Appendix 11

Cherry Outpost Traffic Impact Analysis

CHERRY OUTPOST
TRAFFIC IMPACT ANALYSIS
CITY OF WILDOMAR, CALIFORNIA

December 2, 2024

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TRAMES SOLUTIONS INC.

(0265-0006-03)

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1.0 INTRODUCTION AND SUMMARY

A. Purpose of the TIA and Study Objectives

The purpose of this traffic impact analysis (TIA) is to evaluate the traffic impacts of the proposed Cherry Outpost development. The project is proposed to be developed with an 72 room hotel, C-store (14 fueling positions), 2 fast food restaurants w/drive-thru (6,800 sf total), and a car wash with a 130 foot tunnel. The site is located east of I-15 and north of Bundy Canyon Road in the City of Wildomar.

Study objectives include the following:

Existing (2023) Traffic. Existing traffic will be counted to determine current conditions. This constitutes the environmental setting for a CEQA analysis at the time that the hearing body reviews the project. Traffic count data shall be new or recent. In some cases, data up to one year old may be acceptable with the approval of the City of Wildomar Engineering Department. Any exception to this must be requested prior to approval of the scoping agreement

Existing (2023) Plus Project Traffic. Traffic generated by the proposed project will be added to existing traffic counts to identify and analyze impacts on the circulation system.

Existing + Ambient + Project (EAP 2025). Traffic conditions prior to the time that the proposed development is completed will be estimated by increasing the existing traffic counts by an appropriate growth rate to be provided by City of Wildomar Engineering Department staff, projected to the year that the project is estimated to be completed. Traffic generated by the proposed project will then be added, and the impacts on the circulation system will be analyzed. This will be the basis for determining project-specific impacts, mitigation, and conditions of approval.

Existing + Ambient + Project + Cumulative (EAPC 2025). Traffic generated by other approved projects in the study area shall be identified and added to the Project Completion traffic identified in Scenario 3. This may also include projects that are proposed and in the review process, but not yet fully approved. This scenario will be analyzed, and a determination made if improvements funded through an approved funding mechanism (TUMF, DIF, CFD, RBBD etc.) can accommodate the cumulative traffic at the target Level of Service (LOS) identified in the General Plan. If the "funded" improvements can provide the target LOS, payment into the fee program will be

considered as cumulative mitigation through the conditions of approval. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF facilities) should be identified as such.

B. Site Location and Study Area

The site is located east of I-15 and north of Bundy Canyon Road in the City of Wildomar. Figure 1-A illustrates the site location and the traffic analysis study area.

In general, the study area shall include any intersection of Collector or higher classification street with another Collector roadway or higher classification street, at which the proposed project will add 50 or more peak hour trips. Pursuant to the attached scoping agreement (see Appendix "A"), the study area includes the following intersections:

STUDY AREA INTERSECTIONS	
1.	Almond Street / Bundy Canyon Rd.
2.	Orange Street / Bundy Canyon Rd.
3.	I-15 SB Ramps / Bundy Canyon Rd.
4.	I-15 NB Ramps / Bundy Canyon Rd.
5.	Cherry Street / Bundy Canyon Rd.
6.	Sellers Road / Bundy Canyon Rd.
7.	Monte Vista Dr. / Bundy Canyon Rd.
8.	Canyon Ranch Rd. / Bundy Canyon Rd.
9.	Orange Street / Canyon Dr.
10.	Cherry Street / N. Project Driveway
11.	Cherry Street / S. Project Driveway
12.	Cherry Street / Waite Street
13.	Sellers Road / Waite Street
14.	Orange Street / Lemon Street
15.	Almond Street / Lemon Street
16	Almond Street / Waite Street

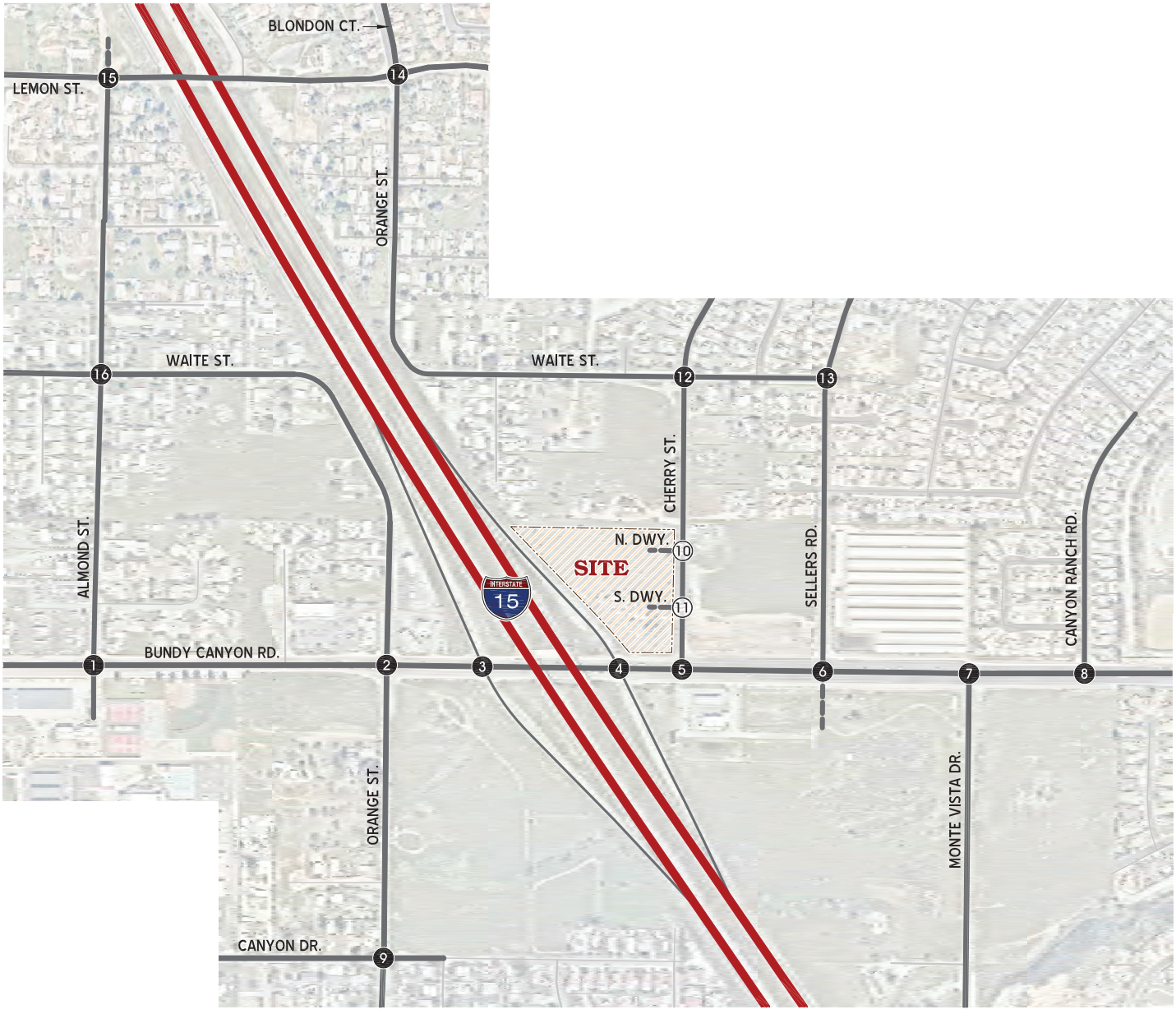
C. Development Project Identification

1. Project Size and Description

The Cherry Outpost Site is proposed to be developed in a single development phase by 2025. The following uses are proposed as indicated below:

- 72 room hotel
- C-store (14 fueling positions)
- 2 fast food restaurants w/drive-thru (6,800 sf total)
- Car wash with a 130 foot tunnel

FIGURE 1-A
STUDY AREA



LEGEND:

14 = EXISTING INTERSECTION ANALYSIS LOCATION

(2) = FUTURE INTERSECTION ANALYSIS LOCATION

= FUTURE ROADWAY/DIRT ROAD

N

2. Existing Land Use

The project site is currently vacant. Adjacent uses include the following:

- North – Vacant/Residential
- South – Vacant/Commercial
- East – Vacant/Residential
- West – I-15

3. Proposed Land Use

Proposed Land Use: Commercial Retail with a Scenic Highway Commercial zoning. No changes to the land use or zoning designations are proposed.

4. Site Plan of Proposed Project

Figure 1-B illustrates the conceptual land use plan. As shown in Figure 1-B, the project is proposed to have two driveways along Cherry Street.

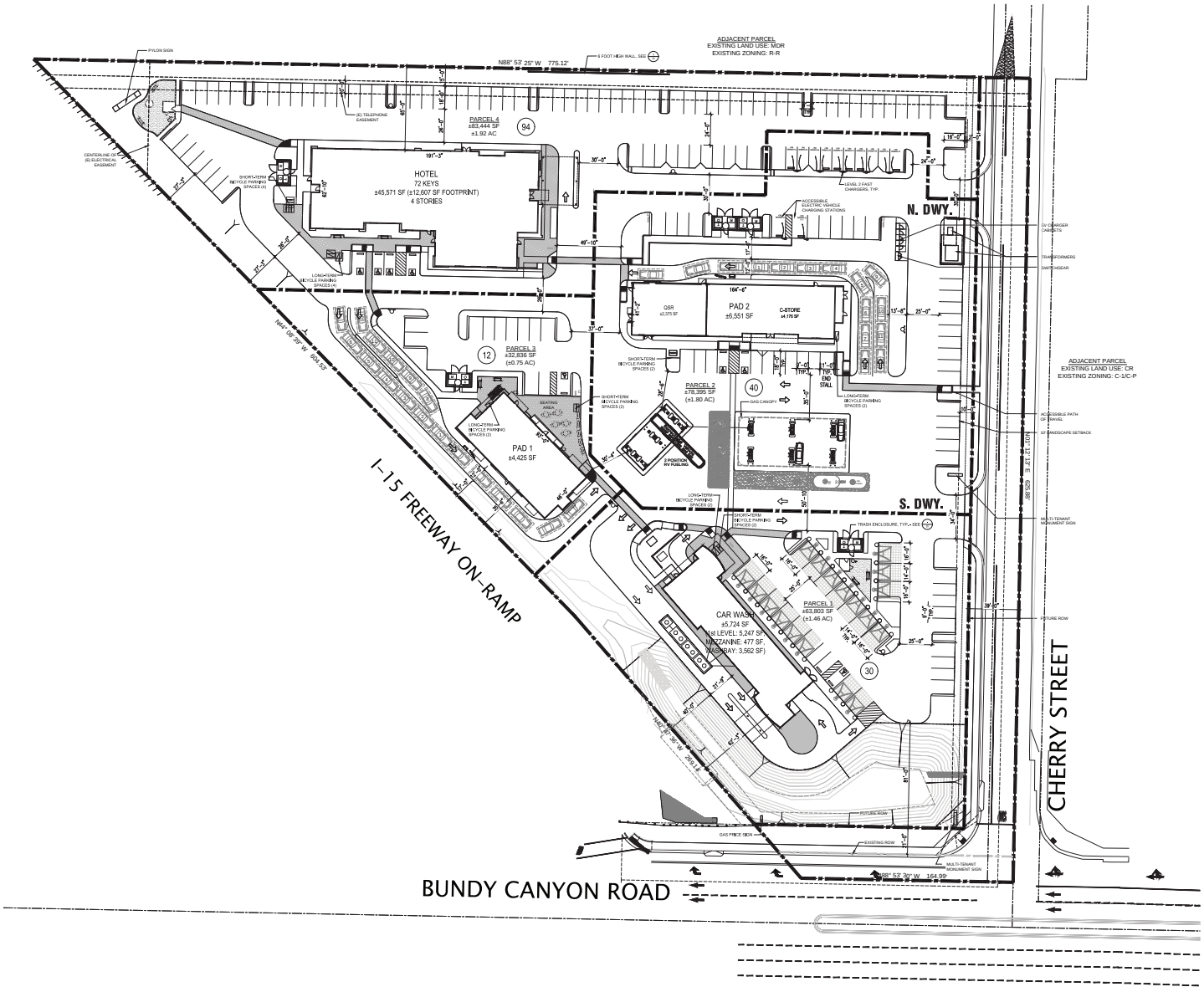
5. Proposed Project Opening Year

The proposed project is anticipated to be completed by 2025. Future traffic analysis has assumed a background (ambient) growth of 2% per year, along with traffic generated by other future developments in the surrounding area.

6. Proposed Project Phasing

The project is expected to be completed in a single phase. Therefore, all traffic recommendations included in this report have been based on the buildout of the proposed project.

FIGURE 1-B
SITE PLAN



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2.0 TRAFFIC ANALYSIS METHODOLOGIES

Traffic operations are quantified through the determination of "Level of Service" (LOS). Level of Service is a qualitative measure of traffic operating conditions, whereby a letter grade "A" through "F" is assigned to an infrastructure facility (intersection) representing progressively worsening traffic conditions. This section presents the LOS definition, LOS criteria and methodologies for the Intersection Operations.

A. Level of Service Definition

The definitions of Level of Service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A": Completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences. Maneuverability within the traffic stream is good. Minor disruptions to flow are easily absorbed without a change in travel speed.

- LOS "B": Free flow conditions, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS "A", but drivers have slightly less freedom to maneuver. Minor disruptions are still easily absorbed, although local deterioration in LOS will be more obvious.

- LOS "C": The influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles. Minor disruptions can cause serious local deterioration in service, and queues will form behind any significant traffic disruption.

- LOS "D": The ability to maneuver is restricted due to traffic congestion. Travel speed is reduced by the increasing volume. Only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.

- LOS "E": Operations at or near capacity, an unstable level. Vehicles are operating with the minimum spacing for maintaining uniform flow.

- LOS "F": Forced or breakdown flow. It occurs either when vehicles arrive at a rate greater than the rate at which they are discharged or when the forecast demand exceeds the computed capacity of a planned facility. Although operations at these points – and on sections immediately downstream – appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

B. City of Wildomar Level of Service Criteria

The City of Wildomar has established Level of Service (LOS) "D" as the city-wide target for the study intersections. Therefore, LOS "E" or "F" is considered unacceptable and requires improvements measures. Furthermore, the City also identifies an impact if a project proposes uses or intensities above that contained in the General Plan, a significant impact is caused when the additional project trips degrade the intersection by the following criteria:

- LOS A/B = By 10.0 seconds or more
- LOS C = By 8.0 seconds or more
- LOS D = By 5.0 seconds or more
- LOS E = By 2.0 seconds or more
- LOS F = By 1.0 seconds or more

Since the project is consistent with the General Plan use and zoning designations, no additional intensities are anticipated.

C. Intersection Operations Analysis Methodology

The City of Wildomar requires the use of the Transportation Research Board - Highway Capacity Manual (HCM), 6th Edition. The HCM defines level of service as a qualitative measure, which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate Level of Service (LOS) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control. The Levels of Service results in this study are determined using the HCM methodology.

For signalized intersections, average total delay per vehicle for the overall intersection is used to determine level of service.

The study area intersections which are stop sign controlled with stop control on the minor street only have been analyzed using the unsignalized intersection methodology of the HCM. For these intersections, the calculation of level of service is dependent on the occurrence of gaps occurring in the traffic flow of the main street. Using data collected describing the intersection configuration and traffic volumes at the study area locations; the level of service has been calculated. The level of service criteria for this type of intersection analysis is based on average total delay per vehicle for the worst minor street movement(s).

For all way stop (AWS) controlled intersections, the ability of vehicles to enter the intersection is not controlled by the occurrence of gaps in the flow of the main street. The AWS controlled intersections have been evaluated using the HCM methodology for this type of multi-way stop controlled intersection configuration. The level of service criteria for this type of intersection analysis is based on average total delay per vehicle.

The levels of service are defined for the various analysis methodologies as follows:

LEVEL OF SERVICE	AVERAGE TOTAL DELAY PER VEHICLE (SECONDS)	
	SIGNALIZED	UNSIGNALIZED
A	0 to 10.00	0 to 10.00
B	10.01 to 20.00	10.01 to 15.00
C	20.01 to 35.00	15.01 to 25.00
D	35.01 to 55.00	25.01 to 35.00
E	55.01 to 80.00	35.01 to 50.00
F	80.01 and up	50.01 and up

Levels of service at the study area intersections have been evaluated using the following HCM intersection analysis program: Synchro.

Peak hour factors (PHF), where known from existing traffic counts, have been used to assess intersection operations.

D. Traffic Signal Warrant Analysis Methodology

This traffic impact analysis utilizes the Peak Hour Volume Based Warrant 3 for existing and future analysis scenarios per the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD).

For future intersections, future average daily traffic (ADT) volumes have been utilized to evaluate traffic signal warrants per Caltrans planning level ADT-based signal warrant criteria.

It should be noted that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted and that meeting this threshold does not require that a traffic control signal should be installed. Other traffic factors and conditions be should be evaluated in order to determine whether the installation of a signal is justified. In addition, a deficient intersection does not necessarily mean that a signal is warranted. An intersection may meet a signal warrant condition and operate at an acceptable LOS (LOS "D" or better) or operate at deficient LOS (LOS "E" or worse) and not meet a signal warrant.

E. Freeway Merge/Diverge Ramp Analysis

The merge/diverge analysis is based on the HCM Ramps and Ramp Junctions analysis method and performed using HCS 7 software. The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on-ramps and off-ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point. The merge/diverge area level of service descriptions for each density range are as follows:

Level of Service	Density Range (pc/mi/ln)1
A	≤10.0
B	10.0 – 20.0
C	20.0 – 28.0
D	28.0 – 35.0
E	>35.0
F	Demand Exceeds Capacity

1 pc/mi/ln = passenger cars per mile per lane. Source: HCM, 6th Edition

The I-15 Freeway mainline volume data were obtained from the Caltrans Performance Measurement System (PeMS) website for the segments of the I-15 Freeway interchanges at Bundy Canyon Road. The existing ramp data (see Appendix B – Counts) were then utilized to flow conserve the mainline volumes to determine the remaining I-15 Freeway mainline segment volumes. The data was obtained from May 2023.

3.0 AREA CONDITIONS

A. Study Area Intersections

In general, the minimum area to be studied shall include any intersection of "Collector" or higher classification street, with "Collector" or higher classification streets, at which the proposed project will add 50 or more peak hour. The City of Wildomar Engineering Department may require deviation from these requirements based on area conditions. The study area includes the following intersections (shown previously on Figure 1-A):

STUDY AREA INTERSECTIONS	
1.	Almond Street / Bundy Canyon Rd.
2.	Orange Street / Bundy Canyon Rd.
3.	I-15 SB Ramps / Bundy Canyon Rd.
4.	I-15 NB Ramps / Bundy Canyon Rd.
5.	Cherry Street / Bundy Canyon Rd.
6.	Sellers Road / Bundy Canyon Rd.
7.	Monte Vista Dr. / Bundy Canyon Rd.
8.	Canyon Ranch Rd. / Bundy Canyon Rd.
9.	Orange Street / Canyon Dr.
10.	Cherry Street / N. Project Driveway
11.	Cherry Street / S. Project Driveway
12.	Cherry Street / Waite Street
13.	Sellers Road / Waite Street
14.	Orange Street / Lemon Street
15.	Almond Street / Lemon Street
16	Almond Street / Waite Street

B. Area Roadway System

Figure 3-A identifies the existing roadway conditions for study area roadways. The existing intersection traffic controls and geometrics are identified.

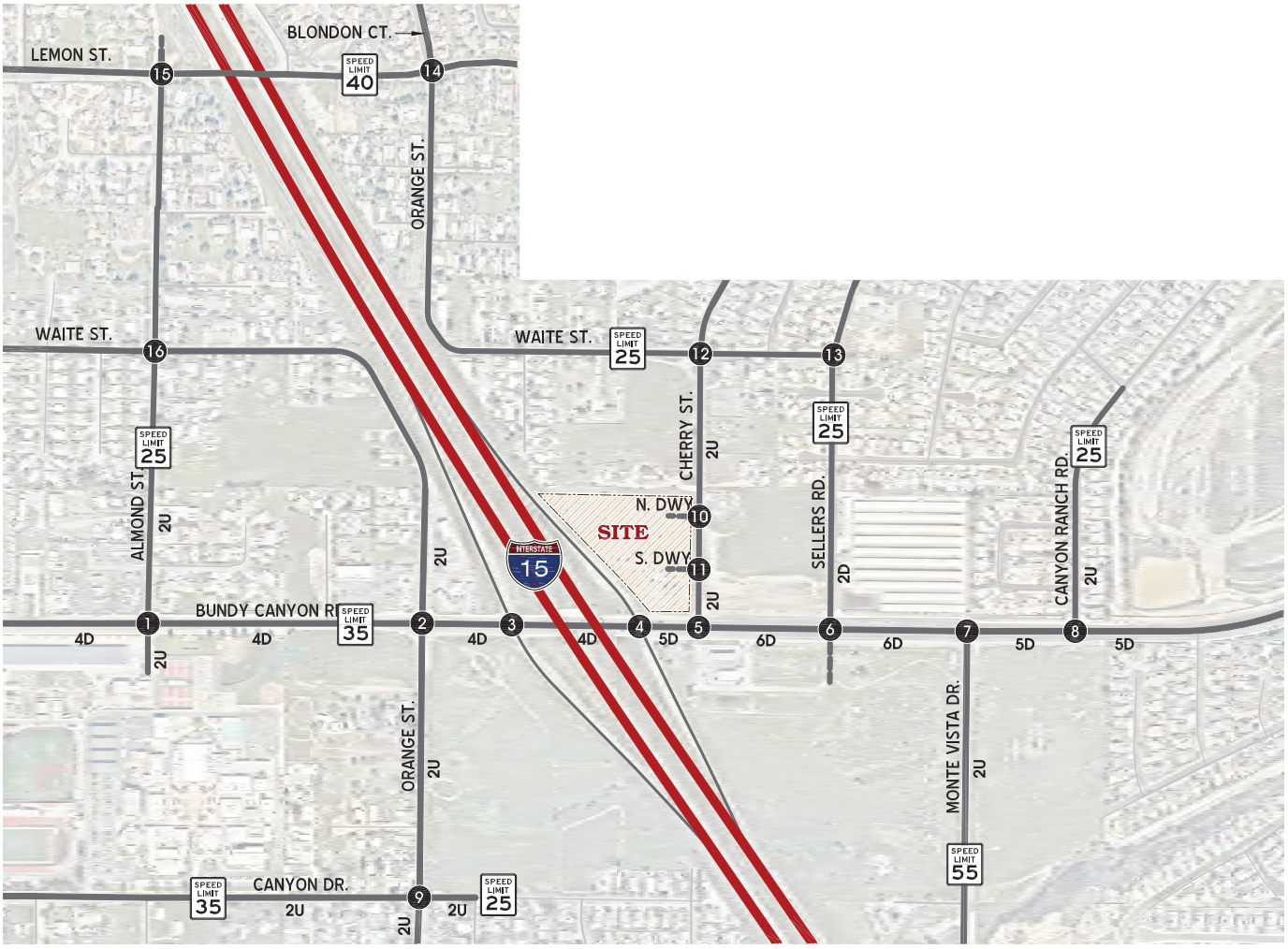
The City of Wildomar Circulation Element and Roadway Cross-Sections is depicted on Figure 3-B.

C. Existing Traffic Volumes

Existing intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts made for Trames Solutions, Inc. in May 2023 and April 2024. Existing AM and PM peak hour intersection turning movement volumes are shown on Figure 3-C. It should be noted that schools were in session during the time that the traffic counts were conducted.

The traffic count worksheets are included in Appendix "B".

FIGURE 3-A
EXISTING TRAFFIC CONTROLS AND INTERSECTION GEOMETRICS



1. Almond St. / Bundy Cyn. Rd.	2. Orange St. / Bundy Cyn. Rd.	3. I-15 SB Ramps / Bundy Cyn. Rd.	4. I-15 NB Ramps / Bundy Cyn. Rd.	5. Cherry St. / Bundy Cyn. Rd.	6. Sellers Rd. / Bundy Cyn. Rd.	7. Monte Vista Dr. / Bundy Cyn. Rd.
DEF, DEF	DEF			TWLTL		
8. Cyn. Ranch Rd. / Bundy Cyn. Rd.	**9. Orange St. / Canyon Dr.**	**10. Cherry St. / N. Dwy.**	**11. Cherry St. / S. Dwy.**	**12. Cherry St. / Waite St.**	**13. Sellers Rd. / Waite St.**	**14. Orange St. / Lemon St.**
		Future Intersection	Future Intersection			DEF
15. Almond St. / Lemon St.	**16. Almond St. / Waite St.**					
DEF						

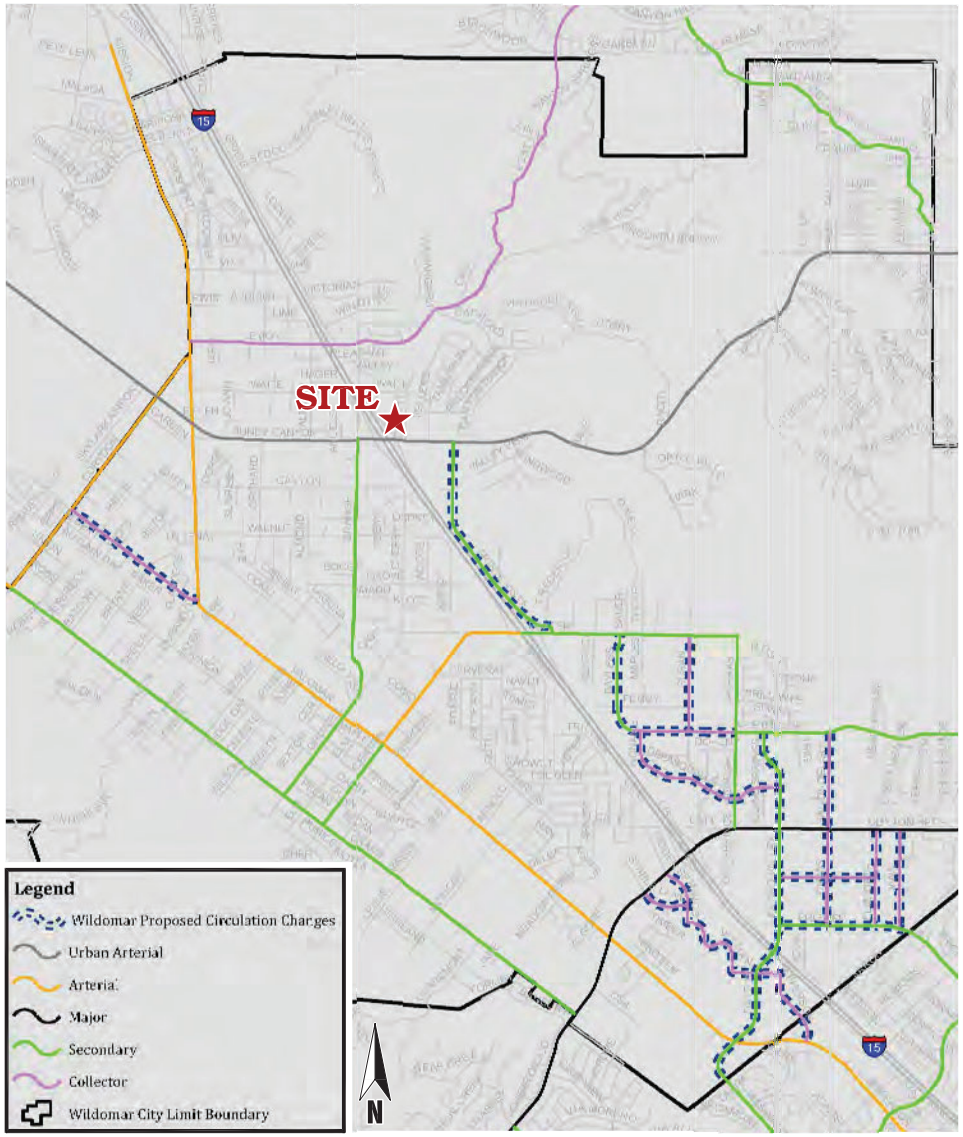
LEGEND:

#	= INTERSECTION ID	4	= NUMBER OF LANES
	= TRAFFIC SIGNAL	D	= DIVIDED
S	= ALL WAY STOP	U	= UNDIVIDED
	= STOP SIGN		= FUTURE ROADWAY/DIRT ROAD
DEF	= DEFACTO RIGHT TURN LANE	TWLTL	= LEFT TURN WITHIN TWO-WAY LEFT TURN LANE (TWLTL) STRIPED MEDIAN

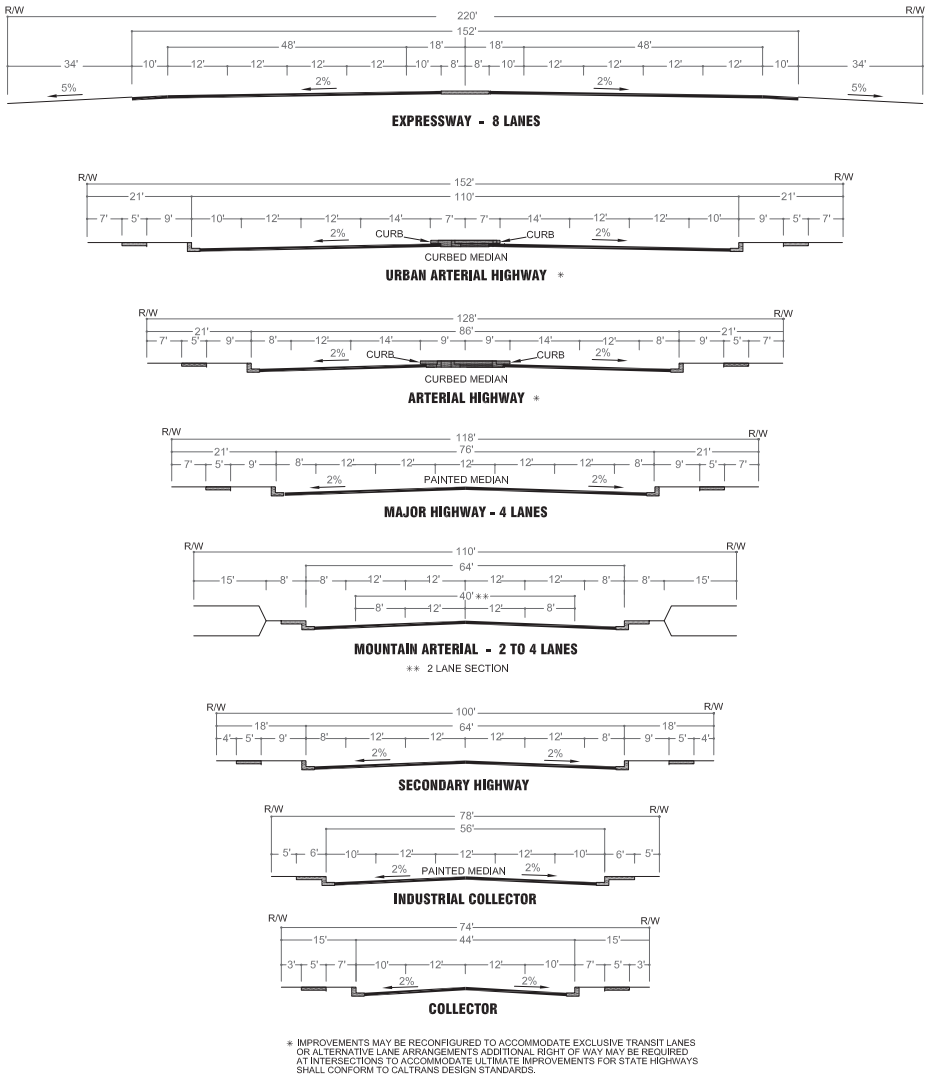
FIGURE 3-B

CITY OF WILDOMAR GENERAL PLAN CIRCULATION ELEMENT AND ROADWAY CROSS-SECTIONS

CIRCULATION MAP



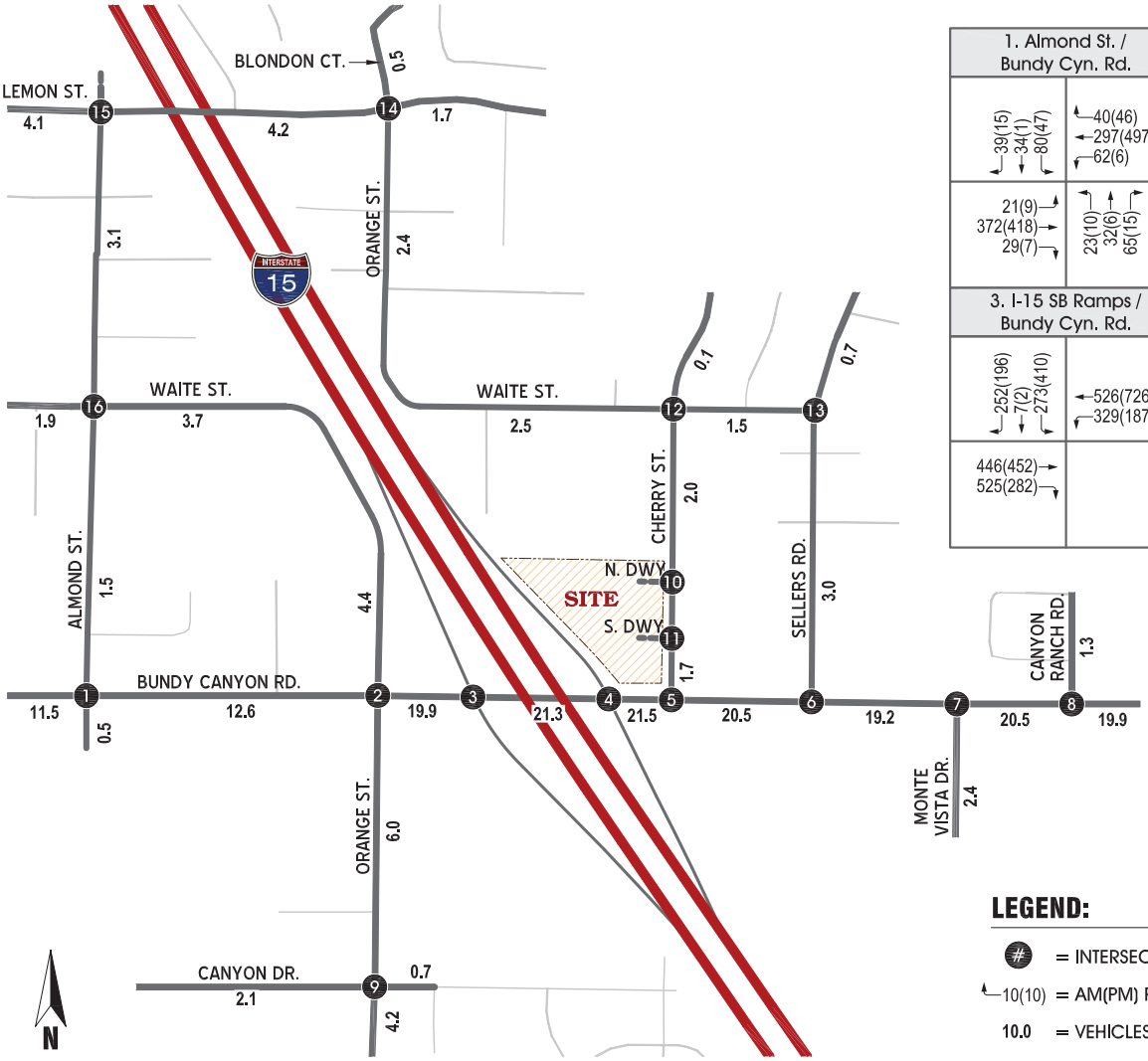
ROADWAY CROSS-SECTIONS



* IMPROVEMENTS MAY BE RECONFIGURED TO ACCOMMODATE EXCLUSIVE TRANSIT LANES OR ALTERNATIVE LANE ARRANGEMENTS ADDITIONAL RIGHT OF WAY MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE ULTIMATE IMPROVEMENTS FOR STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS.

NOTE: THE CITY OF WILDOMAR HAS ADOPTED THE COUNTY'S GENERAL PLAN AND STANDARDS

FIGURE 3-C
EXISTING TRAFFIC VOLUMES



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
39(15) 34(1) 80(47)	40(46) 297(497) 62(6)	7(19) 45(30) 179(111)	63(143) 382(532) 288(192)
21(9) 372(418) 29(7)	23(10) 32(6) 65(15)	24(22) 455(437) 23(24)	9(15) 56(40) 337(186)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
252(196) 7(2) 273(410)	526(726) 329(187)		313(224) 576(479)
446(452) 525(282)		217(134) 502(728)	279(434) 0(3) 191(360)

LEGEND:

- (#) = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR TURN VOLUME
- 10.0 = VEHICLES PER DAY (1000'S)

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.
65(47) 13(5)	6(21) 824(656)	92(59) 45(34)	26(39) 758(567)		749(587) 170(50)	69(24) 12(9)	8(18) 850(613)	253(62) 101(161) 9(30)	35(18) 9(4) 2(1)	Future Intersection
43(65) 650(1023)		53(122) 568(959)		520(969) 93(24)	35(19) 77(106)	26(56) 571(1019)		198(73) 2(7) 74(17)	152(11) 170(154) 4(2)	
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**
Future Intersection		3(1) 4(3) 4(1)	3(1) 88(45) 24(15)	18(8) 29(8)		18(9) 12(3) 1(1)	1(1) 84(44) 15(12)	1(1) 3(1) 1(1)	1(1) 113(81) 149(71)	3(8) 134(39) 111(71)	124(107) 33(73) 8(1)
		1(1) 77(41) 39(33)	15(87) 3(5) 3(25)	19(6) 62(39)	70(45) 10(38)	12(13) 36(61) 86(73)	108(70) 2(13) 5(25)	1(1) 82(140) 77(52)	77(70) 2(1) 153(59)	11(2) 46(49) 14(9)	17(15) 80(30) 6(8)

D. Existing Delay, Level of Service, and Traffic Signal Warrants Analysis

The City of Wildomar has established Level of Service (LOS) “D” as the maximum allowable threshold for the intersection operations. Therefore, LOS “E” or “F” is considered unacceptable and requires improvements measures.

The results of the existing conditions intersection analysis are summarized in Table 3-1. The existing condition operations analysis worksheets are provided in Appendix "C". The intersection of Orange Street / Bundy Canyon Road (#2) is currently operating at an unacceptable levels of service (LOS “E” or worse) during the peak hours with the existing geometry and traffic controls.

Traffic signal warrants for Existing traffic conditions are based on 2023 peak hour intersection volumes (also provided in Appendix “C”). For Existing traffic conditions, none of the unsignalized study intersections currently meet traffic signal warrants.

E. Freeway Merge/Diverge Ramp Analysis

Ramp merge and diverge operations were also evaluated for Existing conditions and the results of this analysis are presented in Table 3-2. As shown in Table 3-2, the I-15 Freeway ramp merge and diverge areas at Bundy Canyon Road currently operate at LOS D or better during the peak hours under Existing traffic conditions. Existing freeway ramp junction operations analysis worksheets are provided in Appendix 3.2.

F. Transit Service

The nearest Riverside Transit Agency (RTA) Route is route 8 which currently serves Mission Trail, located west of the study area. There are currently no RTA routes serving the study area.

TABLE 3-1

INTERSECTION ANALYSIS FOR EXISTING CONDITIONS

ID	Intersection	Traffic Control [1]	Intersection Approach Lanes [2]												Delay [3] (secs.)		Level of Service [3]	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Almond St. / Bundy Cyn. Rd.	AWS	0	1!	0	0	1!	0	0.5	1.5	d	0.5	1.5	d	14.5	12.4	B	B
2	Orange St. / Bundy Cyn. Rd.	TS	0.5	0.5	1	0.5	0.5	1	1	2	d	1	2	0	>80	73.0	F	E
3	I-15 SB Ramps / Bundy Cyn. Rd.	TS	0	0	0	1	1	0	0	2	0	1	2	0	25.6	24.3	C	C
4	I-15 NB Ramps / Bundy Cyn. Rd.	TS	1	1	0	0	0	0	1	2	0	0	2	0	24.8	26.3	C	C
5	Cherry St. / Bundy Cyn. Rd.	CSS	0	0	0	0	1!	0	1*	3	0	0	2	1	14.2	11.9	B	B
6	Sellers Rd. / Bundy Cyn. Rd.	TS	0	0	0	1	0	1	1	3	0	0	2	1	7.7	9.6	A	A
7	Monte Vista Dr. / Bundy Cyn. Rd.	TS	2	0	1	0	0		0	3	1	1	2	0	11.9	7.2	B	A
8	Cyn. Ranch Rd. / Bundy Cyn. Rd.	CSS	0	0	0	0	1!	0	1	3	0	0	2	0	14.5	13.1	B	B
9	Orange St. / Canyon Dr.	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	19.1	9.1	C	A
10	Cherry St. / N. Dwy.	-	Future Intersection												-	-	-	-
11	Cherry St. / S. Dwy.	-	Future Intersection												-	-	-	-
12	Cherry St. / Waite St.	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.5	10.2	B	B
13	Sellers Rd. / Waite St.	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	9.3	8.7	A	A
14	Orange St. / Lemon St.	AWS	0	1!	0	0	1!	0	0	1!	0	0.5	0.5	d	8.5	8.1	A	A
15	Almond St. / Lemon St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0	1!	0	14.6	12.0	B	B
16	Almond St. / Waite St.	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	9.5	8.4	A	A

[1] TS = Traffic Signal; AWS = All-Way Stop; CSS = Cross-Street Stop

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 1! = Shared Left/Through/Right Lane;

* = Left Turn within Two-Way Left Turn Lane Median; d = Defacto right turn lane

[3] Delay and level of service calculated using the following analysis software: Synchro 10 HCM6

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

TABLE 3-2

FREEWAY RAMP JUNCTION MERGE/DIVERGE ANALYSIS FOR
EXISTING CONDITIONS

Freeway	Direction	Ramp Location	Junction Type	Lanes on Freeway	Lanes on Ramp	Volume		Density [1]		LOS [2]	
						AM	PM	AM	PM	AM	PM
I-15 Freeway	SB	SB Off Ramp at Bundy Canyon Rd.	Diverge	3	1	532	608	27.6	24.5	C	C
		SB On Ramp at Bundy Canyon Rd.	Merge	3	1	861	471	27.5	20.7	C	C
	NB	NB Off Ramp at Bundy Canyon Rd.	Diverge	3	1	470	797	22.3	27.4	C	C
		NB On Ramp at Bundy Canyon Rd.	Merge	3	1	530	361	18.7	19.8	B	B

[1] Density calculated based on the Highway Capacity Manual (HCM) analysis; (pc/mi/ln) = passenger car per mile per lane

[2] Level of service determined using HCS7: Ramps and Ramp Junction software, Version 7.90

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4.0 PROJECTED FUTURE TRAFFIC

This section of the report quantifies the number of trips generated by the proposed project and other known developments in the area.

A. Project Traffic

1. Ambient Growth Rate

Some traffic volume increases on roadways can be attributed to vehicles originating outside of the study area. These types of trips either end up within the study area or pass-through onto an outside destination. Therefore, to account for these trips (termed "ambient growth"), a growth rate can be applied to existing traffic volumes.

A 2% ambient growth rate that has been used in this study to account for traffic not attributed to the project or other planned developments within the study area. The City of Wildomar Transportation Department staff has previously reviewed and approved this rate.

2. Project Trip Generation

Trip generation represents the amount of traffic which is attracted and produced by a development. The trip generation for the project is based upon the specific land use which has been planned for this development. For the purpose of this analysis, the following land use assumption is evaluated:

- 72 room hotel
- C-store (14 fueling positions)
- 2 fast food restaurants w/drive-thru (6,800 sf total)
- Car wash with a 130 foot tunnel

It should be noted that RV fueling positions have been added to the site to accommodate larger vehicles but will operate similarly to regular car fueling positions.

Trip generation rates for the proposed development are shown in Table 4-1. The trip generation rates are based upon data collected by the Institute of Transportation Engineers (ITE).

The land uses are comprised of primary and "pass-by" traffic. Primary traffic refers to trips that are intending to go to the project as their primary destination. Pass-by trips are not new trips but those that are already on the roadway system but are anticipated to "pass-by" the project on their way to a primary destination.

The proposed project is located near the I-15 Freeway. Therefore, in order to be consistent with the Caltrans guidelines, a 15% pass-by rate has been assumed for the C-store and fast-food use. For the car wash use, the City has provided specific pass-by percentages based on an empirical study at a similar facility.

The daily and peak hour trip generations for the proposed project are shown on Table 4-2. The project is estimated to generate a total of approximately 7,726 new trip-ends per day with 690 new vehicle trips per hour during the AM peak hour and 612 new vehicle trips per hour during the PM peak hour.

3. Project Trip Distribution and Assignment

Trip distribution represents the directional orientation of traffic to and from the project site. The project's trip distribution patterns are based on the proximity of the residential units to the proposed driveway locations, the surrounding trip attractors (residential communities, commercial opportunities, etc.), and the regional freeway interchanges.

It should be noted that, Cherry Street/Bundy Canyon Road (#5) intersection has been evaluated based on the following configurations:

- Full Access. No restriction.
- Restricted to a right-in/right-out/left-in (RIRO/LI) only configuration.
- Restricted to Right-in/right-out only (RIRO) intersection.

The trip distribution patterns for the project are illustrated on Figures 4-A through 4-F. Outbound and inbound trip distribution without restriction at Cherry Street/Bundy Canyon Road (#5) are shown on Figures 4-A and 4-B. Figures 4-C and 4-D shows the outbound and inbound distribution with RIRO/LI configuration at Cherry Street/Bundy Canyon Road. Figures 4-E and 4-F shows the outbound and inbound distribution with RIRO configuration at Cherry Street/Bundy Canyon Road.

4. Project Peak Hour Turning Movement Traffic

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distribution, proposed arterial highway and local street systems, which would be in place by the time of initial occupancy of the site. Based on the identified project traffic generation and distribution, Project AM and PM peak hour intersection traffic volumes are shown on Figures 4-G (Full Access), 4-H (RIRO/LI configuration), and 4-I (RIRO configuration).

TABLE 4-1

PROJECT TRIP GENERATION RATES[1]

Land Use	Quantity[2]		Peak Hour Trip Rates						Daily
			AM			PM			
			IN	OUT	Total	IN	OUT	Total	
Hotel	72	RM	0.26	0.20	0.46	0.30	0.29	0.59	7.99
Convenience Store/Gas Station - GFA (4-5.5k)	14.0	VFP	13.52	13.52	27.04	11.38	11.38	22.76	257.13
Fast-Food Restaurant w/ Drive-Through	6.8	TSF	22.75	21.86	44.61	17.18	15.85	33.03	467.48
Car Wash[3]	130	Feet	0.38	0.28	0.66	0.63	0.63	1.25	11.87

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

[2] RM = Room; VFP = Vehicle Fueling Position; TSF = Thousand Square Feet; Feet = Linear Feet of the Tunnel

[3] NEC I-15/Clinton Keith Traffic Impact Analysis, January 2023, TJW Engineers, Inc.

TABLE 4-2

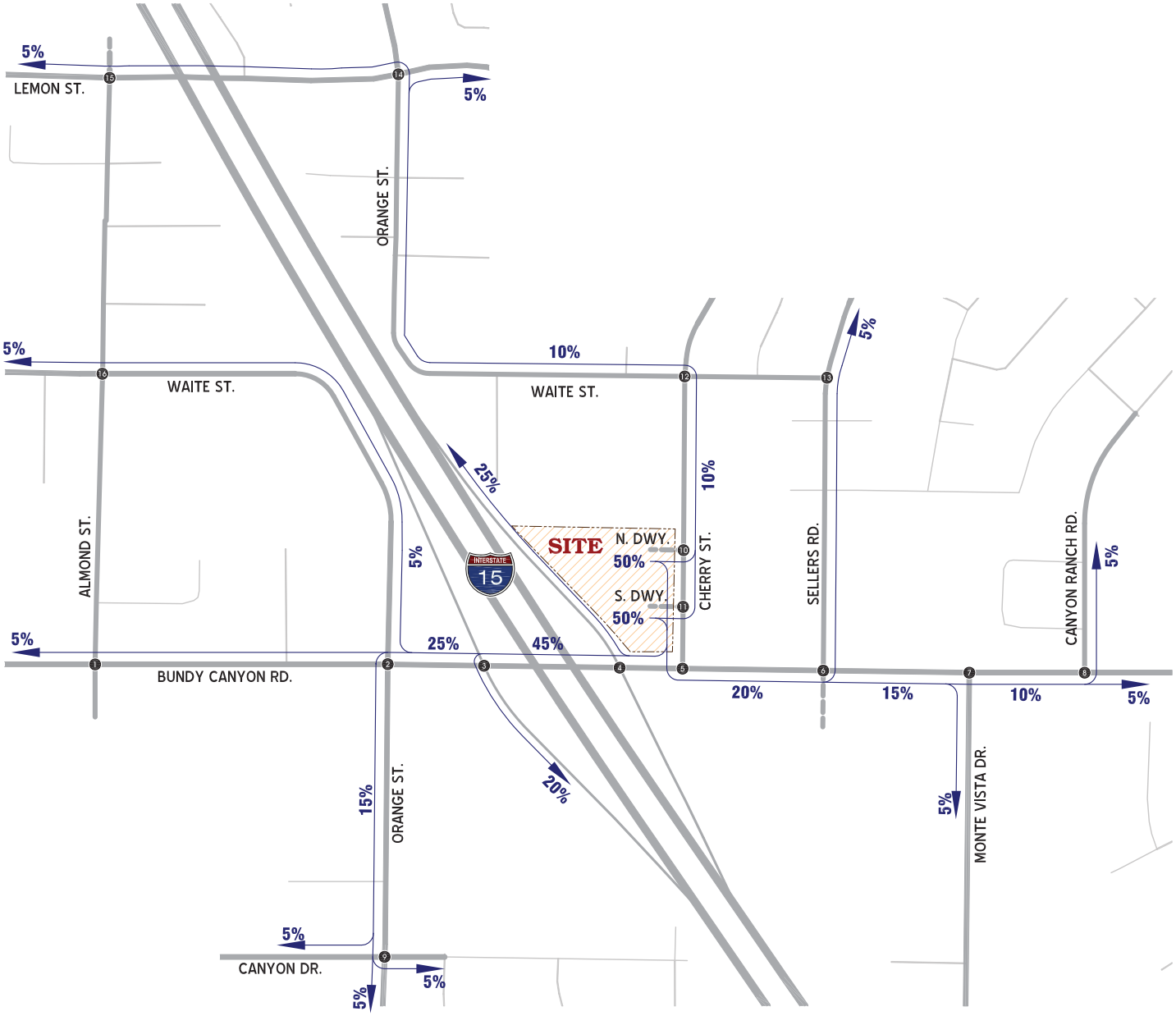
PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity[1]		Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
Hotel	72	RM	19	14	33	22	21	43	575
Convenience Store/Gas Station - GFA (4-5.5k)	14.0	VFP	189	189	378	159	159	318	3,600
Pass-By (15%)			*-28*	*-28*	*-56*	*-24*	*-24*	*-48*	*-540*
Fast-Food Restaurant w/ Drive-Through	6.8	TSF	155	149	304	117	108	225	3,179
Pass-By (15%)			*-23*	*-23*	*-46*	*-17*	*-17*	*-34*	*-477*
Car Wash	130	Feet	49	36	85	82	82	164	1,543
Pass-By (AM 10%. PM 34%, ADT 10%)			*-4*	*-4*	*-8*	*-28*	*-28*	*-56*	*-154*
TOTAL NET TRIPS			357	333	690	311	301	612	7,726

[1] RM = Room; VFP = Vehicle Fueling Position; TSF = Thousand Square Feet; Feet = Linear Feet of the Tunnel

FIGURE 4-A

PROJECT OUTBOUND TRIP DISTRIBUTION
(WITH FULL ACCESS AT CHERRY STREET/BUNDY CANYON ROAD)

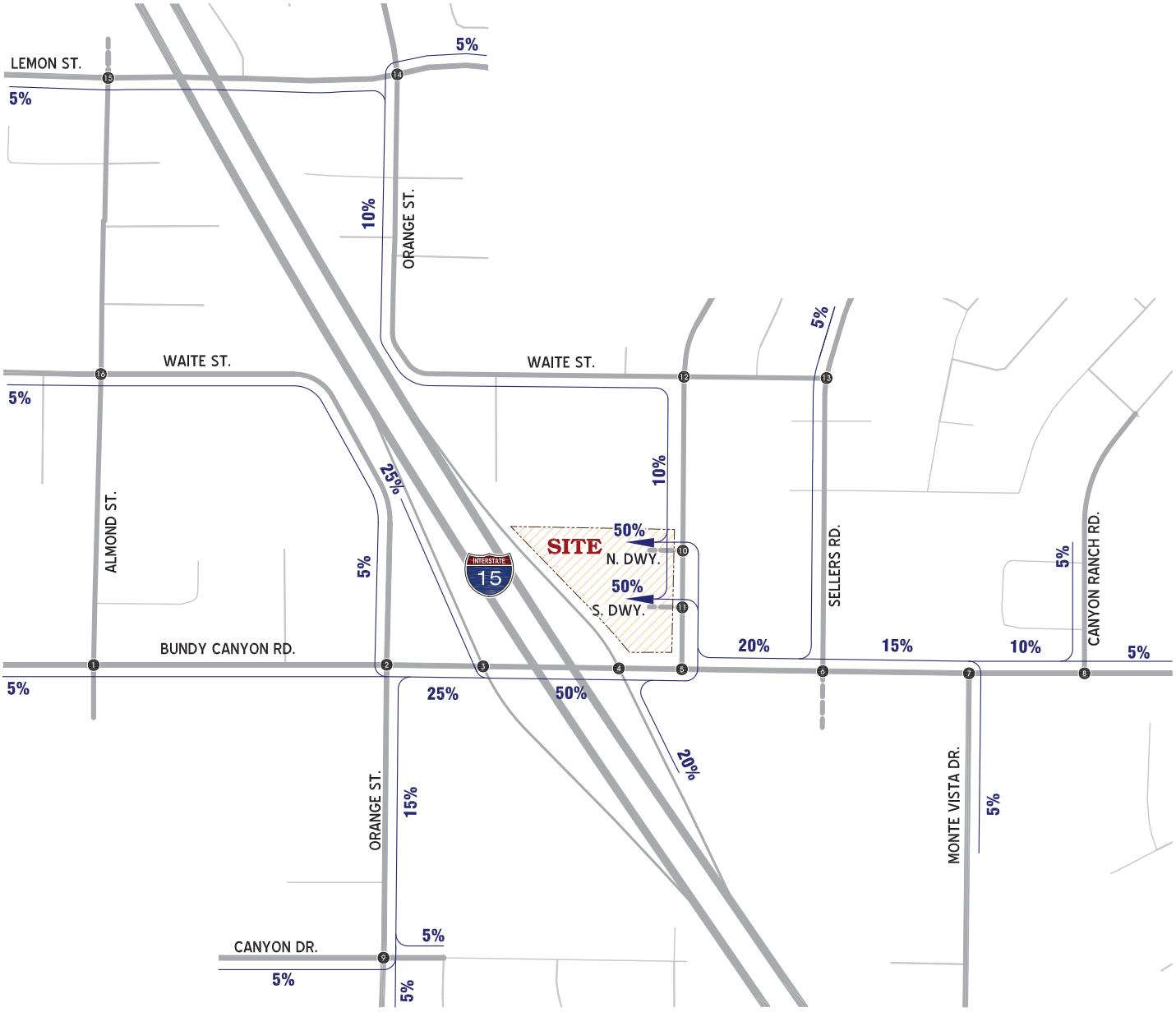


LEGEND:

- 16 = INTERSECTION ID
- = FUTURE ROADWAY / DIRT ROAD / PROJECT DRIVEWAY
- 10% = PERCENT FROM PROJECT

N

FIGURE 4-B
PROJECT INBOUND TRIP DISTRIBUTION
(WITH FULL ACCESS AT CHERRY STREET/BUNDY CANYON ROAD)



LEGEND:

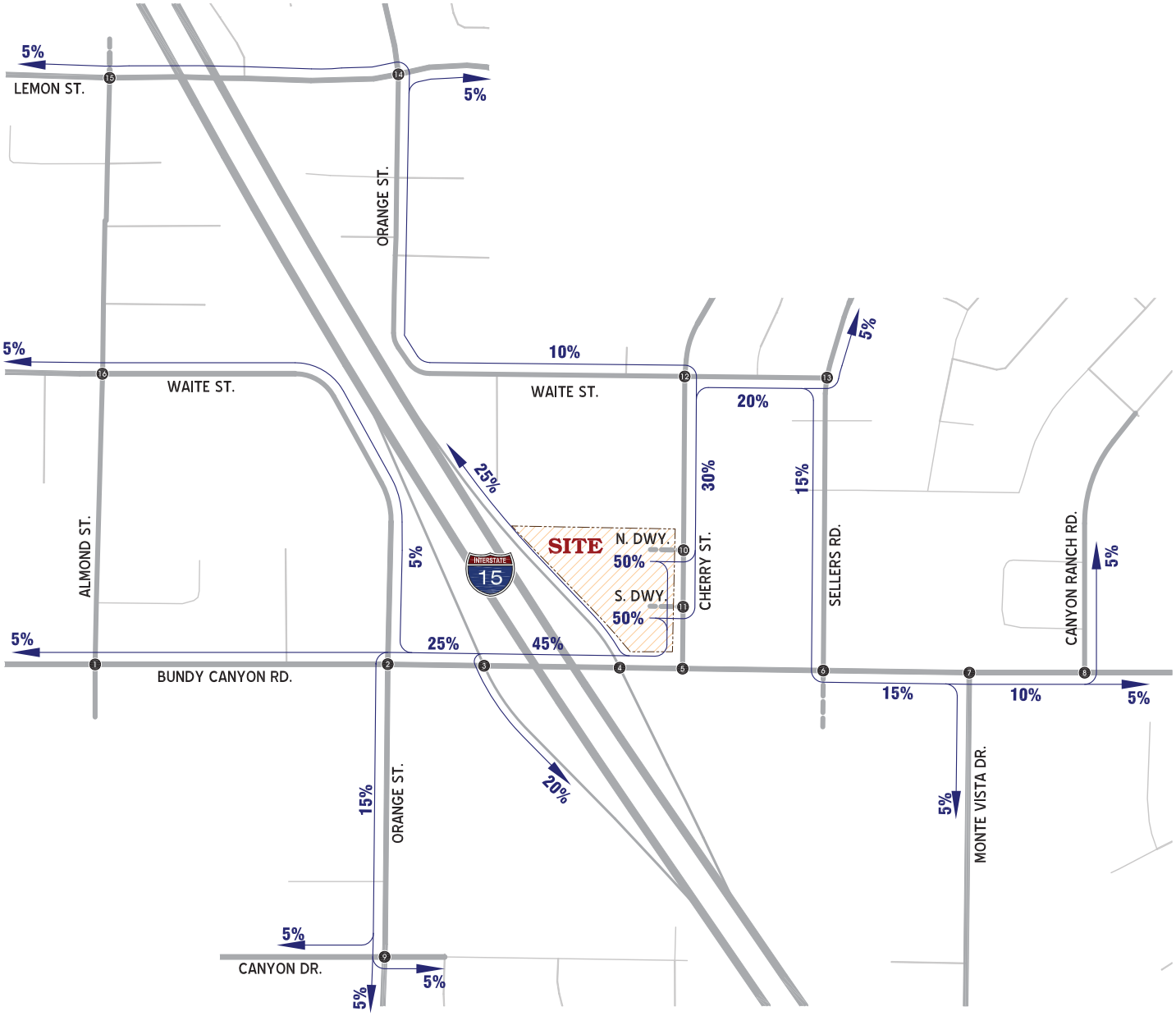
16 = INTERSECTION ID

= FUTURE ROADWAY / DIRT ROAD / PROJECT DRIVEWAY

10% = PERCENT TO PROJECT

N

FIGURE 4-C
PROJECT OUTBOUND TRIP DISTRIBUTION
(WITH RIRO/LI AT CHERRY STREET/BUNDY CANYON ROAD)



LEGEND:

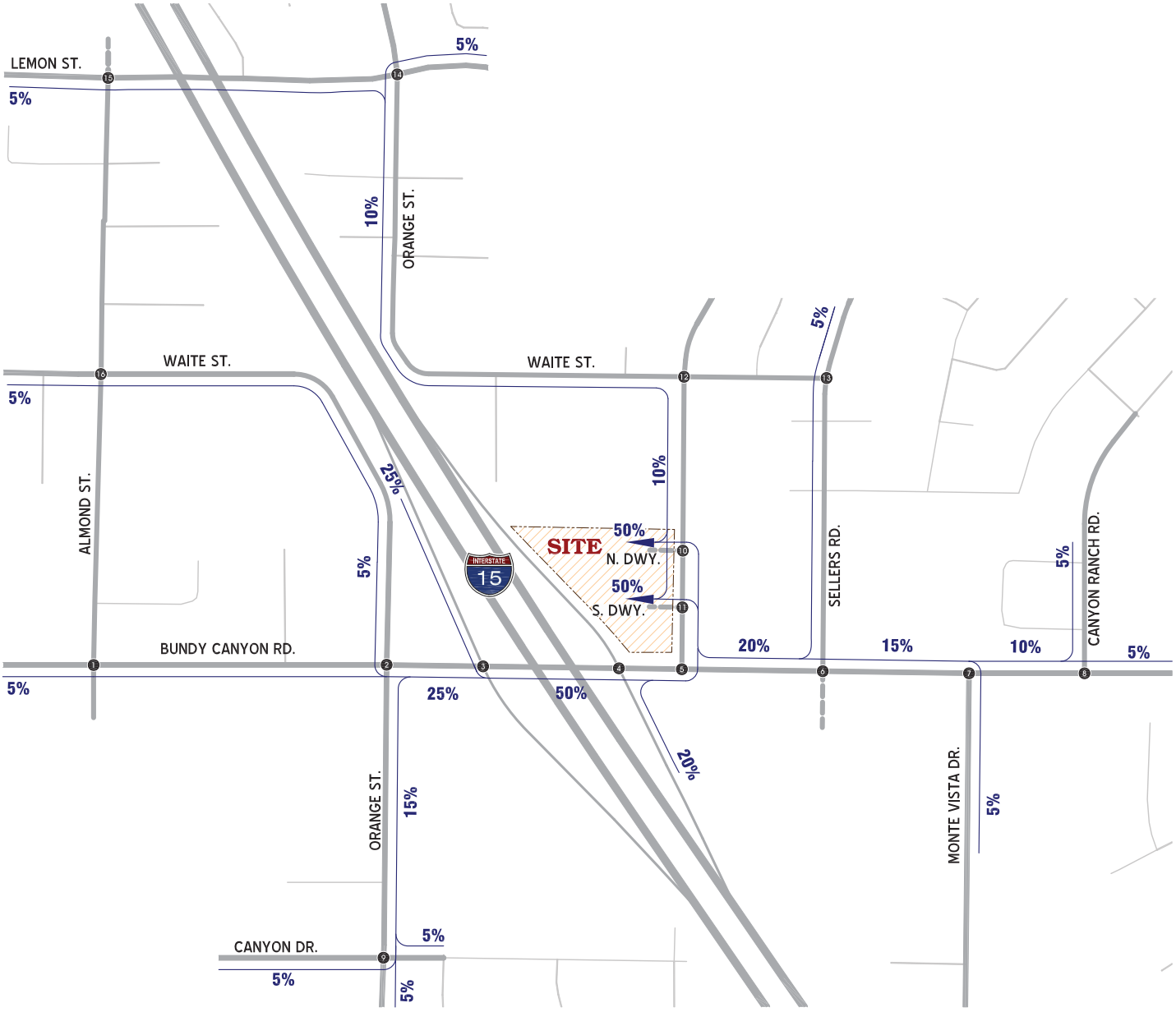
16 = INTERSECTION ID

= FUTURE ROADWAY / DIRT ROAD / PROJECT DRIVEWAY

10% = PERCENT FROM PROJECT

N

FIGURE 4-D
PROJECT INBOUND TRIP DISTRIBUTION
(WITH RIRO/LI AT CHERRY STREET/BUNDY CANYON ROAD)



LEGEND:

16 = INTERSECTION ID

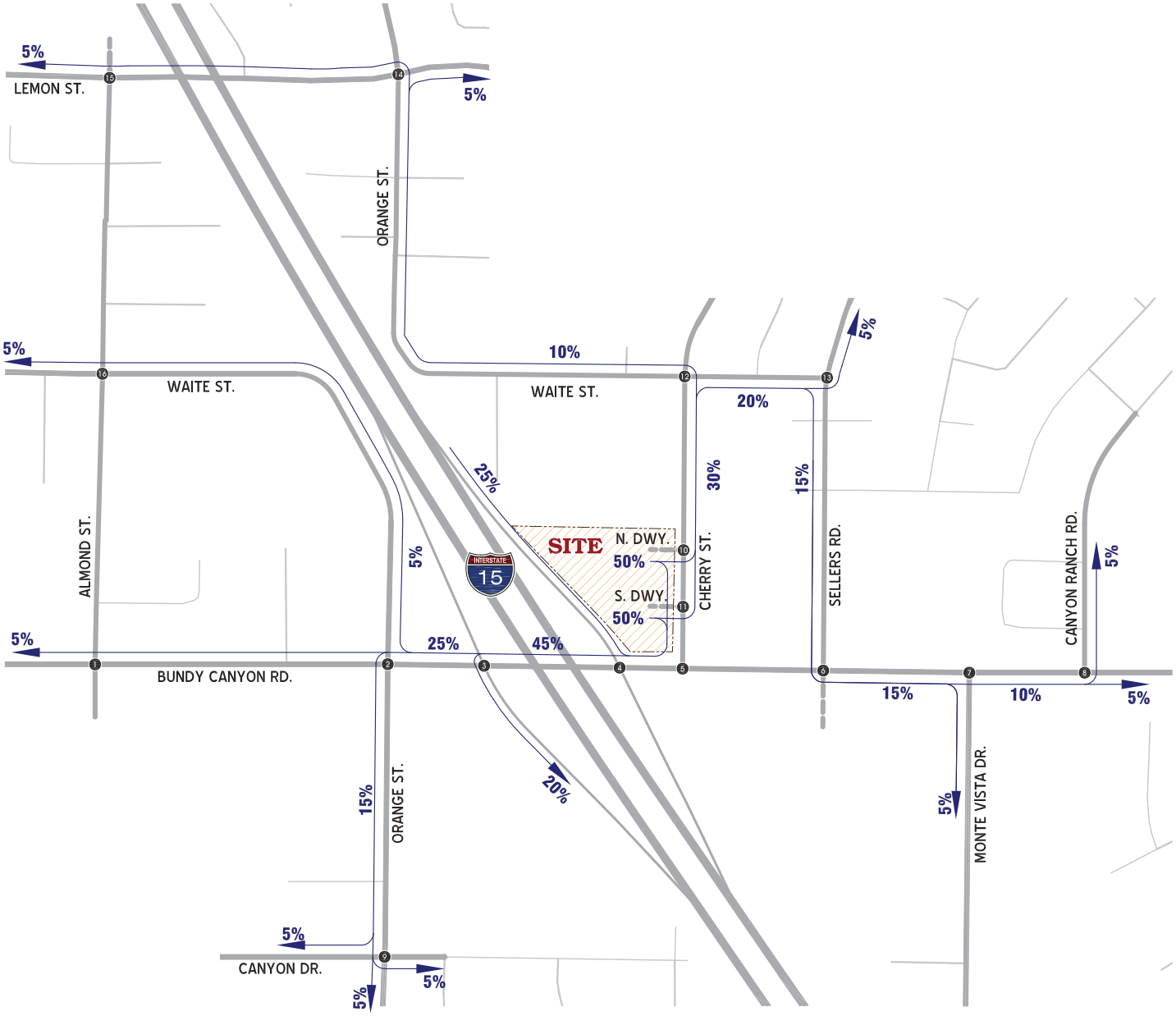
= FUTURE ROADWAY / DIRT ROAD / PROJECT DRIVEWAY

10% = PERCENT TO PROJECT

N

FIGURE 4-E

PROJECT OUTBOUND TRIP DISTRIBUTION
(WITH RIRO AT CHERRY STREET/BUNDY CANYON ROAD)



LEGEND:

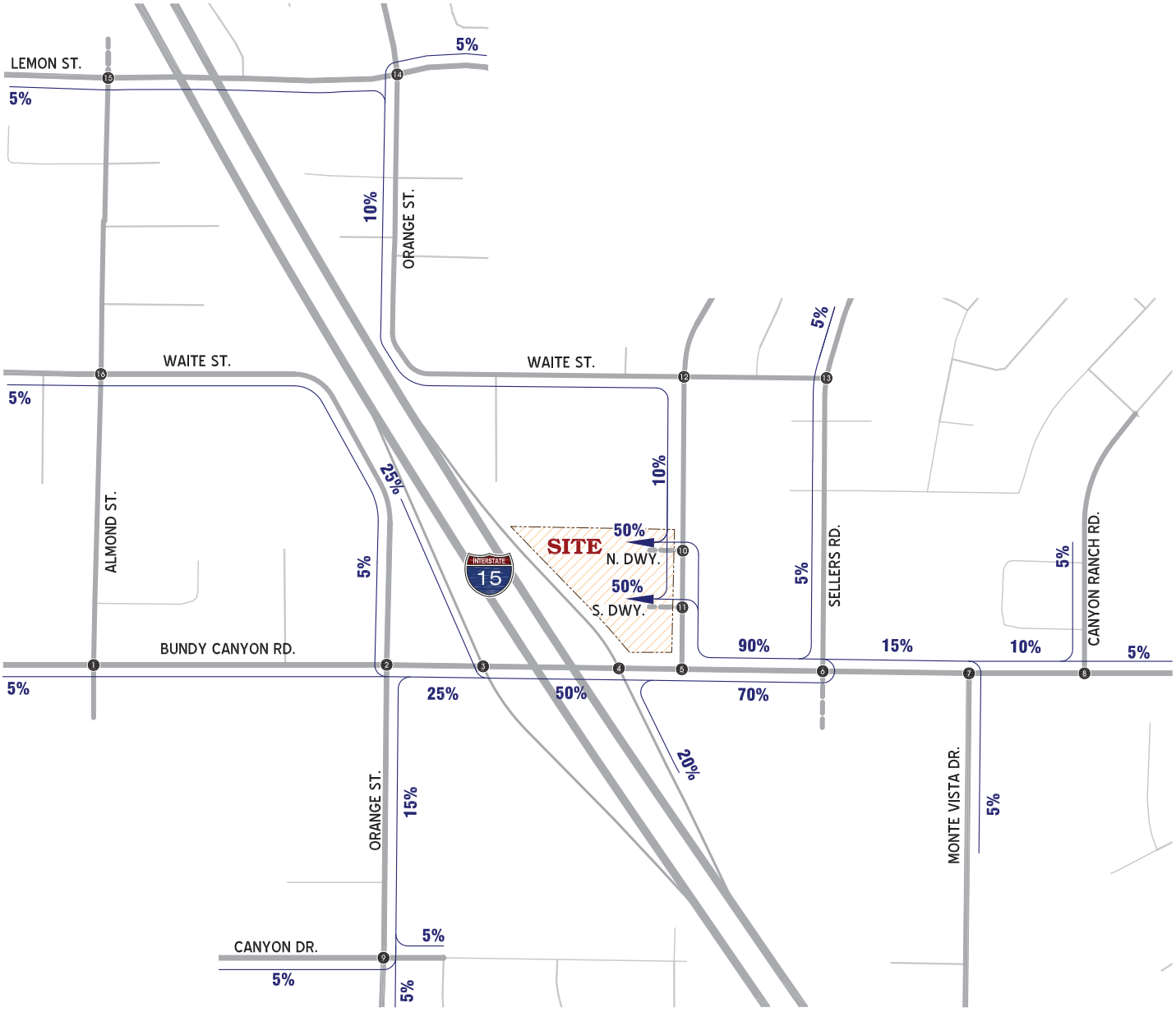
16 = INTERSECTION ID

= FUTURE ROADWAY / DIRT ROAD / PROJECT DRIVEWAY

10% = PERCENT FROM PROJECT

N

FIGURE 4-F
PROJECT INBOUND TRIP DISTRIBUTION
(WITH RIRO AT CHERRY STREET/BUNDY CANYON ROAD)



LEGEND:

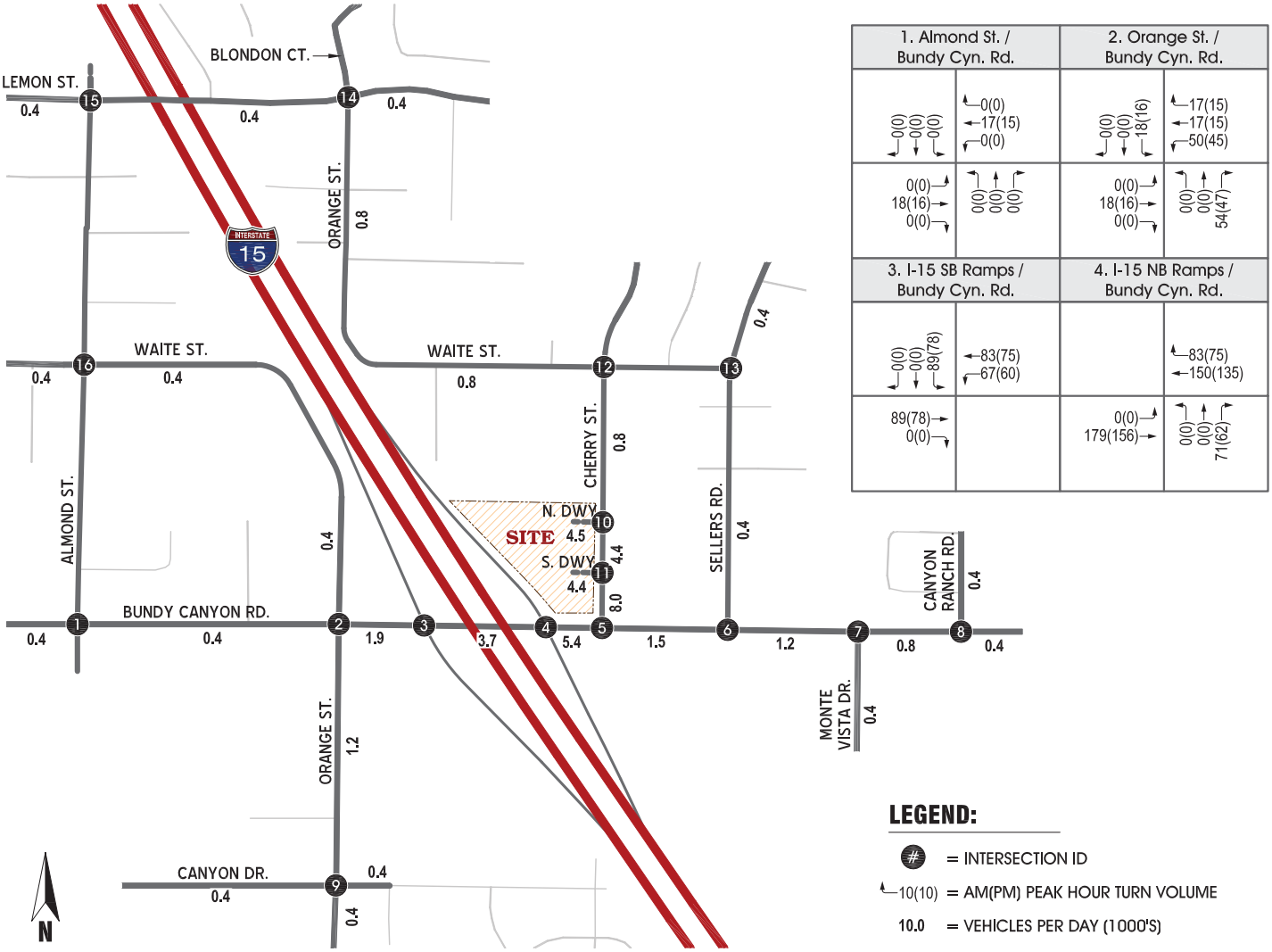
16 = INTERSECTION ID

= FUTURE ROADWAY / DIRT ROAD / PROJECT DRIVEWAY

10% = PERCENT TO PROJECT

N

FIGURE 4-G
PROJECT ONLY (WITH PASS-BY) TRAFFIC VOLUMES
(WITH FULL ACCESS AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
0(0) 0(0) 0(0)	0(0) 17(15) 0(0)	0(0) 0(0) 18(16)	17(15) 17(15) 50(45)
0(0) 18(16) 0(0)	0(0) 0(0) 0(0)	0(0) 18(16) 0(0)	0(0) 0(0) 54(47)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
0(0) 0(0) 89(78)	83(75) 67(60)		83(75) 150(135)
89(78) 0(0)		0(0) 179(156)	0(0) 0(0) 71(62)

LEGEND:

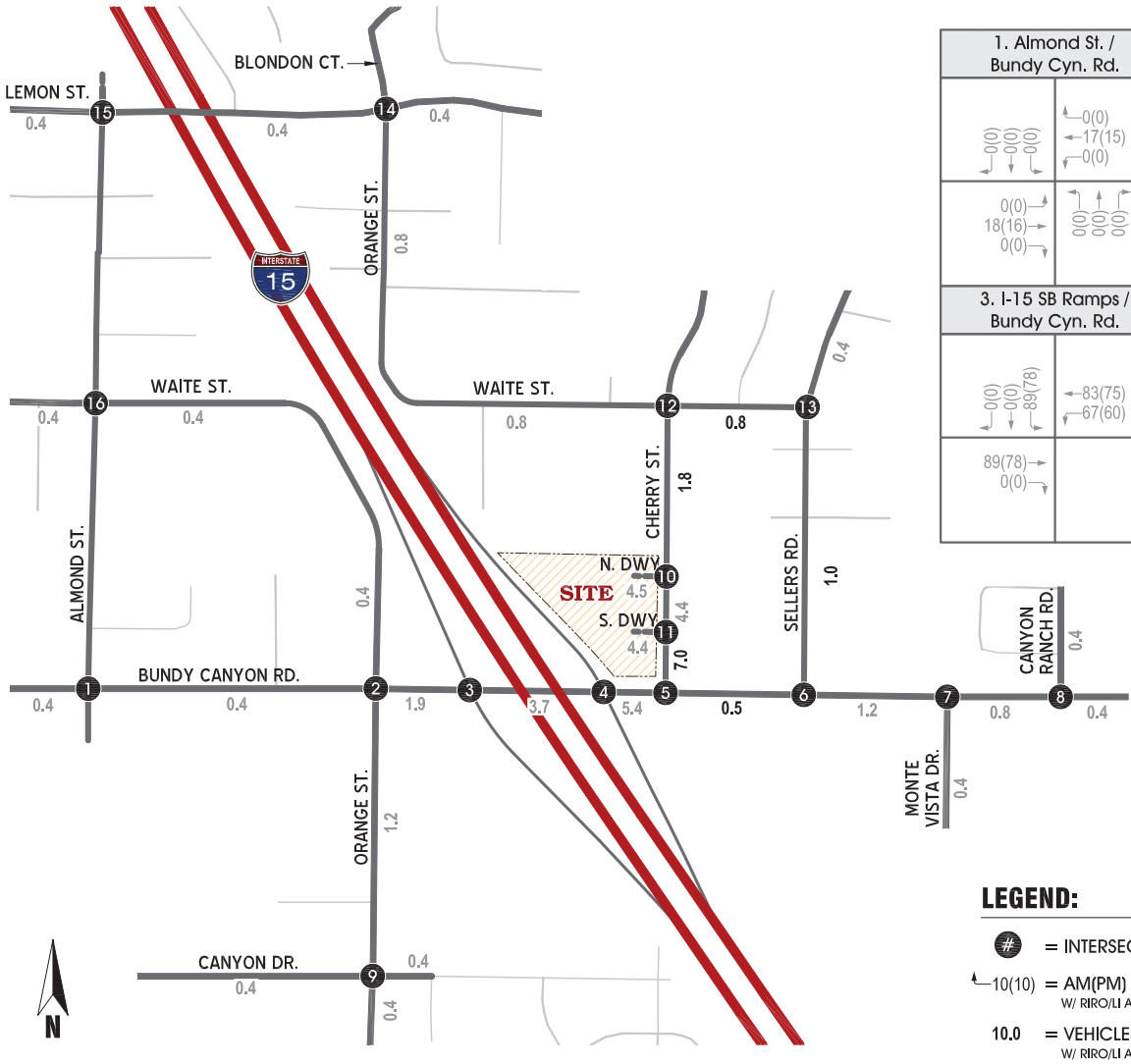
(#) = INTERSECTION ID

10(10) = AM(PM) PEAK HOUR TURN VOLUME

10.0 = VEHICLES PER DAY (1000'S)

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
258(242) 91(92)	96(93) 25(-31)	18(16) 0(0)	0(0) 54(47)		36(31) 0(0)	18(16) 0(0)	0(0) 18(16)	17(15) 17(15) 17(15)	18(16) 0(0) 0(0)	21(19) 15(13)	
274(250) -24(-32)		17(15) 50(45)		33(30) 17(15)	18(16) 0(0)	17(15) 17(15)		18(16) 0(0) 0(0)	0(0) 18(16) 0(0)	18(17) 177(167)	187(173) 16(13)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 174(164)		0(0) 0(0) 0(0)	0(0) 0(0) 0(0)	0(0) 18(16)		0(0) 0(0) 0(0)	0(0) 0(0) 18(16)	0(0) 0(0) 0(0)	0(0) 17(15) 0(0)	0(0) 0(0) 0(0)	0(0) 17(15) 0(0)
19(16) 175(169)	187(173) 184(170)	0(0) 0(0) 36(31)	33(30) 0(0) 0(0)	0(0) 0(0)	0(0) 17(15)	0(0) 0(0) 18(16)	17(15) 0(0) 17(15)	0(0) 18(16) 0(0)	0(0) 0(0) 0(0)	0(0) 18(16) 0(0)	0(0) 0(0) 0(0)

FIGURE 4-H
PROJECT ONLY (WITH PASS-BY) TRAFFIC VOLUMES
(WITH RIRO/LI AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
0(0) 0(0) 0(0)	0(0) 17(15) 0(0)	0(0) 0(0) 18(16)	17(15) 17(15) 50(45)
0(0) 18(16) 0(0)	0(0) 0(0) 0(0)	0(0) 18(16) 0(0)	0(0) 0(0) 54(47)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
0(0) 0(0) 89(78)	83(75) 67(60)		83(75) 150(135)
89(78) 0(0)		0(0) 179(156)	0(0) 0(0) 71(62)

LEGEND:

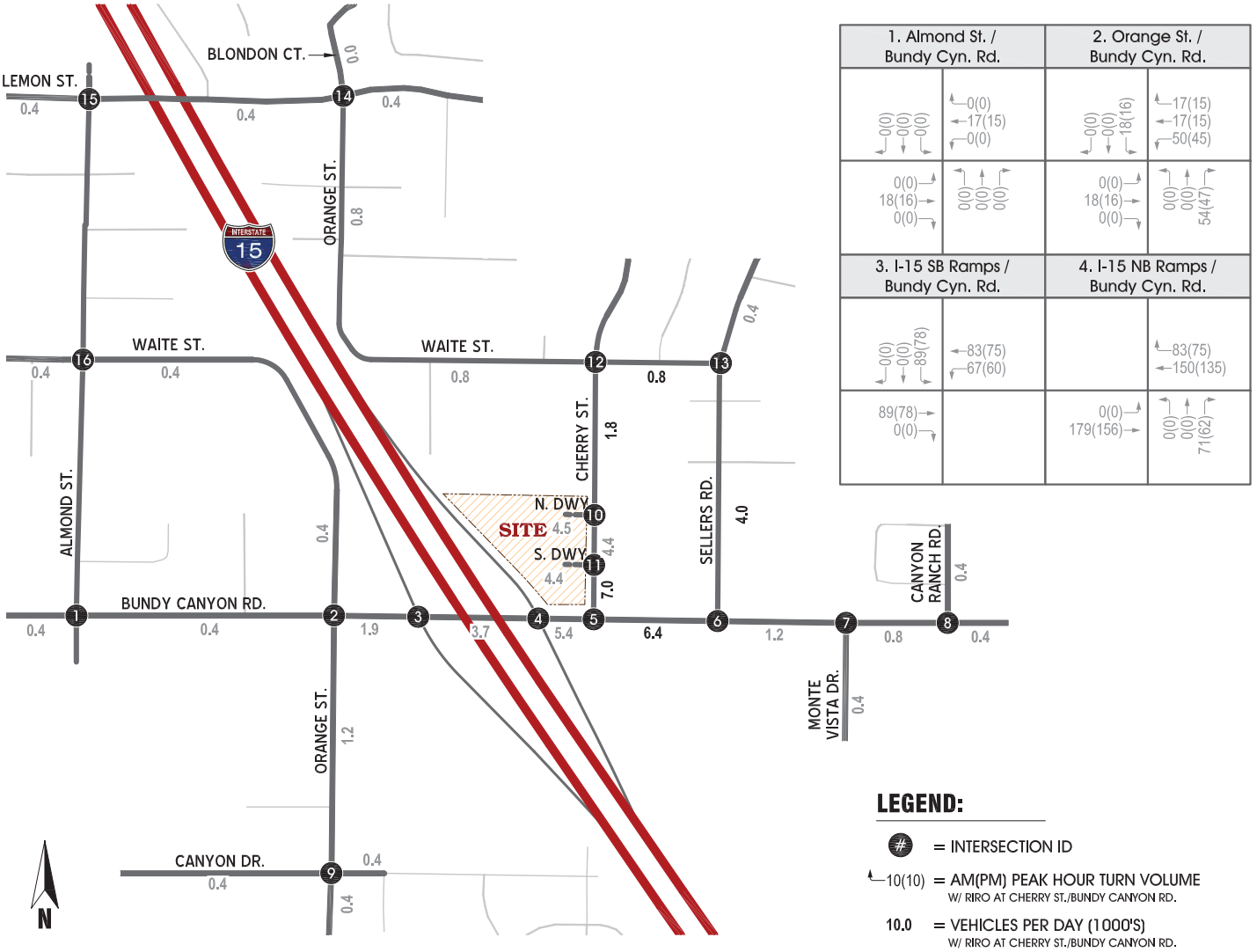
= INTERSECTION ID

10(10) = AM(PM) PEAK HOUR TURN VOLUME W/ RIRO/LI AT CHERRY ST./BUNDY CANYON RD.

10.0 = VEHICLES PER DAY (1000'S) W/ RIRO/LI AT CHERRY ST./BUNDY CANYON RD.

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
258(242)	96(93) -25(-31)	18(16) 74(77)	0(0) 54(47)		36(31) 0(0)	18(16) 0(0)	0(0) 18(16)	17(15) 17(15) 17(15)	18(16) 0(0) 0(0)	21(19) 15(13)	
274(250) -24(-32)		0(0) -24(-32)		33(30) 17(15)	18(16) 0(0)	17(15) 17(15)		18(16) 0(0) 0(0)	0(0) 18(16) 0(0)	63(63) 132(121)	187(173) 61(59)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 129(118)		0(0) 0(0) 0(0)	0(0) 0(0) 0(0)	0(0) 18(16)		0(0) 0(0) 0(0)	0(0) 0(0) 18(16)	0(0) 0(0) 0(0)	0(0) 17(15) 0(0)	0(0) 0(0) 0(0)	0(0) 17(15) 0(0)
64(62) 130(123)	187(173) 184(170)	0(0) 0(0) 36(31)	33(30) 0(0) 67(60)	17(15) 50(45)	0(0) 0(0)	0(0) 0(0) 18(16)	17(15) 0(0) 17(15)	0(0) 18(16) 0(0)	0(0) 0(0) 0(0)	0(0) 18(16) 0(0)	0(0) 0(0) 0(0)

FIGURE 4-I
PROJECT ONLY (WITH PASS-BY) TRAFFIC VOLUMES
(WITH RIRO AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.	2. Orange St. / Bundy Cyn. Rd.
0(0) 0(0) 0(0) ← 0(0) ← 17(15) ← 0(0) 0(0) → 18(16) → 0(0) ← 0(0) 0(0) 0(0)	0(0) 0(0) 18(16) ← 17(15) ← 17(15) ← 50(45) 0(0) → 18(16) → 0(0) ← 0(0) 0(0) 54(47)
3. I-15 SB Ramps / Bundy Cyn. Rd.	**4. I-15 NB Ramps / Bundy Cyn. Rd.**
0(0) 0(0) 89(78) ← 83(75) ← 67(60) 89(78) → 0(0)	83(75) ← 150(135) 0(0) → 179(156) ← 0(0) 0(0) 71(62)

LEGEND:

- (#) = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR TURN VOLUME W/ RIRO AT CHERRY ST./BUNDY CANYON RD.
- 10.0 = VEHICLES PER DAY (1000'S) W/ RIRO AT CHERRY ST./BUNDY CANYON RD.

5. Cherry St. / Bundy Cyn. Rd.	6. Sellers Rd. / Bundy Cyn. Rd.	7. Monte Vista Dr. / Bundy Cyn. Rd.	8. Cyn. Ranch Rd. / Bundy Cyn. Rd.	9. Orange St. / Canyon Dr.	10. Cherry St. / N. Dwy.
258(242) ← 370(343) ← -25(-31)	18(16) 74(77) ← 0(0) ← 54(47)	← 36(31) ← 0(0)	18(16) 0(0) ← 0(0) ← 18(16)	17(15) 17(15) 17(15) ← 18(16) ← 0(0) ← 0(0)	21(19) 15(13)
250(218) →	274(250) → -24(-32) →	33(30) → 17(15) → 18(16) 0(0)	17(15) → 17(15) →	18(16) → 0(0) → 0(0) 0(0) 18(16) 0(0)	63(63) → 132(121) → 187(173) 61(59)
11. Cherry St. / S. Dwy.	**12. Cherry St. / Walte St.**	**13. Sellers Rd. / Walte St.**	**14. Orange St. / Lemon St.**	**15. Almond St. / Lemon St.**	**16. Almond St. / Walte St.**
18(16) 129(118)	0(0) 0(0) 0(0) ← 0(0) ← 0(0) ← 0(0)	0(0) → 18(16)	0(0) 0(0) 0(0) ← 0(0) ← 0(0) ← 18(16)	0(0) 0(0) 0(0) ← 0(0) ← 17(15) ← 0(0)	0(0) 0(0) 0(0) ← 0(0) ← 17(15) ← 0(0)
64(62) → 130(123) → 187(173) 184(170)	0(0) → 0(0) → 36(31) → 33(30) 0(0) 67(60)	17(15) → 50(45) → 0(0) 0(0)	0(0) → 0(0) → 18(16) → 17(15) 0(0) 17(15)	0(0) → 18(16) → 0(0) → 0(0) 0(0) 0(0)	0(0) → 18(16) → 0(0) → 0(0) 0(0) 0(0)

B. Cumulative Traffic (Background)

1. Method of Projection

To assess Existing Plus Ambient Plus Project Plus Cumulative traffic conditions, project traffic is combined with existing traffic, area-wide growth and other future developments which are approved or being processed concurrently in the study area. Developments which are being processed concurrently in the study area have been provided by the City of Wildomar staff.

2. Other Approved or Proposed Development Projects

The cumulative developments have been included along with the land use associated with each project. The location of the cumulative projects provided by the County are shown on Figure 4-J.

3. Other Approved Projects Trip Generation

Tables 4-3 and 4-4 presents the cumulative development land uses/trip generation rates and trip generation summary, respectively. As presented in Table 4-4 cumulative developments are projected to generate a total of approximately 28,814 trip-ends per day with 1,898 vehicle trips per hour during the AM peak hour and 2,769 vehicle trips per hour during the PM peak hour.

4. Total Background Peak Hour Turning Movement Volumes

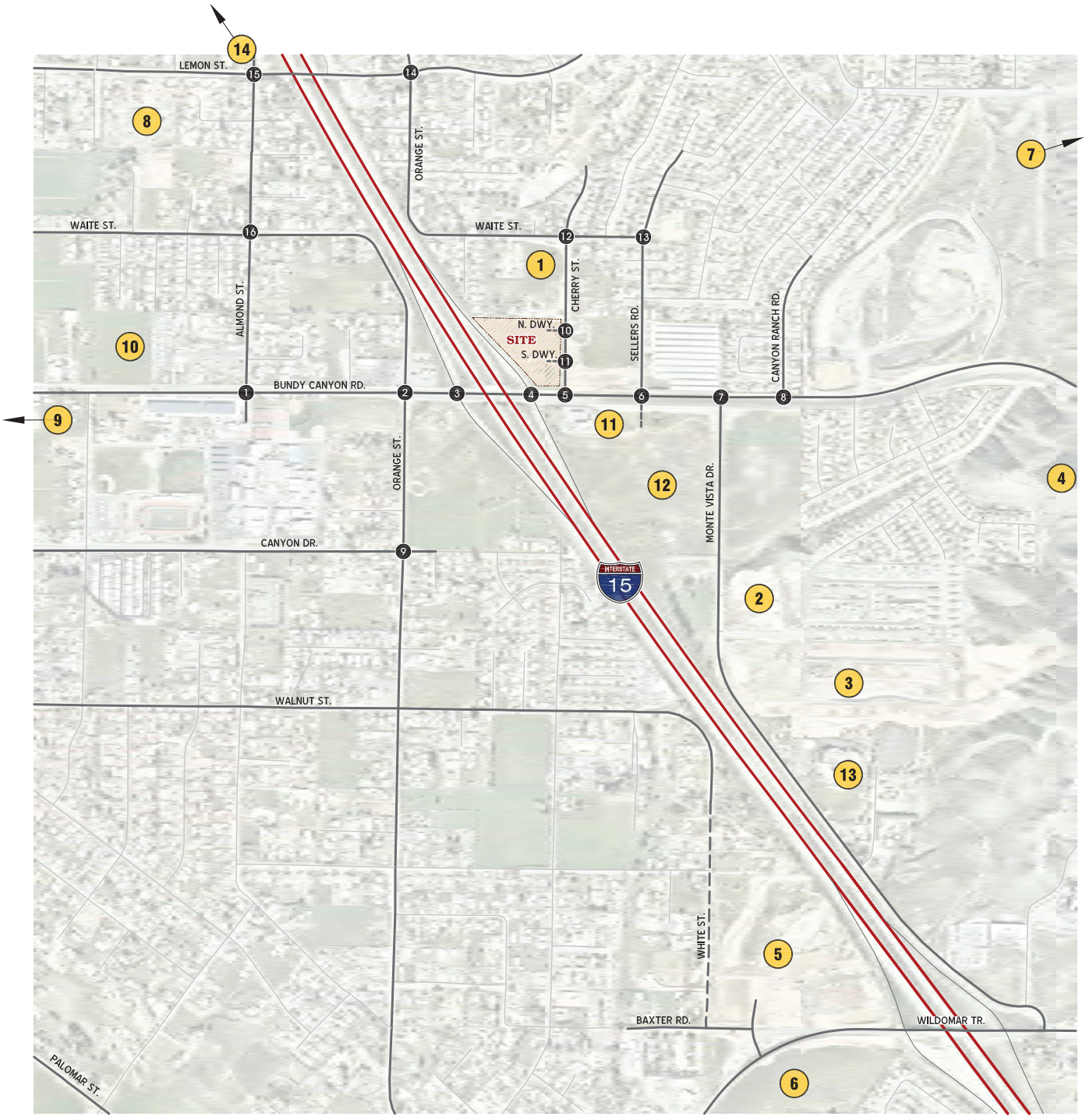
Based on the identified trip distribution for the cumulative development on arterial highways throughout the study area, cumulative development AM and PM peak hour intersection turning movement volumes are shown on Figure 4-K.

Existing plus Project (E+P) AM and PM peak hour intersection turning movement volumes are shown on Figures 4-L to 4-N.

Existing plus Ambient plus Project (EAP) AM and PM peak hour intersection turning movement volumes are shown on Figures 4-O to 4-Q.

Existing plus Ambient plus Project plus Cumulative (EAPC) AM and PM peak hour intersection turning movement volumes are shown on Figures 4-R to 4-T.

FIGURE 4-J
CUMULATIVE DEVELOPMENTS LOCATION MAP



LEGEND:

16 = INTERSECTION ID

14 = CUMULATIVE DEVELOPMENT ID (SEE TABLE 4-4 FOR REFERENCE)

N

TABLE 4-3

CUMULATIVE DEVELOPMENT TRIP GENERATION SUMMARY

LAND USE	ITE CODE	UNITS[2]	PEAK HOUR						DAILY
			AM			PM			
			IN	OUT	TOTAL	IN	OUT	TOTAL	
Single Family Detached	210	DU	0.18	0.52	0.70	0.59	0.35	0.94	9.43
Multifamily Housing (Low-Rise)	220	DU	0.10	0.30	0.40	0.32	0.19	0.51	6.74
Affordable Housing	223	DU	0.10	0.26	0.36	0.27	0.19	0.46	4.81
Hotel	310	RM	0.26	0.20	0.46	0.30	0.29	0.59	7.99
Campground/Recreational Vehicle Park	416	SPACES	0.08	0.13	0.21	0.18	0.09	0.27	2.70
Church	560	SEATS	0.04	0.03	0.07	0.05	0.06	0.10	0.90
Day Care Center	565	STU	0.41	0.37	0.78	0.37	0.42	0.79	4.09
General Office Building	710	TSF	1.34	0.18	1.52	0.24	1.20	1.44	10.84
Medical-Dental Office	720	TSF	2.45	0.65	3.10	1.18	2.75	3.93	36.00
Business Park	770	TSF	1.15	0.20	1.35	0.32	0.90	1.22	12.44
Shopping Center (>150k)	820	TSF	0.52	0.32	0.84	1.63	1.77	3.40	37.01
Shopping Center (40-150k)	821	TSF	1.07	0.66	1.73	2.54	2.65	5.19	67.52
Shopping Center (40-150k)	822	TSF	1.42	0.94	2.36	3.30	3.29	6.59	54.45
Fast-Food Restaurant w/ Drive-Through Window	934	TSF	22.75	21.86	44.61	17.18	15.85	33.03	467.48

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

[2] TSF = Thousand Square Feet; DU = Dwelling Units; STU = Students

TABLE 4-4

CUMULATIVE DEVELOPMENT TRIP GENERATION SUMMARY

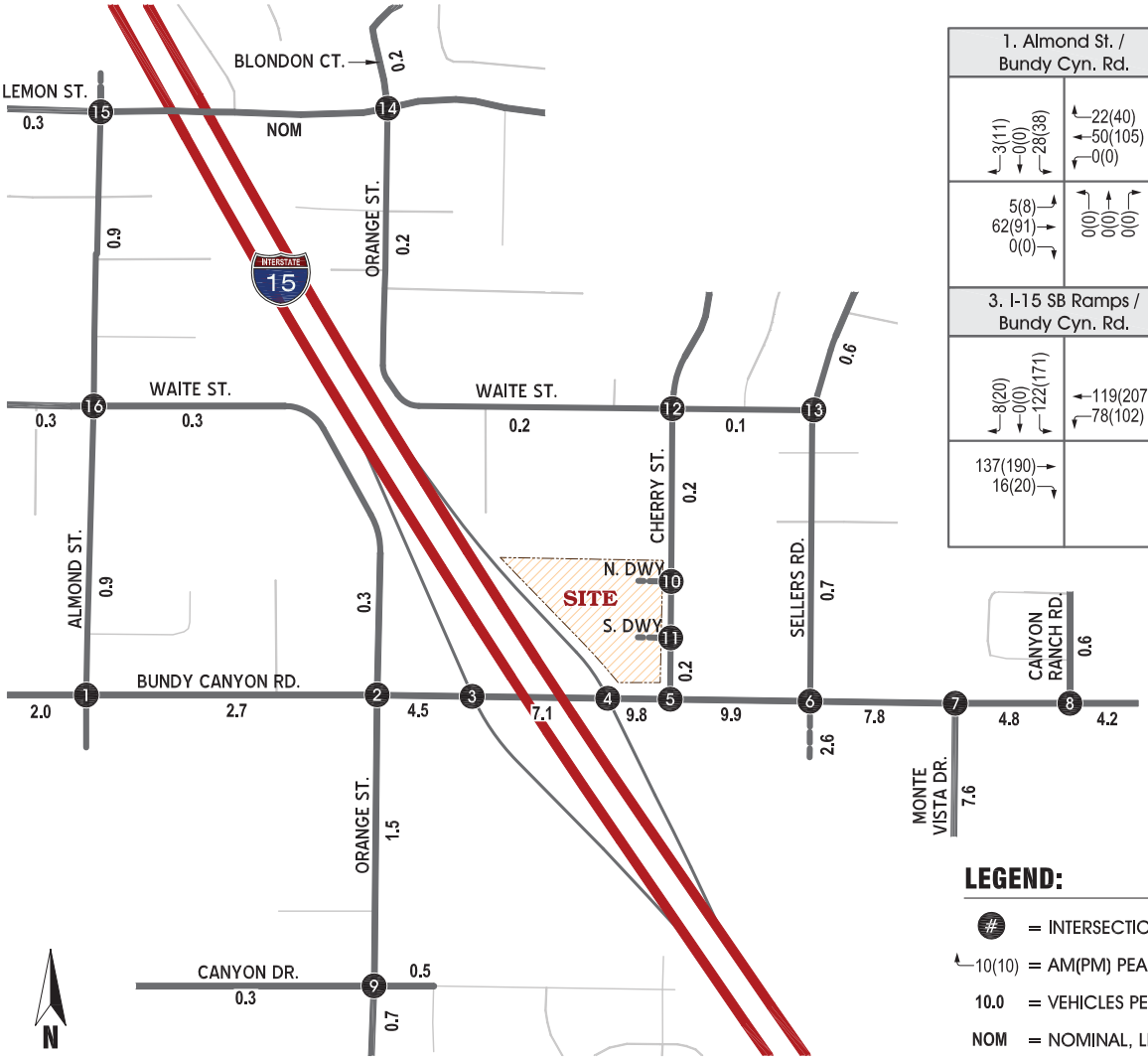
ID	PROJECT NAME	LAND USE	QUANTITY [1]	PEAK HOUR AM IN	PEAK HOUR AM OUT	PEAK HOUR AM TOTAL	PEAK HOUR PM IN	PEAK HOUR PM OUT	PEAK HOUR PM TOTAL	DAILY
1	TTM No. 38525 Subdivision (Cherry/Waite St Subdivision)	Single Family Detached	10 DU	2	5	7	6	4	10	94
2	Monte Vista II Townhome Project (south of Bundy Cyn. & east of Monte Vista Dr.)	Multifamily Housing (Low-Rise)	62 DU	6	19	25	20	12	32	418
3	Summerhill Community Phase 2 (The Village at Monte Vista Mixed Use) (south of Bundy Cyn. & east of Monte Vista Dr.)	Single Family Detached	80 DU	14	42	56	47	28	75	754
		Business Park	136 TSF	156	27	183	44	122	166	1,692
	Subtotal			170	69	239	91	150	241	2,446
4	Bundy Cyn. Resort Apts. (south Bundy Cyn. & west of Oak Creek Rd.)	Multifamily Housing (Low-Rise)	140 DU	14	42	56	45	27	72	944
5	Baxter Village Residential Project (north of Clinton Keith Rd. & west of I-15 Fwy.)	Single Family Detached	67 DU	12	35	47	40	23	63	632
		Multifamily Housing (Low-Rise)	204 DU	20	61	81	65	39	104	1,375
		Medical-Dental Office	84 TSF	206	55	261	99	231	330	3,024
		Hotel	102 RM	27	20	47	31	30	61	815
		Subtotal		265	171	436	235	323	558	5,846
		Internal Interaction (5%)		*(11)*	*(11)*	*(22)*	*(14)*	*(14)*	*(28)*	*(292)*
	Subtotal			254	160	414	221	309	530	5,554
6	Wildomar Trail Mixed-Use Project (south of Clinton Keith Rd. & west of I-15 Fwy.)	Multifamily Housing (Low-Rise)	109 DU	11	33	44	35	21	56	735
		Shopping Center (40-150k)	41.609 TSF	45	27	72	106	110	216	2,809
		General Office Building	72 TSF	96	13	109	17	86	103	780
		Subtotal		152	73	225	158	217	375	4,324
		Internal Interaction (10%)		*(11)*	*(11)*	*(22)*	*(19)*	*(19)*	*(38)*	*(432)*
		Shopping Center Pass-By (10%)		*(3)*	*(3)*	*(6)*	*(11)*	*(11)*	*(22)*	*(281)*
	Subtotal			138	59	197	128	187	315	3,611
7	Oak Creek Canyon Residential Proj. (Bundy Cyn. Rd. & west of Sunshine Av.)	Single Family Detached	275 DU	50	143	193	162	96	258	2,593
8	St. Frances of Rome Church	Proposed New Church	1,200 SEATS	50	34	84	54	66	120	1,080
		Existing Church (to be converted into multi-purpose building)	897 SEATS	(38)	(25)	(63)	(40)	(49)	(89)	(807)
	Subtotal			12	9	21	14	17	31	273
9	Wildomar Shooting Academy[3]	Shooting Range	34.702 TSF	-	-	-	38	42	80	290
10	Bundy Canyon Super Storage RV & Boat Storage	Campground/Recreational Vehicle Park	419 Spaces	34	54	88	75	38	113	1,131
11	Bundy Canyon Plaza	Fast-Food Restaurant w/ Drive-Through Window	7.859 TSF	179	172	351	135	125	260	3,674
		Shopping Center (<40k)	17.1 TSF	24	16	40	56	56	112	930
		Pass-By		*(26)*	*(26)*	*(52)*	*(19)*	*(19)*	*(38)*	*(551)*
	Subtotal			177	162	339	172	162	334	4,053
12	Retail Building (previously Walmart)	Shopping Center (>150k)	193.792 TSF	101	62	163	316	343	659	7,172
		Shopping Center Pass-By (15%)		*(12)*	*(11)*	*(23)*	*(50)*	*(49)*	*(99)*	*(1,076)*
	Subtotal			89	51	140	266	294	560	6,096
13	Cornerstone ChurchPreschool & Admin Bldg.	Day Care Center	170 STU	70	63	133	63	71	134	695
14	Wildomar Cottages	Affordable Housing	128 DU	13	33	46	35	24	59	616
Total Cumulative Trips				1,029	869	1,898	1,336	1,433	2,769	28,814

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

[2] TSF = Thousand Square Feet; DU = Dwelling Units; STU = Students

[3] Source: Initial Study & Mitigated Negative Declaration Wildomar Shooting Range/Academy Project (PA No. 19-0093), November 2019. Prepared by PlaceWorks.

FIGURE 4-K
CUMULATIVE DEVELOPMENTS ONLY TRAFFIC VOLUMES



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
3(11) 0(0) 28(38)	22(40) 50(105) 0(0)	0(0) 0(0) 10(11)	10(10) 72(145) 45(72)
5(8) 62(91) 0(0)	0(0) 0(0) 0(0)	0(0) 90(129) 0(0)	0(0) 0(0) 53(70)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
8(20) 0(0) 122(171)	119(207) 78(102)		126(161) 187(284)
137(190) 16(20)		11(15) 248(346)	10(25) 0(0) 62(117)

LEGEND:

- (#) = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR TURN VOLUME
- 10.0 = VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.
3(3) 0(0)	9(10) 310(442)	0(0) 18(17) 17(19)	7(24) 176(312) 40(36)		122(91) 85(98)	25(27) 0(0)	0(0) 182(162)	17(15) 19(34) 11(23)	13(22) 0(0) 0(0)	Future Intersection
1(4) 309(459)		0(0) 192(347) 27(26)	143(140) 8(8) 8(8)	55(135) 162(239)	101(281) 49(125)	15(32) 89(228)		14(18) 0(0) 0(0)	0(0) 26(30) 0(0)	
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**
Future Intersection		0(0) 0(0) 0(0)	0(0) 0(0) 0(0)	0(0) 25(27)		0(0) 9(9) 0(0)	0(0) 0(0) 0(0)	0(0) 20(36) 0(0)	0(0) 1(1) 0(0)	0(0) 31(50) 0(0)	0(0) 10(10) 0(0)
		0(0) 9(9) 0(1)	9(9) 0(0) 1(1)	0(0) 10(9)	0(0) 15(32)	0(0) 0(0) 0(1)	1(1) 8(8) 0(0)	0(0) 0(1) 11(13)	9(14) 19(34) 0(0)	0(0) 10(11) 0(0)	0(0) 28(48) 0(0)

FIGURE 4-L
EXISTING PLUS PROJECT TRAFFIC VOLUMES
(WITH FULL ACCESS AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
39(15) 34(1) 80(47)	40(46) 314(512) 62(6)	7(19) 45(30) 197(127)	80(158) 399(547) 338(237)
21(9) 390(434) 29(7)	23(10) 32(6) 65(15)	24(22) 473(453) 23(24)	9(15) 56(40) 391(233)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
252(196) 7(2) 362(488)	609(801) 396(247)		396(299) 726(614)
535(530) 525(282)		217(134) 681(884)	279(434) 0(3) 262(422)

LEGEND:

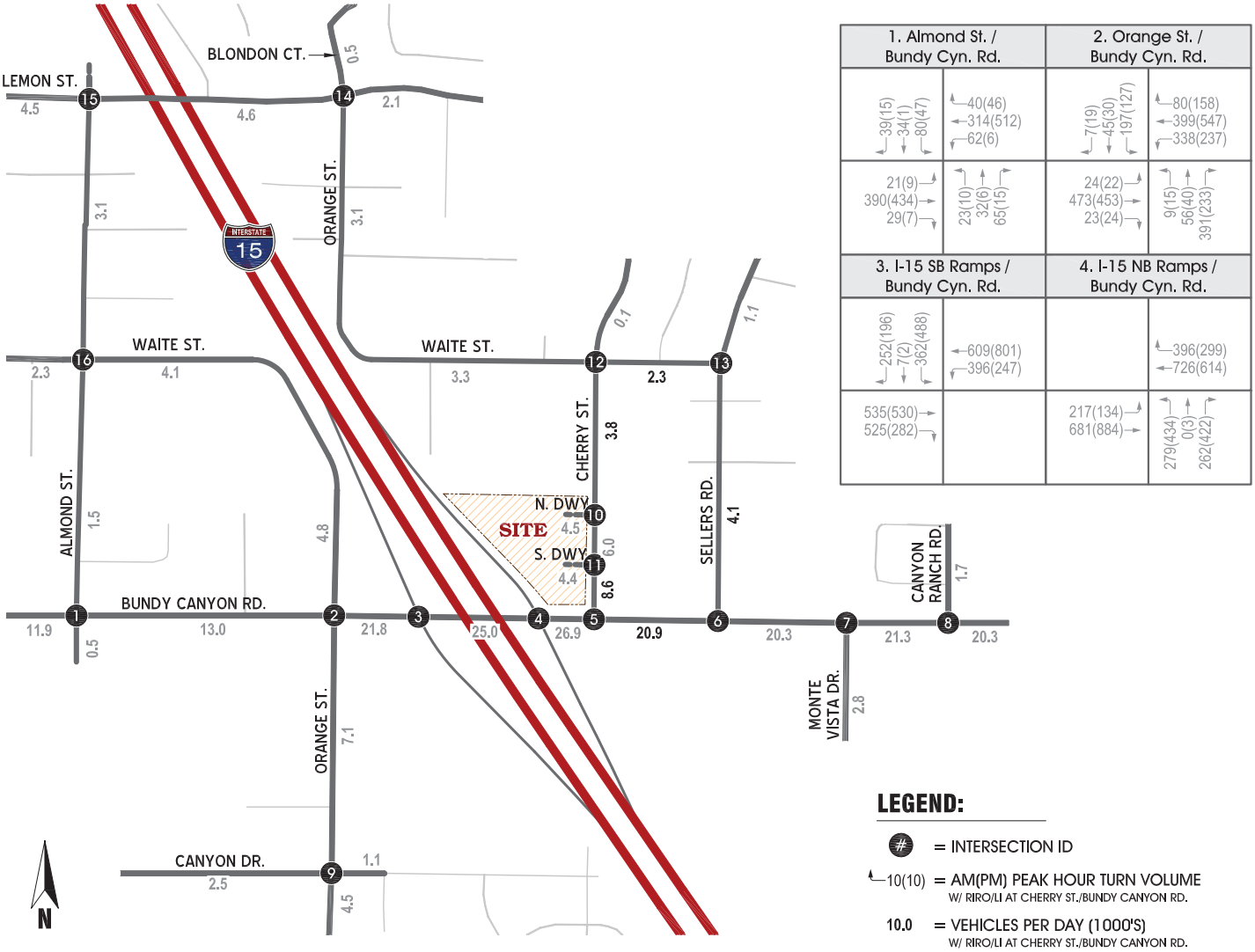
(#) = INTERSECTION ID

10(10) = AM(PM) PEAK HOUR TURN VOLUME

10.0 = VEHICLES PER DAY (1000'S)

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
323(289) 104(97)	102(114) 799(625)	110(75) 45(34)	26(39) 812(614)		785(618) 170(50)	87(40) 12(9)	8(18) 868(629)	270(77) 118(176) 26(45)	53(34) 9(4) 2(1)	21(19) 93(65)	
317(315) 626(991)		70(137) 618(1004)		553(999) 110(39)	53(35) 77(106)	43(71) 588(1034)		216(89) 2(7) 74(17)	152(11) 188(170) 4(2)	18(17) 177(167)	187(173) 65(99)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 252(216)		3(1) 4(3) 4(1)	3(1) 88(45) 24(15)	18(8) 47(24)		18(9) 12(3) 1(1)	1(1) 84(44) 33(28)	1(1) 3(1) 1(1)	1(1) 130(96) 149(71)	3(8) 134(39) 111(71)	124(107) 50(88) 8(1)
19(16) 175(169)	187(173) 233(256)	1(1) 77(41) 75(64)	48(117) 3(5) 3(25)	19(6) 62(39)	70(45) 27(53)	12(13) 36(61) 104(89)	125(85) 2(13) 22(40)	1(1) 100(156) 77(52)	77(70) 2(1) 153(59)	11(2) 64(65) 14(9)	17(15) 80(30) 6(8)

FIGURE 4-M
EXISTING PLUS PROJECT TRAFFIC VOLUMES
(WITH RIRO/LI AT CHERRY STREET/BUNDY CANYON ROAD)



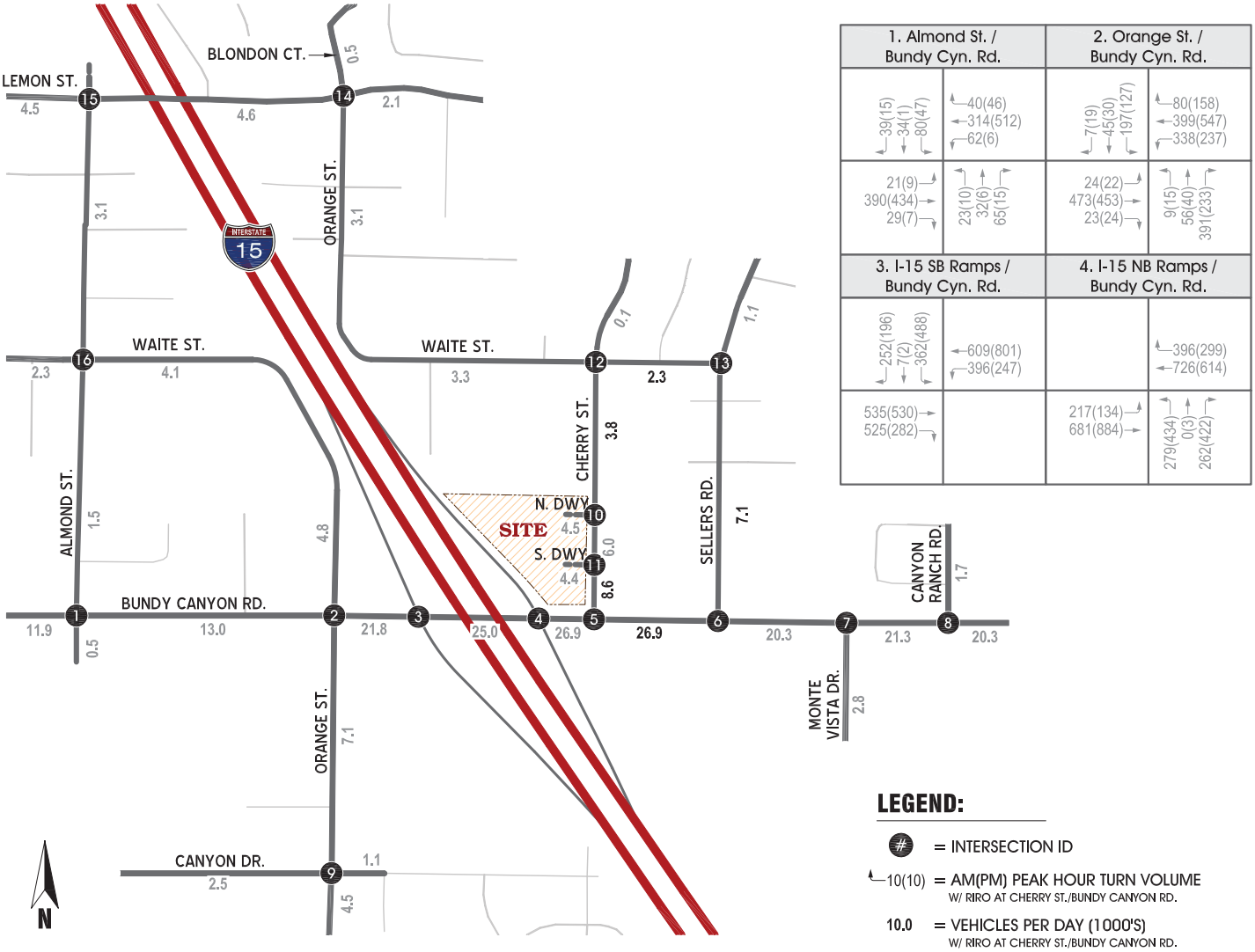
LEGEND:

- (#) = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR TURN VOLUME W/ RIRO/LI AT CHERRY ST./BUNDY CANYON RD.
- 10.0 = VEHICLES PER DAY (1000'S) W/ RIRO/LI AT CHERRY ST./BUNDY CANYON RD.

5. Cherry St. / Bundy Cyn. Rd.	6. Sellers Rd. / Bundy Cyn. Rd.	7. Monte Vista Dr. / Bundy Cyn. Rd.	8. Cyn. Ranch Rd. / Bundy Cyn. Rd.	9. Orange St. / Canyon Dr.	10. Cherry St. / N. Dwy.
323(289) 102(114) 799(625)	110(75) 132(116) 26(39) 812(614)	785(618) 170(50)	87(40) 12(9) 8(18) 868(629)	270(77) 118(176) 26(45) 53(34) 9(4) 2(1)	21(19) 80(60)
317(315) 626(991)	53(122) 531(922)	553(999) 110(39) 53(35) 77(106)	43(71) 588(1034)	216(89) 2(7) 74(17) 152(11) 188(170) 4(2)	63(63) 132(121) 187(173) 110(145)

11. Cherry St. / S. Dwy.	12. Cherry St. / Walte St.	13. Sellers Rd. / Walte St.	14. Orange St. / Lemon St.	15. Almond St. / Lemon St.	16. Almond St. / Walte St.
18(16) 194(165)	3(1) 4(3) 4(1) 3(1) 88(45) 24(15)	18(8) 47(24)	18(9) 12(3) 1(1) 1(1) 84(44) 33(28)	1(1) 3(1) 1(1) 1(1) 130(96) 149(71)	3(8) 134(39) 111(71) 124(107) 50(88) 8(1)
64(62) 130(123) 187(173) 233(256)	1(1) 77(41) 75(64) 48(117) 3(5) 70(85)	36(21) 112(84) 70(45) 10(38)	12(13) 36(61) 104(89) 125(85) 2(13) 22(40)	1(1) 100(156) 77(52) 77(70) 2(1) 153(59)	11(2) 64(65) 14(9) 17(15) 80(30) 6(8)

FIGURE 4-N
EXISTING PLUS PROJECT TRAFFIC VOLUMES
(WITH RIRO AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
39(15) 34(1) 80(47)	40(46) 314(512) 62(6)	7(19) 45(30) 197(127)	80(158) 399(547) 338(237)
21(9) 390(434) 29(7)	23(10) 32(6) 65(15)	24(22) 473(453) 23(24)	9(15) 56(40) 391(233)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
252(196) 7(2) 362(488)	609(801) 396(247)		396(299) 726(614)
535(530) 525(282)		217(134) 681(884)	279(434) 0(3) 262(422)

LEGEND:

(#) = INTERSECTION ID

10(10) = AM(PM) PEAK HOUR TURN VOLUME
W/ RIRO AT CHERRY ST./BUNDY CANYON RD.

10.0 = VEHICLES PER DAY (1000'S)
W/ RIRO AT CHERRY ST./BUNDY CANYON RD.

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
323(289)	419(429) 799(625)	110(75) 132(116)	26(39) 812(614)		785(618) 170(50)	87(40) 12(9)	8(18) 868(629)	270(77) 118(176) 26(45)	53(34) 9(4) 2(1)	21(19) 80(60)	
943(1306)		370(437) 531(922)		553(999) 110(39)	53(35) 77(106)	43(71) 588(1034)		216(89) 2(7) 74(17)	152(11) 188(170) 4(2)	63(63) 132(121)	187(173) 110(145)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 194(165)		3(1) 4(3) 4(1)	3(1) 88(45) 24(15)	18(8) 47(24)		18(9) 12(3) 1(1)	1(1) 84(44) 33(28)	1(1) 3(1) 1(1)	1(1) 130(96) 149(71)	3(8) 134(39) 111(71)	124(107) 50(88) 8(1)
64(62) 130(123)	187(173) 233(256)	1(1) 77(41) 75(64)	48(117) 3(5) 70(85)	36(21) 112(84)	70(45) 10(38)	12(13) 36(61) 104(89)	125(85) 2(13) 22(40)	1(1) 100(156) 77(52)	77(70) 2(1) 153(59)	11(2) 64(65) 14(9)	17(15) 80(30) 6(8)

FIGURE 4-O
EXISTING PLUS AMBIENT PLUS PROJECT (2025) TRAFFIC VOLUMES
(WITH FULL ACCESS AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
41(16) 35(1) 83(49)	42(48) 326(532) 65(6)	7(20) 47(31) 204(131)	83(164) 414(568) 350(245)
22(9) 405(451) 30(7)	24(10) 33(6) 68(16)	25(23) 491(471) 24(25)	9(16) 58(42) 405(241)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
262(204) 7(2) 373(505)	630(830) 409(255)		409(308) 749(633)
553(548) 546(293)		226(139) 701(913)	290(452) 0(3) 270(437)

LEGEND:

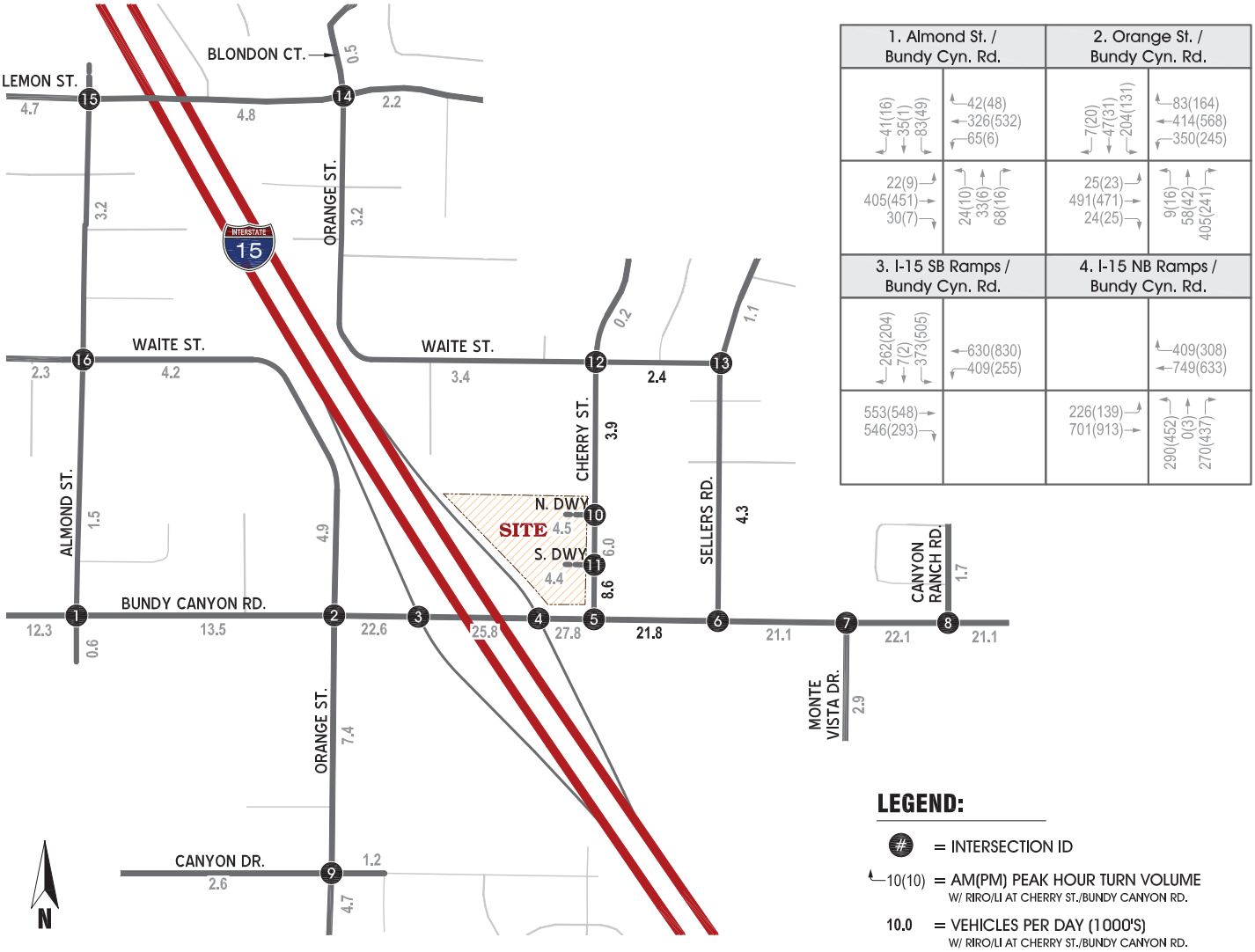
(#) = INTERSECTION ID

10(10) = AM(PM) PEAK HOUR TURN VOLUME

10.0 = VEHICLES PER DAY (1000'S)

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
326(291) 105(97)	102(115) 832(652)	114(77) 47(35)	27(41) 843(637)		815(642) 177(52)	90(41) 12(9)	8(19) 902(654)	280(80) 122(183) 26(46)	54(35) 9(4) 2(1)	21(19) 96(67)	
319(318) 652(1032)		72(142) 641(1043)		574(1038) 114(40)	54(36) 80(110)	44(73) 611(1075)		224(92) 2(7) 77(18)	158(11) 195(176) 4(2)	18(17) 177(167)	187(173) 67(102)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 255(218)		3(1) 4(3) 4(1)	3(1) 92(47) 25(16)	19(8) 48(24)		19(9) 12(3) 1(1)	1(1) 87(46) 34(28)	1(1) 3(1) 1(1)	1(1) 135(99) 155(74)	3(8) 139(41) 115(74)	129(111) 51(91) 8(1)
19(16) 175(169)	187(173) 235(259)	1(1) 80(43) 77(65)	49(121) 3(5) 3(26)	20(6) 65(41)	73(47) 27(55)	12(14) 37(63) 107(92)	129(88) 2(14) 22(41)	1(1) 103(162) 80(54)	80(73) 2(1) 159(61)	11(2) 66(67) 15(9)	18(16) 83(31) 6(8)

FIGURE 4-P
EXISTING PLUS AMBIENT PLUS PROJECT (2025) TRAFFIC VOLUMES
(WITH RIRO/LI AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
41(16) 35(1) 83(49)	42(48) 326(532) 65(6)	7(20) 47(31) 204(131)	83(164) 414(568) 350(245)
22(9) 405(451) 30(7)	24(10) 33(6) 68(16)	25(23) 491(471) 24(25)	9(16) 58(42) 405(241)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
262(204) 7(2) 373(505)	630(830) 409(255)		409(308) 749(633)
553(548) 546(293)		226(139) 701(913)	290(452) 0(3) 270(437)

LEGEND:

(#) = INTERSECTION ID

10(10) = AM(PM) PEAK HOUR TURN VOLUME
W/ RIRO/LI AT CHERRY ST./BUNDY CANYON RD.

10.0 = VEHICLES PER DAY (1000'S)
W/ RIRO/LI AT CHERRY ST./BUNDY CANYON RD.

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
326(291)	102(115) 832(652)	114(77) 134(118)	27(41) 843(637)		815(642) 177(52)	90(41) 12(9)	8(19) 902(654)	280(80) 122(183) 26(46)	54(35) 9(4) 2(1)	21(19) 83(62)	
319(318) 652(1032)		55(127) 553(961)		574(1038) 114(40)	54(36) 80(110)	44(73) 611(1075)		224(92) 2(7) 77(18)	158(11) 195(176) 4(2)	63(63) 132(121)	187(173) 112(148)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 197(167)		3(1) 4(3) 4(1)	3(1) 92(47) 25(16)	19(8) 48(24)		19(9) 12(3) 1(1)	1(1) 87(46) 34(28)	1(1) 3(1) 1(1)	1(1) 135(99) 155(74)	3(8) 139(41) 115(74)	129(111) 51(91) 8(1)
64(62) 130(123)	187(173) 235(259)	1(1) 80(43) 77(65)	49(121) 3(5) 70(86)	37(21) 115(86)	73(47) 10(40)	12(14) 37(63) 107(92)	129(88) 2(14) 22(41)	1(1) 103(162) 80(54)	80(73) 2(1) 159(61)	11(2) 66(67) 15(9)	18(16) 83(31) 6(8)

FIGURE 4-Q
EXISTING PLUS AMBIENT PLUS PROJECT (2025) TRAFFIC VOLUMES
(WITH RIRO AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
41(16) 35(1) 83(49)	42(48) 326(532) 65(6)	7(20) 47(31) 204(131)	83(164) 414(568) 350(245)
22(9) 405(451) 30(7)	24(10) 33(6) 68(16)	25(23) 491(471) 24(25)	9(16) 58(42) 405(241)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
262(204) 7(2) 373(505)	630(830) 409(255)		409(308) 749(633)
553(548) 546(293)		226(139) 701(913)	290(452) 0(3) 270(437)

LEGEND:

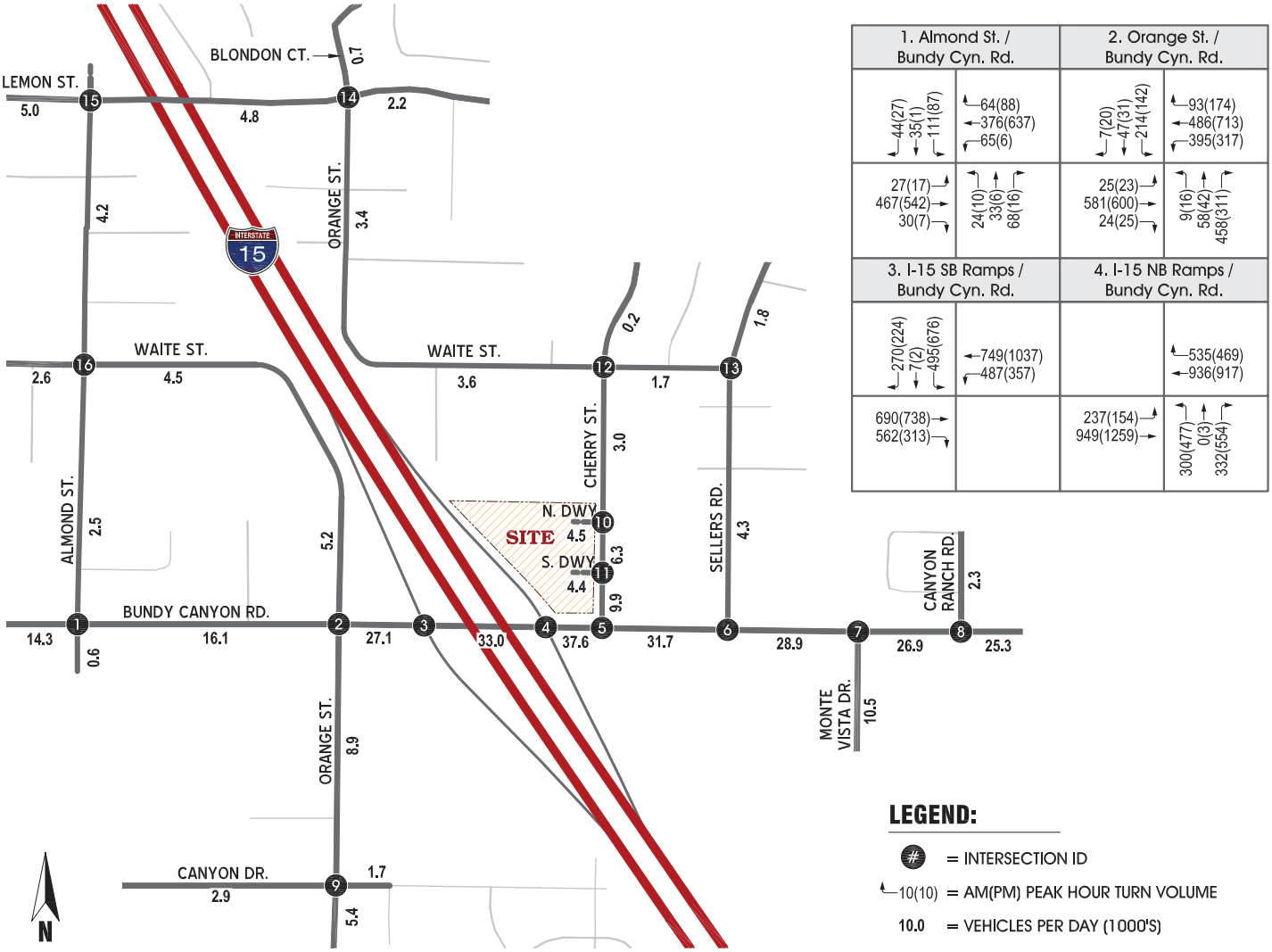
(#) = INTERSECTION ID

10(10) = AM(PM) PEAK HOUR TURN VOLUME
W/ RIRO AT CHERRY ST./BUNDY CANYON RD.

10.0 = VEHICLES PER DAY (1000'S)
W/ RIRO AT CHERRY ST./BUNDY CANYON RD.

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
326(291)	421(432) 832(652)	114(77) 134(118)	27(41) 843(637)	815(642) 177(52)		90(41) 12(9)	8(19) 902(654)	280(80) 122(183) 26(46)	54(35) 9(4) 2(1)	21(19) 83(62)	
971(1350)		374(445) 553(961)		574(1038) 114(40)	54(36) 80(110)	44(73) 611(1075)		224(92) 2(7) 77(18)	158(11) 195(176) 4(2)	63(63) 132(121)	187(173) 112(148)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 197(167)		3(1) 4(3) 4(1)	3(1) 92(47) 25(16)	19(8) 48(24)		19(9) 12(3) 1(1)	1(1) 87(46) 34(28)	1(1) 3(1) 1(1)	1(1) 135(99) 155(74)	3(8) 139(41) 115(74)	129(111) 51(91) 8(1)
64(62) 130(123)	187(173) 235(259)	1(1) 80(43) 77(65)	49(121) 3(5) 70(86)	37(21) 115(86)	73(47) 10(40)	12(14) 37(63) 107(92)	129(88) 2(14) 22(41)	1(1) 103(162) 80(54)	80(73) 2(1) 159(61)	11(2) 66(67) 15(9)	18(16) 83(31) 6(8)

FIGURE 4-R
EAPC (2025) TRAFFIC VOLUMES
(WITH FULL ACCESS AT CHERRY STREET/BUNDY CANYON ROAD)



1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
44(27) 35(1) 111(87)	64(88) 376(637) 65(6)	7(20) 47(31) 214(142)	93(174) 486(713) 395(317)
27(17) 467(542) 30(7)	24(10) 33(6) 68(16)	25(23) 581(600) 24(25)	9(16) 58(42) 458(311)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
270(224) 7(2) 495(676)	749(1037) 487(357)		535(469) 936(917)
690(738) 562(313)		237(154) 949(1259)	300(477) 0(3) 332(554)

LEGEND:

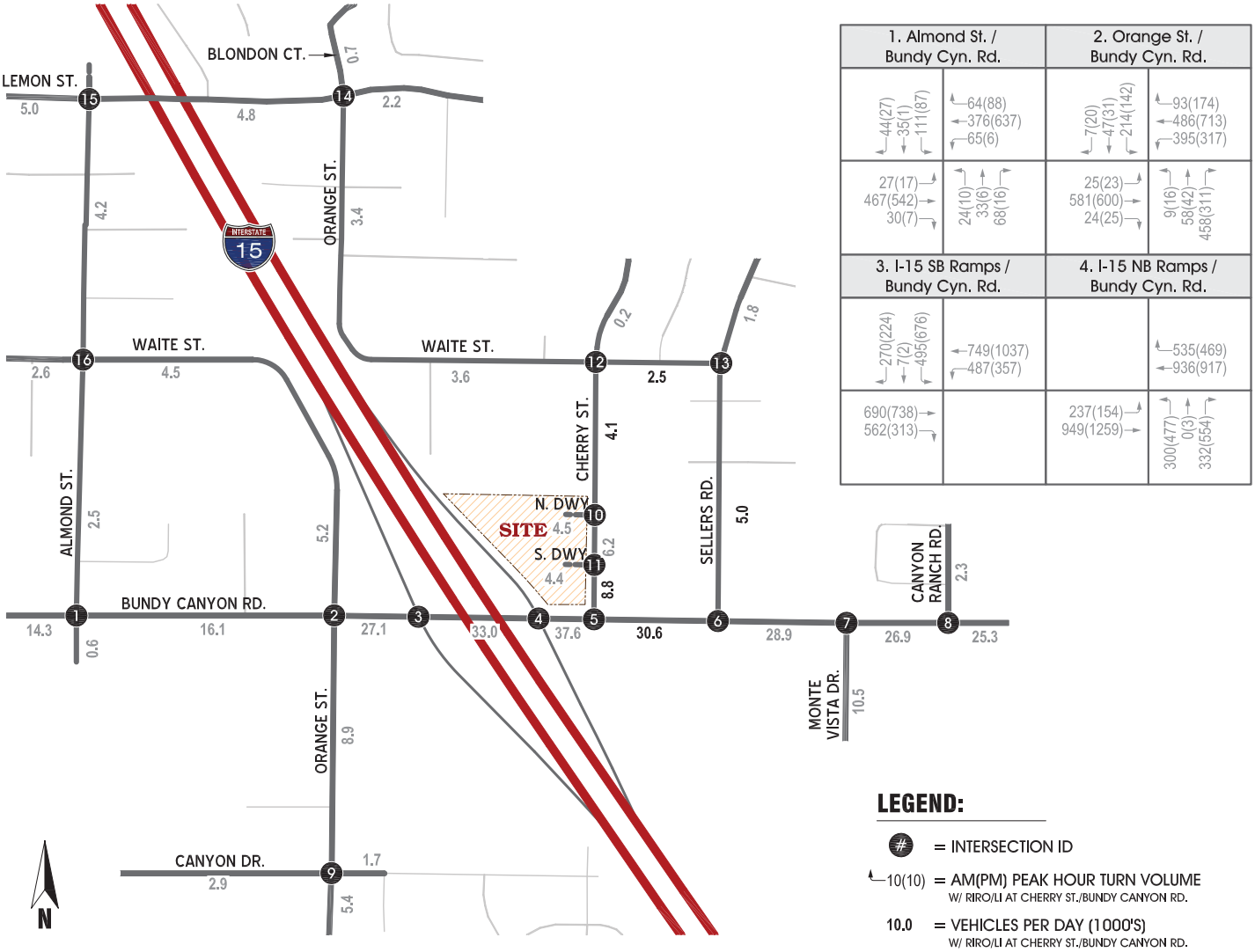
(#) = INTERSECTION ID

10(10) = AM(PM) PEAK HOUR TURN VOLUME

10.0 = VEHICLES PER DAY (1000'S)

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
329(294) 105(97)	111(125) 1142(1094)	114(77) 64(54)	34(65) 1032(959)	937(733) 262(150)		115(68) 12(9)	8(19) 1084(816)	297(95) 141(217) 37(69)	67(57) 9(4) 2(1)	21(19) 99(70)	
320(322) 961(1491)		72(142) 833(1390)		629(1173) 276(279)	155(317) 129(235)	59(105) 700(1303)		238(110) 2(7) 77(18)	158(11) 221(206) 4(2)	18(17) 177(167)	187(173) 77(116)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 258(221)		3(1) 4(3) 4(1)	3(1) 92(47) 25(16)	19(8) 73(51)		19(9) 21(12) 1(1)	1(1) 87(46) 34(28)	1(1) 23(37) 1(1)	1(1) 136(100) 155(74)	3(8) 170(91) 115(74)	129(111) 61(101) 8(1)
19(16) 175(169)	187(173) 245(273)	1(1) 89(52) 77(66)	58(130) 3(5) 4(27)	20(6) 75(50)	73(47) 42(87)	12(14) 37(63) 107(93)	130(89) 10(22) 22(41)	1(1) 103(163) 91(67)	89(87) 21(35) 159(61)	11(2) 76(78) 15(9)	18(16) 111(79) 6(8)

FIGURE 4-S
EAPC (2025) TRAFFIC VOLUMES
(WITH RIRO/LI AT CHERRY STREET/BUNDY CANYON ROAD)



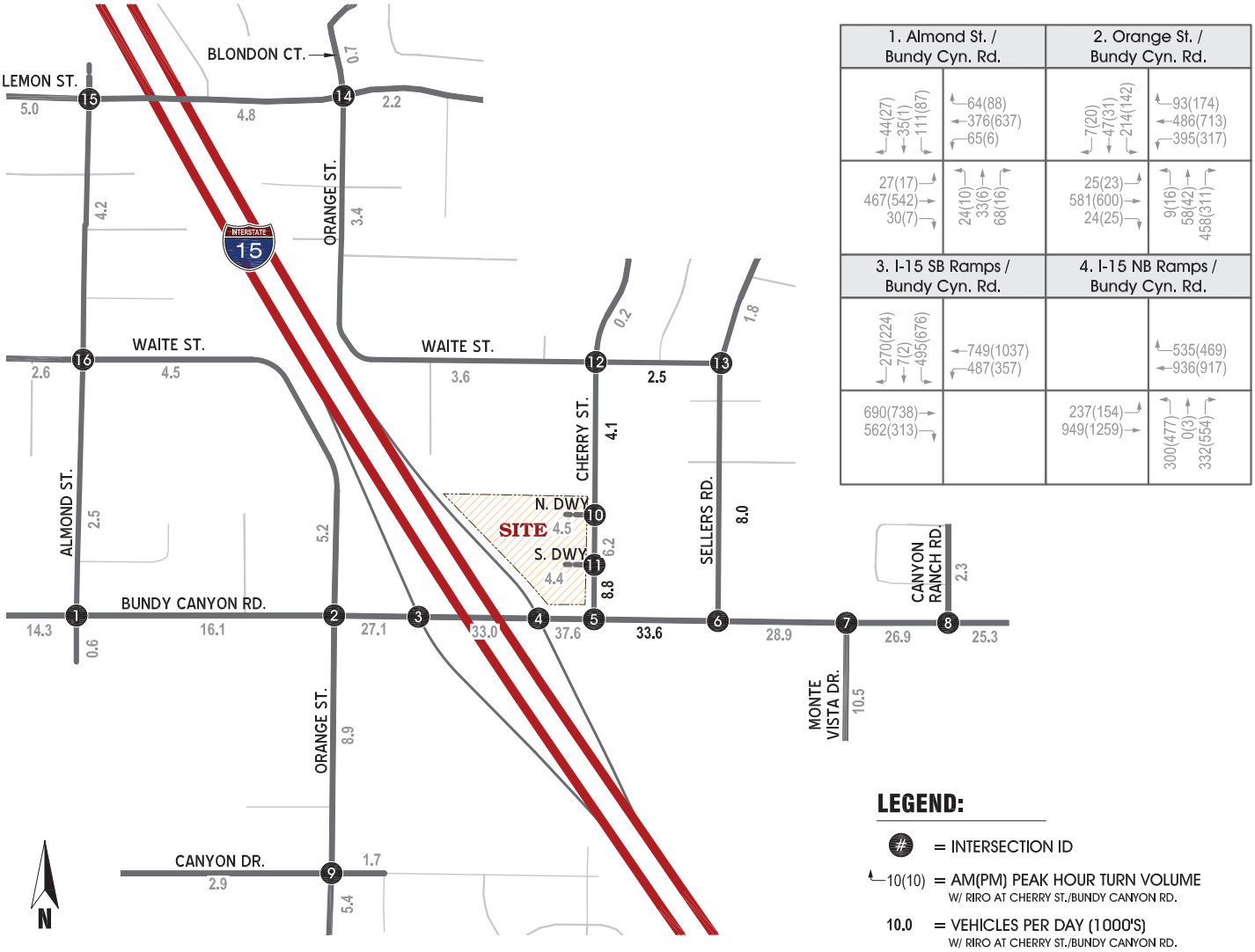
1. Almond St. / Bundy Cyn. Rd.		2. Orange St. / Bundy Cyn. Rd.	
44(27) 35(1) 111(87)	64(88) 376(637) 65(6)	7(20) 47(31) 214(142)	93(174) 486(713) 395(317)
27(17) 467(542) 30(7)	24(10) 33(6) 68(16)	25(23) 581(600) 24(25)	9(16) 58(42) 458(311)
3. I-15 SB Ramps / Bundy Cyn. Rd.		**4. I-15 NB Ramps / Bundy Cyn. Rd.**	
270(224) 7(2) 495(676)	749(1037) 487(357)		535(469) 936(917)
690(738) 562(313)		237(154) 949(1259)	300(477) 0(3) 332(554)

LEGEND:

- (#) = INTERSECTION ID
- 10(10) = AM(PM) PEAK HOUR TURN VOLUME W/ RIRO/LI AT CHERRY ST./BUNDY CANYON RD.
- 10.0 = VEHICLES PER DAY (1000'S) W/ RIRO/LI AT CHERRY ST./BUNDY CANYON RD.

5. Cherry St. / Bundy Cyn. Rd.		6. Sellers Rd. / Bundy Cyn. Rd.		7. Monte Vista Dr. / Bundy Cyn. Rd.		8. Cyn. Ranch Rd. / Bundy Cyn. Rd.		9. Orange St. / Canyon Dr.		10. Cherry St. / N. Dwy.	
329(294)	111(125) 1142(1094)	114(77) 151(137)	34(65) 1019(949)		937(733) 262(150)	115(68) 12(9)	8(19) 1084(816)	297(95) 141(217) 37(69)	67(57) 9(4) 2(1)	21(19) 86(65)	
320(322) 961(1491)		55(127) 745(1308)		629(1173) 276(279)	155(317) 129(235)	59(105) 700(1303)		238(110) 2(7) 77(18)	158(11) 221(206) 4(2)	63(63) 132(121)	187(173) 122(162)
11. Cherry St. / S. Dwy.		**12. Cherry St. / Walte St.**		**13. Sellers Rd. / Walte St.**		**14. Orange St. / Lemon St.**		**15. Almond St. / Lemon St.**		**16. Almond St. / Walte St.**	
18(16) 200(170)		3(1) 4(3) 4(1)	3(1) 92(47) 25(16)	19(8) 73(51)		19(9) 21(12) 1(1)	1(1) 87(46) 34(28)	1(1) 23(37) 1(1)	1(1) 136(100) 155(74)	3(8) 170(91) 115(74)	129(111) 61(101) 8(1)
64(62) 130(123)	187(173) 245(273)	1(1) 89(52) 77(66)	58(130) 3(5) 71(87)	37(21) 125(95)	73(47) 25(72)	12(14) 37(63) 107(93)	130(89) 10(22) 22(41)	1(1) 103(163) 91(67)	89(87) 21(35) 159(61)	11(2) 76(78) 15(9)	18(16) 111(79) 6(8)

FIGURE 4-T
EAPC (2025) TRAFFIC VOLUMES
(WITH RIRO AT CHERRY STREET/BUNDY CANYON ROAD)



5. Cherry St. / Bundy Cyn. Rd.	6. Sellers Rd. / Bundy Cyn. Rd.	7. Monte Vista Dr. / Bundy Cyn. Rd.	8. Cyn. Ranch Rd. / Bundy Cyn. Rd.	9. Orange St. / Canyon Dr.	10. Cherry St. / N. Dwy.
329(294) 431(446) 1142(1094)	114(77) 151(137) 34(65) 1019(949)	937(733) 262(150)	115(68) 12(9) 8(19) 1084(816)	297(95) 141(217) 37(69) 67(57) 9(4) 2(1)	21(19) 86(65)
1281(1813)	375(449) 745(1308)	629(1173) 276(279) 155(317) 129(235)	59(105) 700(1303)	238(110) 2(7) 77(18) 158(11) 221(206) 4(2)	63(63) 132(121) 187(173) 122(162)
11. Cherry St. / S. Dwy.	**12. Cherry St. / Walte St.**	**13. Sellers Rd. / Walte St.**	**14. Orange St. / Lemon St.**	**15. Almond St. / Lemon St.**	**16. Almond St. / Walte St.**
18(16) 200(170)	3(1) 4(3) 4(1) 3(1) 92(47) 25(16)	19(8) 73(51)	19(9) 21(12) 1(1) 1(1) 87(46) 34(28)	1(1) 23(37) 1(1) 1(1) 136(100) 155(74)	3(8) 170(91) 115(74) 129(111) 61(101) 8(1)
64(62) 130(123) 187(173) 245(273)	1(1) 89(52) 77(66) 58(130) 3(5) 71(87)	37(21) 125(95) 73(47) 25(72)	12(14) 37(63) 107(93) 130(89) 10(22) 22(41)	1(1) 103(163) 91(67) 89(87) 21(35) 159(61)	11(2) 76(78) 15(9) 18(16) 111(79) 6(8)

5. Vehicle Miles Traveled Evaluation

A significant change in the California Environmental Quality Act (CEQA) has been triggered by the implementation of Senate Bill 743 (SB 743). The bill specifies the use of Vehicle Miles Traveled (VMT) as the metric to evaluate transportation impacts. In some cases, projects can be determined to have a less than significant impact and be "screened out" of further analysis. According to the Office of Planning and Research (OPR), a commercial project less than 50,000 square feet or local serving developments that will tend to reduce the VMT in an area can be considered to have a less than significant impact.

The retail component of the project will consist of less than 50,000 square feet and can be screened out of further analysis The proposed hotel will be local serving.

There will be no conference/wedding facilities or restaurants to attract visitors from outside of the area. The OPR indicates that by adding retail opportunities and improve destination proximity, local-serving retail developments tends to shorten trips and reduce VMT. Similarly, the proposed hotel project will be located between similar type hotels in the Cities of Lake Elsinore (Holiday Inn Express 31573 Canyon Estates) and Murrieta (Comfort Inn 41005 California Oaks). The proposed hotel would be located approximately 3 miles south of the Lake Elsinore hotel and 6 miles north of the one in Murrieta. By siting the hotel along Bundy Canyon, this should result in a reduction of VMT by 1.5 miles to the north and 3 miles to the south. Therefore, the proposed hotel is consistent with the goals of SB 743 by potentially reducing the VMT along I-15 and can be considered to have a less than significant transportation impact.

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5.0 TRAFFIC ANALYSIS

Peak hour intersection analysis has been performed at the study area intersections for each of the project scenarios and for projected future conditions. Improvements are recommended to satisfy the level of service requirements of the City of Wildomar and if the following impacts are identified:

1) When existing traffic conditions (Analysis Scenario 1) exceed the General Plan target LOS.

2) When project traffic, when added to existing traffic (Analysis Scenario 2), will deteriorate the LOS to below the target LOS, and impacts cannot be mitigated through project conditions of approval.

3) When cumulative traffic (Analysis Scenario 3) exceeds the target LOS, and impacts cannot be mitigated through existing infrastructure funding mechanisms.

A. Existing plus Project (E+P) Conditions

The results of the E+P conditions intersection analysis are summarized in Table 5-1. The E+P condition operations analysis worksheets are provided in Appendix "E". As shown in Table 5-1, the intersections of Orange Street / Bundy Canyon Road (#2) and Cherry Street / Bundy Canyon Road (#5) are anticipated to operate at an unacceptable LOS (LOS “E” or worse).

The following improvements (as shown on Table 5-1) are anticipated to improve intersection LOS to acceptable operations:

Orange Street / Bundy Canyon Road (#2)

- Modify striping for the northbound approach to provide a 1 left turn lane and 1 shared through/right lane.
- Modify striping for the southbound approach to provide a 1 left turn lane and 1 shared through/right lane.

As mentioned previously, the intersection of Cherry Street / Bundy Canyon Road (#5) has been evaluated as a full access, right-in/right-out/left-in (RIRO/LI) only configuration, and as a right-in/right-out only (RIRO) intersection (no median break and no EB left turn movement). As shown on Table 5-1, Cherry Street / Bundy Canyon Road (#5) is projected to operate at an unacceptable LOS (LOS “E” or worse) during the peak hours if left turn restrictions (Full Access) are not implemented at this location. However, an acceptable level of service (LOS “D” or better) is projected during the peak hours with either the RIRO/LI or RIRO configuration (as listed below).

Cherry Street / Bundy Canyon Road (#5)

- Full Access:
    - o Install traffic signal.
    - o Provide a separate southbound left turn lane.
    - o Modify existing two-way left turn lane median striping to provide a dedicated eastbound left turn lane.
    - o This improvement may not be feasible due to the close proximity between the I-15/Bundy Canyon and Sellers/Bundy Canyon traffic signals.

- Alternative 1: Restrict intersection to right-in/right-out/left-in only (RIRO) configuration (no SB left turn movement).
    - o Modify existing two-way left turn lane median striping to provide a dedicated eastbound left turn lane.

- Alternative 2: Restrict intersection to right-in/right-out only (RIRO) configuration (no median break, no SB left and EB left turn movements). This alternative may not be feasible since inbound delivery trucks would likely need to perform a U-turn maneuver at the Sellers/Bundy Canyon traffic signal. Additional improvements would be required at this intersection to accommodate the U-turn.

In addition, Bundy Canyon Road is proposed to be improved and striped to include a continuous westbound right turn only lane at the I-15 NB on-ramp to address potential queuing issues between the I-15 NB on-ramp and Cherry Street. Therefore, the following improvements are proposed in addition to the potential configurations of Cherry Street / Bundy Canyon Road (#5):

I-15 NB Ramps / Bundy Canyon Road (#4)

- Provide a separate westbound right turn lane .

Cherry Street / Bundy Canyon Road (#5)

- Modify existing westbound right turn lane to provide a 3rd westbound thru lane with a defacto right turn lane.

Traffic signal warrants for E+P traffic conditions are also provided in Appendix "E". For E+P traffic conditions, the intersections of Cherry Street / Bundy Canyon Road (#5) is anticipated to meet traffic signal warrants.

Ramp merge and diverge operations were for E+P traffic conditions are presented in Table 5-2. As shown in Table 5-2, the I-15 Freeway ramp merge and diverge areas at Bundy Canyon Road are anticipated to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours under E+P traffic conditions. E+P traffic conditions freeway ramp junction operations analysis worksheets are provided in Appendix "F".

TABLE 5-1

INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS

ID	Intersection	Traffic Control [1]	Intersection Approach Lanes [2]												Delay [3] (secs.)		Level of Service [3]	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Almond St. / Bundy Cyn. Rd.	AWS	0	1!	0	0	1!	0	0.5	1.5	d	0.5	1.5	d	15.1	12.8	C	B
2	Orange St. / Bundy Cyn. Rd.																	
	- Without Improvements	TS	0.5	0.5	1	0.5	0.5	1	1	2	d	1	2	0	>80	>80	F	F
	- With Improvements	TS	1	1	0	1	1	0	1	2	d	1	2	0	46.5	23.2	D	C
3	I-15 SB Ramps / Bundy Cyn. Rd.	TS	0	0	0	1	1	0	0	2	0	1	2	0	28.9	33.3	C	C
4	I-15 NB Ramps / Bundy Cyn. Rd.																	
	- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	25.8	26.6	C	C
	- With Improvements [4]	TS	1	1	0	0	0	0	1	2	0	0	2	1	22.9	25.0	C	C
5	Cherry St. / Bundy Cyn. Rd.																	
	- With Full Access	CSS	0	0	0	0	1!	0	1*	3	0	0	2	1	>80	>80	F	F
	- With Signal Improvement [5]	TS	0	0	0	1	0	1	1	3	0	0	3	d	30.4	23.1	C	C
	- With Right-In/Right-Out/Left-In Configuration	CSS	0	0	0	0	0	1	1	3	0	0	3	d	30.7	24.2	D	C
	- With Right-In/Right-Out Configuration	CSS	0	0	0	0	0	1	0	3	0	0	3	d	24.9	17.2	C	C
6	Sellers Rd. / Bundy Cyn. Rd.																	
	- With Full Access	TS	0	0	0	1	0	1	1	3	0	0	2	1	8.4	10.1	A	B
	- With RIRO/LI Configuration at Int. #5	TS	0	0	0	1	0	1	1	3	0	0	2	1	8.4	10.0	A	A
	- With RIRO Configuration at Int. #5	TS	0	0	0	1	0	1	1	3	0	0	2	1	18.8	18.3	B	B
7	Monte Vista Dr. / Bundy Cyn. Rd.	TS	2	0	1	0	0	0	0	3	1	1	2	0	11.9	7.3	B	A
8	Cyn. Ranch Rd. / Bundy Cyn. Rd.	CSS	0	0	0	0	1!	0	1	3	0	0	2	0	15.0	12.9	B	B
9	Orange St. / Canyon Dr.	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	27.1	9.8	D	A
10	Cherry St. / N. Dwy.																	
	- With Full Access at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	10.9	10.5	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	13.6	13.1	B	B
	- With RIRO Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	13.5	13.1	B	B
11	Cherry St. / S. Dwy.																	
	- With Full Access at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	13.9	12.8	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	18.3	16.8	C	C
	- With RIRO Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	18.3	16.8	C	C
12	Cherry St. / Waite St.																	
	- With Full Access at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	11.2	10.7	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.8	10.9	B	B
	- With RIRO Configuration at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.8	10.9	B	B
13	Sellers Rd. / Waite St.																	
	- With Full Access at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	9.5	8.9	A	A
	- With RIRO/LI Configuration at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	9.9	9.3	A	A
	- With RIRO Configuration at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	9.9	9.3	A	A
14	Orange St. / Lemon St.	AWS	0	1!	0	0	1!	0	0	1!	0	0.5	0.5	d	9.0	8.4	A	A
15	Almond St. / Lemon St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0	1!	0	15.2	12.3	C	B
16	Almond St. / Waite St.	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	9.7	8.6	A	A

[1] TS = Traffic Signal; AWS = All-Way Stop; CSS = Cross-Street Stop

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 1! = Shared Left/Through/Right Lane;
* = Left Turn within Two-Way Left Turn Lane Median; d = Defacto right turn lane; 1 = Improvement

[3] Delay and level of service calculated using the following analysis software: Synchro 10 HCM6
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[4] Separate WB right turn lane recommended to address potential queueing issues.

TABLE 5-2

FREEWAY RAMP JUNCTION MERGE/DIVERGE ANALYSIS FOR
EXISTING PLUS PROJECT CONDITIONS

Freeway	Direction	Ramp Location	Junction Type	Lanes on Freeway	Lanes on Ramp	Volume		Density [1]		LOS [2]	
						AM	PM	AM	PM	AM	PM
I-15 Freeway	SB	SB Off Ramp at Bundy Canyon Rd.	Diverge	3	1	621	686	28.3	25.2	D	C
		SB On Ramp at Bundy Canyon Rd.	Merge	3	1	928	531	28.1	21.3	D	C
	NB	NB Off Ramp at Bundy Canyon Rd.	Diverge	3	1	541	859	23.0	28.0	C	C
		NB On Ramp at Bundy Canyon Rd.	Merge	3	1	613	436	19.5	20.5	B	C

[1] Density calculated based on the Highway Capacity Manual (HCM) analysis; (pc/mi/ln) = passenger car per mile per lane

[2] Level of service determined using HCS7: Ramps and Ramp Junction software, Version 7.90

B. Existing plus Ambient plus Project (EAP 2025) Conditions

The results of the EAP conditions intersection analysis are summarized in Table 5-3. The EAP condition operations analysis worksheets are provided in Appendix "G". In addition to previously identified deficient intersections under E+P conditions, the study area intersection of Orange Street / Canyon Drive (#9) is projected to operate at an unacceptable level of service (LOS "E" or worse) during the peak hours with the existing geometry and traffic controls.

The following improvements (as shown on Table 5-3) are consistent with E+P improvements and are anticipated to continue to improve intersection LOS to acceptable operations:

Orange Street / Bundy Canyon Road (#2)

- Modify striping for the northbound approach to provide a 1 left turn lane and 1 shared through/right lane.
- Modify striping for the southbound approach to provide a 1 left turn lane and 1 shared through/right lane.

Additional improvements at the new deficient intersection of Orange Street / Canyon Drive (#9) is recommended under EAP conditions:

Orange Street / Canyon Drive (#9)

- Provide a separate southbound right turn lane.

Similar to with E+P conditions, the intersection of Cherry Street / Bundy Canyon Road (#5) has been evaluated with the following configurations and are both projected to operate at an acceptable level of service (LOS "D" or better) during the peak hours.

Cherry Street / Bundy Canyon Road (#5)

- Full Access:
    - Install traffic signal.
    - Provide a separate southbound left turn lane.
    - Modify existing two-way left turn lane median striping to provide a dedicated eastbound left turn lane.
    - This improvement may not be feasible due to the close proximity between the I-15/Bundy Canyon and Sellers/Bundy Canyon traffic signals.

- Alternative 1: Restrict intersection to right-in/right-out/left-in only (RIRO/LI) configuration (no SB left turn movement).
    - Modify existing two-way left turn lane median striping to provide a dedicated eastbound left turn lane.

TABLE 5-3

INTERSECTION ANALYSIS FOR EAP (2025) PROJECT CONDITIONS

ID	Intersection	Traffic Control [1]	Intersection Approach Lanes [2]												Delay [3] (secs.)		Level of Service [3]	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Almond St. / Bundy Cyn. Rd.	AWS	0	1!	0	0	1!	0	0.5	1.5	d	0.5	1.5	d	16.1	13.4	C	B
2	Orange St. / Bundy Cyn. Rd.																	
	- Without Improvements	TS	0.5	0.5	1	0.5	0.5	1	1	2	d	1	2	0	>80	>80	F	F
	- With Improvements	TS	1	1	0	1	1	0	1	2	d	1	2	0	45.2	22.6	D	C
3	I-15 SB Ramps / Bundy Cyn. Rd.	TS	0	0	0	1	1	0	0	2	0	1	2	0	31.9	35.6	C	D
4	I-15 NB Ramps / Bundy Cyn. Rd.																	
	- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	27.0	27.7	C	C
	- With Improvements [4]	TS	1	1	0	0	0	0	1	2	0	0	2	1	23.3	25.3	C	C
5	Cherry St. / Bundy Cyn. Rd.																	
	- With Full Access at Int. #5	CSS	0	0	0	0	0	1	1	3	0	0	2	1	>80	>80	F	F
	- With Signal Improvement [5]	TS	0	0	0	1	0	1	1	3	0	0	3	d	35.6	23.8	D	C
	- With Right-In/Right-Out/Left-In Configuration	CSS	0	0	0	0	0	1	1	3	0	0	3	d	31.5	26.2	D	D
	- With Right-In/Right-Out Configuration	CSS	0	0	0	0	0	1	0	3	0	0	3	d	26.6	17.8	D	C
6	Sellers Rd. / Bundy Cyn. Rd.																	
	- With Full Access at Int. #5	TS	1	1	0	1	1	0	1	3	0	1	2	1	8.6	10.3	A	B
	- With RIRO/LI Configuration at Int. #5	TS	1	1	0	1	1	0	1	3	0	1	2	1	8.5	10.1	A	B
	- With RIRO Configuration at Int. #5	TS	1	1	0	1	1	0	1	3	0	1	2	1	18.8	18.3	B	B
7	Monte Vista Dr. / Bundy Cyn. Rd.	TS	2	0	1	0	0		0	3	1	1	2	0	12.1	7.5	B	A
8	Cyn. Ranch Rd. / Bundy Cyn. Rd.	CSS	0	0	0	0	1!	0	1	3	0	0	2	0	15.5	13.2	C	B
9	Orange St. / Canyon Dr.																	
	- Without Improvements	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	33.8	10.0	D	B
	- With Improvements	AWS	0	1!	0	0.5	0.5	1	0	1!	0	0	1!	0	23.2	9.8	C	A
10	Cherry St. / N. Dwy.																	
	- With Full Access at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	11.0	10.5	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	13.6	13.2	B	B
	- With RIRO Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	13.6	13.2	B	B
11	Cherry St. / S. Dwy.																	
	- With Full Access at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	14.0	12.8	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	18.5	17.0	C	C
	- With RIRO Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	18.5	17.0	C	C
12	Cherry St. / Waite St.																	
	- With Full Access at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	11.3	10.8	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.9	11.0	B	B
	- With RIRO Configuration at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.9	11.0	B	B
13	Sellers Rd. / Waite St.																	
	- With Full Access at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	9.5	8.9	A	A
	- With RIRO/LI Configuration at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	10.0	9.3	B	A
	- With RIRO Configuration at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	10.0	9.3	B	A
14	Orange St. / Lemon St.	AWS	0	1!	0	0	1!	0	0	1!	0	0.5	0.5	d	9.1	8.5	A	A
15	Almond St. / Lemon St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0	1!	0	15.6	12.6	C	B
16	Almond St. / Waite St.	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	9.8	8.7	A	A

[1] TS = Traffic Signal; AWS = All-Way Stop; CSS = Cross-Street Stop

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes
L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 1! = Shared Left/Through/Right Lane;
* = Left Turn within Two-Way Left Turn Lane Median; d = Defacto right turn lane; 1 = Improvement

[3] Delay and level of service calculated using the following analysis software: Synchro 10 HCM6
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

- Alternative 2: Restrict intersection to right-in/right-out only (RIRO) configuration (no median break, no SB left and EB left turn movements). This alternative may not be feasible since inbound delivery trucks would likely need to perform a U-turn maneuver at the Sellers/Bundy Canyon traffic signal. Additional improvements would be required at this intersection to accommodate the U-turn.

Consistent with E+P conditions, the following additional improvements on Bundy Canyon Road is proposed with the development of the Project to address potential queuing issues along Bundy Canyon Road, between the I-15 NB on-ramp and Cherry Street.

I-15 NB Ramps / Bundy Canyon Road (#4)

- Provide a separate westbound right turn lane .

Cherry Street / Bundy Canyon Road (#5)

- Modify existing westbound right turn lane to provide a 3rd westbound thru lane with a defacto right turn lane.

Traffic signal warrants for EAP traffic conditions are also provided in Appendix "G". For EAP traffic conditions, the unsignalized intersection of Orange Street / Canyon Drive (#9) is anticipated to meet traffic signal warrants, in addition to previously warranted intersection under E+P traffic conditions.

Ramp merge and diverge operations were for EAP (2025) traffic conditions are presented in Table 5-4. As shown in Table 5-4, the I-15 Freeway ramp merge and diverge areas at Bundy Canyon Road are anticipated to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours under EAP traffic conditions. EAP traffic conditions freeway ramp junction operations analysis worksheets are provided in Appendix "H".

C. Existing plus Ambient plus Project plus Cumulative (EAPC 2025) Conditions

The results of the EAPC conditions intersection analysis are summarized in Table 5-5. The EAPC condition operations analysis worksheets are provided in Appendix "I". The study area intersection of I-15 SB Ramps / Bundy Canyon Road (#3) is anticipated to operate at an unacceptable LOS under EAPC conditions, in addition to the previously identified deficient intersections under EAP conditions.

The following improvements (as shown on Table 5-5) are anticipated to improve intersection LOS to acceptable operations:

Orange Street / Bundy Canyon Road (#2)

- Modify striping for the northbound approach to provide a 1 left turn lane and 1 through lane and 1 right turn lane with overlap phase.
- Modify striping for the southbound approach to provide a 1 left turn lane and 1 through lane and 1 right lane.

TABLE 5-4

FREEWAY RAMP JUNCTION MERGE/DIVERGE ANALYSIS FOR
EAP (2025) CONDITIONS

Freeway	Direction	Ramp Location	Junction Type	Lanes on Freeway	Lanes on Ramp	Volume		Density [1]		LOS [2]	
						AM	PM	AM	PM	AM	PM
I-15 Freeway	SB	SB Off Ramp at Bundy Canyon Rd.	Diverge	3	1	642	711	29.2	26.0	D	C
		SB On Ramp at Bundy Canyon Rd.	Merge	3	1	962	550	29.1	22.0	D	C
	NB	NB Off Ramp at Bundy Canyon Rd.	Diverge	3	1	560	892	23.6	28.8	C	D
		NB On Ramp at Bundy Canyon Rd.	Merge	3	1	635	450	20.2	21.2	C	C

[1] Density calculated based on the Highway Capacity Manual (HCM) analysis; (pc/mi/ln) = passenger car per mile per lane

[2] Level of service determined using HCS7: Ramps and Ramp Junction software, Version 7.90

TABLE 5-5

INTERSECTION ANALYSIS FOR EAPC (2025) PROJECT CONDITIONS

ID	Intersection	Traffic Control [1]	Intersection Approach Lanes [2]												Delay [3] (secs.)		Level of Service [3]	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Almond St. / Bundy Cyn. Rd.	AWS	0	1!	0	0	1!	0	0.5	1.5	d	0.5	1.5	d	21.1	19.5	C	C
2	Orange St. / Bundy Cyn. Rd.																	
	- Without Improvements	TS	0.5	0.5	1	0.5	0.5	1	1	2	d	1	2	0	>80	>80	F	F
	- With Improvements	TS	1	1	1>	1	1	1	1	2	d	1	2	0	32.0	25.0	C	C
3	I-15 SB Ramps / Bundy Cyn. Rd.																	
	- Without Improvements	TS	0	0	0	1	1	0	0	2	0	1	2	0	75.0	70.7	E	E
	- With Improvements	TS	0	0	0	1	1!	1	0	2	1	1	2	0	33.5	22.5	C	C
4	I-15 NB Ramps / Bundy Cyn. Rd.																	
	- Without Improvements	TS	1	1	0	0	0	0	1	2	0	0	2	0	34.0	44.3	C	D
	- With Improvements [4]	TS	1	1	0	0	0	0	1	2	0	0	2	1	24.5	29.3	C	C
5	Cherry St. / Bundy Cyn. Rd.																	
	- With Full Access at Int. #5	CSS	0	0	0	0	0	1	1	3	0	0	2	1	>80	>80	F	F
	- With Signal Improvement [5]	TS	0	0	0	1	0	1>	1	3	0	0	3	d	20.8	14.5	C	B
	- With Right-In/Right-Out/Left-In Configuration	CSS	0	0	0	0	0	1	1	3	0	0	3	d	34.8	34.9	D	D
	- With Right-In/Right-Out Configuration	CSS	0	0	0	0	0	1	0	3	0	0	3	d	33.2	33.6	D	D
6	Sellers Rd. / Bundy Cyn. Rd.																	
	- With Full Access at Int. #5	TS	1	1	0	1	1	0	1	3	0	1	2	1	16.3	17.8	B	B
	- With RIRO/LI Configuration at Int. #5	TS	1	1	0	1	1	0	1	3	0	1	2	1	18.5	19.2	B	B
	- With RIRO Configuration at Int. #5	TS	1	1	0	1	1	0	1	3	0	1	2	1	43.9	39.9	D	D
7	Monte Vista Dr. / Bundy Cyn. Rd.	TS	2	0	1	0	0	0	0	3	1	1	2	0	24.8	17.6	C	B
8	Cyn. Ranch Rd. / Bundy Cyn. Rd.	CSS	0	0	0	0	1!	0	1	3	0	0	2	0	19.2	15.0	C	B
9	Orange St. / Canyon Dr.																	
	- Without Improvements	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	54.5	11.6	F	B
	- With Improvements	AWS	1	1!	0	0.5	0.5	1	1	1	0	0	1!	0	18.9	11.7	C	B
10	Cherry St. / N. Dwy.																	
	- With Full Access at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	11.0	10.6	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	13.8	13.4	B	B
	- With RIRO Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	13.8	13.4	B	B
11	Cherry St. / S. Dwy.																	
	- With Full Access at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	14.1	12.9	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	18.8	17.3	C	C
	- With RIRO Configuration at Int. #5	CSS	1	1	0	0	1	0	0	1!	0	0	0	0	18.8	17.3	C	C
12	Cherry St. / Waite St.																	
	- With Full Access at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	11.5	11.0	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	11.1	11.3	B	B
	- With RIRO Configuration at Int. #5	CSS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	11.1	11.3	B	B
13	Sellers Rd. / Waite St.																	
	- With Full Access at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	9.8	9.1	A	A
	- With RIRO/LI Configuration at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	10.3	9.7	B	A
	- With RIRO Configuration at Int. #5	CSS	0.5	0.5	0	0	1	0	0	1!	0	0	0	0	10.3	9.7	B	A
14	Orange St. / Lemon St.	AWS	0	1!	0	0	1!	0	0	1!	0	0.5	0.5	d	9.2	8.6	A	A
15	Almond St. / Lemon St.	CSS	0	1!	0	0	1!	0	0.5	0.5	d	0	1!	0	18.7	15.4	C	C
16	Almond St. / Waite St.	AWS	0	1!	0	0	1!	0	0	1!	0	0	1!	0	10.7	9.4	B	A

[1] TS = Traffic Signal; AWS = All-Way Stop; CSS = Cross-Street Stop

[2] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 1! = Shared Left/Through/Right Lane; * = Left Turn within Two-Way Left Turn Lane Median; d = Defacto right turn lane; 1 = Improvement

[3] Delay and level of service calculated using the following analysis software: Synchro 10 HCM6
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[4] Separate WB right turn lane recommended to address potential queueing issues.

[5] SB right turn overlap phase recommended to address potential queueing issues.

I-15 SB Ramps / Bundy Canyon Road (#3)

- Modify existing southbound shared through/right lane to shared left/through/right turn lane.
- Provide a separate eastbound right turn lane.
- Provide a separate southbound right turn lane *(recommended to address potential queueing issues)*.

I-15 NB Ramps / Bundy Canyon Road (#4)

- Provided separate westbound right turn lane *(recommended to address potential queueing issues)*.

Orange Street / Canyon Drive (#9)

- Provide a separate northbound left turn lane
- Provide a separate southbound right turn lane.
- Provide a separate eastbound left turn lane.

For Sellers Road / Bundy Canyon Road (#6), the following improvements are recommended for cumulative access purposes (new south leg).

Sellers Road / Bundy Canyon Road (#6)

- Construct 1 northbound left turn lane and 1 northbound shared though/right lane.
- Construct 1 southbound left turn lane and 1 southbound shared though/right lane.
- Provide 1 westbound left turn lanes.

Similar to with EAP conditions, the intersection of Cherry Street / Bundy Canyon Road (#5) has been evaluated with the following configurations and are projected to operate at an acceptable level of service (LOS "D" or better) during the peak hours.

Cherry Street / Bundy Canyon Road (#5)

- <u>Full Access:</u>
    - Install traffic signal.
    - Provide a separate southbound left turn lane.
    - Modify existing two-way left turn lane median striping to provide a dedicated eastbound left turn lane.
    - Provide a southbound right turn overlap phase *(recommended to address potential queueing issues)*.
    - This improvement may not be feasible due to the close proximity between the I-15/Bundy Canyon and Sellers/Bundy Canyon traffic signals.

- Alternative 1: Restrict intersection to right-in/right-out/left-in only (RIRO/LI) configuration (no SB left turn movement).
    - o Modify existing two-way left turn lane median striping to provide a dedicated eastbound left turn lane.

- Alternative 2: Restrict intersection to right-in/right-out only (RIRO) configuration (no median break, no SB left and EB left turn movements). This alternative may not be feasible since inbound delivery trucks would likely need to perform a U-turn maneuver at the Sellers/Bundy Canyon traffic signal. Additional improvements would be required at this intersection to accommodate the U-turn.

As mentioned previously under E+P and EAP conditions, the following additional improvements on Bundy Canyon Road is proposed with the development of the Project to address potential queuing issues along Bundy Canyon Road, between the I-15 NB on-ramp and Cherry Street.

Cherry Street / Bundy Canyon Road (#5)

- Modify existing westbound right turn lane to provide a 3rd westbound thru lane with a defacto right turn lane.

Traffic Signal Warrant Analysis

Traffic signal warrants for EAPC traffic conditions are also provided in Appendix "I". For EAPC traffic conditions, the intersection of Canyon Ranch / Bundy Canyon Road (#8) is anticipated to meet warrants, in addition to previously warranted intersections under E+P & EAP traffic conditions.

Queuing Analysis

The 95th percentile queuing of vehicles has been assessed at Project access intersections and adjacent study area intersections as shown on Table 5-6.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the intersections with traffic added from the proposed Project. Storage (turn-pocket) length recommendations have been based upon the 95th percentile queue resulting from the Synchro progression analysis. The queue length reported is for the lane with the highest queue in the lane group.

As shown on Table 5-6, queues occasionally exceed available storage length but anticipated to clear in a timely manner either to be accommodated within the turn pocket transition lane on acceptable storage is provided for study area queues with improvements shown on Exhibit 6-C. Queuing analysis worksheets are provided in Appendix "J".

Freeway Merge/Diverge Analysis

Ramp merge and diverge operations were for EAPC (2025) traffic conditions are presented in Table 5-7. As shown in Table 5-7, the I-15 Freeway ramp merge and diverge areas at Bundy Canyon Road are anticipated to operate at an acceptable LOS (i.e., LOS D or better) during the peak hours under EAPC traffic conditions. EAPC traffic conditions freeway ramp junction operations analysis worksheets are provided in Appendix "J".

TABLE 5-6

QUEUING ANALYSIS SUMMARY FOR EAPC (2025) CONDITIONS WITH IMPROVEMENTS

ID	Intersection	With Full Access at Cherry St. / Bundy Cyn. Rd. (#5)						With RIRO/LI at Cherry St. / Bundy Cyn. Rd. (#5)						With RIRO at Cherry St. / Bundy Cyn. Rd. (#5)					
		Turning Movement Lane	Storage Length Provided[1] (feet)	95th Percentile Queue Length Per Lane (feet)[2,3]		Acceptable?[4]		Turning Movement Lane	Storage Length Provided[1] (feet)	95th Percentile Queue Length Per Lane (feet)[2,3]		Acceptable?[4]		Turning Movement Lane	Storage Length Provided[1] (feet)	95th Percentile Queue Length Per Lane (feet)[2,3]		Acceptable?[4]	
				AM	PM	AM	PM			AM	PM	AM	PM			AM	PM	AM	PM
3	I-15 SB Ramps / Bundy Cyn. Rd.																		
		SBL	300	204	259	YES	YES	SBL	300	340	442	YES[5]	YES[5]	SBL	300	260	294	YES[5]	YES
		SBR	300	182	242	YES	YES	SBR	300	353	336	YES[5]	YES[5]	SBR	300	325	174	YES[5]	YES
		EBR	250	164	234	YES	YES	EBR	250	278	96	YES[5]	YES	EBR	250	240	41	YES	YES
		WBL	255	226	204	YES	YES	WBL	255	159	239	YES	YES	WBL	255	260	225	YES[7]	YES
4	I-15 NB Ramps / Bundy Cyn. Rd.																		
		NBL	300	325	389	YES[5]	YES[5]	NBL	300	410	447	YES[5]	YES[5]	NBL	300	239	389	YES	YES[5]
		EBL	255	403	339	YES[5]	YES[5]	EBL	255	377	341	YES[5]	YES[5]	EBL	255	276	228	YES[7]	YES
		WBR	225	201	54	YES	YES	WBR	225	58	174	YES	YES	WBR	225	228	171	YES[7]	YES
5	Cherry St. / Bundy Cyn. Rd.																		
		SBL	100	67	129	YES	YES[5]												
		SBR	245	219	222	YES	YES	SBR	245	239	225	YES	YES	SBR	245	219	219	YES	YES
		EBL	150	152	150	YES[7]	YES	EBL	150	170	155	YES[5]	YES[7]	EBL	150	--	--	--	--
6	Sellers Rd. / Bundy Cyn. Rd.																		
		NBL	200	202	102	YES[7]	YES	NBL	200	148	236	YES	YES[7]	NBL	200	166	199	YES	YES
		SBL	175	67	99	YES	YES	SBL	175	102	88	YES	YES	SBL	175	152	132	YES	YES
		EBL	200	133	176	YES	YES	EBL	200	56	169	YES	YES	EBL	200	180	180	YES	YES
		WBL	150	39	55	YES	YES	WBL	150	98	75	YES	YES	WBL	150	59	31	YES	YES
		WBR	565	36	67	YES	YES	WBR	565	37	30	YES	YES	WBR	565	37	27	YES	YES
10	Cherry St. / N. Dwy.																		
		NBL	100	57	122	YES	YES[5]	NBL	100	NOM	41	YES	YES	NBL	100	33	NOM	YES	YES
		SBT/R	100	NOM	NOM	YES	YES	SBT/R	100	NOM	NOM	YES	YES	SBT/R	100	29	NOM	YES	YES
		EBL/R[6]	270	81	63	YES	YES	EBL/R[6]	270	63	92	YES	YES	EBL/R[6]	270	61	63	YES	YES
11	Cherry St. / S. Dwy.																		
		NBL	100	96	93	YES	YES	NBL	100	38	77	YES	YES	NBL	100	45	42	YES	YES
		SBT/R	200	NOM	156	YES	YES	SBT/R	200	93	30	YES	YES	SBT/R	200	133	NOM	YES	YES
		EBL/R[6]	140	54	188	YES	YES[5]	EBL/R[6]	140	85	92	YES	YES	EBL/R[6]	140	244	190	YES[5]	YES[5]

[1] Existing Storage Length = 100; Future Storage Length = 100

[2] Queue length calculated using Synchro 10 with SimTraffic.

[3] NOM = Nominal, less than 5 feet.

[4] Storage Length is acceptable if the required queuing length is less than or equal to the storage length provided.

[5] 95th percentile queue is anticipated to exceed available storage length. It should be noted however that SimTraffic simulations results indicate that the turn lane queue is anticipated to clear in a timely manner and that the provided pocket length is adequate to accommodate the 95th percentile queue length.

[6] The storage shown is based on the maximum driveway length measured from the sidewalk on Cherry St. to the 2nd internal intersecting isle on-site.

[7] Excess in queue can be accommodated within the transition lane.

TABLE 5-7

FREEWAY RAMP JUNCTION MERGE/DIVERGE ANALYSIS FOR
EAPC (2025) CONDITIONS

Freeway	Direction	Ramp Location	Junction Type	Lanes on Freeway	Lanes on Ramp	Volume		Density [1]		LOS [2]	
						AM	PM	AM	PM	AM	PM
I-15 Freeway	SB	SB Off Ramp at Bundy Canyon Rd.	Diverge	3	1	772	902	30.0	27.4	D	C
		SB On Ramp at Bundy Canyon Rd.	Merge	3	1	1,056	672	29.9	23.0	D	C
	NB	NB Off Ramp at Bundy Canyon Rd.	Diverge	3	1	632	1,034	24.2	29.8	C	D
		NB On Ramp at Bundy Canyon Rd.	Merge	3	1	772	626	21.3	22.7	C	C

[1] Density calculated based on the Highway Capacity Manual (HCM) analysis; (pc/mi/ln) = passenger car per mile per lane

[2] Level of service determined using HCS7: Ramps and Ramp Junction software, Version 7.90

6.0 FINDINGS AND RECOMMENDATIONS

A. Traffic Impacts and Level of Service Intersections Analysis

The intersection LOS results for Existing (2023), Existing plus Project (E+P), Existing plus Ambient plus Project (EAP 2025), and Existing plus Ambient plus Project plus Cumulative (EAPC 2025) traffic conditions are summarized in Table 6-1.

For Existing traffic conditions, the following study area intersection is currently operating at an unacceptable LOS during peak hours, with existing geometry:

- Orange Street / Bundy Canyon Road (#2)

For E+P traffic conditions, the following study area intersections are anticipated to operate at an unacceptable LOS during peak hours, with existing geometry:

- Orange Street / Bundy Canyon Road (#2)
- Cherry Street / Bundy Canyon Road (#5)

It should be noted that Cherry Street / Bundy Canyon Road (#5) has been evaluated based on the following restricted configurations: Alternative 1, intersection is restricted to right-in/right-out/left-in only (RIRO/LI) configuration & Alternative 2, intersection is restricted to right-in/right-out only (RIRO). Alternative 2 (RIRO) is the preferred configuration accepted by the City of Wildomar.

The intersection of Cherry Street / Bundy Canyon Road (#5) is anticipated to meet traffic signal warrants under E+P traffic conditions. As mentioned previously, a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted and that meeting this threshold does not require that a traffic control signal should be installed. Other traffic factors and conditions be should be evaluated in order to determine whether the installation of a signal is justified.

For EAP (2025) traffic conditions, the following study area intersections are projected to operate at an unacceptable LOS during peak hours, with existing geometry:

- Orange Street / Bundy Canyon Road (#2)
- Orange Street / Canyon Drive (#9)

The intersection of Orange Street / Canyon Drive (#9) is anticipated to meet traffic signal warrants under EAP conditions, in addition to the intersections identified under E+P conditions.

TABLE 6-1

INTERSECTION ANALYSIS SUMMARY

ID	Intersection	Traffic Control [1]	Existing				E+P				EAP (2025)				EAPC (2025)			
			Delay [2] (secs.)		Level of Service[2]		Delay [2] (secs.)		Level of Service[3]		Delay [2] (secs.)		Level of Service[2]		Delay [2] (secs.)		Level of Service[2]	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Almond St. / Bundy Cyn. Rd.	AWS	14.5	12.4	B	B	15.1	12.8	C	B	16.1	13.4	C	B	21.1	19.5	C	C
2	Orange St. / Bundy Cyn. Rd.																	
	- Without Improvements	TS	>80	73.0	F	E	>80	>80	F	F	>80	>80	F	F	>80	>80	F	F
	- With Improvements	TS	-	-	-	-	46.5	23.2	D	C	45.2	22.6	D	C	32.0	25.0	C	C
3	I-15 SB Ramps / Bundy Cyn. Rd.																	
	- Without Improvements	TS	25.6	24.3	C	C	28.9	33.3	C	C	31.9	35.6	C	D	75.0	70.7	E	E
	- With Improvements	TS	-	-	-	-	-	-	-	-	-	-	-	-	33.5	22.5	C	C
4	I-15 NB Ramps / Bundy Cyn. Rd.																	
	- Without Improvements	TS	24.8	26.3	C	C	25.8	26.6	C	C	27.0	27.7	C	C	34.0	44.3	C	D
	- With Improvements[4]	TS	-	-	-	-	22.9	25.0	C	C	23.3	25.3	C	C	24.5	29.3	C	C
5	Cherry St. / Bundy Cyn. Rd.																	
	- With Existing Configuration	CSS	14.2	11.9	B	B	>80	>80	F	F	>80	>80	F	F	>80	>80	F	F
	- With Signal Improvement	TS	-	-	-	-	30.4	23.1	C	C	35.6	23.8	D	C	20.8	14.5	C	B
	- With Right-In/Right-Out/Left-In Configuration	CSS	-	-	-	-	30.7	24.2	D	C	31.5	26.2	D	D	34.8	34.9	D	D
	- With Right-In/Right-Out Configuration	CSS	-	-	-	-	24.9	17.2	C	C	26.6	17.8	D	C	33.2	33.6	D	D
6	Sellers Rd. / Bundy Cyn. Rd.																	
	- With Full Access at Int. #5	TS	7.7	9.6	A	A	8.4	10.1	A	B	8.6	10.3	A	B	16.3	17.8	B	B
	- With RIRO/LI Configuration at Int. #5	TS	-	-	-	-	8.4	10.0	A	A	8.5	10.1	A	B	18.5	19.2	B	B
	- With RIRO Configuration at Int. #5	TS	-	-	-	-	18.8	18.3	B	B	18.8	18.3	B	B	43.9	39.9	D	D
7	Monte Vista Dr. / Bundy Cyn. Rd.	TS	11.9	7.2	B	A	11.9	7.3	B	A	12.1	7.5	B	A	24.8	17.6	C	B
8	Cyn. Ranch Rd. / Bundy Cyn. Rd.	CSS	14.5	13.1	B	B	15.0	12.9	B	B	15.5	13.2	C	B	19.2	15.0	C	B
9	Orange St. / Canyon Dr.																	
	- Without Improvements	AWS	19.1	9.1	C	A	27.1	9.8	D	A	33.8	10.0	D	B	54.5	11.6	F	B
	- With Improvements	AWS	-	-	-	-	-	-	-	-	23.2	9.8	C	A	18.9	11.7	C	B
10	Cherry St. / N. Dwy.																	
	- With Full Access at Int. #5	CSS	-	-	-	-	10.9	10.5	B	B	11.0	10.5	B	B	11.0	10.6	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	-	-	-	-	13.6	13.1	B	B	13.6	13.2	B	B	13.8	13.4	B	B
	- With RIRO Configuration at Int. #5	CSS	-	-	-	-	13.5	13.1	B	B	13.6	13.2	B	B	13.8	13.4	B	B
11	Cherry St. / S. Dwy.																	
	- With Full Access at Int. #5	CSS	-	-	-	-	13.9	12.8	B	B	14.0	12.8	B	B	14.1	12.9	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	-	-	-	-	18.3	16.8	C	C	18.5	17.0	C	C	18.8	17.3	C	C
	- With RIRO Configuration at Int. #5	CSS	-	-	-	-	18.3	16.8	C	C	18.5	17.0	C	C	18.8	17.3	C	C
12	Cherry St. / Waite St.																	
	- With Full Access at Int. #5	CSS	10.5	10.2	B	B	11.2	10.7	B	B	11.3	10.8	B	B	11.5	11.0	B	B
	- With RIRO/LI Configuration at Int. #5	CSS	-	-	-	-	10.8	10.9	B	B	10.9	11.0	B	B	11.1	11.3	B	B
	- With RIRO Configuration at Int. #5	CSS	-	-	-	-	10.8	10.9	B	B	10.9	11.0	B	B	11.1	11.3	B	B
13	Sellers Rd. / Waite St.																	
	- With Full Access at Int. #5	CSS	9.3	8.7	A	A	9.5	8.9	A	A	9.5	8.9	A	A	9.8	9.1	A	A
	- With RIRO/LI Configuration at Int. #5	CSS	-	-	-	-	9.9	9.3	A	A	10.0	9.3	B	A	10.3	9.7	B	A
	- With RIRO Configuration at Int. #5	CSS	-	-	-	-	9.9	9.3	A	A	10.0	9.3	B	A	10.3	9.7	B	A
14	Orange St. / Lemon St.	AWS	8.5	8.1	A	A	9.0	8.4	A	A	9.1	8.5	A	A	9.2	8.6	A	A
15	Almond St. / Lemon St.	CSS	14.6	12.0	B	B	15.2	12.3	C	B	15.6	12.6	C	B	18.7	15.4	C	C
16	Almond St. / Waite St.	AWS	9.5	8.4	A	A	9.7	8.6	A	A	9.8	8.7	A	A	10.7	9.4	B	A

[1] TS = Traffic Signal; AWS = All-Way Stop; CSS = Cross-Street Stop; BOLD = Improvement

[2] Delay and level of service calculated using the following analysis software: Synchro 10 HCM6
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

For EAPC (2025) traffic conditions, the following study area intersections are projected to operate at an unacceptable LOS during peak hours, with existing geometry:

- Orange Street / Bundy Canyon Road (#2)
- Orange Street / Canyon Drive (#9)
- I-15 SB Ramps / Bundy Canyon Drive (#3)

The intersection of Canyon Ranch Road / Bundy Canyon Road (#8) is anticipated to meet traffic signal warrants under EAPC traffic conditions, in addition to the intersection identified under E+P and EAP conditions.

B. Recommended Off-Site Improvements

For all future analysis scenarios, Bundy Canyon Road is proposed to include a continuous westbound right turn lane serving the I-15 NB on-ramp to address potential queuing issues between the I-15 NB on-ramp and Cherry Street. Therefore, the following improvements are proposed in addition to the potential configurations of Cherry Street / Bundy Canyon Road (#5):

I-15 NB Ramps / Bundy Canyon Road (#4)

- Provide a separate westbound right turn lane .

Cherry Street / Bundy Canyon Road (#5)

- Modify existing westbound right turn lane to provide a 3rd westbound thru lane with a defacto right turn lane.

Existing Plus Project (E+P) Conditions

Figure 6-A illustrates the recommended improvements for E+P conditions. The following improvements will allow the deficient intersections to operate at acceptable levels of service during the peak hours:

Orange Street / Bundy Canyon Road (#2)

- Modify striping for the northbound approach to provide a 1 left turn lane and 1 shared through/right lane.
- Modify striping for the southbound approach to provide a 1 left turn lane and 1 shared through/right lane.

Cherry Street / Bundy Canyon Road (#5)

- Full Access:
    - Install traffic signal.
    - Provide a separate southbound left turn lane.
    - Modify existing two-way left turn lane median striping to provide a dedicated eastbound left turn lane.
    - This improvement may not be feasible due to the close proximity between the I-15/Bundy Canyon and Sellers/Bundy Canyon traffic signals.

- Alternative 1: Restrict intersection to right-in/right-out/left-in only (RIRO) configuration (no SB left turn movement).
    - Modify existing two-way left turn lane median striping to provide a dedicated eastbound left turn lane.

- Alternative 2 (Preferred): Restrict intersection to right-in/right-out only (RIRO) configuration (no median break, no SB left and EB left turn movements).

Existing + Ambient + Project Conditions

Figure 6-B illustrates the recommended improvements for EAP conditions. The following improvement (in addition to E+P improvements) is anticipated to improve the new deficient intersection of Orange Street / Canyon Drive to operate at acceptable levels of service during the peak hours:

Orange Street / Canyon Drive (#9)

- Provide a separate southbound right turn lane.

Existing + Ambient + Project + Cumulative Conditions

Figure 6-C illustrates the recommended improvements for EAPC conditions. The following improvements (in addition to EAP improvements) are anticipated to improve deficient intersections to operate at acceptable levels of service during the peak hours:

Orange Street / Bundy Canyon Road (#2)

- Modify striping for the northbound approach to provide a 1 left turn lane and 1 through lane and 1 right turn lane with overlap phase.
- Modify striping for the southbound approach to provide a 1 left turn lane and 1 through lane and 1 right lane.

I-15 SB Ramps / Bundy Canyon Road (#3)

- Modify existing southbound shared through/right lane to shared left/through/right turn lane.
- Provide a separate eastbound right turn lane.
- Provide a separate southbound right turn lane *(recommended to address potential queueing issues)*.

Sellers Road / Bundy Canyon Road (#6)

- Construct 1 northbound left turn lane and 1 northbound shared though/right lane.
- Construct 1 southbound left turn lane and 1 southbound shared though/right lane.
- Provide 1 westbound left turn lanes.
- *South leg Improvements are for cumulative access purposes*

Orange Street / Canyon Drive (#9)

- Provide a separate northbound left turn lane
- Provide a separate eastbound left turn lane.

Funding Mechanisms

In order to address the cumulate traffic impacts from the proposed project and other developments in the area, the County has the following funding mechanisms available.

Transportation Uniform Mitigation Fee (TUMF)

The Transportation Uniform Mitigation Fee (TUMF) Program was established to assist in funding the Regional System of Highways and Arterials throughout Riverside County. TUMF allows developers to contribute toward sustaining the regional transportation system on a "fair share" basis. Managed by the Western Riverside Council of Governments (WRCOG), the program is not designed to be the only source of revenue but would complement funds generated by Measure A, local transportation fee programs, etc.

Development Impact Fees (DIF)

The development impact fee (DIF) is intended to construct or acquire needed facilities, preserve open space, and habitat needed to serve new developments. The transportation facilities include roads, bridges, and traffic signals.

C. C R

O -S

F 6-D - . C -

. F I-215 , S R B C , C , , C B , I-15 F . T C A . F 6-E 6-F - . S F 6-G.

T - .

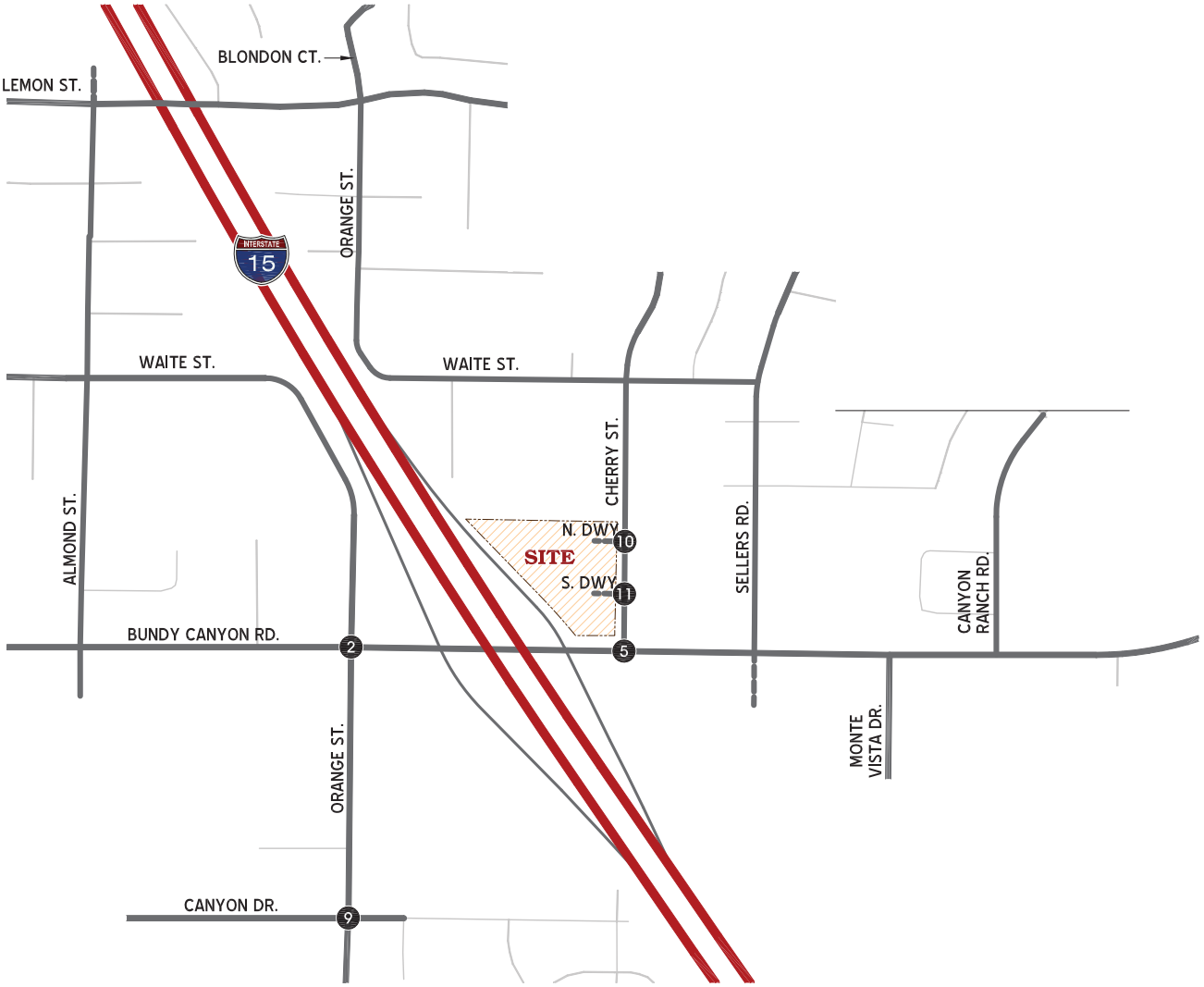
- P
- O -

.

- V .

A E 6-D, S P D B C R C S 245 . B C R ' R D R (S N . 114), 200 . T , P D C R .

FIGURE 6-A
E+P RECOMMENDED IMPROVEMENTS



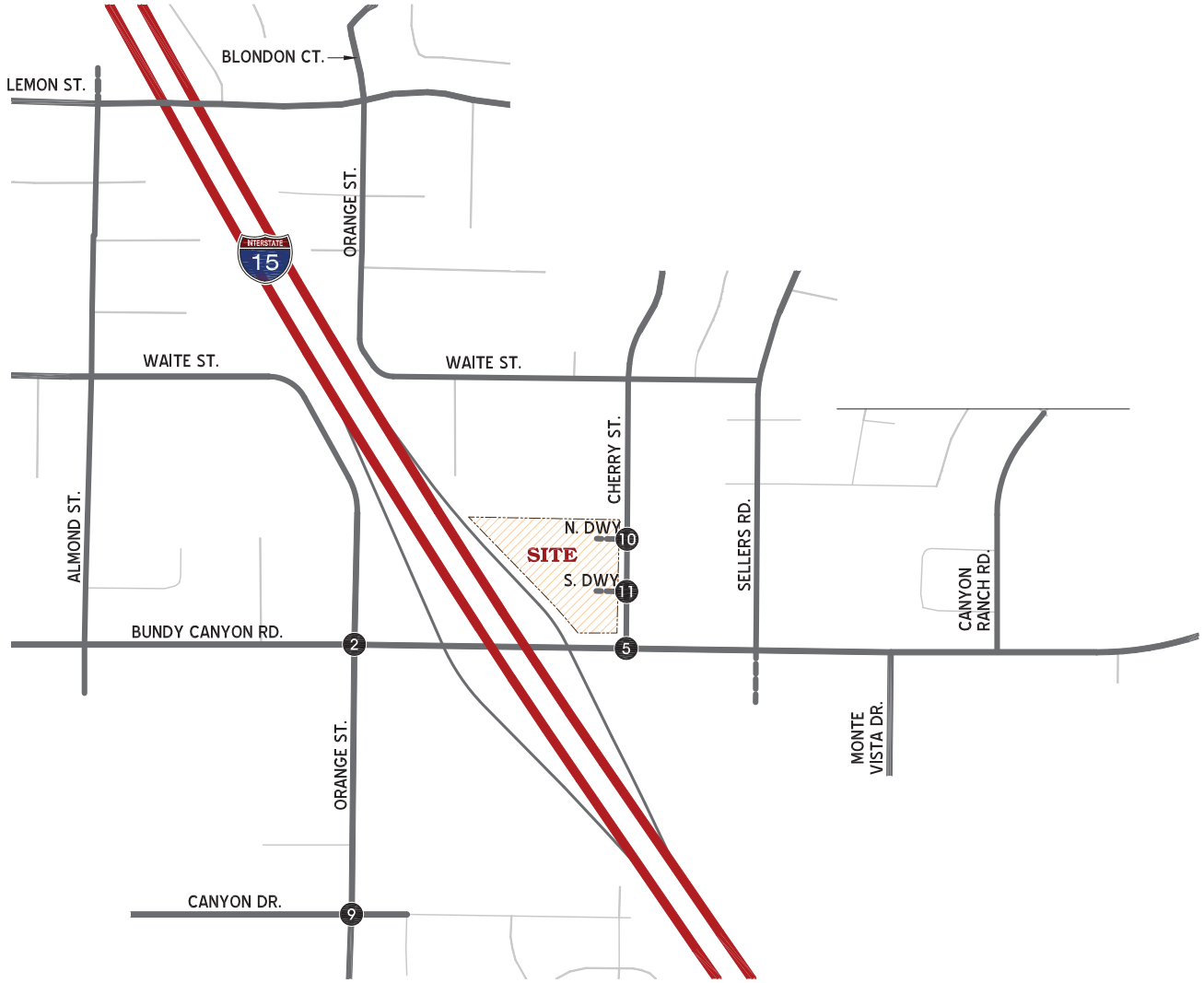
2. Orange St. / Bundy Cyn. Rd.	4. I-15 NB Ramps / Bundy Cyn. Rd.	5. Cherry St. / Bundy Cyn. Rd.	10. Cherry St. / N. Dwy.	11. Cherry St. / S. Dwy.
(RESTRIPE) (RESTRIPE) DEF (RESTRIPE) (RESTRIPE)		PREFERRED ALTERNATIVE (RIRO CONFIGURATION) DEF (RESTRIPE)		

LEGEND:

- # = INTERSECTION ID
- = EXISTING TRAFFIC SIGNAL
- = STOP SIGN
- DEF = DEFACTO RIGHT TURN LANE
- = EXISTING LANE
- = LANE IMPROVEMENT (E+P)
- = FUTURE PROJECT DRIVEWAY

N

FIGURE 6-B
EAP (2025) RECOMMENDED IMPROVEMENTS



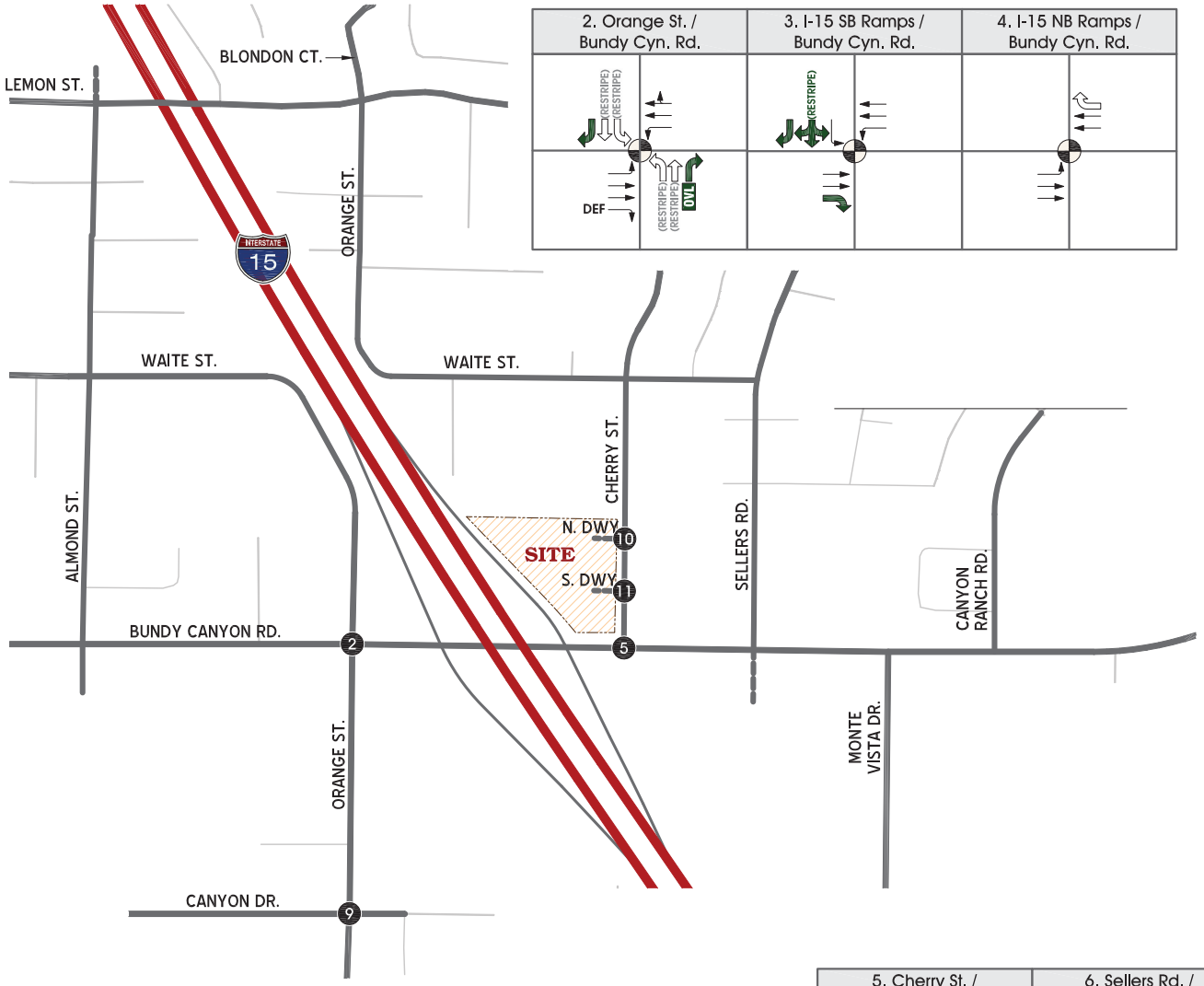
2. Orange St. / Bundy Cyn. Rd.	4. I-15 NB Ramps / Bundy Cyn. Rd.	5. Cherry St. / Bundy Cyn. Rd.	9. Orange St. / Canyon Dr.	10. Cherry St. / N. Dwy.	11. Cherry St. / S. Dwy.
(RESTRIPE) (RESTRIPE) DEF (RESTRIPE) (RESTRIPE)		PREFERRED ALTERNATIVE (RIRO CONFIGURATION) DEF (RESTRIPE)	S		

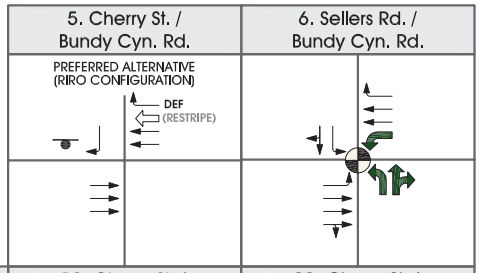
LEGEND:

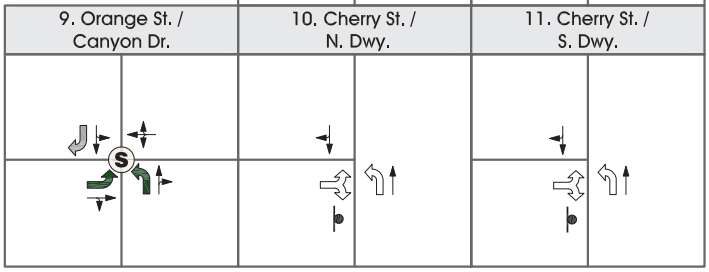
- # = INTERSECTION ID
- = EXISTING TRAFFIC SIGNAL
- S = EXISTING ALL WAY STOP
- = STOP SIGN
- DEF = DEFACTO RIGHT TURN LANE
- = EXISTING LANE
- = LANE IMPROVEMENT (EAP)
- = PREVIOUS LANE IMPROVEMENT (E+P)
- = FUTURE PROJECT DRIVEWAY

N

FIGURE 6-C
EAPC (2025) RECOMMENDED IMPROVEMENTS





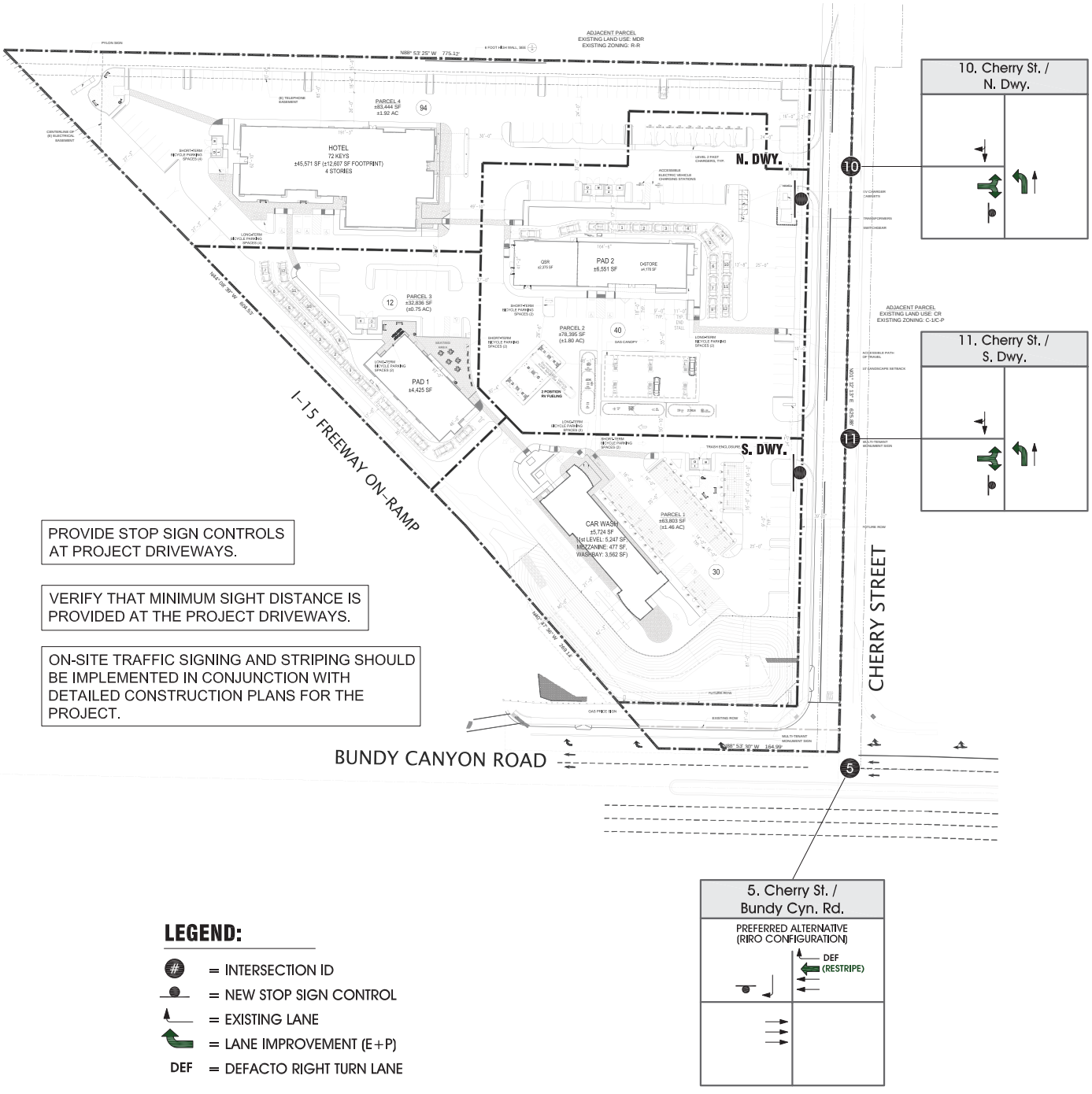


LEGEND:

- # = INTERSECTION ID
- = EXISTING TRAFFIC SIGNAL
- S = EXISTING ALL WAY STOP
- = STOP SIGN
- = EXISTING LANE
- = LANE IMPROVEMENT (EAPC)
- = PREVIOUS LANE IMPROVEMENT (EAP)
- = PREVIOUS LANE IMPROVEMENT (E+P)
- = FUTURE PROJECT DRIVEWAY
- DEF = DEFACTO RIGHT TURN LANE

N

FIGURE 6-D
ON-SITE CIRCULATION RECOMMENDATIONS



PROVIDE STOP SIGN CONTROLS AT PROJECT DRIVEWAYS.

VERIFY THAT MINIMUM SIGHT DISTANCE IS PROVIDED AT THE PROJECT DRIVEWAYS.

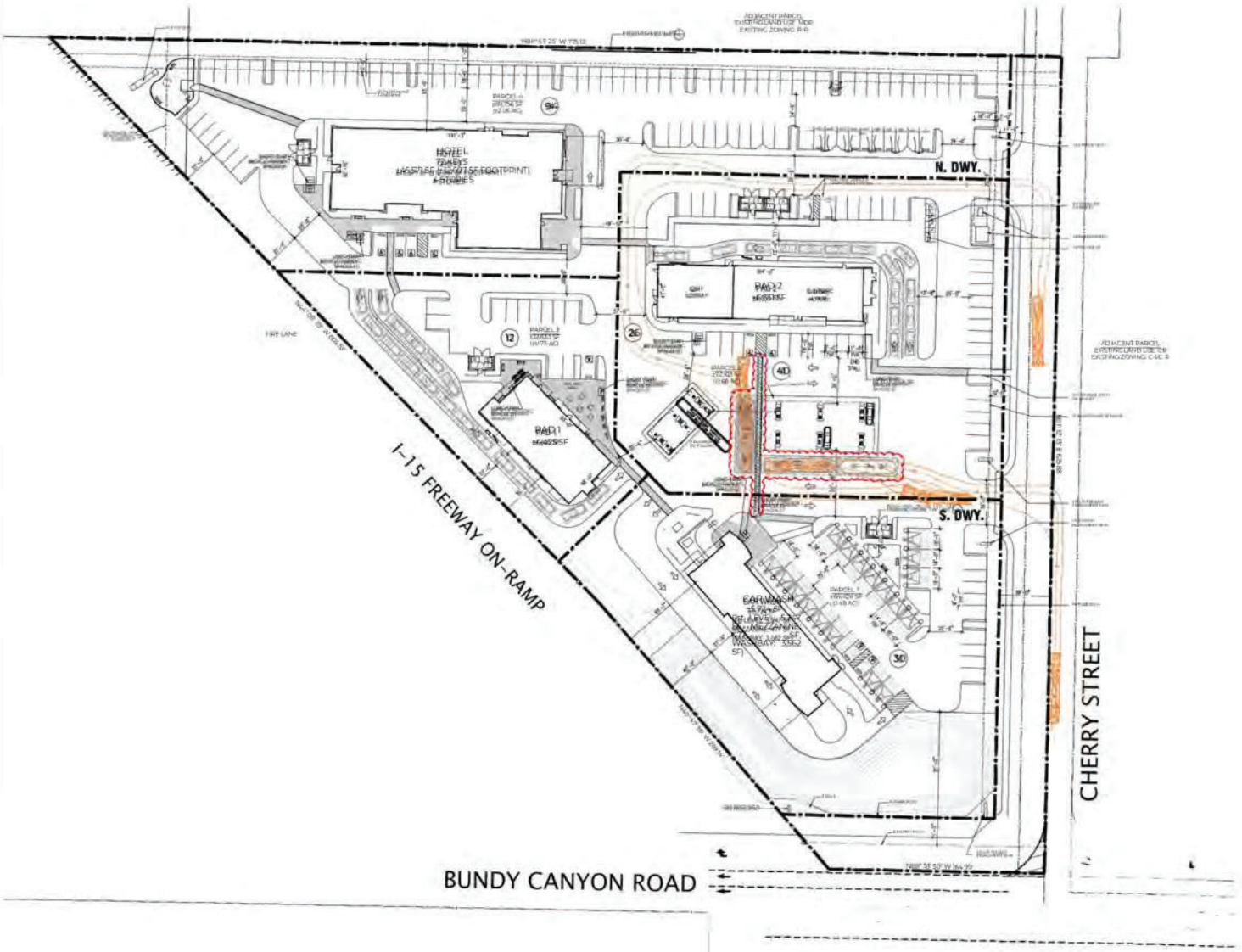
ON-SITE TRAFFIC SIGNING AND STRIPING SHOULD BE IMPLEMENTED IN CONJUNCTION WITH DETAILED CONSTRUCTION PLANS FOR THE PROJECT.

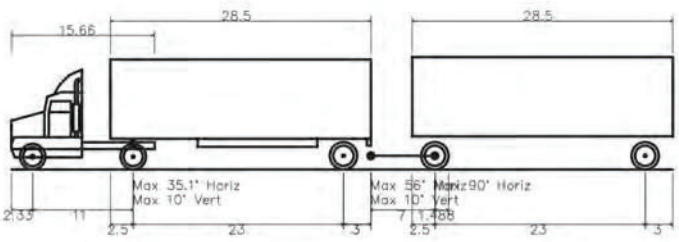
LEGEND:

- (#) = INTERSECTION ID
- = NEW STOP SIGN CONTROL
- = EXISTING LANE
- = LANE IMPROVEMENT (E+P)
- DEF = DEFACTO RIGHT TURN LANE

N

FIGURE 6-E
FUEL TANKER TRUCK PATH

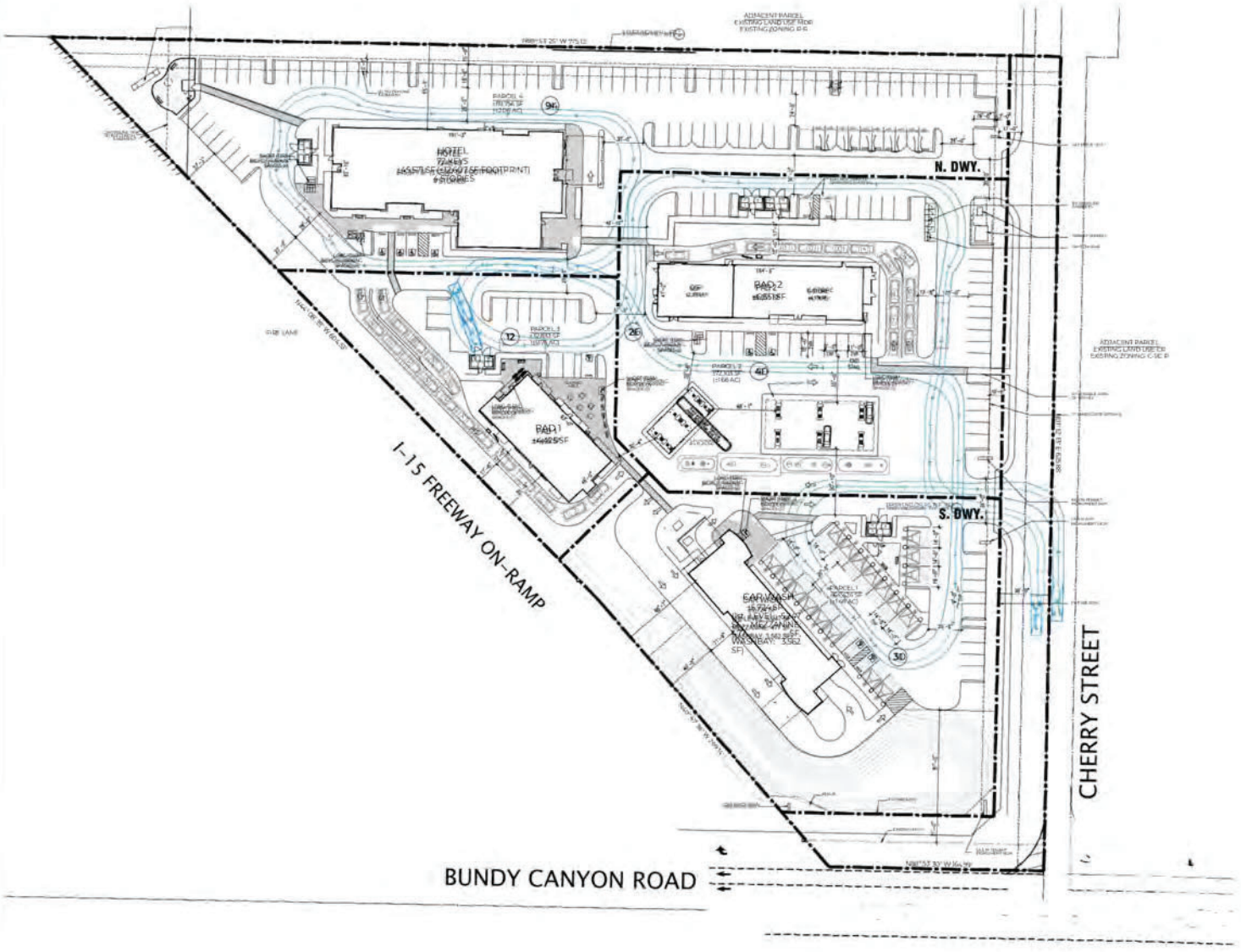




WB-67D - Double Trailer Combination

Overall Length	72.330ft
Overall Width	8.500ft
Overall Body Height	12.314ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	45.000ft

FIGURE 6-F
DELIVERY TRUCK PATH



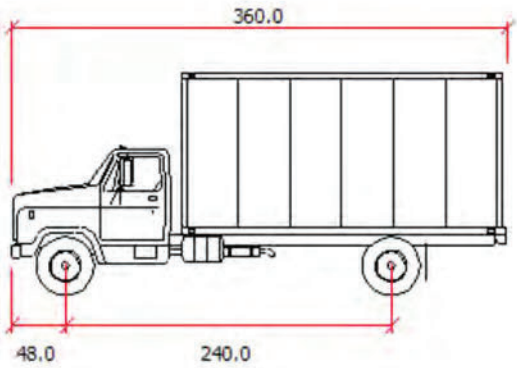
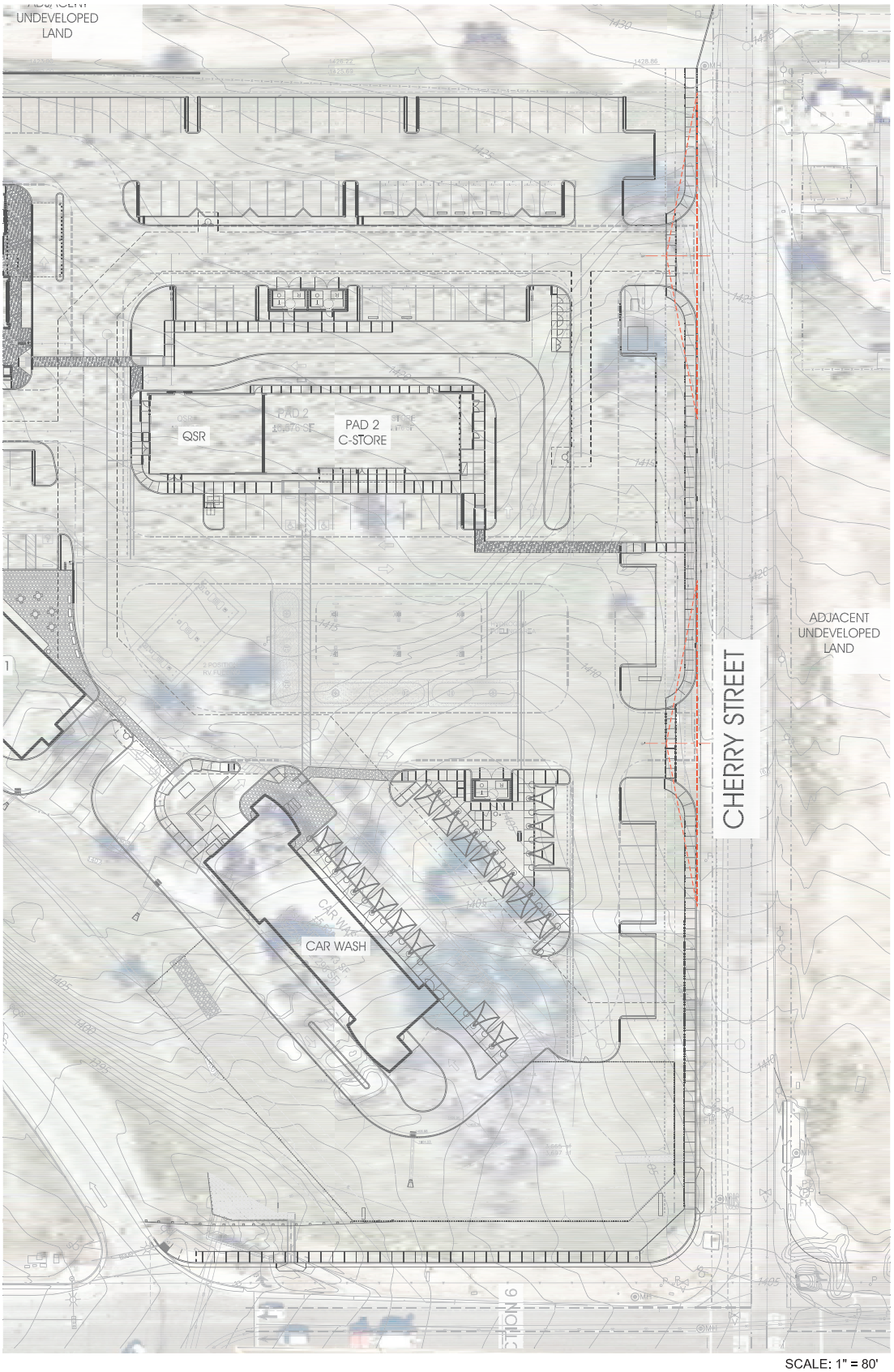


FIGURE 6- G
SIGHT DISTANCE



SCALE: 1" = 80'

APPENDIX A

SCOPING AGREEMENT

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ATTACHMENT A

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Wildomar Engineering Department requirements for the traffic impact analysis of the following project. The analysis must follow the latest City Traffic Impact Analysis Guidelines.

Project Identification

Case No.	**PAR 22-0145**
Related Cases -	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	**Cherry Outpost**
Project Address:	**North of Bundy Canyon Rd. and east of I-15**
Project Opening Year	**2024**
Project Description:	**84 room hotel, C-Store (w/18 fueling positions),**
	2 fast food restaurant w/drive-thru (5,200 sf total), and a car wash with a 120 foot tunnel

	Consultant	Developer
Name:	**Trames Solutions, Inc.**	**J&T Management**
Address:	**Scott Sato**	**139 Rado Rd.**
	4225 Oceanside Blvd., #354H	**Corona, CA 92879**
	Oceanside, CA 92056	
Phone No:	**(949) 244-2436**	**951-280-3833 ext. 6**
Fax/Email	scott@tramessolutions.com	claudia@jtmgmt.com

Trip Generation Information

Trip Generation Source: ITE Trip Generation Manual, 11th Edition

Current General Plan Land Use:	Proposed General Plan Land Use:
Commercial Retail	Commercial Retail
Current Zoning:	Proposed Zoning:
Scenic Highway Commercial	Scenic Highway Commercial

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	-	-	-	**370**	**352**	**722**
PM Trips	-	-	-	**325**	**318**	**643**

Internal Trip Allowance **No** (**0** % Trip Discount)
Pass-By Trip Allowance **Yes** (**15** % Trip Discount)

Project Trip Distribution

Trip Geographic Distribution: (See attached exhibit for detailed assignment).
N _____ S _____ E _____ W _____

Background Traffic

Annual Ambient Growth Rate: **2.0** %
Other projects to be analyzed: City to Provide

Build-out Studies: Does this project require a Build-out Study? No. The project is consistent with the GP

Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies).

1 Almond St./Bundy Canyon Rd.
2 Orange St./Bundy Canyon Rd.
3 I-15 SB Ramps/Bundy Canyon Rd.
4 I-15 NB Ramps/Bundy Canyon Rd.
5 Cherry St./Bundy Canyon Rd.
6 Sellers Rd./Bundy Canyon Rd.
7 Monte Vista Dr./Bundy Canyon Rd.
8 Canyon Ranch Rd./Bundy Canyon Rd.
9 Orange St./Canyon Dr.
10 Cherry St./N. Project Driveway
11 Cherry St./S. Project Driveway

Study Roadway Segments (For Build-out Studies):

1
2
3
4

Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of influence or one mile radius of boundaries? Yes

If so, name of jurisdiction: Lake Elsinore & Caltrans

Specific issues to be addressed in the Study

Existing
Existing+Ambient Growth+Project
Existing+Ambient Growth+Project+Cumulative

Intersections along Bundy Canyon will use the revised striping per the Bundy Canyon Road CIP
Pending the approved recommendaitons for Cherry/BundyCanyon, a signal design will be prepared
The C-store wil include truck traffic and the on-site routing will be included in the study
Truck traffic to/from the site is anticipated to occur outside of the peak hours.

Potential Screening Checks

Is your project screened from specific analyses

Is the project screened from VMT assessment? Yes

VMT screening justification

Retail Component

Project consists of less than 50,000 sf of commercial retail

Hotel Component

The proposed hotel will be local serving. There will be no conference/wedding facilities or restaurants to attact visitors from outside of the area. The OPR indicates that by adding retail opportunities and improve destination proximity, local-serving retail developments tends to shorten trips and reduce VMT. Similarly, the proposed hotel project will be located between similar type hotels in the Cities of Lake Elsinore (Holiday Inn Express 31573 Canyon Estates) and Murrieta (Comfort Inn 41005 California Oaks). The proposed hotel would be located approximately 3 miles south of the Lake Elsinore hotel and 6 miles north of the one in Murrieta. By siting the hotel along Bundy Canyon, this could result in a reduction of VMT by 1.5 miles to the north and 3 miles to the south. Therefore, the propsed hotel is consistent with the goals of SB 375 by potentially reducing the VMT along I-15 and can be considered to have a less than significant transportation impact.

VMT Analysis Scoping

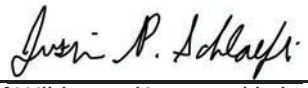
For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Coversion Factors (attach)

Signatures



TIA Preparer



4/26/23

City of Wildomar (Approved by)

TABLE 1

PROJECT TRIP GENERATION RATES[1]

Land Use	Quantity[2]		Peak Hour Trip Rates						Daily
			AM			PM			
			IN	OUT	Total	IN	OUT	Total	
Hotel	84	RM	0.26	0.20	0.46	0.30	0.29	0.59	7.99
Convenience Store/Gas Station - GFA (4-5.5k)	18.0	VFP	13.52	13.52	27.04	11.38	11.38	22.76	257.13
Fast-Food Restaurant w/ Drive-Through	5.2	TSF	22.75	21.86	44.61	17.18	15.85	33.03	467.48
Car Wash[3]	120	Feet	0.38	0.28	0.66	0.63	0.63	1.25	11.87

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

[2] RM = Room; VFP = Vehicle Fueling Position; TSF = Thousand Square Feet; Feet = Linear Feet of the Tunnel

[3] NEC I-15/Clinton Keith Traffic Impact Analysis, January 2023, TJW Engineers, Inc.

TABLE 2

PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity[1]		Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
Hotel	84	RM	22	17	39	25	24	49	671
Convenience Store/Gas Station - GFA (4-5.5k)	18.0	VFP	243	243	486	205	205	410	4,628
Pass-By (15%)			*-36*	*-36*	*-72*	*-31*	*-31*	*-62*	*-694*
Fast-Food Restaurant w/ Drive-Through	5.2	TSF	118	114	232	89	82	171	2,431
Pass-By (15%)			*-18*	*-17*	*-35*	*-13*	*-12*	*-25*	*-365*
Car Wash	120	Feet	46	34	80	76	76	152	1,424
Pass-By (AM 10%. PM 34%, ADT 10%)			*-5*	*-3*	*-8*	*-26*	*-26*	*-52*	*-142*
TOTAL NET TRIPS			370	352	722	325	318	643	7,953

[1] RM = Room; VFP = Vehicle Fueling Position; TSF = Thousand Square Feet; Feet = Linear Feet of the Tunnel

FIGURE 1
STUDY AREA

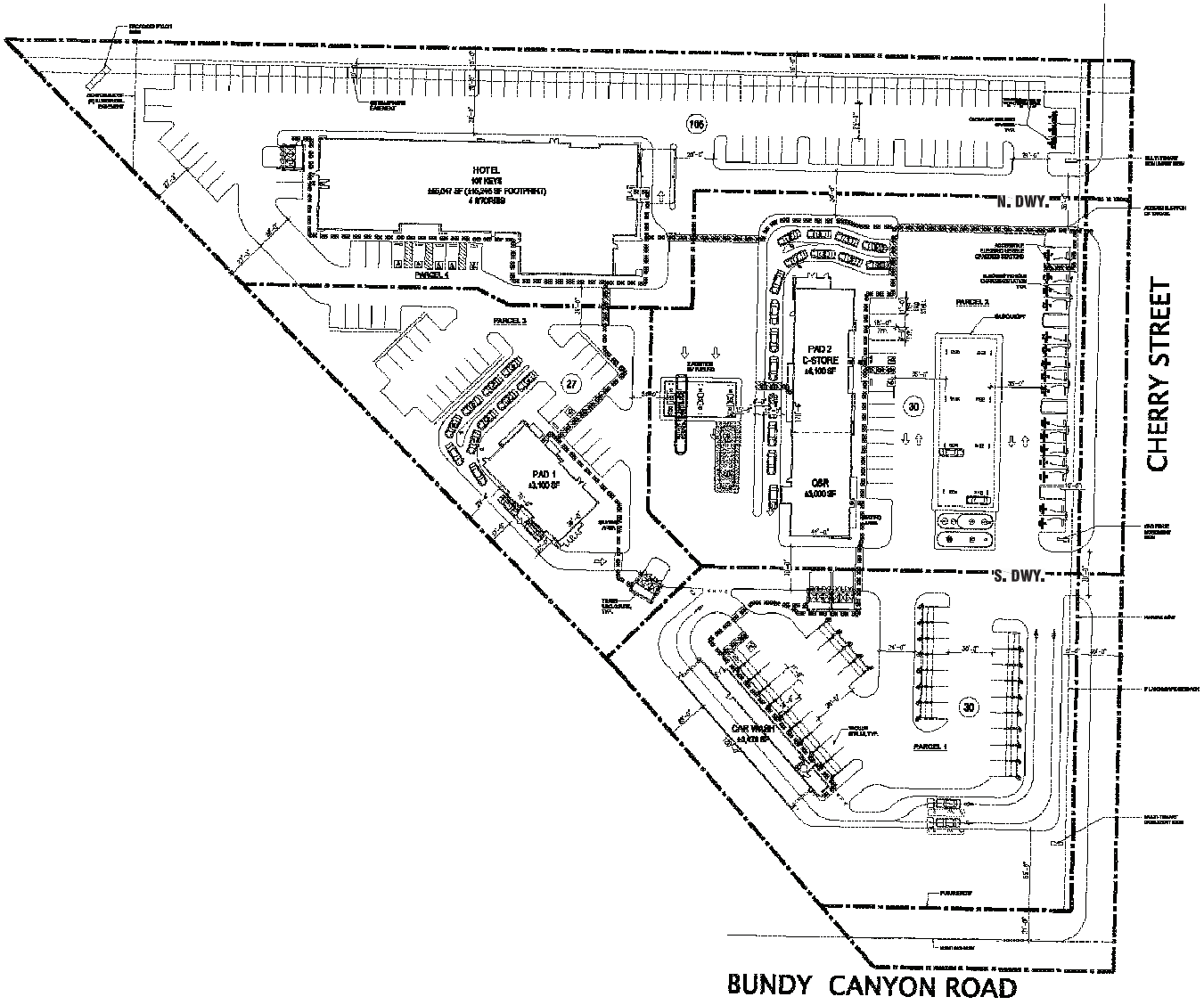


LEGEND:

- 9 = EXISTING INTERSECTION ANALYSIS LOCATION
- (2) = FUTURE INTERSECTION ANALYSIS LOCATION
- = FUTURE ROADWAY / DIRT ROAD / PROJECT DRIVEWAY

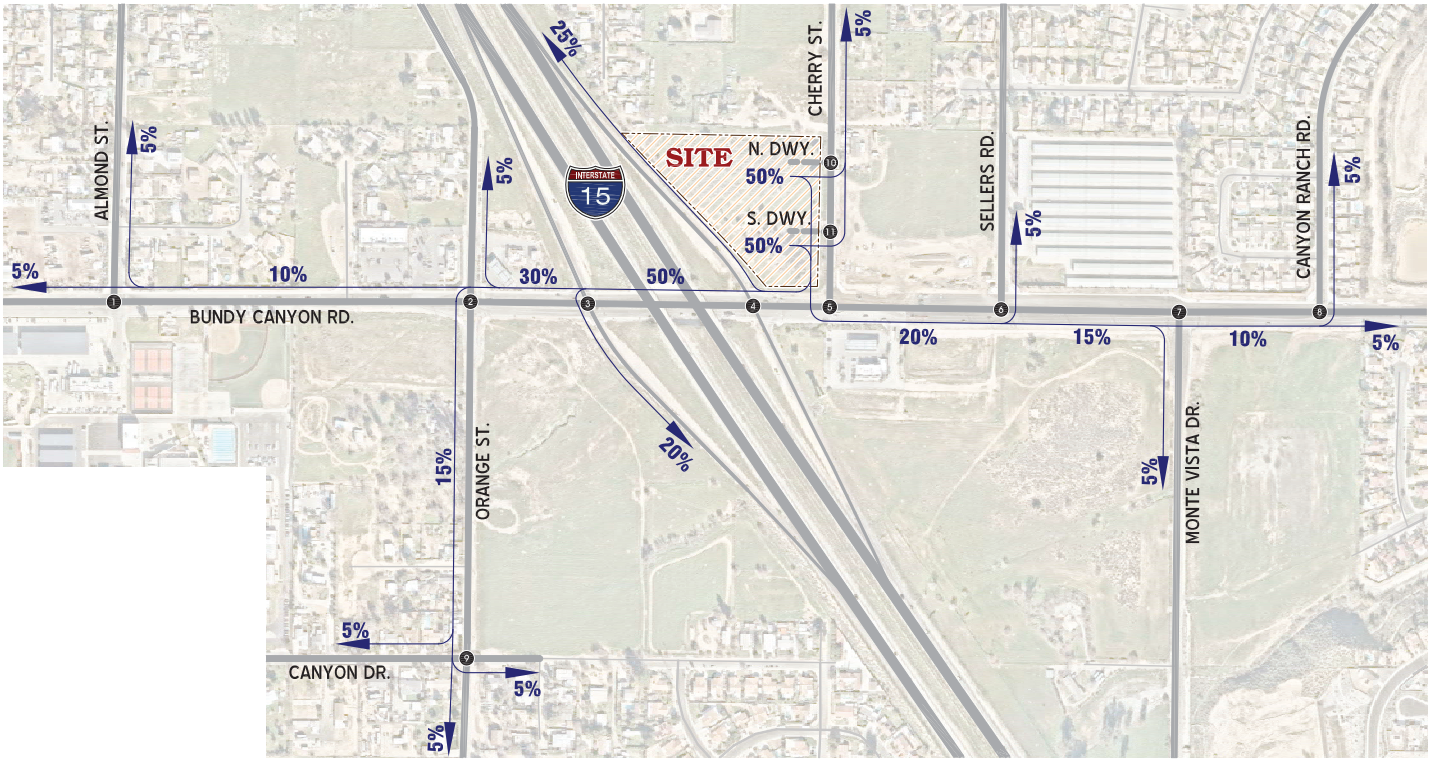
N

FIGURE 2
SITE PLAN



N

FIGURE 3
PROJECT TRIP DISTRIBUTION



LEGEND:

- ❸ = INTERSECTION ID
- = FUTURE ROADWAY / DIRT ROAD / PROJECT DRIVEWAY
- 10% = PERCENT TO/FROM PROJECT

N

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APPENDIX B

TRAFFIC COUNT WORKSHEETS

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Corona, CA 92878
(951) 268-6268

City of Wildomar
N/S: Almonst Street
E/W: Bundy Canyon Road
Weather: Clear

File Name : 01_WLD_Alm_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Almond Street Southbound				Bundy Canyon Road Westbound				Almond Street Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	9	3	2	14	3	66	1	70	2	2	2	6	1	76	1	78	168
07:15 AM	16	5	5	26	3	66	6	75	2	2	6	10	3	91	2	96	207
07:30 AM	36	1	10	47	8	73	9	90	2	1	5	8	1	90	0	91	236
07:45 AM	24	4	5	33	8	70	8	86	3	2	7	12	1	96	4	101	232
Total	85	13	22	120	22	275	24	321	9	7	20	36	6	353	7	366	843
08:00 AM	8	13	12	33	19	71	15	105	12	11	16	39	4	98	13	115	292
08:15 AM	12	16	12	40	27	83	8	118	6	18	37	61	15	88	12	115	334
08:30 AM	10	5	4	19	7	68	6	81	6	7	5	18	9	98	3	110	228
08:45 AM	17	0	1	18	2	82	5	89	2	1	2	5	3	55	0	58	170
Total	47	34	29	110	55	304	34	393	26	37	60	123	31	339	28	398	1024
Grand Total	132	47	51	230	77	579	58	714	35	44	80	159	37	692	35	764	1867
Apprch %	57.4	20.4	22.2		10.8	81.1	8.1		22	27.7	50.3		4.8	90.6	4.6		
Total %	7.1	2.5	2.7	12.3	4.1	31	3.1	38.2	1.9	2.4	4.3	8.5	2	37.1	1.9	40.9	

	Almond Street Southbound				Bundy Canyon Road Westbound				Almond Street Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**36**	1	10	**47**	8	73	9	90	2	1	5	8	1	90	0	91	236
07:45 AM	24	4	5	33	8	70	8	86	3	2	7	12	1	96	4	101	232
08:00 AM	8	13	**12**	33	19	71	**15**	105	**12**	11	16	39	4	**98**	**13**	**115**	292
08:15 AM	12	**16**	12	40	**27**	**83**	8	**118**	6	**18**	**37**	**61**	**15**	88	12	115	**334**
Total Volume	80	34	39	153	62	297	40	399	23	32	65	120	21	372	29	422	1094
% App. Total	52.3	22.2	25.5		15.5	74.4	10		19.2	26.7	54.2		5	88.2	6.9		
PHF	.556	.531	.813	.814	.574	.895	.667	.845	.479	.444	.439	.492	.350	.949	.558	.917	.819

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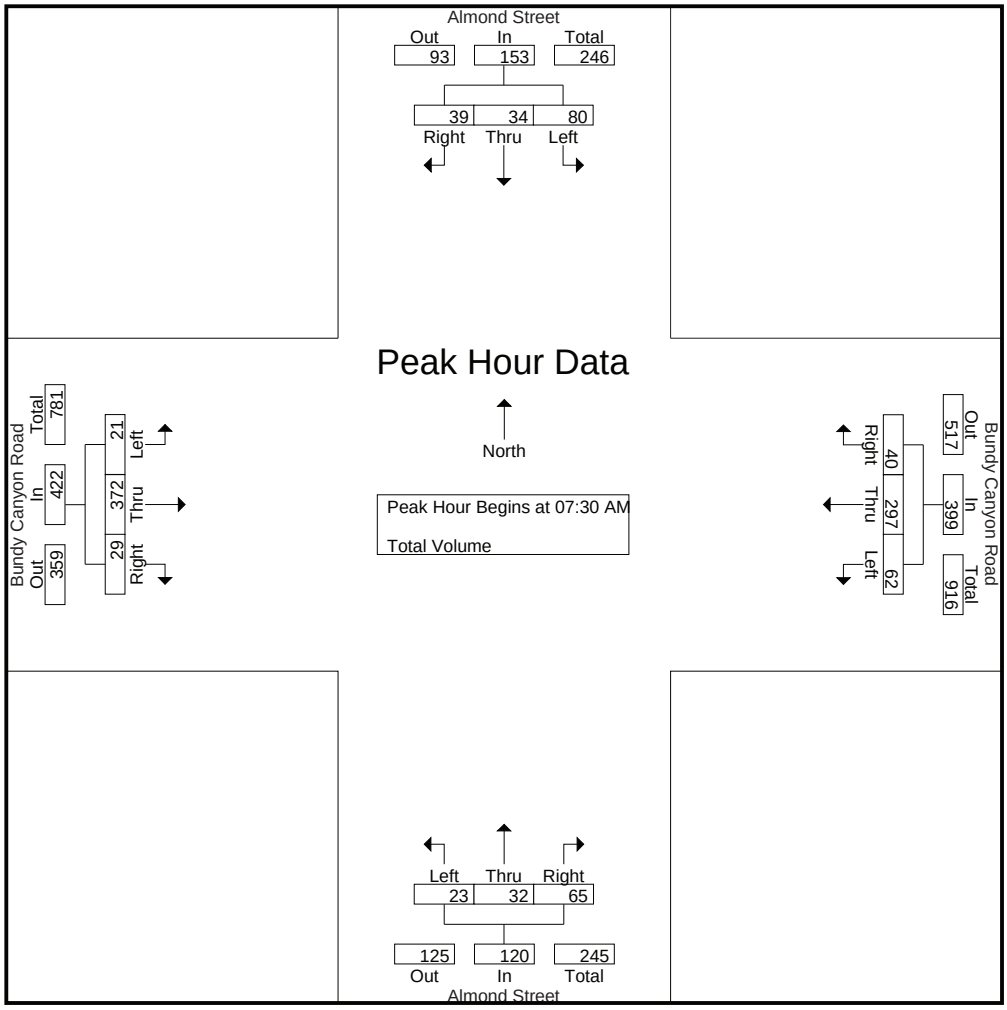

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:45 AM				07:45 AM			
+0 mins.	**36**	1	10	**47**	8	73	9	90	3	2	7	12	1	96	4	101
+15 mins.	24	4	5	33	8	70	8	86	**12**	11	16	39	4	**98**	**13**	**115**
+30 mins.	8	13	**12**	33	19	71	**15**	105	6	**18**	**37**	**61**	**15**	88	12	115
+45 mins.	12	**16**	12	40	**27**	**83**	8	**118**	6	7	5	18	9	98	3	110
Total Volume	80	34	39	153	62	297	40	399	27	38	65	130	29	380	32	441
% App. Total	52.3	22.2	25.5		15.5	74.4	10		20.8	29.2	50		6.6	86.2	7.3	
PHF	.556	.531	.813	.814	.574	.895	.667	.845	.563	.528	.439	.533	.483	.969	.615	.959

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File Name : 01_WLD_Alm_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Almond Street Southbound				Bundy Canyon Road Westbound				Almond Street Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	12	1	2	15	2	126	13	141	5	2	7	14	4	119	6	129	299
04:15 PM	11	0	7	18	1	123	8	132	0	1	2	3	4	83	0	87	240
04:30 PM	12	0	2	14	3	128	13	144	1	1	4	6	0	105	0	105	269
04:45 PM	12	0	4	16	0	120	12	132	4	2	2	8	1	111	1	113	269
Total	47	1	15	63	6	497	46	549	10	6	15	31	9	418	7	434	1077
05:00 PM	10	0	4	14	1	100	10	111	5	0	4	9	2	126	0	128	262
05:15 PM	8	0	1	9	0	117	10	127	4	1	4	9	1	97	0	98	243
05:30 PM	10	0	5	15	1	114	9	124	2	0	7	9	3	106	2	111	259
05:45 PM	11	0	5	16	3	103	9	115	0	0	1	1	4	115	0	119	251
Total	39	0	15	54	5	434	38	477	11	1	16	28	10	444	2	456	1015
Grand Total	86	1	30	117	11	931	84	1026	21	7	31	59	19	862	9	890	2092
Apprch %	73.5	0.9	25.6		1.1	90.7	8.2		35.6	11.9	52.5		2.1	96.9	1		
Total %	4.1	0	1.4	5.6	0.5	44.5	4	49	1	0.3	1.5	2.8	0.9	41.2	0.4	42.5	

	Almond Street Southbound				Bundy Canyon Road Westbound				Almond Street Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**12**	**1**	2	15	2	126	**13**	141	**5**	**2**	**7**	**14**	**4**	**119**	**6**	**129**	**299**
04:15 PM	11	0	**7**	**18**	1	123	8	132	0	1	2	3	4	83	0	87	240
04:30 PM	12	0	2	14	**3**	**128**	13	**144**	1	1	4	6	0	105	0	105	269
04:45 PM	12	0	4	16	0	120	12	132	4	2	2	8	1	111	1	113	269
Total Volume	47	1	15	63	6	497	46	549	10	6	15	31	9	418	7	434	1077
% App. Total	74.6	1.6	23.8		1.1	90.5	8.4		32.3	19.4	48.4		2.1	96.3	1.6		
PHF	.979	.250	.536	.875	.500	.971	.885	.953	.500	.750	.536	.554	.563	.878	.292	.841	.901

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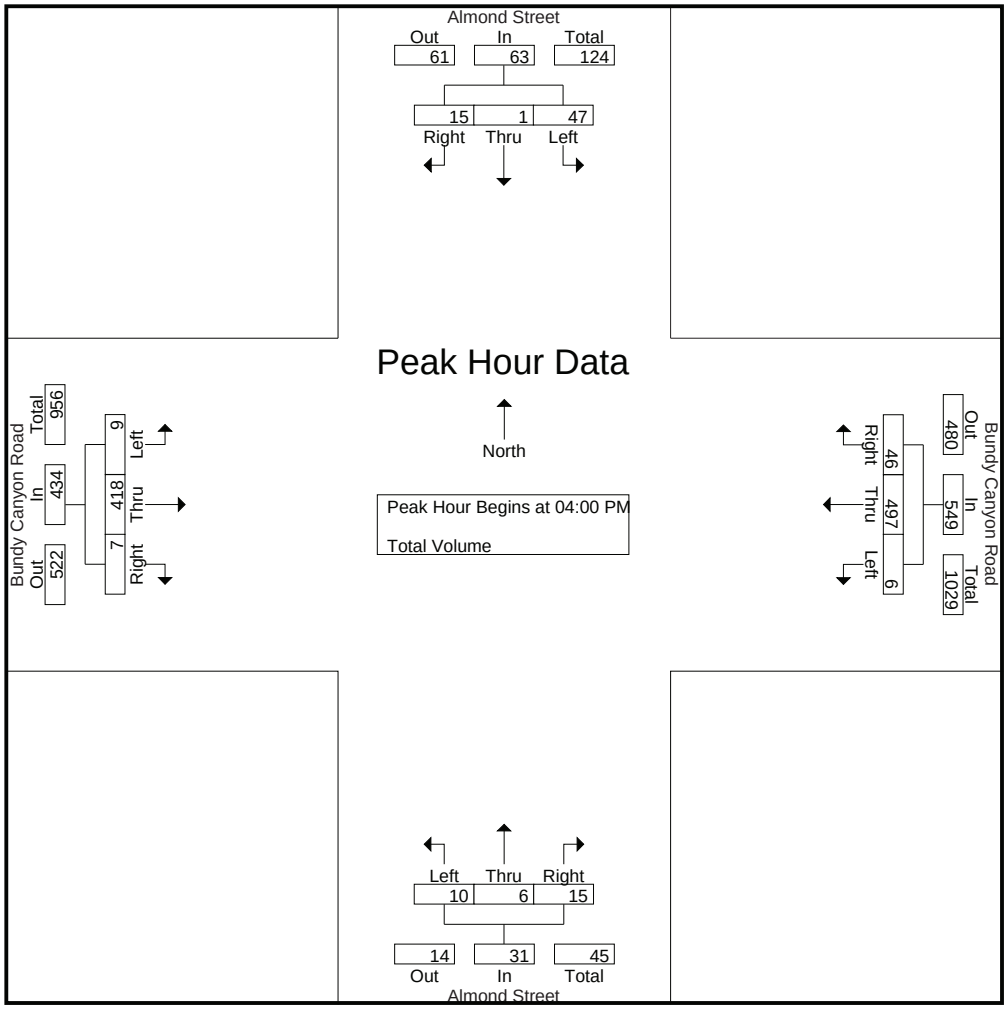
Site Code : 20123414
Start Date : 5/2/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:45 PM				05:00 PM			
+0 mins.	**12**	**1**	2	15	2	126	**13**	141	4	**2**	2	8	2	**126**	0	**128**
+15 mins.	11	0	**7**	**18**	1	123	8	132	**5**	0	4	**9**	1	97	0	98
+30 mins.	12	0	2	14	**3**	**128**	13	**144**	4	1	4	9	3	106	**2**	111
+45 mins.	12	0	4	16	0	120	12	132	2	0	**7**	9	**4**	115	0	119
Total Volume	47	1	15	63	6	497	46	549	15	3	17	35	10	444	2	456
% App. Total	74.6	1.6	23.8		1.1	90.5	8.4		42.9	8.6	48.6		2.2	97.4	0.4	
PHF	.979	.250	.536	.875	.500	.971	.885	.953	.750	.375	.607	.972	.625	.881	.250	.891

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City of Wildomar
N/S: Orange Street
E/W: Bundy Canyon Road
Weather: Clear

File Name : 02_WLD_Orn_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Orange Street Southbound				Bundy Canyon Road Westbound				Orange Street Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	32	5	1	38	55	63	10	128	3	10	46	59	5	86	1	92	317
07:15 AM	34	7	1	42	59	71	18	148	4	9	57	70	4	100	2	106	366
07:30 AM	37	12	5	54	43	89	15	147	1	15	68	84	5	125	3	133	418
07:45 AM	58	12	1	71	54	89	12	155	3	9	80	92	5	116	5	126	444
Total	161	36	8	205	211	312	55	578	11	43	251	305	19	427	11	457	1545
08:00 AM	40	15	3	58	82	101	16	199	0	13	85	98	6	106	4	116	471
08:15 AM	48	11	2	61	94	104	19	217	4	17	88	109	7	111	8	126	513
08:30 AM	33	7	1	41	58	88	16	162	2	17	84	103	6	111	6	123	429
08:45 AM	38	5	0	43	35	83	19	137	2	5	40	47	3	65	2	70	297
Total	159	38	6	203	269	376	70	715	8	52	297	357	22	393	20	435	1710
Grand Total	320	74	14	408	480	688	125	1293	19	95	548	662	41	820	31	892	3255
Apprch %	78.4	18.1	3.4		37.1	53.2	9.7		2.9	14.4	82.8		4.6	91.9	3.5		
Total %	9.8	2.3	0.4	12.5	14.7	21.1	3.8	39.7	0.6	2.9	16.8	20.3	1.3	25.2	1	27.4	

	Orange Street Southbound				Bundy Canyon Road Westbound				Orange Street Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**58**	12	1	**71**	54	89	12	155	3	9	80	92	5	**116**	5	**126**	444
08:00 AM	40	**15**	**3**	58	82	101	16	199	0	13	85	98	6	106	4	116	471
08:15 AM	48	11	2	61	**94**	**104**	**19**	**217**	**4**	**17**	**88**	**109**	**7**	111	**8**	126	**513**
08:30 AM	33	7	1	41	58	88	16	162	2	17	84	103	6	111	6	123	429
Total Volume	179	45	7	231	288	382	63	733	9	56	337	402	24	444	23	491	1857
% App. Total	77.5	19.5	3		39.3	52.1	8.6		2.2	13.9	83.8		4.9	90.4	4.7		
PHF	.772	.750	.583	.813	.766	.918	.829	.844	.563	.824	.957	.922	.857	.957	.719	.974	.905

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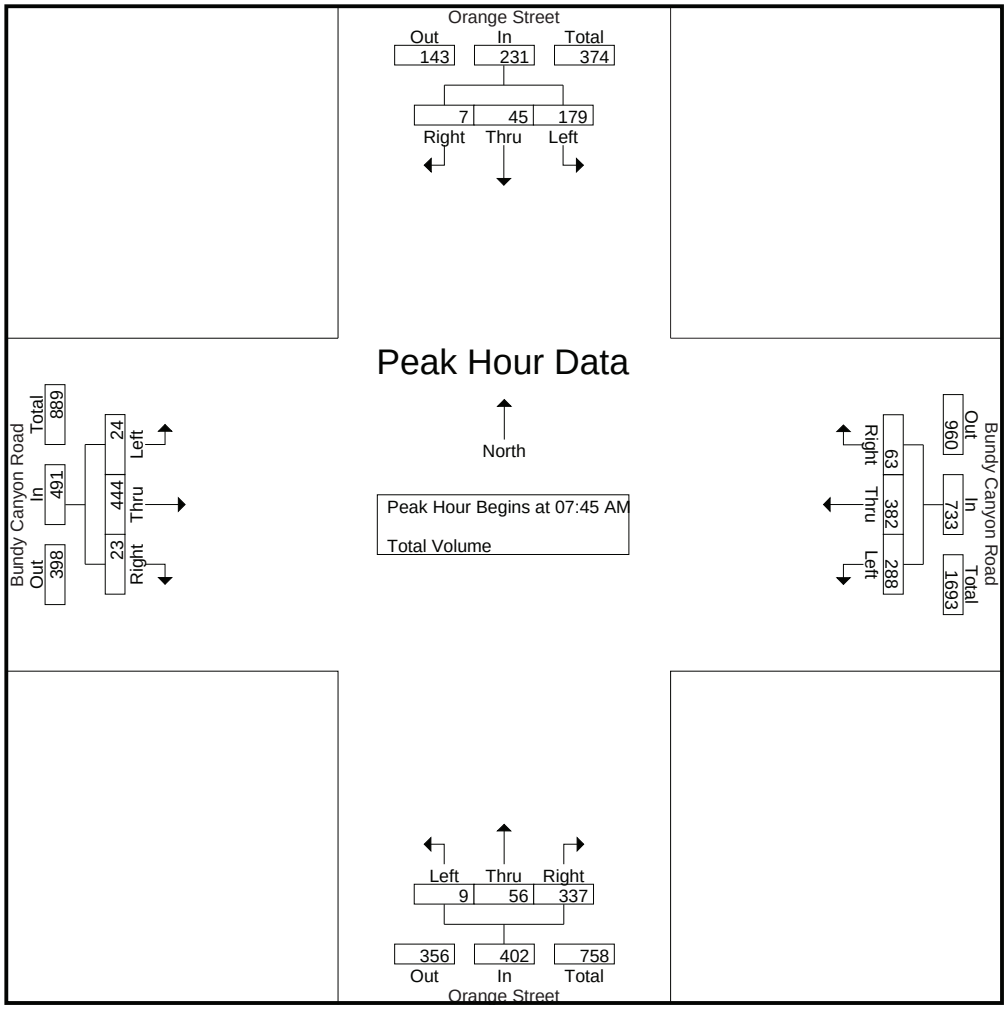
City of Wildomar
N/S: Orange Street
E/W: Bundy Canyon Road
Weather: Clear

File Name : 02_WLD_Orn_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:45 AM				07:30 AM			
+0 mins.	37	12	**5**	54	54	89	12	155	3	9	80	92	5	**125**	3	**133**
+15 mins.	**58**	12	1	**71**	82	101	16	199	0	13	85	98	5	116	5	126
+30 mins.	40	**15**	3	58	**94**	**104**	**19**	**217**	**4**	**17**	**88**	**109**	6	106	4	116
+45 mins.	48	11	2	61	58	88	16	162	2	17	84	103	**7**	111	**8**	126
Total Volume	183	50	11	244	288	382	63	733	9	56	337	402	23	458	20	501
% App. Total	75	20.5	4.5		39.3	52.1	8.6		2.2	13.9	83.8		4.6	91.4	4	
PHF	.789	.833	.550	.859	.766	.918	.829	.844	.563	.824	.957	.922	.821	.916	.625	.942

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City of Wildomar
N/S: Orange Street
E/W: Bundy Canyon Road
Weather: Clear

File Name : 02_WLD_Orn_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Orange Street Southbound				Bundy Canyon Road Westbound				Orange Street Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	33	10	6	49	51	133	36	220	1	6	44	51	4	114	4	122	442
04:15 PM	31	8	5	44	52	135	39	226	8	10	36	54	7	88	7	102	426
04:30 PM	27	7	4	38	45	128	29	202	5	9	43	57	6	113	6	125	422
04:45 PM	20	5	4	29	44	136	39	219	1	15	63	79	5	105	7	117	444
Total	111	30	19	160	192	532	143	867	15	40	186	241	22	420	24	466	1734
05:00 PM	21	2	0	23	59	109	40	208	4	12	36	52	8	138	2	148	431
05:15 PM	30	4	2	36	34	119	36	189	2	12	48	62	4	104	6	114	401
05:30 PM	27	10	2	39	59	126	40	225	1	10	37	48	2	118	5	125	437
05:45 PM	21	15	2	38	45	102	42	189	2	6	42	50	4	107	7	118	395
Total	99	31	6	136	197	456	158	811	9	40	163	212	18	467	20	505	1664
Grand Total	210	61	25	296	389	988	301	1678	24	80	349	453	40	887	44	971	3398
Apprch %	70.9	20.6	8.4		23.2	58.9	17.9		5.3	17.7	77		4.1	91.3	4.5		
Total %	6.2	1.8	0.7	8.7	11.4	29.1	8.9	49.4	0.7	2.4	10.3	13.3	1.2	26.1	1.3	28.6	

	Orange Street Southbound				Bundy Canyon Road Westbound				Orange Street Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**33**	**10**	**6**	**49**	51	133	36	220	1	6	44	51	4	**114**	4	122	442
04:15 PM	31	8	5	44	**52**	135	**39**	**226**	**8**	10	36	54	**7**	88	**7**	102	426
04:30 PM	27	7	4	38	45	128	29	202	5	9	43	57	6	113	6	**125**	422
04:45 PM	20	5	4	29	44	**136**	39	219	1	**15**	**63**	**79**	5	105	7	117	**444**
Total Volume	111	30	19	160	192	532	143	867	15	40	186	241	22	420	24	466	1734
% App. Total	69.4	18.8	11.9		22.1	61.4	16.5		6.2	16.6	77.2		4.7	90.1	5.2		
PHF	.841	.750	.792	.816	.923	.978	.917	.959	.469	.667	.738	.763	.786	.921	.857	.932	.976

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City of Wildomar
N/S: Orange Street
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File Name : 02_WLD_Orn_BC PM
Site Code : 20123414
Start Date : 5/2/2023
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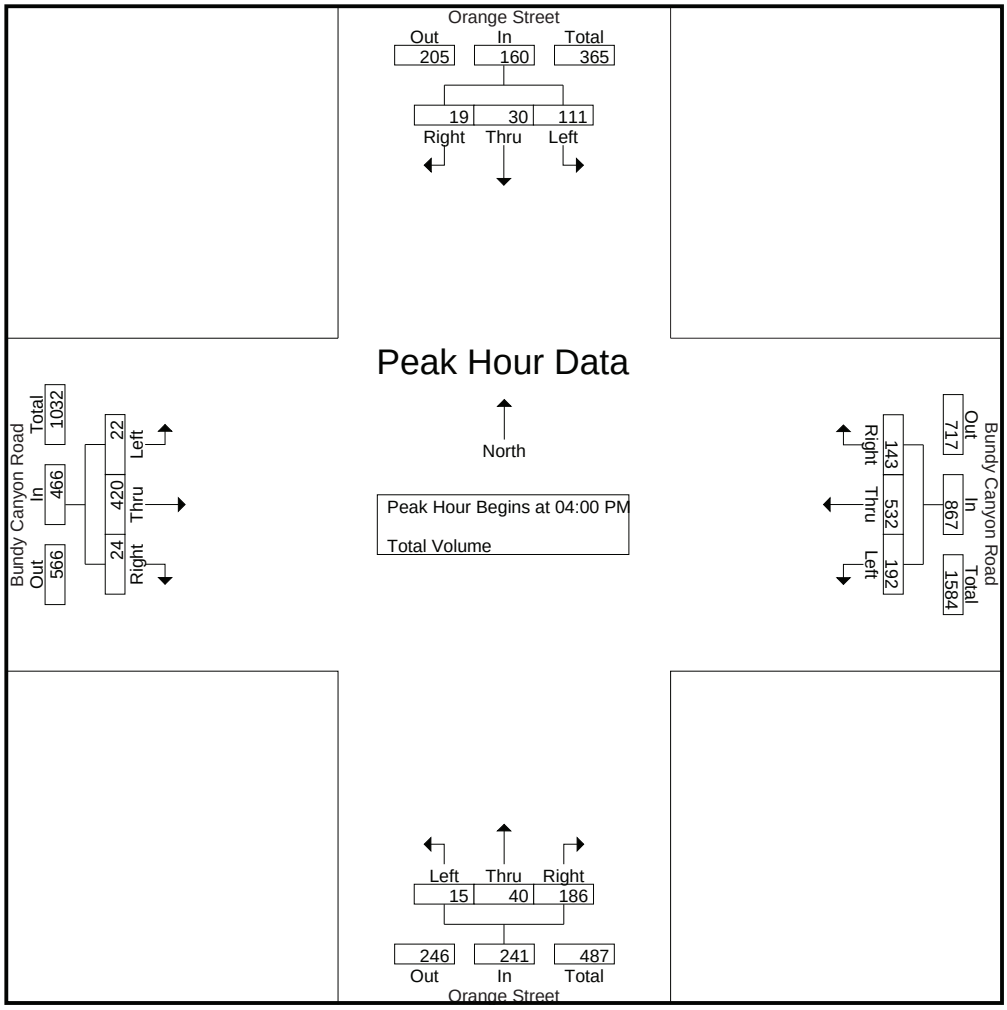

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				05:00 PM			
+0 mins.	**33**	**10**	**6**	**49**	51	133	36	220	**5**	9	43	57	**8**	**138**	2	**148**
+15 mins.	31	8	5	44	**52**	135	**39**	**226**	1	**15**	**63**	**79**	4	104	6	114
+30 mins.	27	7	4	38	45	128	29	202	4	12	36	52	2	118	5	125
+45 mins.	20	5	4	29	44	**136**	39	219	2	12	48	62	4	107	**7**	118
Total Volume	111	30	19	160	192	532	143	867	12	48	190	250	18	467	20	505
% App. Total	69.4	18.8	11.9		22.1	61.4	16.5		4.8	19.2	76		3.6	92.5	4	
PHF	.841	.750	.792	.816	.923	.978	.917	.959	.600	.800	.754	.791	.563	.846	.714	.853

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City of Wildomar
N/S: I-15 Southbound Ramps
E/W: Bundy Canyon Road
Weather: Clear

File Name : 03_WLD_15S_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	I-15 Southbound Off Ramp Southbound				Bundy Canyon Road Westbound				I-15 Southbound On Ramp Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	56	1	45	102	53	92	0	145	0	0	0	0	0	96	67	163	410
07:15 AM	49	0	47	96	69	117	0	186	0	0	0	0	0	91	100	191	473
07:30 AM	72	2	28	102	105	125	0	230	0	0	0	0	0	94	136	230	562
07:45 AM	68	1	48	117	90	122	0	212	0	0	0	0	0	108	146	254	583
Total	245	4	168	417	317	456	0	773	0	0	0	0	0	389	449	838	2028
08:00 AM	61	3	80	144	74	152	0	226	0	0	0	0	0	116	115	231	601
08:15 AM	72	1	96	169	60	127	0	187	0	0	0	0	0	128	128	256	612
08:30 AM	60	0	55	115	48	103	0	151	0	0	0	0	0	112	120	232	498
08:45 AM	35	1	34	70	66	123	0	189	0	0	0	0	0	73	89	162	421
Total	228	5	265	498	248	505	0	753	0	0	0	0	0	429	452	881	2132
Grand Total	473	9	433	915	565	961	0	1526	0	0	0	0	0	818	901	1719	4160
Apprch %	51.7	1	47.3		37	63	0		0	0	0		0	47.6	52.4		
Total %	11.4	0.2	10.4	22	13.6	23.1	0	36.7	0	0	0	0	0	19.7	21.7	41.3	

	I-15 Southbound Off Ramp Southbound				Bundy Canyon Road Westbound				I-15 Southbound On Ramp Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**72**	2	28	102	**105**	125	0	**230**	0	0	0	0	0	94	136	230	562
07:45 AM	68	1	48	117	90	122	0	212	0	0	0	0	0	108	**146**	254	583
08:00 AM	61	**3**	80	144	74	**152**	0	226	0	0	0	0	0	116	115	231	601
08:15 AM	72	1	**96**	**169**	60	127	0	187	0	0	0	0	0	**128**	128	**256**	**612**
Total Volume	273	7	252	532	329	526	0	855	0	0	0	0	0	446	525	971	2358
% App. Total	51.3	1.3	47.4		38.5	61.5	0		0	0	0		0	45.9	54.1		
PHF	.948	.583	.656	.787	.783	.865	.000	.929	.000	.000	.000	.000	.000	.871	.899	.948	.963

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City of Wildomar
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File Name : 03_WLD_15S_BC AM
Site Code : 20123414
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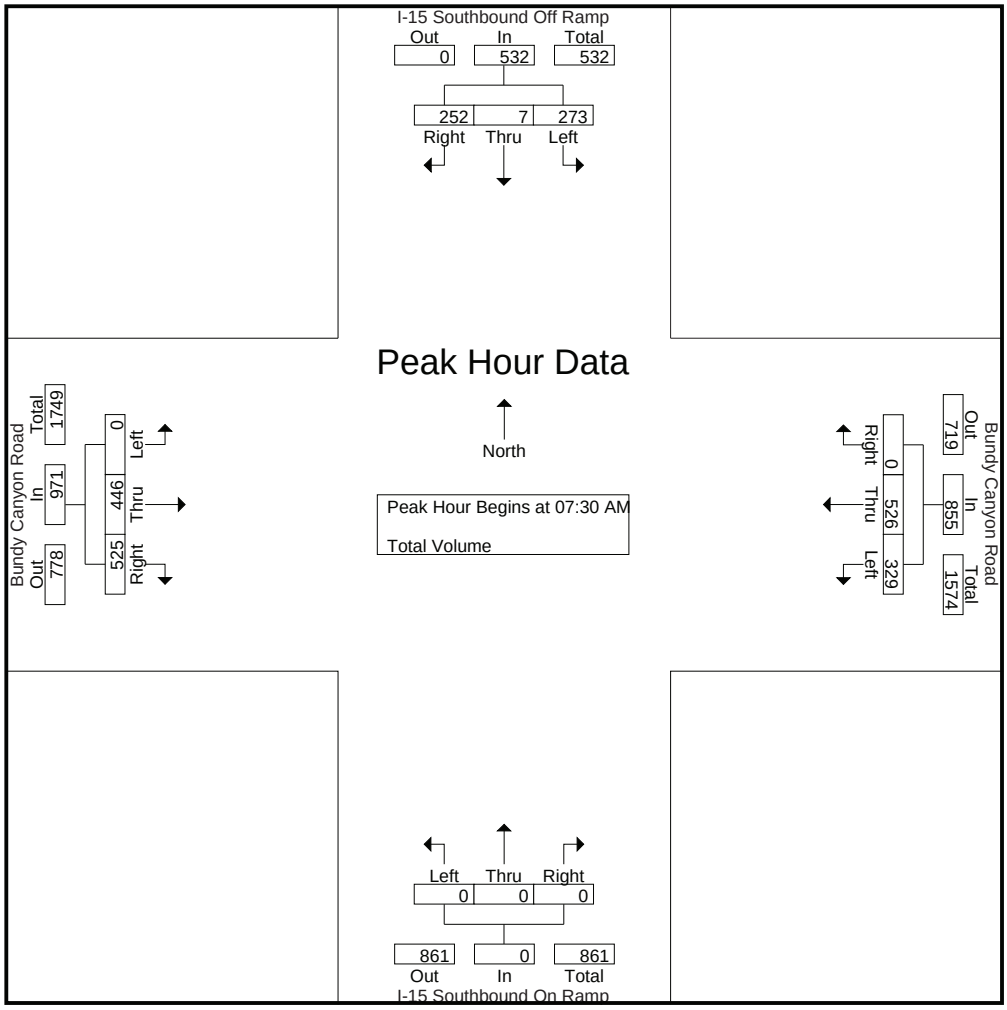

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:30 AM				07:00 AM				07:45 AM			
+0 mins.	68	1	48	117	**105**	125	0	**230**	0	0	0	0	0	108	**146**	254
+15 mins.	61	**3**	80	144	90	122	0	212	0	0	0	0	0	116	115	231
+30 mins.	**72**	1	**96**	**169**	74	**152**	0	226	0	0	0	0	0	**128**	128	**256**
+45 mins.	60	0	55	115	60	127	0	187	0	0	0	0	0	112	120	232
Total Volume	261	5	279	545	329	526	0	855	0	0	0	0	0	464	509	973
% App. Total	47.9	0.9	51.2		38.5	61.5	0		0	0	0		0	47.7	52.3	
PHF	.906	.417	.727	.806	.783	.865	.000	.929	.000	.000	.000	.000	.000	.906	.872	.950

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City of Wildomar
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File Name : 03_WLD_15S_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	I-15 Southbound Off Ramp Southbound				Bundy Canyon Road Westbound				I-15 Southbound On Ramp Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	99	0	55	154	47	199	0	246	0	0	0	0	0	124	74	198	598
04:15 PM	104	1	43	148	54	185	0	239	0	0	0	0	0	90	61	151	538
04:30 PM	112	0	47	159	40	167	0	207	0	0	0	0	0	122	61	183	549
04:45 PM	95	1	51	147	44	175	0	219	0	0	0	0	0	116	86	202	568
Total	410	2	196	608	185	726	0	911	0	0	0	0	0	452	282	734	2253
05:00 PM	111	1	59	171	42	152	0	194	0	0	0	0	0	126	70	196	561
05:15 PM	83	0	51	134	38	164	0	202	0	0	0	0	0	127	55	182	518
05:30 PM	113	0	66	179	37	156	0	193	0	0	0	0	0	109	71	180	552
05:45 PM	110	0	54	164	28	152	0	180	0	0	0	0	0	118	59	177	521
Total	417	1	230	648	145	624	0	769	0	0	0	0	0	480	255	735	2152
Grand Total	827	3	426	1256	330	1350	0	1680	0	0	0	0	0	932	537	1469	4405
Apprch %	65.8	0.2	33.9		19.6	80.4	0		0	0	0		0	63.4	36.6		
Total %	18.8	0.1	9.7	28.5	7.5	30.6	0	38.1	0	0	0	0	0	21.2	12.2	33.3	

	I-15 Southbound Off Ramp Southbound				Bundy Canyon Road Westbound				I-15 Southbound On Ramp Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	99	0	**55**	154	47	**199**	0	**246**	0	0	0	0	0	**124**	74	198	**598**
04:15 PM	104	**1**	43	148	**54**	185	0	239	0	0	0	0	0	90	61	151	538
04:30 PM	**112**	0	47	**159**	40	167	0	207	0	0	0	0	0	122	61	183	549
04:45 PM	95	1	51	147	44	175	0	219	0	0	0	0	0	116	**86**	**202**	568
Total Volume	410	2	196	608	185	726	0	911	0	0	0	0	0	452	282	734	2253
% App. Total	67.4	0.3	32.2		20.3	79.7	0		0	0	0		0	61.6	38.4		
PHF	.915	.500	.891	.956	.856	.912	.000	.926	.000	.000	.000	.000	.000	.911	.820	.908	.942

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City of Wildomar
N/S: I-15 Southbound Ramps
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File Name : 03_WLD_15S_BC PM
Site Code : 20123414
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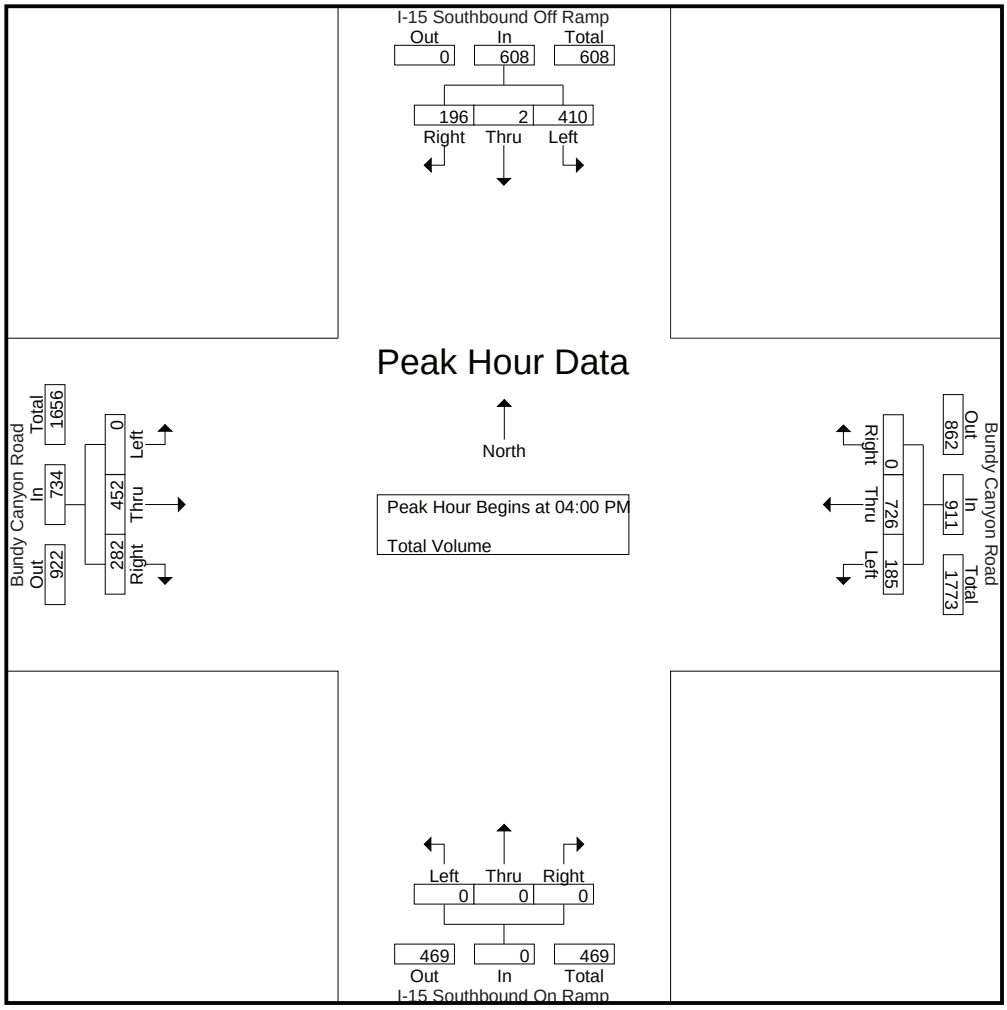

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:00 PM				04:30 PM			
+0 mins.	111	**1**	59	171	47	**199**	0	**246**	0	0	0	0	0	122	61	183
+15 mins.	83	0	51	134	**54**	185	0	239	0	0	0	0	0	116	**86**	**202**
+30 mins.	**113**	0	**66**	**179**	40	167	0	207	0	0	0	0	0	126	70	196
+45 mins.	110	0	54	164	44	175	0	219	0	0	0	0	0	**127**	55	182
Total Volume	417	1	230	648	185	726	0	911	0	0	0	0	0	491	272	763
% App. Total	64.4	0.2	35.5		20.3	79.7	0		0	0	0		0	64.4	35.6	
PHF	.923	.250	.871	.905	.856	.912	.000	.926	.000	.000	.000	.000	.000	.967	.791	.944

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City of Wildomar
N/S: I-15 Northbound Ramps
E/W: Bundy Canyon Road
Weather: Clear

File Name : 04_WLD_15N_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	I-15 Northbound On Ramp Southbound				Bundy Canyon Road Westbound				I-15 Northbound Off Ramp Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	113	63	176	36	0	19	55	50	105	0	155	386
07:15 AM	0	0	0	0	0	126	100	226	49	0	25	74	43	101	0	144	444
07:30 AM	0	0	0	0	0	181	78	259	58	0	34	92	44	117	0	161	512
07:45 AM	0	0	0	0	0	135	80	215	74	0	50	124	50	137	0	187	526
Total	0	0	0	0	0	555	321	876	217	0	128	345	187	460	0	647	1868
08:00 AM	0	0	0	0	0	130	61	191	88	0	56	144	43	112	0	155	490
08:15 AM	0	0	0	0	0	122	82	204	59	0	51	110	73	136	0	209	523
08:30 AM	0	0	0	0	0	103	64	167	63	1	32	96	49	118	0	167	430
08:45 AM	0	0	0	0	0	116	59	175	63	0	40	103	36	74	0	110	388
Total	0	0	0	0	0	471	266	737	273	1	179	453	201	440	0	641	1831
Grand Total	0	0	0	0	0	1026	587	1613	490	1	307	798	388	900	0	1288	3699
Apprch %	0	0	0		0	63.6	36.4		61.4	0.1	38.5		30.1	69.9	0		
Total %	0	0	0	0	0	27.7	15.9	43.6	13.2	0	8.3	21.6	10.5	24.3	0	34.8	

	I-15 Northbound On Ramp Southbound				Bundy Canyon Road Westbound				I-15 Northbound Off Ramp Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**181**	78	**259**	58	0	34	92	44	117	0	161	512
07:45 AM	0	0	0	0	0	135	80	215	74	0	50	124	50	**137**	0	187	**526**
08:00 AM	0	0	0	0	0	130	61	191	**88**	0	**56**	**144**	43	112	0	155	490
08:15 AM	0	0	0	0	0	122	**82**	204	59	0	51	110	**73**	136	0	**209**	523
Total Volume	0	0	0	0	0	568	301	869	279	0	191	470	210	502	0	712	2051
% App. Total	0	0	0		0	65.4	34.6		59.4	0	40.6		29.5	70.5	0		
PHF	.000	.000	.000	.000	.000	.785	.918	.839	.793	.000	.853	.816	.719	.916	.000	.852	.975

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City of Wildomar
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File Name : 04_WLD_15N_BC AM
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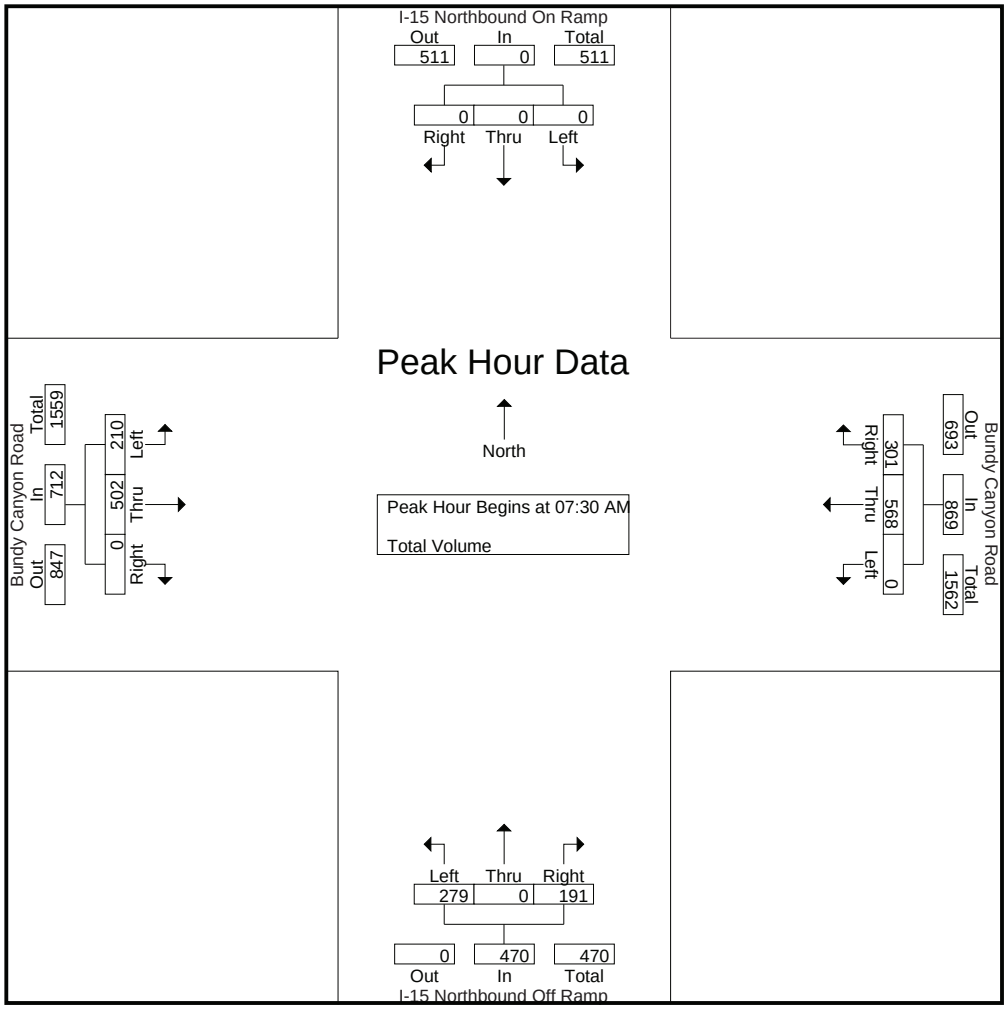

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	126	**100**	226	74	0	50	124	50	**137**	0	187
+15 mins.	0	0	0	0	0	**181**	78	**259**	**88**	0	**56**	**144**	43	112	0	155
+30 mins.	0	0	0	0	0	135	80	215	59	0	51	110	**73**	136	0	**209**
+45 mins.	0	0	0	0	0	130	61	191	63	**1**	32	96	49	118	0	167
Total Volume	0	0	0	0	0	572	319	891	284	1	189	474	215	503	0	718
% App. Total	0	0	0		0	64.2	35.8		59.9	0.2	39.9		29.9	70.1	0	
PHF	.000	.000	.000	.000	.000	.790	.798	.860	.807	.250	.844	.823	.736	.918	.000	.859

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City of Wildomar
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E/W: Bundy Canyon Road
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File Name : 04_WLD_15N_BC PM
Site Code : 20123414
Start Date : 5/2/2023
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Groups Printed- Total Volume

	I-15 Northbound On Ramp Southbound				Bundy Canyon Road Westbound				I-15 Northbound Off Ramp Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	129	58	187	106	0	88	194	30	182	0	212	593
04:15 PM	0	0	0	0	0	136	50	186	121	0	84	205	27	171	0	198	589
04:30 PM	0	0	0	0	0	107	58	165	103	2	96	201	42	199	0	241	607
04:45 PM	0	0	0	0	0	107	44	151	104	1	92	197	35	176	0	211	559
Total	0	0	0	0	0	479	210	689	434	3	360	797	134	728	0	862	2348
05:00 PM	0	0	0	0	0	87	47	134	98	0	100	198	27	192	0	219	551
05:15 PM	0	0	0	0	0	94	55	149	108	2	113	223	37	179	0	216	588
05:30 PM	0	0	0	0	0	112	45	157	85	1	99	185	26	184	0	210	552
05:45 PM	0	0	0	0	0	72	42	114	117	0	81	198	33	187	0	220	532
Total	0	0	0	0	0	365	189	554	408	3	393	804	123	742	0	865	2223
Grand Total	0	0	0	0	0	844	399	1243	842	6	753	1601	257	1470	0	1727	4571
Apprch %	0	0	0		0	67.9	32.1		52.6	0.4	47		14.9	85.1	0		
Total %	0	0	0	0	0	18.5	8.7	27.2	18.4	0.1	16.5	35	5.6	32.2	0	37.8	

	I-15 Northbound On Ramp Southbound				Bundy Canyon Road Westbound				I-15 Northbound Off Ramp Northbound				Bundy Canyon Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	129	**58**	**187**	106	0	88	194	30	182	0	212	593
04:15 PM	0	0	0	0	0	**136**	50	186	**121**	0	84	**205**	27	171	0	198	589
04:30 PM	0	0	0	0	0	107	58	165	103	**2**	**96**	201	**42**	**199**	0	**241**	**607**
04:45 PM	0	0	0	0	0	107	44	151	104	1	92	197	35	176	0	211	559
Total Volume	0	0	0	0	0	479	210	689	434	3	360	797	134	728	0	862	2348
% App. Total	0	0	0		0	69.5	30.5		54.5	0.4	45.2		15.5	84.5	0		
PHF	.000	.000	.000	.000	.000	.881	.905	.921	.897	.375	.938	.972	.798	.915	.000	.894	.967

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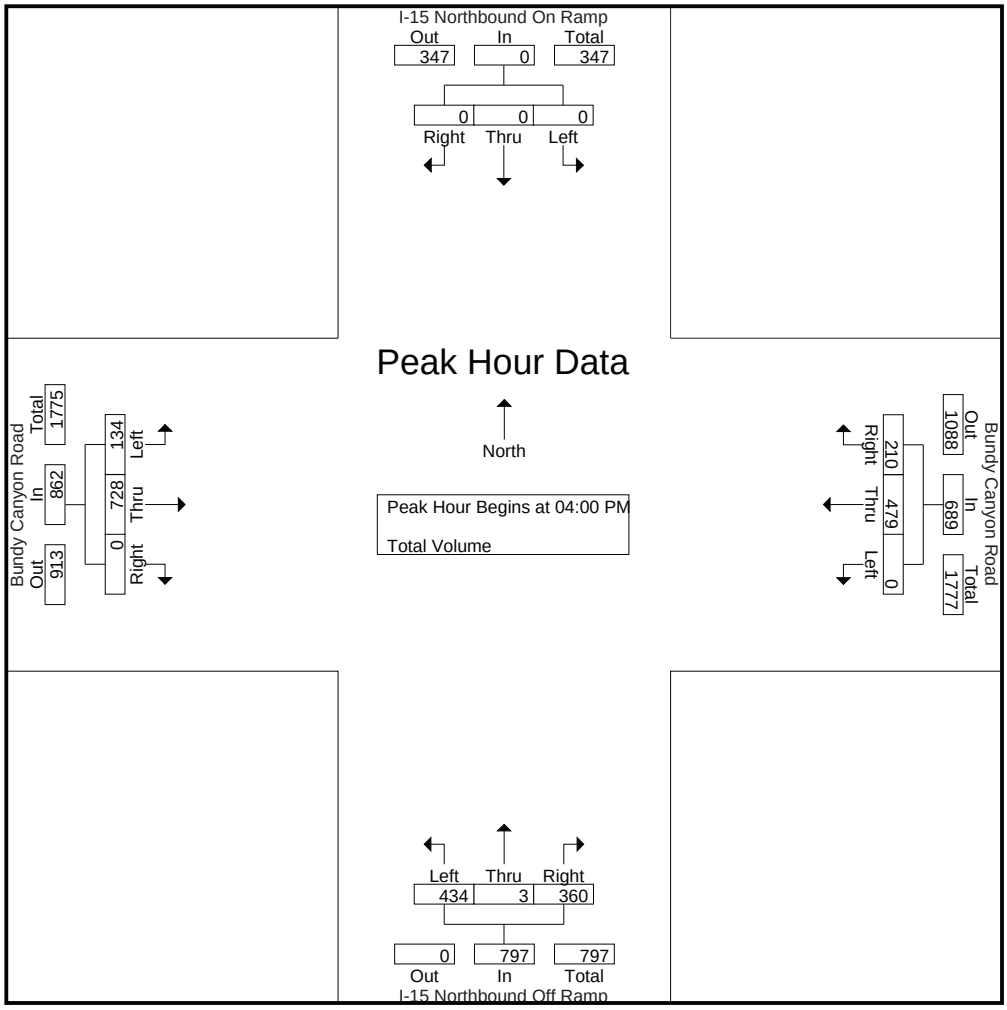
City of Wildomar
N/S: I-15 Northbound Ramps
E/W: Bundy Canyon Road
Weather: Clear

File Name : 04_WLD_15N_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	129	**58**	**187**	103	**2**	96	201	**42**	**199**	0	**241**
+15 mins.	0	0	0	0	0	**136**	50	186	104	1	92	197	35	176	0	211
+30 mins.	0	0	0	0	0	107	58	165	98	0	100	198	27	192	0	219
+45 mins.	0	0	0	0	0	107	44	151	**108**	2	**113**	**223**	37	179	0	216
Total Volume	0	0	0	0	0	479	210	689	413	5	401	819	141	746	0	887
% App. Total	0	0	0		0	69.5	30.5		50.4	0.6	49		15.9	84.1	0	
PHF	.000	.000	.000	.000	.000	.881	.905	.921	.956	.625	.887	.918	.839	.937	.000	.920

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City of Wildomar
N/S: Cherry Street
E/W: Bundy Canyon Road
Weather: Clear

File Name : 05_WLD_Cherry_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Cherry Street Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	12	12	174	1	175	4	122	126	313
07:15 AM	3	18	21	220	3	223	2	124	126	370
07:30 AM	4	21	25	243	2	245	6	147	153	423
07:45 AM	3	19	22	200	1	201	16	174	190	413
Total	10	70	80	837	7	844	28	567	595	1519
08:00 AM	2	9	11	187	2	189	11	160	171	371
08:15 AM	4	16	20	194	1	195	10	169	179	394
08:30 AM	4	9	13	149	1	150	6	140	146	309
08:45 AM	1	8	9	183	2	185	10	104	114	308
Total	11	42	53	713	6	719	37	573	610	1382
Grand Total	21	112	133	1550	13	1563	65	1140	1205	2901
Apprch %	15.8	84.2		99.2	0.8		5.4	94.6		
Total %	0.7	3.9	4.6	53.4	0.4	53.9	2.2	39.3	41.5	

	Cherry Street Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**4**	**21**	**25**	**243**	**2**	**245**	6	147	153	**423**
07:45 AM	3	19	22	200	1	201	**16**	**174**	**190**	413
08:00 AM	2	9	11	187	2	189	11	160	171	371
08:15 AM	4	16	20	194	1	195	10	169	179	394
Total Volume	13	65	78	824	6	830	43	650	693	1601
% App. Total	16.7	83.3		99.3	0.7		6.2	93.8		
PHF	.813	.774	.780	.848	.750	.847	.672	.934	.912	.946

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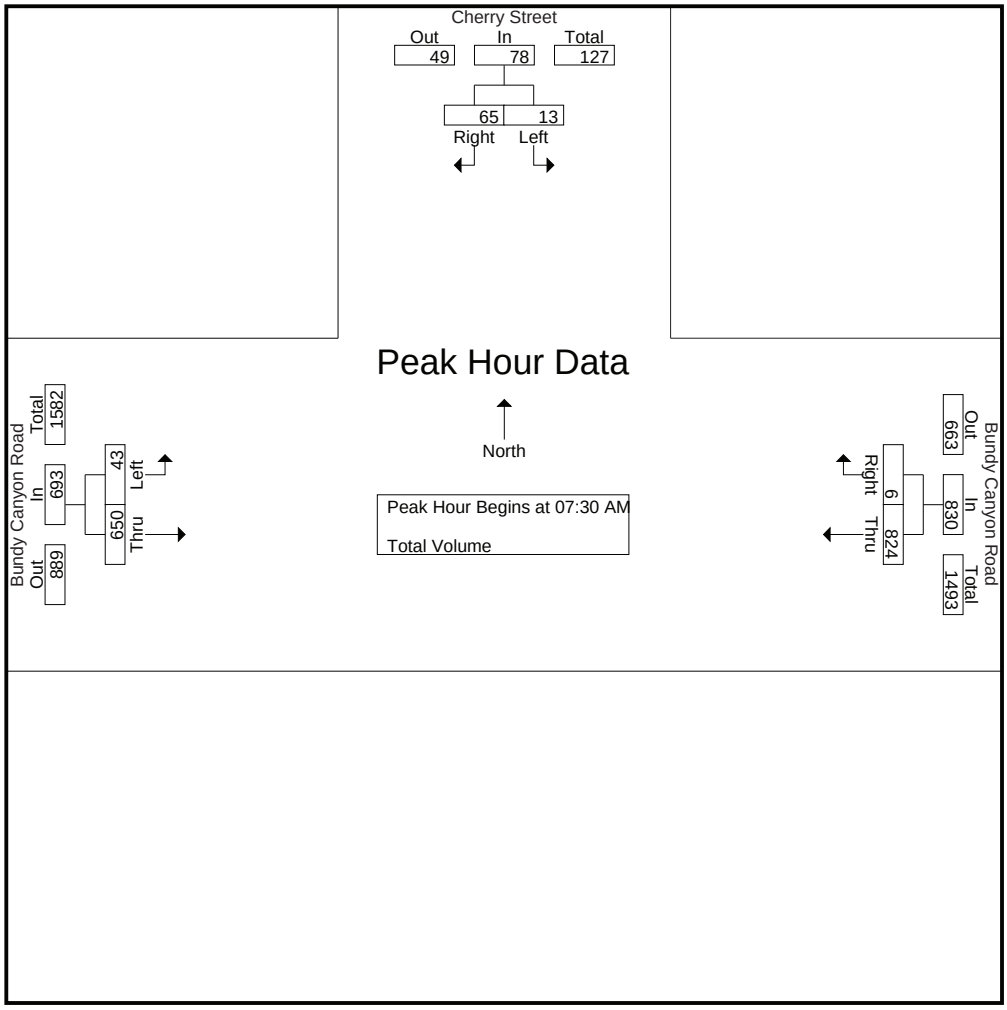
City of Wildomar
N/S: Cherry Street
E/W: Bundy Canyon Road
Weather: Clear

File Name : 05_WLD_Cherry_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			07:30 AM		
+0 mins.	0	12	12	220	**3**	223	6	147	153
+15 mins.	3	18	21	**243**	2	**245**	**16**	**174**	**190**
+30 mins.	**4**	**21**	**25**	200	1	201	11	160	171
+45 mins.	3	19	22	187	2	189	10	169	179
Total Volume	10	70	80	850	8	858	43	650	693
% App. Total	12.5	87.5		99.1	0.9		6.2	93.8	
PHF	.625	.833	.800	.874	.667	.876	.672	.934	.912

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City of Wildomar
N/S: Cherry Street
E/W: Bundy Canyon Road
Weather: Clear

File Name : 05_WLD_Cherry_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Cherry Street Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	2	13	15	178	5	183	14	258	272	470
04:15 PM	2	11	13	180	9	189	13	244	257	459
04:30 PM	0	12	12	153	4	157	19	274	293	462
04:45 PM	1	11	12	145	3	148	19	247	266	426
Total	5	47	52	656	21	677	65	1023	1088	1817
05:00 PM	0	10	10	131	2	133	15	280	295	438
05:15 PM	0	13	13	155	8	163	16	275	291	467
05:30 PM	1	8	9	135	4	139	13	272	285	433
05:45 PM	2	8	10	128	4	132	11	259	270	412
Total	3	39	42	549	18	567	55	1086	1141	1750
Grand Total	8	86	94	1205	39	1244	120	2109	2229	3567
Apprch %	8.5	91.5		96.9	3.1		5.4	94.6		
Total %	0.2	2.4	2.6	33.8	1.1	34.9	3.4	59.1	62.5	

	Cherry Street Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**2**	**13**	**15**	178	5	183	14	258	272	**470**
04:15 PM	2	11	13	**180**	**9**	**189**	13	244	257	459
04:30 PM	0	12	12	153	4	157	**19**	**274**	**293**	462
04:45 PM	1	11	12	145	3	148	19	247	266	426
Total Volume	5	47	52	656	21	677	65	1023	1088	1817
% App. Total	9.6	90.4		96.9	3.1		6	94		
PHF	.625	.904	.867	.911	.583	.896	.855	.933	.928	.966

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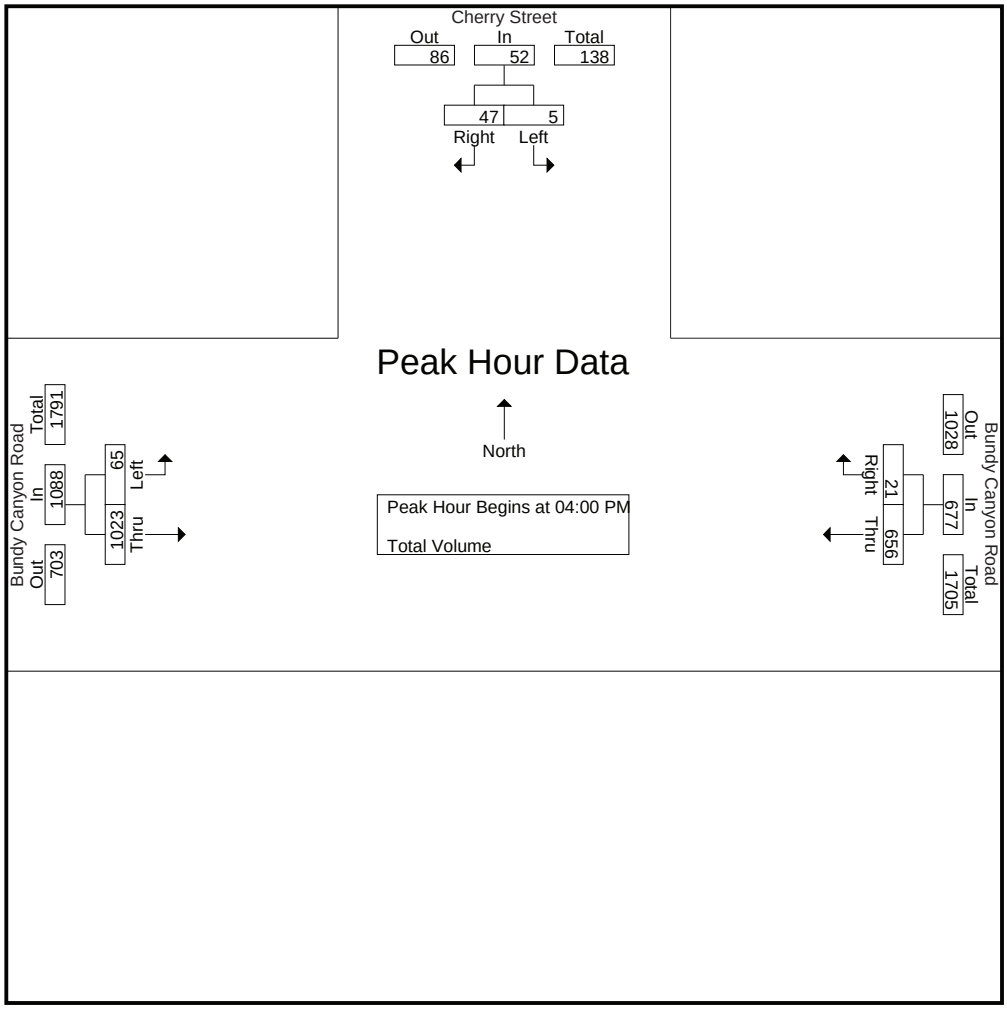
City of Wildomar
N/S: Cherry Street
E/W: Bundy Canyon Road
Weather: Clear

File Name : 05_WLD_Cherry_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:30 PM		
+0 mins.	**2**	**13**	**15**	178	5	183	**19**	274	293
+15 mins.	2	11	13	**180**	**9**	**189**	19	247	266
+30 mins.	0	12	12	153	4	157	15	**280**	**295**
+45 mins.	1	11	12	145	3	148	16	275	291
Total Volume	5	47	52	656	21	677	69	1076	1145
% App. Total	9.6	90.4		96.9	3.1		6	94	
PHF	.625	.904	.867	.911	.583	.896	.908	.961	.970

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City of Wildomar
N/S: Sellers Road
E/W: Bundy Canyon Road
Weather: Clear

File Name : 06_WLD_Sellers_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Sellers Road Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	6	18	24	139	6	145	9	109	118	287
07:15 AM	11	15	26	220	5	225	11	118	129	380
07:30 AM	11	30	41	199	2	201	8	136	144	386
07:45 AM	16	22	38	179	10	189	15	162	177	404
Total	44	85	129	737	23	760	43	525	568	1457
08:00 AM	7	25	32	160	9	169	19	144	163	364
08:15 AM	6	11	17	166	3	169	21	147	168	354
08:30 AM	4	13	17	148	0	148	18	142	160	325
08:45 AM	3	15	18	157	11	168	13	85	98	284
Total	20	64	84	631	23	654	71	518	589	1327
Grand Total	64	149	213	1368	46	1414	114	1043	1157	2784
Apprch %	30	70		96.7	3.3		9.9	90.1		
Total %	2.3	5.4	7.7	49.1	1.7	50.8	4.1	37.5	41.6	

	Sellers Road Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	11	15	26	**220**	5	**225**	11	118	129	380
07:30 AM	11	**30**	**41**	199	2	201	8	136	144	386
07:45 AM	**16**	22	38	179	**10**	189	15	**162**	**177**	**404**
08:00 AM	7	25	32	160	9	169	**19**	144	163	364
Total Volume	45	92	137	758	26	784	53	560	613	1534
% App. Total	32.8	67.2		96.7	3.3		8.6	91.4		
PHF	.703	.767	.835	.861	.650	.871	.697	.864	.866	.949

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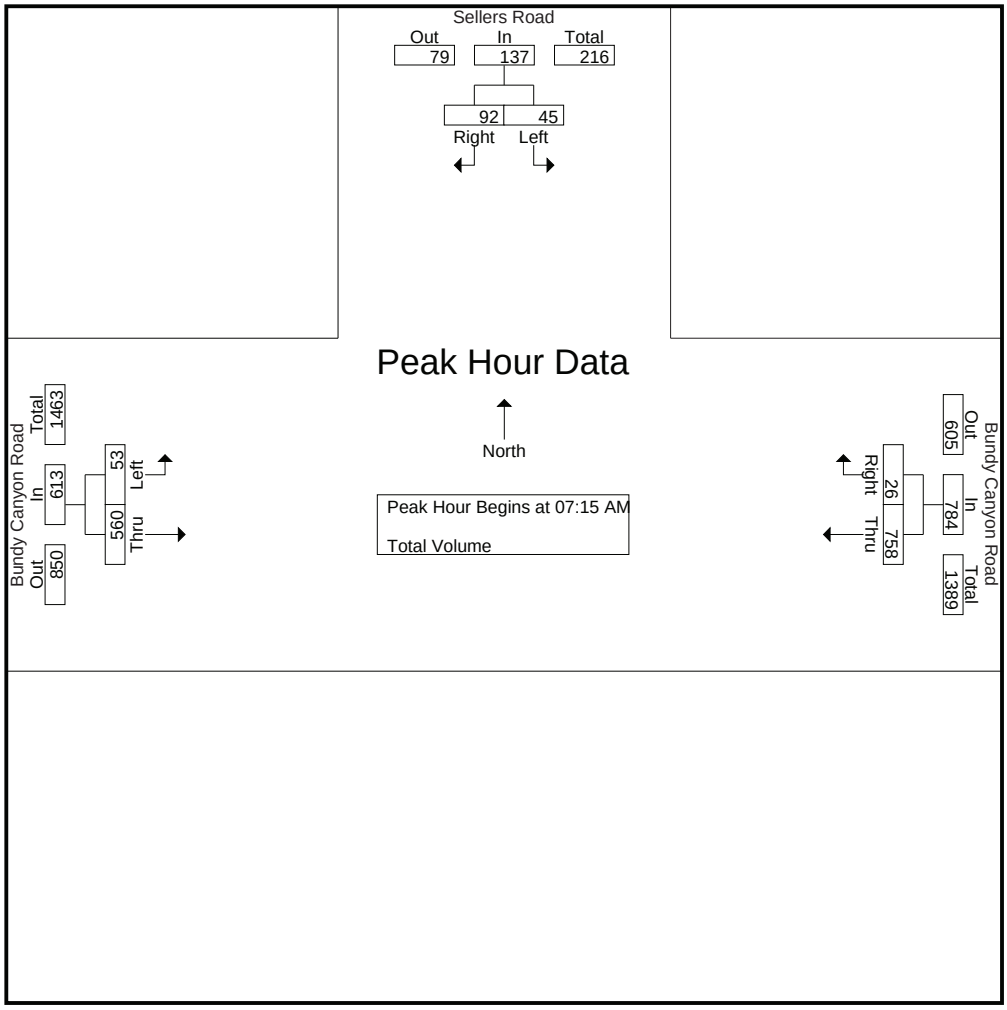
City of Wildomar
N/S: Sellers Road
E/W: Bundy Canyon Road
Weather: Clear

File Name : 06_WLD_Sellers_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:45 AM		
+0 mins.	11	15	26	**220**	5	**225**	15	**162**	**177**
+15 mins.	11	**30**	**41**	199	2	201	19	144	163
+30 mins.	**16**	22	38	179	**10**	189	**21**	147	168
+45 mins.	7	25	32	160	9	169	18	142	160
Total Volume	45	92	137	758	26	784	73	595	668
% App. Total	32.8	67.2		96.7	3.3		10.9	89.1	
PHF	.703	.767	.835	.861	.650	.871	.869	.918	.944

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City of Wildomar
N/S: Sellers Road
E/W: Bundy Canyon Road
Weather: Clear

File Name : 06_WLD_Sellers_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Sellers Road Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	4	15	19	145	10	155	26	207	233	407
04:15 PM	8	14	22	164	8	172	35	228	263	457
04:30 PM	12	12	24	132	15	147	29	242	271	442
04:45 PM	12	21	33	122	9	131	23	229	252	416
Total	36	62	98	563	42	605	113	906	1019	1722
05:00 PM	2	12	14	123	7	130	35	240	275	419
05:15 PM	5	21	26	144	10	154	26	249	275	455
05:30 PM	8	13	21	117	13	130	32	243	275	426
05:45 PM	1	14	15	119	15	134	23	251	274	423
Total	16	60	76	503	45	548	116	983	1099	1723
Grand Total	52	122	174	1066	87	1153	229	1889	2118	3445
Apprch %	29.9	70.1		92.5	7.5		10.8	89.2		
Total %	1.5	3.5	5.1	30.9	2.5	33.5	6.6	54.8	61.5	

	Sellers Road Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:15 PM										
04:15 PM	8	14	22	**164**	8	**172**	**35**	228	263	**457**
04:30 PM	**12**	12	24	132	**15**	147	29	**242**	271	442
04:45 PM	12	**21**	**33**	122	9	131	23	229	252	416
05:00 PM	2	12	14	123	7	130	35	240	**275**	419
Total Volume	34	59	93	541	39	580	122	939	1061	1734
% App. Total	36.6	63.4		93.3	6.7		11.5	88.5		
PHF	.708	.702	.705	.825	.650	.843	.871	.970	.965	.949

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City of Wildomar
N/S: Sellers Road
E/W: Bundy Canyon Road
Weather: Clear

File Name : 06_WLD_Sellers_BC PM
Site Code : 20123414
Start Date : 5/2/2023
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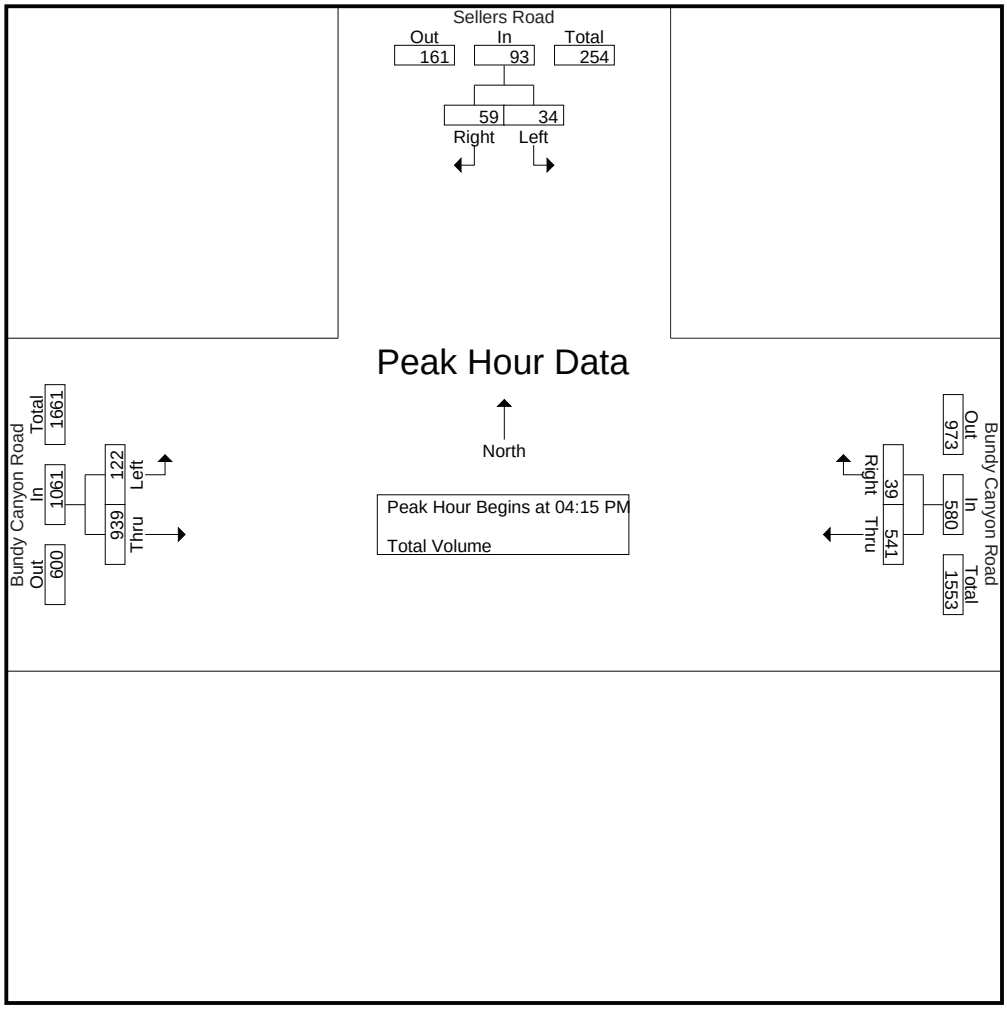

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			05:00 PM		
+0 mins.	4	15	19	145	10	155	**35**	240	**275**
+15 mins.	8	14	22	**164**	8	**172**	26	249	275
+30 mins.	**12**	12	24	132	**15**	147	32	243	275
+45 mins.	12	**21**	**33**	122	9	131	23	**251**	274
Total Volume	36	62	98	563	42	605	116	983	1099
% App. Total	36.7	63.3		93.1	6.9		10.6	89.4	
PHF	.750	.738	.742	.858	.700	.879	.829	.979	.999

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City of Wildomar
N/S: Monte Vista Drive
E/W: Bundy Canyon Road
Weather: Clear

File Name : 07_WLD_MV_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Bundy Canyon Road Westbound			Monte Vista Drive Northbound			Bundy Canyon Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	9	149	158	1	5	6	97	12	109	273
07:15 AM	35	200	235	5	7	12	118	15	133	380
07:30 AM	60	196	256	3	16	19	120	28	148	423
07:45 AM	51	171	222	12	33	45	135	41	176	443
Total	155	716	871	21	61	82	470	96	566	1519
08:00 AM	24	148	172	15	21	36	147	9	156	364
08:15 AM	17	166	183	5	16	21	141	15	156	360
08:30 AM	26	134	160	2	15	17	124	8	132	309
08:45 AM	9	155	164	7	15	22	92	8	100	286
Total	76	603	679	29	67	96	504	40	544	1319
Grand Total	231	1319	1550	50	128	178	974	136	1110	2838
Apprch %	14.9	85.1		28.1	71.9		87.7	12.3		
Total %	8.1	46.5	54.6	1.8	4.5	6.3	34.3	4.8	39.1	

	Bundy Canyon Road Westbound			Monte Vista Drive Northbound			Bundy Canyon Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	35	**200**	235	5	7	12	118	15	133	380
07:30 AM	**60**	196	**256**	3	16	19	120	28	148	423
07:45 AM	51	171	222	12	**33**	**45**	135	**41**	**176**	**443**
08:00 AM	24	148	172	**15**	21	36	**147**	9	156	364
Total Volume	170	715	885	35	77	112	520	93	613	1610
% App. Total	19.2	80.8		31.2	68.8		84.8	15.2		
PHF	.708	.894	.864	.583	.583	.622	.884	.567	.871	.909

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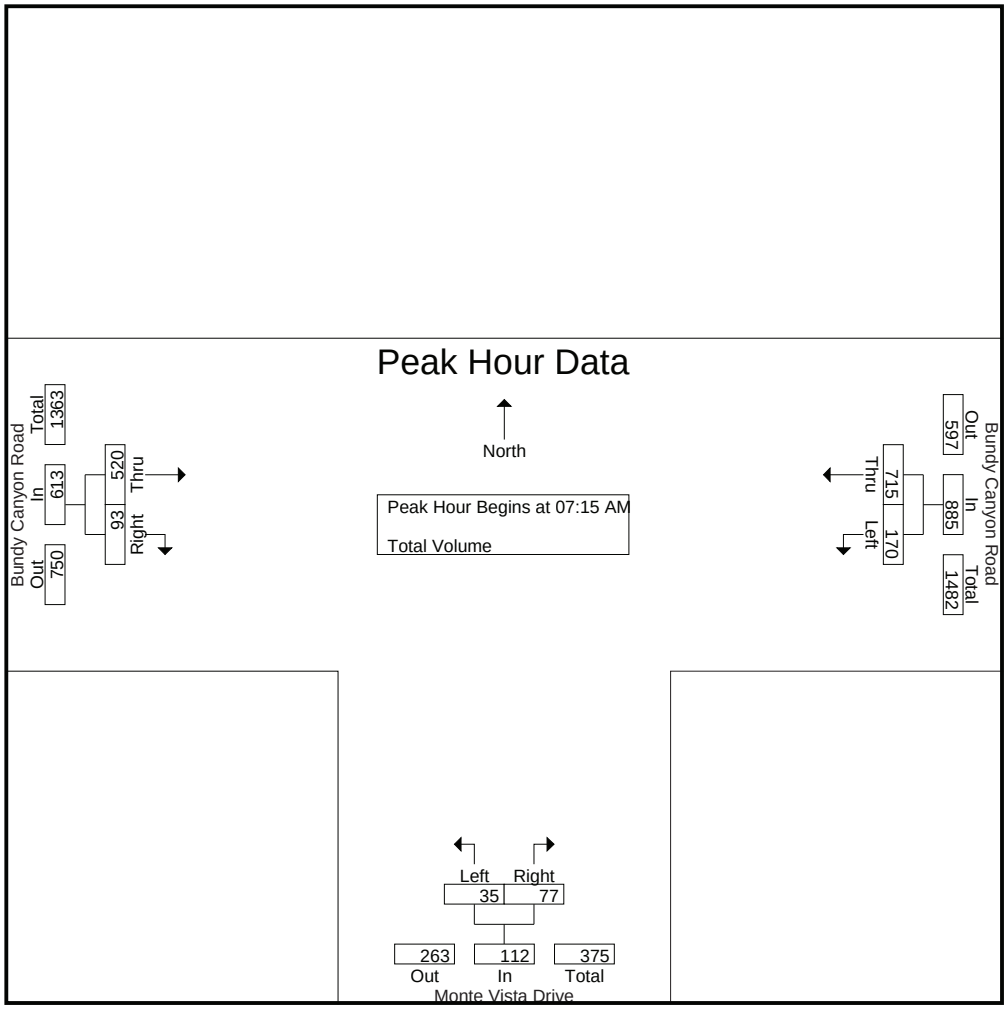
City of Wildomar
N/S: Monte Vista Drive
E/W: Bundy Canyon Road
Weather: Clear

File Name : 07_WLD_MV_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:30 AM			07:30 AM		
+0 mins.	35	**200**	235	3	16	19	120	28	148
+15 mins.	**60**	196	**256**	12	**33**	**45**	135	**41**	**176**
+30 mins.	51	171	222	**15**	21	36	**147**	9	156
+45 mins.	24	148	172	5	16	21	141	15	156
Total Volume	170	715	885	35	86	121	543	93	636
% App. Total	19.2	80.8		28.9	71.1		85.4	14.6	
PHF	.708	.894	.864	.583	.652	.672	.923	.567	.903

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City of Wildomar
N/S: Monte Vista Drive
E/W: Bundy Canyon Road
Weather: Clear

File Name : 07_WLD_MV_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Bundy Canyon Road Westbound			Monte Vista Drive Northbound			Bundy Canyon Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	13	150	163	5	29	34	200	4	204	401
04:15 PM	11	153	164	5	16	21	226	6	232	417
04:30 PM	13	146	159	6	26	32	274	5	279	470
04:45 PM	13	138	151	3	18	21	235	9	244	416
Total	50	587	637	19	89	108	935	24	959	1704
05:00 PM	8	115	123	3	15	18	228	2	230	371
05:15 PM	7	140	147	5	19	24	267	5	272	443
05:30 PM	14	125	139	6	18	24	245	7	252	415
05:45 PM	18	123	141	7	20	27	254	9	263	431
Total	47	503	550	21	72	93	994	23	1017	1660
Grand Total	97	1090	1187	40	161	201	1929	47	1976	3364
Apprch %	8.2	91.8		19.9	80.1		97.6	2.4		
Total %	2.9	32.4	35.3	1.2	4.8	6	57.3	1.4	58.7	

	Bundy Canyon Road Westbound			Monte Vista Drive Northbound			Bundy Canyon Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**13**	150	163	5	**29**	**34**	200	4	204	401
04:15 PM	11	**153**	**164**	5	16	21	226	6	232	417
04:30 PM	13	146	159	**6**	26	32	**274**	5	**279**	**470**
04:45 PM	13	138	151	3	18	21	235	**9**	244	416
Total Volume	50	587	637	19	89	108	935	24	959	1704
% App. Total	7.8	92.2		17.6	82.4		97.5	2.5		
PHF	.962	.959	.971	.792	.767	.794	.853	.667	.859	.906

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City of Wildomar
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File Name : 07_WLD_MV_BC PM
Site Code : 20123414
Start Date : 5/2/2023
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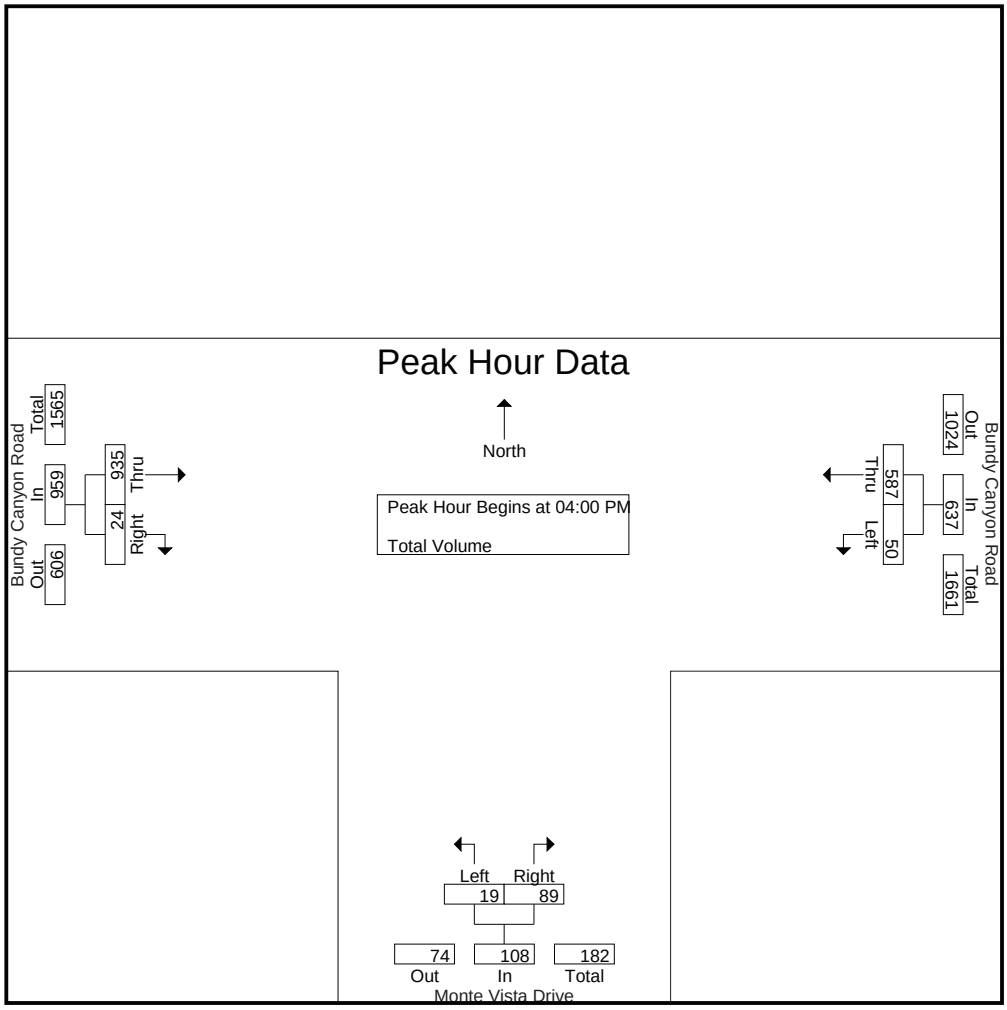

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:30 PM		
+0 mins.	**13**	150	163	5	**29**	**34**	**274**	5	**279**
+15 mins.	11	**153**	**164**	5	16	21	235	**9**	244
+30 mins.	13	146	159	**6**	26	32	228	2	230
+45 mins.	13	138	151	3	18	21	267	5	272
Total Volume	50	587	637	19	89	108	1004	21	1025
% App. Total	7.8	92.2		17.6	82.4		98	2	
PHF	.962	.959	.971	.792	.767	.794	.916	.583	.918

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City of Wildomar
N/S: Canyon Ranch Road
E/W: Bundy Canyon Road
Weather: Clear

File Name : 08_WLD_CR_BC AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Canyon Ranch Road Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	1	7	8	161	2	163	3	103	106	277
07:15 AM	6	20	26	219	1	220	3	119	122	368
07:30 AM	2	24	26	235	0	235	4	135	139	400
07:45 AM	1	13	14	225	2	227	11	159	170	411
Total	10	64	74	840	5	845	21	516	537	1456
08:00 AM	3	12	15	161	5	166	8	154	162	343
08:15 AM	1	1	2	191	4	195	2	149	151	348
08:30 AM	2	9	11	160	3	163	8	137	145	319
08:45 AM	3	9	12	169	6	175	6	91	97	284
Total	9	31	40	681	18	699	24	531	555	1294
Grand Total	19	95	114	1521	23	1544	45	1047	1092	2750
Apprch %	16.7	83.3		98.5	1.5		4.1	95.9		
Total %	0.7	3.5	4.1	55.3	0.8	56.1	1.6	38.1	39.7	

	Canyon Ranch Road Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**6**	20	**26**	219	1	220	3	119	122	368
07:30 AM	2	**24**	26	**235**	0	**235**	4	135	139	400
07:45 AM	1	13	14	225	2	227	**11**	**159**	**170**	**411**
08:00 AM	3	12	15	161	**5**	166	8	154	162	343
Total Volume	12	69	81	840	8	848	26	567	593	1522
% App. Total	14.8	85.2		99.1	0.9		4.4	95.6		
PHF	.500	.719	.779	.894	.400	.902	.591	.892	.872	.926

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File Name : 08_WLD_CR_BC AM
Site Code : 20123414
Start Date : 5/2/2023
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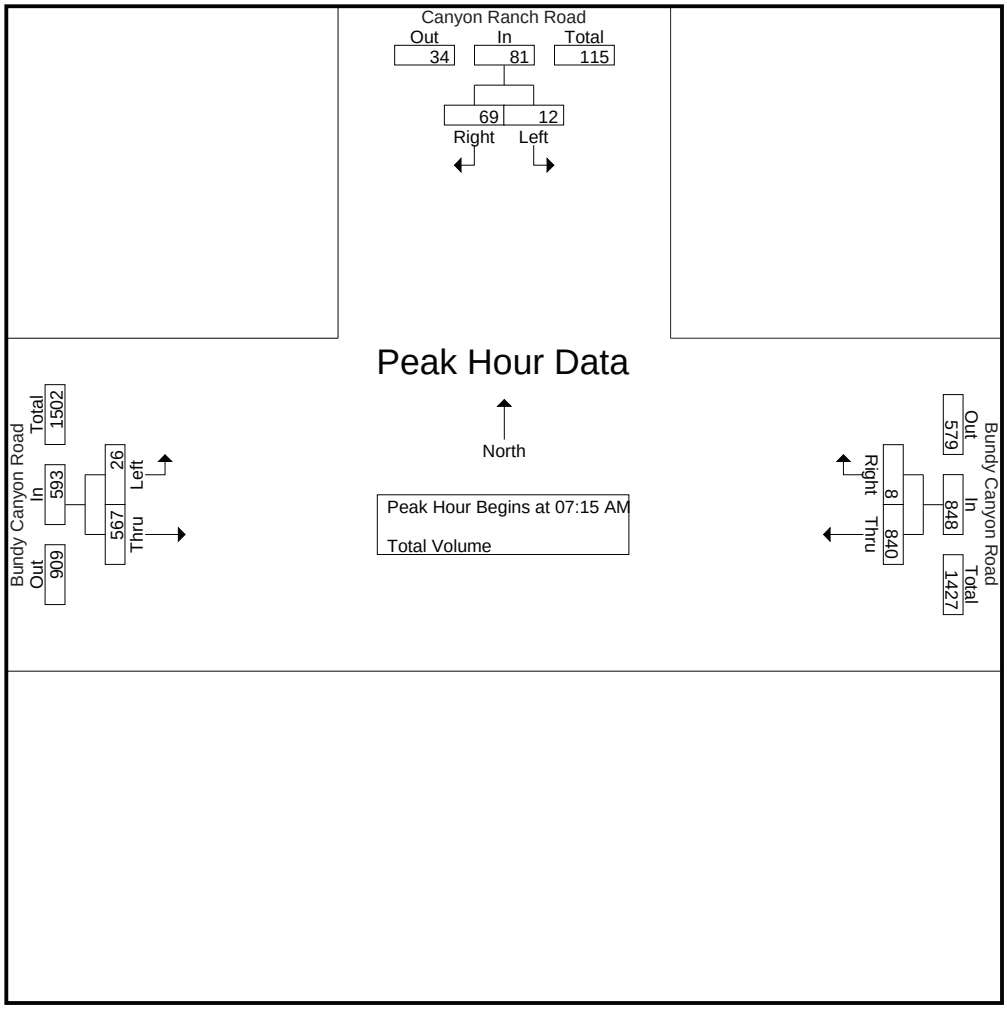

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:45 AM		
+0 mins.	**6**	20	**26**	219	1	220	**11**	**159**	**170**
+15 mins.	2	**24**	26	**235**	0	**235**	8	154	162
+30 mins.	1	13	14	225	2	227	2	149	151
+45 mins.	3	12	15	161	**5**	166	8	137	145
Total Volume	12	69	81	840	8	848	29	599	628
% App. Total	14.8	85.2		99.1	0.9		4.6	95.4	
PHF	.500	.719	.779	.894	.400	.902	.659	.942	.924

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File Name : 08_WLD_CR_BC PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Canyon Ranch Road Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	2	5	7	172	5	177	11	221	232	416
04:15 PM	2	8	10	175	4	179	10	233	243	432
04:30 PM	4	5	9	147	5	152	16	274	290	451
04:45 PM	2	12	14	136	2	138	8	234	242	394
Total	10	30	40	630	16	646	45	962	1007	1693
05:00 PM	1	3	4	126	6	132	13	240	253	389
05:15 PM	2	4	6	160	5	165	19	271	290	461
05:30 PM	3	5	8	125	2	127	11	256	267	402
05:45 PM	6	8	14	135	5	140	8	260	268	422
Total	12	20	32	546	18	564	51	1027	1078	1674
Grand Total	22	50	72	1176	34	1210	96	1989	2085	3367
Apprch %	30.6	69.4		97.2	2.8		4.6	95.4		
Total %	0.7	1.5	2.1	34.9	1	35.9	2.9	59.1	61.9	

	Canyon Ranch Road Southbound			Bundy Canyon Road Westbound			Bundy Canyon Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	**4**	5	9	147	5	152	16	**274**	**290**	451
04:45 PM	2	**12**	**14**	136	2	138	8	234	242	394
05:00 PM	1	3	4	126	**6**	132	13	240	253	389
05:15 PM	2	4	6	**160**	5	**165**	**19**	271	290	**461**
Total Volume	9	24	33	569	18	587	56	1019	1075	1695
% App. Total	27.3	72.7		96.9	3.1		5.2	94.8		
PHF	.563	.500	.589	.889	.750	.889	.737	.930	.927	.919

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N/S: Canyon Ranch Road
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File Name : 08_WLD_CR_BC PM
Site Code : 20123414
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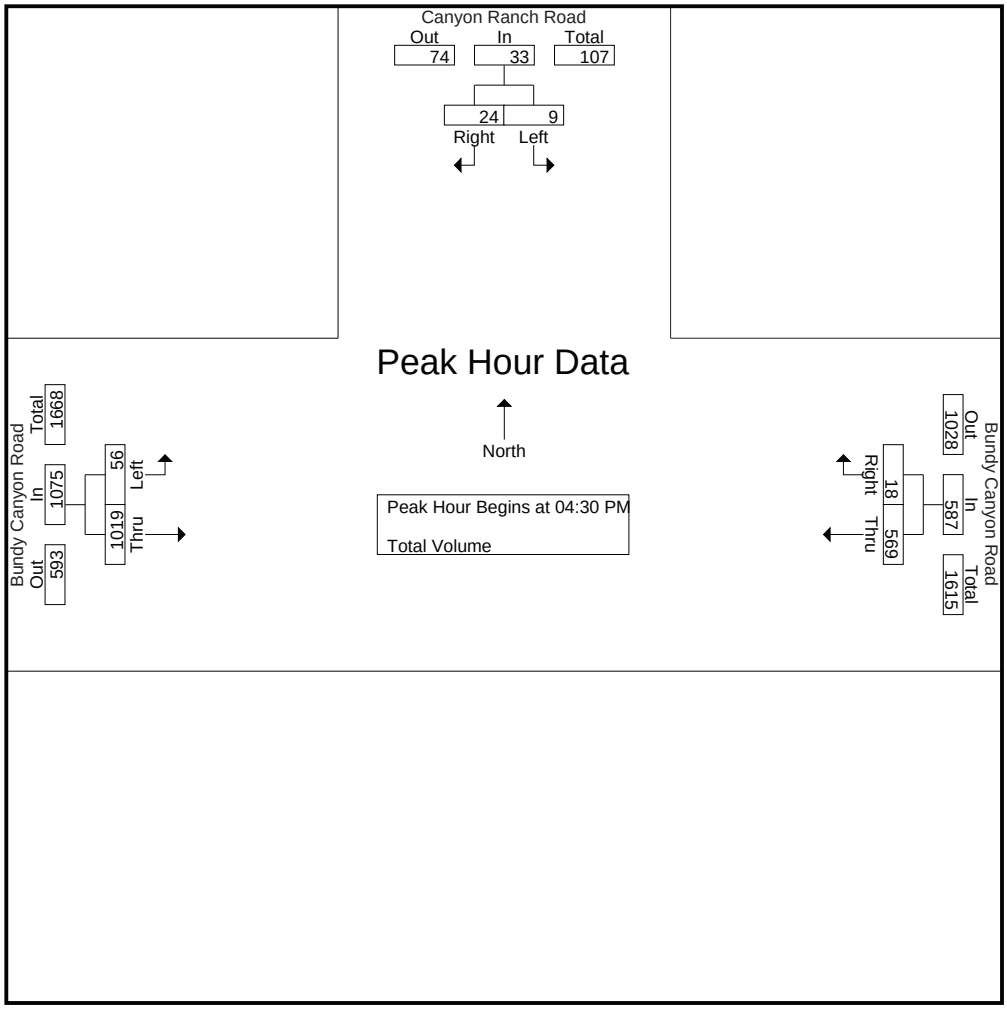

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			05:00 PM		
+0 mins.	2	5	7	172	**5**	177	13	240	253
+15 mins.	2	8	10	**175**	4	**179**	**19**	**271**	**290**
+30 mins.	**4**	5	9	147	5	152	11	256	267
+45 mins.	2	**12**	**14**	136	2	138	8	260	268
Total Volume	10	30	40	630	16	646	51	1027	1078
% App. Total	25	75		97.5	2.5		4.7	95.3	
PHF	.625	.625	.714	.900	.800	.902	.671	.947	.929

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City of Wildomar
N/S: Orange Street
E/W: Canyon Drive
Weather: Clear

File Name : 09_WLD_Orn_Cyn AM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Orange Street Southbound				Canyon Drive Westbound				Orange Street Northbound				Canyon Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	15	39	55	0	2	5	7	5	30	1	36	30	2	1	33	131
07:15 AM	0	15	53	68	1	0	8	9	10	23	0	33	35	1	5	41	151
07:30 AM	1	35	27	63	0	1	8	9	10	34	1	45	35	1	8	44	161
07:45 AM	1	25	39	65	1	1	9	11	30	47	0	77	33	1	13	47	200
Total	3	90	158	251	2	4	30	36	55	134	2	191	133	5	27	165	643
08:00 AM	6	27	78	111	0	2	11	13	41	45	2	88	41	0	20	61	273
08:15 AM	1	22	92	115	0	3	7	10	60	42	1	103	68	1	26	95	323
08:30 AM	1	27	44	72	1	3	8	12	21	36	1	58	56	0	15	71	213
08:45 AM	4	26	14	44	0	0	6	6	4	27	1	32	17	2	4	23	105
Total	12	102	228	342	1	8	32	41	126	150	5	281	182	3	65	250	914
Grand Total	15	192	386	593	3	12	62	77	181	284	7	472	315	8	92	415	1557
Apprch %	2.5	32.4	65.1		3.9	15.6	80.5		38.3	60.2	1.5		75.9	1.9	22.2		
Total %	1	12.3	24.8	38.1	0.2	0.8	4	4.9	11.6	18.2	0.4	30.3	20.2	0.5	5.9	26.7	

	Orange Street Southbound				Canyon Drive Westbound				Orange Street Northbound				Canyon Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	25	39	65	**1**	1	9	11	30	**47**	0	77	33	**1**	13	47	200
08:00 AM	**6**	**27**	78	111	0	2	**11**	**13**	41	45	**2**	88	41	0	20	61	273
08:15 AM	1	22	**92**	**115**	0	**3**	7	10	**60**	42	1	**103**	**68**	1	**26**	**95**	**323**
08:30 AM	1	27	44	72	1	3	8	12	21	36	1	58	56	0	15	71	213
Total Volume	9	101	253	363	2	9	35	46	152	170	4	326	198	2	74	274	1009
% App. Total	2.5	27.8	69.7		4.3	19.6	76.1		46.6	52.1	1.2		72.3	0.7	27		
PHF	.375	.935	.688	.789	.500	.750	.795	.885	.633	.904	.500	.791	.728	.500	.712	.721	.781

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City of Wildomar
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E/W: Canyon Drive
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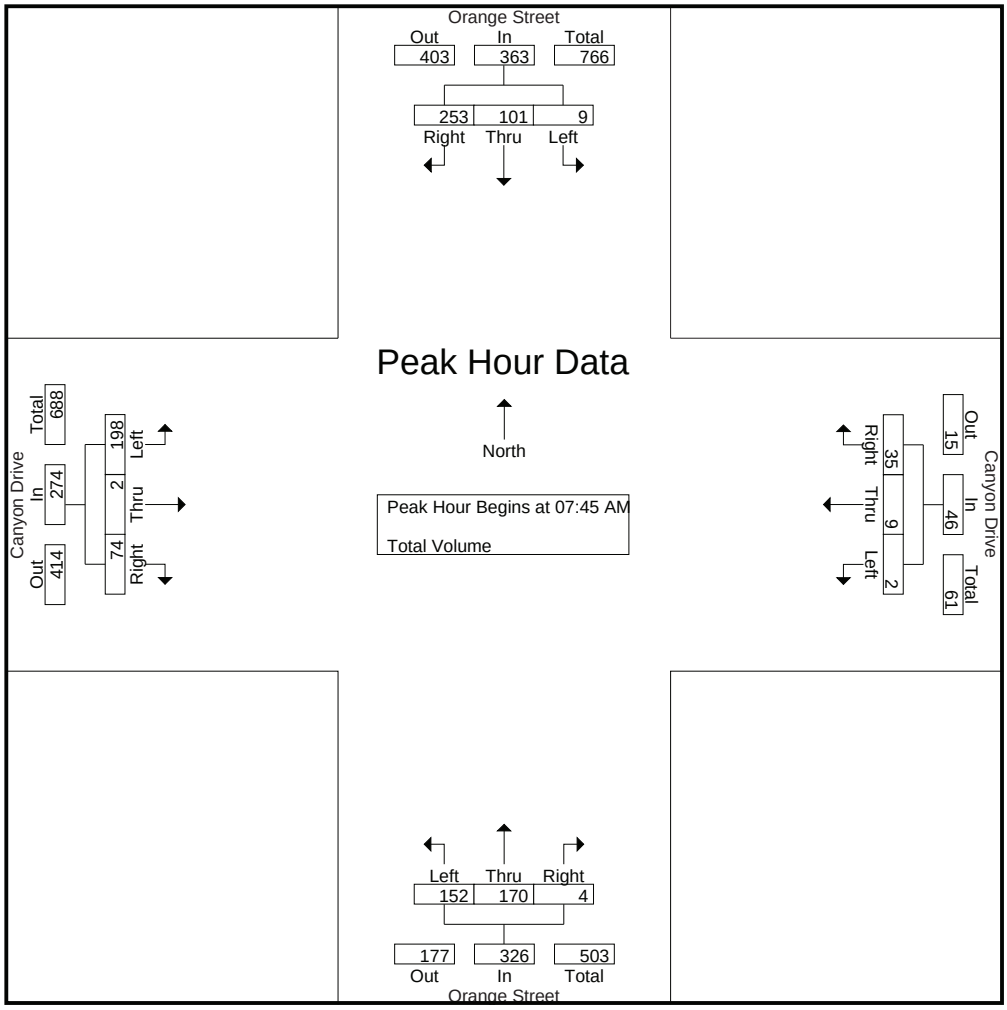
File Name : 09_WLD_Orn_Cyn AM
Site Code : 20123414
Start Date : 5/2/2023



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	1	25	39	65	**1**	1	9	11	30	**47**	0	77	33	**1**	13	47
+15 mins.	**6**	**27**	78	111	0	2	**11**	**13**	41	45	**2**	88	41	0	20	61
+30 mins.	1	22	**92**	**115**	0	**3**	7	10	**60**	42	1	**103**	**68**	1	**26**	**95**
+45 mins.	1	27	44	72	1	3	8	12	21	36	1	58	56	0	15	71
Total Volume	9	101	253	363	2	9	35	46	152	170	4	326	198	2	74	274
% App. Total	2.5	27.8	69.7		4.3	19.6	76.1		46.6	52.1	1.2		72.3	0.7	27	
PHF	.375	.935	.688	.789	.500	.750	.795	.885	.633	.904	.500	.791	.728	.500	.712	.721

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City of Wildomar
N/S: Orange Street
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File Name : 09_WLD_Orn_Cyn PM
Site Code : 20123414
Start Date : 5/2/2023
Page No : 1

Groups Printed- Total Volume

	Orange Street Southbound				Canyon Drive Westbound				Orange Street Northbound				Canyon Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	12	44	12	68	0	1	2	3	3	28	1	32	24	1	6	31	134
04:15 PM	5	48	15	68	1	1	3	5	1	34	0	35	11	1	5	17	125
04:30 PM	5	41	16	62	0	2	8	10	4	37	1	42	13	4	4	21	135
04:45 PM	8	28	19	55	0	0	5	5	3	55	0	58	25	1	2	28	146
Total	30	161	62	253	1	4	18	23	11	154	2	167	73	7	17	97	540
05:00 PM	7	34	15	56	0	2	5	7	4	34	0	38	10	2	5	17	118
05:15 PM	6	32	11	49	1	2	9	12	0	48	1	49	12	5	2	19	129
05:30 PM	11	40	19	70	0	0	6	6	6	25	0	31	10	1	1	12	119
05:45 PM	7	27	32	66	0	0	7	7	6	30	1	37	11	3	4	18	128
Total	31	133	77	241	1	4	27	32	16	137	2	155	43	11	12	66	494
Grand Total	61	294	139	494	2	8	45	55	27	291	4	322	116	18	29	163	1034
Apprch %	12.3	59.5	28.1		3.6	14.5	81.8		8.4	90.4	1.2		71.2	11	17.8		
Total %	5.9	28.4	13.4	47.8	0.2	0.8	4.4	5.3	2.6	28.1	0.4	31.1	11.2	1.7	2.8	15.8	

	Orange Street Southbound				Canyon Drive Westbound				Orange Street Northbound				Canyon Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**12**	44	12	**68**	0	1	2	3	3	28	**1**	32	24	1	**6**	**31**	134
04:15 PM	5	**48**	15	68	**1**	1	3	5	1	34	0	35	11	1	5	17	125
04:30 PM	5	41	16	62	0	**2**	**8**	**10**	**4**	37	1	42	13	**4**	4	21	135
04:45 PM	8	28	**19**	55	0	0	5	5	3	**55**	0	**58**	**25**	1	2	28	**146**
Total Volume	30	161	62	253	1	4	18	23	11	154	2	167	73	7	17	97	540
% App. Total	11.9	63.6	24.5		4.3	17.4	78.3		6.6	92.2	1.2		75.3	7.2	17.5		
PHF	.625	.839	.816	.930	.250	.500	.563	.575	.688	.700	.500	.720	.730	.438	.708	.782	.925

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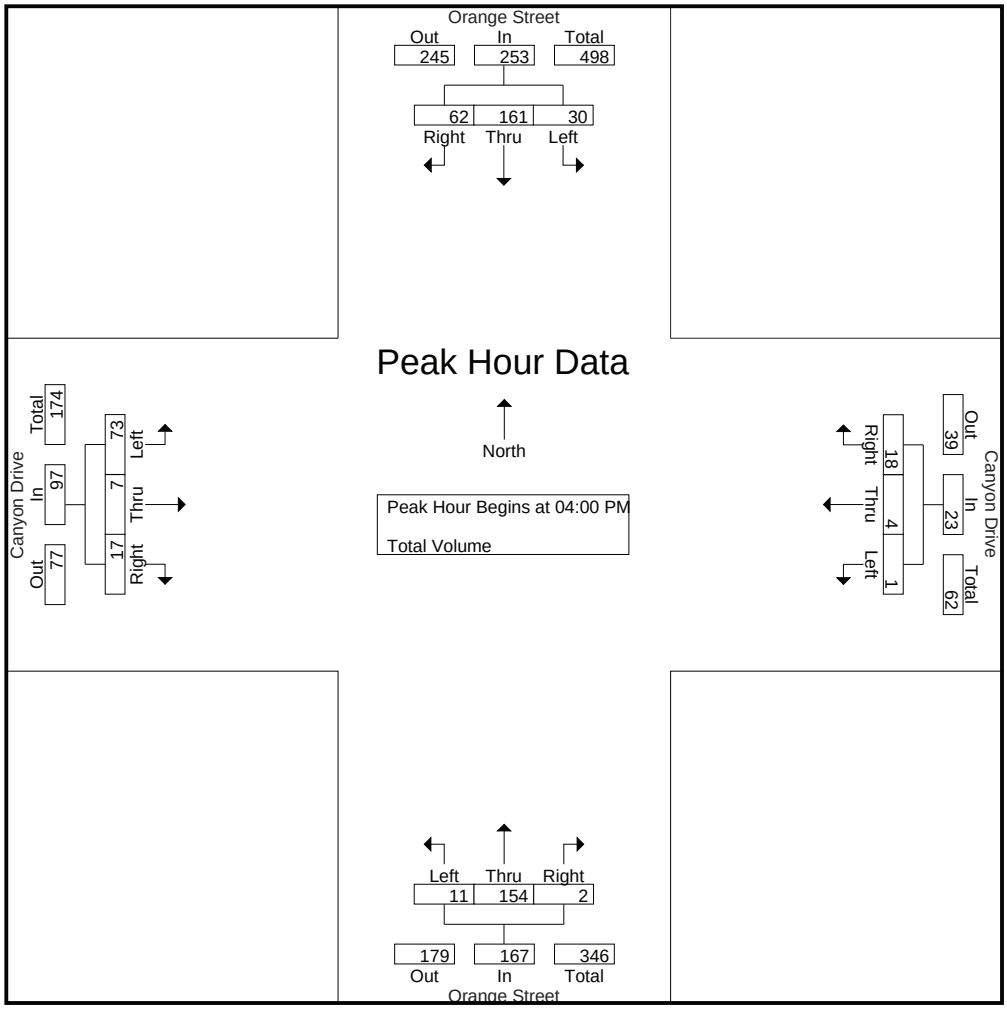
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				04:30 PM				04:00 PM			
+0 mins.	**12**	44	12	**68**	0	**2**	8	10	**4**	37	**1**	42	24	1	**6**	**31**
+15 mins.	5	**48**	15	68	0	0	5	5	3	**55**	0	**58**	11	1	5	17
+30 mins.	5	41	16	62	0	2	5	7	4	34	0	38	13	**4**	4	21
+45 mins.	8	28	**19**	55	**1**	2	**9**	**12**	0	48	1	49	**25**	1	2	28
Total Volume	30	161	62	253	1	6	27	34	11	174	2	187	73	7	17	97
% App. Total	11.9	63.6	24.5		2.9	17.6	79.4		5.9	93	1.1		75.3	7.2	17.5	
PHF	.625	.839	.816	.930	.250	.750	.750	.708	.688	.791	.500	.806	.730	.438	.708	.782

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City of Wildomar
N/S: Cherry Street
E/W: Waite Street
Weather: Clear

File Name : 04_WDM_Cherry_Waite AM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 1

Groups Printed- Total Volume

	Cherry Street Southbound				Waite Street Westbound				Cherry Street Northbound				Waite Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	4	9	0	13	0	0	1	1	0	5	7	12	27
07:15 AM	0	0	0	0	7	14	0	21	3	0	1	4	0	12	12	24	49
07:30 AM	1	2	0	3	3	17	0	20	4	0	0	4	0	20	11	31	58
07:45 AM	3	2	1	6	9	19	1	29	4	3	1	8	0	20	7	27	70
Total	4	5	1	10	23	59	1	83	11	3	3	17	0	57	37	94	204
08:00 AM	0	0	1	1	6	29	2	37	2	0	2	4	1	22	12	35	77
08:15 AM	0	0	1	1	6	23	0	29	5	0	0	5	0	15	9	24	59
08:30 AM	1	1	0	2	6	14	0	20	6	0	1	7	0	16	11	27	56
08:45 AM	0	1	0	1	6	17	0	23	5	0	1	6	1	11	8	20	50
Total	1	2	2	5	24	83	2	109	18	0	4	22	2	64	40	106	242
Grand Total	5	7	3	15	47	142	3	192	29	3	7	39	2	121	77	200	446
Apprch %	33.3	46.7	20		24.5	74	1.6		74.4	7.7	17.9		1	60.5	38.5		
Total %	1.1	1.6	0.7	3.4	10.5	31.8	0.7	43	6.5	0.7	1.6	8.7	0.4	27.1	17.3	44.8	

	Cherry Street Southbound				Waite Street Westbound				Cherry Street Northbound				Waite Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	**2**	0	3	3	17	0	20	4	0	0	4	0	20	11	31	58
07:45 AM	**3**	2	**1**	**6**	**9**	19	1	29	4	**3**	1	**8**	0	20	7	27	70
08:00 AM	0	0	1	1	6	**29**	**2**	**37**	2	0	**2**	4	**1**	**22**	**12**	**35**	**77**
08:15 AM	0	0	1	1	6	23	0	29	**5**	0	0	5	0	15	9	24	59
Total Volume	4	4	3	11	24	88	3	115	15	3	3	21	1	77	39	117	264
% App. Total	36.4	36.4	27.3		20.9	76.5	2.6		71.4	14.3	14.3		0.9	65.8	33.3		
PHF	.333	.500	.750	.458	.667	.759	.375	.777	.750	.250	.375	.656	.250	.875	.813	.836	.857

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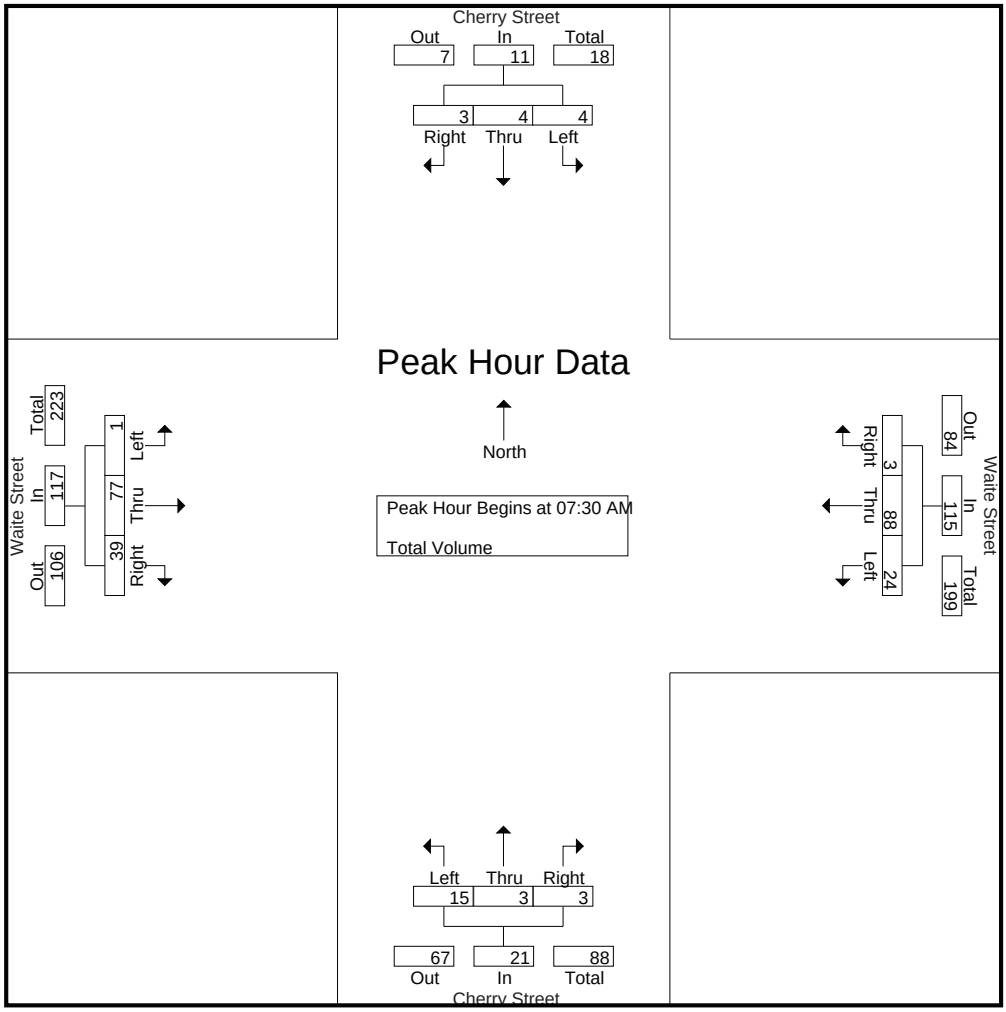
City of Wildomar
N/S: Cherry Street
E/W: Waite Street
Weather: Clear

File Name : 04_WDM_Cherry_Waite AM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:45 AM				07:15 AM			
+0 mins.	1	**2**	0	3	3	17	0	20	4	**3**	1	**8**	0	12	**12**	24
+15 mins.	**3**	2	**1**	**6**	**9**	19	1	29	2	0	**2**	4	0	20	11	31
+30 mins.	0	0	1	1	6	**29**	**2**	**37**	5	0	0	5	0	20	7	27
+45 mins.	0	0	1	1	6	23	0	29	**6**	0	1	7	**1**	**22**	12	**35**
Total Volume	4	4	3	11	24	88	3	115	17	3	4	24	1	74	42	117
% App. Total	36.4	36.4	27.3		20.9	76.5	2.6		70.8	12.5	16.7		0.9	63.2	35.9	
PHF	.333	.500	.750	.458	.667	.759	.375	.777	.708	.250	.500	.750	.250	.841	.875	.836

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City of Wildomar
N/S: Cherry Street
E/W: Waite Street
Weather: Clear

File Name : 04_WDM_Cherry_Waite PM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 1

Groups Printed- Total Volume

	Cherry Street Southbound				Waite Street Westbound				Cherry Street Northbound				Waite Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	4	10	0	14	17	0	5	22	0	14	8	22	58
04:15 PM	0	2	1	3	3	8	0	11	20	0	3	23	1	14	6	21	58
04:30 PM	0	2	0	2	0	7	0	7	24	2	4	30	1	9	4	14	53
04:45 PM	0	1	0	1	5	9	0	14	23	1	3	27	1	9	12	22	64
Total	0	5	1	6	12	34	0	46	84	3	15	102	3	46	30	79	233
05:00 PM	0	2	0	2	2	9	0	11	12	3	6	21	0	15	7	22	56
05:15 PM	0	0	0	0	6	12	0	18	23	1	10	34	0	13	8	21	73
05:30 PM	0	0	1	1	2	15	0	17	29	0	6	35	0	4	6	10	63
05:45 PM	0	0	0	0	1	10	0	11	22	0	8	30	0	11	8	19	60
Total	0	2	1	3	11	46	0	57	86	4	30	120	0	43	29	72	252
Grand Total	0	7	2	9	23	80	0	103	170	7	45	222	3	89	59	151	485
Apprch %	0	77.8	22.2		22.3	77.7	0		76.6	3.2	20.3		2	58.9	39.1		
Total %	0	1.4	0.4	1.9	4.7	16.5	0	21.2	35.1	1.4	9.3	45.8	0.6	18.4	12.2	31.1	

	Cherry Street Southbound				Waite Street Westbound				Cherry Street Northbound				Waite Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	5	9	0	14	23	1	3	27	**1**	9	**12**	**22**	64
05:00 PM	0	**2**	0	**2**	2	9	0	11	12	**3**	6	21	0	**15**	7	22	56
05:15 PM	0	0	0	0	**6**	12	0	**18**	23	1	**10**	34	0	13	8	21	**73**
05:30 PM	0	0	**1**	1	2	**15**	0	17	**29**	0	6	**35**	0	4	6	10	63
Total Volume	0	3	1	4	15	45	0	60	87	5	25	117	1	41	33	75	256
% App. Total	0	75	25		25	75	0		74.4	4.3	21.4		1.3	54.7	44		
PHF	.000	.375	.250	.500	.625	.750	.000	.833	.750	.417	.625	.836	.250	.683	.688	.852	.877

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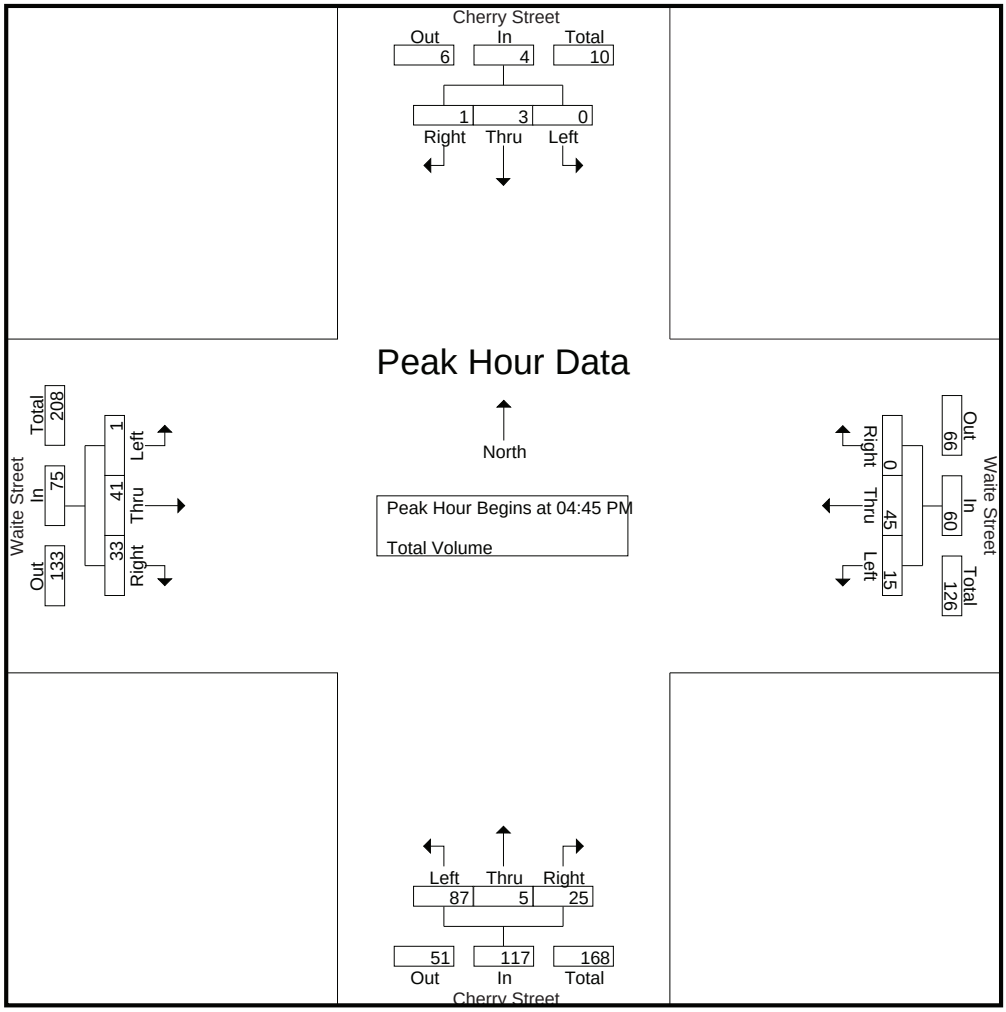
City of Wildomar
N/S: Cherry Street
E/W: Waite Street
Weather: Clear

File Name : 04_WDM_Cherry_Waite PM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:15 PM				04:45 PM				05:00 PM				04:00 PM			
+0 mins.	0	**2**	**1**	**3**	5	9	0	14	12	**3**	6	21	0	**14**	8	**22**
+15 mins.	0	2	0	2	2	9	0	11	23	1	**10**	34	**1**	14	6	21
+30 mins.	0	1	0	1	**6**	12	0	**18**	**29**	0	6	**35**	1	9	4	14
+45 mins.	0	2	0	2	2	**15**	0	17	22	0	8	30	1	9	**12**	22
Total Volume	0	7	1	8	15	45	0	60	86	4	30	120	3	46	30	79
% App. Total	0	87.5	12.5		25	75	0		71.7	3.3	25		3.8	58.2	38	
PHF	.000	.875	.250	.667	.625	.750	.000	.833	.741	.333	.750	.857	.750	.821	.625	.898

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City of Wildomar
N/S: Sellers Road
E/W: Waite Street
Weather: Clear

File Name : 05_WDM_Sel_Waite AM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 1

Groups Printed- Total Volume

	Sellers Road Southbound			Sellers Road Northbound			Waite Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	4	2	6	4	1	5	1	4	5	16
07:15 AM	6	3	9	10	0	10	2	13	15	34
07:30 AM	6	6	12	8	3	11	4	20	24	47
07:45 AM	11	3	14	19	1	20	3	20	23	57
Total	27	14	41	41	5	46	10	57	67	154
08:00 AM	7	6	13	24	3	27	6	15	21	61
08:15 AM	5	3	8	19	3	22	6	7	13	43
08:30 AM	6	1	7	14	4	18	5	13	18	43
08:45 AM	6	7	13	14	2	16	2	9	11	40
Total	24	17	41	71	12	83	19	44	63	187
Grand Total	51	31	82	112	17	129	29	101	130	341
Apprch %	62.2	37.8		86.8	13.2		22.3	77.7		
Total %	15	9.1	24	32.8	5	37.8	8.5	29.6	38.1	

	Sellers Road Southbound			Sellers Road Northbound			Waite Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	6	**6**	12	8	**3**	11	4	**20**	**24**	47
07:45 AM	**11**	3	**14**	19	1	20	3	20	23	57
08:00 AM	7	6	13	**24**	3	**27**	**6**	15	21	**61**
08:15 AM	5	3	8	19	3	22	6	7	13	43
Total Volume	29	18	47	70	10	80	19	62	81	208
% App. Total	61.7	38.3		87.5	12.5		23.5	76.5		
PHF	.659	.750	.839	.729	.833	.741	.792	.775	.844	.852

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City of Wildomar
N/S: Sellers Road
E/W: Waite Street
Weather: Clear

File Name : 05_WDM_Sel_Waite AM
Site Code : 20124388
Start Date : 4/23/2024
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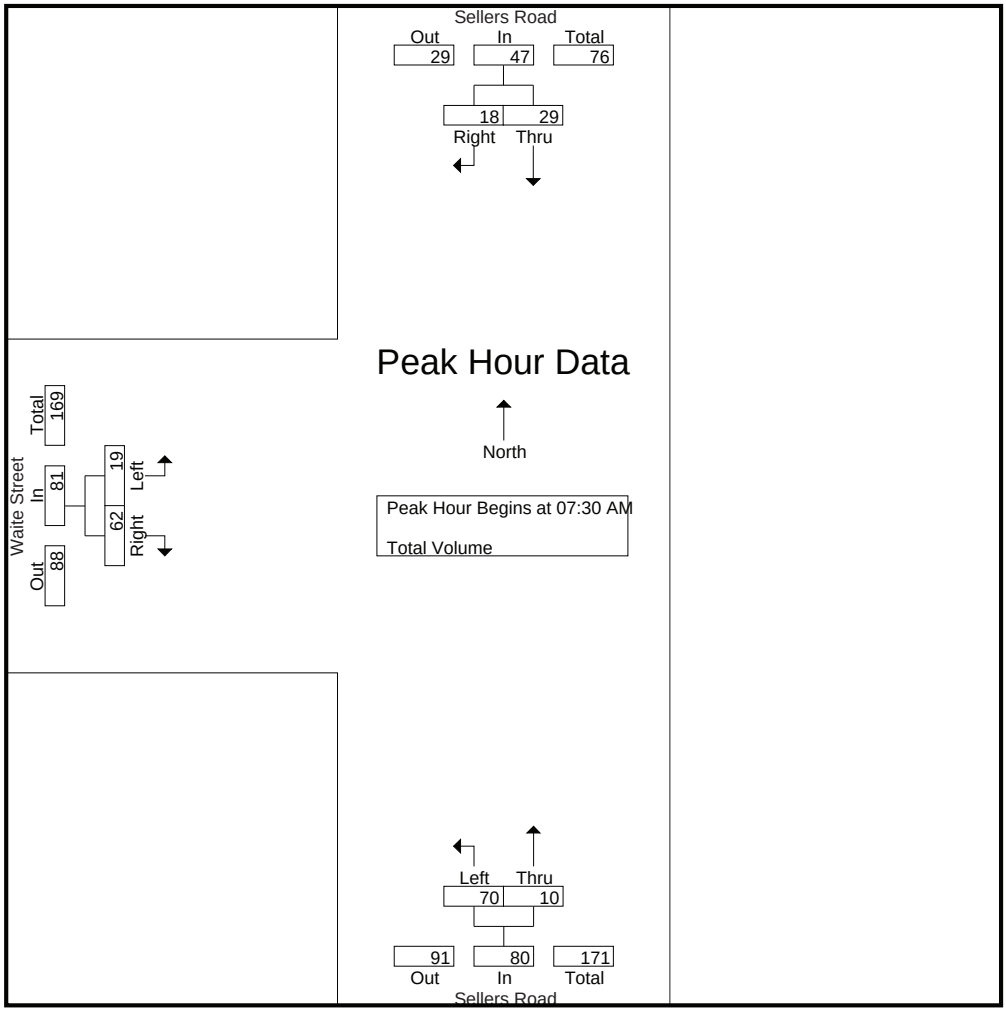

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:45 AM			07:15 AM		
+0 mins.	6	3	9	19	1	20	2	13	15
+15 mins.	6	**6**	12	**24**	3	**27**	4	**20**	**24**
+30 mins.	**11**	3	**14**	19	3	22	3	20	23
+45 mins.	7	6	13	14	**4**	18	**6**	15	21
Total Volume	30	18	48	76	11	87	15	68	83
% App. Total	62.5	37.5		87.4	12.6		18.1	81.9	
PHF	.682	.750	.857	.792	.688	.806	.625	.850	.865

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City of Wildomar
N/S: Sellers Road
E/W: Waite Street
Weather: Clear

File Name : 05_WDM_Sel_Waite PM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 1

Groups Printed- Total Volume

	Sellers Road Southbound			Sellers Road Northbound			Waite Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	4	3	7	11	11	22	3	8	11	40
04:15 PM	2	0	2	8	10	18	0	13	13	33
04:30 PM	5	0	5	5	7	12	2	6	8	25
04:45 PM	4	1	5	8	8	16	7	3	10	31
Total	15	4	19	32	36	68	12	30	42	129
05:00 PM	2	1	3	10	16	26	3	13	16	45
05:15 PM	1	5	6	9	6	15	2	10	12	33
05:30 PM	3	1	4	16	6	22	0	7	7	33
05:45 PM	2	1	3	10	10	20	1	9	10	33
Total	8	8	16	45	38	83	6	39	45	144
Grand Total	23	12	35	77	74	151	18	69	87	273
Apprch %	65.7	34.3		51	49		20.7	79.3		
Total %	8.4	4.4	12.8	28.2	27.1	55.3	6.6	25.3	31.9	

	Sellers Road Southbound			Sellers Road Northbound			Waite Street Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	2	1	3	10	**16**	**26**	**3**	**13**	**16**	**45**
05:15 PM	1	**5**	**6**	9	6	15	2	10	12	33
05:30 PM	**3**	1	4	**16**	6	22	0	7	7	33
05:45 PM	2	1	3	10	10	20	1	9	10	33
Total Volume	8	8	16	45	38	83	6	39	45	144
% App. Total	50	50		54.2	45.8		13.3	86.7		
PHF	.667	.400	.667	.703	.594	.798	.500	.750	.703	.800

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City of Wildomar
N/S: Sellers Road
E/W: Waite Street
Weather: Clear

File Name : 05_WDM_Sel_Waite PM
Site Code : 20124388
Start Date : 4/23/2024
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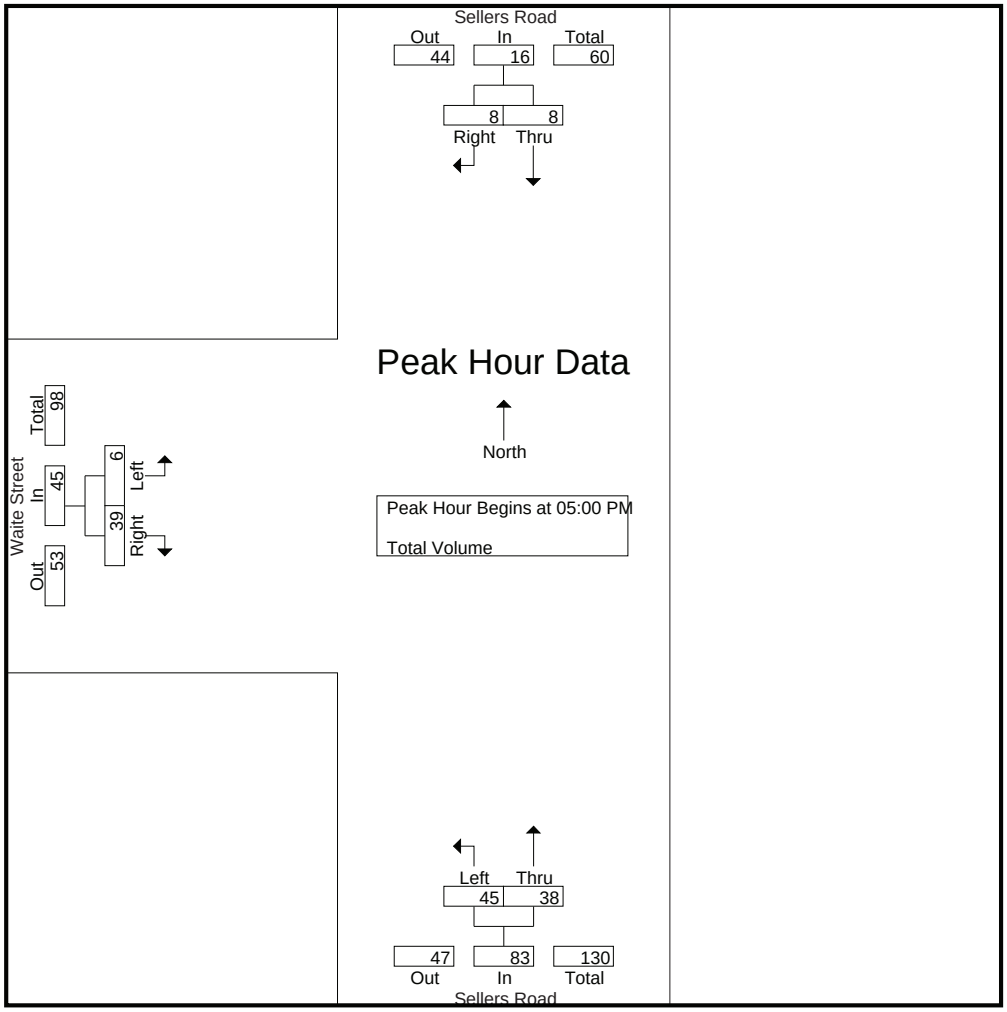

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			04:15 PM		
+0 mins.	4	**3**	**7**	10	**16**	**26**	0	**13**	13
+15 mins.	2	0	2	9	6	15	2	6	8
+30 mins.	**5**	0	5	**16**	6	22	**7**	3	10
+45 mins.	4	1	5	10	10	20	3	13	**16**
Total Volume	15	4	19	45	38	83	12	35	47
% App. Total	78.9	21.1		54.2	45.8		25.5	74.5	
PHF	.750	.333	.679	.703	.594	.798	.429	.673	.734

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City of Wildomar
N/S: Blondon Court/Orange Street
E/W: Lemon Street
Weather: Clear

File Name : 01_WDM_Blon_Lemon AM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 1

Groups Printed- Total Volume

	Blondon Court Southbound				Lemon Street Westbound				Orange Street Northbound				Lemon Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	1	1	6	10	1	17	10	1	2	13	2	3	5	10	41
07:15 AM	0	4	9	13	8	17	0	25	21	1	1	23	1	5	9	15	76
07:30 AM	0	5	7	12	6	14	1	21	23	0	1	24	4	6	13	23	80
07:45 AM	0	4	6	10	1	22	0	23	25	1	4	30	0	4	21	25	88
Total	0	13	23	36	21	63	2	86	79	3	8	90	7	18	48	73	285
08:00 AM	0	3	7	10	7	29	0	36	28	1	0	29	6	8	22	36	111
08:15 AM	0	2	3	5	3	19	1	23	35	0	1	36	5	10	19	34	98
08:30 AM	0	3	2	5	4	14	0	18	20	0	0	20	1	14	24	39	82
08:45 AM	0	0	1	1	2	14	0	16	18	0	0	18	1	8	18	27	62
Total	0	8	13	21	16	76	1	93	101	1	1	103	13	40	83	136	353
Grand Total	0	21	36	57	37	139	3	179	180	4	9	193	20	58	131	209	638
Apprch %	0	36.8	63.2		20.7	77.7	1.7		93.3	2.1	4.7		9.6	27.8	62.7		
Total %	0	3.3	5.6	8.9	5.8	21.8	0.5	28.1	28.2	0.6	1.4	30.3	3.1	9.1	20.5	32.8	

	Blondon Court Southbound				Lemon Street Westbound				Orange Street Northbound				Lemon Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**4**	6	**10**	1	22	0	23	25	**1**	**4**	30	0	4	21	25	88
08:00 AM	0	3	**7**	10	**7**	**29**	0	**36**	28	1	0	29	**6**	8	22	36	**111**
08:15 AM	0	2	3	5	3	19	**1**	23	**35**	0	1	**36**	5	10	19	34	98
08:30 AM	0	3	2	5	4	14	0	18	20	0	0	20	1	**14**	**24**	**39**	82
Total Volume	0	12	18	30	15	84	1	100	108	2	5	115	12	36	86	134	379
% App. Total	0	40	60		15	84	1		93.9	1.7	4.3		9	26.9	64.2		
PHF	.000	.750	.643	.750	.536	.724	.250	.694	.771	.500	.313	.799	.500	.643	.896	.859	.854

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City of Wildomar
N/S: Blondon Court/Orange Street
E/W: Lemon Street
Weather: Clear

File Name : 01_WDM_Blon_Lemon AM
Site Code : 20124388
Start Date : 4/23/2024
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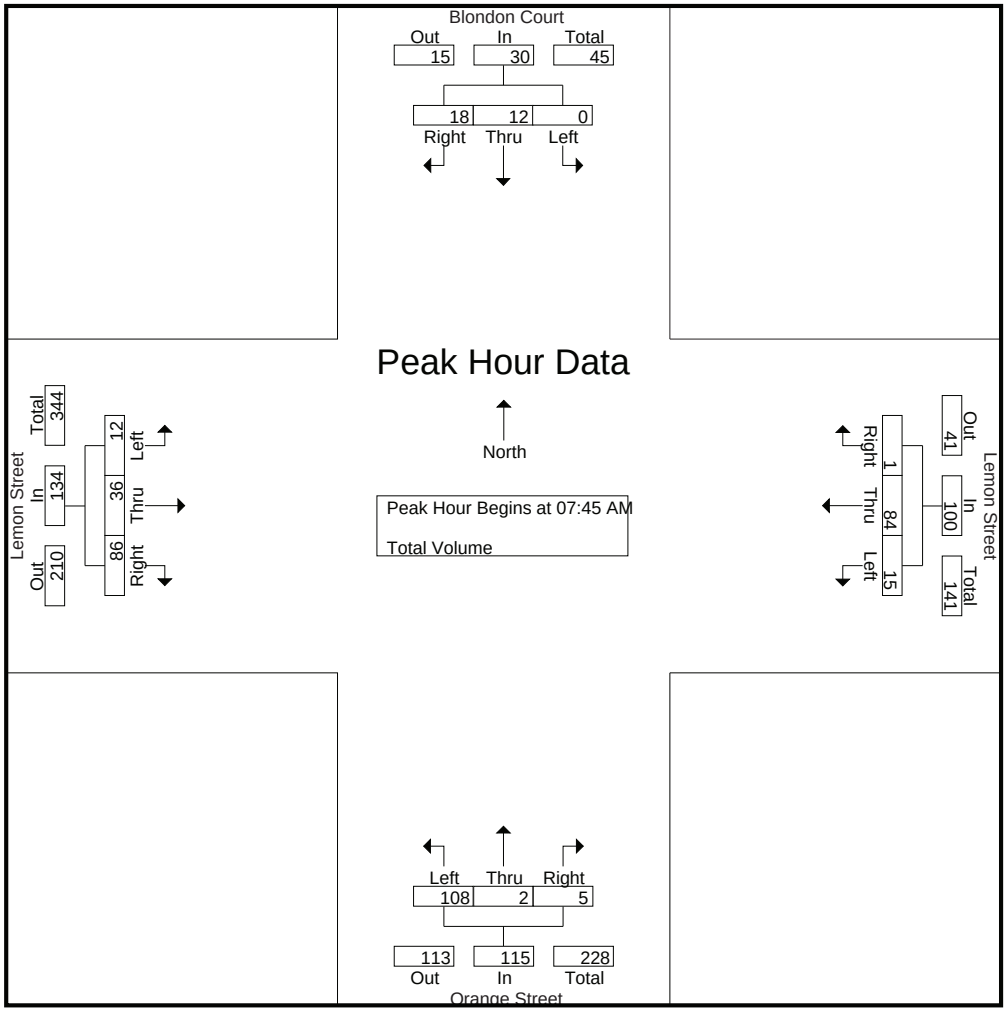

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:30 AM				08:00 AM			
+0 mins.	0	4	**9**	**13**	**8**	17	0	25	23	0	1	24	**6**	8	22	36
+15 mins.	0	**5**	7	12	6	14	**1**	21	25	**1**	**4**	30	5	10	19	34
+30 mins.	0	4	6	10	1	22	0	23	28	1	0	29	1	**14**	**24**	**39**
+45 mins.	0	3	7	10	7	**29**	0	**36**	**35**	0	1	**36**	1	8	18	27
Total Volume	0	16	29	45	22	82	1	105	111	2	6	119	13	40	83	136
% App. Total	0	35.6	64.4		21	78.1	1		93.3	1.7	5		9.6	29.4	61	
PHF	.000	.800	.806	.865	.688	.707	.250	.729	.793	.500	.375	.826	.542	.714	.865	.872

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City of Wildomar
N/S: Blondon Court/Orange Street
E/W: Lemon Street
Weather: Clear

File Name : 01_WDM_Blon_Lemon PM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 1

Groups Printed- Total Volume

	Blondon Court Southbound				Lemon Street Westbound				Orange Street Northbound				Lemon Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	3	4	2	12	0	14	18	2	6	26	4	17	18	39	83
04:15 PM	0	1	2	3	4	12	0	16	19	1	6	26	4	13	18	35	80
04:30 PM	0	0	2	2	3	12	0	15	14	5	6	25	2	17	12	31	73
04:45 PM	0	1	2	3	3	8	0	11	19	5	7	31	3	14	25	42	87
Total	0	3	9	12	12	44	0	56	70	13	25	108	13	61	73	147	323
05:00 PM	0	2	0	2	1	7	1	9	14	1	7	22	2	13	17	32	65
05:15 PM	0	0	1	1	4	12	0	16	19	2	10	31	3	14	14	31	79
05:30 PM	0	0	3	3	2	9	0	11	30	5	6	41	4	15	7	26	81
05:45 PM	0	6	2	8	0	11	0	11	22	4	3	29	3	15	15	33	81
Total	0	8	6	14	7	39	1	47	85	12	26	123	12	57	53	122	306
Grand Total	0	11	15	26	19	83	1	103	155	25	51	231	25	118	126	269	629
Apprch %	0	42.3	57.7		18.4	80.6	1		67.1	10.8	22.1		9.3	43.9	46.8		
Total %	0	1.7	2.4	4.1	3	13.2	0.2	16.4	24.6	4	8.1	36.7	4	18.8	20	42.8	

	Blondon Court Southbound				Lemon Street Westbound				Orange Street Northbound				Lemon Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**1**	**3**	**4**	2	**12**	0	14	18	2	6	26	**4**	**17**	18	39	83
04:15 PM	0	1	2	3	**4**	12	0	**16**	**19**	1	6	26	4	13	18	35	80
04:30 PM	0	0	2	2	3	12	0	15	14	**5**	6	25	2	17	12	31	73
04:45 PM	0	1	2	3	3	8	0	11	19	5	**7**	**31**	3	14	**25**	**42**	**87**
Total Volume	0	3	9	12	12	44	0	56	70	13	25	108	13	61	73	147	323
% App. Total	0	25	75		21.4	78.6	0		64.8	12	23.1		8.8	41.5	49.7		
PHF	.000	.750	.750	.750	.750	.917	.000	.875	.921	.650	.893	.871	.813	.897	.730	.875	.928

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City of Wildomar
N/S: Blondon Court/Orange Street
E/W: Lemon Street
Weather: Clear

File Name : 01_WDM_Blon_Lemon PM
Site Code : 20124388
Start Date : 4/23/2024
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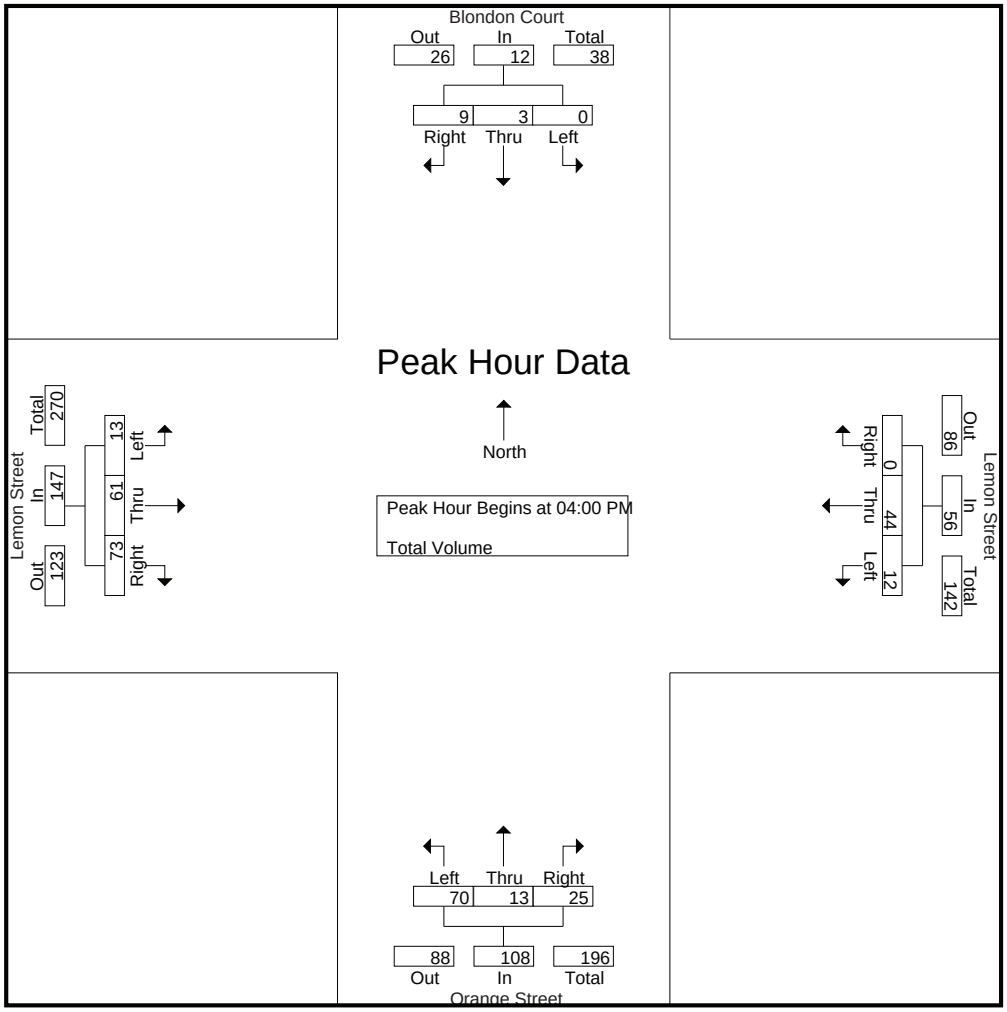

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:45 PM				04:00 PM			
+0 mins.	0	2	0	2	2	**12**	0	14	19	**5**	7	31	**4**	**17**	18	39
+15 mins.	0	0	1	1	**4**	12	0	**16**	14	1	7	22	4	13	18	35
+30 mins.	0	0	**3**	3	3	12	0	15	19	2	**10**	31	2	17	12	31
+45 mins.	0	**6**	2	**8**	3	8	0	11	**30**	5	6	**41**	3	14	**25**	**42**
Total Volume	0	8	6	14	12	44	0	56	82	13	30	125	13	61	73	147
% App. Total	0	57.1	42.9		21.4	78.6	0		65.6	10.4	24		8.8	41.5	49.7	
PHF	.000	.333	.500	.438	.750	.917	.000	.875	.683	.650	.750	.762	.813	.897	.730	.875

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City of Wildomar
N/S: Almond Street
E/W: Lemon Street
Weather: Clear

File Name : 02_WDM_Alm_Lemon AM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 1

Groups Printed- Total Volume

	Almond Street Southbound				Lemon Street Westbound				Almond Street Northbound				Lemon Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	13	9	0	22	8	0	8	16	0	14	12	26	64
07:15 AM	0	0	0	0	25	25	0	50	11	0	16	27	0	12	16	28	105
07:30 AM	0	1	0	1	36	20	0	56	12	0	22	34	1	16	22	39	130
07:45 AM	0	1	0	1	31	28	1	60	27	0	32	59	0	16	21	37	157
Total	0	2	0	2	105	82	1	188	58	0	78	136	1	58	71	130	456
08:00 AM	0	1	0	1	51	29	0	80	18	1	39	58	0	28	12	40	179
08:15 AM	0	1	0	1	45	30	0	75	21	0	46	67	0	15	21	36	179
08:30 AM	0	0	0	0	22	26	0	48	11	1	36	48	0	23	23	46	142
08:45 AM	0	0	0	0	21	23	0	44	16	0	6	22	0	23	11	34	100
Total	0	2	0	2	139	108	0	247	66	2	127	195	0	89	67	156	600
Grand Total	0	4	0	4	244	190	1	435	124	2	205	331	1	147	138	286	1056
Apprch %	0	100	0		56.1	43.7	0.2		37.5	0.6	61.9		0.3	51.4	48.3		
Total %	0	0.4	0	0.4	23.1	18	0.1	41.2	11.7	0.2	19.4	31.3	0.1	13.9	13.1	27.1	

	Almond Street Southbound				Lemon Street Westbound				Almond Street Northbound				Lemon Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	**1**	0	**1**	31	28	**1**	60	**27**	0	32	59	0	16	21	37	157
08:00 AM	0	1	0	1	**51**	29	0	**80**	18	**1**	39	58	0	**28**	12	40	**179**
08:15 AM	0	1	0	1	45	**30**	0	75	21	0	**46**	**67**	0	15	21	36	179
08:30 AM	0	0	0	0	22	26	0	48	11	1	36	48	0	23	**23**	**46**	142
Total Volume	0	3	0	3	149	113	1	263	77	2	153	232	0	82	77	159	657
% App. Total	0	100	0		56.7	43	0.4		33.2	0.9	65.9		0	51.6	48.4		
PHF	.000	.750	.000	.750	.730	.942	.250	.822	.713	.500	.832	.866	.000	.732	.837	.864	.918

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City of Wildomar
N/S: Almond Street
E/W: Lemon Street
Weather: Clear

File Name : 02_WDM_Alm_Lemon AM
Site Code : 20124388
Start Date : 4/23/2024
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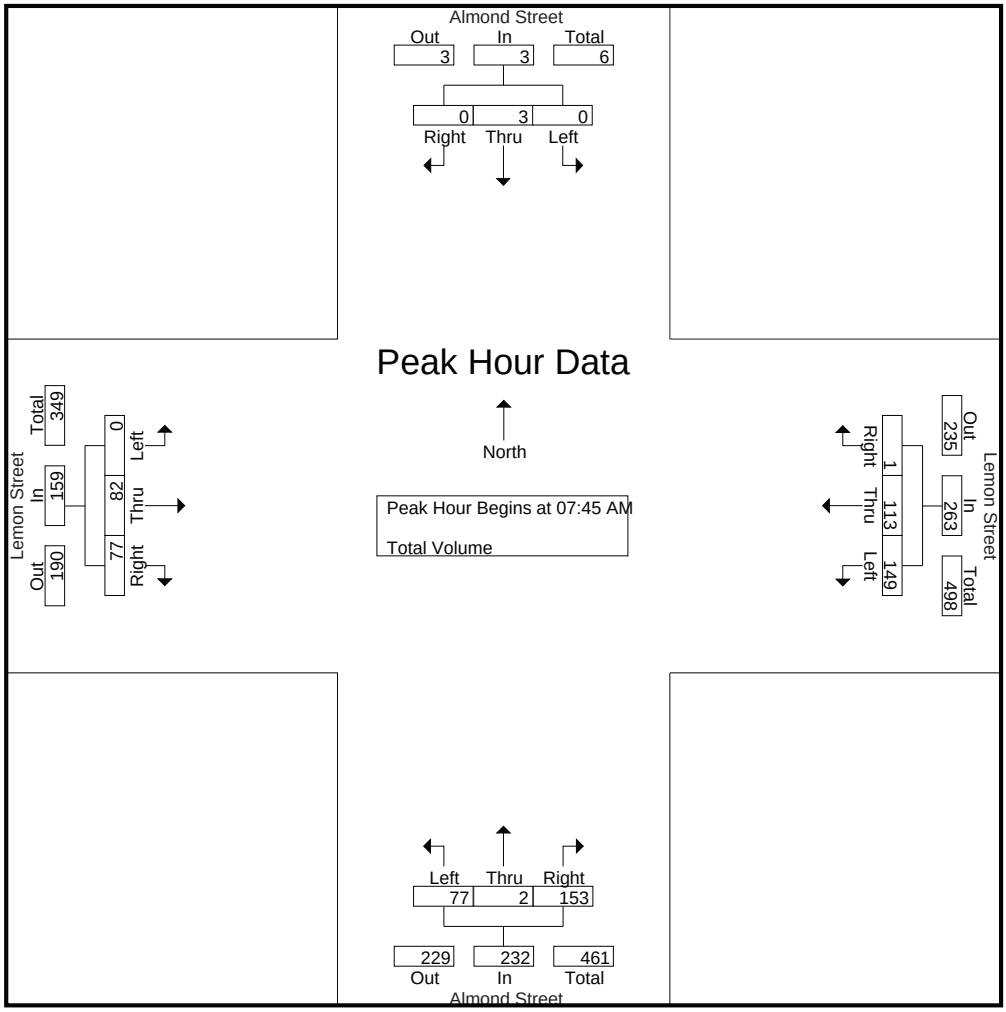

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:45 AM				07:45 AM			
+0 mins.	0	**1**	0	**1**	36	20	0	56	**27**	0	32	59	0	16	21	37
+15 mins.	0	1	0	1	31	28	**1**	60	18	**1**	39	58	0	**28**	12	40
+30 mins.	0	1	0	1	**51**	29	0	**80**	21	0	**46**	**67**	0	15	21	36
+45 mins.	0	1	0	1	45	**30**	0	75	11	1	36	48	0	23	**23**	**46**
Total Volume	0	4	0	4	163	107	1	271	77	2	153	232	0	82	77	159
% App. Total	0	100	0		60.1	39.5	0.4		33.2	0.9	65.9		0	51.6	48.4	
PHF	.000	1.000	.000	1.000	.799	.892	.250	.847	.713	.500	.832	.866	.000	.732	.837	.864

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City of Wildomar
N/S: Almond Street
E/W: Lemon Street
Weather: Clear

File Name : 02_WDM_Alm_Lemon PM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 1

Groups Printed- Total Volume

	Almond Street Southbound				Lemon Street Westbound				Almond Street Northbound				Lemon Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	19	14	0	33	21	0	18	39	0	38	18	56	128
04:15 PM	0	0	0	0	17	28	0	45	19	0	11	30	0	36	9	45	120
04:30 PM	0	0	0	0	21	18	0	39	16	0	17	33	1	31	9	41	113
04:45 PM	0	0	0	0	14	21	0	35	14	0	13	27	0	35	16	51	113
Total	0	0	0	0	71	81	0	152	70	0	59	129	1	140	52	193	474
05:00 PM	0	0	0	0	9	15	0	24	22	0	20	42	0	29	18	47	113
05:15 PM	0	0	0	0	11	19	0	30	24	0	12	36	0	45	14	59	125
05:30 PM	0	0	0	0	10	21	0	31	25	0	18	43	1	24	9	34	108
05:45 PM	0	1	0	1	17	28	0	45	27	0	11	38	0	26	13	39	123
Total	0	1	0	1	47	83	0	130	98	0	61	159	1	124	54	179	469
Grand Total	0	1	0	1	118	164	0	282	168	0	120	288	2	264	106	372	943
Apprch %	0	100	0		41.8	58.2	0		58.3	0	41.7		0.5	71	28.5		
Total %	0	0.1	0	0.1	12.5	17.4	0	29.9	17.8	0	12.7	30.5	0.2	28	11.2	39.4	

	Almond Street Southbound				Lemon Street Westbound				Almond Street Northbound				Lemon Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	19	14	0	33	**21**	0	**18**	**39**	0	**38**	**18**	**56**	**128**
04:15 PM	0	0	0	0	17	**28**	0	**45**	19	0	11	30	0	36	9	45	120
04:30 PM	0	0	0	0	**21**	18	0	39	16	0	17	33	**1**	31	9	41	113
04:45 PM	0	0	0	0	14	21	0	35	14	0	13	27	0	35	16	51	113
Total Volume	0	0	0	0	71	81	0	152	70	0	59	129	1	140	52	193	474
% App. Total	0	0	0		46.7	53.3	0		54.3	0	45.7		0.5	72.5	26.9		
PHF	.000	.000	.000	.000	.845	.723	.000	.844	.833	.000	.819	.827	.250	.921	.722	.862	.926

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City of Wildomar
N/S: Almond Street
E/W: Lemon Street
Weather: Clear

File Name : 02_WDM_Alm_Lemon PM
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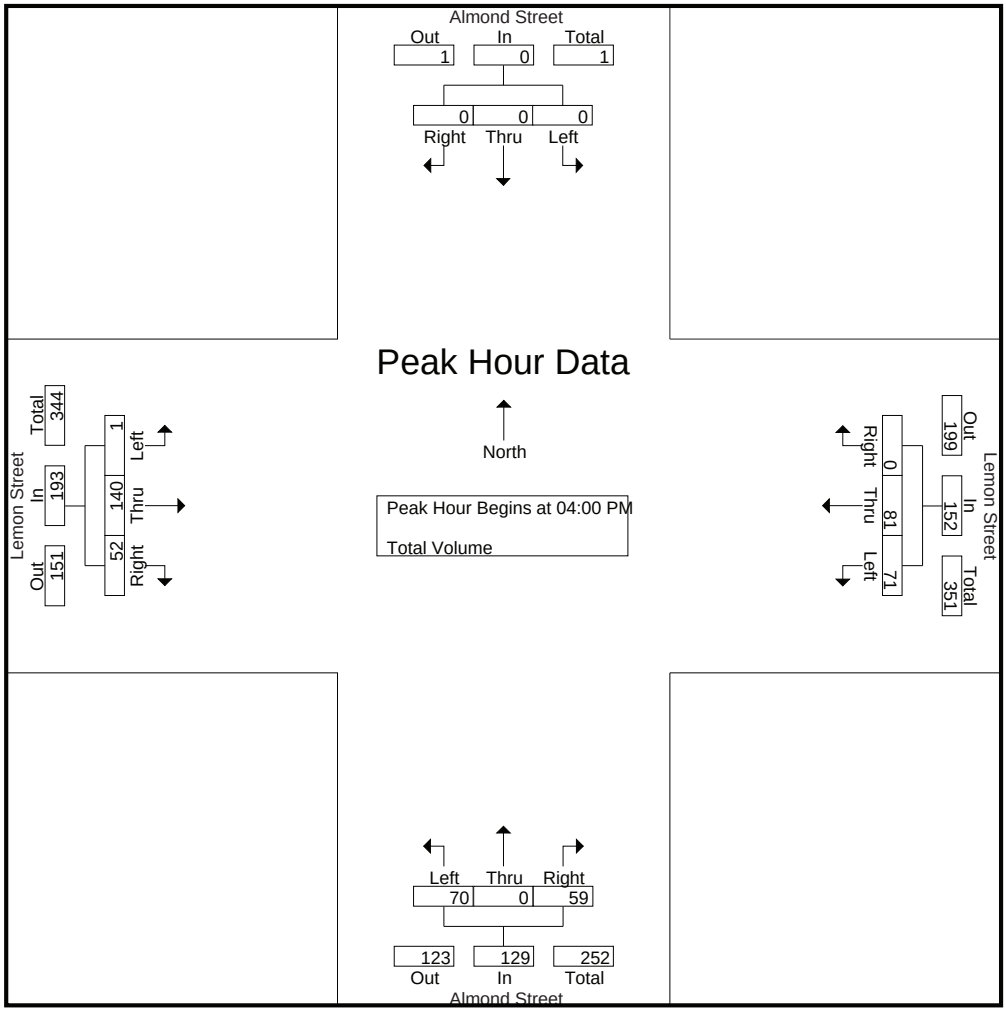

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				05:00 PM				04:30 PM			
+0 mins.	0	0	0	0	19	14	0	33	22	0	**20**	42	**1**	31	9	41
+15 mins.	0	0	0	0	17	**28**	0	**45**	24	0	12	36	0	35	16	51
+30 mins.	0	0	0	0	**21**	18	0	39	25	0	18	**43**	0	29	**18**	47
+45 mins.	0	**1**	0	**1**	14	21	0	35	**27**	0	11	38	0	**45**	14	**59**
Total Volume	0	1	0	1	71	81	0	152	98	0	61	159	1	140	57	198
% App. Total	0	100	0		46.7	53.3	0		61.6	0	38.4		0.5	70.7	28.8	
PHF	.000	.250	.000	.250	.845	.723	.000	.844	.907	.000	.763	.924	.250	.778	.792	.839

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City of Wildomar
N/S: Almond Street
E/W: Waite Street
Weather: Clear

File Name : 03_WDM_Alm_Waite AM
Site Code : 20124388
Start Date : 4/23/2024
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Groups Printed- Total Volume

	Almond Street Southbound				Waite Street Westbound				Almond Street Northbound				Waite Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	13	15	3	31	1	2	7	10	1	4	1	6	5	8	0	13	60
07:15 AM	18	21	0	39	0	4	18	22	1	6	1	8	1	9	4	14	83
07:30 AM	31	30	1	62	4	8	21	33	0	9	1	10	3	16	4	23	128
07:45 AM	34	23	0	57	4	10	40	54	4	15	0	19	3	8	3	14	144
Total	96	89	4	189	9	24	86	119	6	34	3	43	12	41	11	64	415
08:00 AM	27	38	0	65	0	7	37	44	5	22	1	28	2	14	4	20	157
08:15 AM	19	43	2	64	0	8	26	34	8	34	4	46	3	8	3	14	158
08:30 AM	26	19	0	45	2	15	28	45	1	18	2	21	1	13	1	15	126
08:45 AM	18	18	1	37	0	9	15	24	1	6	0	7	3	10	3	16	84
Total	90	118	3	211	2	39	106	147	15	80	7	102	9	45	11	65	525
Grand Total	186	207	7	400	11	63	192	266	21	114	10	145	21	86	22	129	940
Apprch %	46.5	51.8	1.8		4.1	23.7	72.2		14.5	78.6	6.9		16.3	66.7	17.1		
Total %	19.8	22	0.7	42.6	1.2	6.7	20.4	28.3	2.2	12.1	1.1	15.4	2.2	9.1	2.3	13.7	

	Almond Street Southbound				Waite Street Westbound				Almond Street Northbound				Waite Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	31	30	1	62	**4**	8	21	33	0	9	1	10	**3**	**16**	**4**	**23**	128
07:45 AM	**34**	23	0	57	4	**10**	**40**	**54**	4	15	0	19	3	8	3	14	144
08:00 AM	27	38	0	**65**	0	7	37	44	5	22	1	28	2	14	4	20	157
08:15 AM	19	**43**	**2**	64	0	8	26	34	**8**	**34**	**4**	**46**	3	8	3	14	**158**
Total Volume	111	134	3	248	8	33	124	165	17	80	6	103	11	46	14	71	587
% App. Total	44.8	54	1.2		4.8	20	75.2		16.5	77.7	5.8		15.5	64.8	19.7		
PHF	.816	.779	.375	.954	.500	.825	.775	.764	.531	.588	.375	.560	.917	.719	.875	.772	.929

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City of Wildomar
N/S: Almond Street
E/W: Waite Street
Weather: Clear

File Name : 03_WDM_Alm_Waite AM
Site Code : 20124388
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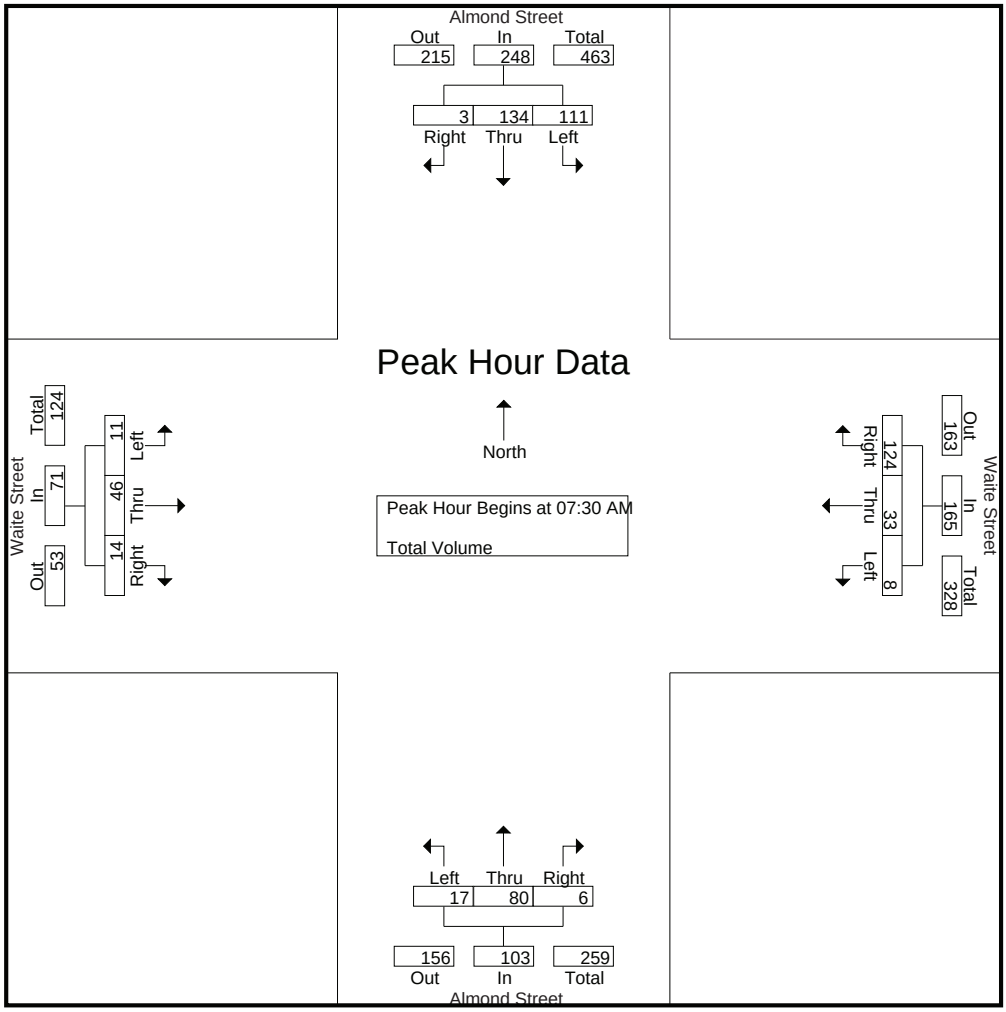

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:45 AM				07:15 AM			
+0 mins.	31	30	1	62	**4**	10	**40**	**54**	4	15	0	19	1	9	**4**	14
+15 mins.	**34**	23	0	57	0	7	37	44	5	22	1	28	**3**	**16**	4	**23**
+30 mins.	27	38	0	**65**	0	8	26	34	**8**	**34**	**4**	**46**	3	8	3	14
+45 mins.	19	**43**	**2**	64	2	**15**	28	45	1	18	2	21	2	14	4	20
Total Volume	111	134	3	248	6	40	131	177	18	89	7	114	9	47	15	71
% App. Total	44.8	54	1.2		3.4	22.6	74		15.8	78.1	6.1		12.7	66.2	21.1	
PHF	.816	.779	.375	.954	.375	.667	.819	.819	.563	.654	.438	.620	.750	.734	.938	.772

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City of Wildomar
N/S: Almond Street
E/W: Waite Street
Weather: Clear

File Name : 03_WDM_Alm_Waite PM
Site Code : 20124388
Start Date : 4/23/2024
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Groups Printed- Total Volume

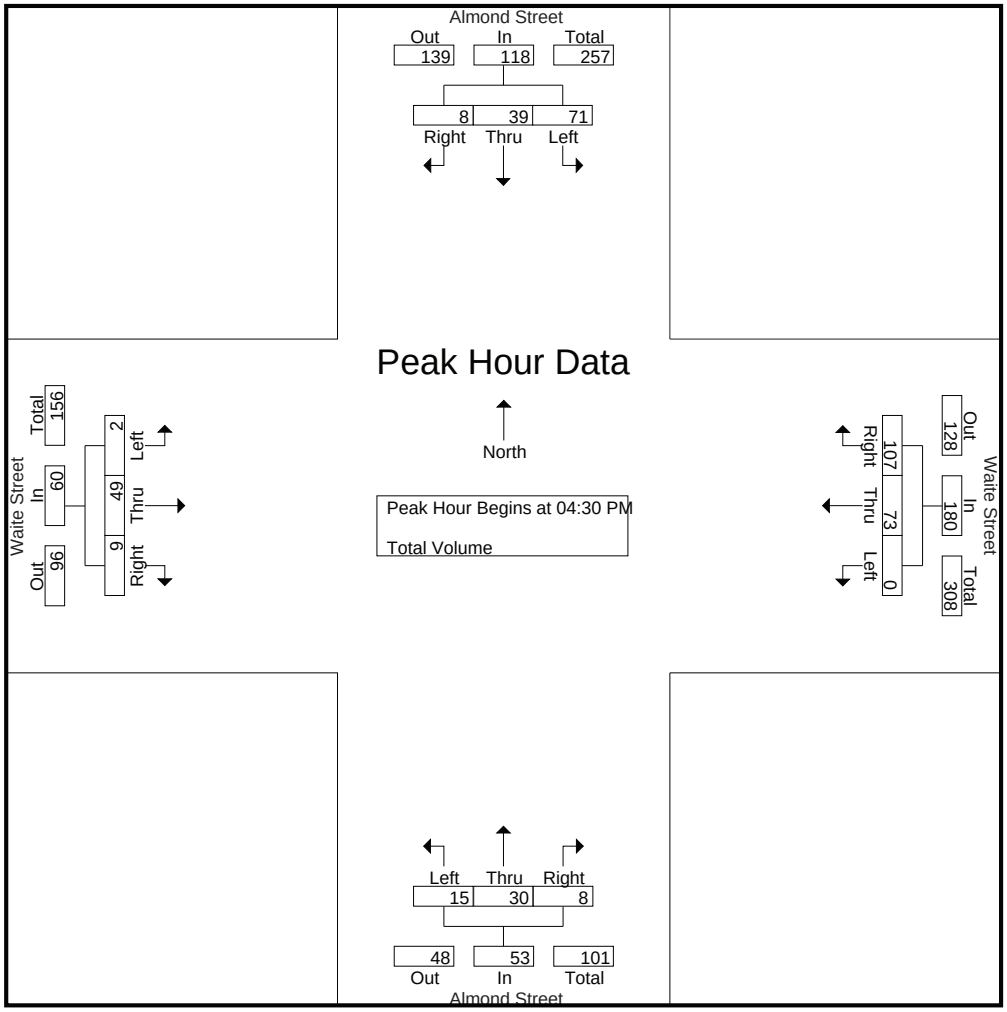
	Almond Street Southbound				Waite Street Westbound				Almond Street Northbound				Waite Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	18	13	4	35	1	19	29	49	2	12	1	15	1	13	1	15	114
04:15 PM	11	11	2	24	1	18	21	40	4	8	0	12	3	10	4	17	93
04:30 PM	21	11	3	35	0	20	26	46	2	8	2	12	0	17	0	17	110
04:45 PM	16	12	3	31	0	17	24	41	3	4	0	7	1	6	2	9	88
Total	66	47	12	125	2	74	100	176	11	32	3	46	5	46	7	58	405
05:00 PM	17	10	1	28	0	19	34	53	8	9	2	19	1	11	5	17	117
05:15 PM	17	6	1	24	0	17	23	40	2	9	4	15	0	15	2	17	96
05:30 PM	8	8	1	17	0	21	27	48	4	11	1	16	4	9	2	15	96
05:45 PM	15	14	3	32	1	9	30	40	0	6	0	6	3	8	0	11	89
Total	57	38	6	101	1	66	114	181	14	35	7	56	8	43	9	60	398
Grand Total	123	85	18	226	3	140	214	357	25	67	10	102	13	89	16	118	803
Apprch %	54.4	37.6	8		0.8	39.2	59.9		24.5	65.7	9.8		11	75.4	13.6		
Total %	15.3	10.6	2.2	28.1	0.4	17.4	26.7	44.5	3.1	8.3	1.2	12.7	1.6	11.1	2	14.7	

	Almond Street Southbound				Waite Street Westbound				Almond Street Northbound				Waite Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**21**	11	**3**	**35**	0	**20**	26	46	2	8	2	12	0	**17**	0	**17**	110
04:45 PM	16	**12**	3	31	0	17	24	41	3	4	0	7	**1**	6	2	9	88
05:00 PM	17	10	1	28	0	19	**34**	**53**	**8**	**9**	2	**19**	1	11	**5**	17	**117**
05:15 PM	17	6	1	24	0	17	23	40	2	9	**4**	15	0	15	2	17	96
Total Volume	71	39	8	118	0	73	107	180	15	30	8	53	2	49	9	60	411
% App. Total	60.2	33.1	6.8		0	40.6	59.4		28.3	56.6	15.1		3.3	81.7	15		
PHF	.845	.813	.667	.843	.000	.913	.787	.849	.469	.833	.500	.697	.500	.721	.450	.882	.878

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Wildomar
N/S: Almond Street
E/W: Waite Street
Weather: Clear

File Name : 03_WDM_Alm_Waite PM
Site Code : 20124388
Start Date : 4/23/2024
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				04:45 PM				04:15 PM			
+0 mins.	18	**13**	**4**	**35**	0	17	24	41	3	4	0	7	**3**	10	4	**17**
+15 mins.	11	11	2	24	0	19	**34**	**53**	**8**	9	2	**19**	0	**17**	0	17
+30 mins.	**21**	11	3	35	0	17	23	40	2	9	**4**	15	1	6	2	9
+45 mins.	16	12	3	31	0	**21**	27	48	4	**11**	1	16	1	11	**5**	17
Total Volume	66	47	12	125	0	74	108	182	17	33	7	57	5	44	11	60
% App. Total	52.8	37.6	9.6		0	40.7	59.3		29.8	57.9	12.3		8.3	73.3	18.3	
PHF	.786	.904	.750	.893	.000	.881	.794	.858	.531	.750	.438	.750	.417	.647	.550	.882

APPENDIX C

EXISTING (2023) CONDITIONS
INTERSECTION ANALYSIS CALCULATION WORKSHEETS AND
TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	372	29	62	297	40	23	32	65	80	34	39
Future Volume (vph)	21	372	29	62	297	40	23	32	65	80	34	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	0		0	0		0
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		289			1348			206			1314	
Travel Time (s)		5.6			26.3			5.6			35.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	14.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	372	29	62	297	40	23	32	65	80	34	39
Future Vol, veh/h	21	372	29	62	297	40	23	32	65	80	34	39
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	454	35	76	362	49	28	39	79	98	41	48
Number of Lanes	0	2	1	0	2	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	15.4	13.8	13.2	15.1
HCM LOS	C	B	B	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	19%	14%	0%	0%	39%	0%	0%	52%
Vol Thru, %	27%	86%	100%	0%	61%	100%	0%	22%
Vol Right, %	54%	0%	0%	100%	0%	0%	100%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	145	248	29	161	198	40	153
LT Vol	23	21	0	0	62	0	0	80
Through Vol	32	124	248	0	99	198	0	34
RT Vol	65	0	0	29	0	0	40	39
Lane Flow Rate	146	177	302	35	196	241	49	187
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.298	0.331	0.56	0.058	0.377	0.45	0.081	0.392
Departure Headway (Hd)	7.332	6.741	6.667	5.95	6.905	6.708	5.99	7.558
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	490	534	541	602	522	538	598	476
Service Time	5.074	4.478	4.403	3.686	4.643	4.445	3.727	5.297
HCM Lane V/C Ratio	0.298	0.331	0.558	0.058	0.375	0.448	0.082	0.393
HCM Control Delay	13.2	12.8	17.6	9.1	13.8	14.8	9.3	15.1
HCM Lane LOS	B	B	C	A	B	B	A	C
HCM 95th-tile Q	1.2	1.4	3.4	0.2	1.7	2.3	0.3	1.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	455	23	288	382	63	9	56	337	179	45	7
Future Volume (vph)	24	455	23	288	382	63	9	56	337	179	45	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	0		100	0		100
Storage Lanes	1		1	1		0	0		1	0		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8		8	4		4
Detector Phase	5	2	2	1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3	23.3	23.3	23.3	23.3
Total Split (s)	11.0	35.0	35.0	41.0	65.0		44.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	9.2%	29.2%	29.2%	34.2%	54.2%		36.7%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3			5.3	5.3		5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min	Min	Min	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	455	23	288	382	63	9	56	337	179	45	7
Future Volume (veh/h)	24	455	23	288	382	63	9	56	337	179	45	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	500	25	316	420	69	10	62	370	197	49	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	1284	569	339	1612	263	34	183	509	54	0	509
Arrive On Green	0.02	0.36	0.36	0.38	1.00	1.00	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3554	1574	1781	3056	499	0	566	1578	0	0	1578
Grp Volume(v), veh/h	26	500	25	316	243	246	72	0	370	246	0	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1574	1781	1777	1778	566	0	1578	0	0	1578
Q Serve(g_s), s	1.7	12.5	1.2	20.4	0.0	0.0	0.0	0.0	24.9	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.7	12.5	1.2	20.4	0.0	0.0	38.7	0.0	24.9	38.7	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.28	0.14		1.00	0.80		1.00
Lane Grp Cap(c), veh/h	43	1284	569	339	937	938	217	0	509	54	0	509
V/C Ratio(X)	0.60	0.39	0.04	0.93	0.26	0.26	0.33	0.00	0.73	4.55	0.00	0.02
Avail Cap(c_a), veh/h	96	1284	569	542	937	938	217	0	509	54	0	509
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.99	0.99	0.99	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	28.5	24.9	36.4	0.0	0.0	31.7	0.0	36.0	60.0	0.0	27.7
Incr Delay (d2), s/veh	5.0	0.9	0.1	12.1	0.7	0.7	0.3	0.0	4.5	1640.7	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	5.5	0.5	8.2	0.2	0.2	1.5	0.0	10.0	26.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	29.4	25.0	48.5	0.7	0.7	32.0	0.0	40.5	1700.7	0.0	27.7
LnGrp LOS	E	C	C	D	A	A	C	A	D	F	A	C
Approach Vol, veh/h		551			805			442			254	
Approach Delay, s/veh		30.8			19.5			39.1			1648.0	
Approach LOS		C			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.3	48.7		44.0	7.4	68.6		44.0				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	36.5	29.7		38.7	6.5	59.7		38.7				
Max Q Clear Time (g_c+I1), s	22.4	14.5		40.7	3.7	2.0		40.7				
Green Ext Time (p_c), s	0.4	1.9		0.0	0.0	1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		228.3	
HCM 6th LOS		F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	446	525	329	526	0	0	0	0	273	7	252
Future Volume (vph)	0	446	525	329	526	0	0	0	0	273	7	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	250		0	0		0	300		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases										4		
Detector Phase		2		1	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		45.0		35.0	45.0					25.0	25.0	
Total Split (s)		48.0		38.0	86.0					34.0	34.0	
Total Split (%)		40.0%		31.7%	71.7%					28.3%	28.3%	
Yellow Time (s)		4.3		3.6	4.3					4.3	4.3	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.3		4.6	5.3					5.3	5.3	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		C-Min		None	C-Min					None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	446	525	329	526	0	0	0	0	273	7	252
Future Volume (veh/h)	0	446	525	329	526	0	0	0	0	273	7	252
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	465	547	343	548	0				284	7	262
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	848	753	365	2561	0				340	8	294
Arrive On Green	0.00	0.80	0.80	0.41	1.00	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	1870	1577	1781	3647	0				1781	41	1538
Grp Volume(v), veh/h	0	465	547	343	548	0				284	0	269
Grp Sat Flow(s),veh/h/ln	0	1777	1577	1781	1777	0				1781	0	1579
Q Serve(g_s), s	0.0	11.3	20.0	22.2	0.0	0.0				18.4	0.0	19.9
Cycle Q Clear(g_c), s	0.0	11.3	20.0	22.2	0.0	0.0				18.4	0.0	19.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.97
Lane Grp Cap(c), veh/h	0	848	753	365	2561	0				340	0	302
V/C Ratio(X)	0.00	0.55	0.73	0.94	0.21	0.00				0.83	0.00	0.89
Avail Cap(c_a), veh/h	0	848	753	496	2561	0				426	0	378
HCM Platoon Ratio	1.00	1.67	1.67	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.90	0.90	0.78	0.78	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.5	8.4	34.7	0.0	0.0				46.7	0.0	47.3
Incr Delay (d2), s/veh	0.0	2.3	5.5	16.4	0.1	0.0				9.2	0.0	17.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.4	4.6	9.2	0.1	0.0				9.0	0.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.8	13.9	51.1	0.1	0.0				55.9	0.0	64.4
LnGrp LOS	A	A	B	D	A	A				E	A	E
Approach Vol, veh/h		1012			891						553	
Approach Delay, s/veh		12.0			19.8						60.0	
Approach LOS		B			B						E	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	29.2	62.6		28.2		91.8						
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3						
Max Green Setting (Gmax), s	33.4	42.7		28.7		80.7						
Max Q Clear Time (g_c+I1), s	24.2	22.0		21.9		2.0						
Green Ext Time (p_c), s	0.4	4.6		1.0		2.5						

Intersection Summary												
HCM 6th Ctrl Delay			25.6									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	502	0	0	576	313	279	0	191	0	0	0
Future Volume (vph)	217	502	0	0	576	313	279	0	191	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases							8					
Detector Phase	5	2			6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0		25.0	25.0				
Total Split (s)	30.0	82.0			52.0		38.0	38.0				
Total Split (%)	25.0%	68.3%			43.3%		31.7%	31.7%				
Yellow Time (s)	3.0	4.3			4.3		4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3		5.3	5.3				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None	C-Min			C-Min		None	None				

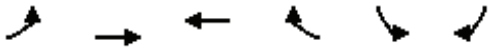
Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	502	0	0	576	313	279	0	191	0	0	0
Future Volume (veh/h)	217	502	0	0	576	313	279	0	191	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	221	512	0	0	588	319	285	0	195			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	246	2596	0	0	1242	673	323	0	285			
Arrive On Green	0.28	1.00	0.00	0.00	0.56	0.56	0.18	0.00	0.18			
Sat Flow, veh/h	1781	3647	0	0	2314	1204	1781	0	1572			
Grp Volume(v), veh/h	221	512	0	0	471	436	285	0	195			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1647	1781	0	1572			
Q Serve(g_s), s	14.3	0.0	0.0	0.0	19.0	19.1	18.7	0.0	13.9			
Cycle Q Clear(g_c), s	14.3	0.0	0.0	0.0	19.0	19.1	18.7	0.0	13.9			
Prop In Lane	1.00		0.00	0.00		0.73	1.00		1.00			
Lane Grp Cap(c), veh/h	246	2596	0	0	994	921	323	0	285			
V/C Ratio(X)	0.90	0.20	0.00	0.00	0.47	0.47	0.88	0.00	0.68			
Avail Cap(c_a), veh/h	386	2596	0	0	994	921	485	0	428			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.68	0.68	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.7	0.0	0.0	0.0	15.9	15.9	47.9	0.0	45.9			
Incr Delay (d2), s/veh	8.1	0.1	0.0	0.0	1.6	1.7	8.7	0.0	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			
%ile BackOfQ(50%),veh/ln	5.9	0.0	0.0	0.0	7.9	7.3	9.1	0.0	5.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	0.1	0.0	0.0	17.5	17.6	56.6	0.0	47.0			
LnGrp LOS	D	A	A	A	B	B	E	A	D			
Approach Vol, veh/h		733			907			480				
Approach Delay, s/veh		15.4			17.5			52.7				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		93.0			20.5	72.4		27.0				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		76.7			26.0	46.7		32.7				
Max Q Clear Time (g_c+I1), s		2.0			16.3	21.1		20.7				
Green Ext Time (p_c), s		2.3			0.2	4.0		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			24.8									
HCM 6th LOS			C									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	650	824	6	13	65
Future Volume (vph)	43	650	824	6	13	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	43	650	824	6	13	65
Future Vol, veh/h	43	650	824	6	13	65
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	45	684	867	6	14	68

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	878	0	-	0	1241	444
Stage 1	-	-	-	-	872	-
Stage 2	-	-	-	-	369	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	765	-	-	-	198	561
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	634	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	761	-	-	-	185	556
Mov Cap-2 Maneuver	-	-	-	-	272	-
Stage 1	-	-	-	-	337	-
Stage 2	-	-	-	-	631	-

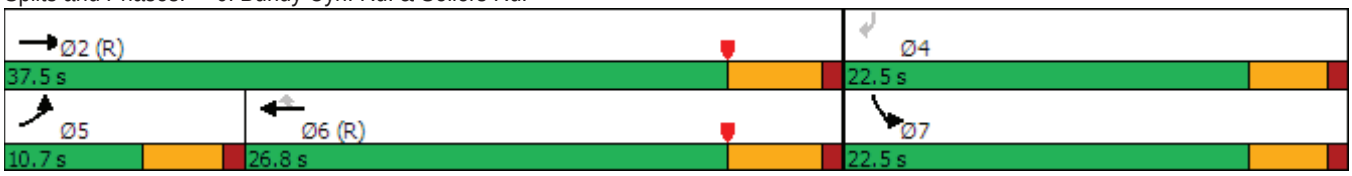
Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	14.2
HCM LOS			B

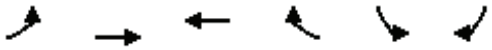
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	761	-	-	-	474
HCM Lane V/C Ratio	0.059	-	-	-	0.173
HCM Control Delay (s)	10	-	-	-	14.2
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	53	568	758	26	45	92
Future Volume (vph)	53	568	758	26	45	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	10.7	37.5	26.8	26.8	22.5	22.5
Total Split (%)	17.8%	62.5%	44.7%	44.7%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	53	568	758	26	45	92
Future Volume (veh/h)	53	568	758	26	45	92
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	598	798	27	47	97
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	90	2740	1461	648	534	476
Arrive On Green	0.05	0.54	0.82	0.82	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1575	1781	1585
Grp Volume(v), veh/h	56	598	798	27	47	97
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1575	1781	1585
Q Serve(g_s), s	1.8	3.7	4.3	0.2	1.1	2.7
Cycle Q Clear(g_c), s	1.8	3.7	4.3	0.2	1.1	2.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	90	2740	1461	648	534	476
V/C Ratio(X)	0.62	0.22	0.55	0.04	0.09	0.20
Avail Cap(c_a), veh/h	184	2740	1461	648	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.91	0.91	1.00	1.00
Uniform Delay (d), s/veh	27.9	7.3	3.5	3.2	15.1	15.7
Incr Delay (d2), s/veh	2.6	0.2	1.3	0.1	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.1	1.1	0.6	0.5	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.5	7.5	4.9	3.3	15.4	16.6
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		654	825		144	
Approach Delay, s/veh		9.5	4.8		16.2	
Approach LOS		A	A		B	

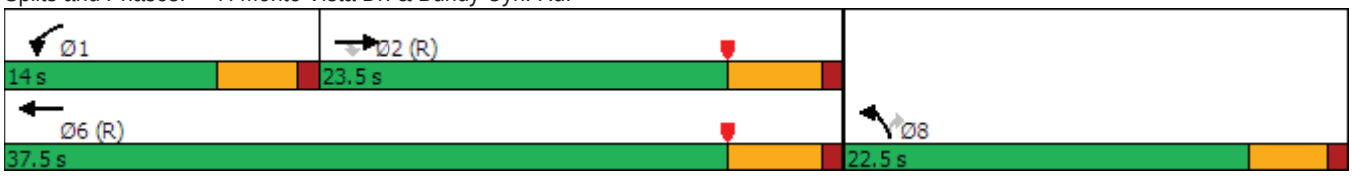
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	7.5	30.0
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	6.2	21.5
Max Q Clear Time (g_c+I1), s		5.7		4.7	3.8	6.3
Green Ext Time (p_c), s		2.8		0.2	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	520	93	170	749	35	77
Future Volume (vph)	520	93	170	749	35	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200	200		100	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			40	55	
Link Distance (ft)	612			588	284	
Travel Time (s)	11.9			10.0	3.5	
Confl. Peds. (#/hr)		5	5		5	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.3	23.3	9.5	22.5	22.5	22.5
Total Split (s)	23.5	23.5	14.0	37.5	22.5	22.5
Total Split (%)	39.2%	39.2%	23.3%	62.5%	37.5%	37.5%
Yellow Time (s)	4.3	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	4.5	5.3	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 7: Monte Vista Dr. & Bundy Cyn. Rd.

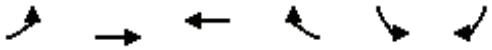




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	520	93	170	749	35	77
Future Volume (veh/h)	520	93	170	749	35	77
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	571	102	187	823	38	85
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1694	522	232	1907	1037	476
Arrive On Green	0.66	0.66	0.13	0.54	0.30	0.30
Sat Flow, veh/h	5274	1573	1781	3647	3456	1585
Grp Volume(v), veh/h	571	102	187	823	38	85
Grp Sat Flow(s),veh/h/ln	1702	1573	1781	1777	1728	1585
Q Serve(g_s), s	2.9	1.5	6.1	8.4	0.5	2.4
Cycle Q Clear(g_c), s	2.9	1.5	6.1	8.4	0.5	2.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1694	522	232	1907	1037	476
V/C Ratio(X)	0.34	0.20	0.81	0.43	0.04	0.18
Avail Cap(c_a), veh/h	1694	522	282	1907	1037	476
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.2	7.0	25.4	8.4	14.9	15.5
Incr Delay (d2), s/veh	0.5	0.8	11.0	0.7	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.5	3.0	2.5	0.2	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.8	7.8	36.4	9.1	14.9	16.4
LnGrp LOS	A	A	D	A	B	B
Approach Vol, veh/h	673			1010	123	
Approach Delay, s/veh	7.8			14.1	15.9	
Approach LOS	A			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.3	25.2				37.5	22.5
Change Period (Y+Rc), s	4.5	5.3				5.3	4.5
Max Green Setting (Gmax), s	9.5	18.2				32.2	18.0
Max Q Clear Time (g_c+I1), s	8.1	4.9				10.4	4.4
Green Ext Time (p_c), s	0.0	2.3				3.6	0.1

Intersection Summary		
HCM 6th Ctrl Delay	11.9	
HCM 6th LOS	B	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	26	571	850	8	12	69
Future Volume (vph)	26	571	850	8	12	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	120				90	
Link Speed (mph)		40	40		25	
Link Distance (ft)		588	428		597	
Travel Time (s)		10.0	7.3		16.3	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

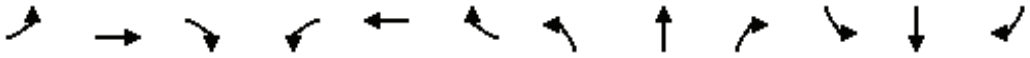
Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	26	571	850	8	12	69
Future Vol, veh/h	26	571	850	8	12	69
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	614	914	9	13	74

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	928	0	-	0	1231	472
Stage 1	-	-	-	-	924	-
Stage 2	-	-	-	-	307	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	733	-	-	-	200	538
Stage 1	-	-	-	-	338	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	730	-	-	-	190	533
Mov Cap-2 Maneuver	-	-	-	-	269	-
Stage 1	-	-	-	-	323	-
Stage 2	-	-	-	-	680	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	730	-	-	-	465
HCM Lane V/C Ratio	0.038	-	-	-	0.187
HCM Control Delay (s)	10.1	-	-	-	14.5
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	198	2	74	2	9	35	152	170	4	9	101	253
Future Volume (vph)	198	2	74	2	9	35	152	170	4	9	101	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

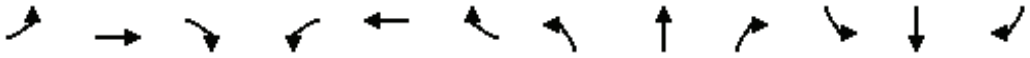
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	19.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	198	2	74	2	9	35	152	170	4	9	101	253
Future Vol, veh/h	198	2	74	2	9	35	152	170	4	9	101	253
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	239	2	89	2	11	42	183	205	5	11	122	305
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.1	10.7	20.5	19.6
HCM LOS	C	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	72%	4%	2%
Vol Thru, %	52%	1%	20%	28%
Vol Right, %	1%	27%	76%	70%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	326	274	46	363
LT Vol	152	198	2	9
Through Vol	170	2	9	101
RT Vol	4	74	35	253
Lane Flow Rate	393	330	55	437
Geometry Grp	1	1	1	1
Degree of Util (X)	0.665	0.586	0.105	0.678
Departure Headway (Hd)	6.099	6.388	6.81	5.577
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	593	565	524	647
Service Time	4.143	4.432	4.879	3.619
HCM Lane V/C Ratio	0.663	0.584	0.105	0.675
HCM Control Delay	20.5	18.1	10.7	19.6
HCM Lane LOS	C	C	B	C
HCM 95th-tile Q	5	3.8	0.3	5.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	77	39	24	88	3	15	3	3	4	4	3
Future Volume (vph)	1	77	39	24	88	3	15	3	3	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

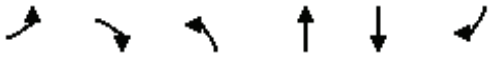
Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	77	39	24	88	3	15	3	3	4	4	3
Future Vol, veh/h	1	77	39	24	88	3	15	3	3	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	90	45	28	102	3	17	3	3	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	135	0	0	279	276	113	278	297	104
Stage 1	-	-	-	-	-	-	115	115	-	160	160	-
Stage 2	-	-	-	-	-	-	164	161	-	118	137	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1486	-	-	1449	-	-	673	632	940	674	615	951
Stage 1	-	-	-	-	-	-	890	800	-	842	766	-
Stage 2	-	-	-	-	-	-	838	765	-	887	783	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1486	-	-	1449	-	-	656	618	940	657	601	951
Mov Cap-2 Maneuver	-	-	-	-	-	-	656	618	-	657	601	-
Stage 1	-	-	-	-	-	-	889	799	-	841	750	-
Stage 2	-	-	-	-	-	-	812	749	-	879	782	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.6	10.5	10.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	679	1486	-	-	1449	-	-	692
HCM Lane V/C Ratio	0.036	0.001	-	-	0.019	-	-	0.018
HCM Control Delay (s)	10.5	7.4	0	-	7.5	0	-	10.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	19	62	70	10	29	18
Future Volume (vph)	19	62	70	10	29	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

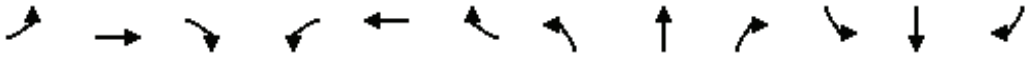
Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	62	70	10	29	18
Future Vol, veh/h	19	62	70	10	29	18
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	73	82	12	34	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	221	45	55	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	767	1025	1550	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	726	1025	1550	-	-	-
Mov Cap-2 Maneuver	726	-	-	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	6.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1550	-	935	-	-
HCM Lane V/C Ratio	0.053	-	0.102	-	-
HCM Control Delay (s)	7.5	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	36	86	15	84	1	108	2	5	1	12	18
Future Volume (vph)	12	36	86	15	84	1	108	2	5	1	12	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1291			669			448			292	
Travel Time (s)		22.0			11.4			12.2			8.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

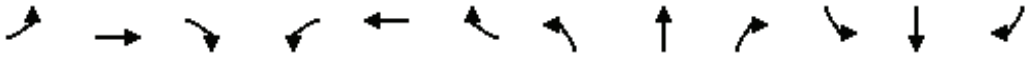
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	36	86	15	84	1	108	2	5	1	12	18
Future Vol, veh/h	12	36	86	15	84	1	108	2	5	1	12	18
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	42	101	18	99	1	127	2	6	1	14	21
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	8.2	8.9	8.9	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	94%	9%	15%	0%	3%
Vol Thru, %	2%	27%	85%	0%	39%
Vol Right, %	4%	64%	0%	100%	58%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	134	99	1	31
LT Vol	108	12	15	0	1
Through Vol	2	36	84	0	12
RT Vol	5	86	0	1	18
Lane Flow Rate	135	158	116	1	36
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.18	0.185	0.167	0.001	0.045
Departure Headway (Hd)	4.78	4.235	5.153	4.373	4.407
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	751	848	696	819	812
Service Time	2.806	2.26	2.879	2.098	2.437
HCM Lane V/C Ratio	0.18	0.186	0.167	0.001	0.044
HCM Control Delay	8.9	8.2	8.9	7.1	7.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.7	0.6	0	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	82	77	149	113	1	77	2	153	1	3	1
Future Volume (vph)	1	82	77	149	113	1	77	2	153	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		496			1291			1349			223	
Travel Time (s)		8.5			22.0			36.8			6.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

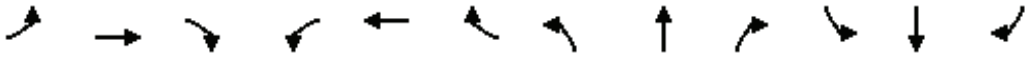
Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	82	77	149	113	1	77	2	153	1	3	1
Future Vol, veh/h	1	82	77	149	113	1	77	2	153	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	89	84	162	123	1	84	2	166	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	124	0	0	173	0	0	541	539	89	665	623	124
Stage 1	-	-	-	-	-	-	91	91	-	448	448	-
Stage 2	-	-	-	-	-	-	450	448	-	217	175	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1463	-	-	1404	-	-	452	449	969	374	402	927
Stage 1	-	-	-	-	-	-	916	820	-	590	573	-
Stage 2	-	-	-	-	-	-	589	573	-	785	754	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1463	-	-	1404	-	-	405	393	969	279	352	927
Mov Cap-2 Maneuver	-	-	-	-	-	-	405	393	-	279	352	-
Stage 1	-	-	-	-	-	-	915	819	-	589	502	-
Stage 2	-	-	-	-	-	-	512	502	-	648	753	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.5	13.9	14.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	657	1463	-	-	1404	-	-	379
HCM Lane V/C Ratio	0.384	0.001	-	-	0.115	-	-	0.014
HCM Control Delay (s)	13.9	7.5	0	-	7.9	0	-	14.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.8	0	-	-	0.4	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	46	14	8	33	124	17	80	6	111	134	3
Future Volume (vph)	11	46	14	8	33	124	17	80	6	111	134	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		400			740			1314			1349	
Travel Time (s)		9.1			16.8			35.8			36.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

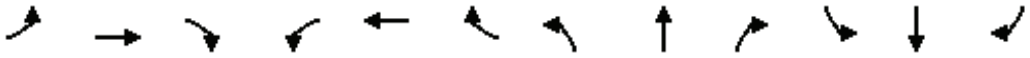
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	46	14	8	33	124	17	80	6	111	134	3
Future Vol, veh/h	11	46	14	8	33	124	17	80	6	111	134	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	49	15	9	35	133	18	86	6	119	144	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.8	8.8	10.4
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	15%	5%	45%
Vol Thru, %	78%	65%	20%	54%
Vol Right, %	6%	20%	75%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	71	165	248
LT Vol	17	11	8	111
Through Vol	80	46	33	134
RT Vol	6	14	124	3
Lane Flow Rate	111	76	177	267
Geometry Grp	1	1	1	1
Degree of Util (X)	0.149	0.106	0.222	0.351
Departure Headway (Hd)	4.85	4.975	4.501	4.742
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	735	716	795	755
Service Time	2.909	3.034	2.549	2.792
HCM Lane V/C Ratio	0.151	0.106	0.223	0.354
HCM Control Delay	8.8	8.6	8.8	10.4
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.5	0.4	0.8	1.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	418	7	6	497	46	10	6	15	47	1	15
Future Volume (vph)	9	418	7	6	497	46	10	6	15	47	1	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	0		0	0		0
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		289			1348			206			1314	
Travel Time (s)		5.6			26.3			5.6			35.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	418	7	6	497	46	10	6	15	47	1	15
Future Vol, veh/h	9	418	7	6	497	46	10	6	15	47	1	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	464	8	7	552	51	11	7	17	52	1	17
Number of Lanes	0	2	1	0	2	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	12.2	12.9	10.1	11
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	32%	6%	0%	0%	3%	0%	0%	75%
Vol Thru, %	19%	94%	100%	0%	97%	100%	0%	2%
Vol Right, %	48%	0%	0%	100%	0%	0%	100%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	148	279	7	172	331	46	63
LT Vol	10	9	0	0	6	0	0	47
Through Vol	6	139	279	0	166	331	0	1
RT Vol	15	0	0	7	0	0	46	15
Lane Flow Rate	34	165	310	8	191	368	51	70
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.066	0.257	0.481	0.011	0.29	0.559	0.068	0.139
Departure Headway (Hd)	6.862	5.622	5.591	4.886	5.481	5.463	4.758	7.138
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	522	641	647	735	658	663	755	503
Service Time	4.605	3.336	3.305	2.6	3.193	3.176	2.47	4.878
HCM Lane V/C Ratio	0.065	0.257	0.479	0.011	0.29	0.555	0.068	0.139
HCM Control Delay	10.1	10.3	13.4	7.7	10.4	14.9	7.8	11
HCM Lane LOS	B	B	B	A	B	B	A	B
HCM 95th-tile Q	0.2	1	2.6	0	1.2	3.5	0.2	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	437	24	192	532	143	15	40	186	111	30	19
Future Volume (vph)	22	437	24	192	532	143	15	40	186	111	30	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	0		100	0		100
Storage Lanes	1		1	1		0	0		1	0		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8		8	4		4
Detector Phase	5	2	2	1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3	23.3	23.3	23.3	23.3
Total Split (s)	14.0	42.0	42.0	39.0	67.0		39.0	39.0	39.0	39.0	39.0	39.0
Total Split (%)	11.7%	35.0%	35.0%	32.5%	55.8%		32.5%	32.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3			5.3	5.3		5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min	Min	Min	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	437	24	192	532	143	15	40	186	111	30	19
Future Volume (veh/h)	22	437	24	192	532	143	15	40	186	111	30	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	446	24	196	543	146	15	41	190	113	31	19
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	1666	739	222	1583	424	38	85	443	54	9	443
Arrive On Green	0.02	0.47	0.47	0.25	1.00	1.00	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	3554	1577	1781	2769	741	0	302	1577	0	30	1577
Grp Volume(v), veh/h	22	446	24	196	348	341	56	0	190	144	0	19
Grp Sat Flow(s),veh/h/ln	1781	1777	1577	1781	1777	1733	302	0	1577	30	0	1577
Q Serve(g_s), s	1.5	9.1	1.0	12.7	0.0	0.0	0.0	0.0	11.8	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.5	9.1	1.0	12.7	0.0	0.0	33.7	0.0	11.8	33.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.43	0.27		1.00	0.78		1.00
Lane Grp Cap(c), veh/h	39	1666	739	222	1016	991	123	0	443	62	0	443
V/C Ratio(X)	0.57	0.27	0.03	0.88	0.34	0.34	0.46	0.00	0.43	2.32	0.00	0.04
Avail Cap(c_a), veh/h	141	1666	739	512	1016	991	123	0	443	62	0	443
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.1	19.4	17.2	44.2	0.0	0.0	35.3	0.0	35.3	55.4	0.0	31.4
Incr Delay (d2), s/veh	4.8	0.4	0.1	4.4	0.9	0.9	1.0	0.0	0.2	640.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.8	0.4	5.1	0.2	0.2	1.2	0.0	4.5	12.9	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	19.7	17.3	48.6	0.9	0.9	36.3	0.0	35.5	696.2	0.0	31.4
LnGrp LOS	E	B	B	D	A	A	D	A	D	F	A	C
Approach Vol, veh/h		492			885			246			163	
Approach Delay, s/veh		21.6			11.5			35.7			618.7	
Approach LOS		C			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	61.6		39.0	7.1	73.9		39.0				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	34.5	36.7		33.7	9.5	61.7		33.7				
Max Q Clear Time (g_c+I1), s	14.7	11.1		35.7	3.5	2.0		35.7				
Green Ext Time (p_c), s	0.2	1.9		0.0	0.0	2.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		73.0	
HCM 6th LOS		E	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	452	282	187	726	0	0	0	0	410	2	196
Future Volume (vph)	0	452	282	187	726	0	0	0	0	410	2	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	250		0	0		0	300		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases										4		
Detector Phase		2		1	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		45.0		35.0	45.0					25.0	25.0	
Total Split (s)		45.0		35.0	80.0					40.0	40.0	
Total Split (%)		37.5%		29.2%	66.7%					33.3%	33.3%	
Yellow Time (s)		4.3		3.6	4.3					4.3	4.3	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.3		4.6	5.3					5.3	5.3	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		C-Min		None	C-Min					None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	452	282	187	726	0	0	0	0	410	2	196
Future Volume (veh/h)	0	452	282	187	726	0	0	0	0	410	2	196
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	481	300	199	772	0				436	2	209
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1019	633	224	2309	0				467	4	410
Arrive On Green	0.00	0.65	0.65	0.25	1.00	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	2194	1304	1781	3647	0				1781	15	1563
Grp Volume(v), veh/h	0	407	374	199	772	0				436	0	211
Grp Sat Flow(s),veh/h/ln	0	1777	1628	1781	1777	0				1781	0	1578
Q Serve(g_s), s	0.0	14.0	14.1	12.9	0.0	0.0				28.7	0.0	13.7
Cycle Q Clear(g_c), s	0.0	14.0	14.1	12.9	0.0	0.0				28.7	0.0	13.7
Prop In Lane	0.00		0.80	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	862	790	224	2309	0				467	0	414
V/C Ratio(X)	0.00	0.47	0.47	0.89	0.33	0.00				0.93	0.00	0.51
Avail Cap(c_a), veh/h	0	862	790	451	2309	0				515	0	456
HCM Platoon Ratio	1.00	1.33	1.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.96	0.96	0.76	0.76	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.4	13.4	44.1	0.0	0.0				43.3	0.0	37.7
Incr Delay (d2), s/veh	0.0	1.8	2.0	3.6	0.3	0.0				22.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.1	4.7	5.1	0.1	0.0				15.4	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.2	15.4	47.6	0.3	0.0				65.6	0.0	38.1
LnGrp LOS	A	B	B	D	A	A				E	A	D
Approach Vol, veh/h		781			971						647	
Approach Delay, s/veh		15.3			10.0						56.6	
Approach LOS		B			A						E	

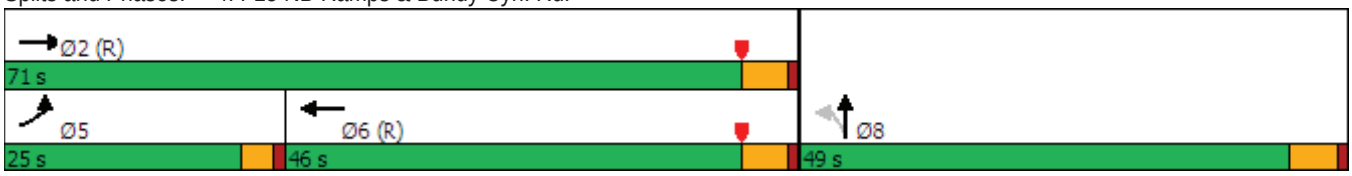
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.7	63.5		36.7		83.3
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3
Max Green Setting (Gmax), s	30.4	39.7		34.7		74.7
Max Q Clear Time (g_c+I1), s	14.9	16.1		30.7		2.0
Green Ext Time (p_c), s	0.2	3.3		0.7		3.8

Intersection Summary			
HCM 6th Ctrl Delay		24.3	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	728	0	0	479	224	434	3	360	0	0	0
Future Volume (vph)	134	728	0	0	479	224	434	3	360	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases							8					
Detector Phase	5	2			6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0		25.0	25.0				
Total Split (s)	25.0	71.0			46.0		49.0	49.0				
Total Split (%)	20.8%	59.2%			38.3%		40.8%	40.8%				
Yellow Time (s)	3.0	4.3			4.3		4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3		5.3	5.3				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None	C-Min			C-Min		None	None				

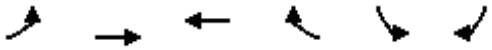
Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	728	0	0	479	224	434	3	360	0	0	0
Future Volume (veh/h)	134	728	0	0	479	224	434	3	360	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	138	751	0	0	494	231	447	3	371			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	163	2258	0	0	1200	558	492	3	433			
Arrive On Green	0.18	1.00	0.00	0.00	0.51	0.51	0.28	0.28	0.28			
Sat Flow, veh/h	1781	3647	0	0	2444	1093	1781	13	1566			
Grp Volume(v), veh/h	138	751	0	0	373	352	447	0	374			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1667	1781	0	1578			
Q Serve(g_s), s	9.0	0.0	0.0	0.0	15.6	15.7	29.1	0.0	27.0			
Cycle Q Clear(g_c), s	9.0	0.0	0.0	0.0	15.6	15.7	29.1	0.0	27.0			
Prop In Lane	1.00		0.00	0.00		0.66	1.00		0.99			
Lane Grp Cap(c), veh/h	163	2258	0	0	907	851	492	0	436			
V/C Ratio(X)	0.85	0.33	0.00	0.00	0.41	0.41	0.91	0.00	0.86			
Avail Cap(c_a), veh/h	312	2258	0	0	907	851	649	0	575			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	48.2	0.0	0.0	0.0	18.2	18.2	41.9	0.0	41.2			
Incr Delay (d2), s/veh	3.3	0.3	0.0	0.0	1.4	1.5	12.0	0.0	7.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.8	0.1	0.0	0.0	6.6	6.3	14.3	0.0	11.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.3	0.0	0.0	19.6	19.7	53.9	0.0	49.1			
LnGrp LOS	D	A	A	A	B	B	D	A	D			
Approach Vol, veh/h		889			725			821				
Approach Delay, s/veh		8.2			19.6			51.7				
Approach LOS		A			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		81.5			15.0	66.5		38.5				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		65.7			21.0	40.7		43.7				
Max Q Clear Time (g_c+I1), s		2.0			11.0	17.7		31.1				
Green Ext Time (p_c), s		3.7			0.1	2.9		2.1				
Intersection Summary												
HCM 6th Ctrl Delay			26.3									
HCM 6th LOS			C									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	65	1023	656	21	5	47
Future Volume (vph)	65	1023	656	21	5	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	65	1023	656	21	5	47
Future Vol, veh/h	65	1023	656	21	5	47
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	1055	676	22	5	48

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	703	0	-	0	1242	348
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	561	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	890	-	-	-	197	648
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	886	-	-	-	180	642
Mov Cap-2 Maneuver	-	-	-	-	288	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	500	-

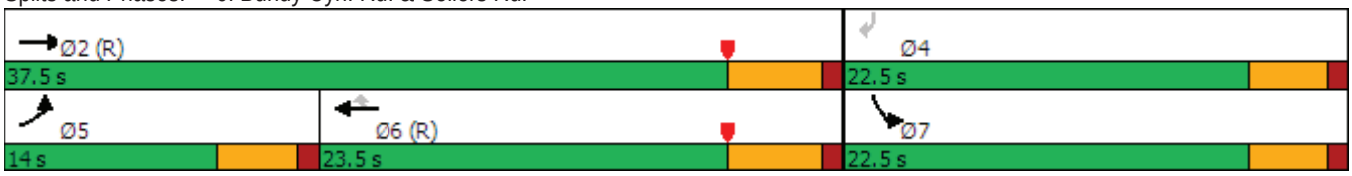
Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	11.9
HCM LOS			B

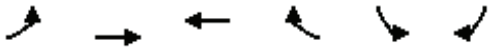
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	886	-	-	-	574
HCM Lane V/C Ratio	0.076	-	-	-	0.093
HCM Control Delay (s)	9.4	-	-	-	11.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	122	959	567	39	34	59
Future Volume (vph)	122	959	567	39	34	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	14.0	37.5	23.5	23.5	22.5	22.5
Total Split (%)	23.3%	62.5%	39.2%	39.2%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	122	959	567	39	34	59
Future Volume (veh/h)	122	959	567	39	34	59
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	128	1009	597	41	36	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	164	2740	1314	582	534	476
Arrive On Green	0.09	0.54	0.74	0.74	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1574	1781	1585
Grp Volume(v), veh/h	128	1009	597	41	36	62
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1574	1781	1585
Q Serve(g_s), s	4.2	6.8	4.0	0.4	0.9	1.7
Cycle Q Clear(g_c), s	4.2	6.8	4.0	0.4	0.9	1.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	164	2740	1314	582	534	476
V/C Ratio(X)	0.78	0.37	0.45	0.07	0.07	0.13
Avail Cap(c_a), veh/h	282	2740	1314	582	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	1.00	1.00
Uniform Delay (d), s/veh	26.6	8.0	5.4	5.0	15.0	15.3
Incr Delay (d2), s/veh	3.0	0.4	1.1	0.2	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.0	1.2	0.9	0.4	1.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.7	8.4	6.5	5.2	15.2	15.9
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		1137	638		98	
Approach Delay, s/veh		10.8	6.4		15.6	
Approach LOS		B	A		B	

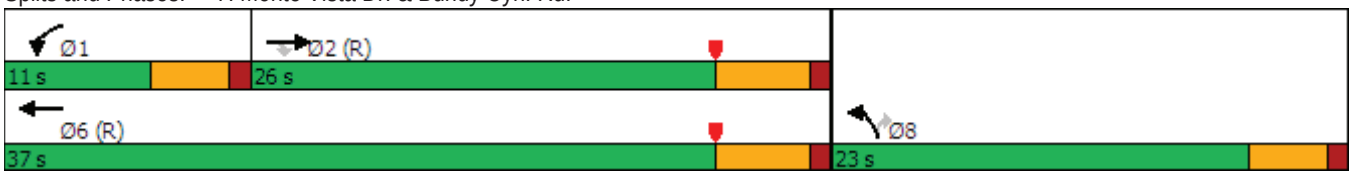
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	10.0	27.5
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	9.5	18.2
Max Q Clear Time (g_c+I1), s		8.8		3.7	6.2	6.0
Green Ext Time (p_c), s		5.0		0.1	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	969	24	50	587	19	106
Future Volume (vph)	969	24	50	587	19	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200	200		100	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			40	55	
Link Distance (ft)	612			588	284	
Travel Time (s)	11.9			10.0	3.5	
Confl. Peds. (#/hr)		5	5		5	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.3	23.3	9.5	22.5	22.5	22.5
Total Split (s)	26.0	26.0	11.0	37.0	23.0	23.0
Total Split (%)	43.3%	43.3%	18.3%	61.7%	38.3%	38.3%
Yellow Time (s)	4.3	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	4.5	5.3	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 7: Monte Vista Dr. & Bundy Cyn. Rd.





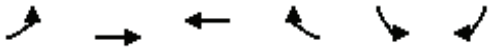
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	969	24	50	587	19	106
Future Volume (veh/h)	969	24	50	587	19	106
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1065	26	55	645	21	116
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2059	635	89	1878	1066	489
Arrive On Green	0.81	0.81	0.06	0.58	0.31	0.31
Sat Flow, veh/h	5274	1575	1781	3647	3456	1585
Grp Volume(v), veh/h	1065	26	55	645	21	116
Grp Sat Flow(s),veh/h/ln	1702	1575	1781	1777	1728	1585
Q Serve(g_s), s	4.2	0.2	1.8	5.7	0.3	3.3
Cycle Q Clear(g_c), s	4.2	0.2	1.8	5.7	0.3	3.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2059	635	89	1878	1066	489
V/C Ratio(X)	0.52	0.04	0.62	0.34	0.02	0.24
Avail Cap(c_a), veh/h	2059	635	193	1878	1066	489
HCM Platoon Ratio	2.00	2.00	1.10	1.10	1.00	1.00
Upstream Filter(I)	0.94	0.94	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.9	3.5	27.8	7.1	14.4	15.5
Incr Delay (d2), s/veh	0.9	0.1	2.6	0.5	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	0.8	1.7	0.1	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.7	3.6	30.4	7.6	14.5	16.6
LnGrp LOS	A	A	C	A	B	B
Approach Vol, veh/h	1091			700	137	
Approach Delay, s/veh	4.7			9.4	16.3	
Approach LOS	A			A	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.5	29.5				37.0	23.0
Change Period (Y+Rc), s	4.5	5.3				5.3	4.5
Max Green Setting (Gmax), s	6.5	20.7				31.7	18.5
Max Q Clear Time (g_c+I1), s	3.8	6.2				7.7	5.3
Green Ext Time (p_c), s	0.0	4.5				2.7	0.1

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	56	1019	613	18	9	24
Future Volume (vph)	56	1019	613	18	9	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	120				90	
Link Speed (mph)		40	40		25	
Link Distance (ft)		588	428		597	
Travel Time (s)		10.0	7.3		16.3	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

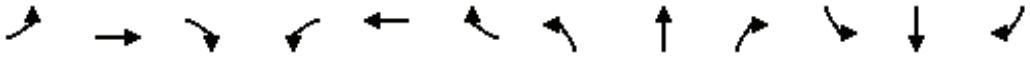
Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	56	1019	613	18	9	24
Future Vol, veh/h	56	1019	613	18	9	24
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	1108	666	20	10	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	691	0	-	0	1251	353
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	570	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	900	-	-	-	195	643
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	497	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	896	-	-	-	180	637
Mov Cap-2 Maneuver	-	-	-	-	288	-
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	495	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	896	-	-	-	479
HCM Lane V/C Ratio	0.068	-	-	-	0.075
HCM Control Delay (s)	9.3	-	-	-	13.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	7	17	1	4	18	11	154	2	30	161	62
Future Volume (vph)	73	7	17	1	4	18	11	154	2	30	161	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

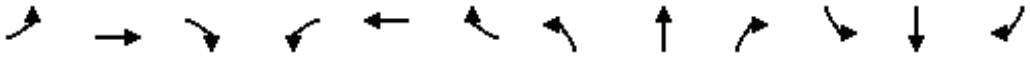
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	7	17	1	4	18	11	154	2	30	161	62
Future Vol, veh/h	73	7	17	1	4	18	11	154	2	30	161	62
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	8	18	1	4	19	12	166	2	32	173	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	7.8	8.9	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	75%	4%	12%
Vol Thru, %	92%	7%	17%	64%
Vol Right, %	1%	18%	78%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	97	23	253
LT Vol	11	73	1	30
Through Vol	154	7	4	161
RT Vol	2	17	18	62
Lane Flow Rate	180	104	25	272
Geometry Grp	1	1	1	1
Degree of Util (X)	0.227	0.145	0.032	0.328
Departure Headway (Hd)	4.554	5.013	4.624	4.335
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	788	714	771	830
Service Time	2.584	3.053	2.671	2.361
HCM Lane V/C Ratio	0.228	0.146	0.032	0.328
HCM Control Delay	8.9	8.9	7.8	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.5	0.1	1.4



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	41	33	15	45	1	87	5	25	1	3	1
Future Volume (vph)	1	41	33	15	45	1	87	5	25	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

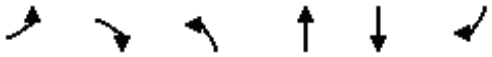
Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	41	33	15	45	1	87	5	25	1	3	1
Future Vol, veh/h	1	41	33	15	45	1	87	5	25	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	47	38	17	51	1	99	6	28	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	52	0	0	85	0	0	156	154	66	171	173	52
Stage 1	-	-	-	-	-	-	68	68	-	86	86	-
Stage 2	-	-	-	-	-	-	88	86	-	85	87	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1554	-	-	1512	-	-	810	738	998	792	720	1016
Stage 1	-	-	-	-	-	-	942	838	-	922	824	-
Stage 2	-	-	-	-	-	-	920	824	-	923	823	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1554	-	-	1512	-	-	798	728	998	757	711	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	798	728	-	757	711	-
Stage 1	-	-	-	-	-	-	941	837	-	921	814	-
Stage 2	-	-	-	-	-	-	904	814	-	890	822	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.8	10.2	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	830	1554	-	-	1512	-	-	766
HCM Lane V/C Ratio	0.16	0.001	-	-	0.011	-	-	0.007
HCM Control Delay (s)	10.2	7.3	0	-	7.4	0	-	9.7
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	39	45	38	8	8
Future Volume (vph)	6	39	45	38	8	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

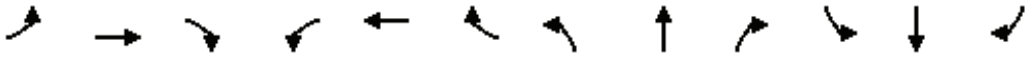
Intersection	
Int Delay, s/veh	5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	39	45	38	8	8
Future Vol, veh/h	6	39	45	38	8	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	49	56	48	10	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	175	15	20	0	-	0
Stage 1	15	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	815	1065	1596	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	786	1065	1596	-	-	-
Mov Cap-2 Maneuver	786	-	-	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1596	-	1017	-	-
HCM Lane V/C Ratio	0.035	-	0.055	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	61	73	12	44	1	70	13	25	1	3	9
Future Volume (vph)	13	61	73	12	44	1	70	13	25	1	3	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1291			669			448			292	
Travel Time (s)		22.0			11.4			12.2			8.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

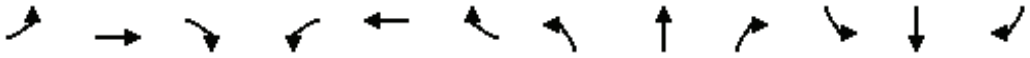
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	61	73	12	44	1	70	13	25	1	3	9
Future Vol, veh/h	13	61	73	12	44	1	70	13	25	1	3	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	66	78	13	47	1	75	14	27	1	3	10
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	8.1	8.2	8.2	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	65%	9%	21%	0%	8%
Vol Thru, %	12%	41%	79%	0%	23%
Vol Right, %	23%	50%	0%	100%	69%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	147	56	1	13
LT Vol	70	13	12	0	1
Through Vol	13	61	44	0	3
RT Vol	25	73	0	1	9
Lane Flow Rate	116	158	60	1	14
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.143	0.181	0.085	0.001	0.016
Departure Headway (Hd)	4.436	4.132	5.061	4.25	4.162
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	812	871	711	845	862
Service Time	2.447	2.142	2.772	1.961	2.177
HCM Lane V/C Ratio	0.143	0.181	0.084	0.001	0.016
HCM Control Delay	8.2	8.1	8.2	7	7.2
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.5	0.7	0.3	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	140	52	71	81	1	70	1	59	1	1	1
Future Volume (vph)	1	140	52	71	81	1	70	1	59	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		496			1291			1349			223	
Travel Time (s)		8.5			22.0			36.8			6.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

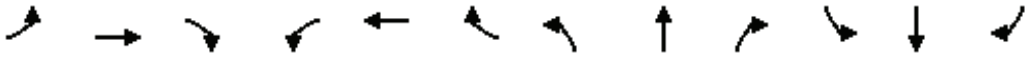
Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	140	52	71	81	1	70	1	59	1	1	1
Future Vol, veh/h	1	140	52	71	81	1	70	1	59	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	151	56	76	87	1	75	1	63	1	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	88	0	0	207	0	0	394	393	151	453	449	88
Stage 1	-	-	-	-	-	-	153	153	-	240	240	-
Stage 2	-	-	-	-	-	-	241	240	-	213	209	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1508	-	-	1364	-	-	566	543	895	517	505	970
Stage 1	-	-	-	-	-	-	849	771	-	763	707	-
Stage 2	-	-	-	-	-	-	762	707	-	789	729	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1508	-	-	1364	-	-	539	510	895	458	475	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	539	510	-	458	475	-
Stage 1	-	-	-	-	-	-	848	770	-	762	665	-
Stage 2	-	-	-	-	-	-	715	665	-	731	728	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.6	12	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	657	1508	-	-	1364	-	-	564
HCM Lane V/C Ratio	0.213	0.001	-	-	0.056	-	-	0.006
HCM Control Delay (s)	12	7.4	0	-	7.8	0	-	11.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	49	9	1	73	107	15	30	8	71	39	8
Future Volume (vph)	2	49	9	1	73	107	15	30	8	71	39	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		400			740			1314			1349	
Travel Time (s)		9.1			16.8			35.8			36.8	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	49	9	1	73	107	15	30	8	71	39	8
Future Vol, veh/h	2	49	9	1	73	107	15	30	8	71	39	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	56	10	1	83	122	17	34	9	81	44	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	8.4	8.1	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	3%	1%	60%
Vol Thru, %	57%	82%	40%	33%
Vol Right, %	15%	15%	59%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	60	181	118
LT Vol	15	2	1	71
Through Vol	30	49	73	39
RT Vol	8	9	107	8
Lane Flow Rate	60	68	206	134
Geometry Grp	1	1	1	1
Degree of Util (X)	0.078	0.086	0.236	0.174
Departure Headway (Hd)	4.659	4.536	4.126	4.681
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	769	790	872	767
Service Time	2.69	2.56	2.145	2.709
HCM Lane V/C Ratio	0.078	0.086	0.236	0.175
HCM Control Delay	8.1	8	8.4	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.9	0.6

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023)CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **821**

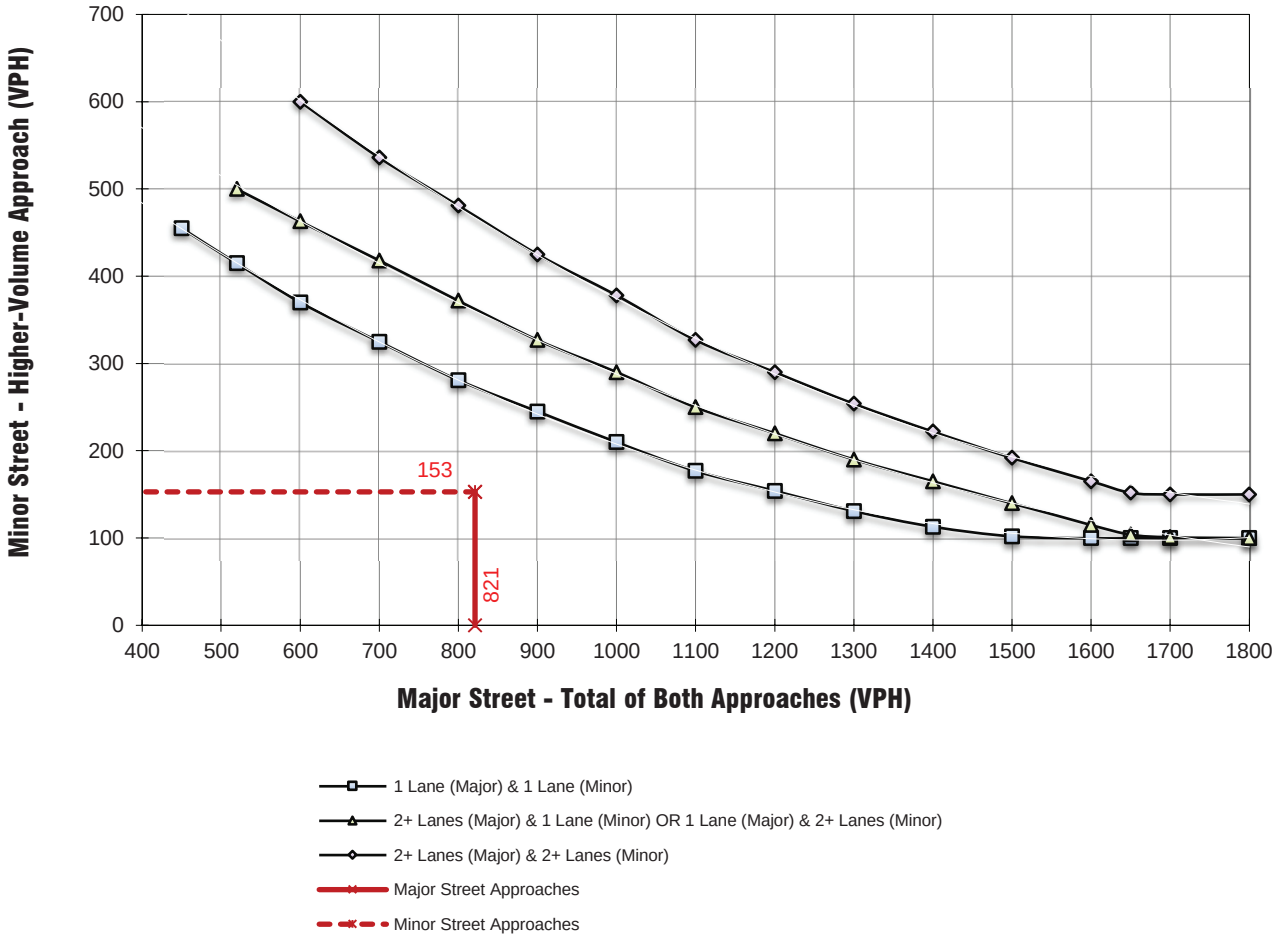
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **153**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023)CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **983**

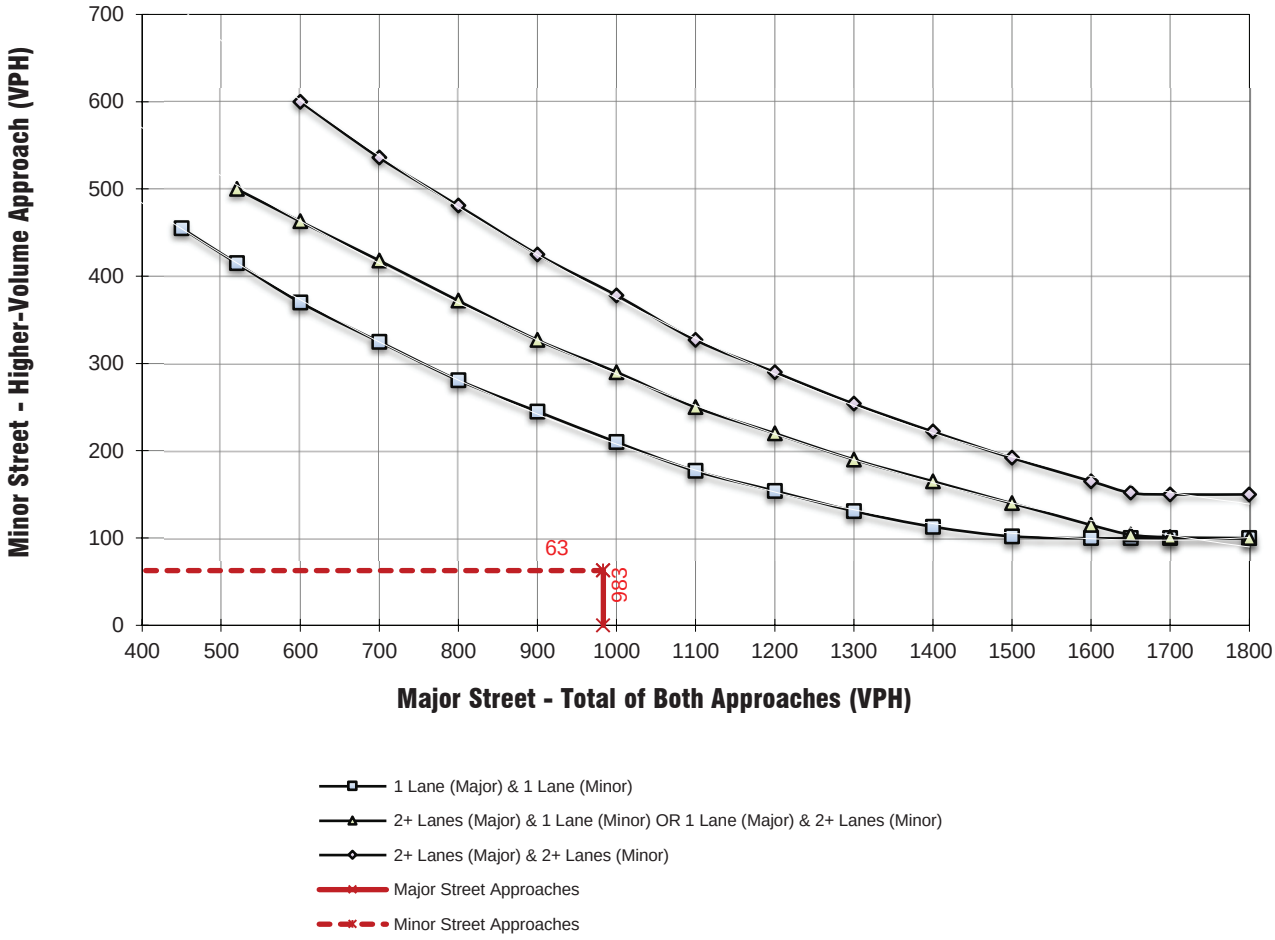
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **63**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1523**

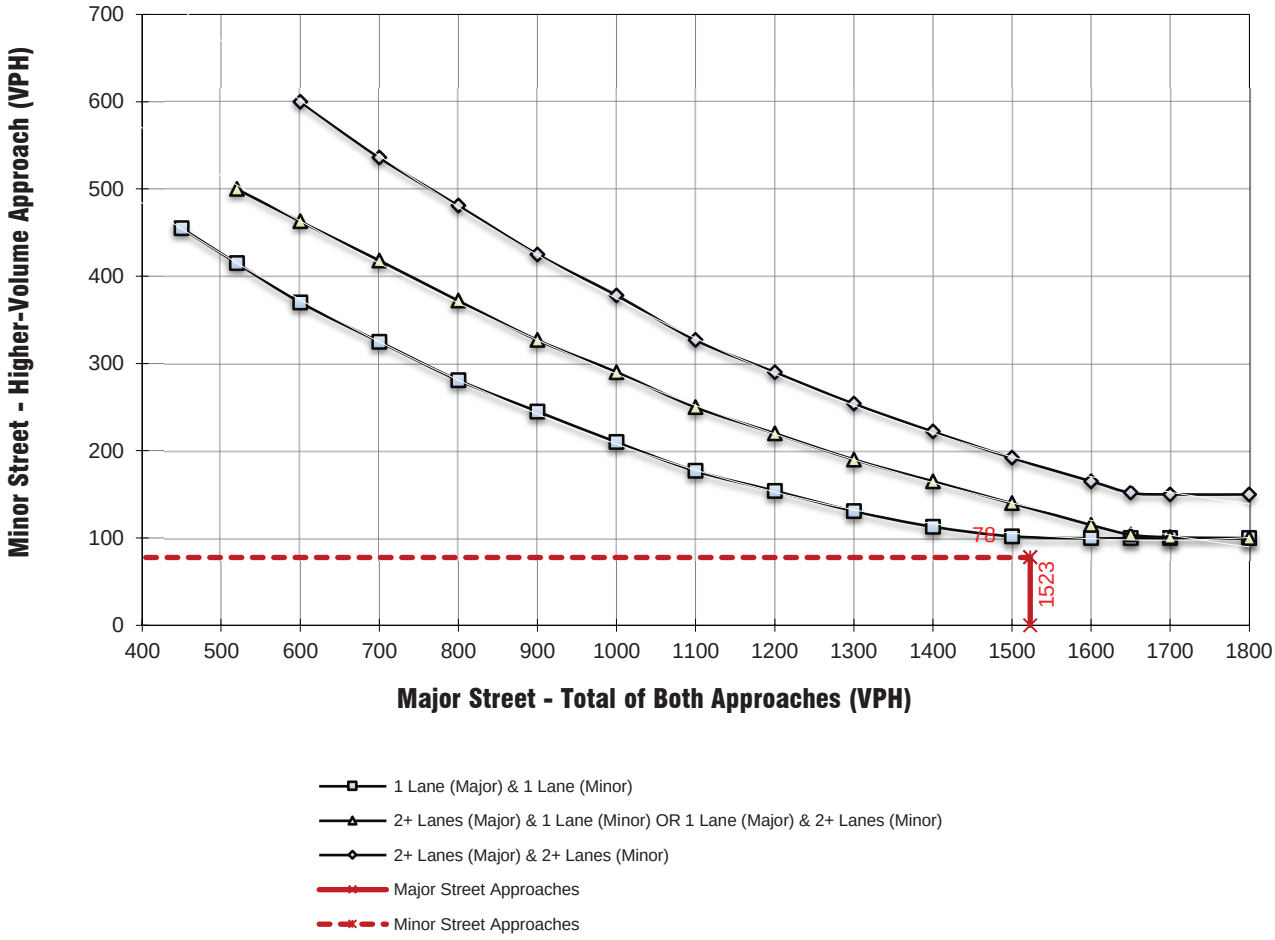
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cherry St.**

High Volume Approach (VPH) = **78**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1765**

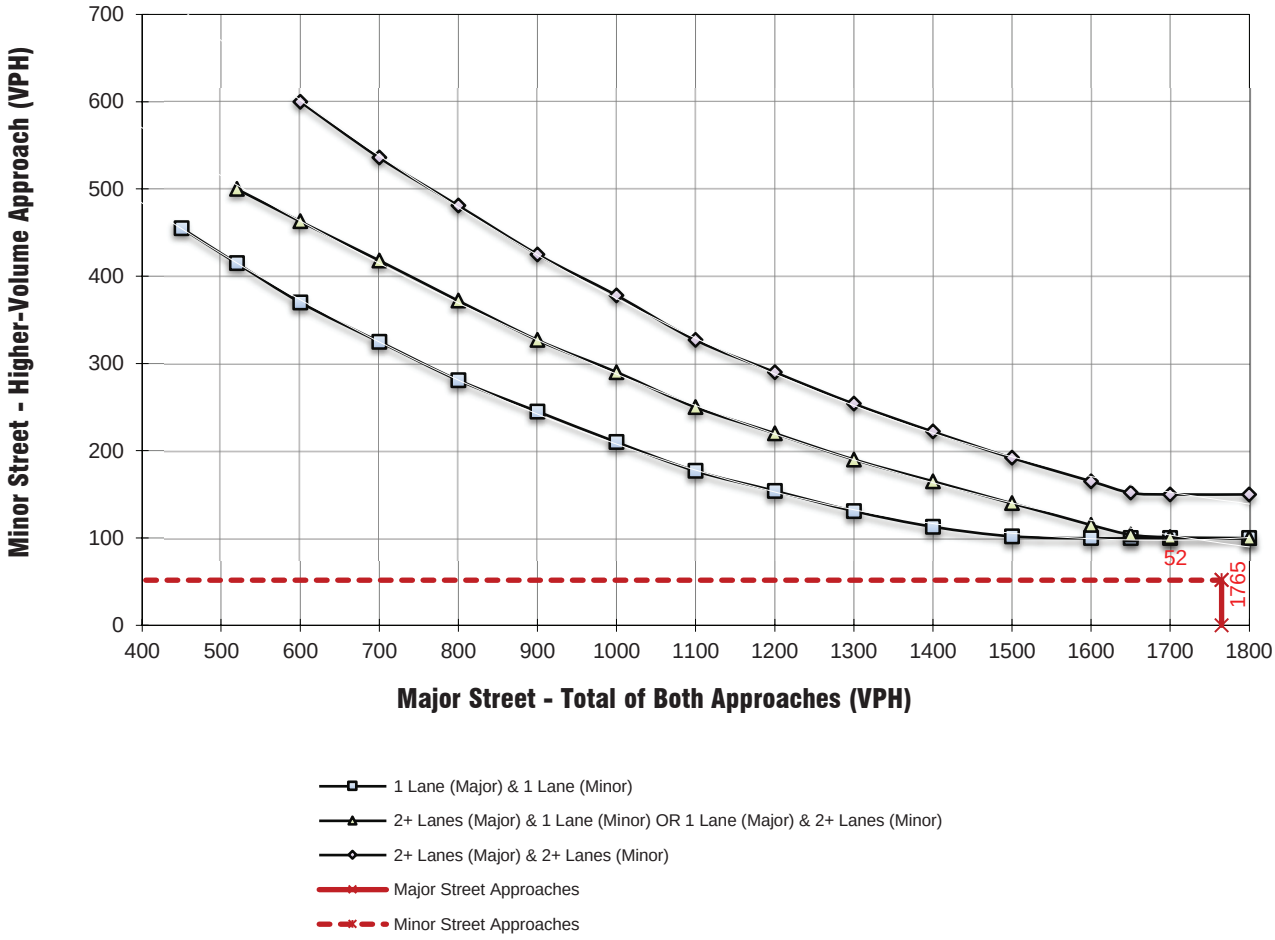
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cherry St.**

High Volume Approach (VPH) = **52**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1455**

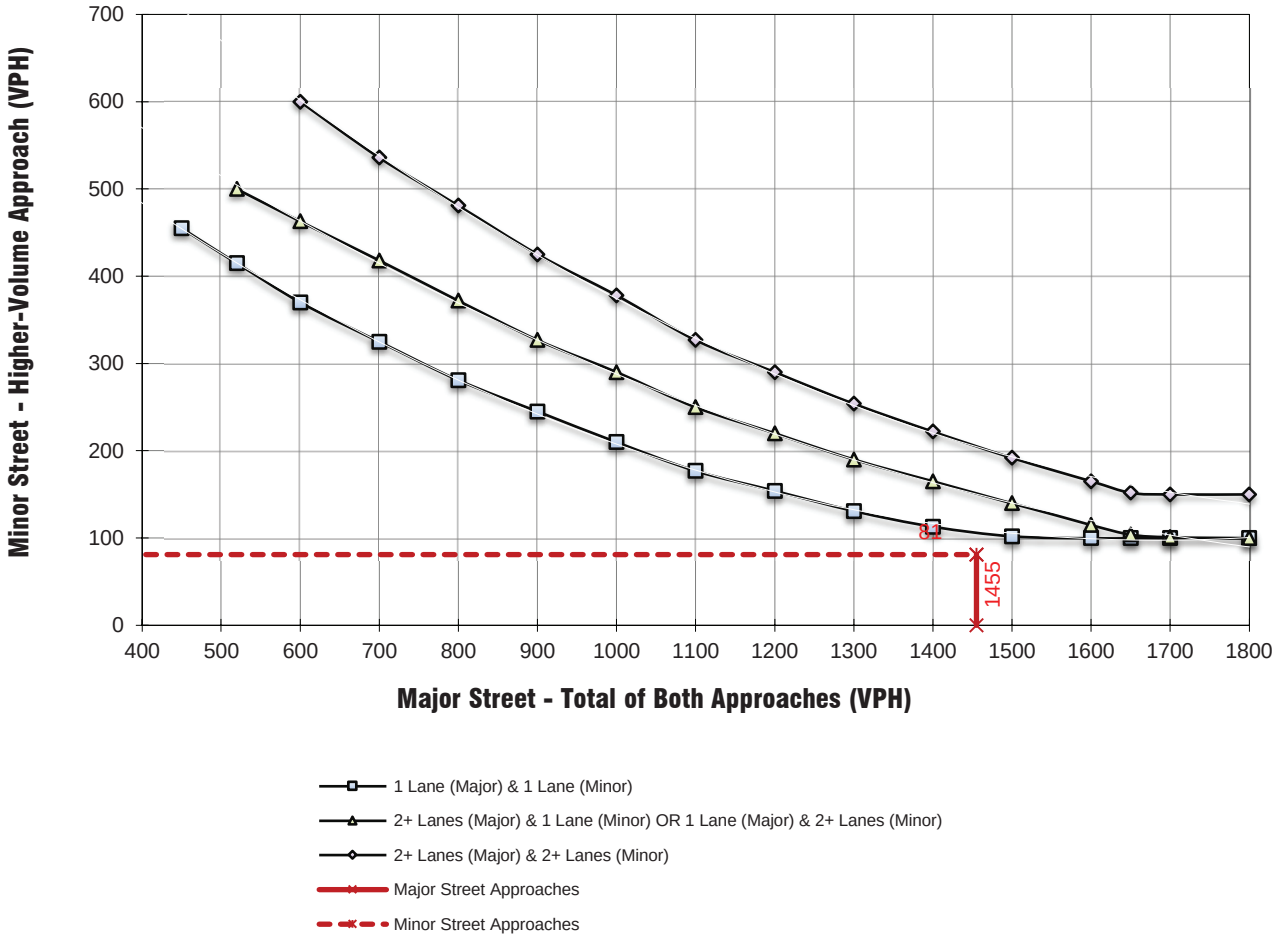
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cyn. Ranch Rd.**

High Volume Approach (VPH) = **81**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1706**

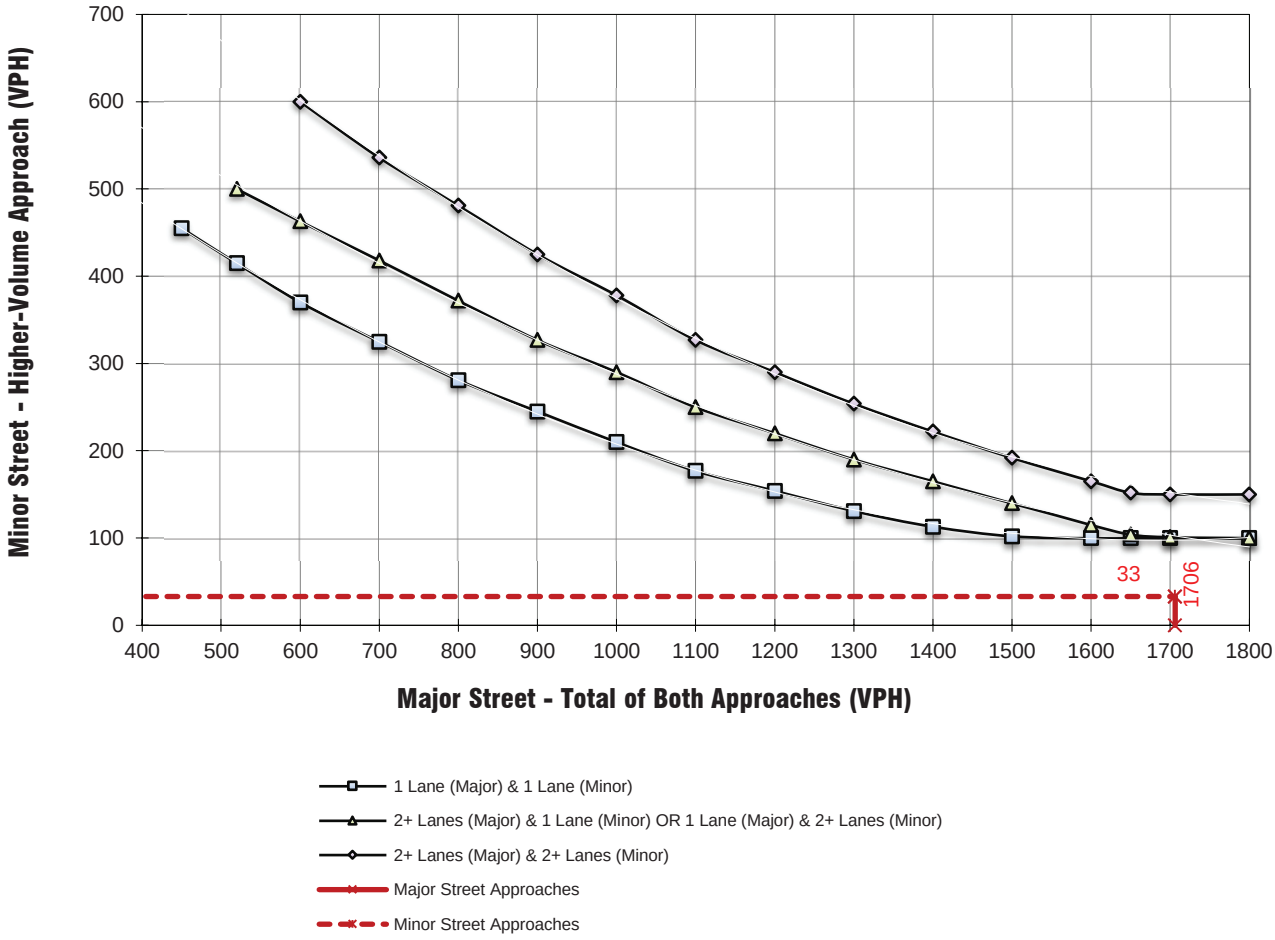
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cyn. Ranch Rd.**

High Volume Approach (VPH) = **33**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Orange St.**

Total of Both Approaches (VPH) = **689**

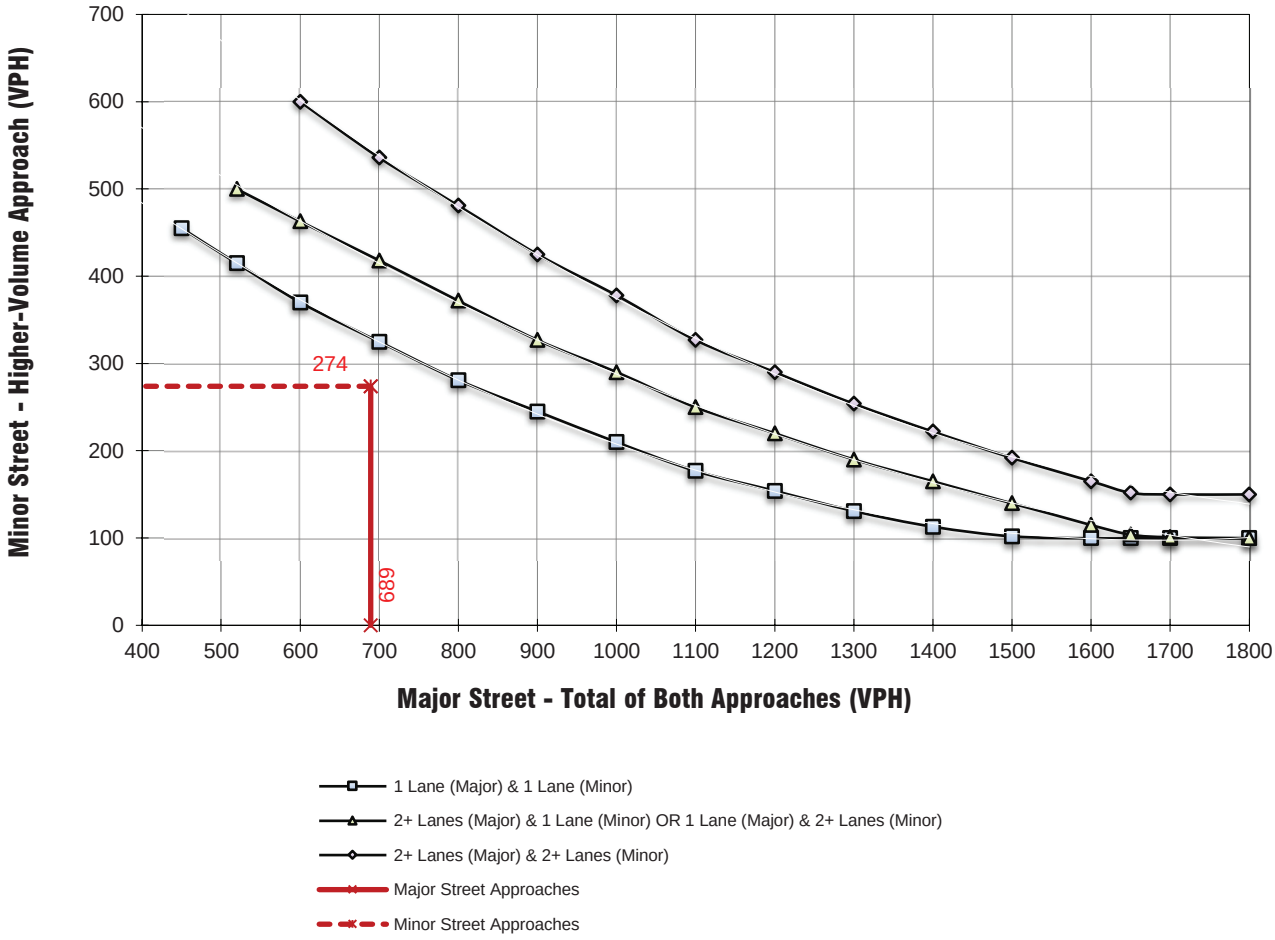
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Canyon Dr.**

High Volume Approach (VPH) = **274**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Orange St.**

Total of Both Approaches (VPH) = **420**

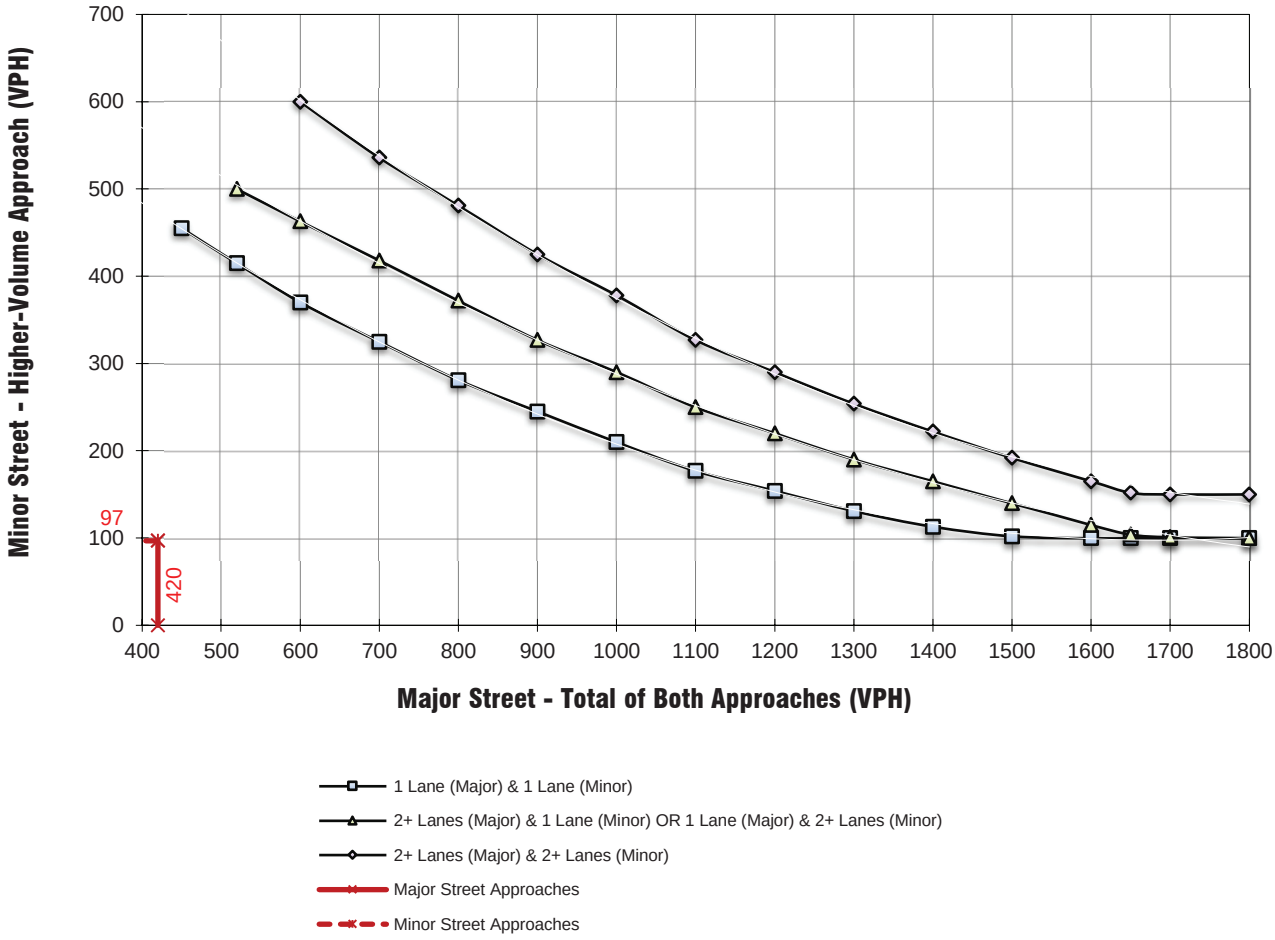
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Canyon Dr.**

High Volume Approach (VPH) = **97**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Cherry St.**

Total of Both Approaches (VPH) = **127**

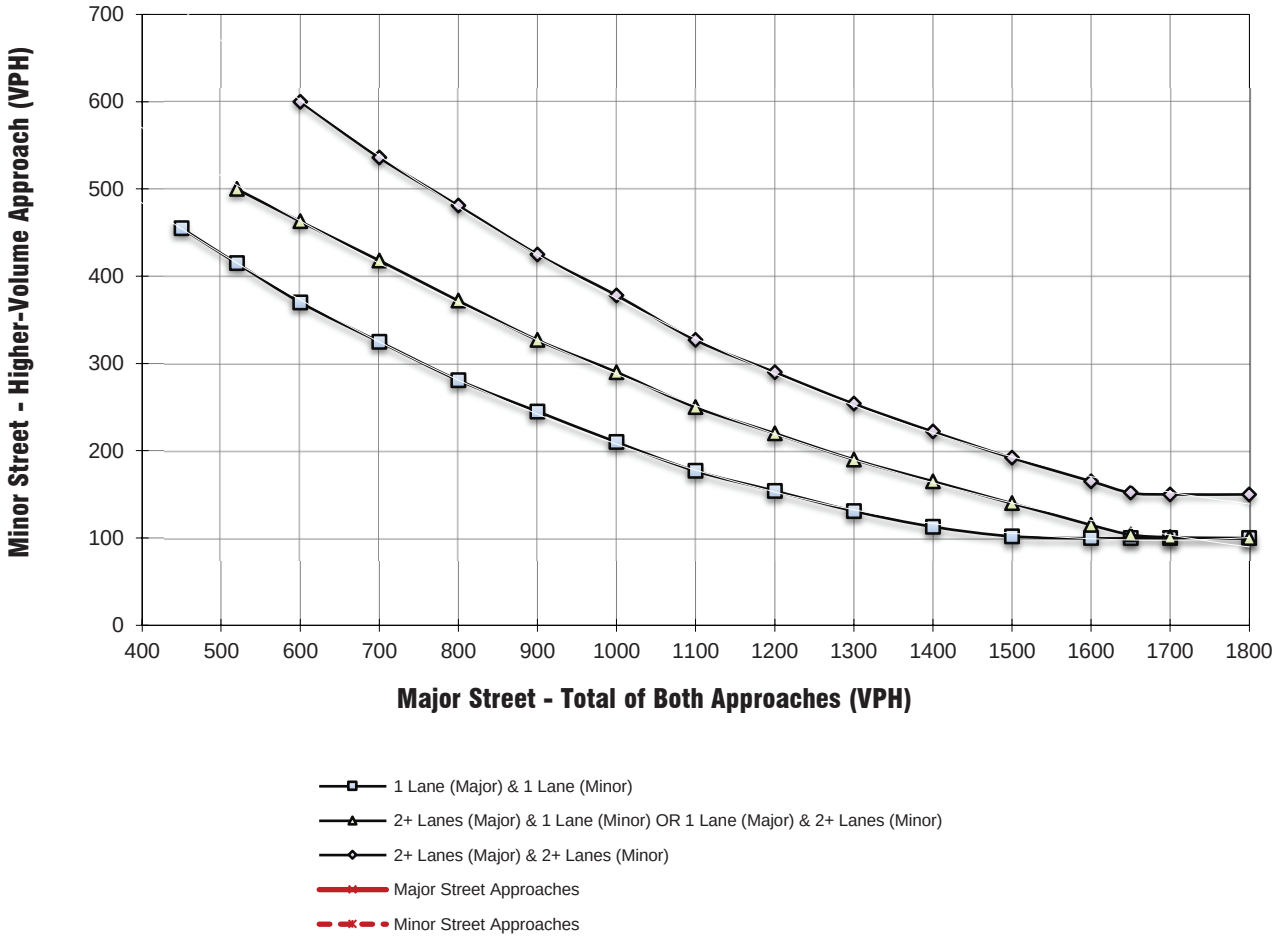
Number of Approach Lanes Major Street = **1**

Minor Street Name = **S. Dwy.**

High Volume Approach (VPH) = **0**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Cherry St.**

Total of Both Approaches (VPH) = **138**

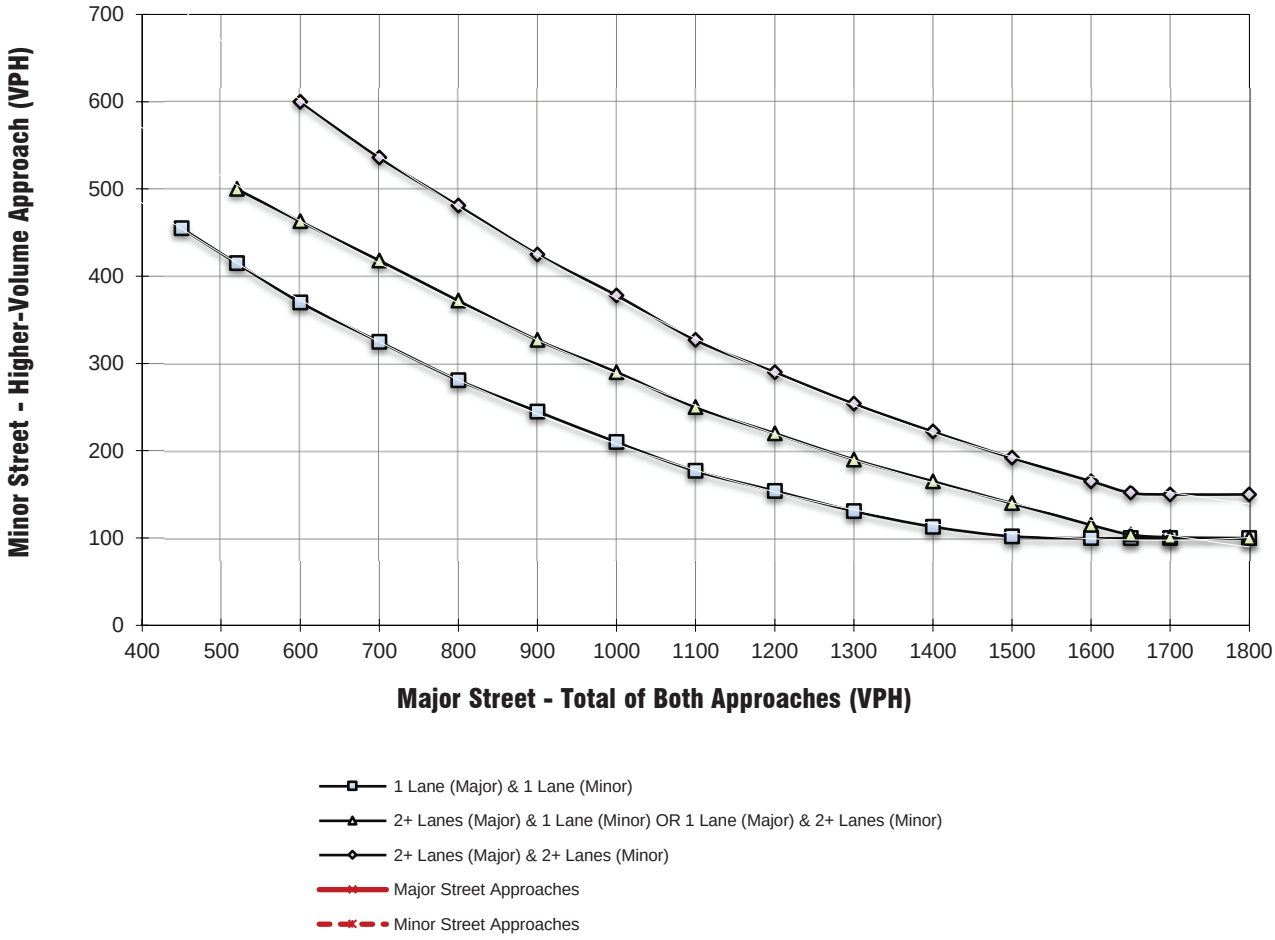
Number of Approach Lanes Major Street = **1**

Minor Street Name = **S. Dwy.**

High Volume Approach (VPH) = **0**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Waite St.**

Total of Both Approaches (VPH) = **232**

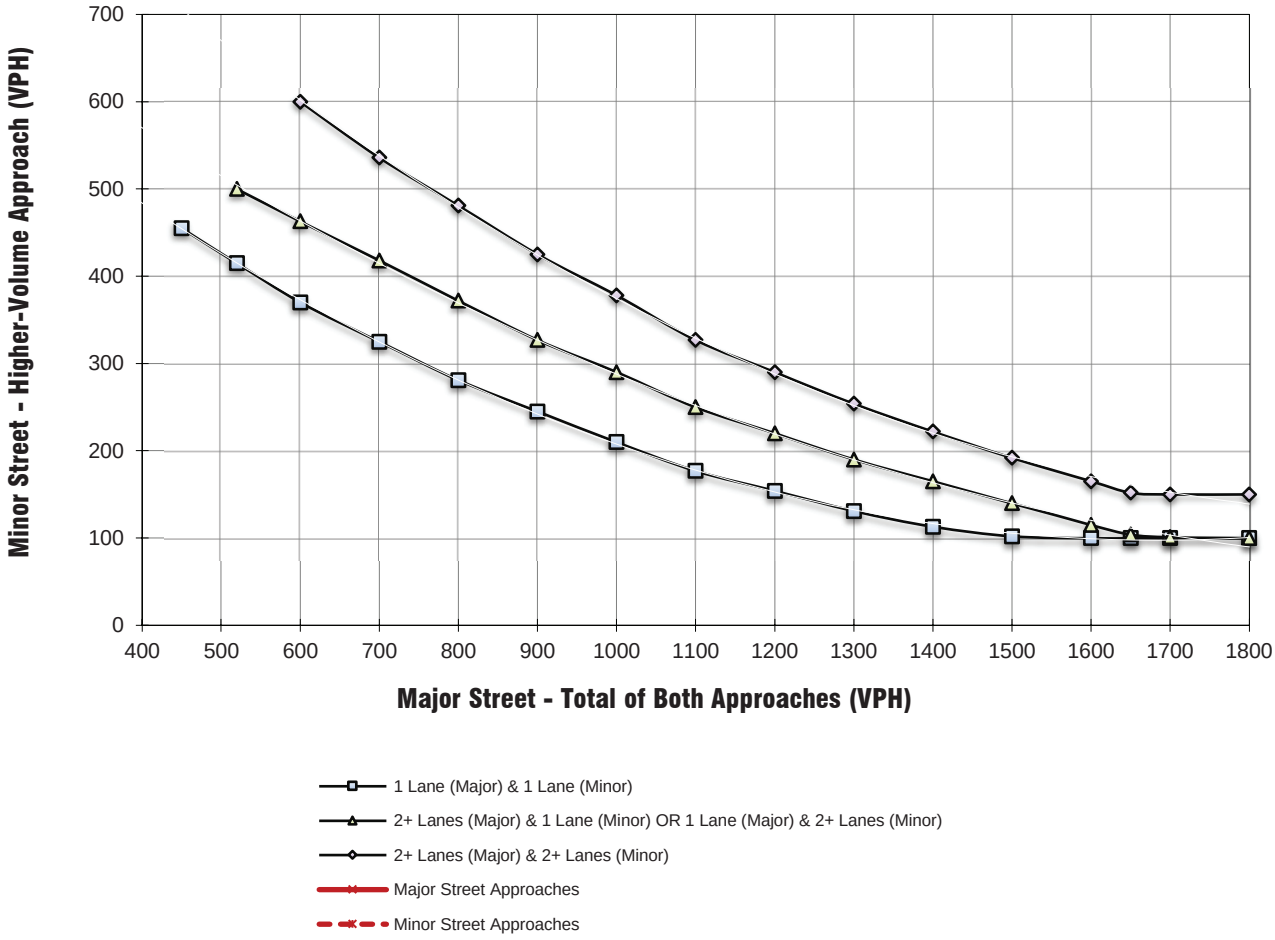
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Cherry St.**

High Volume Approach (VPH) = **21**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Waite St.**

Total of Both Approaches (VPH) = **136**

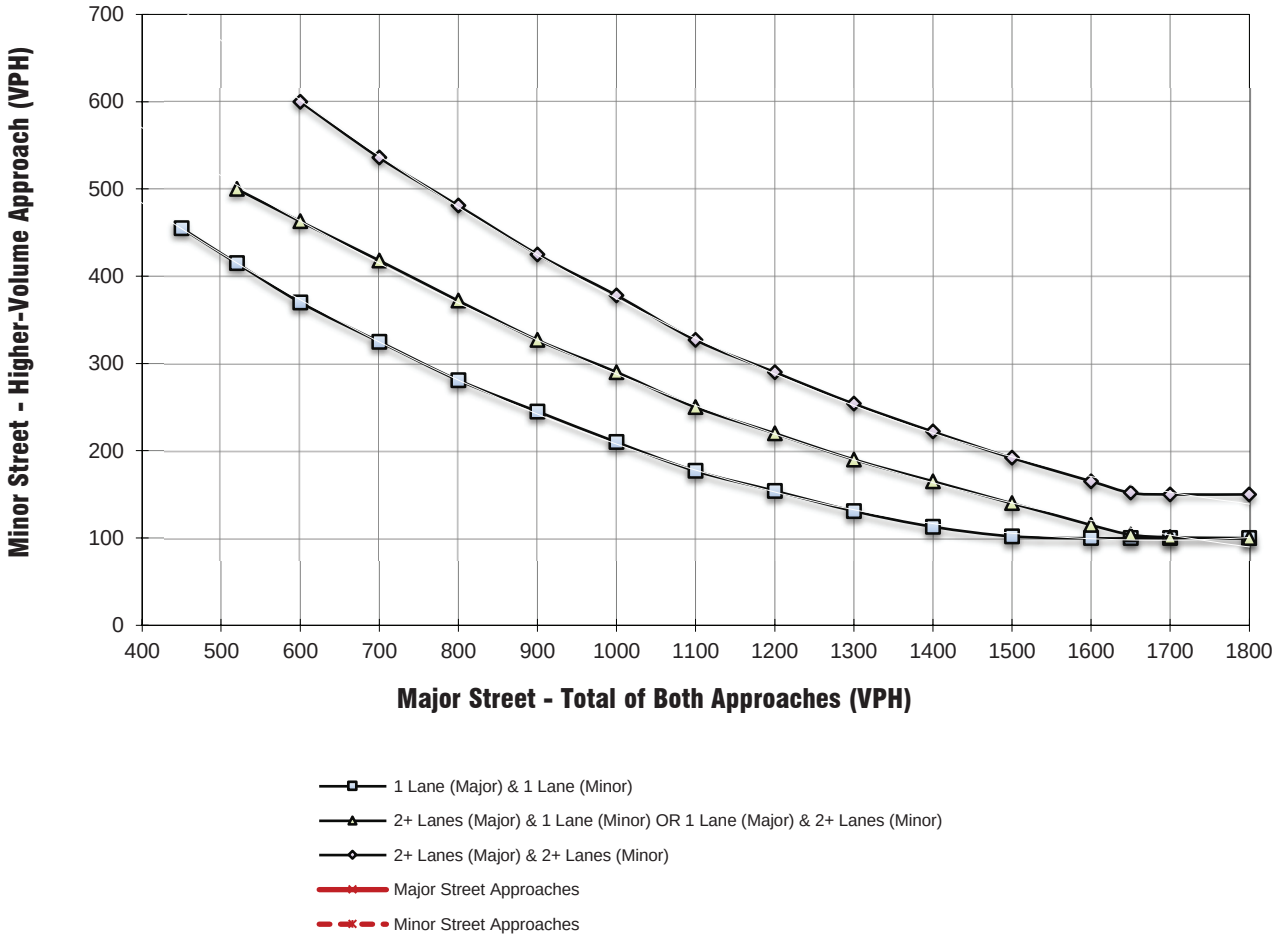
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Cherry St.**

High Volume Approach (VPH) = **117**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Sellers Rd.**

Total of Both Approaches (VPH) = **127**

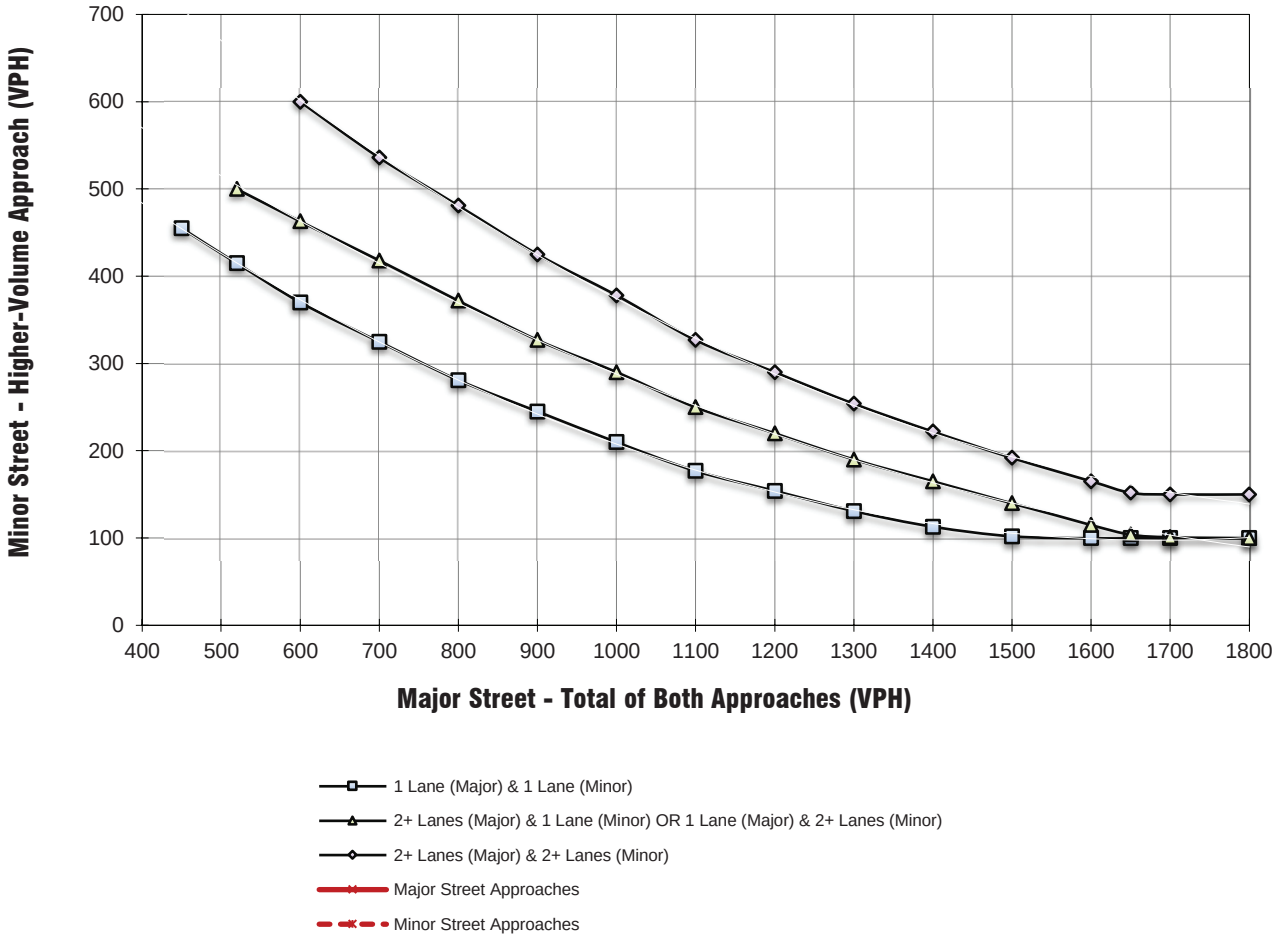
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **81**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Sellers Rd.**

Total of Both Approaches (VPH) = **99**

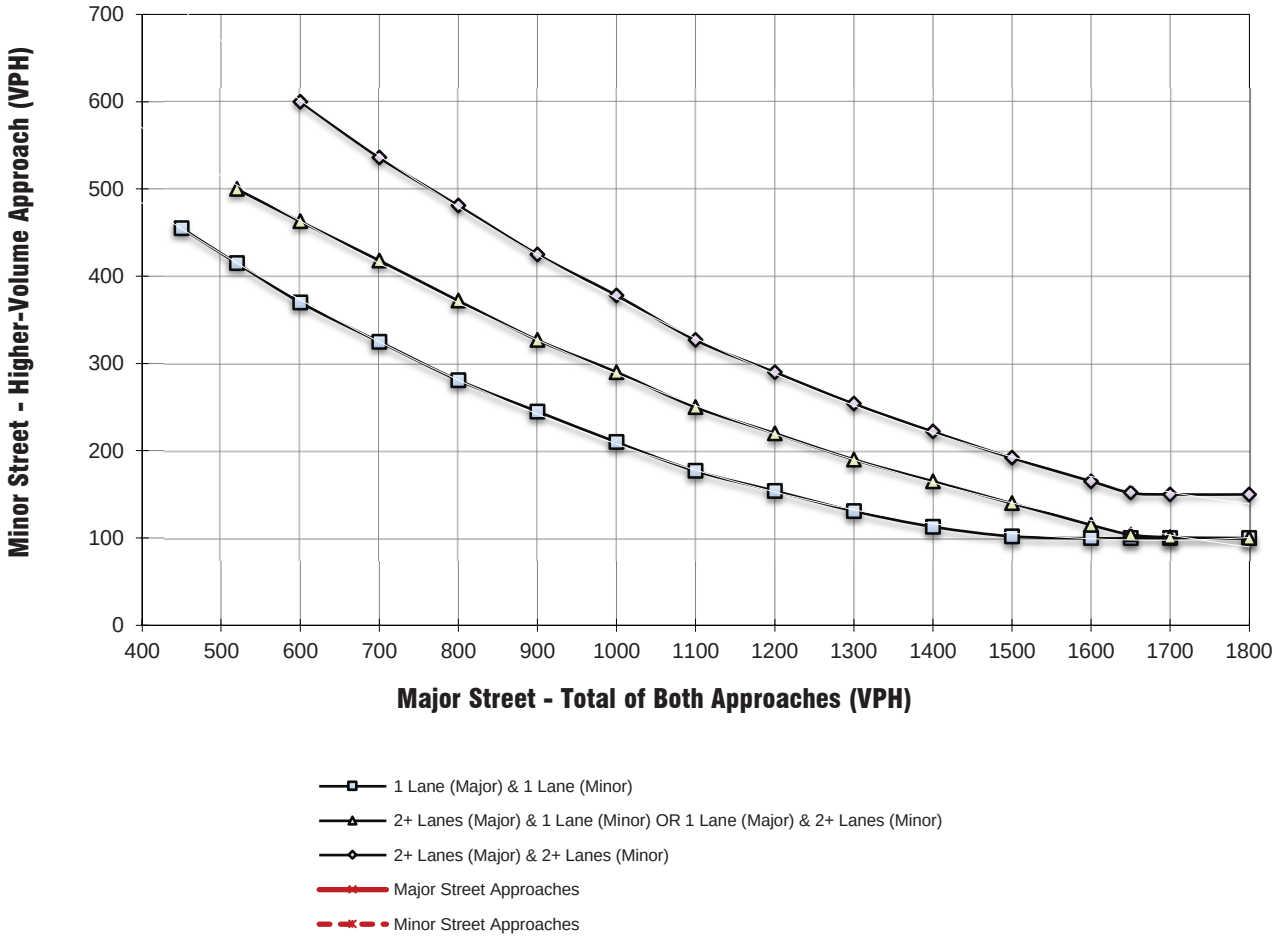
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **45**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **234**

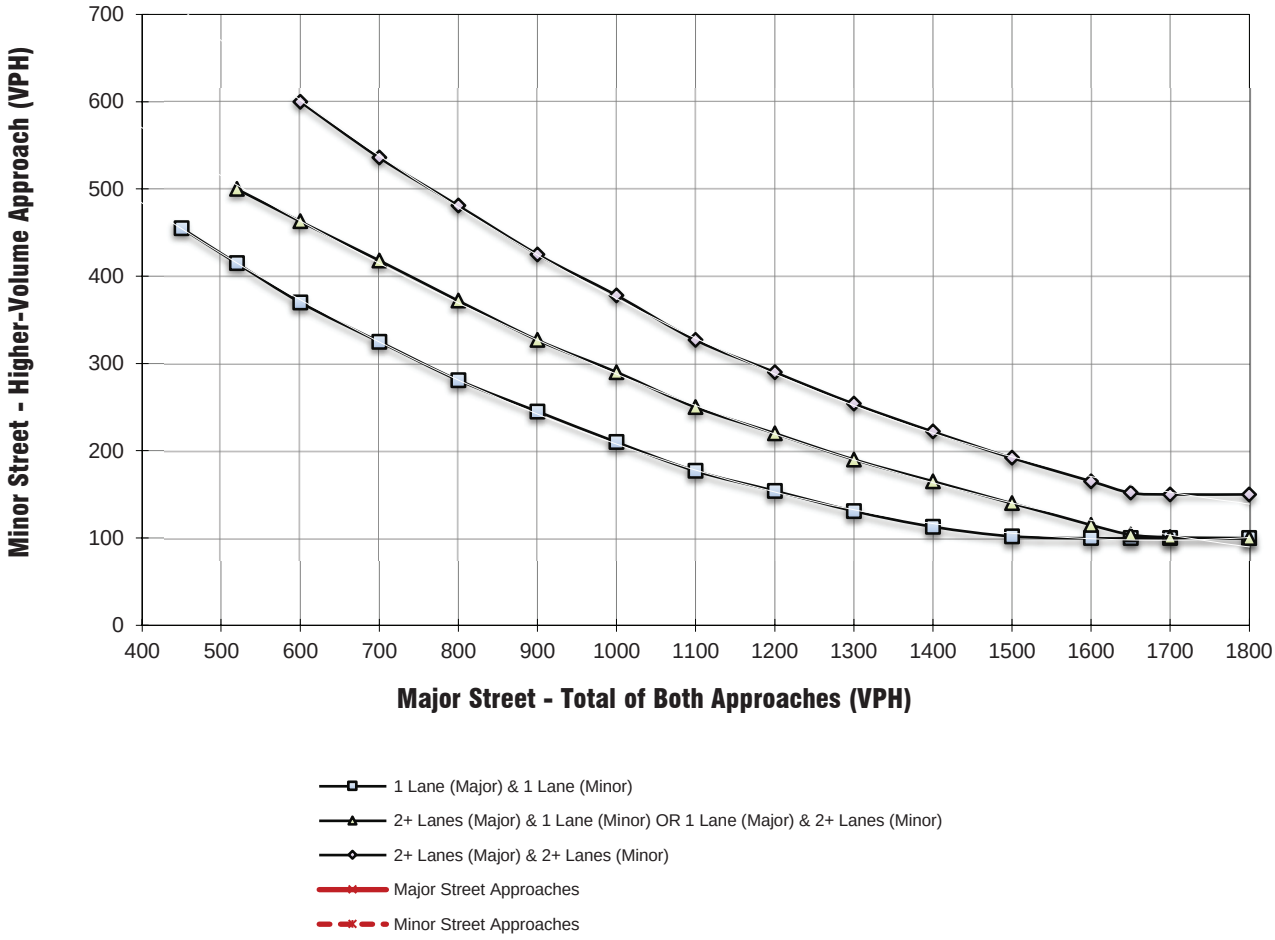
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Orange St.**

High Volume Approach (VPH) = **115**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **204**

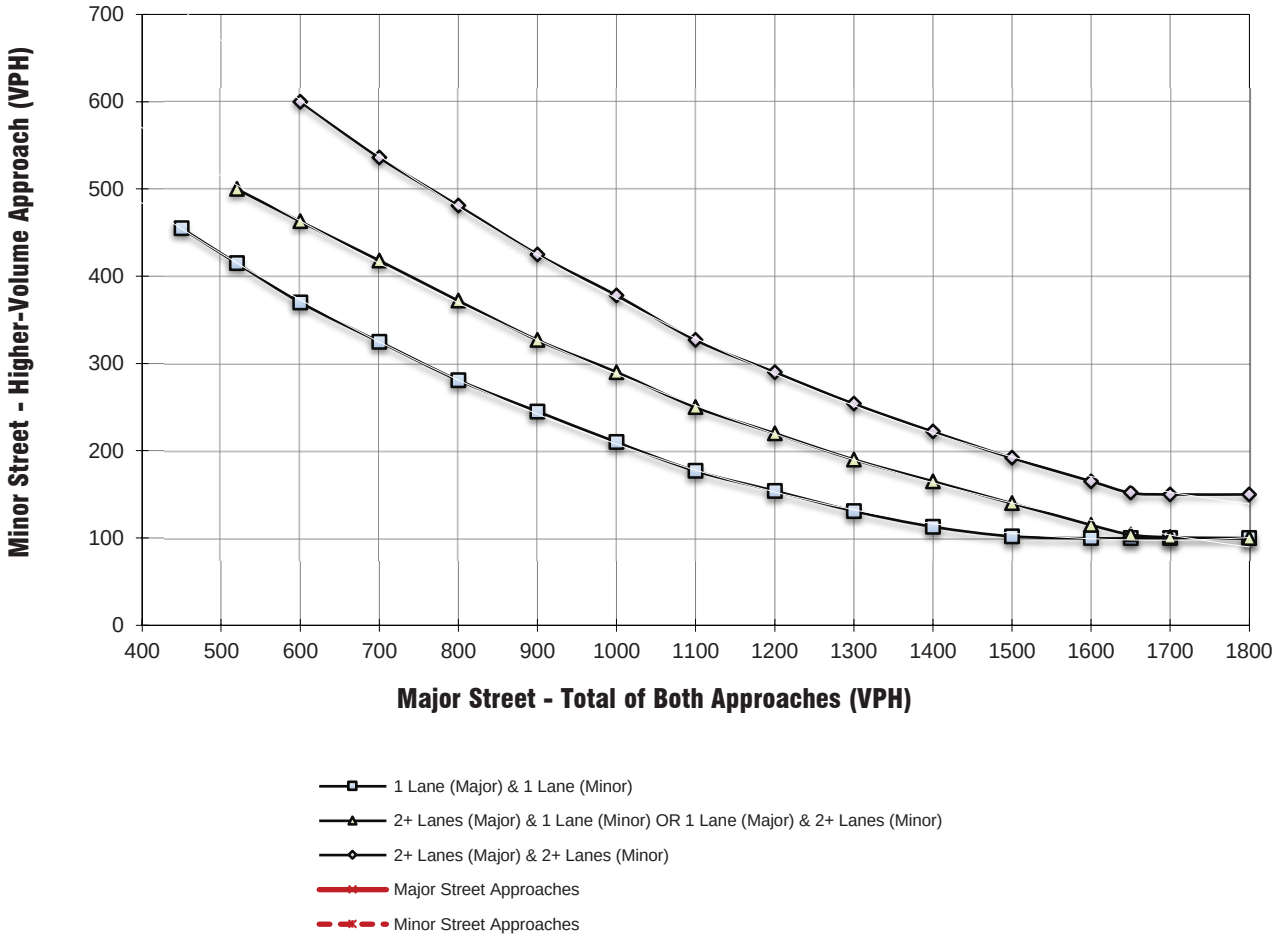
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Orange St.**

High Volume Approach (VPH) = **108**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **423**

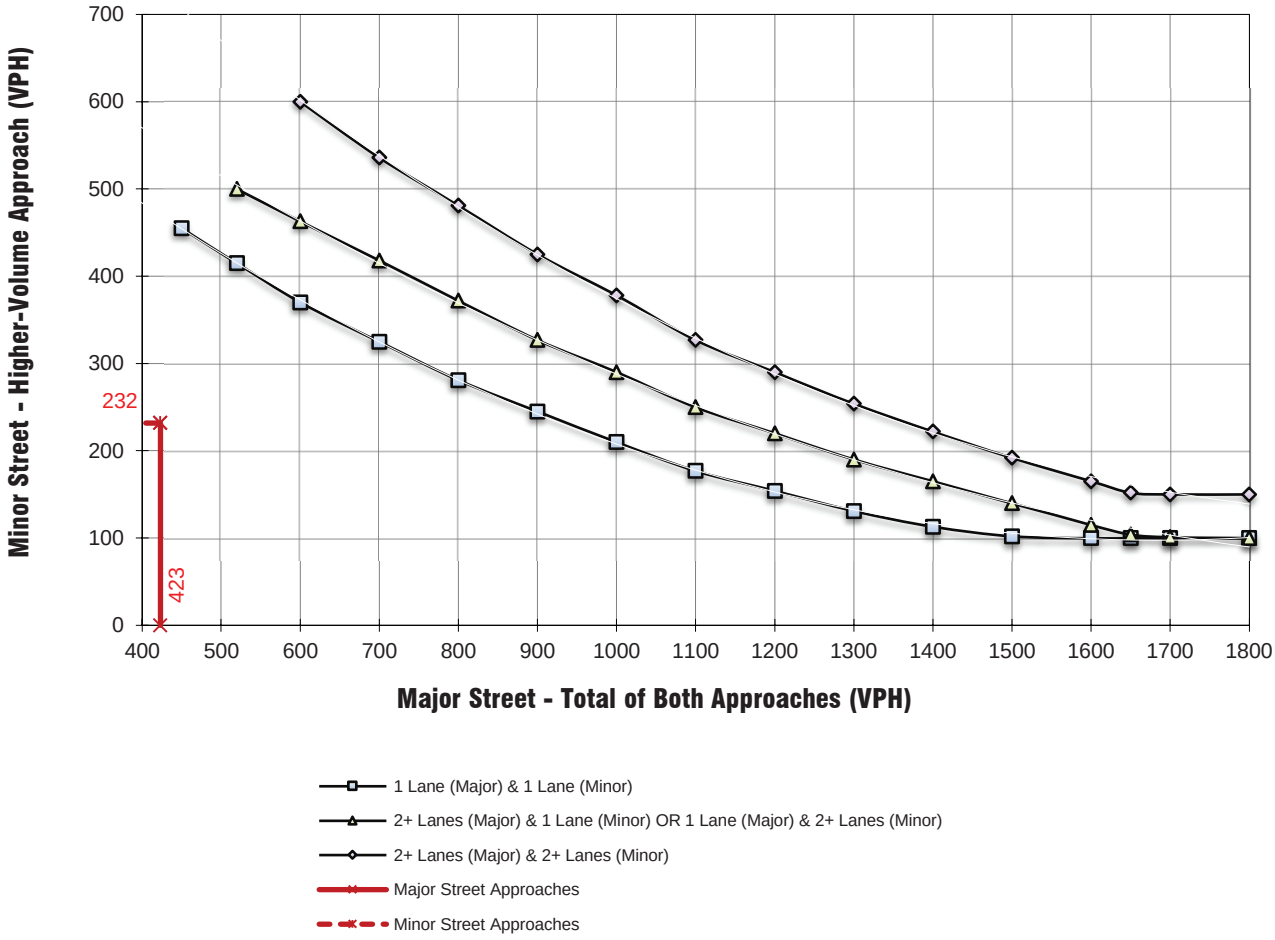
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **232**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **346**

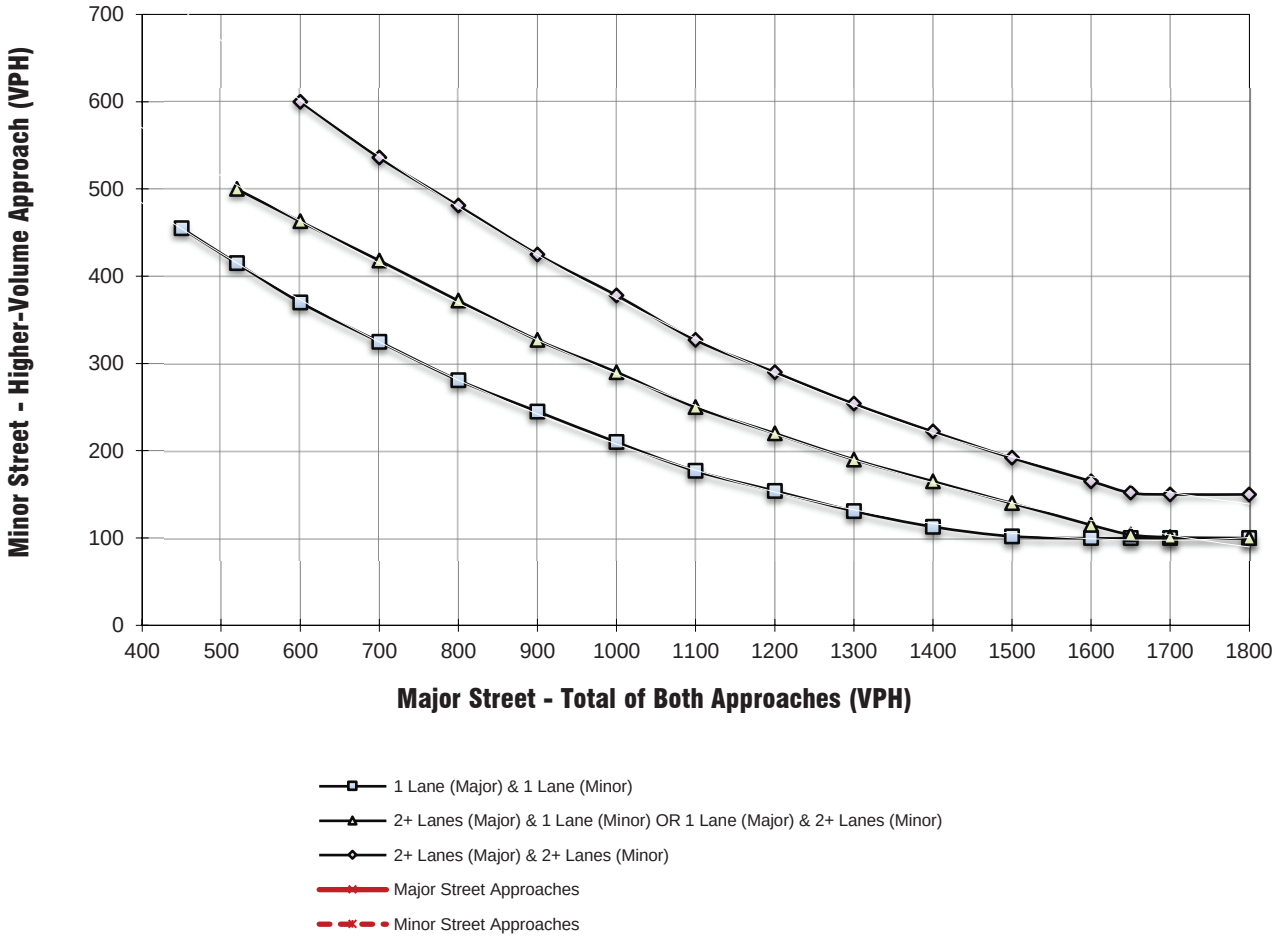
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **130**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (AM Peak Hour)

Major Street Name = **Almond St.**

Total of Both Approaches (VPH) = **351**

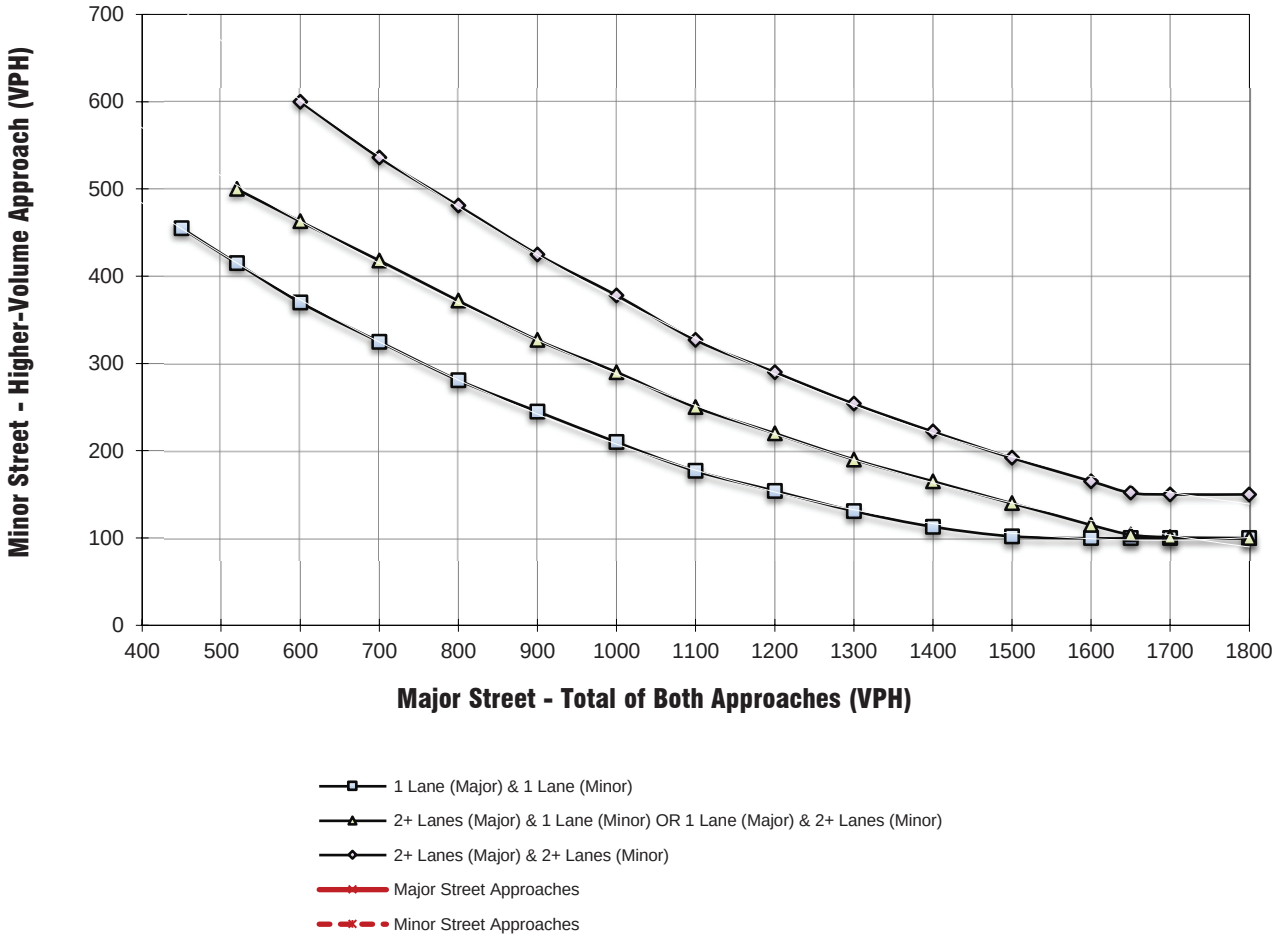
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **165**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EXISTING (2023) CONDITIONS (PM Peak Hour)

Major Street Name = **Waite St.**

Total of Both Approaches (VPH) = **241**

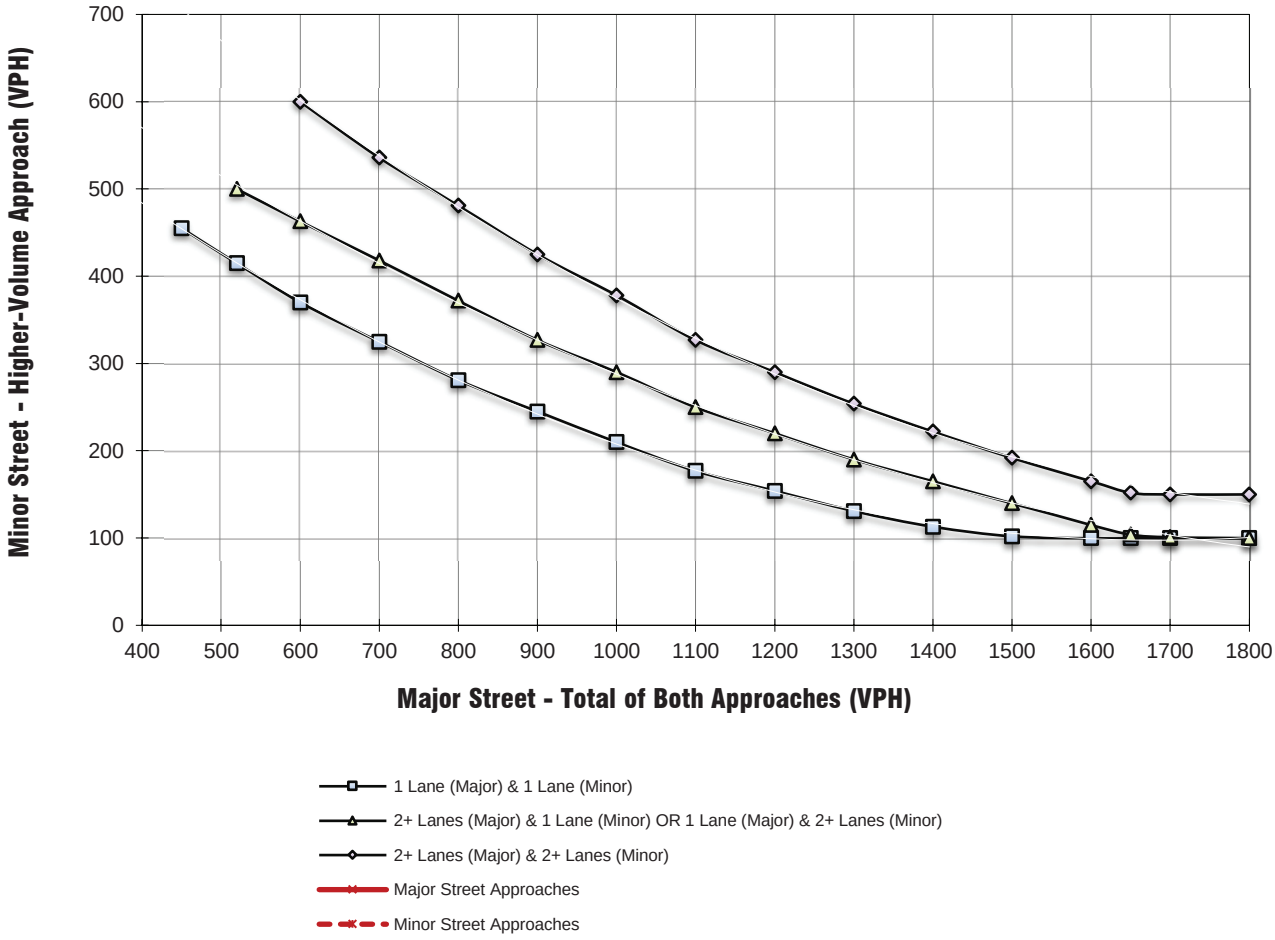
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **118**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

APPENDIX D

EXISTING (2023) CONDITIONS
RAMP JUNCTION ANALYSIS WORKSHEETS

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	Existing (2023)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	230
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3960	532
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4392	590
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.62	0.30

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.416
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1433
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.4
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.623	Outer Lanes Freeway Speed (SO), mi/h	69.6
Flow in Lanes 1 and 2 (v12), pc/h	2959	Ramp Junction Speed (S), mi/h	59.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	24.6
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	27.6

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	Existing (2023)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	400
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3428	861
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3802	955
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.67	0.48

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.384
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1563
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.589	Outer Lanes Freeway Speed (SO), mi/h	61.2
Flow in Lanes 1 and 2 (v12), pc/h	2239	Ramp Junction Speed (S), mi/h	57.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	3194	Average Density (D), pc/mi/ln	27.4
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	27.5

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	Existing (2023)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	160
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2873	470
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3187	521
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.45	0.26

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.410
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	917
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.6
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.656	Outer Lanes Freeway Speed (SO), mi/h	71.3
Flow in Lanes 1 and 2 (v12), pc/h	2270	Ramp Junction Speed (S), mi/h	59.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	17.9
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	22.3

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency		Analysis Year	Existing (2023)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	555
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2403	530
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	2665	588
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.46	0.29

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.311
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1085
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.8
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.593	Outer Lanes Freeway Speed (SO), mi/h	62.9
Flow in Lanes 1 and 2 (v12), pc/h	1580	Ramp Junction Speed (S), mi/h	59.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	2168	Average Density (D), pc/mi/ln	18.3
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	18.7

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	Existing (2023)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	230
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3332	608
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3696	674
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.52	0.34

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.424
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1097
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.637	Outer Lanes Freeway Speed (SO), mi/h	70.9
Flow in Lanes 1 and 2 (v12), pc/h	2599	Ramp Junction Speed (S), mi/h	59.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	20.8
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	24.5

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	Existing (2023)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	400
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2724	471
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3021	522
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.50	0.26

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.328
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1242
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.5
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.589	Outer Lanes Freeway Speed (SO), mi/h	62.3
Flow in Lanes 1 and 2 (v12), pc/h	1779	Ramp Junction Speed (S), mi/h	59.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	2301	Average Density (D), pc/mi/ln	20.0
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	20.7

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	Existing (2023)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	160
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3688	797
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4091	884
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.58	0.44

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.443
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1228
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	54.8
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.617	Outer Lanes Freeway Speed (SO), mi/h	70.4
Flow in Lanes 1 and 2 (v12), pc/h	2863	Ramp Junction Speed (S), mi/h	58.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	23.2
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	27.4

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	12/18/19
Agency	Trames Solutions, Inc.	Analysis Year	Existing (2023)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	555
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2891	361
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3207	400
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.51	0.20

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.316
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1305
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.7
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.593	Outer Lanes Freeway Speed (SO), mi/h	62.1
Flow in Lanes 1 and 2 (v12), pc/h	1902	Ramp Junction Speed (S), mi/h	59.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	2302	Average Density (D), pc/mi/ln	20.3
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	19.8

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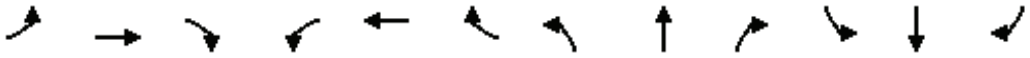


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	390	29	62	314	40	23	32	65	80	34	39
Future Volume (vph)	21	390	29	62	314	40	23	32	65	80	34	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	0		0	0		0
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		289			1348			206			1314	
Travel Time (s)		5.6			26.3			5.6			35.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	390	29	62	314	40	23	32	65	80	34	39
Future Vol, veh/h	21	390	29	62	314	40	23	32	65	80	34	39
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	476	35	76	383	49	28	39	79	98	41	48
Number of Lanes	0	2	1	0	2	1	0	1	0	0	1	0

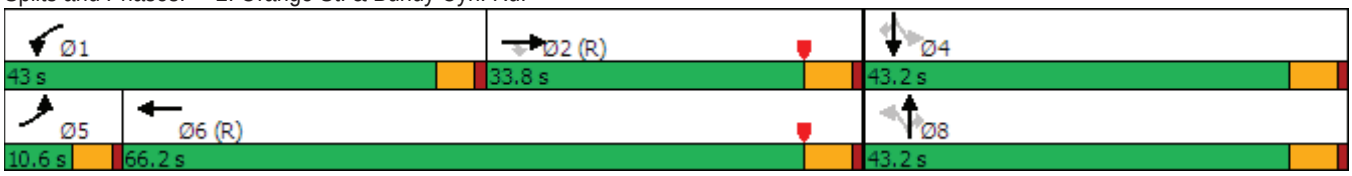
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	16.2	14.4	13.4	15.4
HCM LOS	C	B	B	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	19%	14%	0%	0%	37%	0%	0%	52%
Vol Thru, %	27%	86%	100%	0%	63%	100%	0%	22%
Vol Right, %	54%	0%	0%	100%	0%	0%	100%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	151	260	29	167	209	40	153
LT Vol	23	21	0	0	62	0	0	80
Through Vol	32	130	260	0	105	209	0	34
RT Vol	65	0	0	29	0	0	40	39
Lane Flow Rate	146	184	317	35	203	255	49	187
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.303	0.348	0.592	0.059	0.393	0.48	0.082	0.397
Departure Headway (Hd)	7.448	6.797	6.726	6.008	6.961	6.77	6.052	7.669
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	483	528	536	596	516	534	592	470
Service Time	5.191	4.537	4.465	3.747	4.701	4.51	3.792	5.411
HCM Lane V/C Ratio	0.302	0.348	0.591	0.059	0.393	0.478	0.083	0.398
HCM Control Delay	13.4	13.1	18.8	9.1	14.2	15.6	9.3	15.4
HCM Lane LOS	B	B	C	A	B	C	A	C
HCM 95th-tile Q	1.3	1.5	3.8	0.2	1.9	2.6	0.3	1.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	473	23	338	399	80	9	56	391	197	45	7
Future Volume (vph)	24	473	23	338	399	80	9	56	391	197	45	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	0		100	0		100
Storage Lanes	1		1	1		0	0		1	0		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8		8	4		4
Detector Phase	5	2	2	1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3	23.3	23.3	23.3	23.3
Total Split (s)	10.6	33.8	33.8	43.0	66.2		43.2	43.2	43.2	43.2	43.2	43.2
Total Split (%)	8.8%	28.2%	28.2%	35.8%	55.2%		36.0%	36.0%	36.0%	36.0%	36.0%	36.0%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3			5.3	5.3		5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min	Min	Min	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	473	23	338	399	80	9	56	391	197	45	7
Future Volume (veh/h)	24	473	23	338	399	80	9	56	391	197	45	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	520	25	371	438	88	10	62	430	216	49	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	1196	530	395	1576	314	34	182	498	54	0	498
Arrive On Green	0.02	0.34	0.34	0.37	0.89	0.89	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3554	1573	1781	2950	588	0	576	1578	0	0	1578
Grp Volume(v), veh/h	26	520	25	371	263	263	72	0	430	265	0	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1761	576	0	1578	0	0	1578
Q Serve(g_s), s	1.7	13.6	1.3	24.1	2.5	2.6	0.0	0.0	30.8	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.7	13.6	1.3	24.1	2.5	2.6	37.9	0.0	30.8	37.9	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.33	0.14		1.00	0.82		1.00
Lane Grp Cap(c), veh/h	43	1196	530	395	949	941	216	0	498	54	0	498
V/C Ratio(X)	0.60	0.43	0.05	0.94	0.28	0.28	0.33	0.00	0.86	4.87	0.00	0.02
Avail Cap(c_a), veh/h	91	1196	530	571	949	941	216	0	498	54	0	498
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	30.9	26.8	37.0	3.2	3.2	32.1	0.0	38.6	60.0	0.0	28.2
Incr Delay (d2), s/veh	5.0	1.2	0.2	15.5	0.7	0.7	0.3	0.0	13.9	1780.6	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	6.0	0.5	10.7	1.0	1.0	1.5	0.0	13.6	28.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	32.1	27.0	52.6	3.9	3.9	32.4	0.0	52.5	1840.6	0.0	28.2
LnGrp LOS	E	C	C	D	A	A	C	A	D	F	A	C
Approach Vol, veh/h		571			897			502			273	
Approach Delay, s/veh		33.3			24.0			49.6			1787.5	
Approach LOS		C			C			D			F	

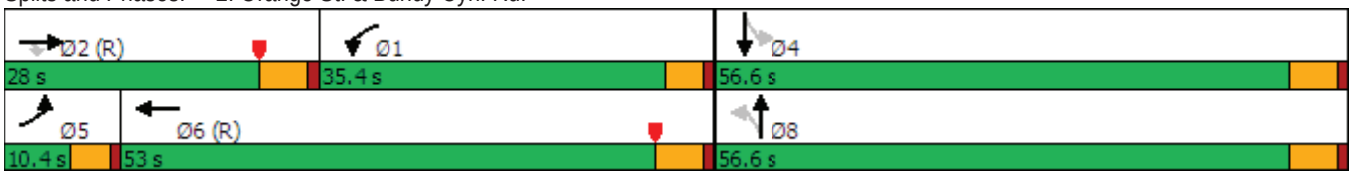
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.1	45.7		43.2	7.4	69.4		43.2				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	38.5	28.5		37.9	6.1	60.9		37.9				
Max Q Clear Time (g_c+I1), s	26.1	15.6		39.9	3.7	4.6		39.9				
Green Ext Time (p_c), s	0.5	1.9		0.0	0.0	2.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		246.7
HCM 6th LOS		F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	473	23	338	399	80	9	56	391	197	45	7
Future Volume (vph)	24	473	23	338	399	80	9	56	391	197	45	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	100		100	100		100
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3		23.3	23.3	
Total Split (s)	10.4	28.0	28.0	35.4	53.0		56.6	56.6		56.6	56.6	
Total Split (%)	8.7%	23.3%	23.3%	29.5%	44.2%		47.2%	47.2%		47.2%	47.2%	
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3		4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3		5.3	5.3		5.3	5.3	
Lead/Lag	Lead	Lead	Lead	Lag	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	473	23	338	399	80	9	56	391	197	45	7
Future Volume (veh/h)	24	473	23	338	399	80	9	56	391	197	45	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	520	25	371	438	88	10	62	430	216	49	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	43	672	296	447	1246	248	609	87	602	219	670	109
Arrive On Green	0.02	0.19	0.19	0.25	0.42	0.42	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1781	3554	1564	1781	2949	588	1343	203	1408	905	1567	256
Grp Volume(v), veh/h	26	520	25	371	263	263	10	0	492	216	0	57
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1760	1343	0	1611	905	0	1823
Q Serve(g_s), s	1.7	16.7	1.6	23.6	12.0	12.2	0.5	0.0	30.2	21.1	0.0	2.2
Cycle Q Clear(g_c), s	1.7	16.7	1.6	23.6	12.0	12.2	2.7	0.0	30.2	51.3	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.33	1.00		0.87	1.00		0.14
Lane Grp Cap(c), veh/h	43	672	296	447	751	744	609	0	689	219	0	779
V/C Ratio(X)	0.60	0.77	0.08	0.83	0.35	0.35	0.02	0.00	0.71	0.99	0.00	0.07
Avail Cap(c_a), veh/h	88	672	296	459	751	744	609	0	689	219	0	779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	46.2	40.1	42.5	23.5	23.5	21.1	0.0	28.3	52.2	0.0	20.3
Incr Delay (d2), s/veh	5.0	8.4	0.6	10.9	1.2	1.3	0.0	0.0	3.0	56.6	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.1	0.7	11.6	5.2	5.3	0.2	0.0	11.9	10.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	54.7	40.6	53.4	24.7	24.8	21.1	0.0	31.3	108.8	0.0	20.3
LnGrp LOS	E	D	D	D	C	C	C	A	C	F	A	C
Approach Vol, veh/h		571			897			502			273	
Approach Delay, s/veh		54.4			36.6			31.1			90.3	
Approach LOS		D			D			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	35.4	28.0		56.6	7.4	56.0		56.6				
Change Period (Y+Rc), s	5.3	* 5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	30.9	* 23		51.3	5.9	47.7		51.3				
Max Q Clear Time (g_c+I1), s	25.6	18.7		53.3	3.7	14.2		32.2				
Green Ext Time (p_c), s	0.3	0.9		0.0	0.0	2.0		2.2				

Intersection Summary			
HCM 6th Ctrl Delay		46.5	
HCM 6th LOS		D	

Notes

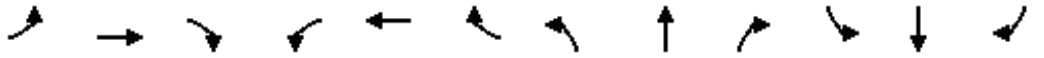
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	535	525	396	609	0	0	0	0	362	7	252
Future Volume (vph)	0	535	525	396	609	0	0	0	0	362	7	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	250		0	0		0	300		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases										4		
Detector Phase		2		1	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		45.0		35.0	45.0					25.0	25.0	
Total Split (s)		46.0		38.0	84.0					36.0	36.0	
Total Split (%)		38.3%		31.7%	70.0%					30.0%	30.0%	
Yellow Time (s)		4.3		3.6	4.3					4.3	4.3	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.3		4.6	5.3					5.3	5.3	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		C-Min		None	C-Min					None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	535	525	396	609	0	0	0	0	362	7	252
Future Volume (veh/h)	0	535	525	396	609	0	0	0	0	362	7	252
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	557	547	412	634	0				377	7	262
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	714	633	431	2423	0				410	9	354
Arrive On Green	0.00	0.80	0.80	0.48	1.00	0.00				0.23	0.23	0.23
Sat Flow, veh/h	0	1870	1575	1781	3647	0				1781	41	1540
Grp Volume(v), veh/h	0	557	547	412	634	0				377	0	269
Grp Sat Flow(s),veh/h/ln	0	1777	1575	1781	1777	0				1781	0	1581
Q Serve(g_s), s	0.0	19.8	26.8	26.7	0.0	0.0				24.8	0.0	18.9
Cycle Q Clear(g_c), s	0.0	19.8	26.8	26.7	0.0	0.0				24.8	0.0	18.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.97
Lane Grp Cap(c), veh/h	0	714	633	431	2423	0				410	0	364
V/C Ratio(X)	0.00	0.78	0.86	0.96	0.26	0.00				0.92	0.00	0.74
Avail Cap(c_a), veh/h	0	714	633	496	2423	0				456	0	405
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.87	0.87	0.68	0.68	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.0	9.7	30.4	0.0	0.0				45.1	0.0	42.9
Incr Delay (d2), s/veh	0.0	7.3	13.0	20.9	0.2	0.0				21.6	0.0	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.9	5.7	10.9	0.1	0.0				13.4	0.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.3	22.7	51.3	0.2	0.0				66.8	0.0	48.0
LnGrp LOS	A	B	C	D	A	A				E	A	D
Approach Vol, veh/h		1104			1046						646	
Approach Delay, s/veh		19.5			20.3						59.0	
Approach LOS		B			C						E	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	33.6	53.5		32.9		87.1						
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3						
Max Green Setting (Gmax), s	33.4	40.7		30.7		78.7						
Max Q Clear Time (g_c+I1), s	28.7	28.8		26.8		2.0						
Green Ext Time (p_c), s	0.3	4.1		0.8		3.0						

Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	217	681	0	0	726	396	279	0	262	0	0	0
Future Volume (vph)	217	681	0	0	726	396	279	0	262	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases							8					
Detector Phase	5	2			6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0		25.0	25.0				
Total Split (s)	28.0	84.0			56.0		36.0	36.0				
Total Split (%)	23.3%	70.0%			46.7%		30.0%	30.0%				
Yellow Time (s)	3.0	4.3			4.3		4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3		5.3	5.3				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None	C-Min			C-Min		None	None				

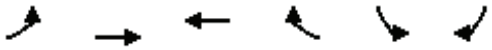
Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	681	0	0	726	396	279	0	262	0	0	0
Future Volume (veh/h)	217	681	0	0	726	396	279	0	262	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	221	695	0	0	741	404	285	0	267			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	245	2559	0	0	1218	662	341	0	301			
Arrive On Green	0.28	1.00	0.00	0.00	0.55	0.55	0.19	0.00	0.19			
Sat Flow, veh/h	1781	3647	0	0	2312	1206	1781	0	1573			
Grp Volume(v), veh/h	221	695	0	0	593	552	285	0	267			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1647	1781	0	1573			
Q Serve(g_s), s	14.3	0.0	0.0	0.0	27.1	27.3	18.5	0.0	19.8			
Cycle Q Clear(g_c), s	14.3	0.0	0.0	0.0	27.1	27.3	18.5	0.0	19.8			
Prop In Lane	1.00		0.00	0.00		0.73	1.00		1.00			
Lane Grp Cap(c), veh/h	245	2559	0	0	976	904	341	0	301			
V/C Ratio(X)	0.90	0.27	0.00	0.00	0.61	0.61	0.84	0.00	0.89			
Avail Cap(c_a), veh/h	356	2559	0	0	976	904	456	0	402			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.44	0.44	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.7	0.0	0.0	0.0	18.3	18.4	46.7	0.0	47.2			
Incr Delay (d2), s/veh	7.6	0.1	0.0	0.0	2.8	3.1	7.5	0.0	13.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.8	0.0	0.0	0.0	11.4	10.7	8.9	0.0	8.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	0.1	0.0	0.0	21.1	21.4	54.2	0.0	61.2			
LnGrp LOS	D	A	A	A	C	C	D	A	E			
Approach Vol, veh/h		916			1145			552				
Approach Delay, s/veh		12.2			21.3			57.6				
Approach LOS		B			C			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.7			20.5	71.2		28.3				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		78.7			24.0	50.7		30.7				
Max Q Clear Time (g_c+I1), s		2.0			16.3	29.3		21.8				
Green Ext Time (p_c), s		3.4			0.2	5.2		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	317	626	799	102	104	323
Future Volume (vph)	317	626	799	102	104	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	48.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	317	626	799	102	104	323
Future Vol, veh/h	317	626	799	102	104	323
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	334	659	841	107	109	340

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	953	0	-	0	1783	431
Stage 1	-	-	-	-	846	-
Stage 2	-	-	-	-	937	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	717	-	-	-	~ 94	573
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	316	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	714	-	-	-	~ 50	568
Mov Cap-2 Maneuver	-	-	-	-	131	-
Stage 1	-	-	-	-	196	-
Stage 2	-	-	-	-	314	-

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	245.2
HCM LOS			F

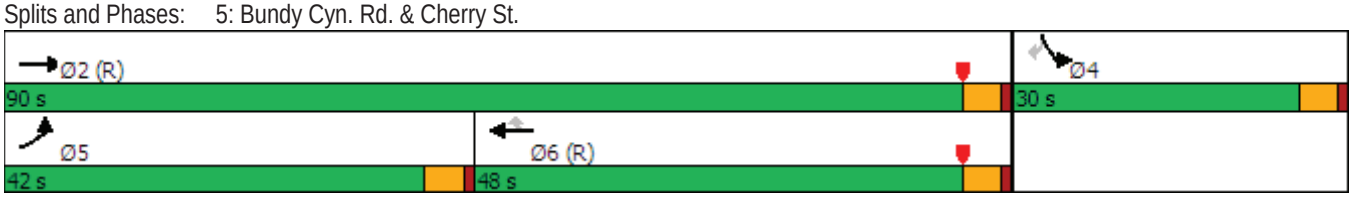
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	714	-	-	-	313
HCM Lane V/C Ratio	0.467	-	-	-	1.436
HCM Control Delay (s)	14.4	-	-	-	245.2
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	2.5	-	-	-	24.1

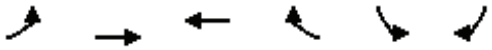
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	317	626	799	102	104	323
Future Volume (vph)	317	626	799	102	104	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				30	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	42.0	90.0	48.0	48.0	30.0	30.0
Total Split (%)	35.0%	75.0%	40.0%	40.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Bundy Cyn. Rd. & Cherry St.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	317	626	799	102	104	323
Future Volume (veh/h)	317	626	799	102	104	323
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	334	659	841	107	109	340
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	360	3638	1680	745	379	337
Arrive On Green	0.40	1.00	0.47	0.47	0.21	0.21
Sat Flow, veh/h	1781	5274	3647	1577	1781	1585
Grp Volume(v), veh/h	334	659	841	107	109	340
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1577	1781	1585
Q Serve(g_s), s	21.4	0.0	19.6	4.6	6.2	25.5
Cycle Q Clear(g_c), s	21.4	0.0	19.6	4.6	6.2	25.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	360	3638	1680	745	379	337
V/C Ratio(X)	0.93	0.18	0.50	0.14	0.29	1.01
Avail Cap(c_a), veh/h	557	3638	1680	745	379	337
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	21.9	17.9	39.6	47.3
Incr Delay (d2), s/veh	15.5	0.1	1.1	0.4	0.4	51.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	0.0	8.2	1.7	2.8	24.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.4	0.1	22.9	18.3	40.0	98.7
LnGrp LOS	D	A	C	B	D	F
Approach Vol, veh/h		993	948		449	
Approach Delay, s/veh		17.0	22.4		84.5	
Approach LOS		B	C		F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		30.0	28.8	61.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		85.5		25.5	37.5	43.5
Max Q Clear Time (g_c+I1), s		2.0		27.5	23.4	21.6
Green Ext Time (p_c), s		5.2		0.0	0.9	6.3

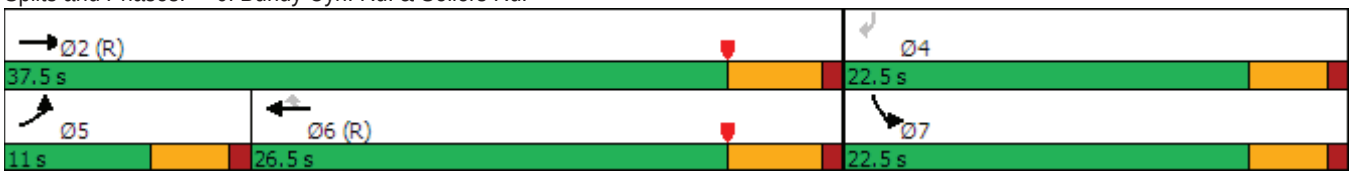
Intersection Summary		
HCM 6th Ctrl Delay		31.8
HCM 6th LOS		C

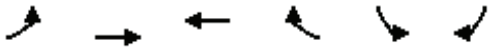
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	70	618	812	26	45	110
Future Volume (vph)	70	618	812	26	45	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	11.0	37.5	26.5	26.5	22.5	22.5
Total Split (%)	18.3%	62.5%	44.2%	44.2%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	618	812	26	45	110
Future Volume (veh/h)	70	618	812	26	45	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	651	855	27	47	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	105	2740	1431	634	534	476
Arrive On Green	0.06	0.54	0.81	0.81	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1575	1781	1585
Grp Volume(v), veh/h	74	651	855	27	47	116
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1575	1781	1585
Q Serve(g_s), s	2.4	4.1	5.4	0.2	1.1	3.3
Cycle Q Clear(g_c), s	2.4	4.1	5.4	0.2	1.1	3.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	105	2740	1431	634	534	476
V/C Ratio(X)	0.70	0.24	0.60	0.04	0.09	0.24
Avail Cap(c_a), veh/h	193	2740	1431	634	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.91	0.91	1.00	1.00
Uniform Delay (d), s/veh	27.7	7.4	4.0	3.5	15.1	15.9
Incr Delay (d2), s/veh	3.2	0.2	1.7	0.1	0.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.2	1.4	0.6	0.5	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.9	7.6	5.7	3.6	15.4	17.1
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		725	882		163	
Approach Delay, s/veh		10.0	5.6		16.6	
Approach LOS		A	A		B	

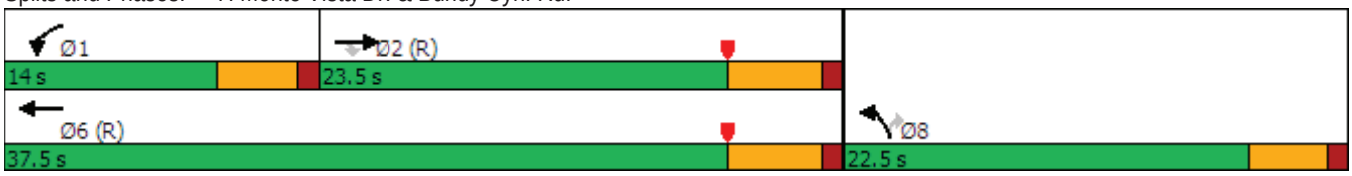
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	8.0	29.5
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	6.5	21.2
Max Q Clear Time (g_c+I1), s		6.1		5.3	4.4	7.4
Green Ext Time (p_c), s		3.0		0.2	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	553	110	170	785	53	77
Future Volume (vph)	553	110	170	785	53	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200	200		100	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			40	55	
Link Distance (ft)	612			588	284	
Travel Time (s)	11.9			10.0	3.5	
Confl. Peds. (#/hr)		5	5		5	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.3	23.3	9.5	22.5	22.5	22.5
Total Split (s)	23.5	23.5	14.0	37.5	22.5	22.5
Total Split (%)	39.2%	39.2%	23.3%	62.5%	37.5%	37.5%
Yellow Time (s)	4.3	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	4.5	5.3	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 7: Monte Vista Dr. & Bundy Cyn. Rd.

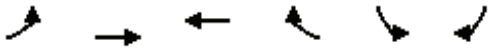




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	553	110	170	785	53	77
Future Volume (veh/h)	553	110	170	785	53	77
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	608	121	187	863	58	85
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1694	522	232	1907	1037	476
Arrive On Green	0.66	0.66	0.13	0.54	0.30	0.30
Sat Flow, veh/h	5274	1573	1781	3647	3456	1585
Grp Volume(v), veh/h	608	121	187	863	58	85
Grp Sat Flow(s),veh/h/ln	1702	1573	1781	1777	1728	1585
Q Serve(g_s), s	3.2	1.8	6.1	8.9	0.7	2.4
Cycle Q Clear(g_c), s	3.2	1.8	6.1	8.9	0.7	2.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1694	522	232	1907	1037	476
V/C Ratio(X)	0.36	0.23	0.81	0.45	0.06	0.18
Avail Cap(c_a), veh/h	1694	522	282	1907	1037	476
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.3	7.1	25.4	8.5	15.0	15.5
Incr Delay (d2), s/veh	0.6	1.0	11.0	0.8	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	3.0	2.7	0.2	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.9	8.1	36.4	9.3	15.1	16.4
LnGrp LOS	A	A	D	A	B	B
Approach Vol, veh/h	729			1050	143	
Approach Delay, s/veh	7.9			14.1	15.8	
Approach LOS	A			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.3	25.2				37.5	22.5
Change Period (Y+Rc), s	4.5	5.3				5.3	4.5
Max Green Setting (Gmax), s	9.5	18.2				32.2	18.0
Max Q Clear Time (g_c+I1), s	8.1	5.2				10.9	4.4
Green Ext Time (p_c), s	0.0	2.5				3.8	0.2

Intersection Summary		
HCM 6th Ctrl Delay		11.9
HCM 6th LOS		B



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	588	868	8	12	87
Future Volume (vph)	43	588	868	8	12	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	120				90	
Link Speed (mph)		40	40		25	
Link Distance (ft)		588	428		597	
Travel Time (s)		10.0	7.3		16.3	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

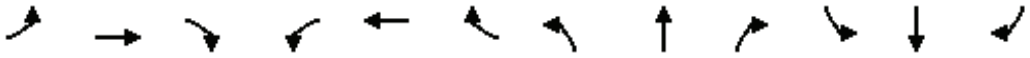
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	43	588	868	8	12	87
Future Vol, veh/h	43	588	868	8	12	87
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	632	933	9	13	94

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	947	0	-	0	1293	481
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	350	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	721	-	-	-	184	531
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	648	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	718	-	-	-	171	526
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	645	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	718	-	-	-	465
HCM Lane V/C Ratio	0.064	-	-	-	0.229
HCM Control Delay (s)	10.4	-	-	-	15
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	2	74	2	9	53	152	188	4	26	118	270
Future Volume (vph)	216	2	74	2	9	53	152	188	4	26	118	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

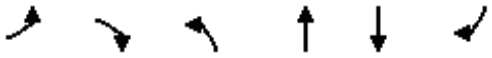
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	27.1
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	216	2	74	2	9	53	152	188	4	26	118	270
Future Vol, veh/h	216	2	74	2	9	53	152	188	4	26	118	270
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	260	2	89	2	11	64	183	227	5	31	142	325
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	23	12	27.4	32.1
HCM LOS	C	B	D	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	74%	3%	6%
Vol Thru, %	55%	1%	14%	29%
Vol Right, %	1%	25%	83%	65%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	344	292	64	414
LT Vol	152	216	2	26
Through Vol	188	2	9	118
RT Vol	4	74	53	270
Lane Flow Rate	414	352	77	499
Geometry Grp	1	1	1	1
Degree of Util (X)	0.756	0.671	0.161	0.831
Departure Headway (Hd)	6.566	6.863	7.531	6.001
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	547	524	479	599
Service Time	4.654	4.95	5.531	4.085
HCM Lane V/C Ratio	0.757	0.672	0.161	0.833
HCM Control Delay	27.4	23	12	32.1
HCM Lane LOS	D	C	B	D
HCM 95th-tile Q	6.6	5	0.6	8.7



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	177	187	65	93	21
Future Volume (vph)	18	177	187	65	93	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

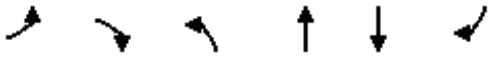
Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	177	187	65	93	21
Future Vol, veh/h	18	177	187	65	93	21
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	192	203	71	101	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	600	123	129	0	-	0
Stage 1	118	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	464	928	1457	-	-	-
Stage 1	907	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	392	919	1450	-	-	-
Mov Cap-2 Maneuver	392	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	618	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	5.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1450	-	818	-	-
HCM Lane V/C Ratio	0.14	-	0.259	-	-
HCM Control Delay (s)	7.9	0	10.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	19	175	187	233	252	18
Future Volume (vph)	19	175	187	233	252	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

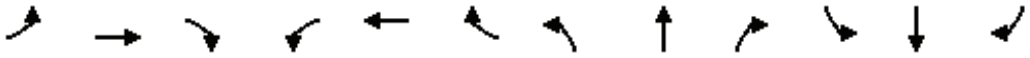
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	175	187	233	252	18
Future Vol, veh/h	19	175	187	233	252	18
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	190	203	253	274	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	953	294	299	0	-	0
Stage 1	289	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	287	745	1262	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	238	738	1256	-	-	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	3.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1256	-	612	-	-
HCM Lane V/C Ratio	0.162	-	0.345	-	-
HCM Control Delay (s)	8.4	-	13.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.6	-	1.5	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	77	75	24	88	3	48	3	3	4	4	3
Future Volume (vph)	1	77	75	24	88	3	48	3	3	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

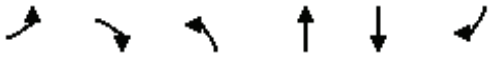
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	77	75	24	88	3	48	3	3	4	4	3
Future Vol, veh/h	1	77	75	24	88	3	48	3	3	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	90	87	28	102	3	56	3	3	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	177	0	0	300	297	134	299	339	104
Stage 1	-	-	-	-	-	-	136	136	-	160	160	-
Stage 2	-	-	-	-	-	-	164	161	-	139	179	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1486	-	-	1399	-	-	652	615	915	653	582	951
Stage 1	-	-	-	-	-	-	867	784	-	842	766	-
Stage 2	-	-	-	-	-	-	838	765	-	864	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1486	-	-	1399	-	-	635	601	915	637	569	951
Mov Cap-2 Maneuver	-	-	-	-	-	-	635	601	-	637	569	-
Stage 1	-	-	-	-	-	-	866	783	-	841	750	-
Stage 2	-	-	-	-	-	-	812	749	-	856	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	11.2	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	644	1486	-	-	1399	-	-	668
HCM Lane V/C Ratio	0.098	0.001	-	-	0.02	-	-	0.019
HCM Control Delay (s)	11.2	7.4	0	-	7.6	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	19	62	70	27	47	18
Future Volume (vph)	19	62	70	27	47	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

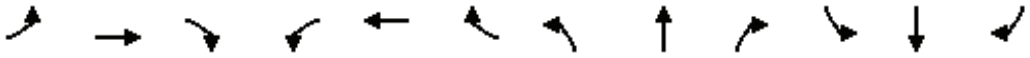
Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	62	70	27	47	18
Future Vol, veh/h	19	62	70	27	47	18
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	73	82	32	55	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	262	66	76	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	727	998	1523	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	687	998	1523	-	-	-
Mov Cap-2 Maneuver	687	-	-	-	-	-
Stage 1	904	-	-	-	-	-
Stage 2	837	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	5.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1523	-	902	-	-
HCM Lane V/C Ratio	0.054	-	0.106	-	-
HCM Control Delay (s)	7.5	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	36	104	33	84	1	125	2	22	1	12	18
Future Volume (vph)	12	36	104	33	84	1	125	2	22	1	12	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1291			669			448			292	
Travel Time (s)		22.0			11.4			12.2			8.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

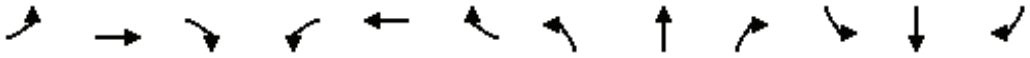
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	36	104	33	84	1	125	2	22	1	12	18
Future Vol, veh/h	12	36	104	33	84	1	125	2	22	1	12	18
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	42	122	39	99	1	147	2	26	1	14	21
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	8.6	9.5	9.3	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	84%	8%	28%	0%	3%
Vol Thru, %	1%	24%	72%	0%	39%
Vol Right, %	15%	68%	0%	100%	58%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	152	117	1	31
LT Vol	125	12	33	0	1
Through Vol	2	36	84	0	12
RT Vol	22	104	0	1	18
Lane Flow Rate	175	179	138	1	36
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.234	0.216	0.204	0.001	0.046
Departure Headway (Hd)	4.813	4.343	5.345	4.498	4.578
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	745	824	670	794	779
Service Time	2.849	2.378	3.082	2.235	2.625
HCM Lane V/C Ratio	0.235	0.217	0.206	0.001	0.046
HCM Control Delay	9.3	8.6	9.5	7.2	7.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.9	0.8	0.8	0	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	100	77	149	130	1	77	2	153	1	3	1
Future Volume (vph)	1	100	77	149	130	1	77	2	153	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		496			1291			1349			223	
Travel Time (s)		8.5			22.0			36.8			6.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

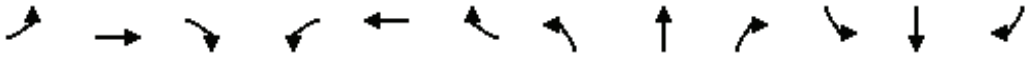
Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	100	77	149	130	1	77	2	153	1	3	1
Future Vol, veh/h	1	100	77	149	130	1	77	2	153	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	109	84	162	141	1	84	2	166	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	142	0	0	193	0	0	579	577	109	703	661	142
Stage 1	-	-	-	-	-	-	111	111	-	466	466	-
Stage 2	-	-	-	-	-	-	468	466	-	237	195	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1441	-	-	1380	-	-	426	427	945	352	383	906
Stage 1	-	-	-	-	-	-	894	804	-	577	562	-
Stage 2	-	-	-	-	-	-	575	562	-	766	739	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1441	-	-	1380	-	-	381	372	945	260	334	906
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	372	-	260	334	-
Stage 1	-	-	-	-	-	-	893	803	-	576	491	-
Stage 2	-	-	-	-	-	-	498	491	-	629	738	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.2	14.5	15.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	628	1441	-	-	1380	-	-	359
HCM Lane V/C Ratio	0.402	0.001	-	-	0.117	-	-	0.015
HCM Control Delay (s)	14.5	7.5	0	-	8	0	-	15.2
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.9	0	-	-	0.4	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	64	14	8	50	124	17	80	6	111	134	3
Future Volume (vph)	11	64	14	8	50	124	17	80	6	111	134	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		400			740			1314			1349	
Travel Time (s)		9.1			16.8			35.8			36.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

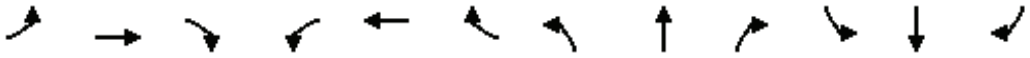
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	64	14	8	50	124	17	80	6	111	134	3
Future Vol, veh/h	11	64	14	8	50	124	17	80	6	111	134	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	69	15	9	54	133	18	86	6	119	144	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	9.2	8.9	10.6
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	12%	4%	45%
Vol Thru, %	78%	72%	27%	54%
Vol Right, %	6%	16%	68%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	89	182	248
LT Vol	17	11	8	111
Through Vol	80	64	50	134
RT Vol	6	14	124	3
Lane Flow Rate	111	96	196	267
Geometry Grp	1	1	1	1
Degree of Util (X)	0.152	0.134	0.249	0.358
Departure Headway (Hd)	4.955	5.031	4.581	4.838
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	718	707	779	739
Service Time	3.029	3.102	2.641	2.902
HCM Lane V/C Ratio	0.155	0.136	0.252	0.361
HCM Control Delay	8.9	8.9	9.2	10.6
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.5	0.5	1	1.6



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	434	7	6	512	46	10	6	15	47	1	15
Future Volume (vph)	9	434	7	6	512	46	10	6	15	47	1	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	0		0	0		0
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		289			1348			206			1314	
Travel Time (s)		5.6			26.3			5.6			35.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	434	7	6	512	46	10	6	15	47	1	15
Future Vol, veh/h	9	434	7	6	512	46	10	6	15	47	1	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	482	8	7	569	51	11	7	17	52	1	17
Number of Lanes	0	2	1	0	2	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	12.6	13.3	10.2	11.1
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	32%	6%	0%	0%	3%	0%	0%	75%
Vol Thru, %	19%	94%	100%	0%	97%	100%	0%	2%
Vol Right, %	48%	0%	0%	100%	0%	0%	100%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	154	289	7	177	341	46	63
LT Vol	10	9	0	0	6	0	0	47
Through Vol	6	145	289	0	171	341	0	1
RT Vol	15	0	0	7	0	0	46	15
Lane Flow Rate	34	171	321	8	196	379	51	70
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.066	0.267	0.501	0.011	0.301	0.58	0.068	0.14
Departure Headway (Hd)	6.929	5.636	5.606	4.901	5.518	5.501	4.796	7.204
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	517	639	643	731	656	660	751	498
Service Time	4.675	3.362	3.333	2.627	3.218	3.201	2.496	4.945
HCM Lane V/C Ratio	0.066	0.268	0.499	0.011	0.299	0.574	0.068	0.141
HCM Control Delay	10.2	10.4	13.9	7.7	10.6	15.5	7.8	11.1
HCM Lane LOS	B	B	B	A	B	C	A	B
HCM 95th-tile Q	0.2	1.1	2.8	0	1.3	3.7	0.2	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	453	24	237	547	158	15	40	233	127	30	19
Future Volume (vph)	22	453	24	237	547	158	15	40	233	127	30	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	0		100	0		100
Storage Lanes	1		1	1		0	0		1	0		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8		8	4		4
Detector Phase	5	2	2	1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3	23.3	23.3	23.3	23.3
Total Split (s)	13.0	40.0	40.0	41.0	68.0		39.0	39.0	39.0	39.0	39.0	39.0
Total Split (%)	10.8%	33.3%	33.3%	34.2%	56.7%		32.5%	32.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3			5.3	5.3		5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min	Min	Min	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	453	24	237	547	158	15	40	233	127	30	19
Future Volume (veh/h)	22	453	24	237	547	158	15	40	233	127	30	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	462	24	242	558	161	15	41	238	130	31	19
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	1576	699	267	1555	447	38	85	443	54	7	443
Arrive On Green	0.02	0.44	0.44	0.30	1.00	1.00	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	3554	1576	1781	2720	782	0	302	1577	0	26	1577
Grp Volume(v), veh/h	22	462	24	242	364	355	56	0	238	161	0	19
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1726	302	0	1577	26	0	1577
Q Serve(g_s), s	1.5	10.0	1.0	15.7	0.0	0.0	0.0	0.0	15.3	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.5	10.0	1.0	15.7	0.0	0.0	33.7	0.0	15.3	33.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.45	0.27		1.00	0.81		1.00
Lane Grp Cap(c), veh/h	39	1576	699	267	1016	986	123	0	443	62	0	443
V/C Ratio(X)	0.57	0.29	0.03	0.91	0.36	0.36	0.46	0.00	0.54	2.61	0.00	0.04
Avail Cap(c_a), veh/h	126	1576	699	542	1016	986	123	0	443	62	0	443
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.1	21.4	18.9	41.2	0.0	0.0	35.3	0.0	36.5	56.0	0.0	31.4
Incr Delay (d2), s/veh	4.8	0.5	0.1	4.3	0.9	0.9	1.0	0.0	0.7	769.6	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.2	0.4	6.0	0.3	0.3	1.2	0.0	5.9	15.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	21.8	19.0	45.6	0.9	0.9	36.3	0.0	37.3	825.6	0.0	31.4
LnGrp LOS	E	C	B	D	A	A	D	A	D	F	A	C
Approach Vol, veh/h		508			961			294			180	
Approach Delay, s/veh		23.5			12.2			37.1			741.8	
Approach LOS		C			B			D			F	

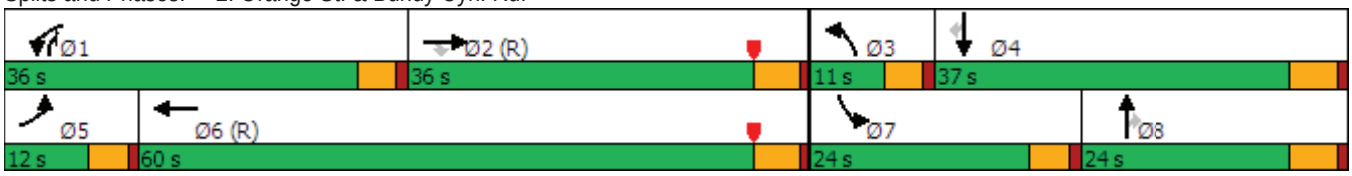
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.5	58.5		39.0	7.1	73.9		39.0				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	36.5	34.7		33.7	8.5	62.7		33.7				
Max Q Clear Time (g_c+I1), s	17.7	12.0		35.7	3.5	2.0		35.7				
Green Ext Time (p_c), s	0.3	2.0		0.0	0.0	3.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		86.5	
HCM 6th LOS		F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	453	24	237	547	158	15	40	233	127	30	19
Future Volume (vph)	22	453	24	237	547	158	15	40	233	127	30	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	100		100	100		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2						8			4
Detector Phase	5	2	2	1	6		3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		9.5	23.3	9.5	9.5	23.3	23.3
Total Split (s)	12.0	36.0	36.0	36.0	60.0		11.0	24.0	36.0	24.0	37.0	37.0
Total Split (%)	10.0%	30.0%	30.0%	30.0%	50.0%		9.2%	20.0%	30.0%	20.0%	30.8%	30.8%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		3.5	4.3	3.5	3.5	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3		4.5	5.3	4.5	4.5	5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max		None	Min	None	None	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	453	24	237	547	158	15	40	233	127	30	19
Future Volume (veh/h)	22	453	24	237	547	158	15	40	233	127	30	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	462	24	242	558	161	15	41	238	130	31	19
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	1612	715	267	1582	455	29	271	464	158	406	342
Arrive On Green	0.02	0.45	0.45	0.30	1.00	1.00	0.02	0.14	0.14	0.09	0.22	0.22
Sat Flow, veh/h	1781	3554	1576	1781	2720	782	1781	1870	1569	1781	1870	1574
Grp Volume(v), veh/h	22	462	24	242	364	355	15	41	238	130	31	19
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1726	1781	1870	1569	1781	1870	1574
Q Serve(g_s), s	1.5	9.8	1.0	15.7	0.0	0.0	1.0	2.3	15.1	8.6	1.6	1.1
Cycle Q Clear(g_c), s	1.5	9.8	1.0	15.7	0.0	0.0	1.0	2.3	15.1	8.6	1.6	1.1
Prop In Lane	1.00		1.00	1.00		0.45	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	1612	715	267	1033	1003	29	271	464	158	406	342
V/C Ratio(X)	0.57	0.29	0.03	0.91	0.35	0.35	0.51	0.15	0.51	0.82	0.08	0.06
Avail Cap(c_a), veh/h	111	1612	715	468	1033	1003	96	291	482	289	494	416
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	20.6	18.2	41.2	0.0	0.0	58.5	44.9	35.2	53.7	37.4	37.2
Incr Delay (d2), s/veh	4.8	0.4	0.1	5.9	0.9	0.9	13.3	0.1	0.3	10.1	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.1	0.4	6.1	0.2	0.2	0.6	1.1	5.8	4.3	0.7	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	21.0	18.3	47.2	0.9	0.9	71.8	45.0	35.5	63.8	37.4	37.2
LnGrp LOS	E	C	B	D	A	A	E	D	D	E	D	D
Approach Vol, veh/h		508			961			294			180	
Approach Delay, s/veh		22.7			12.5			38.7			56.5	
Approach LOS		C			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.5	59.7	6.5	31.4	7.1	75.1	15.2	22.7
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	31.5	30.7	6.5	31.7	7.5	54.7	19.5	18.7
Max Q Clear Time (g_c+I1), s	17.7	11.8	3.0	3.6	3.5	2.0	10.6	17.1
Green Ext Time (p_c), s	0.3	1.9	0.0	0.1	0.0	3.0	0.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	530	282	247	801	0	0	0	0	488	2	196
Future Volume (vph)	0	530	282	247	801	0	0	0	0	488	2	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	250		0	0		0	300		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases										4		
Detector Phase		2		1	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		45.0		35.0	45.0					25.0	25.0	
Total Split (s)		45.0		35.0	80.0					40.0	40.0	
Total Split (%)		37.5%		29.2%	66.7%					33.3%	33.3%	
Yellow Time (s)		4.3		3.6	4.3					4.3	4.3	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.3		4.6	5.3					5.3	5.3	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		C-Min		None	C-Min					None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	530	282	247	801	0	0	0	0	488	2	196
Future Volume (veh/h)	0	530	282	247	801	0	0	0	0	488	2	196
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	564	300	263	852	0				519	2	209
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	946	503	287	2212	0				515	4	452
Arrive On Green	0.00	0.42	0.42	0.32	1.00	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	2330	1188	1781	3647	0				1781	15	1564
Grp Volume(v), veh/h	0	448	416	263	852	0				519	0	211
Grp Sat Flow(s),veh/h/ln	0	1777	1648	1781	1777	0				1781	0	1579
Q Serve(g_s), s	0.0	23.3	23.4	17.0	0.0	0.0				34.7	0.0	13.2
Cycle Q Clear(g_c), s	0.0	23.3	23.4	17.0	0.0	0.0				34.7	0.0	13.2
Prop In Lane	0.00		0.72	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	752	697	287	2212	0				515	0	457
V/C Ratio(X)	0.00	0.60	0.60	0.92	0.39	0.00				1.01	0.00	0.46
Avail Cap(c_a), veh/h	0	752	697	451	2212	0				515	0	457
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.95	0.95	0.68	0.68	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	26.7	26.7	39.9	0.0	0.0				42.6	0.0	35.0
Incr Delay (d2), s/veh	0.0	3.3	3.6	8.8	0.3	0.0				41.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	10.3	9.7	6.8	0.1	0.0				21.0	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	30.0	30.3	48.7	0.3	0.0				84.2	0.0	35.3
LnGrp LOS	A	C	C	D	A	A				F	A	D
Approach Vol, veh/h		864			1115						730	
Approach Delay, s/veh		30.1			11.8						70.1	
Approach LOS		C			B						E	

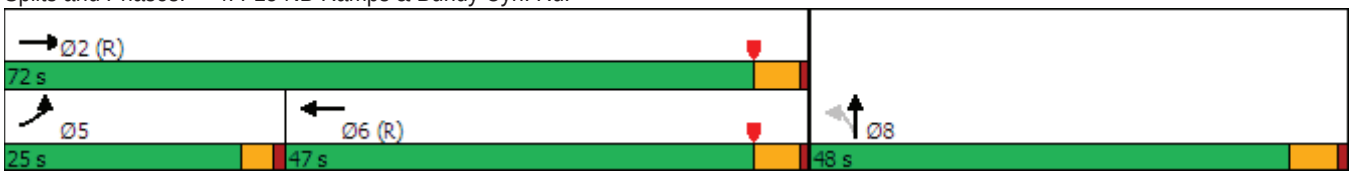
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.9	56.1		40.0		80.0
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3
Max Green Setting (Gmax), s	30.4	39.7		34.7		74.7
Max Q Clear Time (g_c+I1), s	19.0	25.4		36.7		2.0
Green Ext Time (p_c), s	0.3	3.2		0.0		4.3

Intersection Summary		
HCM 6th Ctrl Delay		33.3
HCM 6th LOS		C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	884	0	0	614	299	434	3	422	0	0	0
Future Volume (vph)	134	884	0	0	614	299	434	3	422	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases							8					
Detector Phase	5	2			6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0		25.0	25.0				
Total Split (s)	25.0	72.0			47.0		48.0	48.0				
Total Split (%)	20.8%	60.0%			39.2%		40.0%	40.0%				
Yellow Time (s)	3.0	4.3			4.3		4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3		5.3	5.3				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None	C-Min			C-Min		None	None				

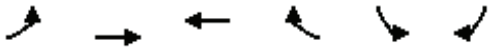
Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	884	0	0	614	299	434	3	422	0	0	0
Future Volume (veh/h)	134	884	0	0	614	299	434	3	422	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	138	911	0	0	633	308	447	3	435			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	163	2168	0	0	1122	546	537	3	473			
Arrive On Green	0.18	1.00	0.00	0.00	0.49	0.49	0.30	0.30	0.30			
Sat Flow, veh/h	1781	3647	0	0	2406	1125	1781	11	1568			
Grp Volume(v), veh/h	138	911	0	0	486	455	447	0	438			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1661	1781	0	1579			
Q Serve(g_s), s	9.0	0.0	0.0	0.0	23.3	23.3	28.1	0.0	32.2			
Cycle Q Clear(g_c), s	9.0	0.0	0.0	0.0	23.3	23.3	28.1	0.0	32.2			
Prop In Lane	1.00		0.00	0.00		0.68	1.00		0.99			
Lane Grp Cap(c), veh/h	163	2168	0	0	862	806	537	0	476			
V/C Ratio(X)	0.85	0.42	0.00	0.00	0.56	0.56	0.83	0.00	0.92			
Avail Cap(c_a), veh/h	312	2168	0	0	862	806	634	0	562			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.55	0.55	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	48.2	0.0	0.0	0.0	21.9	21.9	39.1	0.0	40.5			
Incr Delay (d2), s/veh	2.6	0.3	0.0	0.0	2.7	2.8	7.0	0.0	17.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.7	0.1	0.0	0.0	10.0	9.4	13.2	0.0	14.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	0.3	0.0	0.0	24.6	24.7	46.0	0.0	57.9			
LnGrp LOS	D	A	A	A	C	C	D	A	E			
Approach Vol, veh/h		1049			941			885				
Approach Delay, s/veh		7.0			24.6			51.9				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		78.5			15.0	63.5		41.5				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		66.7			21.0	41.7		42.7				
Max Q Clear Time (g_c+I1), s		2.0			11.0	25.3		34.2				
Green Ext Time (p_c), s		4.7			0.1	3.7		2.0				
Intersection Summary												
HCM 6th Ctrl Delay			26.6									
HCM 6th LOS			C									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	315	991	625	114	97	289
Future Volume (vph)	315	991	625	114	97	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	19.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	315	991	625	114	97	289
Future Vol, veh/h	315	991	625	114	97	289
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	325	1022	644	118	100	298

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	767	0	-	0	1713	332
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	1064	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	842	-	-	-	104	664
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	270	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	838	-	-	-	~ 63	658
Mov Cap-2 Maneuver	-	-	-	-	155	-
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	269	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	110.9
HCM LOS			F

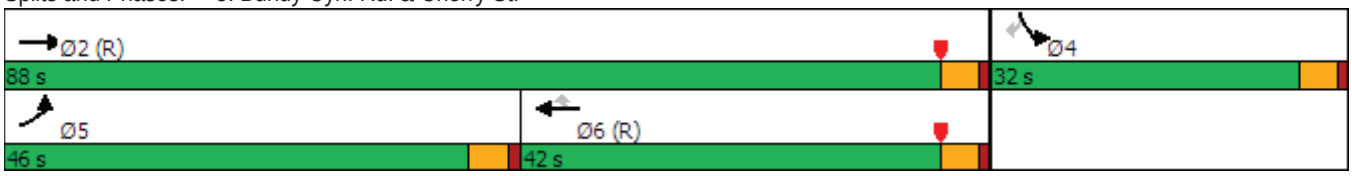
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	838	-	-	-	362
HCM Lane V/C Ratio	0.388	-	-	-	1.099
HCM Control Delay (s)	12	-	-	-	110.9
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	1.8	-	-	-	14.7

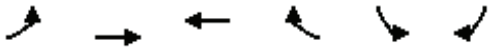
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	315	991	625	114	97	289
Future Volume (vph)	315	991	625	114	97	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				30	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	46.0	88.0	42.0	42.0	32.0	32.0
Total Split (%)	38.3%	73.3%	35.0%	35.0%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Bundy Cyn. Rd. & Cherry St.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	315	991	625	114	97	289
Future Volume (veh/h)	315	991	625	114	97	289
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	325	1022	644	118	100	298
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	352	3677	1723	765	365	325
Arrive On Green	0.40	1.00	0.48	0.48	0.20	0.20
Sat Flow, veh/h	1781	5274	3647	1577	1781	1585
Grp Volume(v), veh/h	325	1022	644	118	100	298
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1577	1781	1585
Q Serve(g_s), s	20.8	0.0	13.7	5.0	5.7	22.1
Cycle Q Clear(g_c), s	20.8	0.0	13.7	5.0	5.7	22.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	352	3677	1723	765	365	325
V/C Ratio(X)	0.92	0.28	0.37	0.15	0.27	0.92
Avail Cap(c_a), veh/h	616	3677	1723	765	408	363
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	0.0	19.4	17.2	40.2	46.7
Incr Delay (d2), s/veh	10.9	0.2	0.6	0.4	0.4	26.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.1	5.7	1.9	2.5	20.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.3	0.2	20.1	17.6	40.6	72.8
LnGrp LOS	D	A	C	B	D	E
Approach Vol, veh/h		1347	762		398	
Approach Delay, s/veh		11.3	19.7		64.7	
Approach LOS		B	B		E	

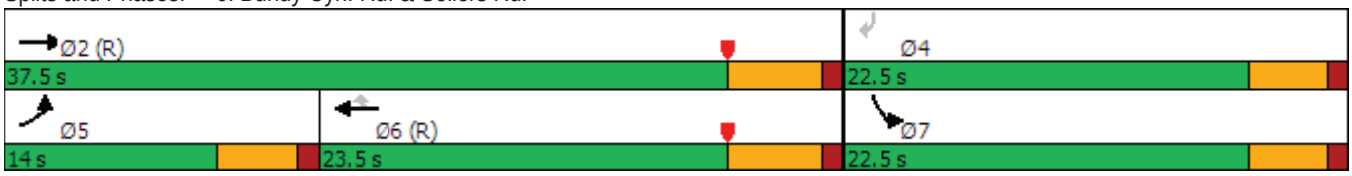
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.9		29.1	28.2	62.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		83.5		27.5	41.5	37.5
Max Q Clear Time (g_c+I1), s		2.0		24.1	22.8	15.7
Green Ext Time (p_c), s		9.2		0.5	0.9	4.7

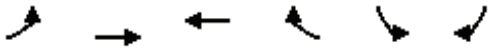
Intersection Summary		
HCM 6th Ctrl Delay		22.3
HCM 6th LOS		C

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	137	1004	614	39	34	75
Future Volume (vph)	137	1004	614	39	34	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	14.0	37.5	23.5	23.5	22.5	22.5
Total Split (%)	23.3%	62.5%	39.2%	39.2%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	137	1004	614	39	34	75
Future Volume (veh/h)	137	1004	614	39	34	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	1057	646	41	36	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	183	2740	1275	565	534	476
Arrive On Green	0.10	0.54	0.72	0.72	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1574	1781	1585
Grp Volume(v), veh/h	144	1057	646	41	36	79
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1574	1781	1585
Q Serve(g_s), s	4.7	7.3	4.8	0.5	0.9	2.2
Cycle Q Clear(g_c), s	4.7	7.3	4.8	0.5	0.9	2.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	183	2740	1275	565	534	476
V/C Ratio(X)	0.79	0.39	0.51	0.07	0.07	0.17
Avail Cap(c_a), veh/h	282	2740	1275	565	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	1.00	1.00
Uniform Delay (d), s/veh	26.3	8.1	6.1	5.5	15.0	15.5
Incr Delay (d2), s/veh	3.5	0.4	1.4	0.2	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.1	1.4	0.9	0.4	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.8	8.5	7.5	5.7	15.2	16.2
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		1201	687		115	
Approach Delay, s/veh		11.1	7.4		15.9	
Approach LOS		B	A		B	

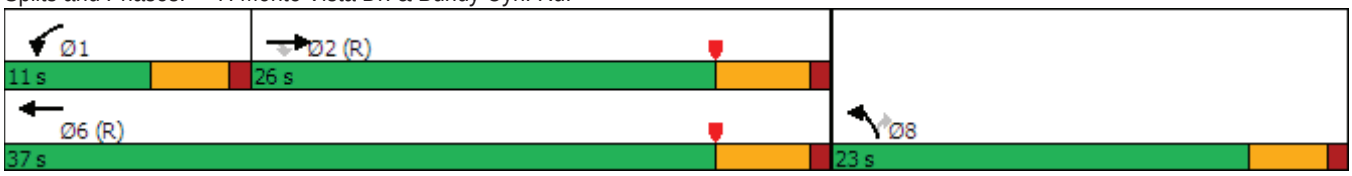
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	10.7	26.8
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	9.5	18.2
Max Q Clear Time (g_c+I1), s		9.3		4.2	6.7	6.8
Green Ext Time (p_c), s		5.2		0.1	0.0	2.3

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	999	39	50	618	35	106
Future Volume (vph)	999	39	50	618	35	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200	200		100	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			40	55	
Link Distance (ft)	612			588	284	
Travel Time (s)	11.9			10.0	3.5	
Confl. Peds. (#/hr)		5	5		5	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.3	23.3	9.5	22.5	22.5	22.5
Total Split (s)	26.0	26.0	11.0	37.0	23.0	23.0
Total Split (%)	43.3%	43.3%	18.3%	61.7%	38.3%	38.3%
Yellow Time (s)	4.3	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	4.5	5.3	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 7: Monte Vista Dr. & Bundy Cyn. Rd.





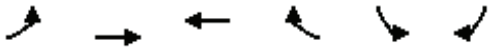
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	999	39	50	618	35	106
Future Volume (veh/h)	999	39	50	618	35	106
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1098	43	55	679	38	116
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2059	635	89	1878	1066	489
Arrive On Green	0.81	0.81	0.06	0.58	0.31	0.31
Sat Flow, veh/h	5274	1575	1781	3647	3456	1585
Grp Volume(v), veh/h	1098	43	55	679	38	116
Grp Sat Flow(s),veh/h/ln	1702	1575	1781	1777	1728	1585
Q Serve(g_s), s	4.4	0.3	1.8	6.1	0.5	3.3
Cycle Q Clear(g_c), s	4.4	0.3	1.8	6.1	0.5	3.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2059	635	89	1878	1066	489
V/C Ratio(X)	0.53	0.07	0.62	0.36	0.04	0.24
Avail Cap(c_a), veh/h	2059	635	193	1878	1066	489
HCM Platoon Ratio	2.00	2.00	1.10	1.10	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.9	3.5	27.8	7.2	14.5	15.5
Incr Delay (d2), s/veh	0.9	0.2	2.6	0.5	0.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	0.8	1.8	0.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.8	3.7	30.4	7.7	14.6	16.6
LnGrp LOS	A	A	C	A	B	B
Approach Vol, veh/h	1141			734	154	
Approach Delay, s/veh	4.8			9.4	16.1	
Approach LOS	A			A	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.5	29.5				37.0	23.0
Change Period (Y+Rc), s	4.5	5.3				5.3	4.5
Max Green Setting (Gmax), s	6.5	20.7				31.7	18.5
Max Q Clear Time (g_c+I1), s	3.8	6.4				8.1	5.3
Green Ext Time (p_c), s	0.0	4.7				2.9	0.2

Intersection Summary		
HCM 6th Ctrl Delay		7.3
HCM 6th LOS		A

Notes

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	71	1034	629	18	9	40
Future Volume (vph)	71	1034	629	18	9	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	120				90	
Link Speed (mph)		40	40		25	
Link Distance (ft)		588	428		597	
Travel Time (s)		10.0	7.3		16.3	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

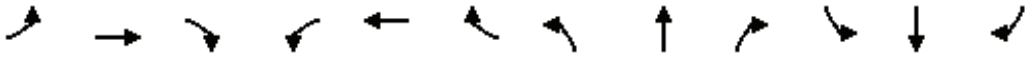
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	71	1034	629	18	9	40
Future Vol, veh/h	71	1034	629	18	9	40
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	1124	684	20	10	43

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	709	0	-	0	1308	362
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	609	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	886	-	-	-	181	635
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	474	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	882	-	-	-	164	629
Mov Cap-2 Maneuver	-	-	-	-	272	-
Stage 1	-	-	-	-	400	-
Stage 2	-	-	-	-	472	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	882	-	-	-	507
HCM Lane V/C Ratio	0.087	-	-	-	0.105
HCM Control Delay (s)	9.5	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	7	17	1	4	34	11	170	2	45	176	77
Future Volume (vph)	89	7	17	1	4	34	11	170	2	45	176	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

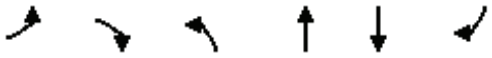
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	89	7	17	1	4	34	11	170	2	45	176	77
Future Vol, veh/h	89	7	17	1	4	34	11	170	2	45	176	77
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	8	18	1	4	37	12	183	2	48	189	83
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	8.1	9.4	10.4
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	79%	3%	15%
Vol Thru, %	93%	6%	10%	59%
Vol Right, %	1%	15%	87%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	113	39	298
LT Vol	11	89	1	45
Through Vol	170	7	4	176
RT Vol	2	17	34	77
Lane Flow Rate	197	122	42	320
Geometry Grp	1	1	1	1
Degree of Util (X)	0.258	0.176	0.056	0.397
Departure Headway (Hd)	4.713	5.22	4.765	4.457
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	760	683	745	804
Service Time	2.762	3.284	2.837	2.5
HCM Lane V/C Ratio	0.259	0.179	0.056	0.398
HCM Control Delay	9.4	9.4	8.1	10.4
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	1	0.6	0.2	1.9



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	17	167	173	99	65	19
Future Volume (vph)	17	167	173	99	65	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

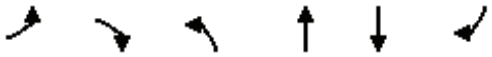
Intersection	
Int Delay, s/veh	6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	167	173	99	65	19
Future Vol, veh/h	17	167	173	99	65	19
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	182	188	108	71	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	576	92	97	0	-	0
Stage 1	87	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	479	965	1496	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	616	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	411	956	1489	-	-	-
Mov Cap-2 Maneuver	411	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1489	-	852	-	-
HCM Lane V/C Ratio	0.126	-	0.235	-	-
HCM Control Delay (s)	7.8	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.9	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	169	173	256	216	16
Future Volume (vph)	16	169	173	256	216	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

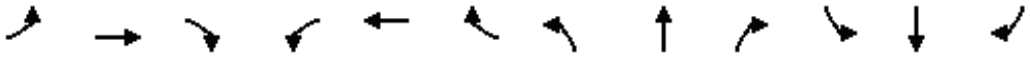
Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	169	173	256	216	16
Future Vol, veh/h	16	169	173	256	216	16
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	184	188	278	235	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	908	254	257	0	-	0
Stage 1	249	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	306	785	1308	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	259	778	1302	-	-	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	512	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	3.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1302	-	663	-	-
HCM Lane V/C Ratio	0.144	-	0.303	-	-
HCM Control Delay (s)	8.2	-	12.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.3	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	41	64	15	45	1	117	5	25	1	3	1
Future Volume (vph)	1	41	64	15	45	1	117	5	25	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

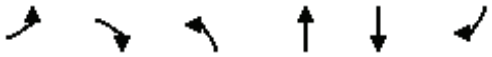
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	41	64	15	45	1	117	5	25	1	3	1
Future Vol, veh/h	1	41	64	15	45	1	117	5	25	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	47	73	17	51	1	133	6	28	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	52	0	0	120	0	0	174	172	84	189	208	52
Stage 1	-	-	-	-	-	-	86	86	-	86	86	-
Stage 2	-	-	-	-	-	-	88	86	-	103	122	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1554	-	-	1468	-	-	789	721	975	771	689	1016
Stage 1	-	-	-	-	-	-	922	824	-	922	824	-
Stage 2	-	-	-	-	-	-	920	824	-	903	795	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1554	-	-	1468	-	-	777	712	975	736	680	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	777	712	-	736	680	-
Stage 1	-	-	-	-	-	-	921	823	-	921	814	-
Stage 2	-	-	-	-	-	-	904	814	-	870	794	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.8	10.7	9.9
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	802	1554	-	-	1468	-	-	740
HCM Lane V/C Ratio	0.208	0.001	-	-	0.012	-	-	0.008
HCM Control Delay (s)	10.7	7.3	0	-	7.5	0	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	39	45	53	24	8
Future Volume (vph)	6	39	45	53	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

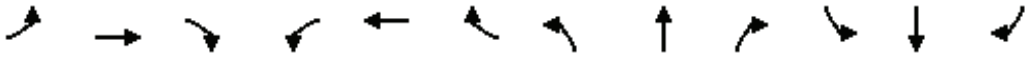
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	39	45	53	24	8
Future Vol, veh/h	6	39	45	53	24	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	49	56	66	30	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	213	35	40	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	178	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	775	1038	1570	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	853	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	746	1038	1570	-	-	-
Mov Cap-2 Maneuver	746	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	853	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	3.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	987	-	-
HCM Lane V/C Ratio	0.036	-	0.057	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	61	89	28	44	1	85	13	40	1	3	9
Future Volume (vph)	13	61	89	28	44	1	85	13	40	1	3	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1291			669			448			292	
Travel Time (s)		22.0			11.4			12.2			8.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

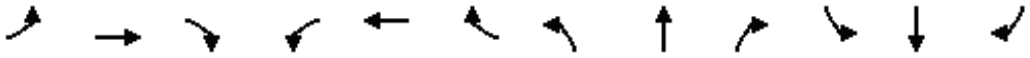
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	61	89	28	44	1	85	13	40	1	3	9
Future Vol, veh/h	13	61	89	28	44	1	85	13	40	1	3	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	66	96	30	47	1	91	14	43	1	3	10
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	8.3	8.6	8.5	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	62%	8%	39%	0%	8%
Vol Thru, %	9%	37%	61%	0%	23%
Vol Right, %	29%	55%	0%	100%	69%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	163	72	1	13
LT Vol	85	13	28	0	1
Through Vol	13	61	44	0	3
RT Vol	40	89	0	1	9
Lane Flow Rate	148	175	77	1	14
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.185	0.205	0.113	0.001	0.017
Departure Headway (Hd)	4.483	4.203	5.245	4.346	4.292
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	801	855	685	824	834
Service Time	2.502	2.222	2.966	2.067	2.319
HCM Lane V/C Ratio	0.185	0.205	0.112	0.001	0.017
HCM Control Delay	8.5	8.3	8.6	7.1	7.4
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.8	0.4	0	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	156	52	71	96	1	70	1	59	1	1	1
Future Volume (vph)	1	156	52	71	96	1	70	1	59	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		496			1291			1349			223	
Travel Time (s)		8.5			22.0			36.8			6.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

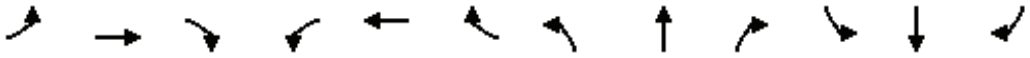
Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	156	52	71	96	1	70	1	59	1	1	1
Future Vol, veh/h	1	156	52	71	96	1	70	1	59	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	168	56	76	103	1	75	1	63	1	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	104	0	0	224	0	0	427	426	168	486	482	104
Stage 1	-	-	-	-	-	-	170	170	-	256	256	-
Stage 2	-	-	-	-	-	-	257	256	-	230	226	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1488	-	-	1345	-	-	538	520	876	492	484	951
Stage 1	-	-	-	-	-	-	832	758	-	749	696	-
Stage 2	-	-	-	-	-	-	748	696	-	773	717	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1488	-	-	1345	-	-	512	488	876	434	454	951
Mov Cap-2 Maneuver	-	-	-	-	-	-	512	488	-	434	454	-
Stage 1	-	-	-	-	-	-	831	757	-	748	654	-
Stage 2	-	-	-	-	-	-	701	654	-	715	716	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.3	12.3	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	631	1488	-	-	1345	-	-	540
HCM Lane V/C Ratio	0.222	0.001	-	-	0.057	-	-	0.006
HCM Control Delay (s)	12.3	7.4	0	-	7.8	0	-	11.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	65	9	1	88	107	15	30	8	71	39	8
Future Volume (vph)	2	65	9	1	88	107	15	30	8	71	39	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		400			740			1314			1349	
Travel Time (s)		9.1			16.8			35.8			36.8	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	65	9	1	88	107	15	30	8	71	39	8
Future Vol, veh/h	2	65	9	1	88	107	15	30	8	71	39	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	74	10	1	100	122	17	34	9	81	44	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.2	8.7	8.2	8.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	3%	1%	60%
Vol Thru, %	57%	86%	45%	33%
Vol Right, %	15%	12%	55%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	76	196	118
LT Vol	15	2	1	71
Through Vol	30	65	88	39
RT Vol	8	9	107	8
Lane Flow Rate	60	86	223	134
Geometry Grp	1	1	1	1
Degree of Util (X)	0.079	0.11	0.259	0.177
Departure Headway (Hd)	4.747	4.579	4.181	4.765
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	753	782	860	752
Service Time	2.784	2.608	2.203	2.799
HCM Lane V/C Ratio	0.08	0.11	0.259	0.178
HCM Control Delay	8.2	8.2	8.7	8.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.4	1	0.6

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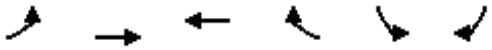


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	317	626	799	102	0	323
Future Volume (vph)	317	626	799	102	0	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	317	626	799	102	0	323
Future Vol, veh/h	317	626	799	102	0	323
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	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	334	659	841	107	0	340

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	953	0	-	0	-	431
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	717	-	-	-	0	573
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	714	-	-	-	-	568
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

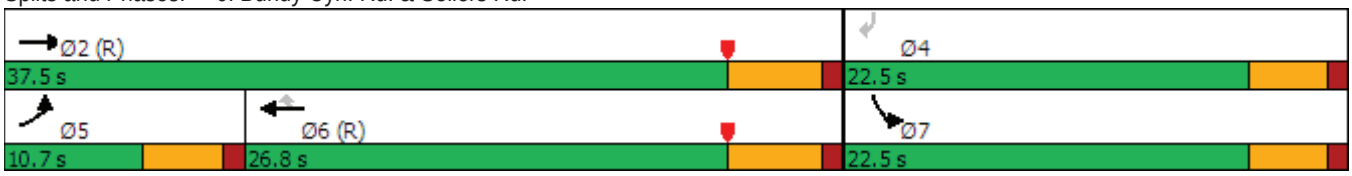
Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	20.3
HCM LOS			C

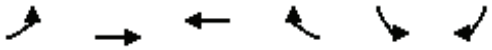
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	714	-	-	-	568
HCM Lane V/C Ratio	0.467	-	-	-	0.599
HCM Control Delay (s)	14.4	-	-	-	20.3
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	2.5	-	-	-	3.9

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	53	531	812	26	132	110
Future Volume (vph)	53	531	812	26	132	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	10.7	37.5	26.8	26.8	22.5	22.5
Total Split (%)	17.8%	62.5%	44.7%	44.7%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.

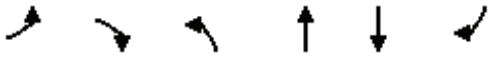




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	53	531	812	26	132	110
Future Volume (veh/h)	53	531	812	26	132	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	559	855	27	139	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	90	2740	1461	648	534	476
Arrive On Green	0.05	0.54	0.82	0.82	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1575	1781	1585
Grp Volume(v), veh/h	56	559	855	27	139	116
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1575	1781	1585
Q Serve(g_s), s	1.8	3.4	4.9	0.2	3.6	3.3
Cycle Q Clear(g_c), s	1.8	3.4	4.9	0.2	3.6	3.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	90	2740	1461	648	534	476
V/C Ratio(X)	0.62	0.20	0.59	0.04	0.26	0.24
Avail Cap(c_a), veh/h	184	2740	1461	648	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.91	0.91	1.00	1.00
Uniform Delay (d), s/veh	27.9	7.2	3.6	3.2	15.9	15.9
Incr Delay (d2), s/veh	2.6	0.2	1.6	0.1	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.0	1.3	0.6	1.5	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.5	7.4	5.1	3.3	17.1	17.1
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		615	882		255	
Approach Delay, s/veh		9.5	5.1		17.1	
Approach LOS		A	A		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	7.5	30.0
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	6.2	21.5
Max Q Clear Time (g_c+I1), s		5.4		5.6	3.8	6.9
Green Ext Time (p_c), s		2.6		0.3	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	8.4
HCM 6th LOS	A



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	132	187	110	80	21
Future Volume (vph)	63	132	187	110	80	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

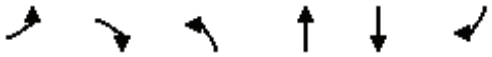
Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	132	187	110	80	21
Future Vol, veh/h	63	132	187	110	80	21
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	143	203	120	87	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	635	109	115	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	443	945	1474	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	374	936	1467	-	-	-
Mov Cap-2 Maneuver	374	-	-	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1467	-	630	-	-
HCM Lane V/C Ratio	0.139	-	0.336	-	-
HCM Control Delay (s)	7.8	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	130	187	233	194	18
Future Volume (vph)	64	130	187	233	194	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

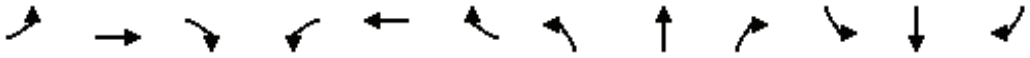
Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	130	187	233	194	18
Future Vol, veh/h	64	130	187	233	194	18
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	141	203	253	211	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	890	231	236	0	-	0
Stage 1	226	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	313	808	1331	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	263	800	1325	-	-	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	3.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1325	-	478	-	-
HCM Lane V/C Ratio	0.153	-	0.441	-	-
HCM Control Delay (s)	8.2	-	18.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	2.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	77	75	24	88	3	48	3	70	4	4	3
Future Volume (vph)	1	77	75	24	88	3	48	3	70	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

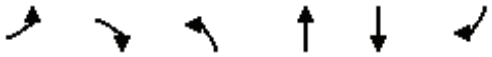
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	77	75	24	88	3	48	3	70	4	4	3
Future Vol, veh/h	1	77	75	24	88	3	48	3	70	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	90	87	28	102	3	56	3	81	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	177	0	0	300	297	134	338	339	104
Stage 1	-	-	-	-	-	-	136	136	-	160	160	-
Stage 2	-	-	-	-	-	-	164	161	-	178	179	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1486	-	-	1399	-	-	652	615	915	616	582	951
Stage 1	-	-	-	-	-	-	867	784	-	842	766	-
Stage 2	-	-	-	-	-	-	838	765	-	824	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1486	-	-	1399	-	-	635	601	915	549	569	951
Mov Cap-2 Maneuver	-	-	-	-	-	-	635	601	-	549	569	-
Stage 1	-	-	-	-	-	-	866	783	-	841	750	-
Stage 2	-	-	-	-	-	-	812	749	-	747	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.7	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	770	1486	-	-	1399	-	-	630
HCM Lane V/C Ratio	0.183	0.001	-	-	0.02	-	-	0.02
HCM Control Delay (s)	10.7	7.4	0	-	7.6	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	36	112	70	10	47	18
Future Volume (vph)	36	112	70	10	47	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

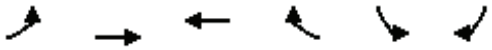
Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	112	70	10	47	18
Future Vol, veh/h	36	112	70	10	47	18
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	132	82	12	55	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	242	66	76	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	746	998	1523	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	706	998	1523	-	-	-
Mov Cap-2 Maneuver	706	-	-	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	6.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1523	-	907	-	-
HCM Lane V/C Ratio	0.054	-	0.192	-	-
HCM Control Delay (s)	7.5	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	315	991	625	114	0	289
Future Volume (vph)	315	991	625	114	0	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	315	991	625	114	0	289
Future Vol, veh/h	315	991	625	114	0	289
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	325	1022	644	118	0	298

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	767	0	-	0	-	332
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	842	-	-	-	0	664
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	838	-	-	-	-	658
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	14.9
HCM LOS			B

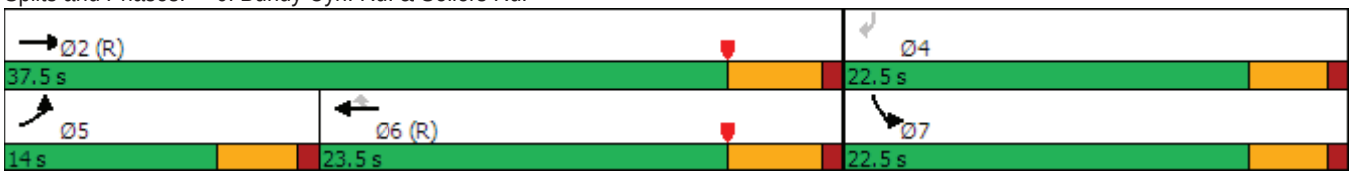
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	838	-	-	-	658
HCM Lane V/C Ratio	0.388	-	-	-	0.453
HCM Control Delay (s)	12	-	-	-	14.9
HCM Lane LOS	B	-	-	-	B
HCM 95th %tile Q(veh)	1.8	-	-	-	2.4

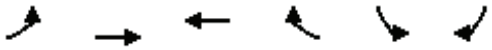
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	122	922	614	39	116	75
Future Volume (vph)	122	922	614	39	116	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	14.0	37.5	23.5	23.5	22.5	22.5
Total Split (%)	23.3%	62.5%	39.2%	39.2%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.

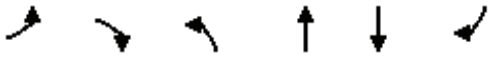




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	122	922	614	39	116	75
Future Volume (veh/h)	122	922	614	39	116	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	128	971	646	41	122	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	164	2740	1314	582	534	476
Arrive On Green	0.09	0.54	0.74	0.74	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1574	1781	1585
Grp Volume(v), veh/h	128	971	646	41	122	79
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1574	1781	1585
Q Serve(g_s), s	4.2	6.5	4.5	0.4	3.1	2.2
Cycle Q Clear(g_c), s	4.2	6.5	4.5	0.4	3.1	2.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	164	2740	1314	582	534	476
V/C Ratio(X)	0.78	0.35	0.49	0.07	0.23	0.17
Avail Cap(c_a), veh/h	282	2740	1314	582	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	1.00	1.00
Uniform Delay (d), s/veh	26.6	8.0	5.5	5.0	15.8	15.5
Incr Delay (d2), s/veh	3.0	0.4	1.3	0.2	1.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	1.9	1.3	0.9	1.3	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.7	8.3	6.8	5.2	16.8	16.2
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		1099	687		201	
Approach Delay, s/veh		10.8	6.7		16.6	
Approach LOS		B	A		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	10.0	27.5
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	9.5	18.2
Max Q Clear Time (g_c+I1), s		8.5		5.1	6.2	6.5
Green Ext Time (p_c), s		4.7		0.2	0.0	2.4

Intersection Summary		
HCM 6th Ctrl Delay	10.0	
HCM 6th LOS	A	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	121	173	145	60	19
Future Volume (vph)	63	121	173	145	60	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

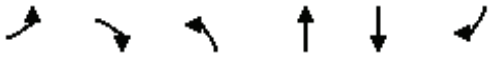
Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	121	173	145	60	19
Future Vol, veh/h	63	121	173	145	60	19
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	132	188	158	65	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	620	86	91	0	-	0
Stage 1	81	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	452	973	1504	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	386	964	1497	-	-	-
Mov Cap-2 Maneuver	386	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1497	-	637	-	-
HCM Lane V/C Ratio	0.126	-	0.314	-	-
HCM Control Delay (s)	7.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	62	123	173	256	165	16
Future Volume (vph)	62	123	173	256	165	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

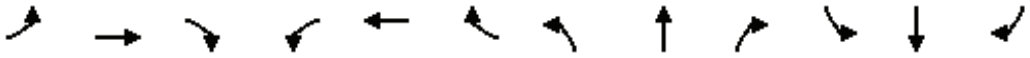
Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	123	173	256	165	16
Future Vol, veh/h	62	123	173	256	165	16
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	134	188	278	179	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	852	198	201	0	-	0
Stage 1	193	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	330	843	1371	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	281	835	1364	-	-	-
Mov Cap-2 Maneuver	281	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	512	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.8	3.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1364	-	503	-	-
HCM Lane V/C Ratio	0.138	-	0.4	-	-
HCM Control Delay (s)	8.1	-	16.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	1.9	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	41	64	15	45	1	117	5	85	1	3	1
Future Volume (vph)	1	41	64	15	45	1	117	5	85	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

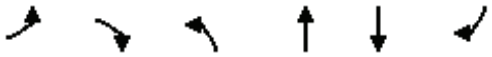
Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	41	64	15	45	1	117	5	85	1	3	1
Future Vol, veh/h	1	41	64	15	45	1	117	5	85	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	47	73	17	51	1	133	6	97	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	52	0	0	120	0	0	174	172	84	223	208	52
Stage 1	-	-	-	-	-	-	86	86	-	86	86	-
Stage 2	-	-	-	-	-	-	88	86	-	137	122	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1554	-	-	1468	-	-	789	721	975	733	689	1016
Stage 1	-	-	-	-	-	-	922	824	-	922	824	-
Stage 2	-	-	-	-	-	-	920	824	-	866	795	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1554	-	-	1468	-	-	777	712	975	650	680	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	777	712	-	650	680	-
Stage 1	-	-	-	-	-	-	921	823	-	921	814	-
Stage 2	-	-	-	-	-	-	904	814	-	774	794	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.8	10.9	10
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	846	1554	-	-	1468	-	-	721
HCM Lane V/C Ratio	0.278	0.001	-	-	0.012	-	-	0.008
HCM Control Delay (s)	10.9	7.3	0	-	7.5	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	84	45	38	24	8
Future Volume (vph)	21	84	45	38	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	84	45	38	24	8
Future Vol, veh/h	21	84	45	38	24	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	105	56	48	30	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	195	35	40	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	794	1038	1570	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	765	1038	1570	-	-	-
Mov Cap-2 Maneuver	765	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	969	-	-
HCM Lane V/C Ratio	0.036	-	0.135	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

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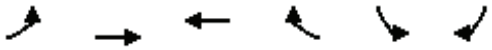


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	943	799	419	0	323
Future Volume (vph)	0	943	799	419	0	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	943	799	419	0	323
Future Vol, veh/h	0	943	799	419	0	323
Conflicting Peds, #/hr	5	0	0	5	5	5
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	0	993	841	441	0	340

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	431
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	573
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	568
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

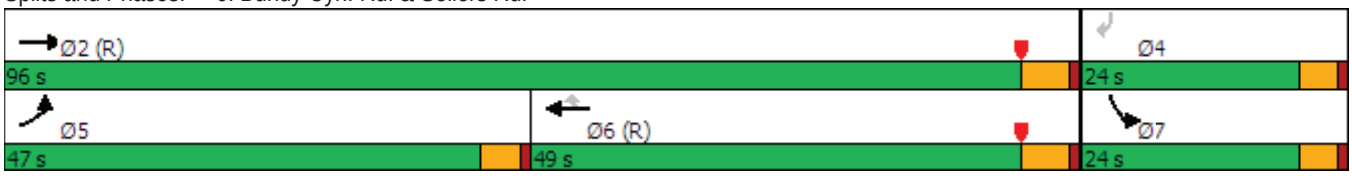
Approach	EB	WB	SB
HCM Control Delay, s	0	0	20.3
HCM LOS			C

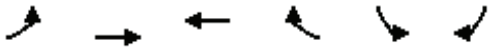
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	568
HCM Lane V/C Ratio	-	-	-	0.599
HCM Control Delay (s)	-	-	-	20.3
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	3.9

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	370	531	812	26	132	110
Future Volume (vph)	370	531	812	26	132	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	47.0	96.0	49.0	49.0	24.0	24.0
Total Split (%)	39.2%	80.0%	40.8%	40.8%	20.0%	20.0%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.

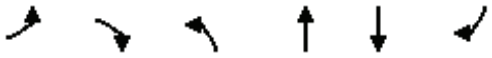




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	370	531	812	26	132	110
Future Volume (veh/h)	370	531	812	26	132	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	389	559	855	27	139	116
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	418	3859	1719	763	289	258
Arrive On Green	0.23	0.76	0.97	0.97	0.16	0.16
Sat Flow, veh/h	1781	5274	3647	1577	1781	1585
Grp Volume(v), veh/h	389	559	855	27	139	116
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1577	1781	1585
Q Serve(g_s), s	25.7	3.6	1.8	0.1	8.5	7.9
Cycle Q Clear(g_c), s	25.7	3.6	1.8	0.1	8.5	7.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	418	3859	1719	763	289	258
V/C Ratio(X)	0.93	0.14	0.50	0.04	0.48	0.45
Avail Cap(c_a), veh/h	631	3859	1719	763	289	258
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.91	0.91	1.00	1.00
Uniform Delay (d), s/veh	45.0	4.0	1.0	1.0	45.6	45.4
Incr Delay (d2), s/veh	12.2	0.1	0.9	0.1	5.6	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	1.1	0.6	0.9	4.3	7.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.1	4.1	2.0	1.1	51.3	51.0
LnGrp LOS	E	A	A	A	D	D
Approach Vol, veh/h		948	882		255	
Approach Delay, s/veh		25.9	2.0		51.1	
Approach LOS		C	A		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		96.0		24.0	32.7	63.3
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		90.7		19.5	42.5	43.7
Max Q Clear Time (g_c+I1), s		5.6		10.5	27.7	3.8
Green Ext Time (p_c), s		2.7		0.3	0.5	4.3

Intersection Summary	
HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	132	187	110	80	21
Future Volume (vph)	63	132	187	110	80	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

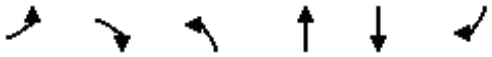
Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	132	187	110	80	21
Future Vol, veh/h	63	132	187	110	80	21
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	143	203	120	87	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	635	109	115	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	443	945	1474	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	374	936	1467	-	-	-
Mov Cap-2 Maneuver	374	-	-	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	587	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1467	-	630	-	-
HCM Lane V/C Ratio	0.139	-	0.336	-	-
HCM Control Delay (s)	7.8	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	130	187	233	194	18
Future Volume (vph)	64	130	187	233	194	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

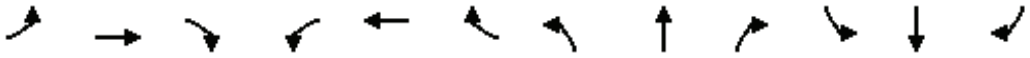
Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	130	187	233	194	18
Future Vol, veh/h	64	130	187	233	194	18
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	141	203	253	211	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	890	231	236	0	-	0
Stage 1	226	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	313	808	1331	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	263	800	1325	-	-	-
Mov Cap-2 Maneuver	263	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	3.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1325	-	478	-	-
HCM Lane V/C Ratio	0.153	-	0.441	-	-
HCM Control Delay (s)	8.2	-	18.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	2.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	77	75	24	88	3	48	3	70	4	4	3
Future Volume (vph)	1	77	75	24	88	3	48	3	70	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

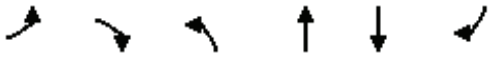
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	77	75	24	88	3	48	3	70	4	4	3
Future Vol, veh/h	1	77	75	24	88	3	48	3	70	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	90	87	28	102	3	56	3	81	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	105	0	0	177	0	0	300	297	134	338	339	104
Stage 1	-	-	-	-	-	-	136	136	-	160	160	-
Stage 2	-	-	-	-	-	-	164	161	-	178	179	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1486	-	-	1399	-	-	652	615	915	616	582	951
Stage 1	-	-	-	-	-	-	867	784	-	842	766	-
Stage 2	-	-	-	-	-	-	838	765	-	824	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1486	-	-	1399	-	-	635	601	915	549	569	951
Mov Cap-2 Maneuver	-	-	-	-	-	-	635	601	-	549	569	-
Stage 1	-	-	-	-	-	-	866	783	-	841	750	-
Stage 2	-	-	-	-	-	-	812	749	-	747	750	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.7	10.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	770	1486	-	-	1399	-	-	630
HCM Lane V/C Ratio	0.183	0.001	-	-	0.02	-	-	0.02
HCM Control Delay (s)	10.7	7.4	0	-	7.6	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	36	112	70	10	47	18
Future Volume (vph)	36	112	70	10	47	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

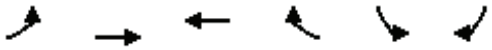
Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	36	112	70	10	47	18
Future Vol, veh/h	36	112	70	10	47	18
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	132	82	12	55	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	242	66	76	0	-	0
Stage 1	66	-	-	-	-	-
Stage 2	176	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	746	998	1523	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	706	998	1523	-	-	-
Mov Cap-2 Maneuver	706	-	-	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	6.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1523	-	907	-	-
HCM Lane V/C Ratio	0.054	-	0.192	-	-
HCM Control Delay (s)	7.5	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	1306	625	429	0	289
Future Volume (vph)	0	1306	625	429	0	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1306	625	429	0	289
Future Vol, veh/h	0	1306	625	429	0	289
Conflicting Peds, #/hr	5	0	0	5	5	5
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1346	644	442	0	298

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	332
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	664
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	658
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

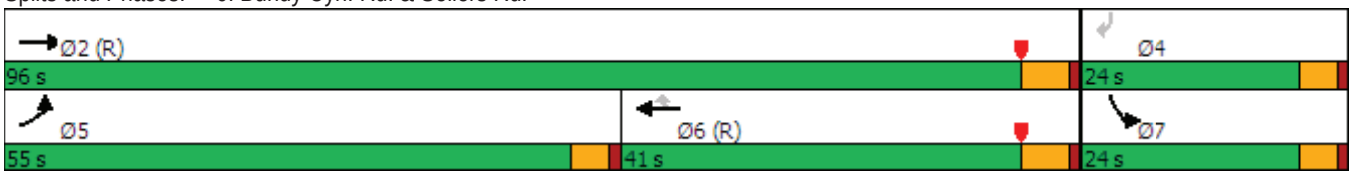
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	658
HCM Lane V/C Ratio	-	-	-	0.453
HCM Control Delay (s)	-	-	-	14.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	2.4

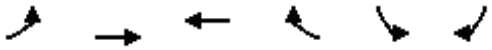
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	437	922	614	39	116	75
Future Volume (vph)	437	922	614	39	116	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	55.0	96.0	41.0	41.0	24.0	24.0
Total Split (%)	45.8%	80.0%	34.2%	34.2%	20.0%	20.0%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.

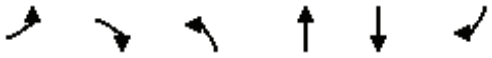




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	437	922	614	39	116	75
Future Volume (veh/h)	437	922	614	39	116	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	460	971	646	41	122	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	489	3859	1577	699	289	258
Arrive On Green	0.27	0.76	0.89	0.89	0.16	0.16
Sat Flow, veh/h	1781	5274	3647	1576	1781	1585
Grp Volume(v), veh/h	460	971	646	41	122	79
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1576	1781	1585
Q Serve(g_s), s	30.3	6.9	3.9	0.4	7.4	5.3
Cycle Q Clear(g_c), s	30.3	6.9	3.9	0.4	7.4	5.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	489	3859	1577	699	289	258
V/C Ratio(X)	0.94	0.25	0.41	0.06	0.42	0.31
Avail Cap(c_a), veh/h	750	3859	1577	699	289	258
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	1.00	1.00
Uniform Delay (d), s/veh	42.6	4.4	4.0	3.8	45.2	44.3
Incr Delay (d2), s/veh	11.7	0.2	0.8	0.2	4.5	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	2.1	1.2	1.6	3.7	5.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.2	4.6	4.7	3.9	49.6	47.4
LnGrp LOS	D	A	A	A	D	D
Approach Vol, veh/h		1431	687		201	
Approach Delay, s/veh		20.5	4.7		48.7	
Approach LOS		C	A		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		96.0		24.0	37.5	58.5
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		90.7		19.5	50.5	35.7
Max Q Clear Time (g_c+I1), s		8.9		9.4	32.3	5.9
Green Ext Time (p_c), s		5.2		0.2	0.7	3.0

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	121	173	145	60	19
Future Volume (vph)	63	121	173	145	60	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

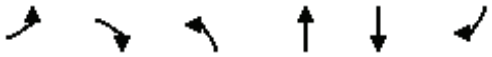
Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	121	173	145	60	19
Future Vol, veh/h	63	121	173	145	60	19
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	132	188	158	65	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	620	86	91	0	-	0
Stage 1	81	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	452	973	1504	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	386	964	1497	-	-	-
Mov Cap-2 Maneuver	386	-	-	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	582	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1497	-	637	-	-
HCM Lane V/C Ratio	0.126	-	0.314	-	-
HCM Control Delay (s)	7.8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	62	123	173	256	165	16
Future Volume (vph)	62	123	173	256	165	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

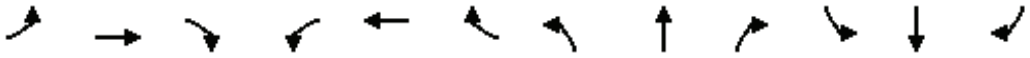
Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	123	173	256	165	16
Future Vol, veh/h	62	123	173	256	165	16
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	134	188	278	179	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	852	198	201	0	-	0
Stage 1	193	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	330	843	1371	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	281	835	1364	-	-	-
Mov Cap-2 Maneuver	281	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	512	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.8	3.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1364	-	503	-	-
HCM Lane V/C Ratio	0.138	-	0.4	-	-
HCM Control Delay (s)	8.1	-	16.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	1.9	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	41	64	15	45	1	117	5	85	1	3	1
Future Volume (vph)	1	41	64	15	45	1	117	5	85	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

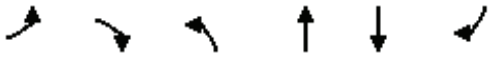
Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	41	64	15	45	1	117	5	85	1	3	1
Future Vol, veh/h	1	41	64	15	45	1	117	5	85	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	47	73	17	51	1	133	6	97	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	52	0	0	120	0	0	174	172	84	223	208	52
Stage 1	-	-	-	-	-	-	86	86	-	86	86	-
Stage 2	-	-	-	-	-	-	88	86	-	137	122	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1554	-	-	1468	-	-	789	721	975	733	689	1016
Stage 1	-	-	-	-	-	-	922	824	-	922	824	-
Stage 2	-	-	-	-	-	-	920	824	-	866	795	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1554	-	-	1468	-	-	777	712	975	650	680	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	777	712	-	650	680	-
Stage 1	-	-	-	-	-	-	921	823	-	921	814	-
Stage 2	-	-	-	-	-	-	904	814	-	774	794	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.8	10.9	10
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	846	1554	-	-	1468	-	-	721
HCM Lane V/C Ratio	0.278	0.001	-	-	0.012	-	-	0.008
HCM Control Delay (s)	10.9	7.3	0	-	7.5	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.1	0	-	-	0	-	-	0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	84	45	38	24	8
Future Volume (vph)	21	84	45	38	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	84	45	38	24	8
Future Vol, veh/h	21	84	45	38	24	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	105	56	48	30	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	195	35	40	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	794	1038	1570	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	869	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	765	1038	1570	-	-	-
Mov Cap-2 Maneuver	765	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	869	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	969	-	-
HCM Lane V/C Ratio	0.036	-	0.135	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **856**

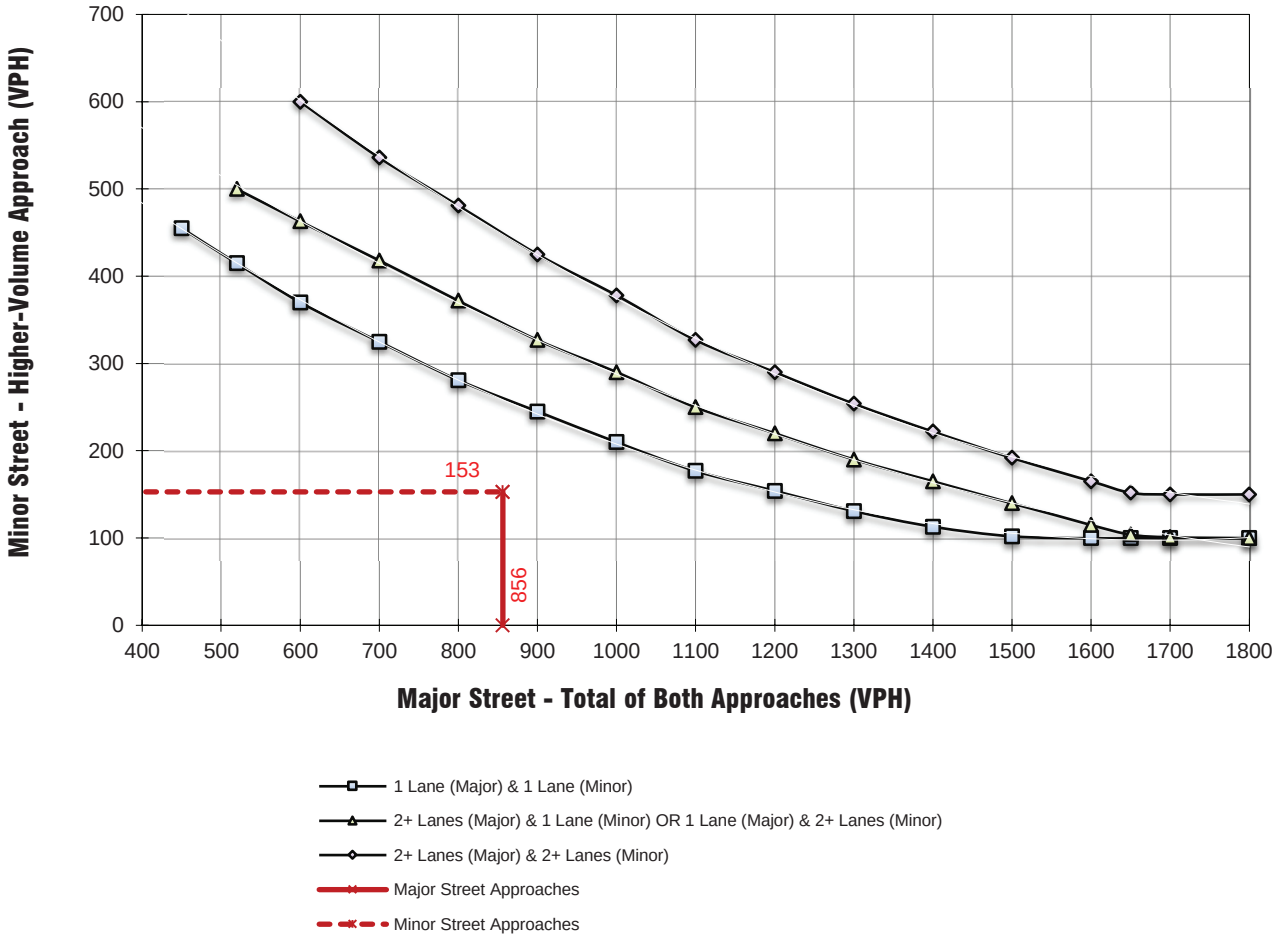
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **153**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1014**

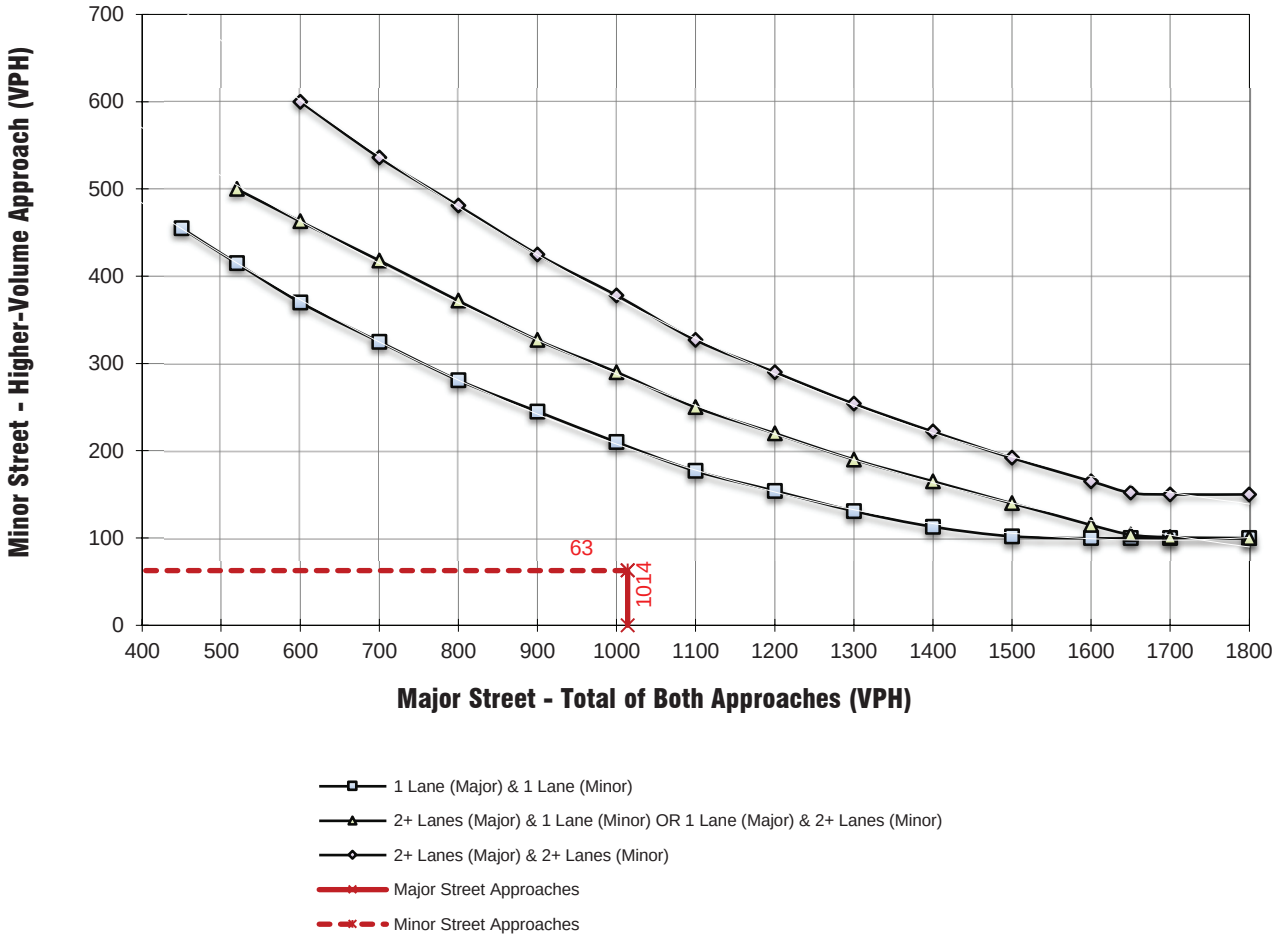
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **63**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1844**

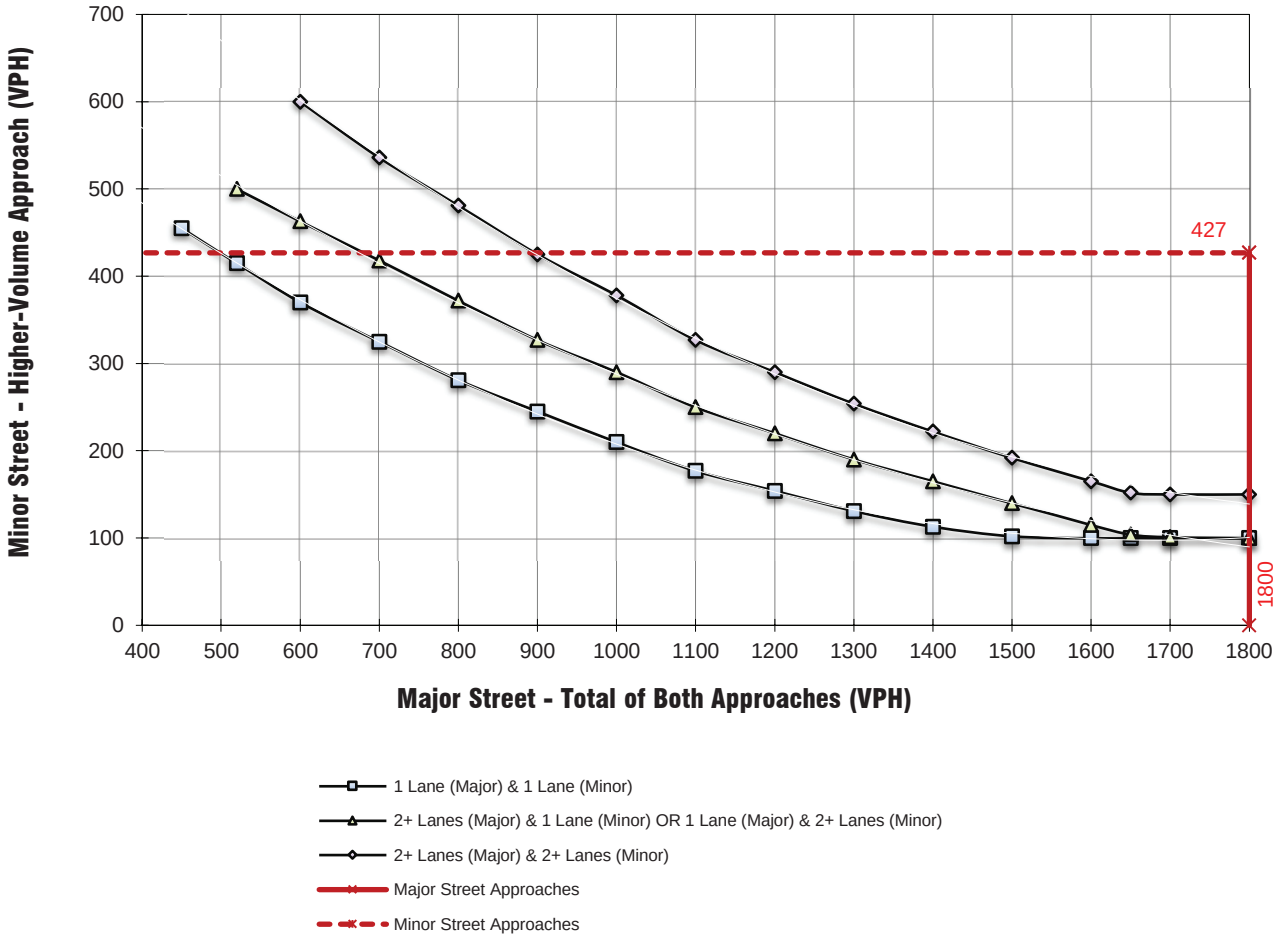
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cherry St.**

High Volume Approach (VPH) = **427**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **2045**

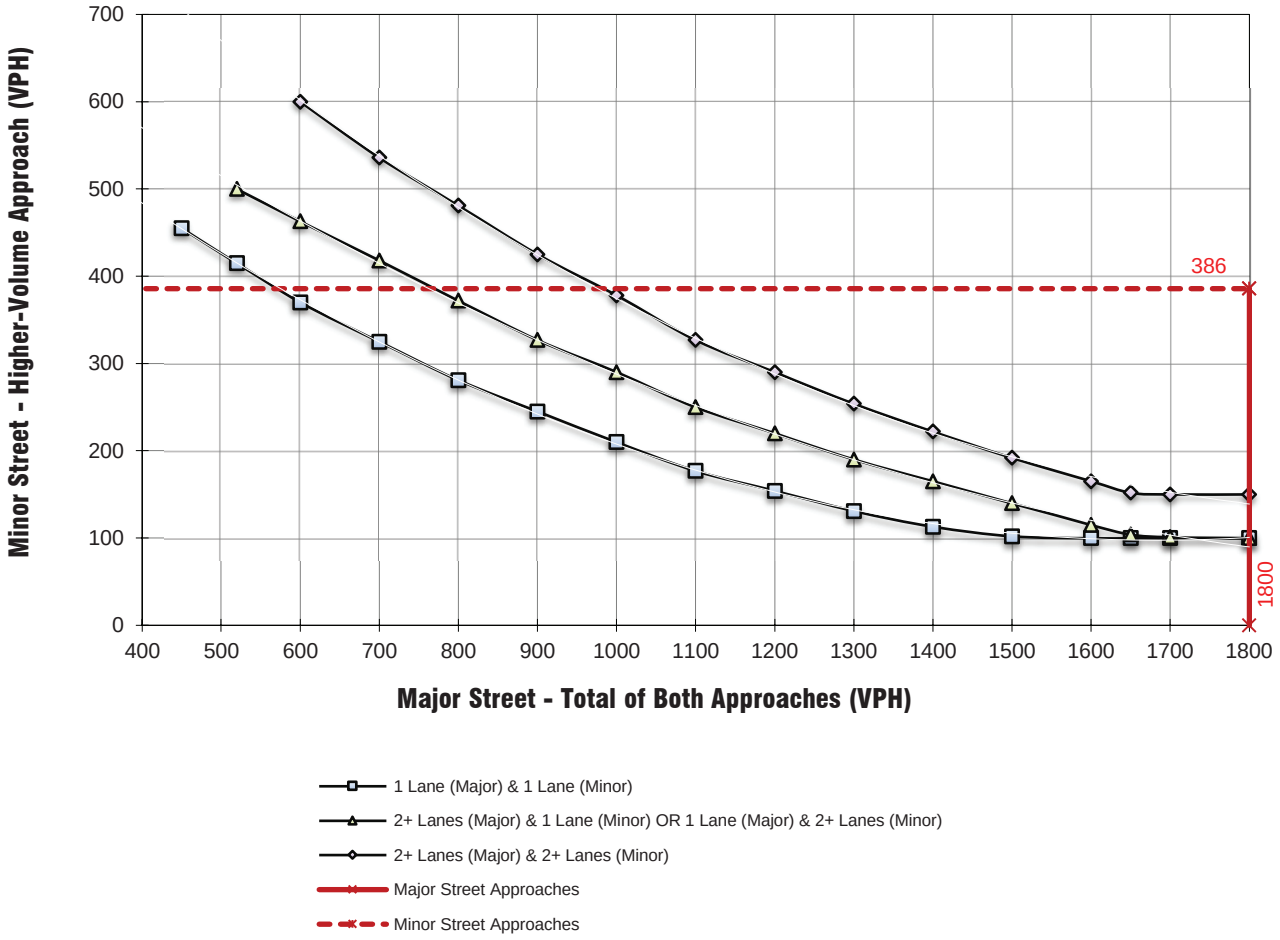
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cherry St.**

High Volume Approach (VPH) = **386**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1507**

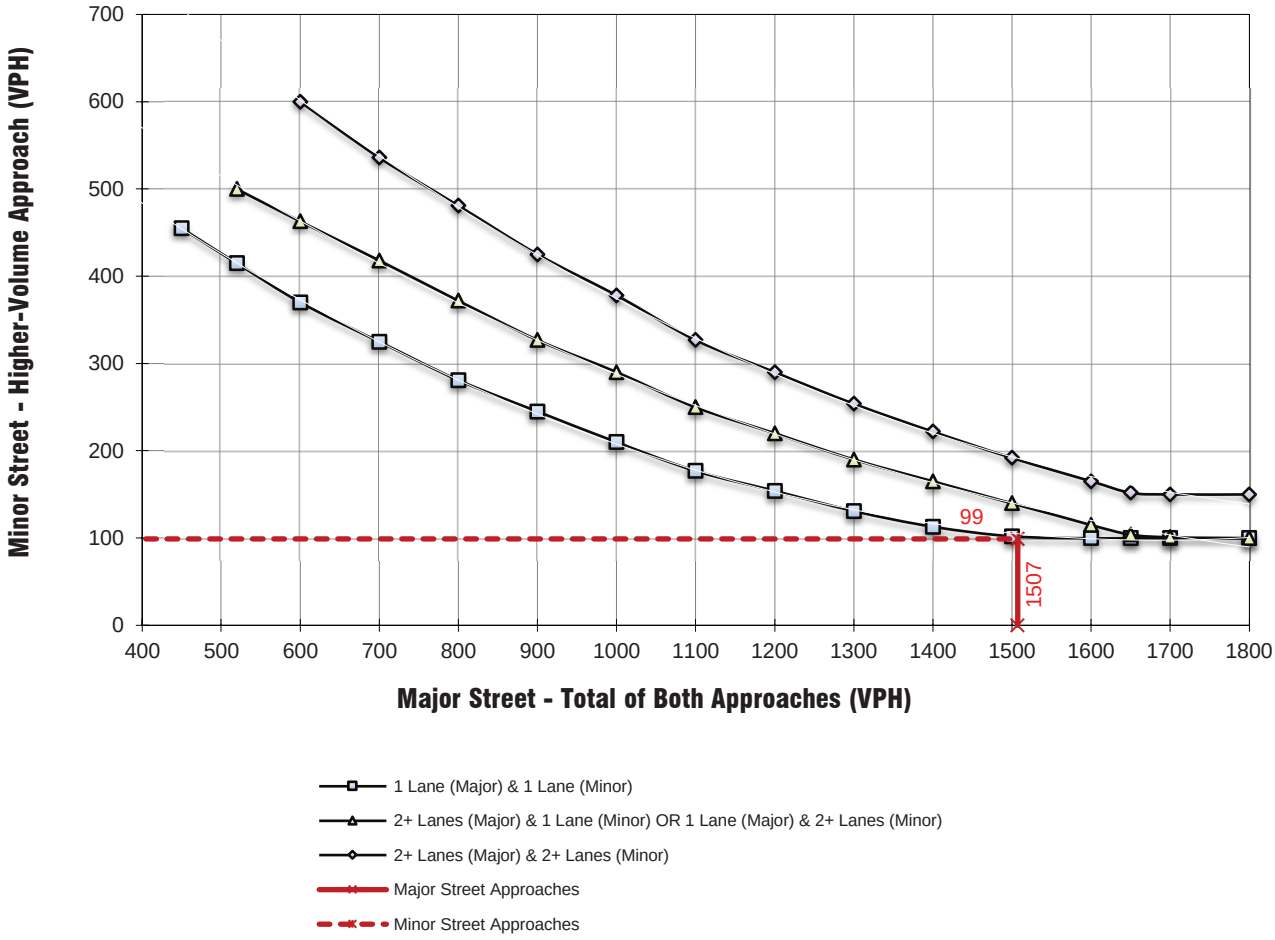
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cyn. Ranch Rd.**

High Volume Approach (VPH) = **99**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1752**

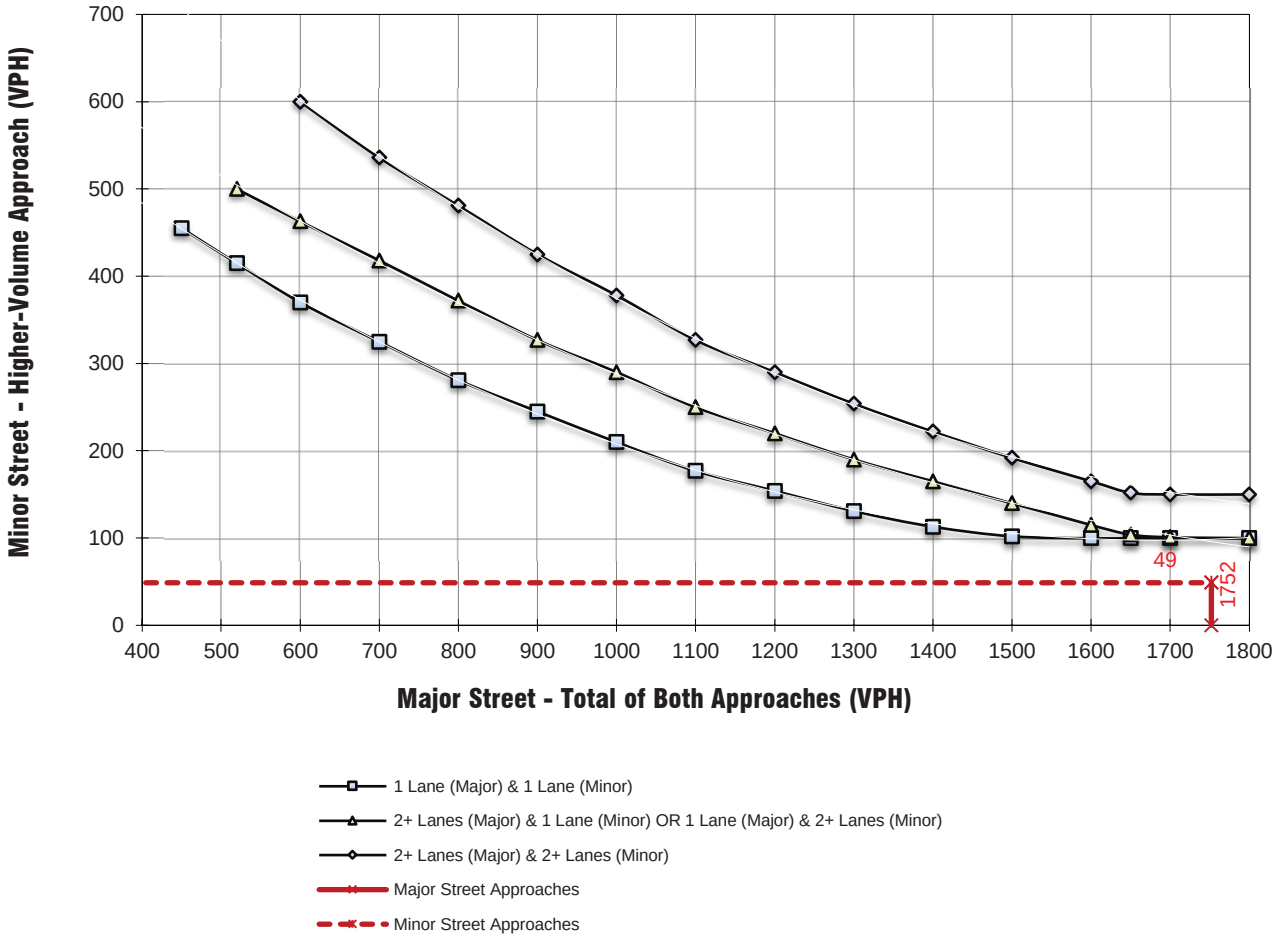
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cyn. Ranch Rd.**

High Volume Approach (VPH) = **49**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (AM Peak Hour)

Major Street Name = **Orange St.**

Total of Both Approaches (VPH) = **758**

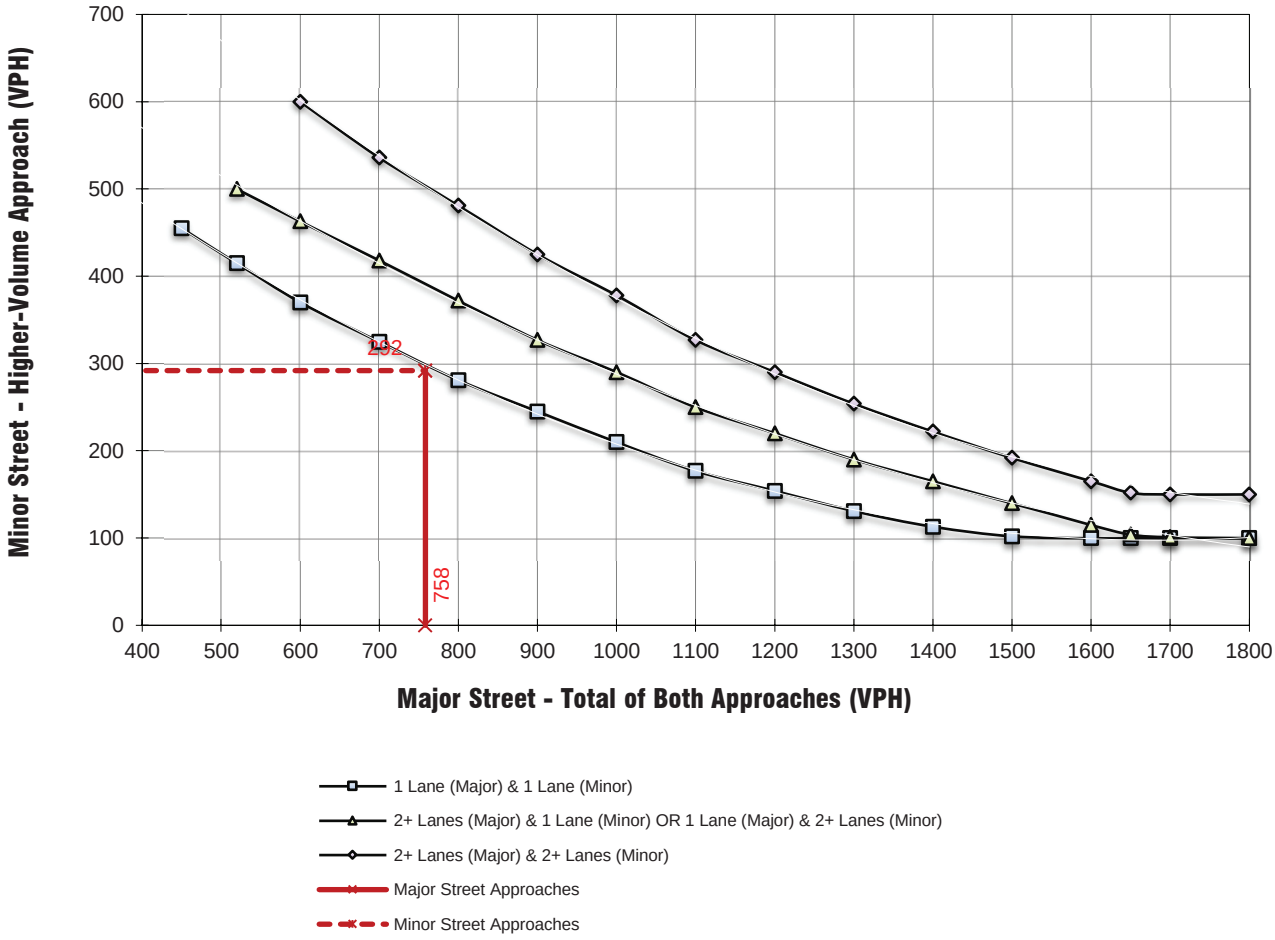
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Canyon Dr.**

High Volume Approach (VPH) = **292**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (PM Peak Hour)

Major Street Name = **Orange St.**

Total of Both Approaches (VPH) = **481**

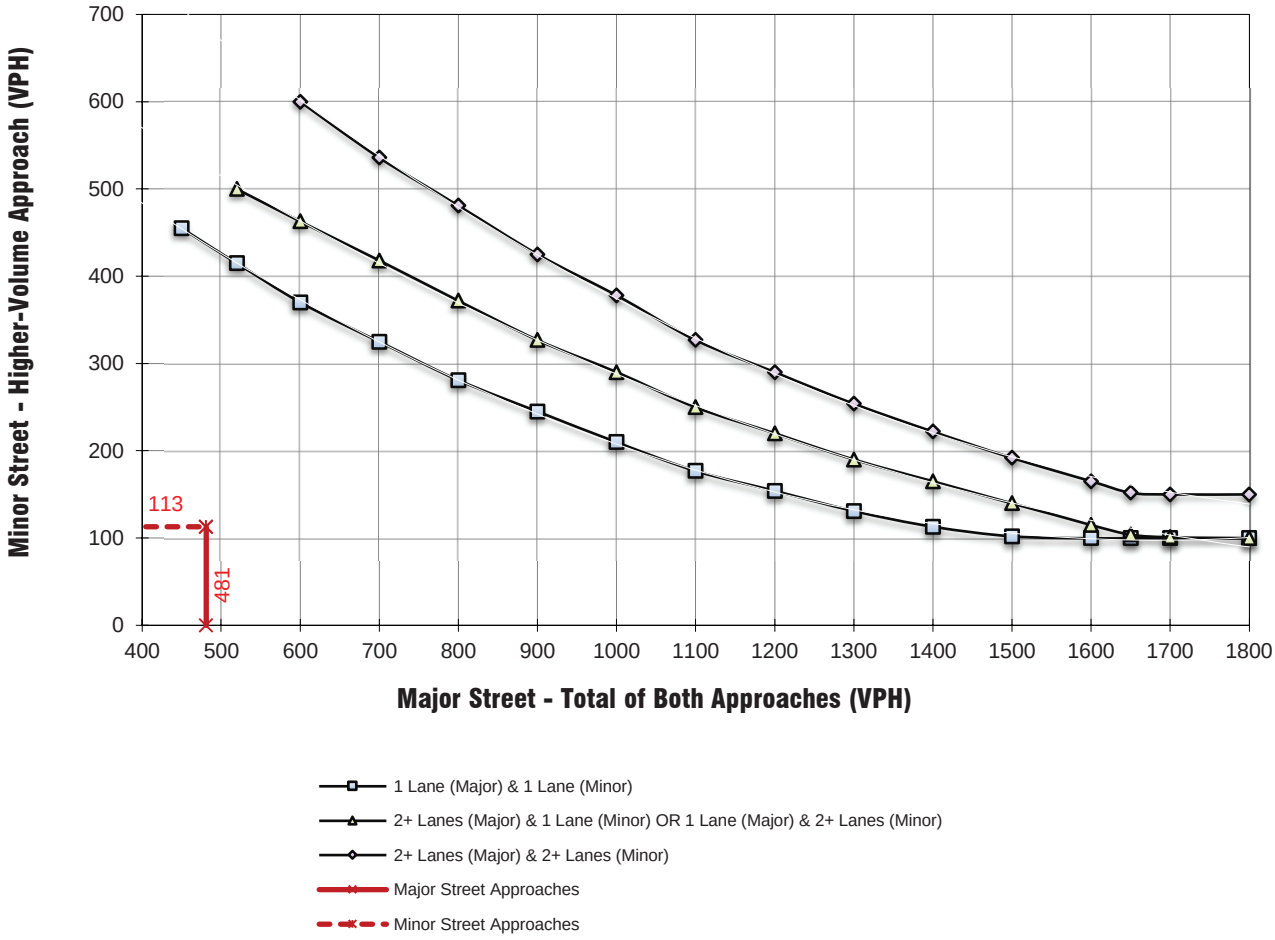
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Canyon Dr.**

High Volume Approach (VPH) = **113**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (AM Peak Hour)

Major Street Name = **Sellers Rd.**

Total of Both Approaches (VPH) = **162**

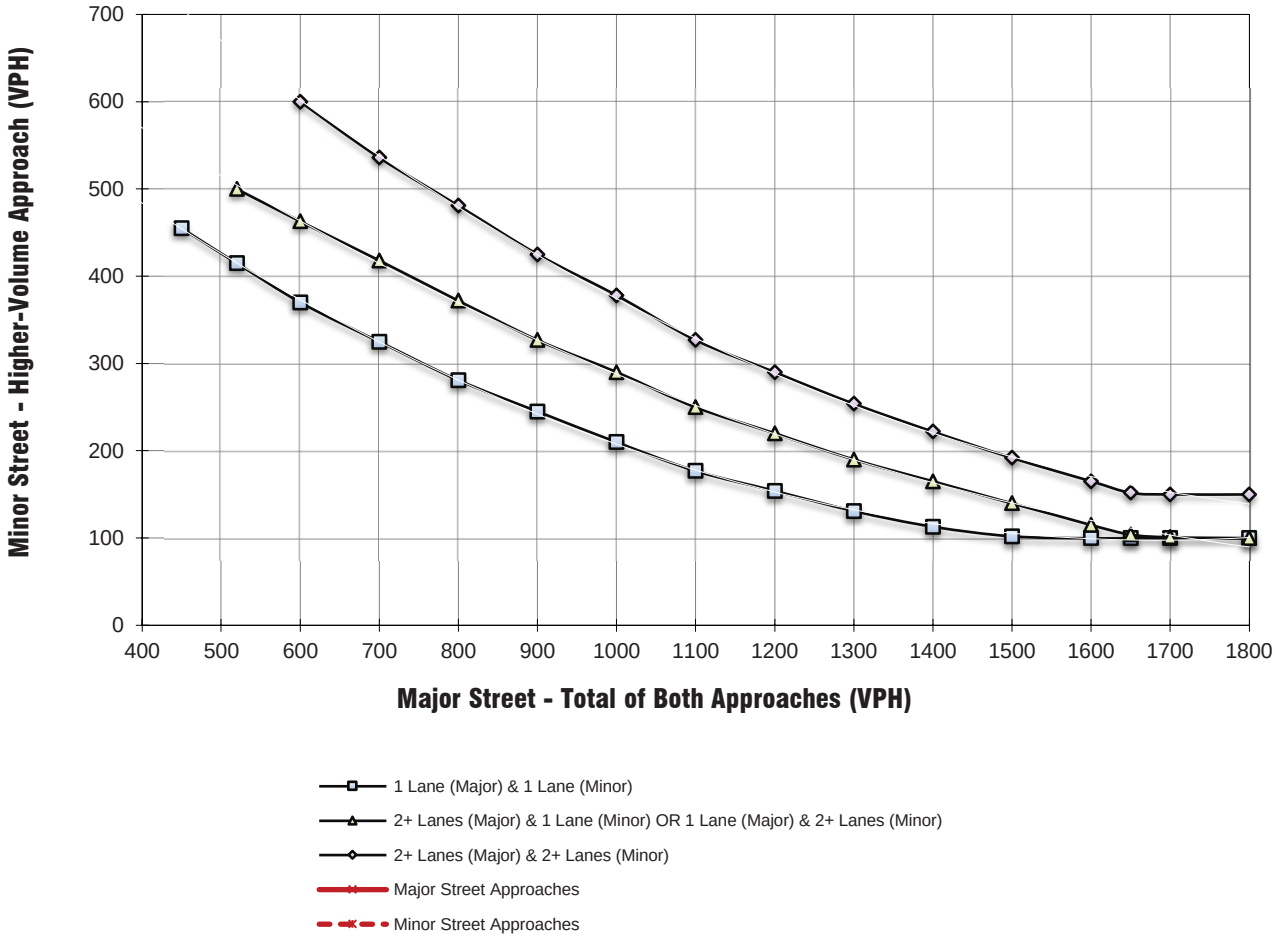
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **81**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (PM Peak Hour)

Major Street Name = **Sellers Rd.**

Total of Both Approaches (VPH) = **130**

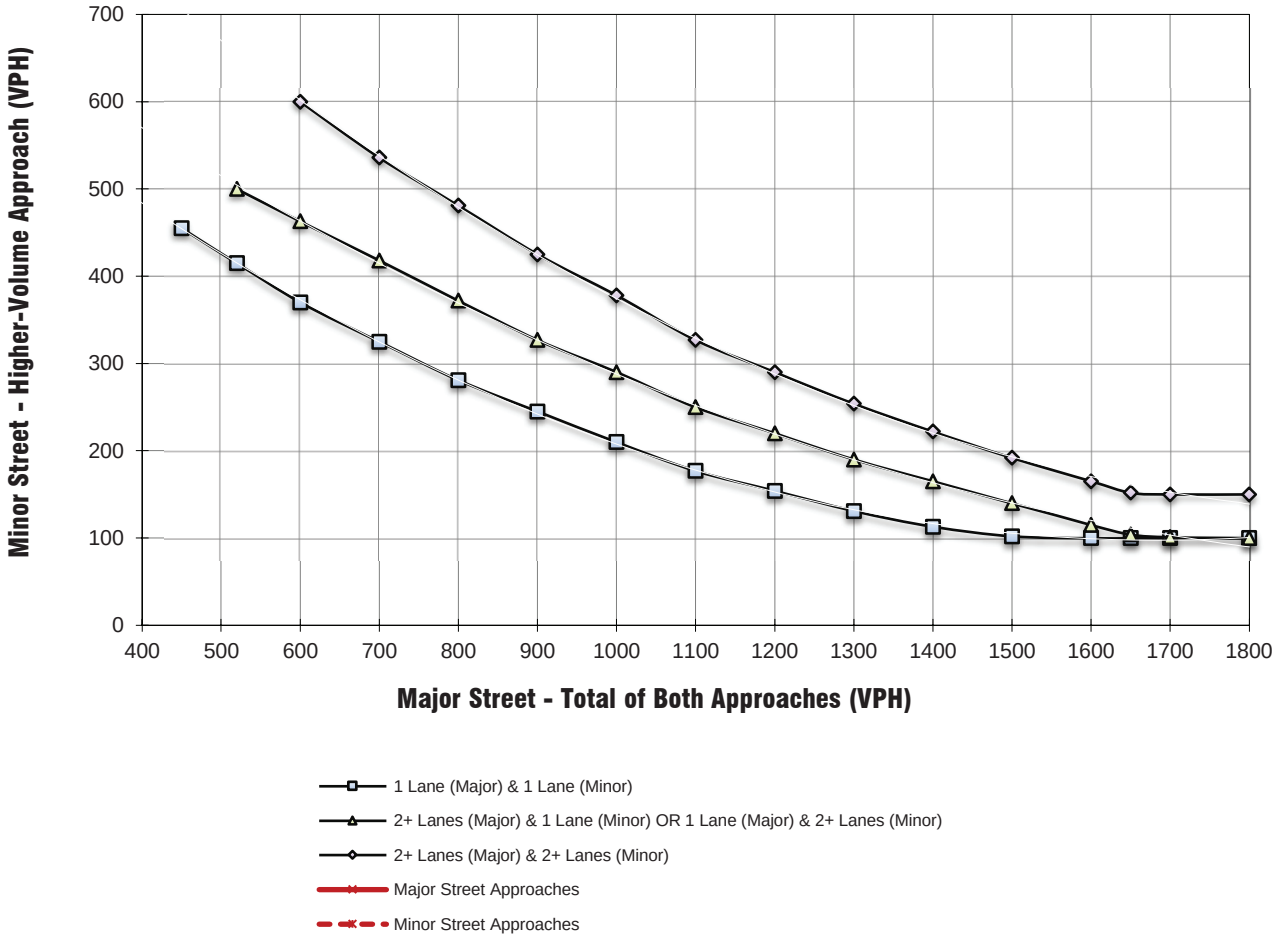
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **45**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (AM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **270**

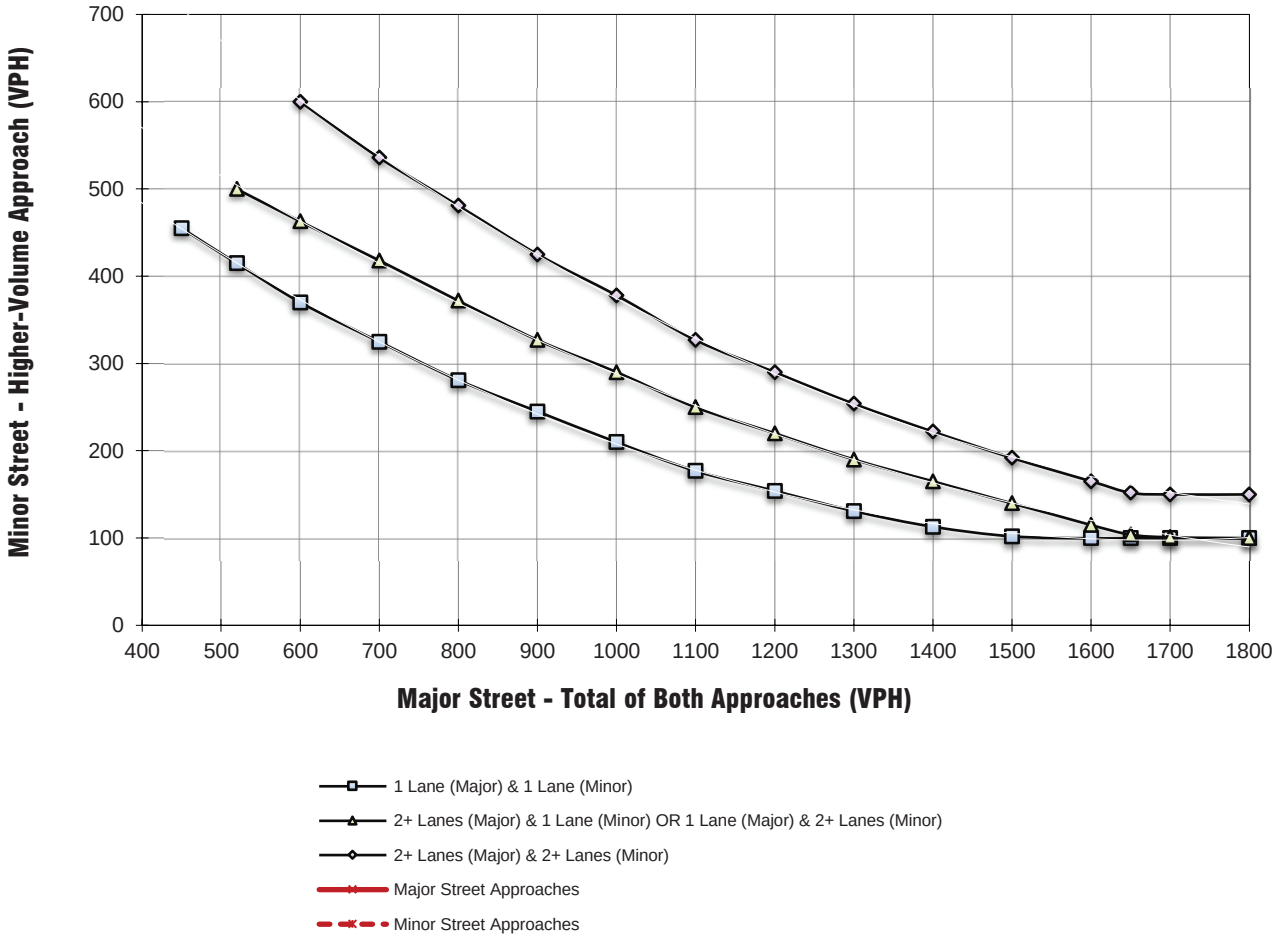
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Orange St.**

High Volume Approach (VPH) = **149**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (PM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **236**

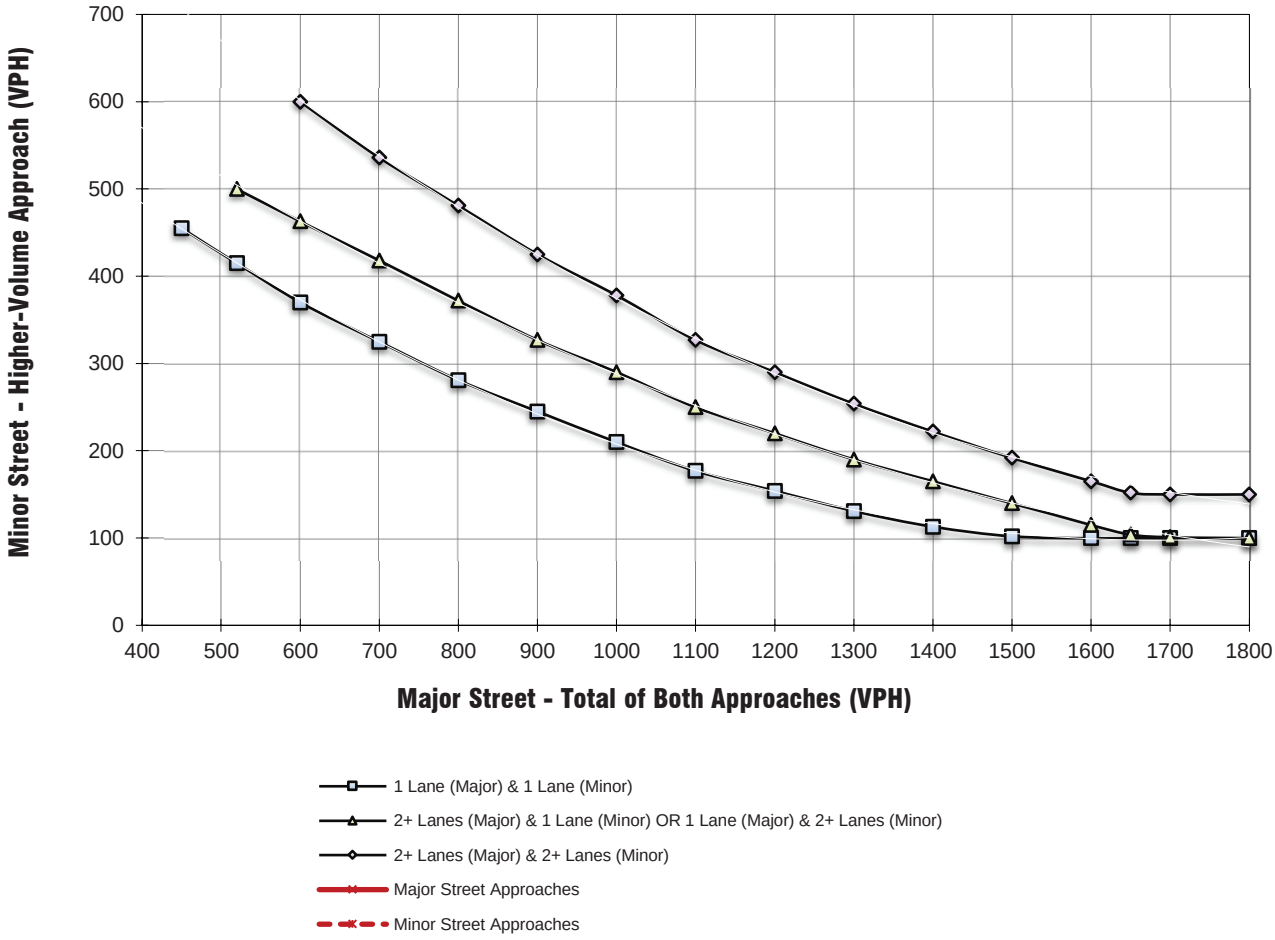
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Orange St.**

High Volume Approach (VPH) = **138**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (AM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **458**

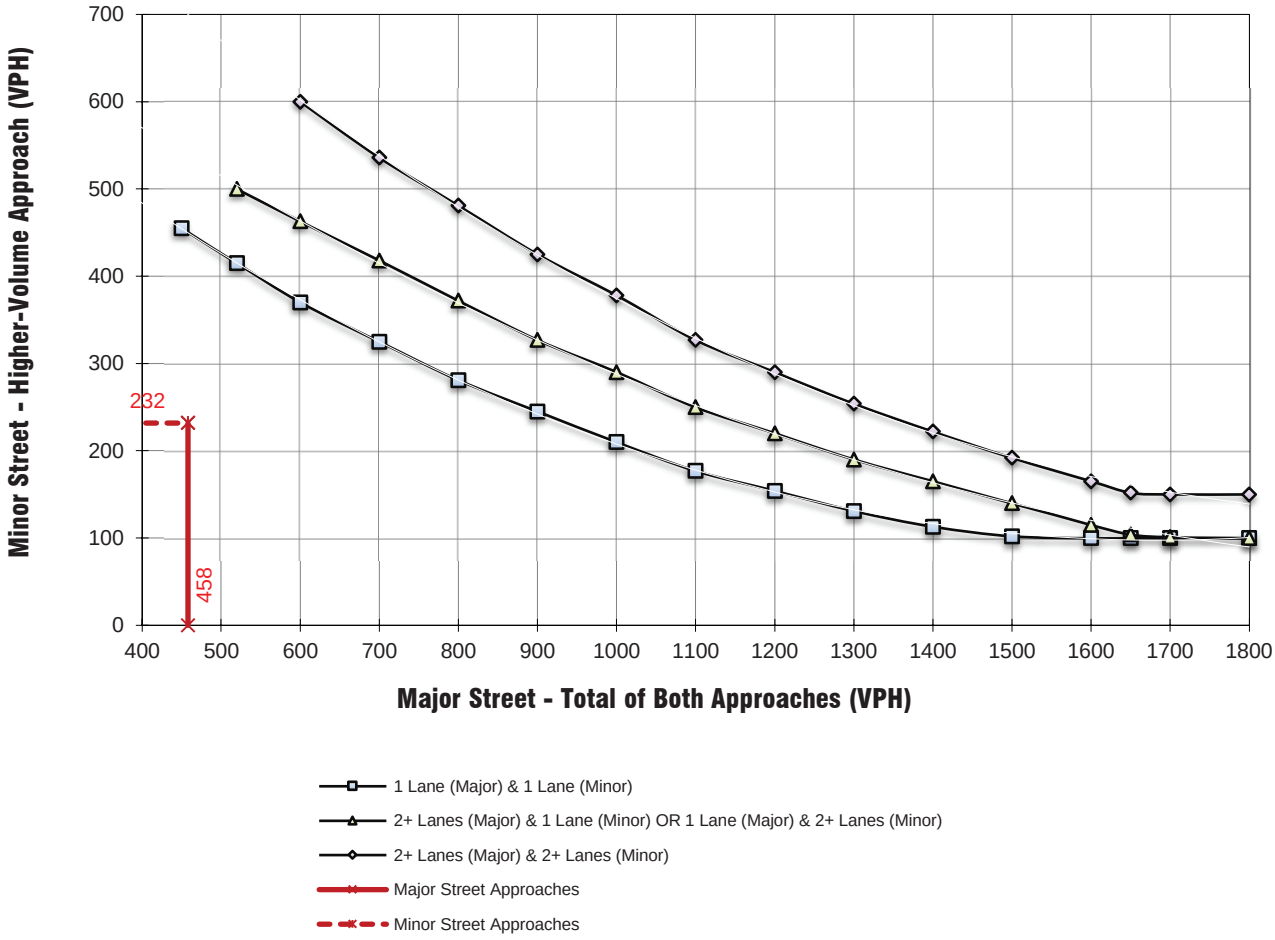
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **232**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
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Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (PM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **377**

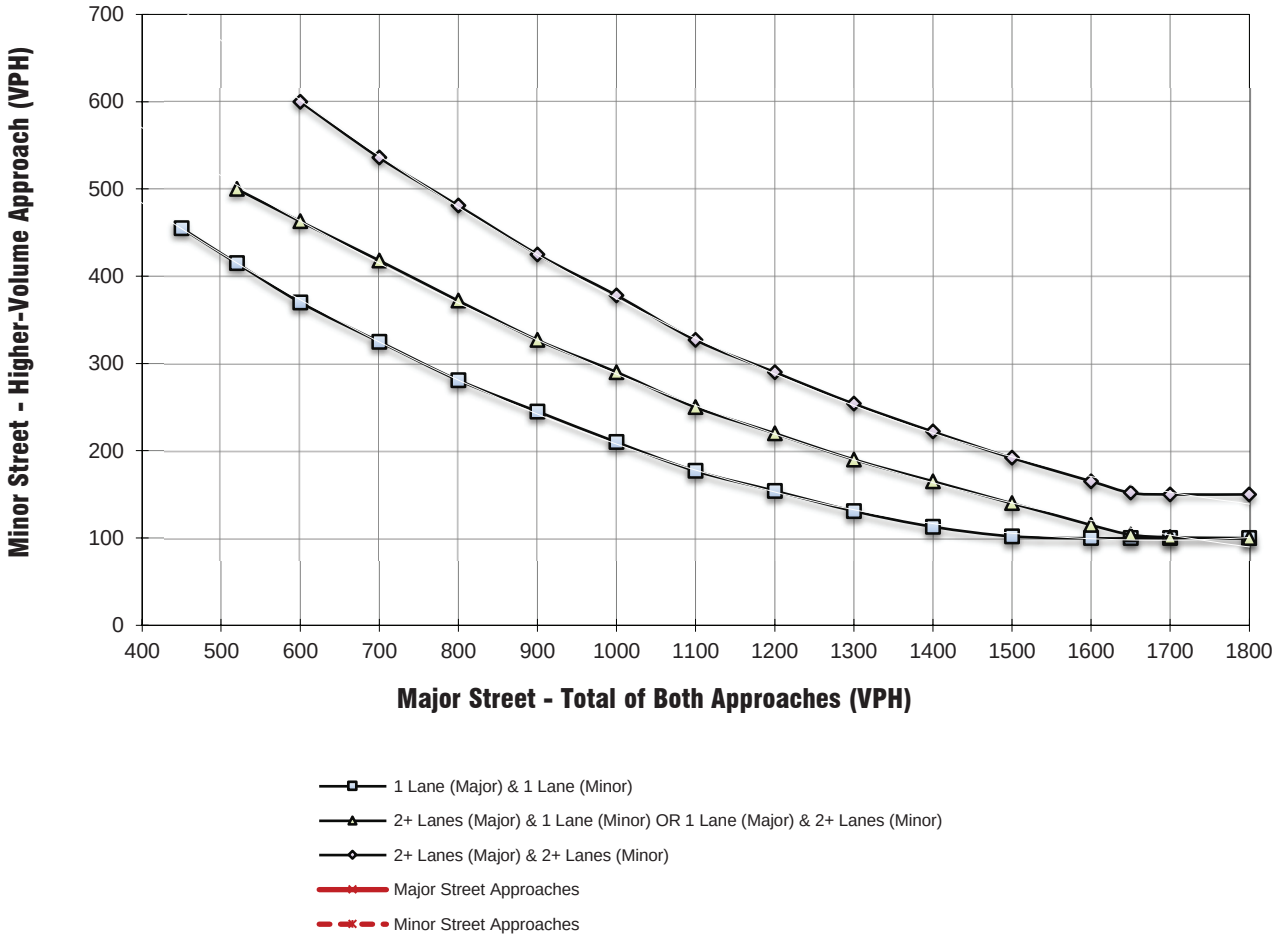
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **130**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (AM Peak Hour)

Major Street Name = **Almond St.**

Total of Both Approaches (VPH) = **351**

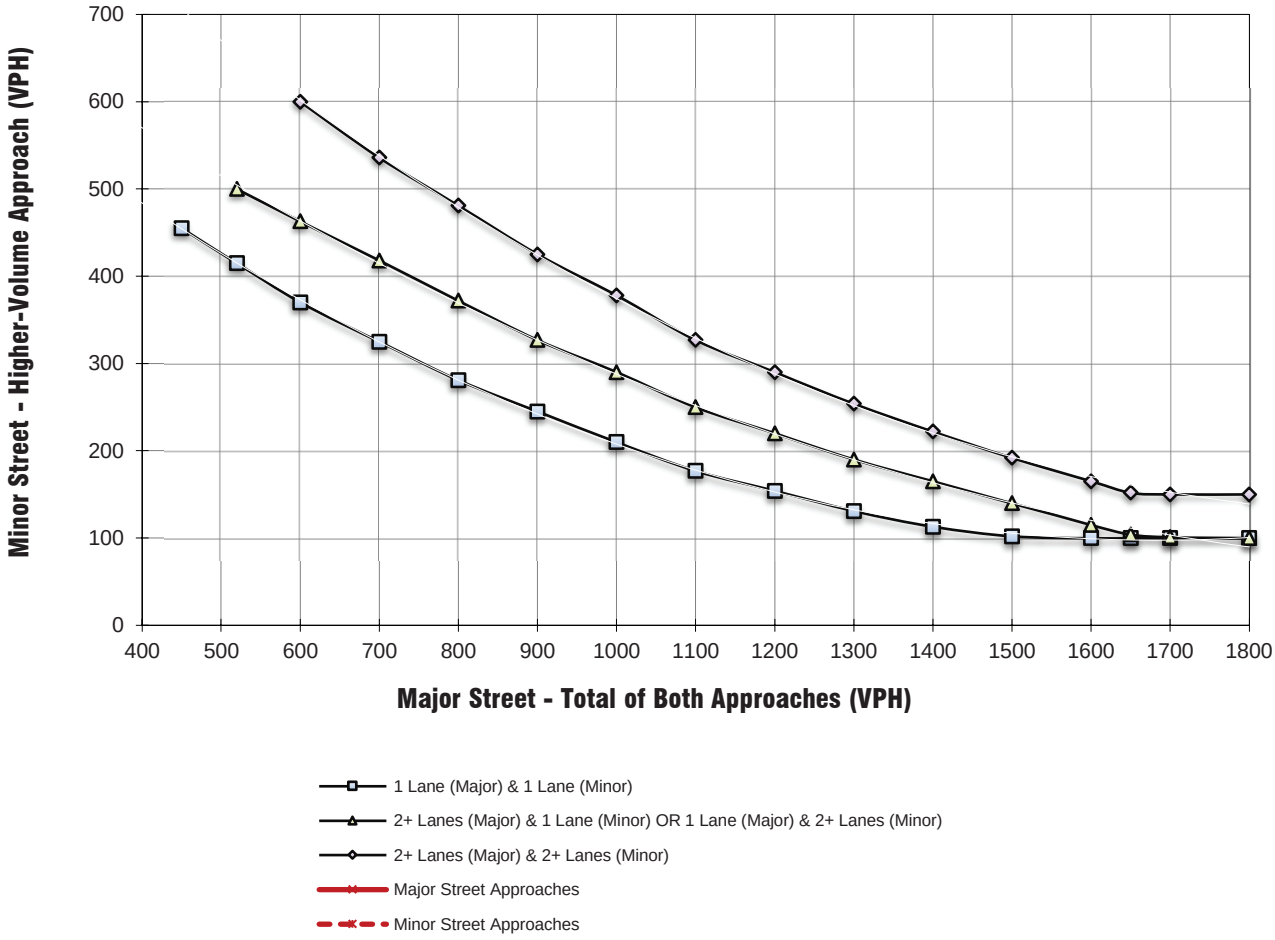
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **182**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

E+P CONDITIONS (PM Peak Hour)

Major Street Name = **Waite St.**

Total of Both Approaches (VPH) = **272**

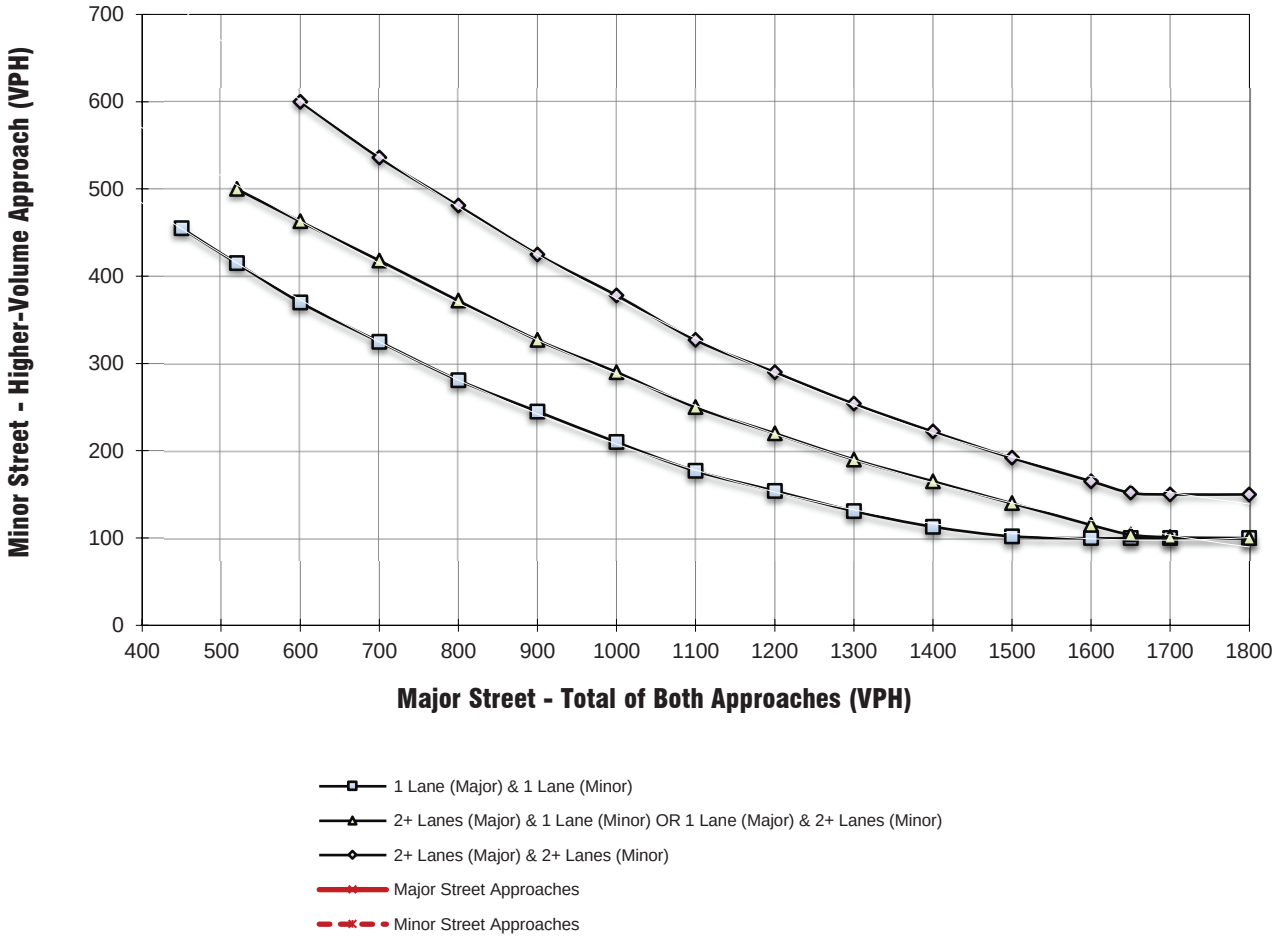
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **118**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

EXISTING PLUS PROJECT CONDITIONS

Jurisdiction: City of Wildomar
Major Street: Cherry St.
Minor Street: N. Dwy.

Critical Approach Speed (Major): 35 mph
Critical Approach Speed (Minor): 30 mph

Major Street Approach Lanes = 1 lane
Minor Street Approach Lanes = 1 lane

Major Street Future ADT = 4,408 vpd
Minor Street Future ADT = 2,231 vpd

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL		Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied XX	*Vehicles Per Day on Major Street (Total of Both Approaches)*		*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*	
Number of lanes for moving traffic on each approa					
Major Street	Minor Street	*Urban*	*Rural*	*Urban*	*Rural*
1 4,408	*1* 2,231	*8,000*	*5,600*	*2,400*	*1,680*
2 +	*1*	*9,600*	*6,720*	*2,400*	*1,680*
2 +	*2 +*	*9,600*	*6,720*	*3,200*	*2,240*
1	*2 +*	*8,000*	*5,600*	*3,200*	*2,240*
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied XX	*Vehicles Per Day on Major Street (Total of Both Approaches)*		*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*	
Number of lanes for moving traffic on each approa					
Major Street	Minor Street	*Urban*	*Rural*	*Urban*	*Rural*
1 4,408	*1* 2,231	*12,000*	*8,400*	*1,200* *	*850*
2 +	*1*	*14,400*	*10,080*	*1,200*	*850*
2 +	*2 +*	*14,400*	*10,080*	*1,600*	*1,120*
1	*2 +*	*12,000*	*8,400*	*1,600*	*1,120*
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following condition fulfilled 80% of more	A 55% B 37%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

EXISTING PLUS PROJECT CONDITIONS

Jurisdiction: City of Wildomar
Major Street: Cherry St.
Minor Street: S. Dwy.

Critical Approach Speed (Major): 35 mph
Critical Approach Speed (Minor): 30 mph

Major Street Approach Lanes = 1 lane
Minor Street Approach Lanes = 1 lane

Major Street Future ADT = 7,845 vpd
Minor Street Future ADT = 2,216 vpd

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT	
XX		
CONDITION A - Minimum Vehicular Volume	*Vehicles Per Day on Major Street (Total of Both Approaches)*	*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*
Satisfied / Not Satisfied XX		
Number of lanes for moving traffic on each approa		
Major Street / Minor Street	*Urban* / *Rural*	*Urban* / *Rural*
1 7,845 / *1* 2,216	*8,000* / *5,600*	*2,400* / *1,680*
2 + / *1*	*9,600* / *6,720*	*2,400* / *1,680*
2 + / *2 +*	*9,600* / *6,720*	*3,200* / *2,240*
1 / *2 +*	*8,000* / *5,600*	*3,200* / *2,240*
CONDITION B - Interruption of Continuous Traffic	*Vehicles Per Day on Major Street (Total of Both Approaches)*	*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*
Satisfied / Not Satisfied XX		
Number of lanes for moving traffic on each approa		
Major Street / Minor Street	*Urban* / *Rural*	*Urban* / *Rural*
1 7,845 / *1* 2,216	*12,000* / *8,400*	*1,200* * / *850*
2 + / *1*	*14,400* / *10,080*	*1,200* / *850*
2 + / *2 +*	*14,400* / *10,080*	*1,600* / *1,120*
1 / *2 +*	*12,000* / *8,400*	*1,600* / *1,120*
Combination of CONDITIONS A + B		
Satisfied / Not Satisfied XX	2 CONDITIONS	2 CONDITIONS
No one condition satisfied, but following condition fulfilled 80% of more .... A 92% / B 65%	80%	80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX F

EXISTING PLUS PROJECT (E+P) CONDITIONS
RAMP JUNCTION ANALYSIS WORKSHEETS

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	230
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	4061	633
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4504	702
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.64	0.35

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.426
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1464
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.615	Outer Lanes Freeway Speed (SO), mi/h	69.5
Flow in Lanes 1 and 2 (v12), pc/h	3040	Ramp Junction Speed (S), mi/h	59.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	25.4
Level of Service (LOS)	D	Density in Ramp Influence Area (DR), pc/mi/ln	28.3

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	400
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3428	938
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3802	1040
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.69	0.52

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.393
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1563
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	56.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.589	Outer Lanes Freeway Speed (SO), mi/h	61.2
Flow in Lanes 1 and 2 (v12), pc/h	2239	Ramp Junction Speed (S), mi/h	57.6
Flow Entering Ramp-Infl. Area (vR12), pc/h	3279	Average Density (D), pc/mi/ln	28.0
Level of Service (LOS)	D	Density in Ramp Influence Area (DR), pc/mi/ln	28.1

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	160
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2954	551
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3276	611
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.46	0.31

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.418
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	933
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.4
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.650	Outer Lanes Freeway Speed (SO), mi/h	71.3
Flow in Lanes 1 and 2 (v12), pc/h	2343	Ramp Junction Speed (S), mi/h	59.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	18.4
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	23.0

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	555
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2403	626
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	2665	694
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.48	0.35

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.315
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1085
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.8
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.593	Outer Lanes Freeway Speed (SO), mi/h	62.9
Flow in Lanes 1 and 2 (v12), pc/h	1580	Ramp Junction Speed (S), mi/h	59.4
Flow Entering Ramp-Infl. Area (vR12), pc/h	2274	Average Density (D), pc/mi/ln	18.8
Level of Service (LOS)	B	Density in Ramp Influence Area (DR), pc/mi/ln	19.5

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	230
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3420	696
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3793	772
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.54	0.39

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.432
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1118
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.1
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.630	Outer Lanes Freeway Speed (SO), mi/h	70.8
Flow in Lanes 1 and 2 (v12), pc/h	2675	Ramp Junction Speed (S), mi/h	59.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	21.4
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	25.2

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	400
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2724	540
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3021	599
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.51	0.30

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.331
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1242
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.4
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.589	Outer Lanes Freeway Speed (SO), mi/h	62.3
Flow in Lanes 1 and 2 (v12), pc/h	1779	Ramp Junction Speed (S), mi/h	59.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	2378	Average Density (D), pc/mi/ln	20.5
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	21.3

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	160
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3758	867
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4168	962
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.59	0.48

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.450
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1244
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	54.6
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.612	Outer Lanes Freeway Speed (SO), mi/h	70.4
Flow in Lanes 1 and 2 (v12), pc/h	2924	Ramp Junction Speed (S), mi/h	58.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	23.7
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	28.0

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	12/18/19
Agency	Trames Solutions, Inc.	Analysis Year	E+P
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	555
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2891	447
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3207	496
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.53	0.25

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.320
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1305
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.6
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.593	Outer Lanes Freeway Speed (SO), mi/h	62.1
Flow in Lanes 1 and 2 (v12), pc/h	1902	Ramp Junction Speed (S), mi/h	59.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	2398	Average Density (D), pc/mi/ln	20.9
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	20.5

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APPENDIX G

EXISTING PLUS AMBIENT PLUS PROJECT (EAP 2025) CONDITIONS INTERSECTION ANALYSIS CALCULATION WORKSHEETS AND TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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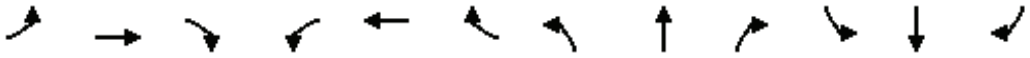


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	405	30	65	326	42	24	33	68	83	35	41
Future Volume (vph)	22	405	30	65	326	42	24	33	68	83	35	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	0		0	0		0
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		289			1348			206			1314	
Travel Time (s)		5.6			26.3			5.6			35.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	405	30	65	326	42	24	33	68	83	35	41
Future Vol, veh/h	22	405	30	65	326	42	24	33	68	83	35	41
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	494	37	79	398	51	29	40	83	101	43	50
Number of Lanes	0	2	1	0	2	1	0	1	0	0	1	0

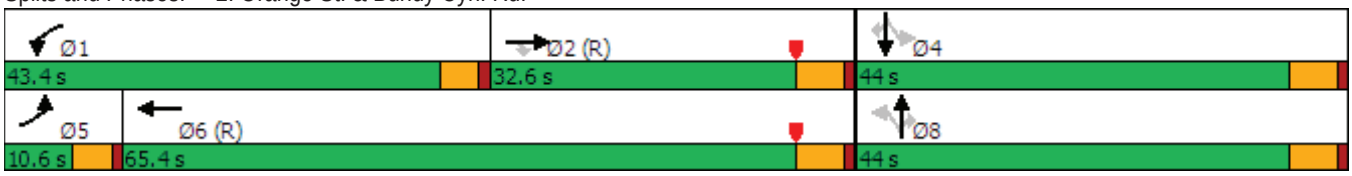
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	17.5	15.2	13.9	16.2
HCM LOS	C	C	B	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	19%	14%	0%	0%	37%	0%	0%	52%
Vol Thru, %	26%	86%	100%	0%	63%	100%	0%	22%
Vol Right, %	54%	0%	0%	100%	0%	0%	100%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	157	270	30	174	217	42	159
LT Vol	24	22	0	0	65	0	0	83
Through Vol	33	135	270	0	109	217	0	35
RT Vol	68	0	0	30	0	0	42	41
Lane Flow Rate	152	191	329	37	212	265	51	194
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.322	0.369	0.628	0.062	0.418	0.509	0.088	0.421
Departure Headway (Hd)	7.603	6.937	6.865	6.146	7.103	6.911	6.192	7.814
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	473	519	527	582	506	522	578	461
Service Time	5.356	4.682	4.61	3.891	4.849	4.657	3.937	5.565
HCM Lane V/C Ratio	0.321	0.368	0.624	0.064	0.419	0.508	0.088	0.421
HCM Control Delay	13.9	13.7	20.6	9.3	14.9	16.6	9.5	16.2
HCM Lane LOS	B	B	C	A	B	C	A	C
HCM 95th-tile Q	1.4	1.7	4.3	0.2	2	2.9	0.3	2.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	491	24	350	414	83	9	58	405	204	47	7
Future Volume (vph)	25	491	24	350	414	83	9	58	405	204	47	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	0		100	0		100
Storage Lanes	1		1	1		0	0		1	0		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8		8	4		4
Detector Phase	5	2	2	1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3	23.3	23.3	23.3	23.3
Total Split (s)	10.6	32.6	32.6	43.4	65.4		44.0	44.0	44.0	44.0	44.0	44.0
Total Split (%)	8.8%	27.2%	27.2%	36.2%	54.5%		36.7%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3			5.3	5.3		5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min	Min	Min	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	491	24	350	414	83	9	58	405	204	47	7
Future Volume (veh/h)	25	491	24	350	414	83	9	58	405	204	47	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	540	26	385	455	91	10	64	445	224	52	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	1146	507	408	1555	309	34	187	509	54	0	509
Arrive On Green	0.02	0.32	0.32	0.38	0.88	0.88	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3554	1573	1781	2952	586	0	581	1578	0	0	1578
Grp Volume(v), veh/h	27	540	26	385	273	273	74	0	445	276	0	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1762	581	0	1578	0	0	1578
Q Serve(g_s), s	1.8	14.6	1.4	25.0	3.0	3.0	0.0	0.0	31.9	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.8	14.6	1.4	25.0	3.0	3.0	38.7	0.0	31.9	38.7	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.33	0.14		1.00	0.81		1.00
Lane Grp Cap(c), veh/h	44	1146	507	408	936	928	222	0	509	54	0	509
V/C Ratio(X)	0.61	0.47	0.05	0.94	0.29	0.29	0.33	0.00	0.87	5.08	0.00	0.02
Avail Cap(c_a), veh/h	91	1146	507	577	936	928	222	0	509	54	0	509
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	32.5	28.0	36.3	3.6	3.6	31.6	0.0	38.4	60.0	0.0	27.7
Incr Delay (d2), s/veh	5.0	1.4	0.2	16.5	0.8	0.8	0.3	0.0	15.0	1875.6	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	6.4	0.5	11.1	1.1	1.1	1.5	0.0	14.2	30.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	33.9	28.2	52.8	4.3	4.4	32.0	0.0	53.4	1935.6	0.0	27.7
LnGrp LOS	E	C	C	D	A	A	C	A	D	F	A	C
Approach Vol, veh/h		593			931			519			284	
Approach Delay, s/veh		35.0			24.4			50.3			1881.9	
Approach LOS		C			C			D			F	

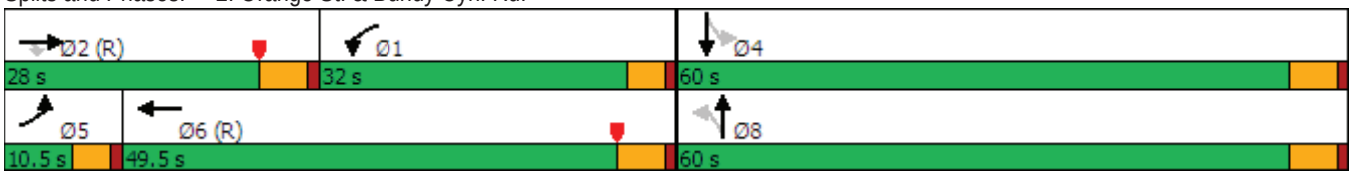
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.0	44.0		44.0	7.5	68.5		44.0				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	38.9	27.3		38.7	6.1	60.1		38.7				
Max Q Clear Time (g_c+I1), s	27.0	16.6		40.7	3.8	5.0		40.7				
Green Ext Time (p_c), s	0.5	1.8		0.0	0.0	2.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		259.6	
HCM 6th LOS		F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	491	24	350	414	83	9	58	405	204	47	7
Future Volume (vph)	25	491	24	350	414	83	9	58	405	204	47	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	100		100	100		100
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3		23.3	23.3	
Total Split (s)	10.5	28.0	28.0	32.0	49.5		60.0	60.0		60.0	60.0	
Total Split (%)	8.8%	23.3%	23.3%	26.7%	41.3%		50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3		4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3		5.3	5.3		5.3	5.3	
Lead/Lag	Lead	Lead	Lead	Lag	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	491	24	350	414	83	9	58	405	204	47	7
Future Volume (veh/h)	25	491	24	350	414	83	9	58	405	204	47	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	540	26	385	455	91	10	64	445	224	52	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	672	296	616	1526	303	646	92	642	242	721	111
Arrive On Green	0.02	0.15	0.15	0.11	0.17	0.17	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1781	3554	1564	1781	2952	586	1339	203	1409	891	1582	243
Grp Volume(v), veh/h	27	540	26	385	273	273	10	0	509	224	0	60
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1761	1339	0	1611	891	0	1826
Q Serve(g_s), s	1.8	17.6	1.7	24.7	16.1	16.3	0.5	0.0	30.2	24.5	0.0	2.2
Cycle Q Clear(g_c), s	1.8	17.6	1.7	24.7	16.1	16.3	2.7	0.0	30.2	54.7	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.33	1.00		0.87	1.00		0.13
Lane Grp Cap(c), veh/h	44	672	296	616	919	911	646	0	734	242	0	832
V/C Ratio(X)	0.61	0.80	0.09	0.62	0.30	0.30	0.02	0.00	0.69	0.92	0.00	0.07
Avail Cap(c_a), veh/h	89	672	296	616	919	911	646	0	734	242	0	832
HCM Platoon Ratio	0.80	0.80	0.80	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.2	48.8	42.0	45.7	30.7	30.8	19.1	0.0	26.0	50.0	0.0	18.4
Incr Delay (d2), s/veh	5.0	9.8	0.6	1.4	0.8	0.8	0.0	0.0	2.4	37.4	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	8.8	0.7	12.1	7.9	7.9	0.2	0.0	11.7	9.3	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	58.6	42.6	47.2	31.5	31.6	19.1	0.0	28.3	87.4	0.0	18.4
LnGrp LOS	E	E	D	D	C	C	B	A	C	F	A	B
Approach Vol, veh/h		593			931			519			284	
Approach Delay, s/veh		58.1			38.0			28.2			72.9	
Approach LOS		E			D			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	46.9	28.0		60.0	7.5	67.5		60.0				
Change Period (Y+Rc), s	5.3	* 5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	27.5	* 23		54.7	6.0	44.2		54.7				
Max Q Clear Time (g_c+I1), s	26.7	19.6		56.7	3.8	18.3		32.2				
Green Ext Time (p_c), s	0.1	0.8		0.0	0.0	2.1		2.3				

Intersection Summary			
HCM 6th Ctrl Delay		45.2	
HCM 6th LOS		D	

Notes

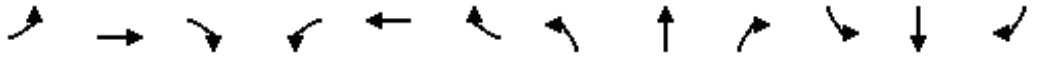
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	553	546	409	630	0	0	0	0	373	7	262
Future Volume (vph)	0	553	546	409	630	0	0	0	0	373	7	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	250		0	0		0	300		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases										4		
Detector Phase		2		1	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		45.0		35.0	45.0					25.0	25.0	
Total Split (s)		46.0		38.0	84.0					36.0	36.0	
Total Split (%)		38.3%		31.7%	70.0%					30.0%	30.0%	
Yellow Time (s)		4.3		3.6	4.3					4.3	4.3	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.3		4.6	5.3					5.3	5.3	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		C-Min		None	C-Min					None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	553	546	409	630	0	0	0	0	373	7	262
Future Volume (veh/h)	0	553	546	409	630	0	0	0	0	373	7	262
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	576	569	426	656	0				389	7	273
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	690	612	444	2402	0				420	9	364
Arrive On Green	0.00	0.78	0.78	0.50	1.00	0.00				0.24	0.24	0.24
Sat Flow, veh/h	0	1870	1575	1781	3647	0				1781	40	1542
Grp Volume(v), veh/h	0	576	569	426	656	0				389	0	280
Grp Sat Flow(s),veh/h/ln	0	1777	1575	1781	1777	0				1781	0	1581
Q Serve(g_s), s	0.0	24.7	34.9	27.6	0.0	0.0				25.6	0.0	19.7
Cycle Q Clear(g_c), s	0.0	24.7	34.9	27.6	0.0	0.0				25.6	0.0	19.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.98
Lane Grp Cap(c), veh/h	0	690	612	444	2402	0				420	0	373
V/C Ratio(X)	0.00	0.83	0.93	0.96	0.27	0.00				0.93	0.00	0.75
Avail Cap(c_a), veh/h	0	690	612	496	2402	0				456	0	405
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.85	0.85	0.65	0.65	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.0	12.1	29.5	0.0	0.0				44.8	0.0	42.6
Incr Delay (d2), s/veh	0.0	9.9	20.3	21.4	0.2	0.0				23.1	0.0	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.0	7.6	11.2	0.1	0.0				13.9	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.8	32.4	50.9	0.2	0.0				67.9	0.0	48.6
LnGrp LOS	A	C	C	D	A	A				E	A	D
Approach Vol, veh/h		1145			1082						669	
Approach Delay, s/veh		26.6			20.2						59.8	
Approach LOS		C			C						E	

Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	34.5	51.9		33.6		86.4						
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3						
Max Green Setting (Gmax), s	33.4	40.7		30.7		78.7						
Max Q Clear Time (g_c+I1), s	29.6	36.9		27.6		2.0						
Green Ext Time (p_c), s	0.3	1.9		0.7		3.1						

Intersection Summary												
HCM 6th Ctrl Delay			31.9									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	701	0	0	749	409	290	0	270	0	0	0
Future Volume (vph)	226	701	0	0	749	409	290	0	270	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases							8					
Detector Phase	5	2			6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0		25.0	25.0				
Total Split (s)	27.0	85.0			58.0		35.0	35.0				
Total Split (%)	22.5%	70.8%			48.3%		29.2%	29.2%				
Yellow Time (s)	3.0	4.3			4.3		4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3		5.3	5.3				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None	C-Min			C-Min		None	None				

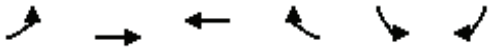
Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	226	701	0	0	749	409	290	0	270	0	0	0
Future Volume (veh/h)	226	701	0	0	749	409	290	0	270	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	231	715	0	0	764	417	296	0	276			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	255	2541	0	0	1195	649	350	0	309			
Arrive On Green	0.29	1.00	0.00	0.00	0.54	0.54	0.20	0.00	0.20			
Sat Flow, veh/h	1781	3647	0	0	2312	1205	1781	0	1573			
Grp Volume(v), veh/h	231	715	0	0	611	570	296	0	276			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1647	1781	0	1573			
Q Serve(g_s), s	15.0	0.0	0.0	0.0	29.0	29.3	19.2	0.0	20.5			
Cycle Q Clear(g_c), s	15.0	0.0	0.0	0.0	29.0	29.3	19.2	0.0	20.5			
Prop In Lane	1.00		0.00	0.00		0.73	1.00		1.00			
Lane Grp Cap(c), veh/h	255	2541	0	0	957	887	350	0	309			
V/C Ratio(X)	0.91	0.28	0.00	0.00	0.64	0.64	0.85	0.00	0.89			
Avail Cap(c_a), veh/h	341	2541	0	0	957	887	441	0	389			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.37	0.37	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.1	0.0	0.0	0.0	19.5	19.5	46.4	0.0	47.0			
Incr Delay (d2), s/veh	8.5	0.1	0.0	0.0	3.3	3.6	9.7	0.0	16.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	0.0	12.3	11.6	9.4	0.0	9.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.1	0.0	0.0	22.7	23.1	56.2	0.0	63.7			
LnGrp LOS	D	A	A	A	C	C	E	A	E			
Approach Vol, veh/h		946			1181			572				
Approach Delay, s/veh		12.4			22.9			59.8				
Approach LOS		B			C			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.1			21.2	69.9		28.9				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		79.7			23.0	52.7		29.7				
Max Q Clear Time (g_c+I1), s		2.0			17.0	31.3		22.5				
Green Ext Time (p_c), s		3.5			0.2	5.5		1.1				
Intersection Summary												
HCM 6th Ctrl Delay			27.0									
HCM 6th LOS			C									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	319	652	832	102	105	326
Future Volume (vph)	319	652	832	102	105	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	47.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	319	652	832	102	105	326
Future Vol, veh/h	319	652	832	102	105	326
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	336	686	876	107	111	343

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	988	0	-	0	1832	448
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	951	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	2.8
Pot Cap-1 Maneuver	695	-	-	-	~ 88	642
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	311	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	692	-	-	-	~ 45	636
Mov Cap-2 Maneuver	-	-	-	-	123	-
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	309	-

Approach	EB	WB	SB
HCM Control Delay, s	4.9	0	246.7
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	692	-	-	-	315
HCM Lane V/C Ratio	0.485	-	-	-	1.44
HCM Control Delay (s)	15	-	-	-	246.7
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	2.7	-	-	-	24.3

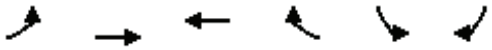
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	319	652	832	102	105	326
Future Volume (vph)	319	652	832	102	105	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				30	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	41.0	90.0	49.0	49.0	30.0	30.0
Total Split (%)	34.2%	75.0%	40.8%	40.8%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Bundy Cyn. Rd. & Cherry St.

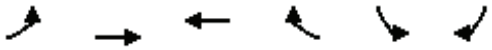




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	319	652	832	102	105	326
Future Volume (veh/h)	319	652	832	102	105	326
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	336	686	876	107	111	343
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	362	3638	1676	744	379	337
Arrive On Green	0.41	1.00	0.47	0.47	0.21	0.21
Sat Flow, veh/h	1781	5274	3647	1577	1781	1585
Grp Volume(v), veh/h	336	686	876	107	111	343
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1577	1781	1585
Q Serve(g_s), s	21.6	0.0	20.7	4.6	6.3	25.5
Cycle Q Clear(g_c), s	21.6	0.0	20.7	4.6	6.3	25.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	362	3638	1676	744	379	337
V/C Ratio(X)	0.93	0.19	0.52	0.14	0.29	1.02
Avail Cap(c_a), veh/h	542	3638	1676	744	379	337
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	22.2	18.0	39.7	47.3
Incr Delay (d2), s/veh	16.6	0.1	1.2	0.4	0.4	53.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	8.7	1.7	2.8	25.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.4	0.1	23.4	18.4	40.1	101.0
LnGrp LOS	D	A	C	B	D	F
Approach Vol, veh/h		1022	983		454	
Approach Delay, s/veh		17.0	22.8		86.1	
Approach LOS		B	C		F	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		30.0	28.9	61.1
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		85.5		25.5	36.5	44.5
Max Q Clear Time (g_c+I1), s		2.0		27.5	23.6	22.7
Green Ext Time (p_c), s		5.4		0.0	0.8	6.6

Intersection Summary		
HCM 6th Ctrl Delay		32.1
HCM 6th LOS		C



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	319	652	832	102	0	326
Future Volume (vph)	319	652	832	102	0	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

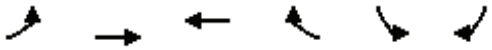
Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	319	652	832	102	0	326
Future Vol, veh/h	319	652	832	102	0	326
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	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	336	686	876	107	0	343

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	988	0	-	0	-	448
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	695	-	-	-	0	558
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	692	-	-	-	-	553
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	4.9	0	21.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	692	-	-	-	553
HCM Lane V/C Ratio	0.485	-	-	-	0.621
HCM Control Delay (s)	15	-	-	-	21.6
HCM Lane LOS	C	-	-	-	C
HCM 95th %tile Q(veh)	2.7	-	-	-	4.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Volume (vph)	0	971	832	421	0	326
Future Volume (vph)	0	971	832	421	0	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	971	832	421	0	326
Future Vol, veh/h	0	971	832	421	0	326
Conflicting Peds, #/hr	5	0	0	5	5	5
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	0	1022	876	443	0	343

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	448
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	558
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	553
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

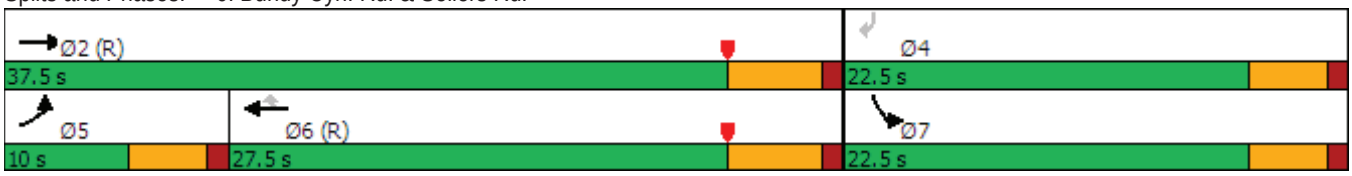
Approach	EB	WB	SB
HCM Control Delay, s	0	0	21.6
HCM LOS			C

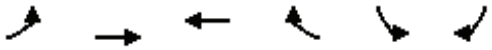
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	553
HCM Lane V/C Ratio	-	-	-	0.621
HCM Control Delay (s)	-	-	-	21.6
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	4.2

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	72	641	843	27	47	114
Future Volume (vph)	72	641	843	27	47	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	10.0	37.5	27.5	27.5	22.5	22.5
Total Split (%)	16.7%	62.5%	45.8%	45.8%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.

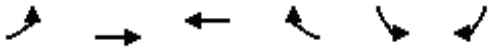




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	72	641	843	27	47	114
Future Volume (veh/h)	72	641	843	27	47	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	675	887	28	49	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	107	2740	1428	633	534	476
Arrive On Green	0.06	0.54	0.80	0.80	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1575	1781	1585
Grp Volume(v), veh/h	76	675	887	28	49	120
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1575	1781	1585
Q Serve(g_s), s	2.5	4.2	5.9	0.2	1.2	3.4
Cycle Q Clear(g_c), s	2.5	4.2	5.9	0.2	1.2	3.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	107	2740	1428	633	534	476
V/C Ratio(X)	0.71	0.25	0.62	0.04	0.09	0.25
Avail Cap(c_a), veh/h	163	2740	1428	633	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	27.7	7.4	4.1	3.5	15.1	15.9
Incr Delay (d2), s/veh	3.3	0.2	1.8	0.1	0.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.2	1.5	0.6	0.5	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	31.0	7.6	5.9	3.7	15.5	17.2
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		751	915		169	
Approach Delay, s/veh		10.0	5.9		16.7	
Approach LOS		A	A		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	8.1	29.4
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	5.5	22.2
Max Q Clear Time (g_c+I1), s		6.2		5.4	4.5	7.9
Green Ext Time (p_c), s		3.2		0.2	0.0	3.7

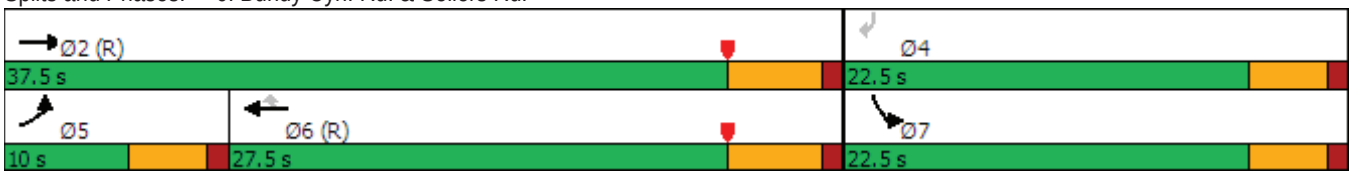
Intersection Summary	
HCM 6th Ctrl Delay	8.6
HCM 6th LOS	A

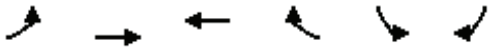


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	55	553	843	27	134	114
Future Volume (vph)	55	553	843	27	134	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	10.0	37.5	27.5	27.5	22.5	22.5
Total Split (%)	16.7%	62.5%	45.8%	45.8%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	553	843	27	134	114
Future Volume (veh/h)	55	553	843	27	134	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	582	887	28	141	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	92	2740	1457	646	534	476
Arrive On Green	0.05	0.54	0.82	0.82	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1575	1781	1585
Grp Volume(v), veh/h	58	582	887	28	141	120
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1575	1781	1585
Q Serve(g_s), s	1.9	3.6	5.4	0.2	3.6	3.4
Cycle Q Clear(g_c), s	1.9	3.6	5.4	0.2	3.6	3.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	92	2740	1457	646	534	476
V/C Ratio(X)	0.63	0.21	0.61	0.04	0.26	0.25
Avail Cap(c_a), veh/h	163	2740	1457	646	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	27.9	7.3	3.7	3.2	16.0	15.9
Incr Delay (d2), s/veh	2.6	0.2	1.7	0.1	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	1.1	1.3	0.6	1.6	3.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.5	7.4	5.4	3.3	17.2	17.2
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		640	915		261	
Approach Delay, s/veh		9.5	5.3		17.2	
Approach LOS		A	A		B	

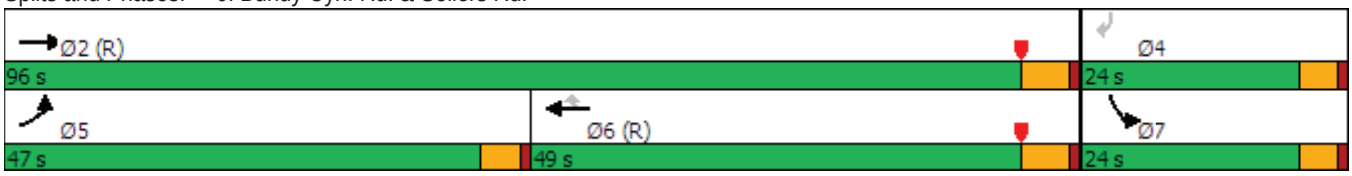
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	7.6	29.9
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	5.5	22.2
Max Q Clear Time (g_c+I1), s		5.6		5.6	3.9	7.4
Green Ext Time (p_c), s		2.7		0.3	0.0	3.7

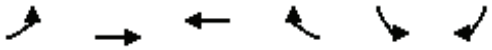
Intersection Summary	
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	374	553	843	27	134	114
Future Volume (vph)	374	553	843	27	134	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		4
Detector Phase	5	2	6	6	7	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	47.0	96.0	49.0	49.0	24.0	24.0
Total Split (%)	39.2%	80.0%	40.8%	40.8%	20.0%	20.0%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	374	553	843	27	134	114
Future Volume (veh/h)	374	553	843	27	134	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	394	582	887	28	141	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	423	3859	1709	758	289	258
Arrive On Green	0.24	0.76	0.96	0.96	0.16	0.16
Sat Flow, veh/h	1781	5274	3647	1577	1781	1585
Grp Volume(v), veh/h	394	582	887	28	141	120
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1577	1781	1585
Q Serve(g_s), s	26.0	3.8	2.3	0.1	8.6	8.2
Cycle Q Clear(g_c), s	26.0	3.8	2.3	0.1	8.6	8.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	423	3859	1709	758	289	258
V/C Ratio(X)	0.93	0.15	0.52	0.04	0.49	0.47
Avail Cap(c_a), veh/h	631	3859	1709	758	289	258
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	44.8	4.0	1.2	1.2	45.7	45.5
Incr Delay (d2), s/veh	12.6	0.1	1.0	0.1	5.8	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	1.1	0.7	1.0	4.3	7.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.4	4.1	2.3	1.3	51.5	51.5
LnGrp LOS	E	A	A	A	D	D
Approach Vol, veh/h		976	915		261	
Approach Delay, s/veh		25.6	2.2		51.5	
Approach LOS		C	A		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		96.0		24.0	33.0	63.0
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		90.7		19.5	42.5	43.7
Max Q Clear Time (g_c+I1), s		5.8		10.6	28.0	4.3
Green Ext Time (p_c), s		2.8		0.3	0.5	4.6

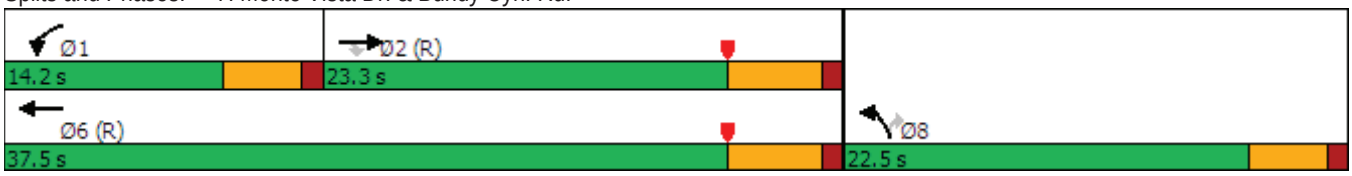
Intersection Summary		
HCM 6th Ctrl Delay		18.8
HCM 6th LOS		B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	574	114	177	815	54	80
Future Volume (vph)	574	114	177	815	54	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200	200		100	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			40	55	
Link Distance (ft)	612			588	284	
Travel Time (s)	11.9			10.0	3.5	
Confl. Peds. (#/hr)		5	5		5	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.3	23.3	9.5	22.5	22.5	22.5
Total Split (s)	23.3	23.3	14.2	37.5	22.5	22.5
Total Split (%)	38.8%	38.8%	23.7%	62.5%	37.5%	37.5%
Yellow Time (s)	4.3	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	4.5	5.3	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 7: Monte Vista Dr. & Bundy Cyn. Rd.

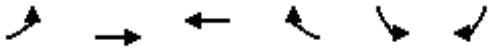




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	574	114	177	815	54	80
Future Volume (veh/h)	574	114	177	815	54	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	631	125	195	896	59	88
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1669	514	240	1907	1037	476
Arrive On Green	0.65	0.65	0.13	0.54	0.30	0.30
Sat Flow, veh/h	5274	1573	1781	3647	3456	1585
Grp Volume(v), veh/h	631	125	195	896	59	88
Grp Sat Flow(s),veh/h/ln	1702	1573	1781	1777	1728	1585
Q Serve(g_s), s	3.4	2.0	6.4	9.4	0.7	2.5
Cycle Q Clear(g_c), s	3.4	2.0	6.4	9.4	0.7	2.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1669	514	240	1907	1037	476
V/C Ratio(X)	0.38	0.24	0.81	0.47	0.06	0.19
Avail Cap(c_a), veh/h	1669	514	288	1907	1037	476
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.6	7.3	25.2	8.6	15.0	15.6
Incr Delay (d2), s/veh	0.6	1.1	11.5	0.8	0.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	3.2	2.8	0.2	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.2	8.4	36.8	9.4	15.1	16.4
LnGrp LOS	A	A	D	A	B	B
Approach Vol, veh/h	756			1091	147	
Approach Delay, s/veh	8.3			14.3	15.9	
Approach LOS	A			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	12.6	24.9				37.5	22.5
Change Period (Y+Rc), s	4.5	5.3				5.3	4.5
Max Green Setting (Gmax), s	9.7	18.0				32.2	18.0
Max Q Clear Time (g_c+I1), s	8.4	5.4				11.4	4.5
Green Ext Time (p_c), s	0.0	2.6				3.9	0.2

Intersection Summary			
HCM 6th Ctrl Delay		12.1	
HCM 6th LOS		B	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	44	611	902	8	12	90
Future Volume (vph)	44	611	902	8	12	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	120				90	
Link Speed (mph)		40	40		25	
Link Distance (ft)		588	428		597	
Travel Time (s)		10.0	7.3		16.3	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

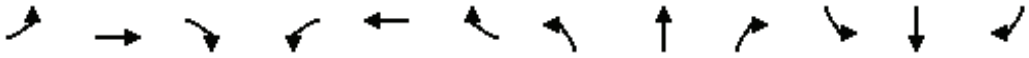
Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	44	611	902	8	12	90
Future Vol, veh/h	44	611	902	8	12	90
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	657	970	9	13	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	984	0	-	0	1342	500
Stage 1	-	-	-	-	980	-
Stage 2	-	-	-	-	362	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	698	-	-	-	173	516
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	639	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	695	-	-	-	160	511
Mov Cap-2 Maneuver	-	-	-	-	241	-
Stage 1	-	-	-	-	293	-
Stage 2	-	-	-	-	636	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	695	-	-	-	451
HCM Lane V/C Ratio	0.068	-	-	-	0.243
HCM Control Delay (s)	10.6	-	-	-	15.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	2	77	2	9	54	158	195	4	26	122	280
Future Volume (vph)	224	2	77	2	9	54	158	195	4	26	122	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	33.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	224	2	77	2	9	54	158	195	4	26	122	280
Future Vol, veh/h	224	2	77	2	9	54	158	195	4	26	122	280
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	270	2	93	2	11	65	190	235	5	31	147	337
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	26.9	12.6	33.7	42.1
HCM LOS	D	B	D	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	44%	74%	3%	6%
Vol Thru, %	55%	1%	14%	29%
Vol Right, %	1%	25%	83%	65%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	357	303	65	428
LT Vol	158	224	2	26
Through Vol	195	2	9	122
RT Vol	4	77	54	280
Lane Flow Rate	430	365	78	516
Geometry Grp	1	1	1	1
Degree of Util (X)	0.816	0.725	0.171	0.9
Departure Headway (Hd)	6.833	7.149	7.839	6.281
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	529	507	455	578
Service Time	4.898	5.177	5.936	4.311
HCM Lane V/C Ratio	0.813	0.72	0.171	0.893
HCM Control Delay	33.7	26.9	12.6	42.1
HCM Lane LOS	D	D	B	E
HCM 95th-tile Q	8	5.9	0.6	10.8



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	2	77	2	9	54	158	195	4	26	122	280
Future Volume (vph)	224	2	77	2	9	54	158	195	4	26	122	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	0		0	100		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

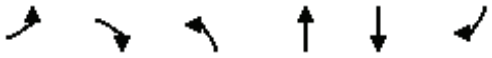
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	23.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	224	2	77	2	9	54	158	195	4	26	122	280
Future Vol, veh/h	224	2	77	2	9	54	158	195	4	26	122	280
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	273	2	94	2	11	66	193	238	5	32	149	341
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	24.4	12	32	16.8
HCM LOS	C	B	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	44%	74%	3%	18%	0%
Vol Thru, %	55%	1%	14%	82%	0%
Vol Right, %	1%	25%	83%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	357	303	65	148	280
LT Vol	158	224	2	26	0
Through Vol	195	2	9	122	0
RT Vol	4	77	54	0	280
Lane Flow Rate	435	370	79	180	341
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.806	0.7	0.165	0.358	0.601
Departure Headway (Hd)	6.662	6.822	7.508	7.139	6.331
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	540	528	480	502	567
Service Time	4.731	4.89	5.508	4.913	4.105
HCM Lane V/C Ratio	0.806	0.701	0.165	0.359	0.601
HCM Control Delay	32	24.4	12	13.9	18.3
HCM Lane LOS	D	C	B	B	C
HCM 95th-tile Q	7.8	5.5	0.6	1.6	4



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	177	187	67	96	21
Future Volume (vph)	18	177	187	67	96	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

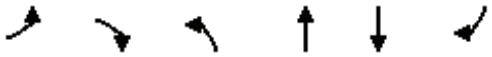
Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	177	187	67	96	21
Future Vol, veh/h	18	177	187	67	96	21
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	192	203	73	104	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	605	126	132	0	-	0
Stage 1	121	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	461	924	1453	-	-	-
Stage 1	904	-	-	-	-	-
Stage 2	620	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	390	915	1446	-	-	-
Mov Cap-2 Maneuver	390	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	617	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	5.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1446	-	814	-	-
HCM Lane V/C Ratio	0.141	-	0.26	-	-
HCM Control Delay (s)	7.9	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	132	187	112	83	21
Future Volume (vph)	63	132	187	112	83	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

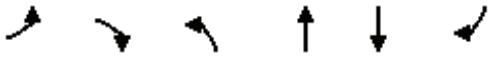
Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	132	187	112	83	21
Future Vol, veh/h	63	132	187	112	83	21
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	143	203	122	90	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	640	112	118	0	-	0
Stage 1	107	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	440	941	1470	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	371	932	1463	-	-	-
Mov Cap-2 Maneuver	371	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1463	-	626	-	-
HCM Lane V/C Ratio	0.139	-	0.339	-	-
HCM Control Delay (s)	7.9	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	132	187	112	83	21
Future Volume (vph)	63	132	187	112	83	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

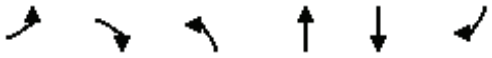
Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	132	187	112	83	21
Future Vol, veh/h	63	132	187	112	83	21
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	143	203	122	90	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	640	112	118	0	-	0
Stage 1	107	-	-	-	-	-
Stage 2	533	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	440	941	1470	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	371	932	1463	-	-	-
Mov Cap-2 Maneuver	371	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1463	-	626	-	-
HCM Lane V/C Ratio	0.139	-	0.339	-	-
HCM Control Delay (s)	7.9	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	19	175	187	235	255	18
Future Volume (vph)	19	175	187	235	255	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	175	187	235	255	18
Future Vol, veh/h	19	175	187	235	255	18
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	190	203	255	277	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	958	297	302	0	-	0
Stage 1	292	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	285	742	1259	-	-	-
Stage 1	758	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	237	735	1253	-	-	-
Mov Cap-2 Maneuver	237	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	508	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	3.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1253	-	610	-	-
HCM Lane V/C Ratio	0.162	-	0.346	-	-
HCM Control Delay (s)	8.4	-	14	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.6	-	1.5	-	-

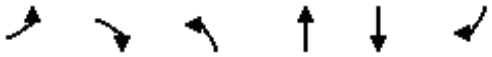
Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	130	187	235	197	18
Future Vol, veh/h	64	130	187	235	197	18
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	141	203	255	214	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	895	234	239	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	311	805	1328	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	261	797	1322	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	681	-	-	-	-	-
Stage 2	508	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	3.6	0
HCM LOS	C		

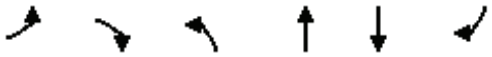
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1322	-	475	-	-
HCM Lane V/C Ratio	0.154	-	0.444	-	-
HCM Control Delay (s)	8.2	-	18.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	2.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	130	187	235	197	18
Future Volume (vph)	64	130	187	235	197	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	130	187	235	197	18
Future Volume (vph)	64	130	187	235	197	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

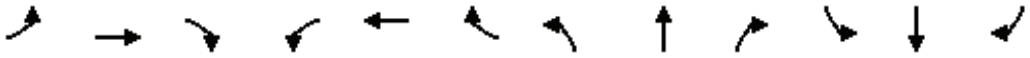
Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	130	187	235	197	18
Future Vol, veh/h	64	130	187	235	197	18
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	141	203	255	214	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	895	234	239	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	311	805	1328	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	261	797	1322	-	-	-
Mov Cap-2 Maneuver	261	-	-	-	-	-
Stage 1	681	-	-	-	-	-
Stage 2	508	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.5	3.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1322	-	475	-	-
HCM Lane V/C Ratio	0.154	-	0.444	-	-
HCM Control Delay (s)	8.2	-	18.5	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	2.2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	80	77	25	92	3	49	3	3	4	4	3
Future Volume (vph)	1	80	77	25	92	3	49	3	3	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

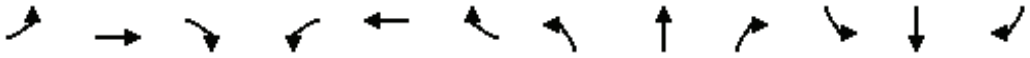
Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	80	77	25	92	3	49	3	3	4	4	3
Future Vol, veh/h	1	80	77	25	92	3	49	3	3	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	93	90	29	107	3	57	3	3	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	183	0	0	311	308	138	310	352	109
Stage 1	-	-	-	-	-	-	140	140	-	167	167	-
Stage 2	-	-	-	-	-	-	171	168	-	143	185	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1480	-	-	1392	-	-	642	606	910	642	573	945
Stage 1	-	-	-	-	-	-	863	781	-	835	760	-
Stage 2	-	-	-	-	-	-	831	759	-	860	747	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1480	-	-	1392	-	-	625	592	910	625	560	945
Mov Cap-2 Maneuver	-	-	-	-	-	-	625	592	-	625	560	-
Stage 1	-	-	-	-	-	-	862	780	-	834	743	-
Stage 2	-	-	-	-	-	-	805	742	-	852	746	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	11.3	10.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	634	1480	-	-	1392	-	-	658
HCM Lane V/C Ratio	0.101	0.001	-	-	0.021	-	-	0.019
HCM Control Delay (s)	11.3	7.4	0	-	7.6	0	-	10.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	80	77	25	92	3	49	3	70	4	4	3
Future Volume (vph)	1	80	77	25	92	3	49	3	70	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

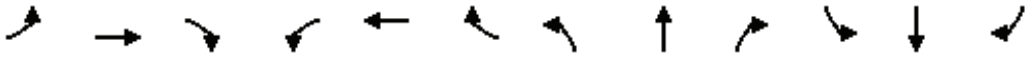
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	80	77	25	92	3	49	3	70	4	4	3
Future Vol, veh/h	1	80	77	25	92	3	49	3	70	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	93	90	29	107	3	57	3	81	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	183	0	0	311	308	138	349	352	109
Stage 1	-	-	-	-	-	-	140	140	-	167	167	-
Stage 2	-	-	-	-	-	-	171	168	-	182	185	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1480	-	-	1392	-	-	642	606	910	606	573	945
Stage 1	-	-	-	-	-	-	863	781	-	835	760	-
Stage 2	-	-	-	-	-	-	831	759	-	820	747	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1480	-	-	1392	-	-	625	592	910	540	560	945
Mov Cap-2 Maneuver	-	-	-	-	-	-	625	592	-	540	560	-
Stage 1	-	-	-	-	-	-	862	780	-	834	743	-
Stage 2	-	-	-	-	-	-	805	742	-	743	746	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.8	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	761	1480	-	-	1392	-	-	621
HCM Lane V/C Ratio	0.186	0.001	-	-	0.021	-	-	0.021
HCM Control Delay (s)	10.8	7.4	0	-	7.6	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	80	77	25	92	3	49	3	70	4	4	3
Future Volume (vph)	1	80	77	25	92	3	49	3	70	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

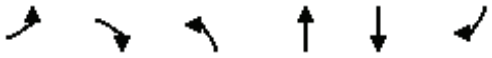
Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	80	77	25	92	3	49	3	70	4	4	3
Future Vol, veh/h	1	80	77	25	92	3	49	3	70	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	93	90	29	107	3	57	3	81	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	183	0	0	311	308	138	349	352	109
Stage 1	-	-	-	-	-	-	140	140	-	167	167	-
Stage 2	-	-	-	-	-	-	171	168	-	182	185	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1480	-	-	1392	-	-	642	606	910	606	573	945
Stage 1	-	-	-	-	-	-	863	781	-	835	760	-
Stage 2	-	-	-	-	-	-	831	759	-	820	747	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1480	-	-	1392	-	-	625	592	910	540	560	945
Mov Cap-2 Maneuver	-	-	-	-	-	-	625	592	-	540	560	-
Stage 1	-	-	-	-	-	-	862	780	-	834	743	-
Stage 2	-	-	-	-	-	-	805	742	-	743	746	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	10.8	10.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	761	1480	-	-	1392	-	-	621
HCM Lane V/C Ratio	0.186	0.001	-	-	0.021	-	-	0.021
HCM Control Delay (s)	10.8	7.4	0	-	7.6	0	-	10.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	65	73	27	48	19
Future Volume (vph)	20	65	73	27	48	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

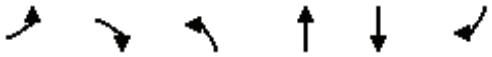
Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	65	73	27	48	19
Future Vol, veh/h	20	65	73	27	48	19
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	76	86	32	56	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	271	67	78	0	-	0
Stage 1	67	-	-	-	-	-
Stage 2	204	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	718	997	1520	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	830	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	676	997	1520	-	-	-
Mov Cap-2 Maneuver	676	-	-	-	-	-
Stage 1	901	-	-	-	-	-
Stage 2	830	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	5.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1520	-	897	-	-
HCM Lane V/C Ratio	0.057	-	0.111	-	-
HCM Control Delay (s)	7.5	0	9.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	115	73	10	48	19
Future Volume (vph)	37	115	73	10	48	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

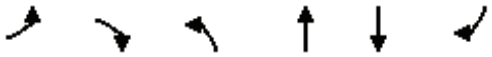
Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	115	73	10	48	19
Future Vol, veh/h	37	115	73	10	48	19
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	135	86	12	56	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	251	67	78	0	-	0
Stage 1	67	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	738	997	1520	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	696	997	1520	-	-	-
Mov Cap-2 Maneuver	696	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	848	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	6.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1520	-	902	-	-
HCM Lane V/C Ratio	0.057	-	0.198	-	-
HCM Control Delay (s)	7.5	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	115	73	10	48	19
Future Volume (vph)	37	115	73	10	48	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

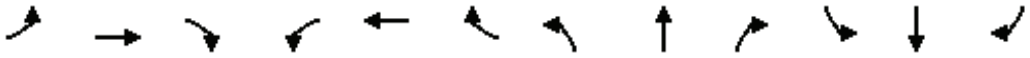
Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	115	73	10	48	19
Future Vol, veh/h	37	115	73	10	48	19
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	135	86	12	56	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	251	67	78	0	-	0
Stage 1	67	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	738	997	1520	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	696	997	1520	-	-	-
Mov Cap-2 Maneuver	696	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	848	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	6.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1520	-	902	-	-
HCM Lane V/C Ratio	0.057	-	0.198	-	-
HCM Control Delay (s)	7.5	0	10	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.7	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	37	107	34	87	1	129	2	22	1	12	19
Future Volume (vph)	12	37	107	34	87	1	129	2	22	1	12	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1291			669			448			292	
Travel Time (s)		22.0			11.4			12.2			8.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

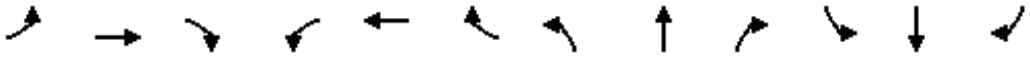
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	37	107	34	87	1	129	2	22	1	12	19
Future Vol, veh/h	12	37	107	34	87	1	129	2	22	1	12	19
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	44	126	40	102	1	152	2	26	1	14	22
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	8.7	9.6	9.4	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	84%	8%	28%	0%	3%
Vol Thru, %	1%	24%	72%	0%	38%
Vol Right, %	14%	69%	0%	100%	59%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	156	121	1	32
LT Vol	129	12	34	0	1
Through Vol	2	37	87	0	12
RT Vol	22	107	0	1	19
Lane Flow Rate	180	184	142	1	38
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.242	0.223	0.212	0.001	0.048
Departure Headway (Hd)	4.842	4.367	5.367	4.521	4.603
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	740	820	668	789	774
Service Time	2.882	2.405	3.107	2.261	2.654
HCM Lane V/C Ratio	0.243	0.224	0.213	0.001	0.049
HCM Control Delay	9.4	8.7	9.6	7.3	7.9
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.9	0.9	0.8	0	0.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	103	80	155	135	1	80	2	159	1	3	1
Future Volume (vph)	1	103	80	155	135	1	80	2	159	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		496			1291			1349			223	
Travel Time (s)		8.5			22.0			36.8			6.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

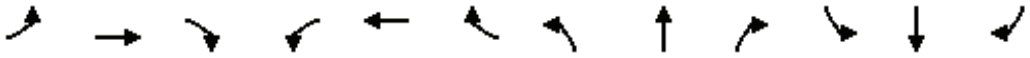
Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	103	80	155	135	1	80	2	159	1	3	1
Future Vol, veh/h	1	103	80	155	135	1	80	2	159	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	112	87	168	147	1	87	2	173	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	148	0	0	199	0	0	600	598	112	729	685	148
Stage 1	-	-	-	-	-	-	114	114	-	484	484	-
Stage 2	-	-	-	-	-	-	486	484	-	245	201	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1434	-	-	1373	-	-	413	416	941	338	371	899
Stage 1	-	-	-	-	-	-	891	801	-	564	552	-
Stage 2	-	-	-	-	-	-	563	552	-	759	735	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1434	-	-	1373	-	-	367	360	941	246	321	899
Mov Cap-2 Maneuver	-	-	-	-	-	-	367	360	-	246	321	-
Stage 1	-	-	-	-	-	-	890	800	-	563	479	-
Stage 2	-	-	-	-	-	-	484	479	-	617	734	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.3	15.2	15.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	614	1434	-	-	1373	-	-	344
HCM Lane V/C Ratio	0.427	0.001	-	-	0.123	-	-	0.016
HCM Control Delay (s)	15.2	7.5	0	-	8	0	-	15.6
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	2.1	0	-	-	0.4	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	66	15	8	51	129	18	83	6	115	139	3
Future Volume (vph)	11	66	15	8	51	129	18	83	6	115	139	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		400			740			1314			1349	
Travel Time (s)		9.1			16.8			35.8			36.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

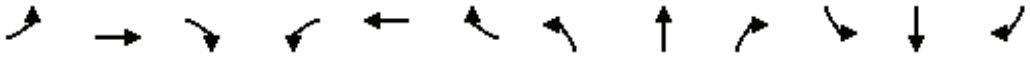
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	66	15	8	51	129	18	83	6	115	139	3
Future Vol, veh/h	11	66	15	8	51	129	18	83	6	115	139	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	71	16	9	55	139	19	89	6	124	149	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	9.3	9	10.9
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	12%	4%	45%
Vol Thru, %	78%	72%	27%	54%
Vol Right, %	6%	16%	69%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	92	188	257
LT Vol	18	11	8	115
Through Vol	83	66	51	139
RT Vol	6	15	129	3
Lane Flow Rate	115	99	202	276
Geometry Grp	1	1	1	1
Degree of Util (X)	0.16	0.14	0.26	0.374
Departure Headway (Hd)	4.999	5.078	4.623	4.873
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	710	699	770	732
Service Time	3.083	3.157	2.689	2.943
HCM Lane V/C Ratio	0.162	0.142	0.262	0.377
HCM Control Delay	9	9	9.3	10.9
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.6	0.5	1	1.7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	451	7	6	532	48	10	6	16	49	1	16
Future Volume (vph)	9	451	7	6	532	48	10	6	16	49	1	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	0		0	0		0
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		289			1348			206			1314	
Travel Time (s)		5.6			26.3			5.6			35.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	451	7	6	532	48	10	6	16	49	1	16
Future Vol, veh/h	9	451	7	6	532	48	10	6	16	49	1	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	501	8	7	591	53	11	7	18	54	1	18
Number of Lanes	0	2	1	0	2	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	13.1	14	10.3	11.3
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	31%	6%	0%	0%	3%	0%	0%	74%
Vol Thru, %	19%	94%	100%	0%	97%	100%	0%	2%
Vol Right, %	50%	0%	0%	100%	0%	0%	100%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	159	301	7	183	355	48	66
LT Vol	10	9	0	0	6	0	0	49
Through Vol	6	150	301	0	177	355	0	1
RT Vol	16	0	0	7	0	0	48	16
Lane Flow Rate	36	177	334	8	204	394	53	73
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.069	0.28	0.526	0.011	0.314	0.606	0.072	0.149
Departure Headway (Hd)	7.014	5.696	5.668	4.962	5.55	5.533	4.828	7.29
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	510	632	638	722	648	654	742	492
Service Time	4.761	3.424	3.395	2.689	3.276	3.259	2.553	5.031
HCM Lane V/C Ratio	0.071	0.28	0.524	0.011	0.315	0.602	0.071	0.148
HCM Control Delay	10.3	10.6	14.5	7.7	10.8	16.4	7.9	11.3
HCM Lane LOS	B	B	B	A	B	C	A	B
HCM 95th-tile Q	0.2	1.1	3.1	0	1.3	4.1	0.2	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	471	25	245	568	164	16	42	241	131	31	20
Future Volume (vph)	23	471	25	245	568	164	16	42	241	131	31	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	0		100	0		100
Storage Lanes	1		1	1		0	0		1	0		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8		8	4		4
Detector Phase	5	2	2	1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3	23.3	23.3	23.3	23.3
Total Split (s)	13.0	41.0	41.0	40.0	68.0		39.0	39.0	39.0	39.0	39.0	39.0
Total Split (%)	10.8%	34.2%	34.2%	33.3%	56.7%		32.5%	32.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3			5.3	5.3		5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min	Min	Min	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	471	25	245	568	164	16	42	241	131	31	20
Future Volume (veh/h)	23	471	25	245	568	164	16	42	241	131	31	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	481	26	250	580	167	16	43	246	134	32	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	1561	692	275	1554	446	38	83	443	54	7	443
Arrive On Green	0.02	0.44	0.44	0.31	1.00	1.00	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	3554	1576	1781	2721	781	0	297	1577	0	27	1577
Grp Volume(v), veh/h	23	481	26	250	378	369	59	0	246	166	0	20
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1726	297	0	1577	27	0	1577
Q Serve(g_s), s	1.5	10.5	1.1	16.2	0.0	0.0	0.0	0.0	16.0	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.5	10.5	1.1	16.2	0.0	0.0	33.7	0.0	16.0	33.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.45	0.27		1.00	0.81		1.00
Lane Grp Cap(c), veh/h	40	1561	692	275	1015	985	122	0	443	62	0	443
V/C Ratio(X)	0.58	0.31	0.04	0.91	0.37	0.37	0.49	0.00	0.56	2.69	0.00	0.05
Avail Cap(c_a), veh/h	126	1561	692	527	1015	985	122	0	443	62	0	443
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.1	21.8	19.2	40.7	0.0	0.0	35.4	0.0	36.8	56.0	0.0	31.4
Incr Delay (d2), s/veh	4.9	0.5	0.1	4.3	0.9	1.0	1.1	0.0	0.9	805.4	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.4	0.4	6.2	0.3	0.3	1.3	0.0	6.2	15.7	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	22.3	19.3	45.0	0.9	1.0	36.5	0.0	37.7	861.3	0.0	31.4
LnGrp LOS	E	C	B	D	A	A	D	A	D	F	A	C
Approach Vol, veh/h		530			997			305			186	
Approach Delay, s/veh		24.0			12.0			37.5			772.1	
Approach LOS		C			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	58.0		39.0	7.2	73.8		39.0				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	35.5	35.7		33.7	8.5	62.7		33.7				
Max Q Clear Time (g_c+I1), s	18.2	12.5		35.7	3.5	2.0		35.7				
Green Ext Time (p_c), s	0.3	2.1		0.0	0.0	3.2		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			89.1									
HCM 6th LOS			F									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	471	25	245	568	164	16	42	241	131	31	20
Future Volume (vph)	23	471	25	245	568	164	16	42	241	131	31	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	100		100	100		100
Storage Lanes	1		1	1		0	1		0	1		0
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3		23.3	23.3	
Total Split (s)	12.0	37.0	37.0	37.0	62.0		46.0	46.0		46.0	46.0	
Total Split (%)	10.0%	30.8%	30.8%	30.8%	51.7%		38.3%	38.3%		38.3%	38.3%	
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3		4.3	4.3	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3		5.3	5.3		5.3	5.3	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min		Min	Min	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	471	25	245	568	164	16	42	241	131	31	20
Future Volume (veh/h)	23	471	25	245	568	164	16	42	241	131	31	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	481	26	250	580	167	16	43	246	134	32	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	1517	673	274	1520	436	426	70	403	212	315	197
Arrive On Green	0.02	0.43	0.43	0.31	1.00	1.00	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1781	3554	1576	1781	2721	781	1347	240	1374	1090	1074	671
Grp Volume(v), veh/h	23	481	26	250	378	369	16	0	289	134	0	52
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1726	1347	0	1615	1090	0	1745
Q Serve(g_s), s	1.5	10.8	1.2	16.2	0.0	0.0	1.1	0.0	18.5	14.5	0.0	2.6
Cycle Q Clear(g_c), s	1.5	10.8	1.2	16.2	0.0	0.0	3.7	0.0	18.5	33.0	0.0	2.6
Prop In Lane	1.00		1.00	1.00		0.45	1.00		0.85	1.00		0.38
Lane Grp Cap(c), veh/h	40	1517	673	274	993	964	426	0	473	212	0	512
V/C Ratio(X)	0.58	0.32	0.04	0.91	0.38	0.38	0.04	0.00	0.61	0.63	0.00	0.10
Avail Cap(c_a), veh/h	111	1517	673	482	993	964	488	0	548	262	0	592
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.1	22.8	20.0	40.7	0.0	0.0	32.2	0.0	36.5	50.7	0.0	30.9
Incr Delay (d2), s/veh	4.9	0.5	0.1	6.0	1.0	1.0	0.0	0.0	0.8	1.5	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.6	0.4	6.3	0.3	0.3	0.3	0.0	7.3	4.0	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	23.3	20.1	46.7	1.0	1.0	32.2	0.0	37.3	52.2	0.0	30.9
LnGrp LOS	E	C	C	D	A	A	C	A	D	D	A	C
Approach Vol, veh/h		530			997			305			186	
Approach Delay, s/veh		24.9			12.5			37.0			46.2	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	56.5		40.5	7.2	72.3		40.5				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	32.5	31.7		40.7	7.5	56.7		40.7				
Max Q Clear Time (g_c+I1), s	18.2	12.8		35.0	3.5	2.0		20.5				
Green Ext Time (p_c), s	0.3	2.0		0.2	0.0	3.2		1.1				

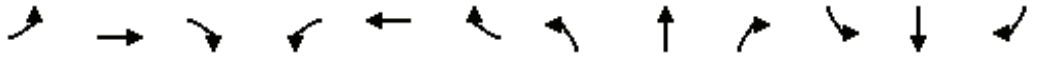
Intersection Summary			
HCM 6th Ctrl Delay		22.6	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	548	293	255	830	0	0	0	0	505	2	204
Future Volume (vph)	0	548	293	255	830	0	0	0	0	505	2	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	250		0	0		0	300		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases										4		
Detector Phase		2		1	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		45.0		35.0	45.0					25.0	25.0	
Total Split (s)		45.0		35.0	80.0					40.0	40.0	
Total Split (%)		37.5%		29.2%	66.7%					33.3%	33.3%	
Yellow Time (s)		4.3		3.6	4.3					4.3	4.3	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.3		4.6	5.3					5.3	5.3	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		C-Min		None	C-Min					None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	548	293	255	830	0	0	0	0	505	2	204
Future Volume (veh/h)	0	548	293	255	830	0	0	0	0	505	2	204
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	583	312	271	883	0				537	2	217
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	934	500	295	2212	0				515	4	452
Arrive On Green	0.00	0.42	0.42	0.33	1.00	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	2324	1193	1781	3647	0				1781	14	1565
Grp Volume(v), veh/h	0	464	431	271	883	0				537	0	219
Grp Sat Flow(s),veh/h/ln	0	1777	1647	1781	1777	0				1781	0	1579
Q Serve(g_s), s	0.0	24.7	24.7	17.6	0.0	0.0				34.7	0.0	13.7
Cycle Q Clear(g_c), s	0.0	24.7	24.7	17.6	0.0	0.0				34.7	0.0	13.7
Prop In Lane	0.00		0.72	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	744	690	295	2212	0				515	0	457
V/C Ratio(X)	0.00	0.62	0.62	0.92	0.40	0.00				1.04	0.00	0.48
Avail Cap(c_a), veh/h	0	744	690	451	2212	0				515	0	457
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.94	0.94	0.65	0.65	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	27.4	27.5	39.4	0.0	0.0				42.6	0.0	35.2
Incr Delay (d2), s/veh	0.0	3.7	4.0	9.5	0.4	0.0				51.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.0	10.3	7.0	0.1	0.0				22.4	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	31.1	31.4	48.9	0.4	0.0				93.8	0.0	35.5
LnGrp LOS	A	C	C	D	A	A				F	A	D
Approach Vol, veh/h		895			1154						756	
Approach Delay, s/veh		31.3			11.8						76.9	
Approach LOS		C			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.5	55.5		40.0		80.0
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3
Max Green Setting (Gmax), s	30.4	39.7		34.7		74.7
Max Q Clear Time (g_c+I1), s	19.6	26.7		36.7		2.0
Green Ext Time (p_c), s	0.3	3.2		0.0		4.5

Intersection Summary		
HCM 6th Ctrl Delay		35.6
HCM 6th LOS		D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	139	913	0	0	633	308	452	3	437	0	0	0
Future Volume (vph)	139	913	0	0	633	308	452	3	437	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases							8					
Detector Phase	5	2			6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0		25.0	25.0				
Total Split (s)	25.0	73.0			48.0		47.0	47.0				
Total Split (%)	20.8%	60.8%			40.0%		39.2%	39.2%				
Yellow Time (s)	3.0	4.3			4.3		4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3		5.3	5.3				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None	C-Min			C-Min		None	None				

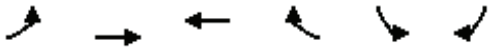
Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	913	0	0	633	308	452	3	437	0	0	0
Future Volume (veh/h)	139	913	0	0	633	308	452	3	437	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	143	941	0	0	653	318	466	3	451			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	168	2139	0	0	1096	534	552	3	486			
Arrive On Green	0.19	1.00	0.00	0.00	0.47	0.47	0.31	0.31	0.31			
Sat Flow, veh/h	1781	3647	0	0	2405	1126	1781	10	1569			
Grp Volume(v), veh/h	143	941	0	0	502	469	466	0	454			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1661	1781	0	1579			
Q Serve(g_s), s	9.3	0.0	0.0	0.0	24.8	24.8	29.3	0.0	33.4			
Cycle Q Clear(g_c), s	9.3	0.0	0.0	0.0	24.8	24.8	29.3	0.0	33.4			
Prop In Lane	1.00		0.00	0.00		0.68	1.00		0.99			
Lane Grp Cap(c), veh/h	168	2139	0	0	842	787	552	0	489			
V/C Ratio(X)	0.85	0.44	0.00	0.00	0.60	0.60	0.84	0.00	0.93			
Avail Cap(c_a), veh/h	312	2139	0	0	842	787	619	0	549			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.49	0.49	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	47.9	0.0	0.0	0.0	23.1	23.1	38.7	0.0	40.1			
Incr Delay (d2), s/veh	2.3	0.3	0.0	0.0	3.1	3.3	8.6	0.0	20.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.8	0.1	0.0	0.0	10.8	10.2	14.0	0.0	15.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	0.3	0.0	0.0	26.2	26.4	47.3	0.0	60.1			
LnGrp LOS	D	A	A	A	C	C	D	A	E			
Approach Vol, veh/h		1084			971			920				
Approach Delay, s/veh		6.9			26.3			53.6				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.5			15.3	62.2		42.5				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		67.7			21.0	42.7		41.7				
Max Q Clear Time (g_c+I1), s		2.0			11.3	26.8		35.4				
Green Ext Time (p_c), s		4.9			0.1	3.8		1.8				
Intersection Summary												
HCM 6th Ctrl Delay			27.7									
HCM 6th LOS			C									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	318	1032	652	115	97	291
Future Volume (vph)	318	1032	652	115	97	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	21.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	318	1032	652	115	97	291
Future Vol, veh/h	318	1032	652	115	97	291
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	1064	672	119	100	300

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	796	0	-	0	1764	346
Stage 1	-	-	-	-	677	-
Stage 2	-	-	-	-	1087	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	822	-	-	-	~ 97	650
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	262	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	818	-	-	-	~ 58	644
Mov Cap-2 Maneuver	-	-	-	-	148	-
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	261	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	126.9
HCM LOS			F

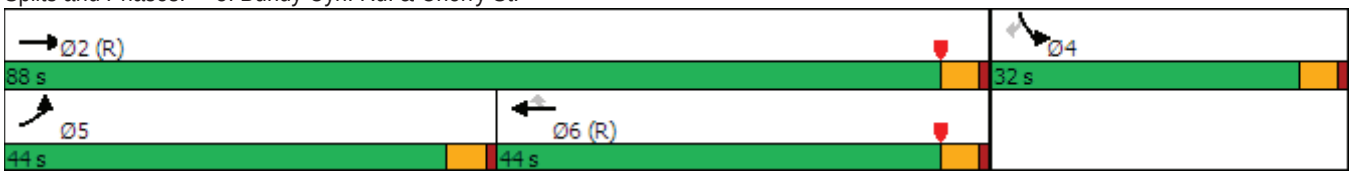
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	818	-	-	-	350
HCM Lane V/C Ratio	0.401	-	-	-	1.143
HCM Control Delay (s)	12.3	-	-	-	126.9
HCM Lane LOS	B	-	-	-	F
HCM 95th %tile Q(veh)	1.9	-	-	-	15.8

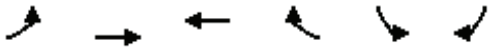
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	318	1032	652	115	97	291
Future Volume (vph)	318	1032	652	115	97	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				30	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	44.0	88.0	44.0	44.0	32.0	32.0
Total Split (%)	36.7%	73.3%	36.7%	36.7%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Bundy Cyn. Rd. & Cherry St.

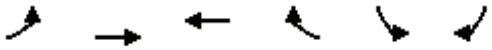




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	318	1032	652	115	97	291
Future Volume (veh/h)	318	1032	652	115	97	291
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	328	1064	672	119	100	300
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	355	3672	1714	760	367	326
Arrive On Green	0.40	1.00	0.48	0.48	0.21	0.21
Sat Flow, veh/h	1781	5274	3647	1577	1781	1585
Grp Volume(v), veh/h	328	1064	672	119	100	300
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1577	1781	1585
Q Serve(g_s), s	21.0	0.0	14.5	5.1	5.7	22.2
Cycle Q Clear(g_c), s	21.0	0.0	14.5	5.1	5.7	22.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	355	3672	1714	760	367	326
V/C Ratio(X)	0.92	0.29	0.39	0.16	0.27	0.92
Avail Cap(c_a), veh/h	586	3672	1714	760	408	363
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	19.8	17.4	40.1	46.7
Incr Delay (d2), s/veh	12.5	0.2	0.7	0.4	0.4	26.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.1	6.0	1.9	2.5	20.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.8	0.2	20.5	17.8	40.5	73.1
LnGrp LOS	D	A	C	B	D	E
Approach Vol, veh/h		1392	791		400	
Approach Delay, s/veh		11.4	20.1		64.9	
Approach LOS		B	C		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.8		29.2	28.4	62.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		83.5		27.5	39.5	39.5
Max Q Clear Time (g_c+I1), s		2.0		24.2	23.0	16.5
Green Ext Time (p_c), s		9.7		0.5	0.9	5.0

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	318	1032	652	115	0	291
Future Volume (vph)	318	1032	652	115	0	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

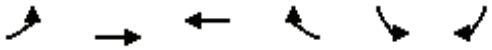
Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	318	1032	652	115	0	291
Future Vol, veh/h	318	1032	652	115	0	291
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	1064	672	119	0	300

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	796	0	-	0	-	346
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	822	-	-	-	0	650
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	818	-	-	-	-	644
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	2.9	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	818	-	-	-	644
HCM Lane V/C Ratio	0.401	-	-	-	0.466
HCM Control Delay (s)	12.3	-	-	-	15.4
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	1.9	-	-	-	2.5



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1350	652	432	0	291
Future Volume (vph)	0	1350	652	432	0	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑	↱		↱
Traffic Vol, veh/h	0	1350	652	432	0	291
Future Vol, veh/h	0	1350	652	432	0	291
Conflicting Peds, #/hr	5	0	0	5	5	5
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1392	672	445	0	300

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	346
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	650
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	644
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

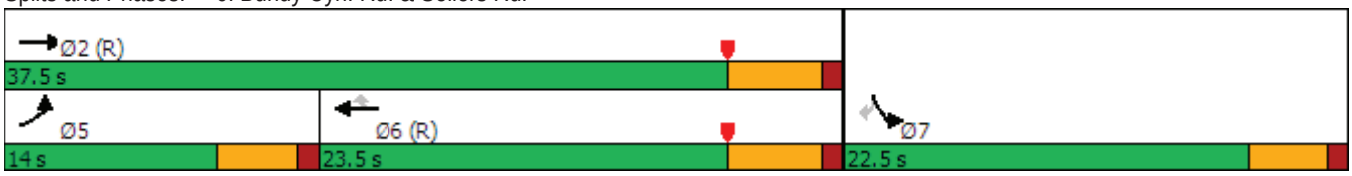
Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.4
HCM LOS			C

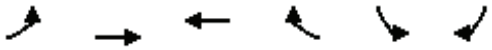
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	644
HCM Lane V/C Ratio	-	-	-	0.466
HCM Control Delay (s)	-	-	-	15.4
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.5

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	142	1043	637	41	35	77
Future Volume (vph)	142	1043	637	41	35	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		7
Detector Phase	5	2	6	6	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	14.0	37.5	23.5	23.5	22.5	22.5
Total Split (%)	23.3%	62.5%	39.2%	39.2%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	142	1043	637	41	35	77
Future Volume (veh/h)	142	1043	637	41	35	77
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1098	671	43	37	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	189	2740	1264	560	534	476
Arrive On Green	0.11	0.54	0.71	0.71	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1574	1781	1585
Grp Volume(v), veh/h	149	1098	671	43	37	81
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1574	1781	1585
Q Serve(g_s), s	4.9	7.6	5.3	0.5	0.9	2.3
Cycle Q Clear(g_c), s	4.9	7.6	5.3	0.5	0.9	2.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	189	2740	1264	560	534	476
V/C Ratio(X)	0.79	0.40	0.53	0.08	0.07	0.17
Avail Cap(c_a), veh/h	282	2740	1264	560	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	26.2	8.2	6.3	5.7	15.0	15.5
Incr Delay (d2), s/veh	4.5	0.4	1.5	0.3	0.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.3	1.5	1.0	0.4	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.7	8.6	7.8	5.9	15.3	16.3
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		1247	714		118	
Approach Delay, s/veh		11.3	7.7		16.0	
Approach LOS		B	A		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	10.9	26.6
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	9.5	18.2
Max Q Clear Time (g_c+I1), s		9.6		4.3	6.9	7.3
Green Ext Time (p_c), s		5.4		0.1	0.0	2.4

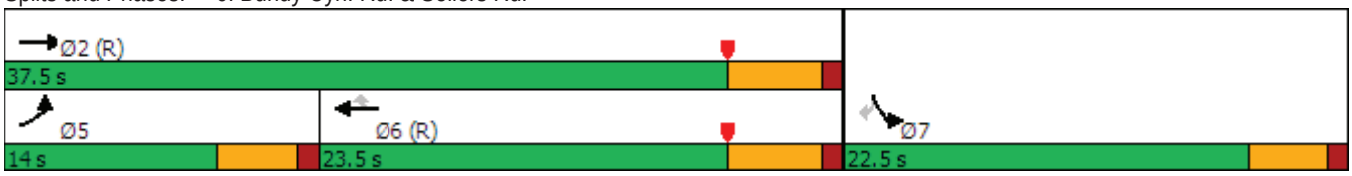
Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

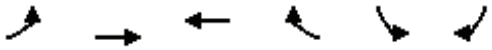
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	127	961	637	41	118	77
Future Volume (vph)	127	961	637	41	118	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		7
Detector Phase	5	2	6	6	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	14.0	37.5	23.5	23.5	22.5	22.5
Total Split (%)	23.3%	62.5%	39.2%	39.2%	37.5%	37.5%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	127	961	637	41	118	77
Future Volume (veh/h)	127	961	637	41	118	77
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	1012	671	43	124	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	171	2740	1299	575	534	476
Arrive On Green	0.10	0.54	0.73	0.73	0.30	0.30
Sat Flow, veh/h	1781	5274	3647	1574	1781	1585
Grp Volume(v), veh/h	134	1012	671	43	124	81
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1574	1781	1585
Q Serve(g_s), s	4.4	6.9	4.9	0.5	3.1	2.3
Cycle Q Clear(g_c), s	4.4	6.9	4.9	0.5	3.1	2.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	171	2740	1299	575	534	476
V/C Ratio(X)	0.78	0.37	0.52	0.07	0.23	0.17
Avail Cap(c_a), veh/h	282	2740	1299	575	534	476
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	26.5	8.0	5.8	5.2	15.8	15.5
Incr Delay (d2), s/veh	3.0	0.4	1.4	0.2	1.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	2.0	1.4	0.9	1.3	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.5	8.4	7.2	5.4	16.8	16.3
LnGrp LOS	C	A	A	A	B	B
Approach Vol, veh/h		1146	714		205	
Approach Delay, s/veh		10.9	7.1		16.6	
Approach LOS		B	A		B	

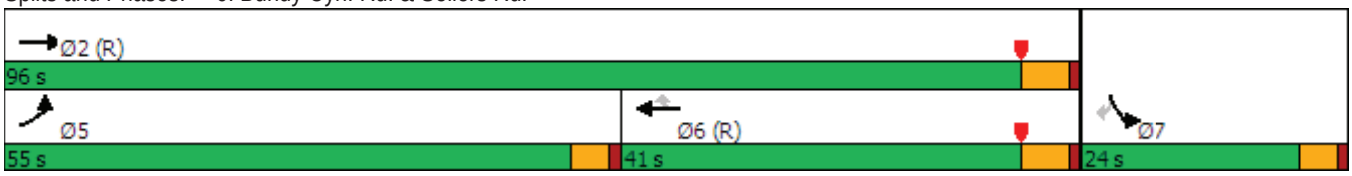
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		22.5	10.3	27.2
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		32.2		18.0	9.5	18.2
Max Q Clear Time (g_c+I1), s		8.9		5.1	6.4	6.9
Green Ext Time (p_c), s		5.0		0.3	0.0	2.4

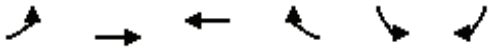
Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	445	961	637	41	118	77
Future Volume (vph)	445	961	637	41	118	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			285	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	60				60	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		25	
Link Distance (ft)		377	612		1298	
Travel Time (s)		7.3	11.9		35.4	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		7	
Permitted Phases				6		7
Detector Phase	5	2	6	6	7	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	23.3	23.3	22.5	22.5
Total Split (s)	55.0	96.0	41.0	41.0	24.0	24.0
Total Split (%)	45.8%	80.0%	34.2%	34.2%	20.0%	20.0%
Yellow Time (s)	3.5	4.3	4.3	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	5.3	4.5	4.5
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Bundy Cyn. Rd. & Sellers Rd.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	445	961	637	41	118	77
Future Volume (veh/h)	445	961	637	41	118	77
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	468	1012	671	43	124	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	497	3859	1561	692	289	258
Arrive On Green	0.28	0.76	0.88	0.88	0.16	0.16
Sat Flow, veh/h	1781	5274	3647	1576	1781	1585
Grp Volume(v), veh/h	468	1012	671	43	124	81
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1576	1781	1585
Q Serve(g_s), s	30.8	7.2	4.4	0.4	7.5	5.4
Cycle Q Clear(g_c), s	30.8	7.2	4.4	0.4	7.5	5.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	497	3859	1561	692	289	258
V/C Ratio(X)	0.94	0.26	0.43	0.06	0.43	0.31
Avail Cap(c_a), veh/h	750	3859	1561	692	289	258
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh	42.3	4.5	4.4	4.1	45.2	44.4
Incr Delay (d2), s/veh	12.3	0.2	0.8	0.2	4.6	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	2.2	1.4	1.6	3.7	5.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.6	4.6	5.2	4.3	49.8	47.5
LnGrp LOS	D	A	A	A	D	D
Approach Vol, veh/h		1480	714		205	
Approach Delay, s/veh		20.4	5.1		48.9	
Approach LOS		C	A		D	

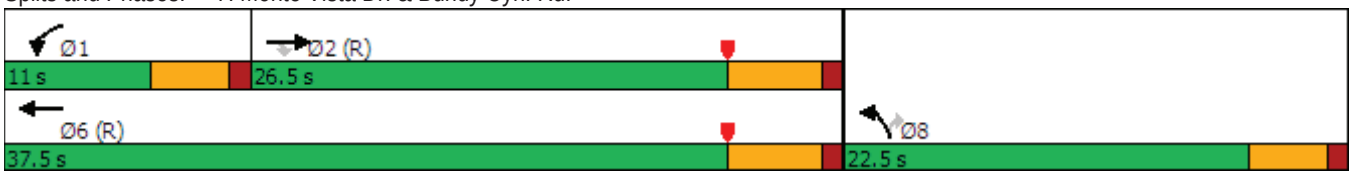
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		96.0		24.0	38.0	58.0
Change Period (Y+Rc), s		5.3		4.5	4.5	5.3
Max Green Setting (Gmax), s		90.7		19.5	50.5	35.7
Max Q Clear Time (g_c+I1), s		9.2		9.5	32.8	6.4
Green Ext Time (p_c), s		5.4		0.2	0.7	3.2

Intersection Summary	
HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1038	40	52	642	36	110
Future Volume (vph)	1038	40	52	642	36	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200	200		100	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			40	55	
Link Distance (ft)	612			588	284	
Travel Time (s)	11.9			10.0	3.5	
Confl. Peds. (#/hr)		5	5		5	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.3	23.3	9.5	22.5	22.5	22.5
Total Split (s)	26.5	26.5	11.0	37.5	22.5	22.5
Total Split (%)	44.2%	44.2%	18.3%	62.5%	37.5%	37.5%
Yellow Time (s)	4.3	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	4.5	5.3	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 7: Monte Vista Dr. & Bundy Cyn. Rd.

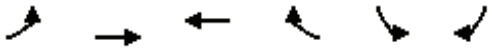




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1038	40	52	642	36	110
Future Volume (veh/h)	1038	40	52	642	36	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1141	44	57	705	40	121
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2096	647	91	1907	1037	476
Arrive On Green	0.82	0.82	0.05	0.54	0.30	0.30
Sat Flow, veh/h	5274	1575	1781	3647	3456	1585
Grp Volume(v), veh/h	1141	44	57	705	40	121
Grp Sat Flow(s),veh/h/ln	1702	1575	1781	1777	1728	1585
Q Serve(g_s), s	4.3	0.3	1.9	6.9	0.5	3.5
Cycle Q Clear(g_c), s	4.3	0.3	1.9	6.9	0.5	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2096	647	91	1907	1037	476
V/C Ratio(X)	0.54	0.07	0.63	0.37	0.04	0.25
Avail Cap(c_a), veh/h	2096	647	193	1907	1037	476
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.6	3.2	27.9	8.0	14.9	15.9
Incr Delay (d2), s/veh	0.9	0.2	2.6	0.6	0.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	0.8	2.1	0.2	1.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.5	3.4	30.5	8.6	14.9	17.2
LnGrp LOS	A	A	C	A	B	B
Approach Vol, veh/h	1185			762	161	
Approach Delay, s/veh	4.5			10.2	16.6	
Approach LOS	A			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.6	29.9				37.5	22.5
Change Period (Y+Rc), s	4.5	5.3				5.3	4.5
Max Green Setting (Gmax), s	6.5	21.2				32.2	18.0
Max Q Clear Time (g_c+I1), s	3.9	6.3				8.9	5.5
Green Ext Time (p_c), s	0.0	5.0				3.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	73	1075	654	19	9	41
Future Volume (vph)	73	1075	654	19	9	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	120				90	
Link Speed (mph)		40	40		25	
Link Distance (ft)		588	428		597	
Travel Time (s)		10.0	7.3		16.3	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

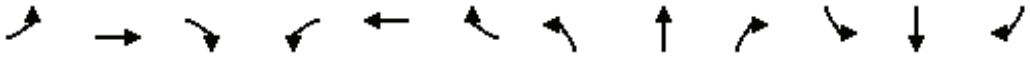
Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	73	1075	654	19	9	41
Future Vol, veh/h	73	1075	654	19	9	41
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	1168	711	21	10	45

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	737	0	-	0	1357	376
Stage 1	-	-	-	-	727	-
Stage 2	-	-	-	-	630	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	865	-	-	-	169	622
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	462	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	861	-	-	-	152	616
Mov Cap-2 Maneuver	-	-	-	-	260	-
Stage 1	-	-	-	-	386	-
Stage 2	-	-	-	-	460	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	13.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	861	-	-	-	494
HCM Lane V/C Ratio	0.092	-	-	-	0.11
HCM Control Delay (s)	9.6	-	-	-	13.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.4



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	7	18	1	4	35	11	176	2	46	183	80
Future Volume (vph)	92	7	18	1	4	35	11	176	2	46	183	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	7	18	1	4	35	11	176	2	46	183	80
Future Vol, veh/h	92	7	18	1	4	35	11	176	2	46	183	80
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	99	8	19	1	4	38	12	189	2	49	197	86
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	8.2	9.5	10.7
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	79%	3%	15%
Vol Thru, %	93%	6%	10%	59%
Vol Right, %	1%	15%	88%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	117	40	309
LT Vol	11	92	1	46
Through Vol	176	7	4	183
RT Vol	2	18	35	80
Lane Flow Rate	203	126	43	332
Geometry Grp	1	1	1	1
Degree of Util (X)	0.268	0.184	0.058	0.414
Departure Headway (Hd)	4.746	5.263	4.816	4.483
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	754	677	736	801
Service Time	2.799	3.332	2.895	2.529
HCM Lane V/C Ratio	0.269	0.186	0.058	0.414
HCM Control Delay	9.5	9.5	8.2	10.7
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	1.1	0.7	0.2	2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	7	18	1	4	35	11	176	2	46	183	80
Future Volume (vph)	92	7	18	1	4	35	11	176	2	46	183	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	0		0	0		0	0		100
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

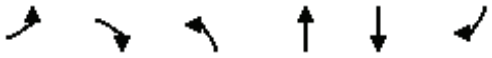
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	92	7	18	1	4	35	11	176	2	46	183	80
Future Vol, veh/h	92	7	18	1	4	35	11	176	2	46	183	80
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	99	8	19	1	4	38	12	189	2	49	197	86
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	1
HCM Control Delay	9.6	8.2	9.8	10.1
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	6%	79%	3%	20%	0%
Vol Thru, %	93%	6%	10%	80%	0%
Vol Right, %	1%	15%	88%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	189	117	40	229	80
LT Vol	11	92	1	46	0
Through Vol	176	7	4	183	0
RT Vol	2	18	35	0	80
Lane Flow Rate	203	126	43	246	86
Geometry Grp	5	2	2	7	7
Degree of Util (X)	0.274	0.185	0.058	0.359	0.106
Departure Headway (Hd)	4.856	5.293	4.848	5.251	4.445
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	736	674	732	682	802
Service Time	2.913	3.354	2.923	3.004	2.198
HCM Lane V/C Ratio	0.276	0.187	0.059	0.361	0.107
HCM Control Delay	9.8	9.6	8.2	10.9	7.7
HCM Lane LOS	A	A	A	B	A
HCM 95th-tile Q	1.1	0.7	0.2	1.6	0.4



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	17	167	173	102	67	19
Future Volume (vph)	17	167	173	102	67	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

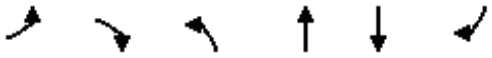
Intersection	
Int Delay, s/veh	6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	167	173	102	67	19
Future Vol, veh/h	17	167	173	102	67	19
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	182	188	111	73	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	581	94	99	0	-	0
Stage 1	89	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	476	963	1494	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	407	954	1487	-	-	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	804	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1487	-	849	-	-
HCM Lane V/C Ratio	0.126	-	0.236	-	-
HCM Control Delay (s)	7.8	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.9	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	121	173	148	62	19
Future Volume (vph)	63	121	173	148	62	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

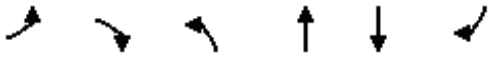
Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	121	173	148	62	19
Future Vol, veh/h	63	121	173	148	62	19
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	132	188	161	67	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	625	88	93	0	-	0
Stage 1	83	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	449	970	1501	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	383	961	1494	-	-	-
Mov Cap-2 Maneuver	383	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1494	-	634	-	-
HCM Lane V/C Ratio	0.126	-	0.315	-	-
HCM Control Delay (s)	7.8	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	121	173	148	62	19
Future Volume (vph)	63	121	173	148	62	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

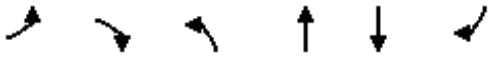
Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	121	173	148	62	19
Future Vol, veh/h	63	121	173	148	62	19
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	132	188	161	67	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	625	88	93	0	-	0
Stage 1	83	-	-	-	-	-
Stage 2	542	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	449	970	1501	-	-	-
Stage 1	940	-	-	-	-	-
Stage 2	583	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	383	961	1494	-	-	-
Mov Cap-2 Maneuver	383	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1494	-	634	-	-
HCM Lane V/C Ratio	0.126	-	0.315	-	-
HCM Control Delay (s)	7.8	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	169	173	259	218	16
Future Volume (vph)	16	169	173	259	218	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

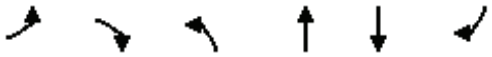
Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	169	173	259	218	16
Future Vol, veh/h	16	169	173	259	218	16
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	184	188	282	237	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	914	256	259	0	-	0
Stage 1	251	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	303	783	1306	-	-	-
Stage 1	791	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	256	776	1300	-	-	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	3.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1300	-	660	-	-
HCM Lane V/C Ratio	0.145	-	0.305	-	-
HCM Control Delay (s)	8.2	-	12.8	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	62	123	173	259	167	16
Future Volume (vph)	62	123	173	259	167	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

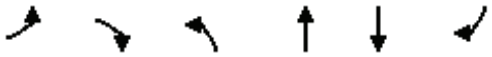
Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	123	173	259	167	16
Future Vol, veh/h	62	123	173	259	167	16
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	134	188	282	182	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	859	201	204	0	-	0
Stage 1	196	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	327	840	1368	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	279	832	1361	-	-	-
Mov Cap-2 Maneuver	279	-	-	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	3.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1361	-	500	-	-
HCM Lane V/C Ratio	0.138	-	0.402	-	-
HCM Control Delay (s)	8.1	-	17	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	1.9	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	62	123	173	259	167	16
Future Volume (vph)	62	123	173	259	167	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

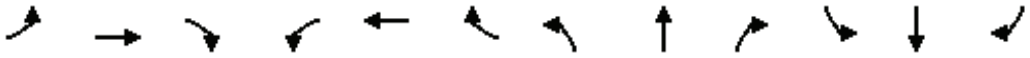
Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	123	173	259	167	16
Future Vol, veh/h	62	123	173	259	167	16
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	134	188	282	182	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	859	201	204	0	-	0
Stage 1	196	-	-	-	-	-
Stage 2	663	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	327	840	1368	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	512	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	279	832	1361	-	-	-
Mov Cap-2 Maneuver	279	-	-	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	509	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	3.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1361	-	500	-	-
HCM Lane V/C Ratio	0.138	-	0.402	-	-
HCM Control Delay (s)	8.1	-	17	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	1.9	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	43	65	16	47	1	121	5	26	1	3	1
Future Volume (vph)	1	43	65	16	47	1	121	5	26	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

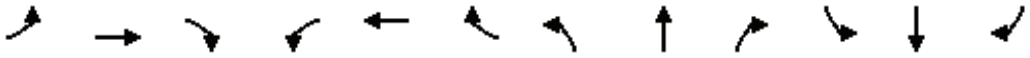
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	43	65	16	47	1	121	5	26	1	3	1
Future Vol, veh/h	1	43	65	16	47	1	121	5	26	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	49	74	18	53	1	138	6	30	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	54	0	0	123	0	0	180	178	86	196	215	54
Stage 1	-	-	-	-	-	-	88	88	-	90	90	-
Stage 2	-	-	-	-	-	-	92	90	-	106	125	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1551	-	-	1464	-	-	782	716	973	763	683	1013
Stage 1	-	-	-	-	-	-	920	822	-	917	820	-
Stage 2	-	-	-	-	-	-	915	820	-	900	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1551	-	-	1464	-	-	769	706	973	727	673	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	769	706	-	727	673	-
Stage 1	-	-	-	-	-	-	919	821	-	916	809	-
Stage 2	-	-	-	-	-	-	898	809	-	866	791	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.9	10.8	10
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	795	1551	-	-	1464	-	-	733
HCM Lane V/C Ratio	0.217	0.001	-	-	0.012	-	-	0.008
HCM Control Delay (s)	10.8	7.3	0	-	7.5	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	43	65	16	47	1	121	5	86	1	3	1
Future Volume (vph)	1	43	65	16	47	1	121	5	86	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

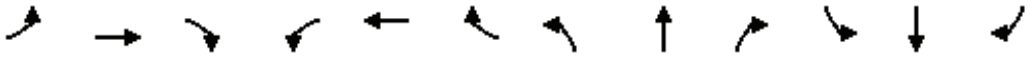
Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	43	65	16	47	1	121	5	86	1	3	1
Future Vol, veh/h	1	43	65	16	47	1	121	5	86	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	49	74	18	53	1	138	6	98	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	54	0	0	123	0	0	180	178	86	230	215	54
Stage 1	-	-	-	-	-	-	88	88	-	90	90	-
Stage 2	-	-	-	-	-	-	92	90	-	140	125	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1551	-	-	1464	-	-	782	716	973	725	683	1013
Stage 1	-	-	-	-	-	-	920	822	-	917	820	-
Stage 2	-	-	-	-	-	-	915	820	-	863	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1551	-	-	1464	-	-	769	706	973	642	673	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	769	706	-	642	673	-
Stage 1	-	-	-	-	-	-	919	821	-	916	809	-
Stage 2	-	-	-	-	-	-	898	809	-	770	791	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.9	11	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	839	1551	-	-	1464	-	-	714
HCM Lane V/C Ratio	0.287	0.001	-	-	0.012	-	-	0.008
HCM Control Delay (s)	11	7.3	0	-	7.5	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	43	65	16	47	1	121	5	86	1	3	1
Future Volume (vph)	1	43	65	16	47	1	121	5	86	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

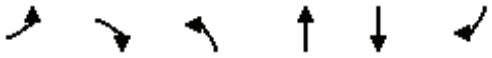
Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	43	65	16	47	1	121	5	86	1	3	1
Future Vol, veh/h	1	43	65	16	47	1	121	5	86	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	49	74	18	53	1	138	6	98	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	54	0	0	123	0	0	180	178	86	230	215	54
Stage 1	-	-	-	-	-	-	88	88	-	90	90	-
Stage 2	-	-	-	-	-	-	92	90	-	140	125	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1551	-	-	1464	-	-	782	716	973	725	683	1013
Stage 1	-	-	-	-	-	-	920	822	-	917	820	-
Stage 2	-	-	-	-	-	-	915	820	-	863	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1551	-	-	1464	-	-	769	706	973	642	673	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	769	706	-	642	673	-
Stage 1	-	-	-	-	-	-	919	821	-	916	809	-
Stage 2	-	-	-	-	-	-	898	809	-	770	791	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.9	11	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	839	1551	-	-	1464	-	-	714
HCM Lane V/C Ratio	0.287	0.001	-	-	0.012	-	-	0.008
HCM Control Delay (s)	11	7.3	0	-	7.5	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0	-	-	0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	41	47	55	24	8
Future Volume (vph)	6	41	47	55	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

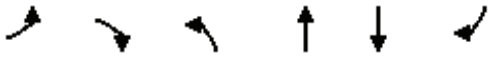
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	41	47	55	24	8
Future Vol, veh/h	6	41	47	55	24	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	51	59	69	30	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	222	35	40	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	187	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	766	1038	1570	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	845	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	736	1038	1570	-	-	-
Mov Cap-2 Maneuver	736	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	845	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	3.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	986	-	-
HCM Lane V/C Ratio	0.037	-	0.06	-	-
HCM Control Delay (s)	7.4	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	86	47	40	24	8
Future Volume (vph)	21	86	47	40	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

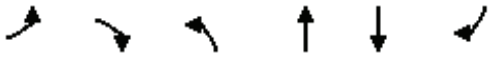
Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	86	47	40	24	8
Future Vol, veh/h	21	86	47	40	24	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	108	59	50	30	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	203	35	40	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	786	1038	1570	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	755	1038	1570	-	-	-
Mov Cap-2 Maneuver	755	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	862	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	967	-	-
HCM Lane V/C Ratio	0.037	-	0.138	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	86	47	40	24	8
Future Volume (vph)	21	86	47	40	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

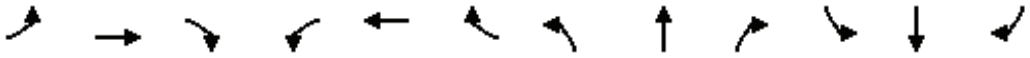
Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	86	47	40	24	8
Future Vol, veh/h	21	86	47	40	24	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	108	59	50	30	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	203	35	40	0	-	0
Stage 1	35	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	786	1038	1570	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	755	1038	1570	-	-	-
Mov Cap-2 Maneuver	755	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	862	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	967	-	-
HCM Lane V/C Ratio	0.037	-	0.138	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	63	92	28	46	1	88	14	41	1	3	9
Future Volume (vph)	14	63	92	28	46	1	88	14	41	1	3	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1291			669			448			292	
Travel Time (s)		22.0			11.4			12.2			8.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

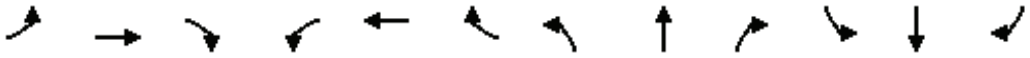
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	63	92	28	46	1	88	14	41	1	3	9
Future Vol, veh/h	14	63	92	28	46	1	88	14	41	1	3	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	68	99	30	49	1	95	15	44	1	3	10
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	8.4	8.7	8.6	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	62%	8%	38%	0%	8%
Vol Thru, %	10%	37%	62%	0%	23%
Vol Right, %	29%	54%	0%	100%	69%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	143	169	74	1	13
LT Vol	88	14	28	0	1
Through Vol	14	63	46	0	3
RT Vol	41	92	0	1	9
Lane Flow Rate	154	182	80	1	14
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.192	0.213	0.116	0.001	0.017
Departure Headway (Hd)	4.505	4.222	5.26	4.366	4.321
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	798	852	683	821	828
Service Time	2.524	2.24	2.982	2.087	2.347
HCM Lane V/C Ratio	0.193	0.214	0.117	0.001	0.017
HCM Control Delay	8.6	8.4	8.7	7.1	7.4
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.7	0.8	0.4	0	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	162	54	74	99	1	73	1	61	1	1	1
Future Volume (vph)	1	162	54	74	99	1	73	1	61	1	1	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		496			1291			1349			223	
Travel Time (s)		8.5			22.0			36.8			6.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

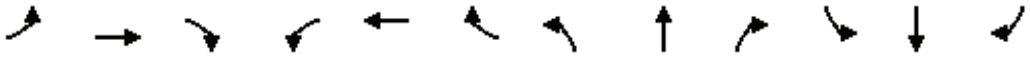
Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	162	54	74	99	1	73	1	61	1	1	1
Future Vol, veh/h	1	162	54	74	99	1	73	1	61	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	174	58	80	106	1	78	1	66	1	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	232	0	0	444	443	174	506	501	107
Stage 1	-	-	-	-	-	-	176	176	-	267	267	-
Stage 2	-	-	-	-	-	-	268	267	-	239	234	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1484	-	-	1336	-	-	524	509	869	477	472	947
Stage 1	-	-	-	-	-	-	826	753	-	738	688	-
Stage 2	-	-	-	-	-	-	738	688	-	764	711	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1484	-	-	1336	-	-	497	476	869	418	441	947
Mov Cap-2 Maneuver	-	-	-	-	-	-	497	476	-	418	441	-
Stage 1	-	-	-	-	-	-	825	752	-	737	644	-
Stage 2	-	-	-	-	-	-	689	644	-	705	710	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.3	12.6	11.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	616	1484	-	-	1336	-	-	525
HCM Lane V/C Ratio	0.236	0.001	-	-	0.06	-	-	0.006
HCM Control Delay (s)	12.6	7.4	0	-	7.9	0	-	11.9
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.9	0	-	-	0.2	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	67	9	1	91	111	16	31	8	74	41	8
Future Volume (vph)	2	67	9	1	91	111	16	31	8	74	41	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		400			740			1314			1349	
Travel Time (s)		9.1			16.8			35.8			36.8	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	67	9	1	91	111	16	31	8	74	41	8
Future Vol, veh/h	2	67	9	1	91	111	16	31	8	74	41	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	76	10	1	103	126	18	35	9	84	47	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.2	8.8	8.3	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	3%	0%	60%
Vol Thru, %	56%	86%	45%	33%
Vol Right, %	15%	12%	55%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	78	203	123
LT Vol	16	2	1	74
Through Vol	31	67	91	41
RT Vol	8	9	111	8
Lane Flow Rate	62	89	231	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.083	0.114	0.269	0.186
Departure Headway (Hd)	4.785	4.613	4.205	4.795
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	747	776	854	748
Service Time	2.826	2.646	2.232	2.831
HCM Lane V/C Ratio	0.083	0.115	0.27	0.187
HCM Control Delay	8.3	8.2	8.8	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.4	1.1	0.7

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **890**

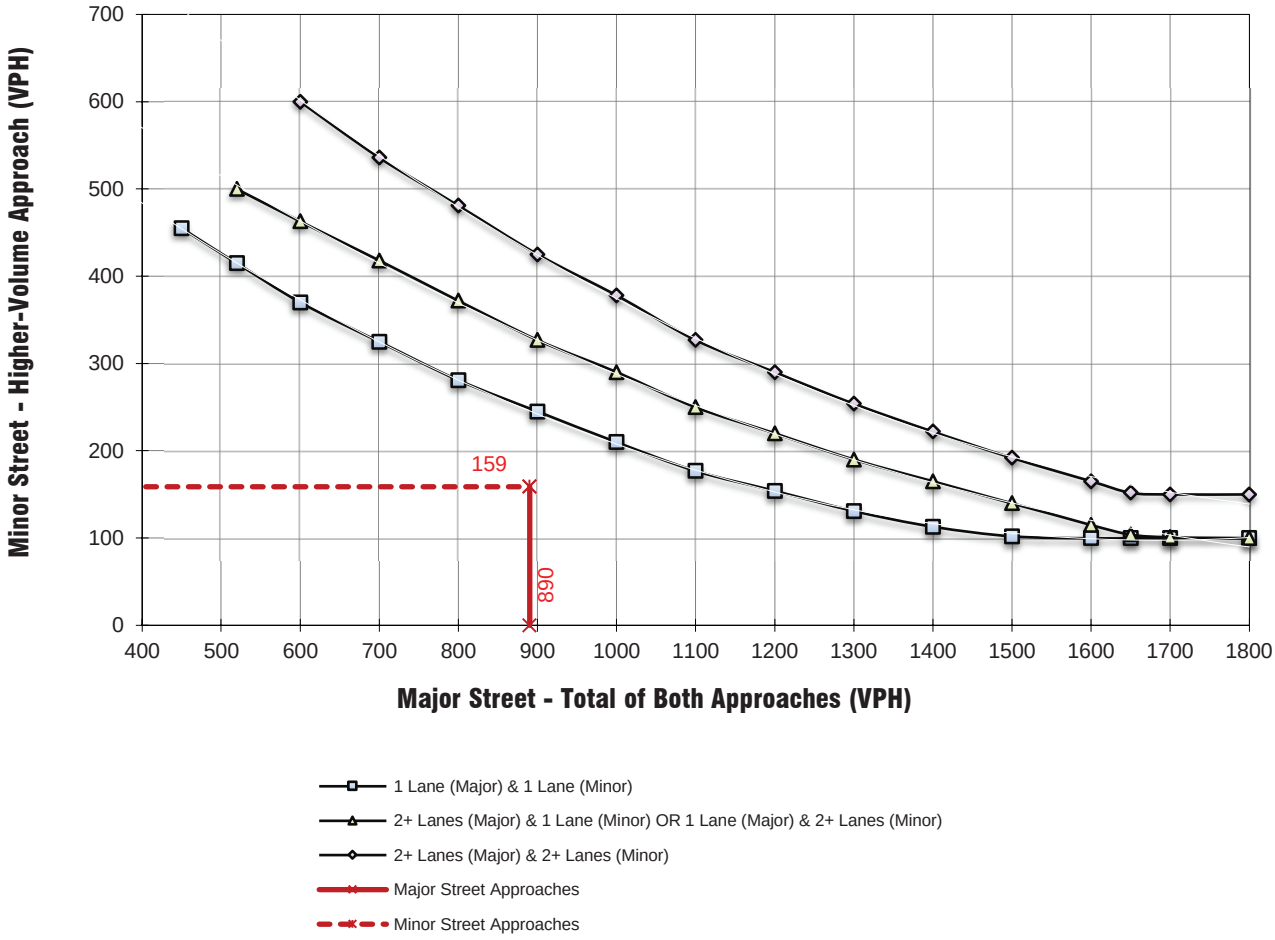
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **159**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1053**

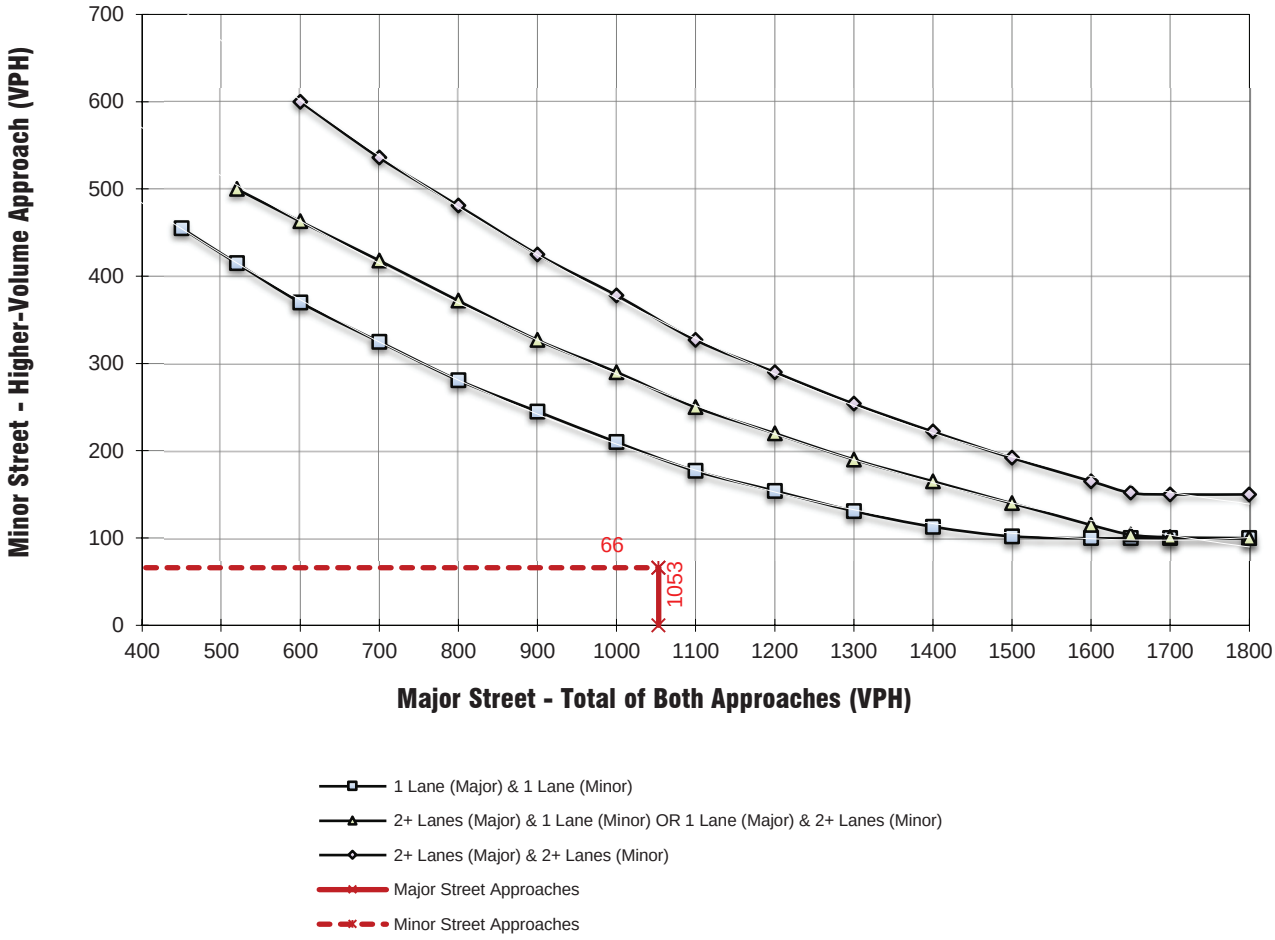
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **66**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1565**

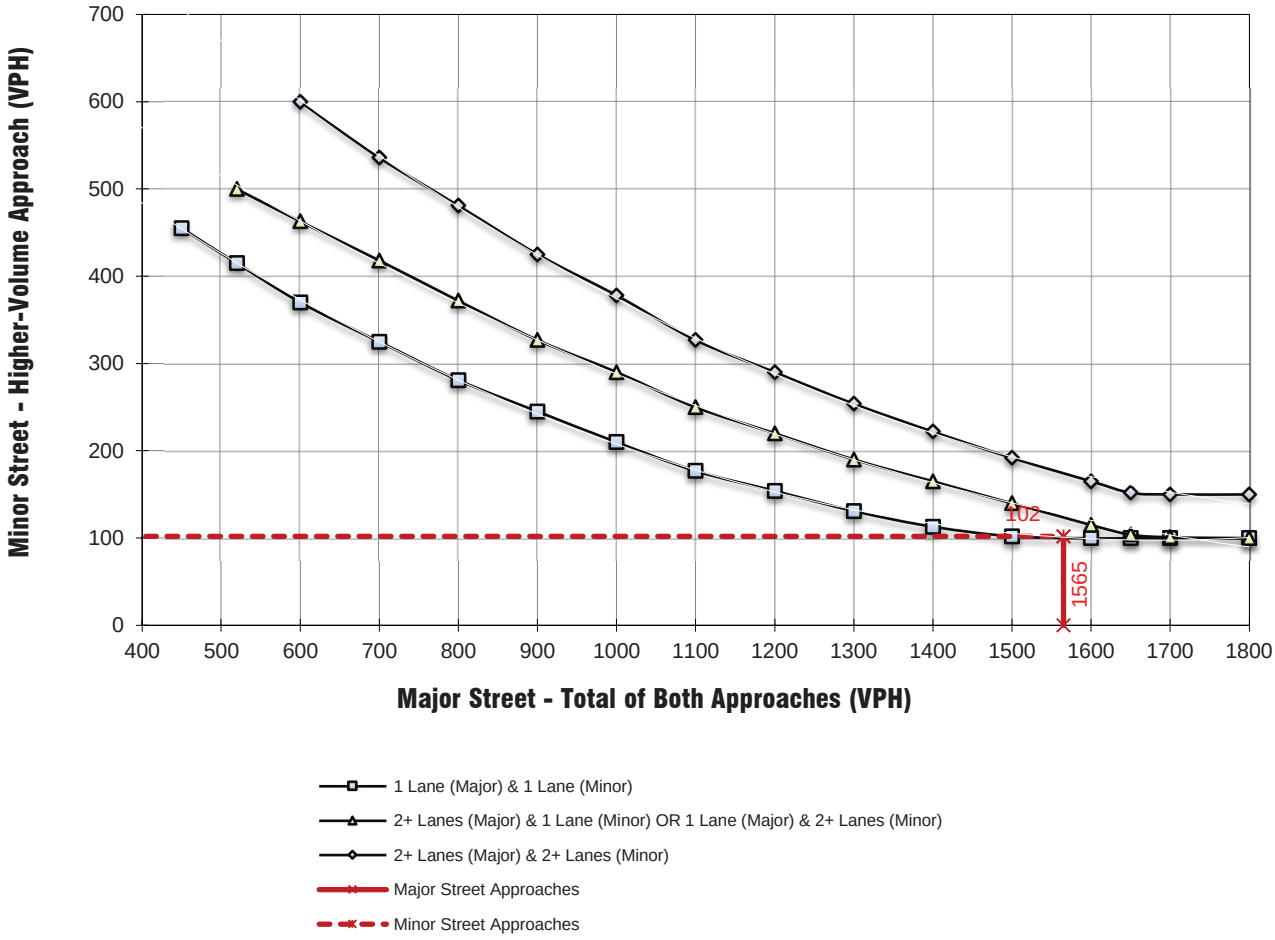
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cyn. Ranch Rd.**

High Volume Approach (VPH) = **102**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1821**

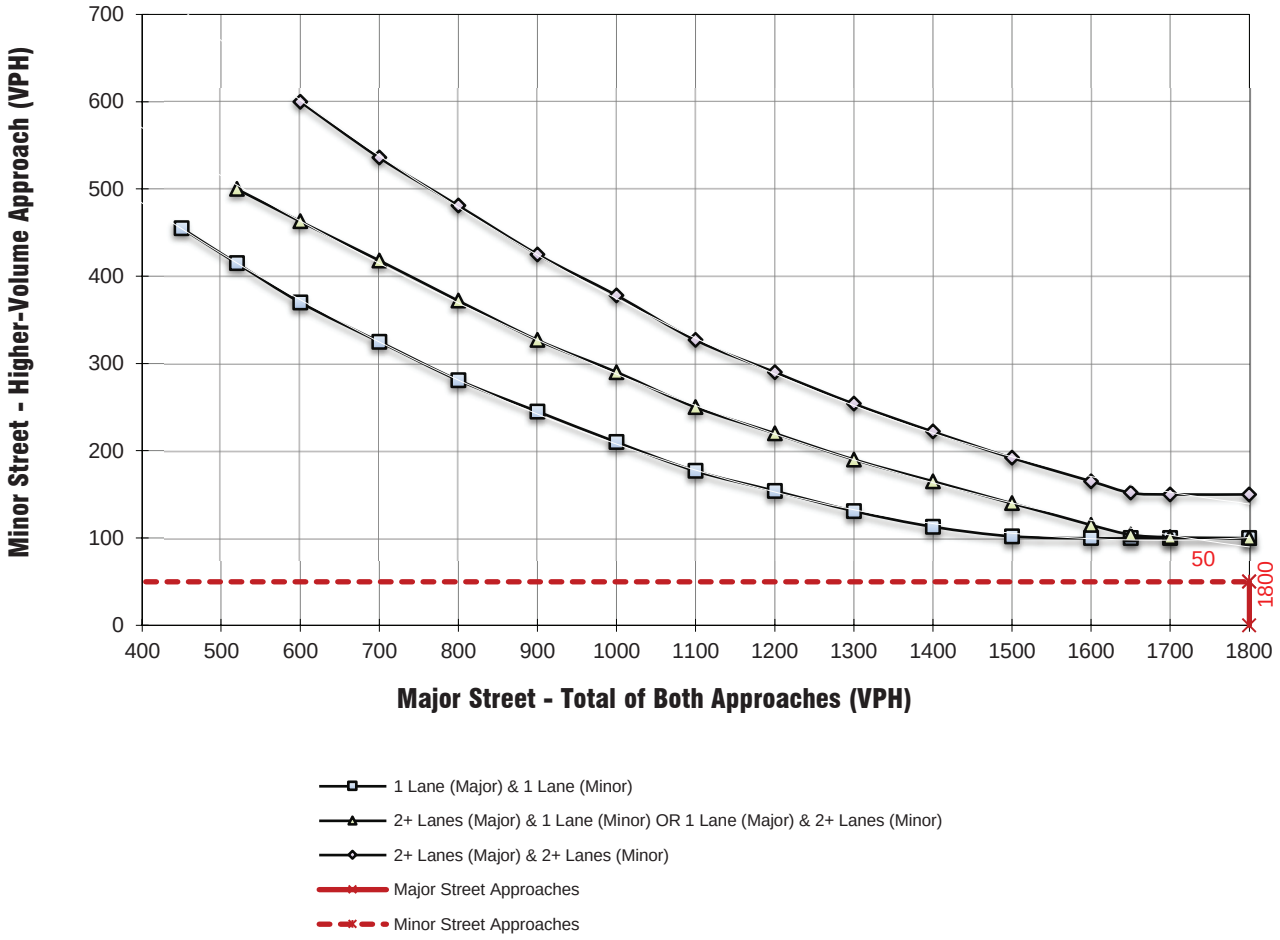
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cyn. Ranch Rd.**

High Volume Approach (VPH) = **50**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (AM Peak Hour)

Major Street Name = **Orange St.**

Total of Both Approaches (VPH) = **785**

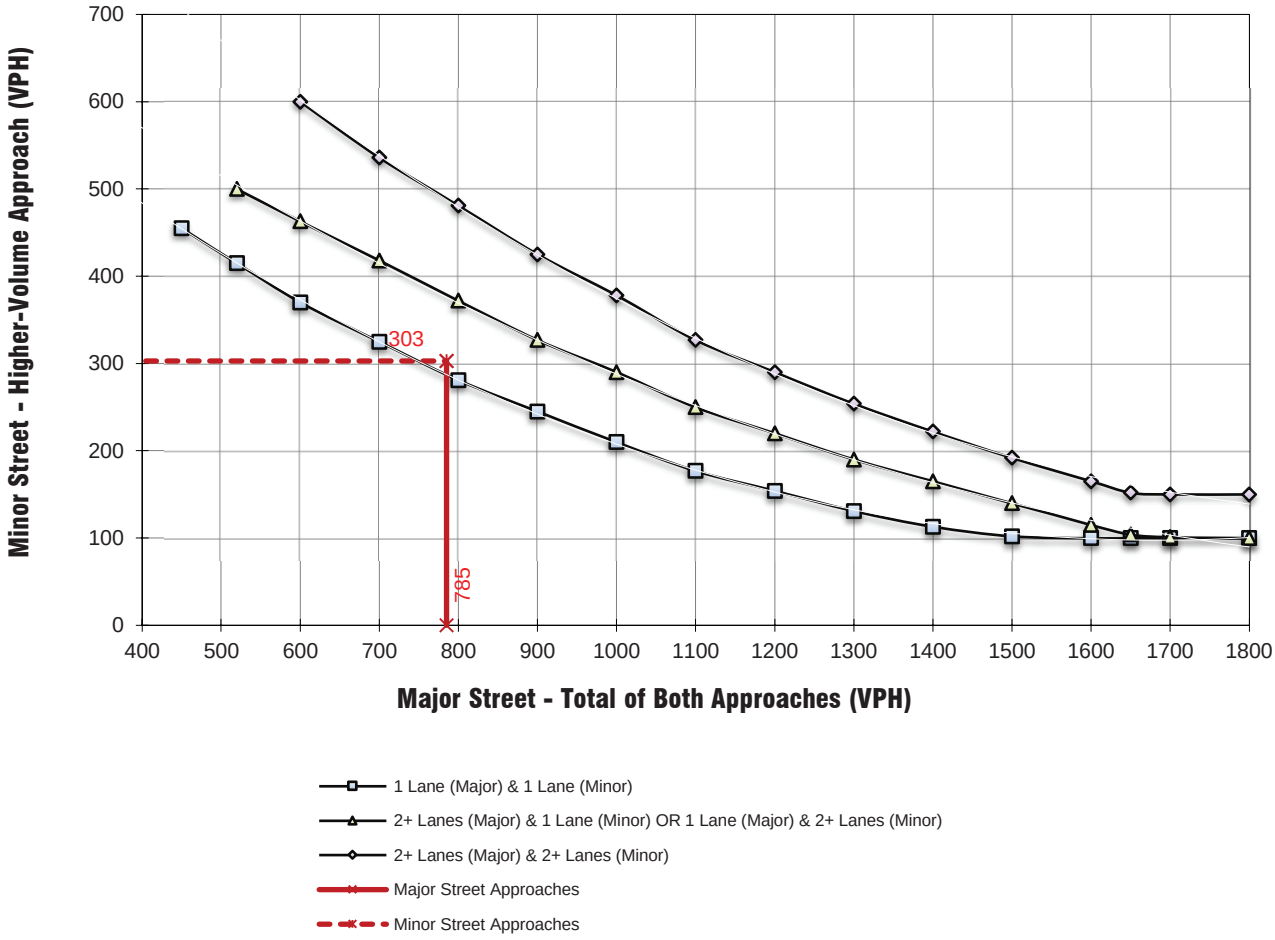
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Canyon Dr.**

High Volume Approach (VPH) = **303**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (PM Peak Hour)

Major Street Name = **Orange St.**

Total of Both Approaches (VPH) = **498**

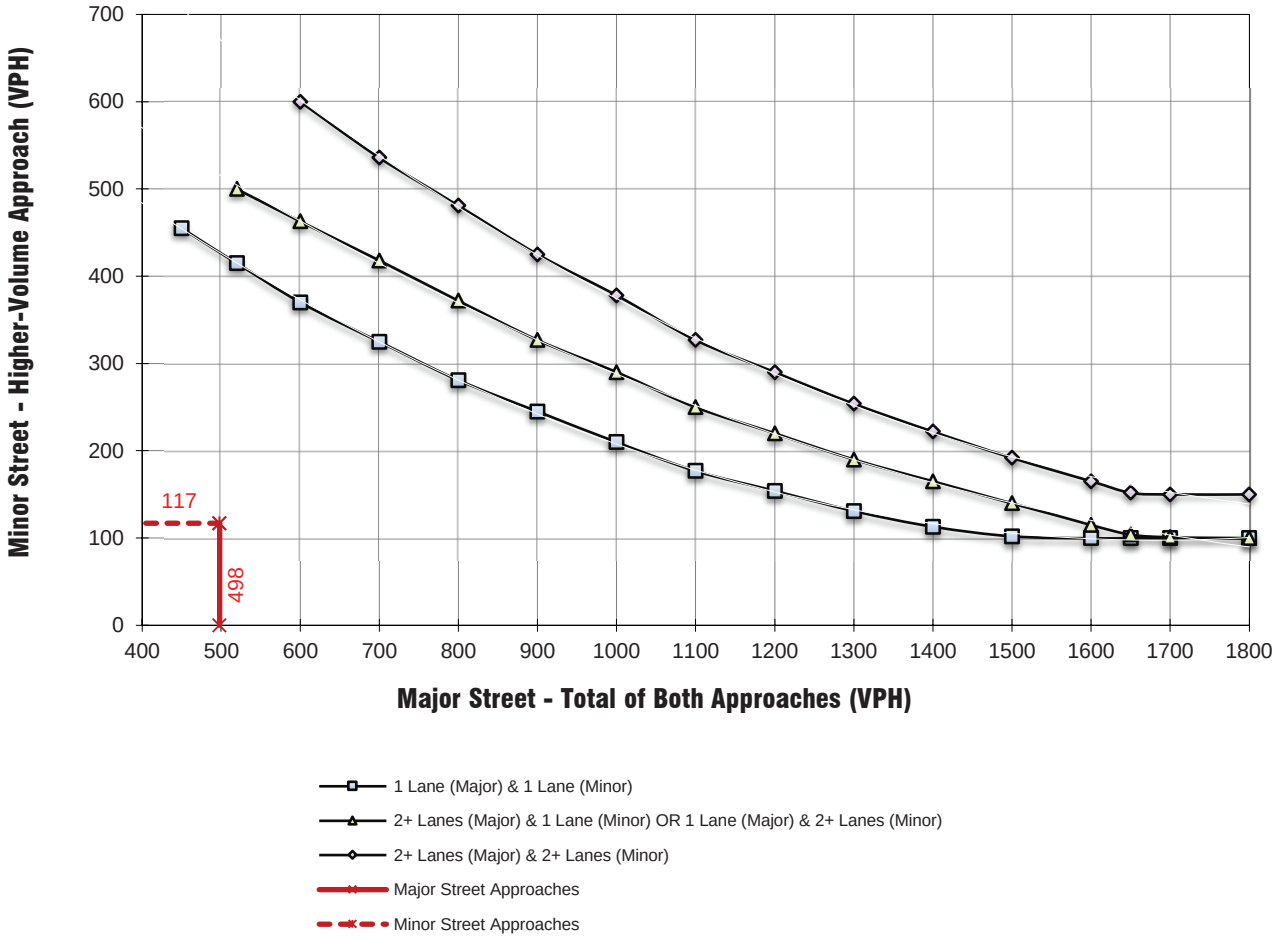
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Canyon Dr.**

High Volume Approach (VPH) = **117**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Sellers Rd.**

Total of Both Approaches (VPH) = **167**

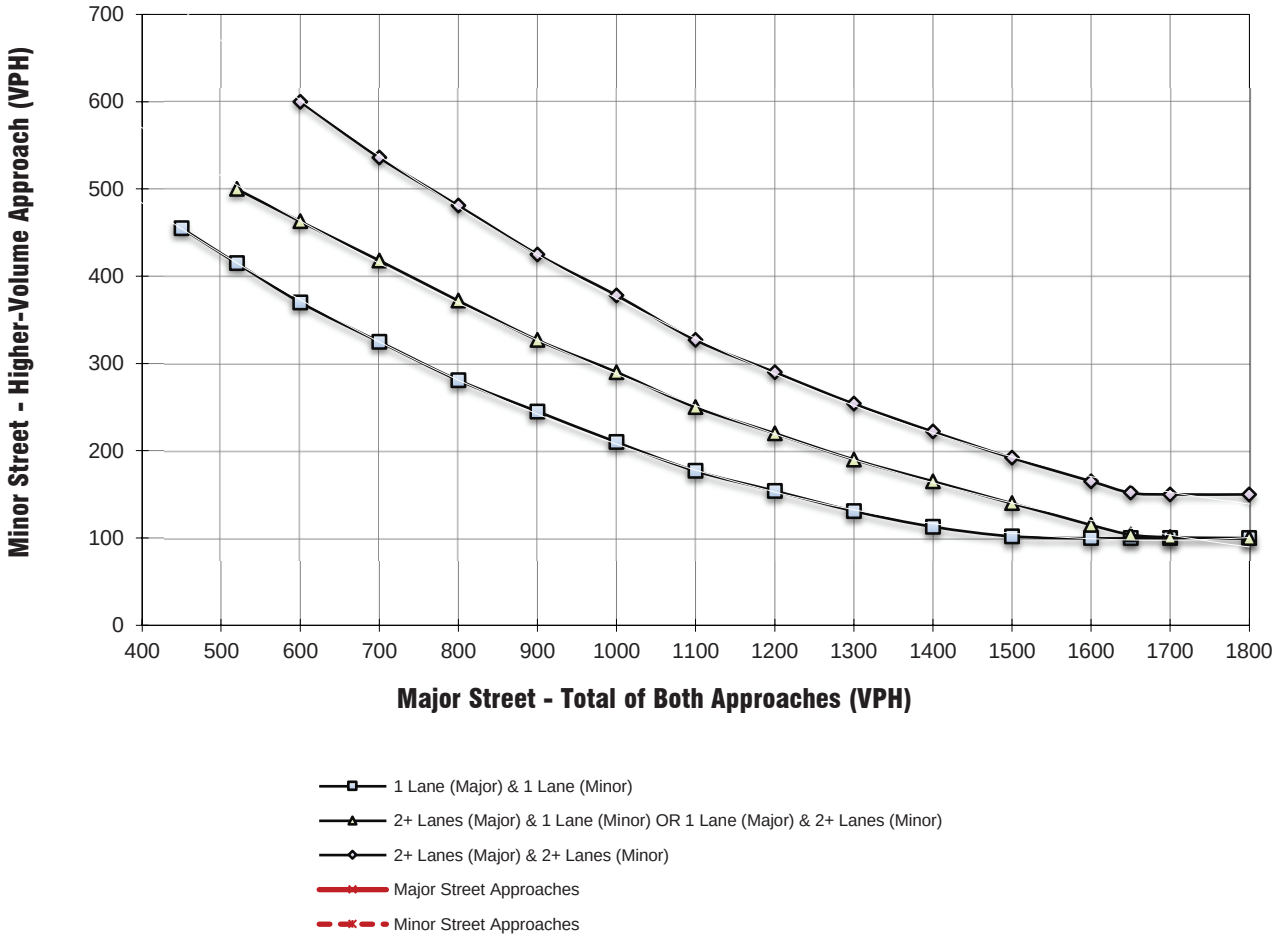
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **85**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Sellers Rd.**

Total of Both Approaches (VPH) = **134**

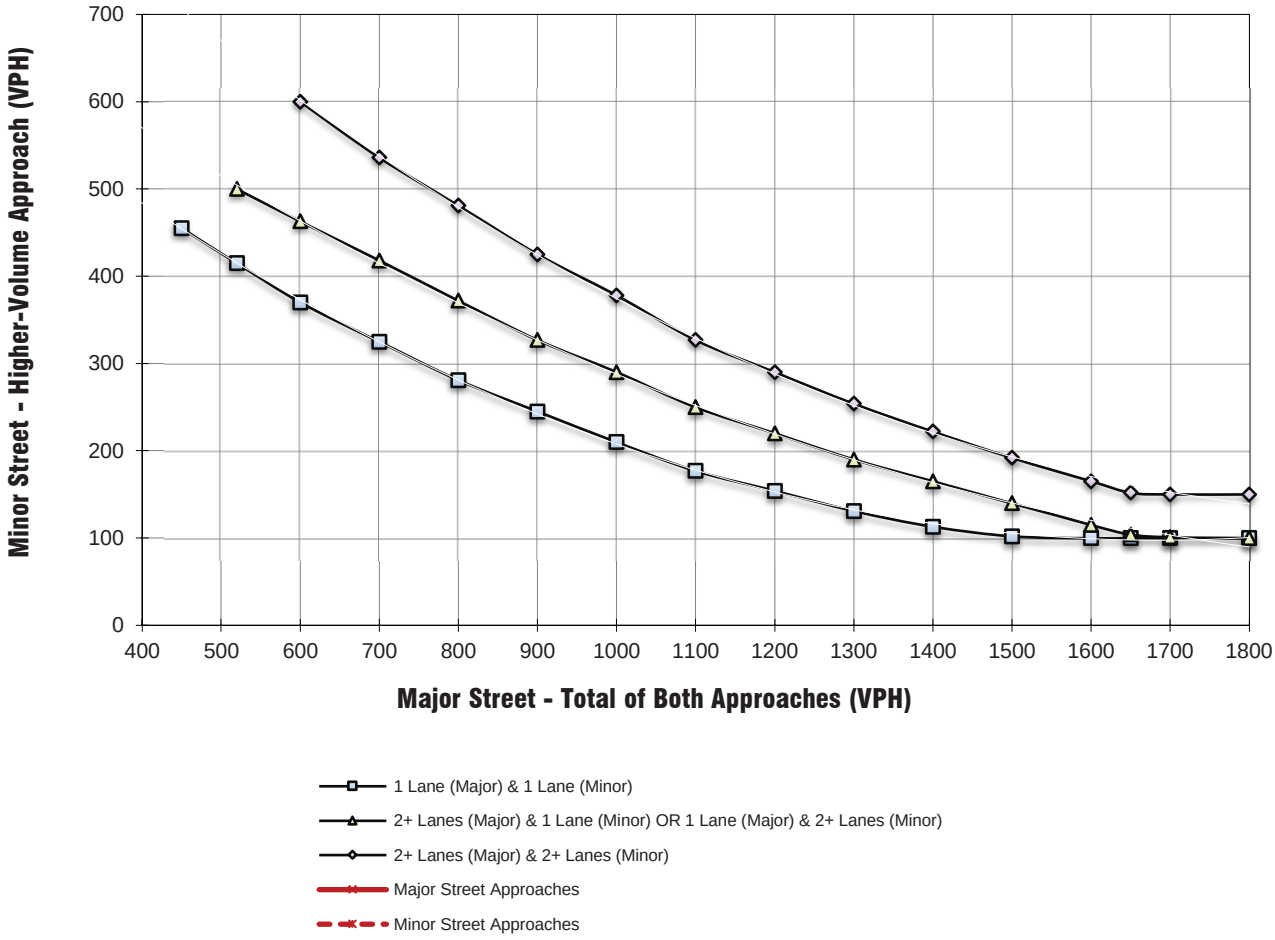
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **47**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (AM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **278**

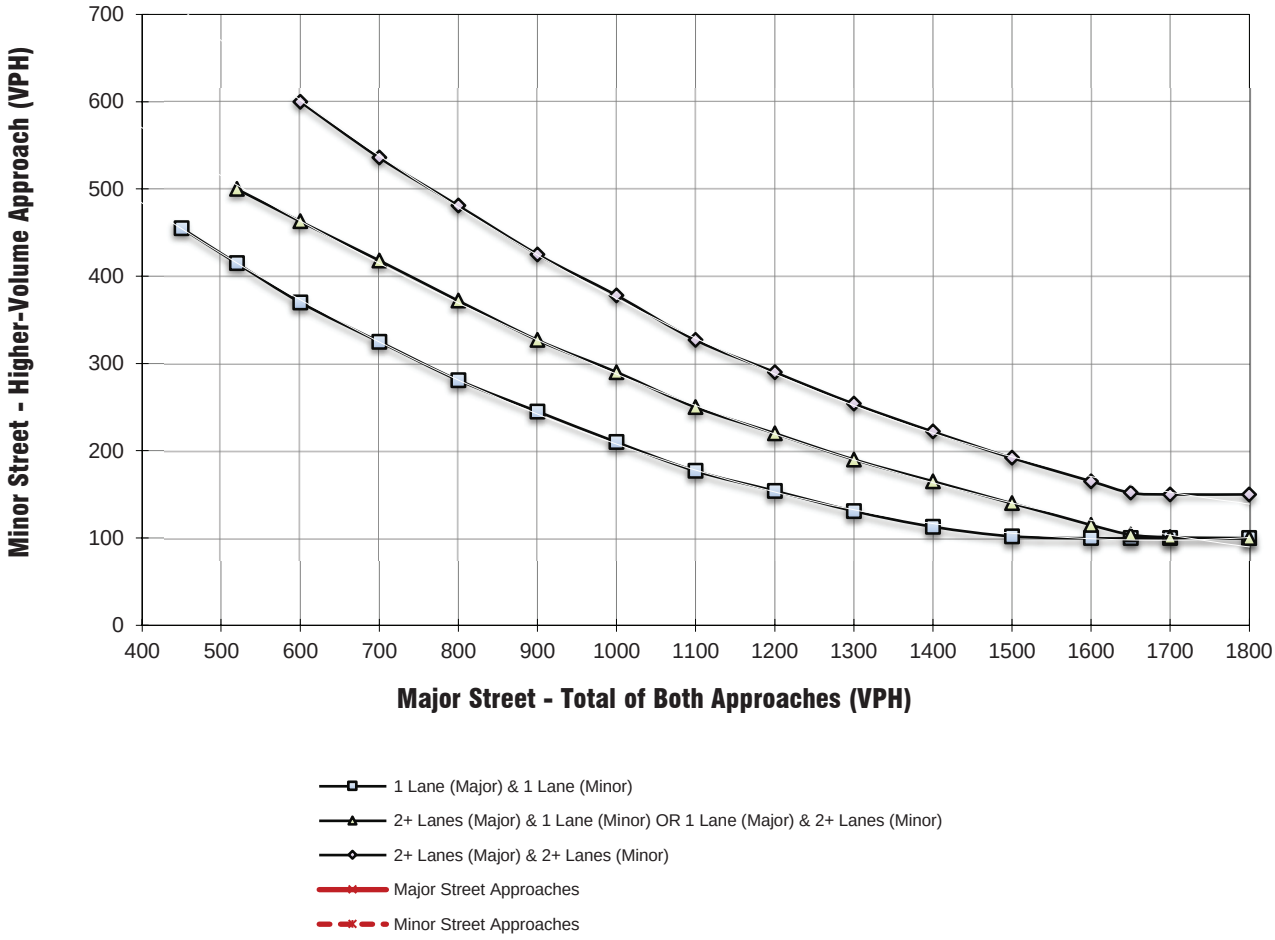
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Orange St.**

High Volume Approach (VPH) = **153**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (PM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **244**

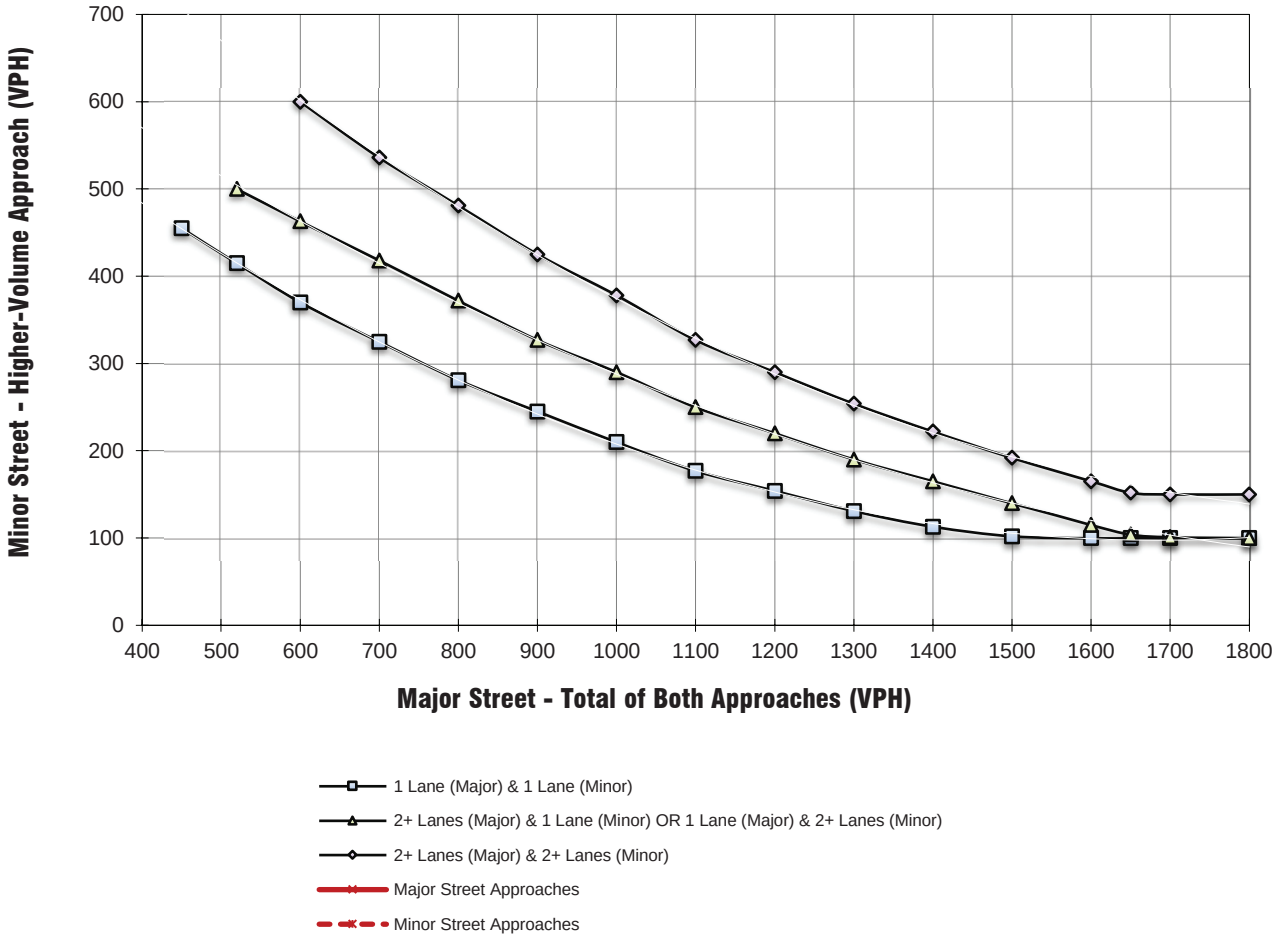
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Orange St.**

High Volume Approach (VPH) = **143**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **475**

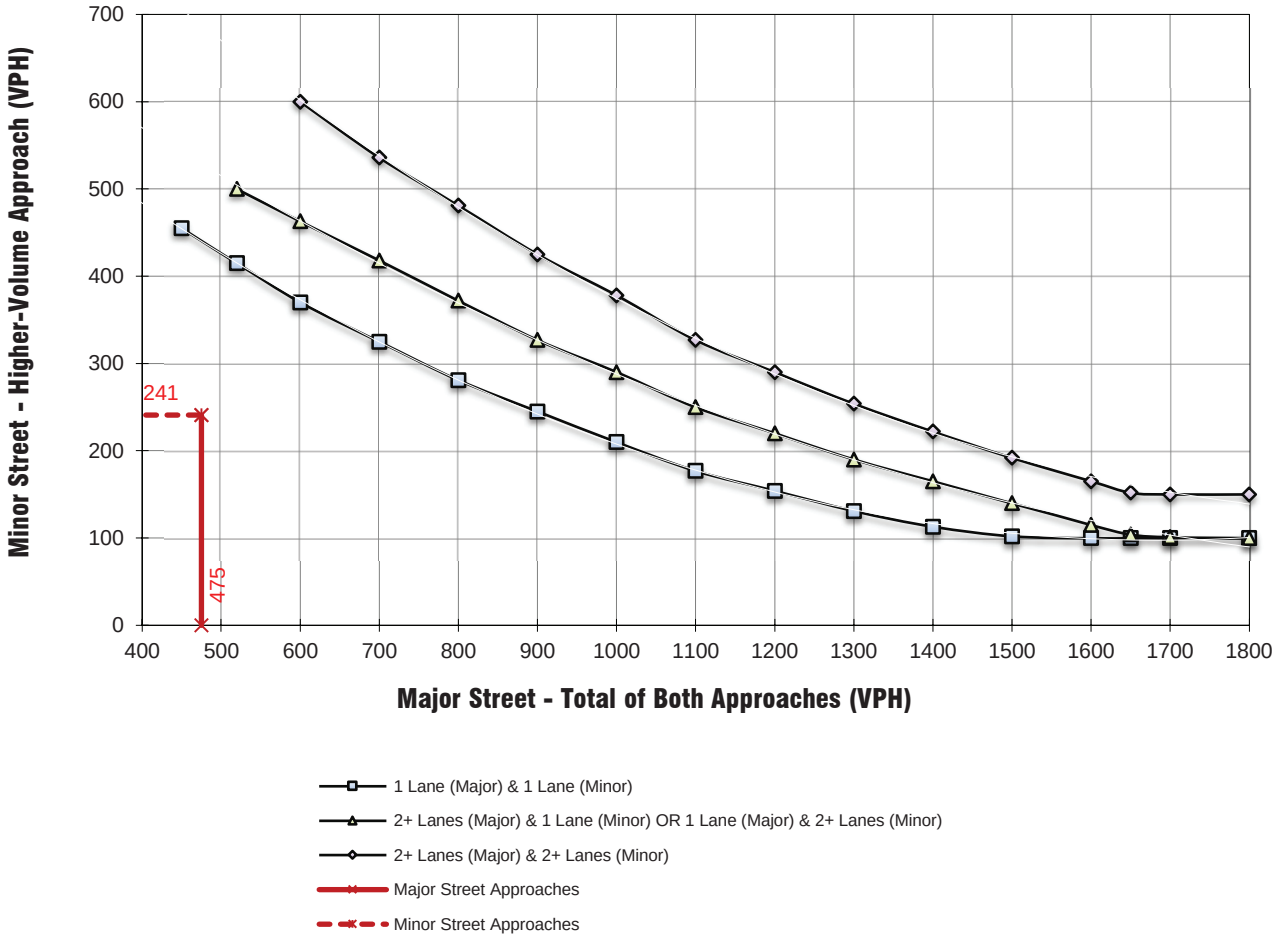
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **241**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (PM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **391**

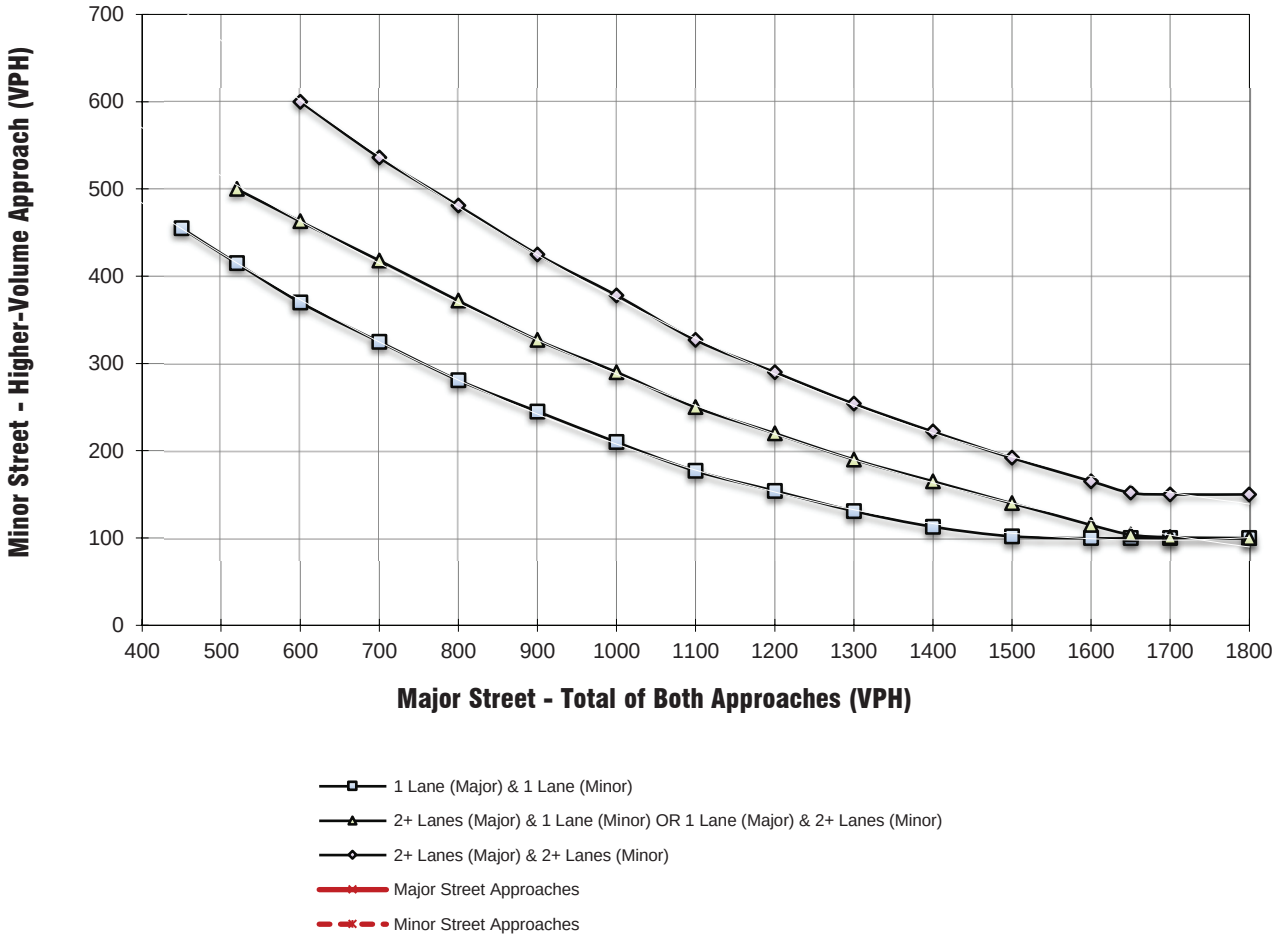
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **135**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAP CONDITIONS (AM Peak Hour)

Major Street Name = **Almond St.**

Total of Both Approaches (VPH) = **364**

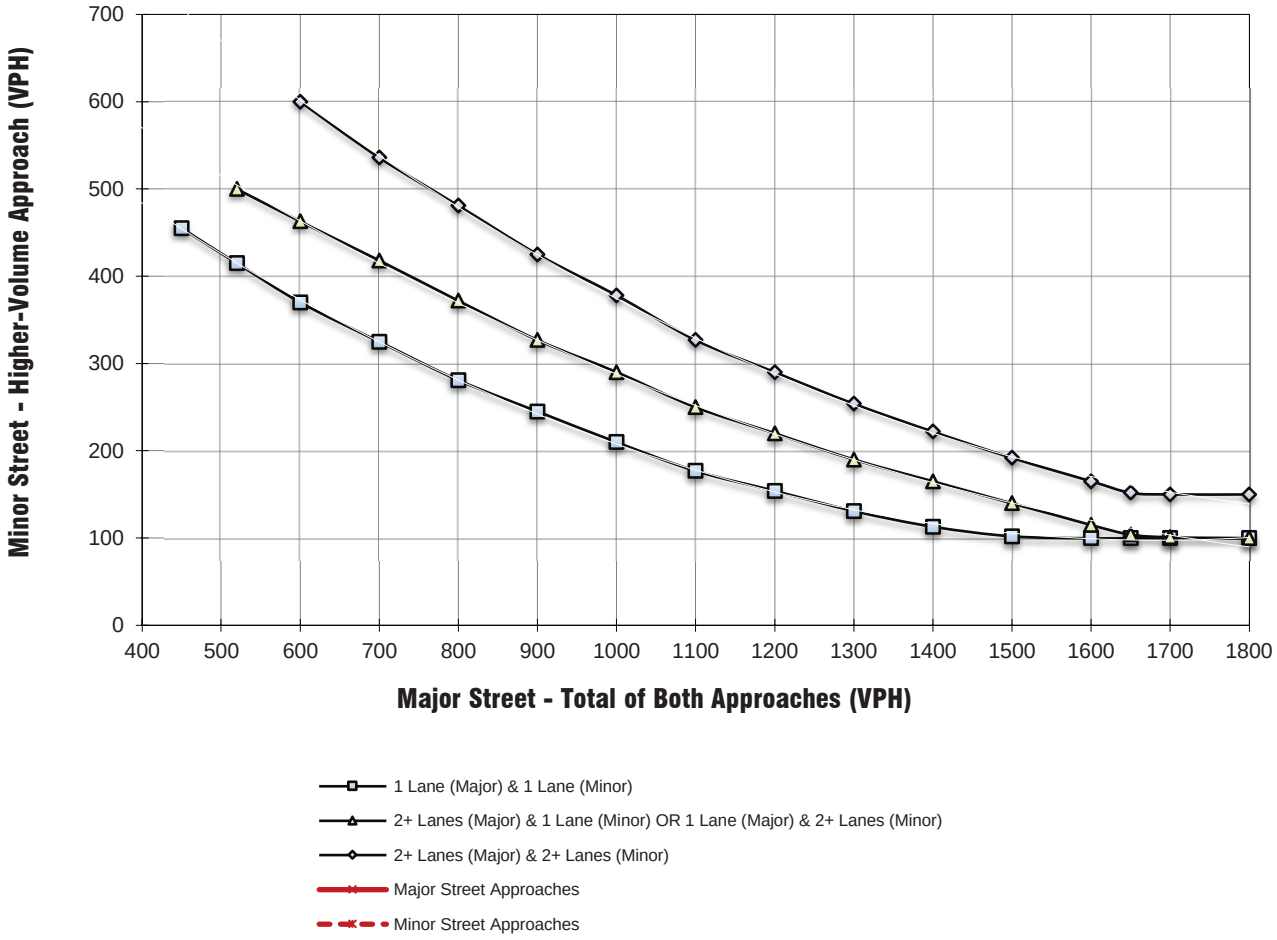
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **188**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Waite St.**

Total of Both Approaches (VPH) = **281**

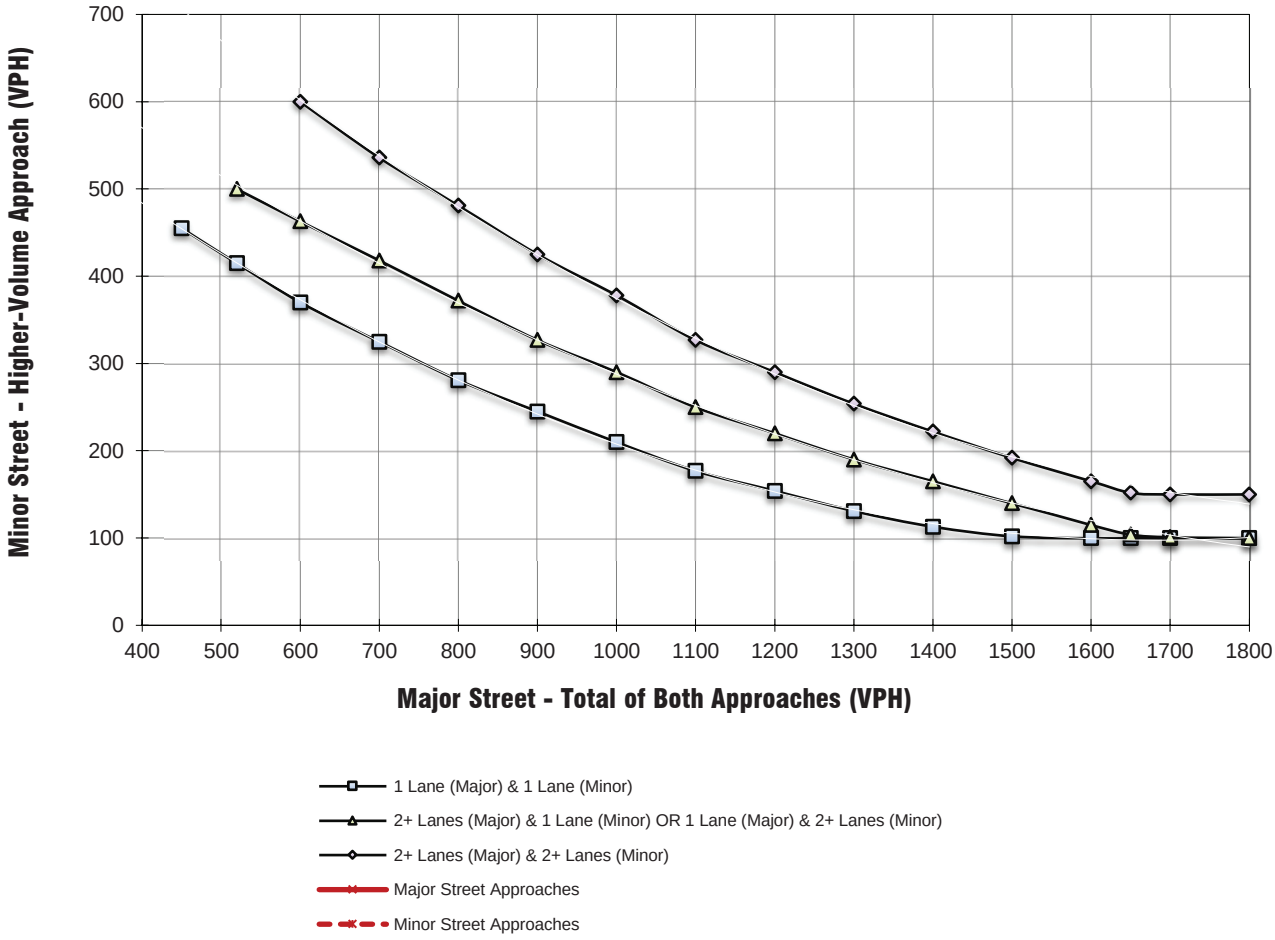
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **123**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

EAP (2025) CONDITIONS

Jurisdiction: City of Wildomar
Major Street: Cherry St.
Minor Street: N. Dwy.

Critical Approach Speed (Major): 35 mph
Critical Approach Speed (Minor): 30 mph

Major Street Approach Lanes = 1 lane
Minor Street Approach Lanes = 1 lane

Major Street Future ADT = 4,482 vpd
Minor Street Future ADT = 2,231 vpd

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT	
XX		
CONDITION A - Minimum Vehicular Volume	*Vehicles Per Day on Major Street (Total of Both Approaches)*	*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*
Satisfied / Not Satisfied XX		
Number of lanes for moving traffic on each approa		
Major Street / Minor Street	*Urban* / *Rural*	*Urban* / *Rural*
1 4,482 / *1* 2,231	*8,000* / *5,600*	*2,400* / *1,680*
2 + / *1*	*9,600* / *6,720*	*2,400* / *1,680*
2 + / *2 +*	*9,600* / *6,720*	*3,200* / *2,240*
1 / *2 +*	*8,000* / *5,600*	*3,200* / *2,240*
CONDITION B - Interruption of Continuous Traffic	*Vehicles Per Day on Major Street (Total of Both Approaches)*	*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*
Satisfied / Not Satisfied XX		
Number of lanes for moving traffic on each approa		
Major Street / Minor Street	*Urban* / *Rural*	*Urban* / *Rural*
1 4,482 / *1* 2,231	*12,000* / *8,400*	*1,200* * / *850*
2 + / *1*	*14,400* / *10,080*	*1,200* / *850*
2 + / *2 +*	*14,400* / *10,080*	*1,600* / *1,120*
1 / *2 +*	*12,000* / *8,400*	*1,600* / *1,120*
Combination of CONDITIONS A + B		
Satisfied / Not Satisfied XX	2 CONDITIONS	2 CONDITIONS
No one condition satisfied, but following condition fulfilled 80% of more .... A 56% B 37%	80%	80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

EAP (2025) CONDITIONS

Jurisdiction: City of Wildomar
Major Street: Cherry St.
Minor Street: S. Dwy.

Critical Approach Speed (Major): 35 mph
Critical Approach Speed (Minor): 30 mph

Major Street Approach Lanes = 1 lane
Minor Street Approach Lanes = 1 lane

Major Street Future ADT = 7,912 vpd
Minor Street Future ADT = 2,216 vpd

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL	Minimum Requirements EADT	
XX		
CONDITION A - Minimum Vehicular Volume		
Satisfied / Not Satisfied: XX	*Vehicles Per Day on Major Street (Total of Both Approaches)*	*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*
Number of lanes for moving traffic on each approa		
Major Street / Minor Street	*Urban* / *Rural*	*Urban* / *Rural*
1 7,912 / *1* 2,216	*8,000* / *5,600*	*2,400* / *1,680*
2 + / *1*	*9,600* / *6,720*	*2,400* / *1,680*
2 + / *2 +*	*9,600* / *6,720*	*3,200* / *2,240*
1 / *2 +*	*8,000* / *5,600*	*3,200* / *2,240*
CONDITION B - Interruption of Continuous Traffic		
Satisfied / Not Satisfied: XX	*Vehicles Per Day on Major Street (Total of Both Approaches)*	*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*
Number of lanes for moving traffic on each approa		
Major Street / Minor Street	*Urban* / *Rural*	*Urban* / *Rural*
1 7,912 / *1* 2,216	*12,000* / *8,400*	*1,200* * / *850*
2 + / *1*	*14,400* / *10,080*	*1,200* / *850*
2 + / *2 +*	*14,400* / *10,080*	*1,600* / *1,120*
1 / *2 +*	*12,000* / *8,400*	*1,600* / *1,120*
Combination of CONDITIONS A + B		
Satisfied / Not Satisfied: XX	2 CONDITIONS	2 CONDITIONS
No one condition satisfied, but following condition fulfilled 80% of more .... A: 92% B: 66%	80%	80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX H

EXISTING PLUS AMBIENT PLUS PROJECT (EAP 2025) CONDITIONS
RAMP JUNCTION ANALYSIS WORKSHEETS

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAP (2025)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	230
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	4221	654
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4682	725
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.66	0.36

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.428
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1543
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.610	Outer Lanes Freeway Speed (SO), mi/h	69.2
Flow in Lanes 1 and 2 (v12), pc/h	3139	Ramp Junction Speed (S), mi/h	59.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	26.4
Level of Service (LOS)	D	Density in Ramp Influence Area (DR), pc/mi/ln	29.2

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAP (2025)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	400
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3567	972
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3956	1078
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.71	0.54

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.407
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1626
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	55.6
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.589	Outer Lanes Freeway Speed (SO), mi/h	60.9
Flow in Lanes 1 and 2 (v12), pc/h	2330	Ramp Junction Speed (S), mi/h	57.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	3408	Average Density (D), pc/mi/ln	29.3
Level of Service (LOS)	D	Density in Ramp Influence Area (DR), pc/mi/ln	29.1

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAP (2025)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	160
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3070	570
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3405	632
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.48	0.32

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.420
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	982
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.646	Outer Lanes Freeway Speed (SO), mi/h	71.3
Flow in Lanes 1 and 2 (v12), pc/h	2423	Ramp Junction Speed (S), mi/h	59.1
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	19.2
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	23.6

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAP (2025)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	555
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2500	648
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	2773	719
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.50	0.36

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.318
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1129
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.7
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.593	Outer Lanes Freeway Speed (SO), mi/h	62.7
Flow in Lanes 1 and 2 (v12), pc/h	1644	Ramp Junction Speed (S), mi/h	59.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	2363	Average Density (D), pc/mi/ln	19.7
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	20.2

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAP (2025)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	230
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3555	721
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3943	800
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.56	0.40

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.435
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1179
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.0
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.625	Outer Lanes Freeway Speed (SO), mi/h	70.6
Flow in Lanes 1 and 2 (v12), pc/h	2764	Ramp Junction Speed (S), mi/h	58.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	22.3
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	26.0

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAP (2025)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	400
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2834	559
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3143	620
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.53	0.31

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.335
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1292
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.589	Outer Lanes Freeway Speed (SO), mi/h	62.1
Flow in Lanes 1 and 2 (v12), pc/h	1851	Ramp Junction Speed (S), mi/h	58.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	2471	Average Density (D), pc/mi/ln	21.3
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	22.0

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAP (2025)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	160
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3907	900
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4333	998
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.61	0.50

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.453
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1314
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	54.6
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.606	Outer Lanes Freeway Speed (SO), mi/h	70.1
Flow in Lanes 1 and 2 (v12), pc/h	3019	Ramp Junction Speed (S), mi/h	58.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	24.7
Level of Service (LOS)	D	Density in Ramp Influence Area (DR), pc/mi/ln	28.8

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	12/18/19
Agency	Trames Solutions, Inc.	Analysis Year	EAP (2025)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	555
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3007	461
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3335	511
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.55	0.26

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.324
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1357
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.5
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.593	Outer Lanes Freeway Speed (SO), mi/h	61.9
Flow in Lanes 1 and 2 (v12), pc/h	1978	Ramp Junction Speed (S), mi/h	59.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	2489	Average Density (D), pc/mi/ln	21.7
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	21.2

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APPENDIX I

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT (EAPC 2025) CONDITIONS INTERSECTION ANALYSIS CALCULATION WORKSHEETS AND TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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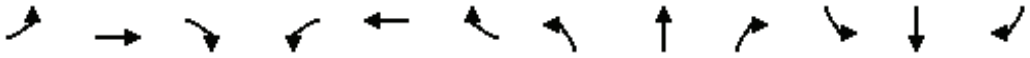


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	467	30	65	376	64	24	33	68	111	35	44
Future Volume (vph)	27	467	30	65	376	64	24	33	68	111	35	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	0		0	0		0
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		289			1348			206			1314	
Travel Time (s)		5.6			26.3			5.6			35.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	21.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	467	30	65	376	64	24	33	68	111	35	44
Future Vol, veh/h	27	467	30	65	376	64	24	33	68	111	35	44
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	570	37	79	459	78	29	40	83	135	43	54
Number of Lanes	0	2	1	0	2	1	0	1	0	0	1	0

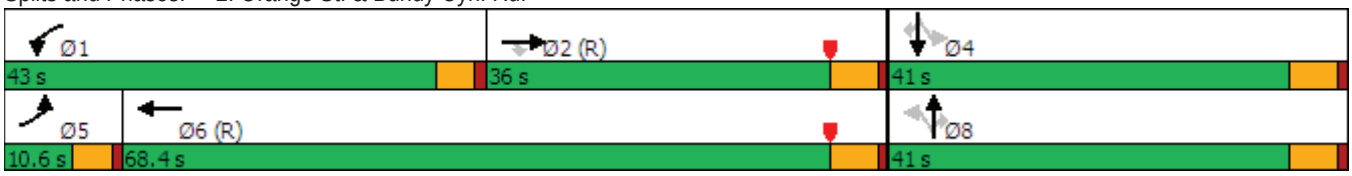
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	24.9	18.9	15.5	20.5
HCM LOS	C	C	C	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	19%	15%	0%	0%	34%	0%	0%	58%
Vol Thru, %	26%	85%	100%	0%	66%	100%	0%	18%
Vol Right, %	54%	0%	0%	100%	0%	0%	100%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	183	311	30	190	251	64	190
LT Vol	24	27	0	0	65	0	0	111
Through Vol	33	156	311	0	125	251	0	35
RT Vol	68	0	0	30	0	0	64	44
Lane Flow Rate	152	223	380	37	232	306	78	232
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.35	0.46	0.776	0.067	0.489	0.629	0.145	0.538
Departure Headway (Hd)	8.258	7.434	7.357	6.634	7.585	7.408	6.685	8.358
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	434	483	490	537	474	486	534	431
Service Time	6.037	5.204	5.127	4.403	5.356	5.179	4.455	6.13
HCM Lane V/C Ratio	0.35	0.462	0.776	0.069	0.489	0.63	0.146	0.538
HCM Control Delay	15.5	16.4	31.4	9.9	17.5	22	10.6	20.5
HCM Lane LOS	C	C	D	A	C	C	B	C
HCM 95th-tile Q	1.5	2.4	6.9	0.2	2.6	4.3	0.5	3.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	581	24	395	486	93	9	58	458	214	47	7
Future Volume (vph)	25	581	24	395	486	93	9	58	458	214	47	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	0		100	0		100
Storage Lanes	1		1	1		0	0		1	0		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8		8	4		4
Detector Phase	5	2	2	1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3	23.3	23.3	23.3	23.3
Total Split (s)	10.6	36.0	36.0	43.0	68.4		41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	8.8%	30.0%	30.0%	35.8%	57.0%		34.2%	34.2%	34.2%	34.2%	34.2%	34.2%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3			5.3	5.3		5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min	Min	Min	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	581	24	395	486	93	9	58	458	214	47	7
Future Volume (veh/h)	25	581	24	395	486	93	9	58	458	214	47	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	638	26	434	534	102	10	64	503	235	52	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	1140	504	456	1643	312	34	185	469	55	0	469
Arrive On Green	0.02	0.32	0.32	0.43	0.92	0.92	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3554	1573	1781	2976	566	0	620	1577	0	0	1577
Grp Volume(v), veh/h	27	638	26	434	318	318	74	0	503	287	0	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1765	620	0	1577	0	0	1577
Q Serve(g_s), s	1.8	17.8	1.4	28.2	2.4	2.4	0.0	0.0	35.7	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.8	17.8	1.4	28.2	2.4	2.4	35.7	0.0	35.7	35.7	0.0	0.4
Prop In Lane	1.00		1.00	1.00		0.32	0.14		1.00	0.82		1.00
Lane Grp Cap(c), veh/h	44	1140	504	456	981	974	219	0	469	55	0	469
V/C Ratio(X)	0.61	0.56	0.05	0.95	0.32	0.33	0.34	0.00	1.07	5.26	0.00	0.02
Avail Cap(c_a), veh/h	91	1140	504	571	981	974	219	0	469	55	0	469
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	33.7	28.1	33.6	2.2	2.2	33.2	0.0	42.2	60.0	0.0	29.8
Incr Delay (d2), s/veh	5.0	2.0	0.2	21.0	0.8	0.8	0.3	0.0	62.2	1956.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	7.9	0.5	12.8	0.9	0.9	1.6	0.0	21.7	31.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	35.7	28.3	54.7	3.0	3.0	33.5	0.0	104.3	2016.8	0.0	29.8
LnGrp LOS	E	D	C	D	A	A	C	A	F	F	A	C
Approach Vol, veh/h		691			1070			577			295	
Approach Delay, s/veh		36.5			24.0			95.3			1962.9	
Approach LOS		D			C			F			F	

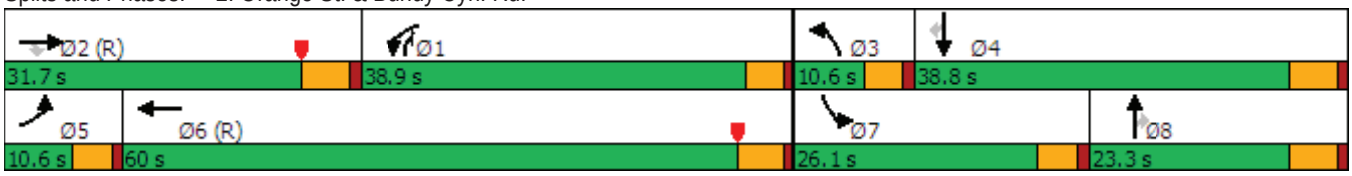
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	35.2	43.8		41.0	7.5	71.5		41.0				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	38.5	30.7		35.7	6.1	63.1		35.7				
Max Q Clear Time (g_c+I1), s	30.2	19.8		37.7	3.8	4.4		37.7				
Green Ext Time (p_c), s	0.5	2.2		0.0	0.0	2.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		260.1	
HCM 6th LOS		F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	581	24	395	486	93	9	58	458	214	47	7
Future Volume (vph)	25	581	24	395	486	93	9	58	458	214	47	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	100		100	100		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2						8			4
Detector Phase	5	2	2	1	6		3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		9.5	23.3	9.5	9.5	23.3	23.3
Total Split (s)	10.6	31.7	31.7	38.9	60.0		10.6	23.3	38.9	26.1	38.8	38.8
Total Split (%)	8.8%	26.4%	26.4%	32.4%	50.0%		8.8%	19.4%	32.4%	21.8%	32.3%	32.3%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		3.5	4.3	3.5	3.5	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3		4.5	5.3	4.5	4.5	5.3	5.3
Lead/Lag	Lead	Lead	Lead	Lag	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max		None	Min	None	None	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	581	24	395	486	93	9	58	458	214	47	7
Future Volume (veh/h)	25	581	24	395	486	93	9	58	458	214	47	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	638	26	434	534	102	10	64	503	235	52	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	782	345	615	1628	310	21	218	730	264	473	399
Arrive On Green	0.02	0.22	0.22	0.46	0.73	0.73	0.01	0.12	0.12	0.15	0.25	0.25
Sat Flow, veh/h	1781	3554	1567	1781	2976	566	1781	1870	1565	1781	1870	1576
Grp Volume(v), veh/h	27	638	26	434	318	318	10	64	503	235	52	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1567	1781	1777	1765	1781	1870	1565	1781	1870	1576
Q Serve(g_s), s	1.8	20.5	1.4	23.4	7.7	7.7	0.7	3.8	10.6	15.5	2.6	0.5
Cycle Q Clear(g_c), s	1.8	20.5	1.4	23.4	7.7	7.7	0.7	3.8	10.6	15.5	2.6	0.5
Prop In Lane	1.00		1.00	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	782	345	615	972	966	21	218	730	264	473	399
V/C Ratio(X)	0.61	0.82	0.08	0.71	0.33	0.33	0.48	0.29	0.69	0.89	0.11	0.02
Avail Cap(c_a), veh/h	91	782	345	615	972	966	91	281	782	321	522	440
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.9	44.5	28.8	27.6	8.4	8.5	58.9	48.5	9.2	50.2	34.4	33.7
Incr Delay (d2), s/veh	5.0	9.2	0.4	3.0	0.8	0.9	15.7	0.3	1.9	22.2	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	9.9	0.6	9.4	2.8	2.8	0.4	1.8	4.6	8.5	1.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	53.7	29.2	30.5	9.3	9.3	74.6	48.7	11.0	72.4	34.5	33.7
LnGrp LOS	E	D	C	C	A	A	E	D	B	E	C	C
Approach Vol, veh/h		691			1070			577			295	
Approach Delay, s/veh		53.1			17.9			16.3			64.7	
Approach LOS		D			B			B			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	46.7	31.7	5.9	35.7	7.5	71.0	22.3	19.3
Change Period (Y+Rc), s	5.3	* 5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	34.4	* 26	6.1	33.5	6.1	54.7	21.6	18.0
Max Q Clear Time (g_c+I1), s	25.4	22.5	2.7	4.6	3.8	9.7	17.5	12.6
Green Ext Time (p_c), s	0.5	1.2	0.0	0.1	0.0	2.6	0.2	0.7

Intersection Summary	
HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	690	562	487	749	0	0	0	0	495	7	270
Future Volume (vph)	0	690	562	487	749	0	0	0	0	495	7	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	250		0	0		0	300		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases										4		
Detector Phase		2		1	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		45.0		35.0	45.0					25.0	25.0	
Total Split (s)		46.0		36.0	82.0					38.0	38.0	
Total Split (%)		38.3%		30.0%	68.3%					31.7%	31.7%	
Yellow Time (s)		4.3		3.6	4.3					4.3	4.3	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.3		4.6	5.3					5.3	5.3	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		C-Min		None	C-Min					None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	690	562	487	749	0	0	0	0	495	7	270
Future Volume (veh/h)	0	690	562	487	749	0	0	0	0	495	7	270
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	719	585	507	780	0				516	7	281
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	634	507	466	2271	0				485	10	421
Arrive On Green	0.00	0.45	0.45	0.52	1.00	0.00				0.27	0.27	0.27
Sat Flow, veh/h	0	1963	1496	1781	3647	0				1781	38	1544
Grp Volume(v), veh/h	0	683	621	507	780	0				516	0	288
Grp Sat Flow(s),veh/h/ln	0	1777	1588	1781	1777	0				1781	0	1582
Q Serve(g_s), s	0.0	40.7	40.7	31.4	0.0	0.0				32.7	0.0	19.4
Cycle Q Clear(g_c), s	0.0	40.7	40.7	31.4	0.0	0.0				32.7	0.0	19.4
Prop In Lane	0.00		0.94	1.00		0.00				1.00		0.98
Lane Grp Cap(c), veh/h	0	603	539	466	2271	0				485	0	431
V/C Ratio(X)	0.00	1.13	1.15	1.09	0.34	0.00				1.06	0.00	0.67
Avail Cap(c_a), veh/h	0	603	539	466	2271	0				485	0	431
HCM Platoon Ratio	1.00	1.33	1.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.79	0.79	0.42	0.42	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.9	32.9	28.6	0.0	0.0				43.7	0.0	38.8
Incr Delay (d2), s/veh	0.0	75.8	85.1	54.1	0.2	0.0				58.6	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	28.2	26.6	16.5	0.1	0.0				22.2	0.0	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	108.7	118.0	82.7	0.2	0.0				102.3	0.0	42.0
LnGrp LOS	A	F	F	F	A	A				F	A	D
Approach Vol, veh/h		1304			1287						804	
Approach Delay, s/veh		113.1			32.7						80.7	
Approach LOS		F			C						F	

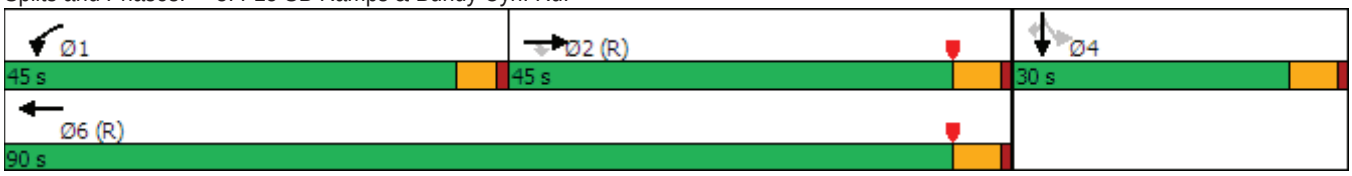
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	36.0	46.0		38.0		82.0
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3
Max Green Setting (Gmax), s	31.4	40.7		32.7		76.7
Max Q Clear Time (g_c+I1), s	33.4	42.7		34.7		2.0
Green Ext Time (p_c), s	0.0	0.0		0.0		3.9

Intersection Summary		
HCM 6th Ctrl Delay		75.0
HCM 6th LOS		E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	690	562	487	749	0	0	0	0	495	7	270
Future Volume (vph)	0	690	562	487	749	0	0	0	0	495	7	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	255		0	0		0	300		300
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)										46%		11%
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Detector Phase		2	2	1	6					4	4	4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		45.0	45.0	35.0	45.0					25.0	25.0	25.0
Total Split (s)		45.0	45.0	45.0	90.0					30.0	30.0	30.0
Total Split (%)		37.5%	37.5%	37.5%	75.0%					25.0%	25.0%	25.0%
Yellow Time (s)		4.3	4.3	3.6	4.3					4.3	4.3	4.3
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		5.3	5.3	4.6	5.3					5.3	5.3	5.3
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		C-Min	C-Min	None	C-Min					None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	690	562	487	749	0	0	0	0	495	7	270
Future Volume (veh/h)	0	690	562	487	749	0	0	0	0	495	7	270
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	719	585	507	780	0				606	0	190
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1392	617	523	2571	0				670	0	296
Arrive On Green	0.00	0.52	0.52	0.59	1.00	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3647	1575	1781	3647	0				3563	0	1572
Grp Volume(v), veh/h	0	719	585	507	780	0				606	0	190
Grp Sat Flow(s),veh/h/ln	0	1777	1575	1781	1777	0				1781	0	1572
Q Serve(g_s), s	0.0	15.9	42.2	32.7	0.0	0.0				20.0	0.0	13.4
Cycle Q Clear(g_c), s	0.0	15.9	42.2	32.7	0.0	0.0				20.0	0.0	13.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1392	617	523	2571	0				670	0	296
V/C Ratio(X)	0.00	0.52	0.95	0.97	0.30	0.00				0.90	0.00	0.64
Avail Cap(c_a), veh/h	0	1392	617	600	2571	0				733	0	324
HCM Platoon Ratio	1.00	1.33	1.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.67	0.67	0.76	0.76	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.3	27.6	24.3	0.0	0.0				47.6	0.0	45.0
Incr Delay (d2), s/veh	0.0	0.9	19.5	22.5	0.2	0.0				13.2	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	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.0	17.0	12.1	0.1	0.0				10.1	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.2	47.2	46.8	0.2	0.0				60.8	0.0	47.6
LnGrp LOS	A	C	D	D	A	A				E	A	D
Approach Vol, veh/h		1304			1287						796	
Approach Delay, s/veh		33.4			18.6						57.7	
Approach LOS		C			B						E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	39.8	52.3		27.9		92.1
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3
Max Green Setting (Gmax), s	40.4	39.7		24.7		84.7
Max Q Clear Time (g_c+I1), s	34.7	44.2		22.0		2.0
Green Ext Time (p_c), s	0.5	0.0		0.6		3.9

Intersection Summary		
HCM 6th Ctrl Delay		33.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	949	0	0	936	535	300	0	332	0	0	0
Future Volume (vph)	237	949	0	0	936	535	300	0	332	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases							8					
Detector Phase	5	2			6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0		25.0	25.0				
Total Split (s)	25.0	89.0			64.0		31.0	31.0				
Total Split (%)	20.8%	74.2%			53.3%		25.8%	25.8%				
Yellow Time (s)	3.0	4.3			4.3		4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3		5.3	5.3				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None	C-Min			C-Min		None	None				

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	949	0	0	936	535	300	0	332	0	0	0
Future Volume (veh/h)	237	949	0	0	936	535	300	0	332	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	242	968	0	0	955	546	306	0	339			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	265	2479	0	0	1134	629	381	0	337			
Arrive On Green	0.30	1.00	0.00	0.00	0.52	0.52	0.21	0.00	0.21			
Sat Flow, veh/h	1781	3647	0	0	2293	1221	1781	0	1574			
Grp Volume(v), veh/h	242	968	0	0	766	735	306	0	339			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1644	1781	0	1574			
Q Serve(g_s), s	15.7	0.0	0.0	0.0	44.1	47.0	19.6	0.0	25.7			
Cycle Q Clear(g_c), s	15.7	0.0	0.0	0.0	44.1	47.0	19.6	0.0	25.7			
Prop In Lane	1.00		0.00	0.00		0.74	1.00		1.00			
Lane Grp Cap(c), veh/h	265	2479	0	0	916	847	381	0	337			
V/C Ratio(X)	0.91	0.39	0.00	0.00	0.84	0.87	0.80	0.00	1.01			
Avail Cap(c_a), veh/h	312	2479	0	0	916	847	381	0	337			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	41.4	0.0	0.0	0.0	24.8	25.5	44.7	0.0	47.2			
Incr Delay (d2), s/veh	3.5	0.0	0.0	0.0	9.0	11.6	10.8	0.0	50.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.0	0.0	19.9	20.1	9.8	0.0	14.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.9	0.0	0.0	0.0	33.7	37.1	55.6	0.0	97.6			
LnGrp LOS	D	A	A	A	C	D	E	A	F			
Approach Vol, veh/h		1210			1501			645				
Approach Delay, s/veh		9.0			35.4			77.7				
Approach LOS		A			D			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		89.0			21.8	67.2		31.0				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		83.7			21.0	58.7		25.7				
Max Q Clear Time (g_c+I1), s		2.0			17.7	49.0		27.7				
Green Ext Time (p_c), s		5.1			0.1	5.1		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			34.0									
HCM 6th LOS			C									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	949	0	0	936	535	300	0	332	0	0	0
Future Volume (vph)	237	949	0	0	936	535	300	0	332	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	255		0	0		0	300		300	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases						6	8					
Detector Phase	5	2			6	6	8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0	45.0	25.0	25.0				
Total Split (s)	30.0	82.0			52.0	52.0	38.0	38.0				
Total Split (%)	25.0%	68.3%			43.3%	43.3%	31.7%	31.7%				
Yellow Time (s)	3.0	4.3			4.3	4.3	4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3	5.3	5.3	5.3				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	None	C-Min			C-Min	C-Min	None	None				

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 51 (43%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 95	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.



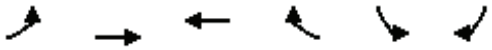
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	237	949	0	0	936	535	300	0	332	0	0	0
Future Volume (veh/h)	237	949	0	0	936	535	300	0	332	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	242	968	0	0	955	546	306	0	339			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	273	2403	0	0	1739	772	420	0	371			
Arrive On Green	0.05	0.22	0.00	0.00	0.98	0.98	0.24	0.00	0.24			
Sat Flow, veh/h	1781	3647	0	0	3647	1577	1781	0	1575			
Grp Volume(v), veh/h	242	968	0	0	955	546	306	0	339			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1577	1781	0	1575			
Q Serve(g_s), s	16.2	27.9	0.0	0.0	1.5	2.9	19.0	0.0	25.2			
Cycle Q Clear(g_c), s	16.2	27.9	0.0	0.0	1.5	2.9	19.0	0.0	25.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	273	2403	0	0	1739	772	420	0	371			
V/C Ratio(X)	0.89	0.40	0.00	0.00	0.55	0.71	0.73	0.00	0.91			
Avail Cap(c_a), veh/h	386	2403	0	0	1739	772	485	0	429			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.73	0.73	0.00	0.00	0.75	0.75	1.00	0.00	1.00			
Uniform Delay (d), s/veh	55.9	25.9	0.0	0.0	0.7	0.7	42.3	0.0	44.7			
Incr Delay (d2), s/veh	9.8	0.4	0.0	0.0	0.9	4.1	3.6	0.0	20.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	8.5	13.4	0.0	0.0	0.5	1.2	8.8	0.0	11.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.7	26.3	0.0	0.0	1.6	4.8	45.9	0.0	65.3			
LnGrp LOS	E	C	A	A	A	A	D	A	E			
Approach Vol, veh/h		1210			1501			645				
Approach Delay, s/veh		34.2			2.8			56.1				
Approach LOS		C			A			E				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.4			22.4	64.0		33.6				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		76.7			26.0	46.7		32.7				
Max Q Clear Time (g_c+I1), s		29.9			18.2	4.9		27.2				
Green Ext Time (p_c), s		5.1			0.2	6.4		1.1				
Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	320	961	1142	111	105	329
Future Volume (vph)	320	961	1142	111	105	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				30	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	9.5
Total Split (s)	39.1	97.5	58.4	58.4	22.5	39.1
Total Split (%)	32.6%	81.3%	48.7%	48.7%	18.8%	32.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes	Yes		Yes
Recall Mode	None	C-Max	C-Max	C-Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Bundy Cyn. Rd. & Cherry St.

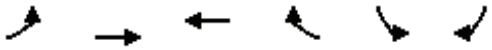




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	320	961	1142	111	105	329
Future Volume (veh/h)	320	961	1142	111	105	329
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	337	1012	1202	117	111	346
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	368	3957	1887	838	267	565
Arrive On Green	0.27	1.00	0.53	0.53	0.15	0.15
Sat Flow, veh/h	1781	5274	3647	1578	1781	1585
Grp Volume(v), veh/h	337	1012	1202	117	111	346
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1578	1781	1585
Q Serve(g_s), s	22.0	0.0	28.8	4.5	6.8	18.0
Cycle Q Clear(g_c), s	22.0	0.0	28.8	4.5	6.8	18.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	368	3957	1887	838	267	565
V/C Ratio(X)	0.92	0.26	0.64	0.14	0.42	0.61
Avail Cap(c_a), veh/h	514	3957	1887	838	267	565
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	0.0	19.9	14.2	46.2	31.8
Incr Delay (d2), s/veh	16.1	0.1	1.7	0.3	1.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	0.1	11.8	1.7	3.1	19.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.7	0.1	21.6	14.6	47.3	33.7
LnGrp LOS	E	A	C	B	D	C
Approach Vol, veh/h		1349	1319		457	
Approach Delay, s/veh		14.8	21.0		37.0	
Approach LOS		B	C		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.5		22.5	29.3	68.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		93.0		18.0	34.6	53.9
Max Q Clear Time (g_c+I1), s		2.0		20.0	24.0	30.8
Green Ext Time (p_c), s		9.0		0.0	0.8	9.8

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	320	961	1142	111	105	329
Future Volume (vph)	320	961	1142	111	105	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	106.5

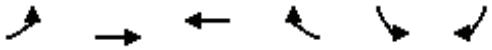
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	320	961	1142	111	105	329
Future Vol, veh/h	320	961	1142	111	105	329
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median 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	337	1012	1202	117	111	346

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1324	0	-	0	2291	611
Stage 1	-	-	-	-	1207	-
Stage 2	-	-	-	-	1084	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	2.8
Pot Cap-1 Maneuver	518	-	-	-	~ 46	497
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	263	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	516	-	-	-	~ 16	492
Mov Cap-2 Maneuver	-	-	-	-	~ 63	-
Stage 1	-	-	-	-	~ 83	-
Stage 2	-	-	-	-	262	-

Approach	EB	WB	SB
HCM Control Delay, s	6	0	$ 710.8
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	516	-	-	-	186
HCM Lane V/C Ratio	0.653	-	-	-	2.456
HCM Control Delay (s)	24.1	-	-	-	-$ 710.8
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	4.7	-	-	-	38.3

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



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	320	961	1142	111	0	329
Future Volume (vph)	320	961	1142	111	0	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	320	961	1142	111	0	329
Future Vol, veh/h	320	961	1142	111	0	329
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	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	337	1012	1202	117	0	346

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1324	0	-	0	-	611
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	2.8
Pot Cap-1 Maneuver	518	-	-	-	0	497
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	516	-	-	-	-	492
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	6	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	516	-	-	-	492
HCM Lane V/C Ratio	0.653	-	-	-	0.704
HCM Control Delay (s)	24.1	-	-	-	27.9
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	4.7	-	-	-	5.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	833	27	27	1032	34	130	8	8	64	18	114
Future Volume (vph)	72	833	27	27	1032	34	130	8	8	64	18	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	150		285	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	60			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		377			612			347			1298	
Travel Time (s)		7.3			11.9			9.5			35.4	
Confl. Peds. (#/hr)	5					5				5		5
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
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	23.3	23.3	9.5	22.5		22.5	22.5	
Total Split (s)	17.0	63.0		11.0	57.0	57.0	23.0	23.0		23.0	23.0	
Total Split (%)	14.2%	52.5%		9.2%	47.5%	47.5%	19.2%	19.2%		19.2%	19.2%	
Yellow Time (s)	3.5	4.3		3.5	4.3	4.3	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3	5.3	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Sellers Rd. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	833	27	27	1032	34	130	8	8	64	18	114
Future Volume (veh/h)	72	833	27	27	1032	34	130	8	8	64	18	114
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		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	877	28	28	1086	36	137	8	8	67	19	120
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	97	2902	93	45	1926	855	165	80	80	275	34	214
Arrive On Green	0.05	0.57	0.57	0.05	1.00	1.00	0.09	0.09	0.09	0.15	0.15	0.15
Sat Flow, veh/h	1781	5082	162	1781	3554	1578	1781	858	858	1781	219	1386
Grp Volume(v), veh/h	76	587	318	28	1086	36	137	0	16	67	0	139
Grp Sat Flow(s),veh/h/ln	1781	1702	1840	1781	1777	1578	1781	0	1716	1781	0	1605
Q Serve(g_s), s	5.1	10.7	10.8	1.8	0.0	0.0	9.1	0.0	1.0	4.0	0.0	9.6
Cycle Q Clear(g_c), s	5.1	10.7	10.8	1.8	0.0	0.0	9.1	0.0	1.0	4.0	0.0	9.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.50	1.00		0.86
Lane Grp Cap(c), veh/h	97	1944	1051	45	1926	855	165	0	159	275	0	247
V/C Ratio(X)	0.78	0.30	0.30	0.62	0.56	0.04	0.83	0.00	0.10	0.24	0.00	0.56
Avail Cap(c_a), veh/h	186	1944	1051	96	1926	855	275	0	265	275	0	247
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	13.3	13.3	56.4	0.0	0.0	53.5	0.0	49.8	44.6	0.0	47.0
Incr Delay (d2), s/veh	5.2	0.4	0.7	11.6	1.0	0.1	10.0	0.0	0.3	2.1	0.0	8.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	4.1	4.5	1.0	0.3	0.0	4.6	0.0	0.5	1.9	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	13.7	14.1	68.0	1.0	0.1	63.5	0.0	50.1	46.7	0.0	55.9
LnGrp LOS	E	B	B	E	A	A	E	A	D	D	A	E
Approach Vol, veh/h		981			1150			153			206	
Approach Delay, s/veh		17.5			2.6			62.1			52.9	
Approach LOS		B			A			E			D	

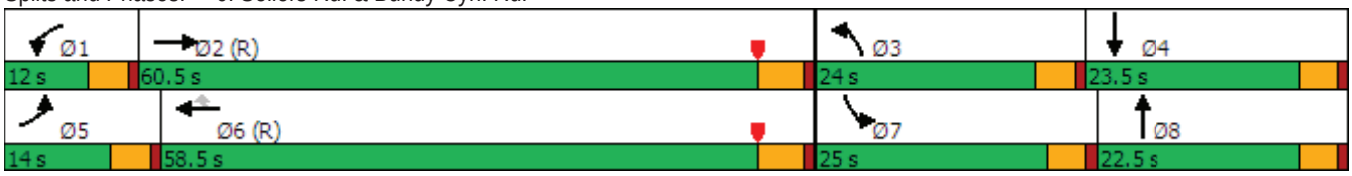
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	73.8	15.6	23.0	11.0	70.3	23.0	15.6
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	6.5	57.7	18.5	18.5	12.5	51.7	18.5	18.5
Max Q Clear Time (g_c+I1), s	3.8	12.8	11.1	11.6	7.1	2.0	6.0	3.0
Green Ext Time (p_c), s	0.0	4.2	0.2	0.3	0.0	6.1	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	745	27	40	1019	34	143	8	8	151	18	114
Future Volume (vph)	55	745	27	40	1019	34	143	8	8	151	18	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	150		285	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	60			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		377			612			347			1298	
Travel Time (s)		7.3			11.9			9.5			35.4	
Confl. Peds. (#/hr)	5					5				5		5
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
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	23.3	23.3	9.5	22.5		22.5	22.5	
Total Split (s)	14.0	60.5		12.0	58.5	58.5	24.0	22.5		25.0	23.5	
Total Split (%)	11.7%	50.4%		10.0%	48.8%	48.8%	20.0%	18.8%		20.8%	19.6%	
Yellow Time (s)	3.5	4.3		3.5	4.3	4.3	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3	5.3	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Sellers Rd. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	745	27	40	1019	34	143	8	8	151	18	114
Future Volume (veh/h)	55	745	27	40	1019	34	143	8	8	151	18	114
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		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	784	28	42	1073	36	151	8	8	159	19	120
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	75	2796	100	56	1926	855	180	76	76	304	35	219
Arrive On Green	0.04	0.55	0.55	0.06	1.00	1.00	0.10	0.09	0.09	0.17	0.16	0.16
Sat Flow, veh/h	1781	5061	180	1781	3554	1578	1781	858	858	1781	219	1386
Grp Volume(v), veh/h	58	527	285	42	1073	36	151	0	16	159	0	139
Grp Sat Flow(s),veh/h/ln	1781	1702	1837	1781	1777	1578	1781	0	1716	1781	0	1605
Q Serve(g_s), s	3.9	9.8	9.9	2.8	0.0	0.0	10.0	0.0	1.0	9.8	0.0	9.6
Cycle Q Clear(g_c), s	3.9	9.8	9.9	2.8	0.0	0.0	10.0	0.0	1.0	9.8	0.0	9.6
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.50	1.00		0.86
Lane Grp Cap(c), veh/h	75	1881	1015	56	1926	855	180	0	152	304	0	254
V/C Ratio(X)	0.78	0.28	0.28	0.75	0.56	0.04	0.84	0.00	0.11	0.52	0.00	0.55
Avail Cap(c_a), veh/h	141	1881	1015	111	1926	855	289	0	257	304	0	254
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.9	14.2	14.2	55.8	0.0	0.0	53.0	0.0	50.3	45.3	0.0	46.5
Incr Delay (d2), s/veh	6.3	0.4	0.7	16.0	1.0	0.1	11.2	0.0	0.3	6.3	0.0	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.8	4.2	1.5	0.3	0.0	5.1	0.0	0.5	4.9	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.2	14.6	14.9	71.8	1.0	0.1	64.2	0.0	50.6	51.6	0.0	54.7
LnGrp LOS	E	B	B	E	A	A	E	A	D	D	A	D
Approach Vol, veh/h		870			1151			167			298	
Approach Delay, s/veh		17.9			3.6			62.9			53.1	
Approach LOS		B			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	71.6	16.6	23.5	9.5	70.3	25.0	15.1
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	7.5	55.2	19.5	19.0	9.5	53.2	20.5	18.0
Max Q Clear Time (g_c+I1), s	4.8	11.9	12.0	11.6	5.9	2.0	11.8	3.0
Green Ext Time (p_c), s	0.0	3.6	0.2	0.3	0.0	6.0	0.1	0.0

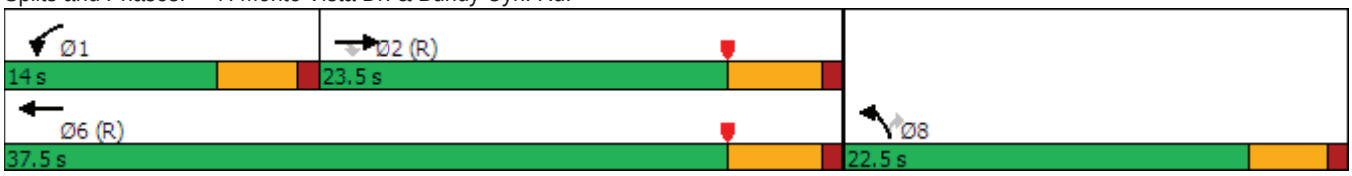
Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	629	276	262	937	155	129
Future Volume (vph)	629	276	262	937	155	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200	200		100	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			40	55	
Link Distance (ft)	612			588	284	
Travel Time (s)	11.9			10.0	3.5	
Confl. Peds. (#/hr)		5	5		5	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.3	23.3	9.5	22.5	22.5	22.5
Total Split (s)	23.5	23.5	14.0	37.5	22.5	22.5
Total Split (%)	39.2%	39.2%	23.3%	62.5%	37.5%	37.5%
Yellow Time (s)	4.3	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	4.5	5.3	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 7: Monte Vista Dr. & Bundy Cyn. Rd.

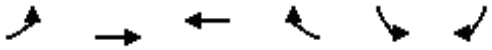




Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	629	276	262	937	155	129
Future Volume (veh/h)	629	276	262	937	155	129
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	691	303	288	1030	170	142
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1549	477	282	1907	1037	476
Arrive On Green	0.10	0.10	0.16	0.54	0.30	0.30
Sat Flow, veh/h	5274	1572	1781	3647	3456	1585
Grp Volume(v), veh/h	691	303	288	1030	170	142
Grp Sat Flow(s),veh/h/ln	1702	1572	1781	1777	1728	1585
Q Serve(g_s), s	7.6	11.1	9.5	11.3	2.2	4.1
Cycle Q Clear(g_c), s	7.6	11.1	9.5	11.3	2.2	4.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1549	477	282	1907	1037	476
V/C Ratio(X)	0.45	0.64	1.02	0.54	0.16	0.30
Avail Cap(c_a), veh/h	1549	477	282	1907	1037	476
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.2	23.8	25.3	9.1	15.5	16.1
Incr Delay (d2), s/veh	0.9	6.0	59.1	1.1	0.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	5.2	8.2	3.5	0.7	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.1	29.8	84.4	10.2	15.8	17.8
LnGrp LOS	C	C	F	B	B	B
Approach Vol, veh/h	994			1318	312	
Approach Delay, s/veh	25.2			26.4	16.7	
Approach LOS	C			C	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.0	23.5				37.5	22.5
Change Period (Y+Rc), s	4.5	5.3				5.3	4.5
Max Green Setting (Gmax), s	9.5	18.2				32.2	18.0
Max Q Clear Time (g_c+I1), s	11.5	13.1				13.3	6.1
Green Ext Time (p_c), s	0.0	1.9				4.6	0.4

Intersection Summary			
HCM 6th Ctrl Delay		24.8	
HCM 6th LOS		C	



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	59	700	1084	8	12	115
Future Volume (vph)	59	700	1084	8	12	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	120				90	
Link Speed (mph)		40	40		25	
Link Distance (ft)		588	428		597	
Travel Time (s)		10.0	7.3		16.3	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

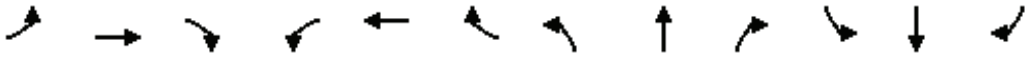
Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	59	700	1084	8	12	115
Future Vol, veh/h	59	700	1084	8	12	115
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	753	1166	9	13	124

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1180	0	-	0	1608	598
Stage 1	-	-	-	-	1176	-
Stage 2	-	-	-	-	432	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	588	-	-	-	120	445
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	585	-	-	-	106	441
Mov Cap-2 Maneuver	-	-	-	-	182	-
Stage 1	-	-	-	-	222	-
Stage 2	-	-	-	-	584	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	19.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	585	-	-	-	389
HCM Lane V/C Ratio	0.108	-	-	-	0.351
HCM Control Delay (s)	11.9	-	-	-	19.2
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.5



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	2	77	2	9	67	158	221	4	37	141	297
Future Volume (vph)	238	2	77	2	9	67	158	221	4	37	141	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	54.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	238	2	77	2	9	67	158	221	4	37	141	297
Future Vol, veh/h	238	2	77	2	9	67	158	221	4	37	141	297
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	287	2	93	2	11	81	190	266	5	45	170	358
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	33.5	14	49	79.6
HCM LOS	D	B	E	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	75%	3%	8%
Vol Thru, %	58%	1%	12%	30%
Vol Right, %	1%	24%	86%	63%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	383	317	78	475
LT Vol	158	238	2	37
Through Vol	221	2	9	141
RT Vol	4	77	67	297
Lane Flow Rate	461	382	94	572
Geometry Grp	1	1	1	1
Degree of Util (X)	0.912	0.786	0.216	1.054
Departure Headway (Hd)	7.371	7.694	8.644	6.63
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	494	474	418	544
Service Time	5.371	5.694	6.644	4.718
HCM Lane V/C Ratio	0.933	0.806	0.225	1.051
HCM Control Delay	49	33.5	14	79.6
HCM Lane LOS	E	D	B	F
HCM 95th-tile Q	10.5	7	0.8	16.5



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	2	77	2	9	67	158	221	4	37	141	297
Future Volume (vph)	238	2	77	2	9	67	158	221	4	37	141	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	0		0	100		0	0		100
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

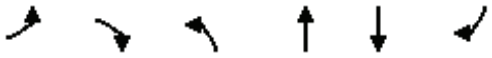
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	18.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	238	2	77	2	9	67	158	221	4	37	141	297
Future Vol, veh/h	238	2	77	2	9	67	158	221	4	37	141	297
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	287	2	93	2	11	81	190	266	5	45	170	358
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	21.6	13.3	17.8	18.9
HCM LOS	C	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	3%	21%	0%
Vol Thru, %	0%	98%	0%	3%	12%	79%	0%
Vol Right, %	0%	2%	0%	97%	86%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	158	225	238	79	78	178	297
LT Vol	158	0	238	0	2	37	0
Through Vol	0	221	0	2	9	141	0
RT Vol	0	4	0	77	67	0	297
Lane Flow Rate	190	271	287	95	94	214	358
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.417	0.555	0.651	0.184	0.21	0.44	0.652
Departure Headway (Hd)	7.892	7.366	8.177	6.965	8.05	7.383	6.558
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	455	488	442	515	445	487	551
Service Time	5.648	5.121	5.929	4.717	6.123	5.136	4.31
HCM Lane V/C Ratio	0.418	0.555	0.649	0.184	0.211	0.439	0.65
HCM Control Delay	16.2	19	25	11.3	13.3	15.8	20.8
HCM Lane LOS	C	C	C	B	B	C	C
HCM 95th-tile Q	2	3.3	4.5	0.7	0.8	2.2	4.7



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	18	177	187	77	99	21
Future Volume (vph)	18	177	187	77	99	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

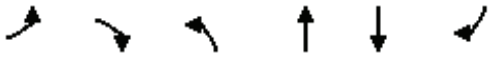
Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	177	187	77	99	21
Future Vol, veh/h	18	177	187	77	99	21
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	192	203	84	108	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	620	130	136	0	-	0
Stage 1	125	-	-	-	-	-
Stage 2	495	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	452	920	1448	-	-	-
Stage 1	901	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	381	911	1441	-	-	-
Mov Cap-2 Maneuver	381	-	-	-	-	-
Stage 1	764	-	-	-	-	-
Stage 2	610	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	5.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1441	-	807	-	-
HCM Lane V/C Ratio	0.141	-	0.263	-	-
HCM Control Delay (s)	7.9	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.1	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	132	187	122	86	21
Future Volume (vph)	63	132	187	122	86	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

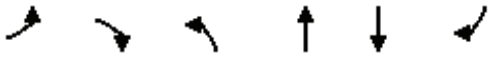
Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	132	187	122	86	21
Future Vol, veh/h	63	132	187	122	86	21
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	143	203	133	93	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	654	115	121	0	-	0
Stage 1	110	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	431	937	1467	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	363	928	1460	-	-	-
Mov Cap-2 Maneuver	363	-	-	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	579	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	4.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1460	-	617	-	-
HCM Lane V/C Ratio	0.139	-	0.344	-	-
HCM Control Delay (s)	7.9	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.5	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	19	175	187	245	258	18
Future Volume (vph)	19	175	187	245	258	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

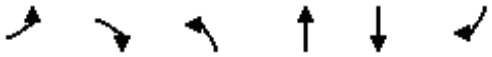
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	19	175	187	245	258	18
Future Vol, veh/h	19	175	187	245	258	18
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	190	203	266	280	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	972	300	305	0	-	0
Stage 1	295	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	280	740	1256	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	232	733	1250	-	-	-
Mov Cap-2 Maneuver	232	-	-	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	502	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	3.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1250	-	605	-	-
HCM Lane V/C Ratio	0.163	-	0.349	-	-
HCM Control Delay (s)	8.4	-	14.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.6	-	1.6	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	64	130	187	245	200	18
Future Volume (vph)	64	130	187	245	200	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

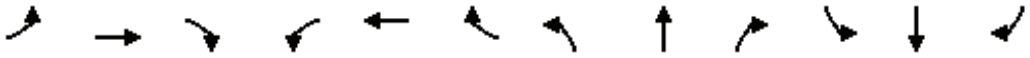
Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	64	130	187	245	200	18
Future Vol, veh/h	64	130	187	245	200	18
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	141	203	266	217	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	909	237	242	0	-	0
Stage 1	232	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	305	802	1324	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	505	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	256	794	1318	-	-	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	502	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.8	3.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1318	-	469	-	-
HCM Lane V/C Ratio	0.154	-	0.45	-	-
HCM Control Delay (s)	8.2	-	18.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	2.3	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	89	77	25	92	3	58	3	4	4	4	3
Future Volume (vph)	1	89	77	25	92	3	58	3	4	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

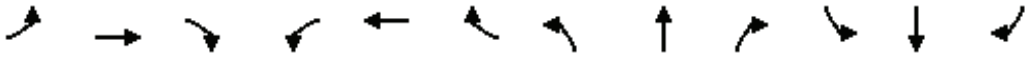
Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	89	77	25	92	3	58	3	4	4	4	3
Future Vol, veh/h	1	89	77	25	92	3	58	3	4	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	103	90	29	107	3	67	3	5	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	193	0	0	321	318	148	321	362	109
Stage 1	-	-	-	-	-	-	150	150	-	167	167	-
Stage 2	-	-	-	-	-	-	171	168	-	154	195	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1480	-	-	1380	-	-	632	598	899	632	565	945
Stage 1	-	-	-	-	-	-	853	773	-	835	760	-
Stage 2	-	-	-	-	-	-	831	759	-	848	739	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1480	-	-	1380	-	-	615	584	899	615	552	945
Mov Cap-2 Maneuver	-	-	-	-	-	-	615	584	-	615	552	-
Stage 1	-	-	-	-	-	-	852	772	-	834	743	-
Stage 2	-	-	-	-	-	-	805	742	-	839	738	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	11.5	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	626	1480	-	-	1380	-	-	650
HCM Lane V/C Ratio	0.121	0.001	-	-	0.021	-	-	0.02
HCM Control Delay (s)	11.5	7.4	0	-	7.7	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	89	77	25	92	3	58	3	71	4	4	3
Future Volume (vph)	1	89	77	25	92	3	58	3	71	4	4	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

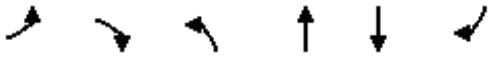
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	89	77	25	92	3	58	3	71	4	4	3
Future Vol, veh/h	1	89	77	25	92	3	58	3	71	4	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	103	90	29	107	3	67	3	83	5	5	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	193	0	0	321	318	148	360	362	109
Stage 1	-	-	-	-	-	-	150	150	-	167	167	-
Stage 2	-	-	-	-	-	-	171	168	-	193	195	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1480	-	-	1380	-	-	632	598	899	596	565	945
Stage 1	-	-	-	-	-	-	853	773	-	835	760	-
Stage 2	-	-	-	-	-	-	831	759	-	809	739	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1480	-	-	1380	-	-	615	584	899	529	552	945
Mov Cap-2 Maneuver	-	-	-	-	-	-	615	584	-	529	552	-
Stage 1	-	-	-	-	-	-	852	772	-	834	743	-
Stage 2	-	-	-	-	-	-	805	742	-	731	738	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.6	11.1	11
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	740	1480	-	-	1380	-	-	612
HCM Lane V/C Ratio	0.207	0.001	-	-	0.021	-	-	0.021
HCM Control Delay (s)	11.1	7.4	0	-	7.7	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	0.1



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	75	73	42	73	19
Future Volume (vph)	20	75	73	42	73	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

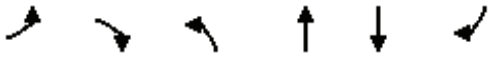
Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	75	73	42	73	19
Future Vol, veh/h	20	75	73	42	73	19
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	88	86	49	86	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	318	97	108	0	-	0
Stage 1	97	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	675	959	1483	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	635	959	1483	-	-	-
Mov Cap-2 Maneuver	635	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	816	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	4.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1483	-	866	-	-
HCM Lane V/C Ratio	0.058	-	0.129	-	-
HCM Control Delay (s)	7.6	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	37	125	73	25	73	19
Future Volume (vph)	37	125	73	25	73	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

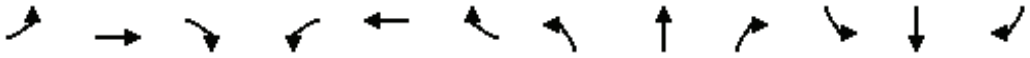
Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	125	73	25	73	19
Future Vol, veh/h	37	125	73	25	73	19
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	147	86	29	86	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	298	97	108	0	-	0
Stage 1	97	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	693	959	1483	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	652	959	1483	-	-	-
Mov Cap-2 Maneuver	652	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	833	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	5.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1483	-	866	-	-
HCM Lane V/C Ratio	0.058	-	0.22	-	-
HCM Control Delay (s)	7.6	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.8	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	37	107	34	87	1	130	10	22	1	21	19
Future Volume (vph)	12	37	107	34	87	1	130	10	22	1	21	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1291			669			448			292	
Travel Time (s)		22.0			11.4			12.2			8.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

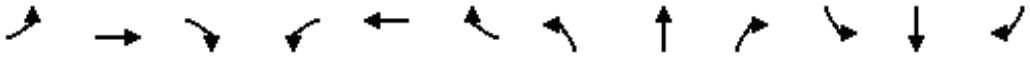
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	37	107	34	87	1	130	10	22	1	21	19
Future Vol, veh/h	12	37	107	34	87	1	130	10	22	1	21	19
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	44	126	40	102	1	153	12	26	1	25	22
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	8.8	9.7	9.6	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	80%	8%	28%	0%	2%
Vol Thru, %	6%	24%	72%	0%	51%
Vol Right, %	14%	69%	0%	100%	46%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	162	156	121	1	41
LT Vol	130	12	34	0	1
Through Vol	10	37	87	0	21
RT Vol	22	107	0	1	19
Lane Flow Rate	191	184	142	1	48
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.257	0.226	0.215	0.001	0.063
Departure Headway (Hd)	4.859	4.424	5.425	4.578	4.701
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	738	809	661	779	757
Service Time	2.905	2.467	3.171	2.324	2.76
HCM Lane V/C Ratio	0.259	0.227	0.215	0.001	0.063
HCM Control Delay	9.6	8.8	9.7	7.3	8.1
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	1	0.9	0.8	0	0.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	103	91	155	136	1	89	21	159	1	23	1
Future Volume (vph)	1	103	91	155	136	1	89	21	159	1	23	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		496			1291			1349			223	
Travel Time (s)		8.5			22.0			36.8			6.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

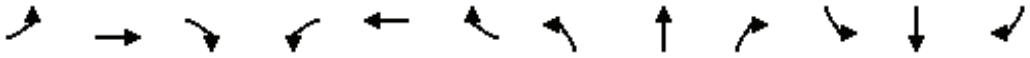
Intersection	
Int Delay, s/veh	8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	103	91	155	136	1	89	21	159	1	23	1
Future Vol, veh/h	1	103	91	155	136	1	89	21	159	1	23	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	112	99	168	148	1	97	23	173	1	25	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	149	0	0	211	0	0	612	599	112	747	698	149
Stage 1	-	-	-	-	-	-	114	114	-	485	485	-
Stage 2	-	-	-	-	-	-	498	485	-	262	213	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1432	-	-	1360	-	-	405	415	941	329	364	898
Stage 1	-	-	-	-	-	-	891	801	-	563	552	-
Stage 2	-	-	-	-	-	-	554	552	-	743	726	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1432	-	-	1360	-	-	341	359	941	229	314	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	341	359	-	229	314	-
Stage 1	-	-	-	-	-	-	890	800	-	562	477	-
Stage 2	-	-	-	-	-	-	454	477	-	589	725	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.3	18.7	17.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	551	1432	-	-	1360	-	-	318
HCM Lane V/C Ratio	0.531	0.001	-	-	0.124	-	-	0.085
HCM Control Delay (s)	18.7	7.5	0	-	8	0	-	17.4
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	3.1	0	-	-	0.4	-	-	0.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	76	15	8	61	129	18	111	6	115	170	3
Future Volume (vph)	11	76	15	8	61	129	18	111	6	115	170	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		400			740			1314			1349	
Travel Time (s)		9.1			16.8			35.8			36.8	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

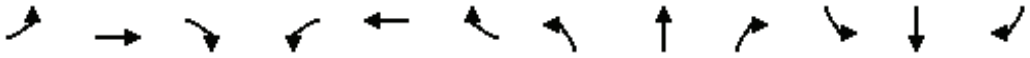
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	76	15	8	61	129	18	111	6	115	170	3
Future Vol, veh/h	11	76	15	8	61	129	18	111	6	115	170	3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	82	16	9	66	139	19	119	6	124	183	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	10	9.7	12
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	11%	4%	40%
Vol Thru, %	82%	75%	31%	59%
Vol Right, %	4%	15%	65%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	135	102	198	288
LT Vol	18	11	8	115
Through Vol	111	76	61	170
RT Vol	6	15	129	3
Lane Flow Rate	145	110	213	310
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.164	0.292	0.437
Departure Headway (Hd)	5.239	5.394	4.935	5.085
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	685	666	730	712
Service Time	3.266	3.425	2.95	3.097
HCM Lane V/C Ratio	0.212	0.165	0.292	0.435
HCM Control Delay	9.7	9.5	10	12
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.8	0.6	1.2	2.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	542	7	6	637	88	10	6	16	87	1	27
Future Volume (vph)	17	542	7	6	637	88	10	6	16	87	1	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		50	0		0	0		0
Storage Lanes	0		1	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		289			1348			206			1314	
Travel Time (s)		5.6			26.3			5.6			35.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	19.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	542	7	6	637	88	10	6	16	87	1	27
Future Vol, veh/h	17	542	7	6	637	88	10	6	16	87	1	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	602	8	7	708	98	11	7	18	97	1	30
Number of Lanes	0	2	1	0	2	1	0	1	0	0	1	0

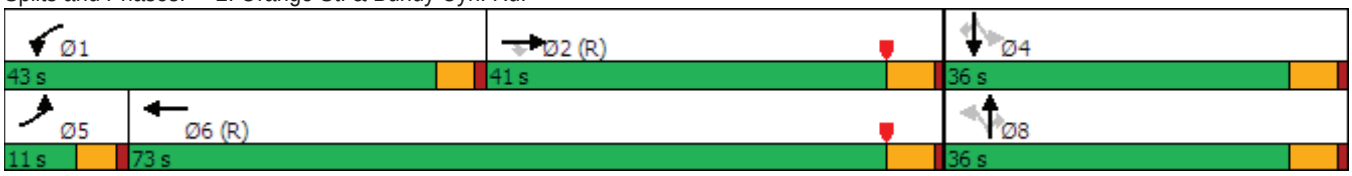
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	18.7	21.3	11.2	13.7
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	31%	9%	0%	0%	3%	0%	0%	76%
Vol Thru, %	19%	91%	100%	0%	97%	100%	0%	1%
Vol Right, %	50%	0%	0%	100%	0%	0%	100%	23%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	198	361	7	218	425	88	115
LT Vol	10	17	0	0	6	0	0	87
Through Vol	6	181	361	0	212	425	0	1
RT Vol	16	0	0	7	0	0	88	27
Lane Flow Rate	36	220	401	8	243	472	98	128
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.077	0.383	0.695	0.012	0.408	0.793	0.145	0.279
Departure Headway (Hd)	7.797	6.279	6.235	5.525	6.061	6.047	5.337	7.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	457	571	578	644	592	595	669	455
Service Time	5.591	4.043	3.999	3.289	3.82	3.806	3.096	5.644
HCM Lane V/C Ratio	0.079	0.385	0.694	0.012	0.41	0.793	0.146	0.281
HCM Control Delay	11.2	12.9	22.1	8.4	13	28.2	9	13.7
HCM Lane LOS	B	B	C	A	B	D	A	B
HCM 95th-tile Q	0.2	1.8	5.5	0	2	7.7	0.5	1.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	600	25	317	713	174	16	42	311	142	31	20
Future Volume (vph)	23	600	25	317	713	174	16	42	311	142	31	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	0		100	0		100
Storage Lanes	1		1	1		0	0		1	0		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8		8	4		4
Detector Phase	5	2	2	1	6		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		23.3	23.3	23.3	23.3	23.3	23.3
Total Split (s)	11.0	41.0	41.0	43.0	73.0		36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	9.2%	34.2%	34.2%	35.8%	60.8%		30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		4.3	4.3	4.3	4.3	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3			5.3	5.3		5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Recall Mode	None	C-Max	C-Max	None	C-Max		Min	Min	Min	Min	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	600	25	317	713	174	16	42	311	142	31	20
Future Volume (veh/h)	23	600	25	317	713	174	16	42	311	142	31	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	612	26	323	728	178	16	43	317	145	32	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	1507	668	346	1686	412	38	83	403	55	0	403
Arrive On Green	0.02	0.42	0.42	0.39	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3554	1576	1781	2828	691	0	325	1576	0	0	1576
Grp Volume(v), veh/h	23	612	26	323	457	449	59	0	317	177	0	20
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1742	325	0	1576	0	0	1576
Q Serve(g_s), s	1.5	14.4	1.2	20.9	0.0	0.0	0.0	0.0	22.5	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.5	14.4	1.2	20.9	0.0	0.0	30.7	0.0	22.5	30.7	0.0	1.1
Prop In Lane	1.00		1.00	1.00		0.40	0.27		1.00	0.82		1.00
Lane Grp Cap(c), veh/h	40	1507	668	346	1059	1039	121	0	403	55	0	403
V/C Ratio(X)	0.58	0.41	0.04	0.93	0.43	0.43	0.49	0.00	0.79	3.24	0.00	0.05
Avail Cap(c_a), veh/h	96	1507	668	571	1059	1039	121	0	403	55	0	403
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.1	24.0	20.2	36.0	0.0	0.0	37.0	0.0	41.6	60.0	0.0	33.7
Incr Delay (d2), s/veh	4.9	0.8	0.1	9.5	1.1	1.1	1.1	0.0	9.1	1053.6	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.1	0.4	8.1	0.3	0.3	1.4	0.0	9.6	17.6	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	24.8	20.3	45.5	1.1	1.1	38.1	0.0	50.7	1113.6	0.0	33.7
LnGrp LOS	E	C	C	D	A	A	D	A	D	F	A	C
Approach Vol, veh/h		661			1229			376			197	
Approach Delay, s/veh		26.0			12.8			48.7			1004.0	
Approach LOS		C			B			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.8	56.2		36.0	7.2	76.8		36.0				
Change Period (Y+Rc), s	4.5	5.3		5.3	4.5	5.3		5.3				
Max Green Setting (Gmax), s	38.5	35.7		30.7	6.5	67.7		30.7				
Max Q Clear Time (g_c+I1), s	22.9	16.4		32.7	3.5	2.0		32.7				
Green Ext Time (p_c), s	0.4	2.6		0.0	0.0	4.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		101.1
HCM 6th LOS		F

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	600	25	317	713	174	16	42	311	142	31	20
Future Volume (vph)	23	600	25	317	713	174	16	42	311	142	31	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		50	200		0	100		100	100		100
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	120			60			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		1348			443			1323			557	
Travel Time (s)		26.3			8.6			25.8			10.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)												
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2						8			4
Detector Phase	5	2	2	1	6		3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	23.3	23.3	9.5	23.3		9.5	23.3	9.5	9.5	23.3	23.3
Total Split (s)	10.3	36.1	36.1	38.1	63.9		9.8	23.3	38.1	22.5	36.0	36.0
Total Split (%)	8.6%	30.1%	30.1%	31.8%	53.3%		8.2%	19.4%	31.8%	18.8%	30.0%	30.0%
Yellow Time (s)	3.5	4.3	4.3	3.5	4.3		3.5	4.3	3.5	3.5	4.3	4.3
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.3	5.3	4.5	5.3		4.5	5.3	4.5	4.5	5.3	5.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max		None	Min	None	None	Min	Min

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: Orange St. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	600	25	317	713	174	16	42	311	142	31	20
Future Volume (veh/h)	23	600	25	317	713	174	16	42	311	142	31	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	612	26	323	728	178	16	43	317	145	32	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	40	1405	623	345	1603	392	31	281	543	173	430	362
Arrive On Green	0.02	0.40	0.40	0.39	1.00	1.00	0.02	0.15	0.15	0.10	0.23	0.23
Sat Flow, veh/h	1781	3554	1575	1781	2828	691	1781	1870	1569	1781	1870	1575
Grp Volume(v), veh/h	23	612	26	323	457	449	16	43	317	145	32	20
Grp Sat Flow(s),veh/h/ln	1781	1777	1575	1781	1777	1742	1781	1870	1569	1781	1870	1575
Q Serve(g_s), s	1.5	15.1	1.2	20.9	0.0	0.0	1.1	2.4	18.0	9.6	1.6	1.2
Cycle Q Clear(g_c), s	1.5	15.1	1.2	20.9	0.0	0.0	1.1	2.4	18.0	9.6	1.6	1.2
Prop In Lane	1.00		1.00	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	40	1405	623	345	1007	988	31	281	543	173	430	362
V/C Ratio(X)	0.58	0.44	0.04	0.94	0.45	0.45	0.52	0.15	0.58	0.84	0.07	0.06
Avail Cap(c_a), veh/h	86	1405	623	499	1007	988	79	281	543	267	479	403
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	26.5	22.3	36.0	0.0	0.0	58.5	44.4	32.4	53.2	36.2	36.0
Incr Delay (d2), s/veh	4.9	1.0	0.1	15.1	1.3	1.3	13.0	0.1	1.1	12.8	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	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.5	0.5	8.6	0.4	0.4	0.6	1.1	7.6	4.9	0.7	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	27.5	22.4	51.2	1.3	1.3	71.5	44.5	33.5	66.0	36.2	36.0
LnGrp LOS	E	C	C	D	A	A	E	D	C	E	D	D
Approach Vol, veh/h		661			1229			376			197	
Approach Delay, s/veh		28.5			14.4			36.3			58.1	
Approach LOS		C			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.8	52.8	6.6	32.9	7.2	73.3	16.2	23.3
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	33.6	30.8	5.3	30.7	5.8	58.6	18.0	18.0
Max Q Clear Time (g_c+I1), s	22.9	17.1	3.1	3.6	3.5	2.0	11.6	20.0
Green Ext Time (p_c), s	0.4	2.4	0.0	0.1	0.0	4.0	0.2	0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	738	313	357	1037	0	0	0	0	676	2	224
Future Volume (vph)	0	738	313	357	1037	0	0	0	0	676	2	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	250		0	0		0	300		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)												
Turn Type		NA		Prot	NA					Perm	NA	
Protected Phases		2		1	6						4	
Permitted Phases										4		
Detector Phase		2		1	6					4	4	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		45.0		35.0	45.0					25.0	25.0	
Total Split (s)		45.0		35.0	80.0					40.0	40.0	
Total Split (%)		37.5%		29.2%	66.7%					33.3%	33.3%	
Yellow Time (s)		4.3		3.6	4.3					4.3	4.3	
All-Red Time (s)		1.0		1.0	1.0					1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)		5.3		4.6	5.3					5.3	5.3	
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?		Yes		Yes								
Recall Mode		C-Min		None	C-Min					None	None	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	738	313	357	1037	0	0	0	0	676	2	224
Future Volume (veh/h)	0	738	313	357	1037	0	0	0	0	676	2	224
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	785	333	380	1103	0				719	2	238
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	874	370	399	2212	0				515	4	453
Arrive On Green	0.00	0.36	0.36	0.45	1.00	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	2520	1028	1781	3647	0				1781	13	1566
Grp Volume(v), veh/h	0	575	543	380	1103	0				719	0	240
Grp Sat Flow(s),veh/h/ln	0	1777	1677	1781	1777	0				1781	0	1579
Q Serve(g_s), s	0.0	36.7	36.8	24.6	0.0	0.0				34.7	0.0	15.3
Cycle Q Clear(g_c), s	0.0	36.7	36.8	24.6	0.0	0.0				34.7	0.0	15.3
Prop In Lane	0.00		0.61	1.00		0.00				1.00		0.99
Lane Grp Cap(c), veh/h	0	640	604	399	2212	0				515	0	457
V/C Ratio(X)	0.00	0.90	0.90	0.95	0.50	0.00				1.40	0.00	0.53
Avail Cap(c_a), veh/h	0	640	604	451	2212	0				515	0	457
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.90	0.90	0.24	0.24	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	36.3	36.4	32.5	0.0	0.0				42.6	0.0	35.8
Incr Delay (d2), s/veh	0.0	16.4	17.4	10.3	0.2	0.0				189.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	18.4	17.6	9.2	0.1	0.0				42.2	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	52.7	53.8	42.8	0.2	0.0				232.4	0.0	36.3
LnGrp LOS	A	D	D	D	A	A				F	A	D
Approach Vol, veh/h		1118			1483						959	
Approach Delay, s/veh		53.2			11.1						183.3	
Approach LOS		D			B						F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	31.5	48.5		40.0		80.0
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3
Max Green Setting (Gmax), s	30.4	39.7		34.7		74.7
Max Q Clear Time (g_c+I1), s	26.6	38.8		36.7		2.0
Green Ext Time (p_c), s	0.3	0.5		0.0		6.2

Intersection Summary		
HCM 6th Ctrl Delay		70.7
HCM 6th LOS		E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	738	313	357	1037	0	0	0	0	676	2	224
Future Volume (vph)	0	738	313	357	1037	0	0	0	0	676	2	224
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	255		0	0		0	300		300
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	90			90			90			140		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		443			611			779			793	
Travel Time (s)		8.6			11.9			17.7			18.0	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Shared Lane Traffic (%)										48%		10%
Turn Type		NA	Perm	Prot	NA					Perm	NA	Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Detector Phase		2	2	1	6					4	4	4
Switch Phase												
Minimum Initial (s)		5.0	5.0	5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		45.0	45.0	35.0	45.0					25.0	25.0	25.0
Total Split (s)		45.0	45.0	36.0	81.0					39.0	39.0	39.0
Total Split (%)		37.5%	37.5%	30.0%	67.5%					32.5%	32.5%	32.5%
Yellow Time (s)		4.3	4.3	3.6	4.3					4.3	4.3	4.3
All-Red Time (s)		1.0	1.0	1.0	1.0					1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		5.3	5.3	4.6	5.3					5.3	5.3	5.3
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes	Yes								
Recall Mode		C-Min	C-Min	None	C-Min					None	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-15 SB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	738	313	357	1037	0	0	0	0	676	2	224
Future Volume (veh/h)	0	738	313	357	1037	0	0	0	0	676	2	224
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	785	333	380	1103	0				794	0	159
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1439	638	400	2373	0				869	0	384
Arrive On Green	0.00	0.81	0.81	0.45	1.00	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	3647	1575	1781	3647	0				3563	0	1575
Grp Volume(v), veh/h	0	785	333	380	1103	0				794	0	159
Grp Sat Flow(s),veh/h/ln	0	1777	1575	1781	1777	0				1781	0	1575
Q Serve(g_s), s	0.0	9.0	8.3	24.6	0.0	0.0				26.0	0.0	10.2
Cycle Q Clear(g_c), s	0.0	9.0	8.3	24.6	0.0	0.0				26.0	0.0	10.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1439	638	400	2373	0				869	0	384
V/C Ratio(X)	0.00	0.55	0.52	0.95	0.46	0.00				0.91	0.00	0.41
Avail Cap(c_a), veh/h	0	1439	638	466	2373	0				1000	0	442
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.86	0.86	0.63	0.63	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.6	7.6	32.5	0.0	0.0				44.1	0.0	38.1
Incr Delay (d2), s/veh	0.0	1.3	2.6	19.4	0.4	0.0				10.6	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	2.4	10.2	0.1	0.0				12.7	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.9	10.2	51.8	0.4	0.0				54.8	0.0	38.4
LnGrp LOS	A	A	B	D	A	A				D	A	D
Approach Vol, veh/h		1118			1483						953	
Approach Delay, s/veh		9.3			13.6						52.0	
Approach LOS		A			B						D	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	31.5	53.9		34.6		85.4
Change Period (Y+Rc), s	4.6	5.3		5.3		5.3
Max Green Setting (Gmax), s	31.4	39.7		33.7		75.7
Max Q Clear Time (g_c+I1), s	26.6	11.0		28.0		2.0
Green Ext Time (p_c), s	0.3	4.4		1.3		6.2

Intersection Summary		
HCM 6th Ctrl Delay		22.5
HCM 6th LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1259	0	0	917	469	477	3	554	0	0	0
Future Volume (vph)	154	1259	0	0	917	469	477	3	554	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	0		0	300		0	0		0
Storage Lanes	1		0	0		0	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA		Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases							8					
Detector Phase	5	2			6		8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0		25.0	25.0				
Total Split (s)	25.0	77.0			52.0		43.0	43.0				
Total Split (%)	20.8%	64.2%			43.3%		35.8%	35.8%				
Yellow Time (s)	3.0	4.3			4.3		4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0		1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3		5.3	5.3				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None	C-Min			C-Min		None	None				

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1259	0	0	917	469	477	3	554	0	0	0
Future Volume (veh/h)	154	1259	0	0	917	469	477	3	554	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	159	1298	0	0	945	484	492	3	571			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	184	2123	0	0	1053	529	560	3	493			
Arrive On Green	0.21	1.00	0.00	0.00	0.46	0.46	0.31	0.31	0.31			
Sat Flow, veh/h	1781	3647	0	0	2379	1148	1781	8	1571			
Grp Volume(v), veh/h	159	1298	0	0	730	699	492	0	574			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1656	1781	0	1579			
Q Serve(g_s), s	10.3	0.0	0.0	0.0	45.2	47.2	31.4	0.0	37.7			
Cycle Q Clear(g_c), s	10.3	0.0	0.0	0.0	45.2	47.2	31.4	0.0	37.7			
Prop In Lane	1.00		0.00	0.00		0.69	1.00		0.99			
Lane Grp Cap(c), veh/h	184	2123	0	0	819	763	560	0	496			
V/C Ratio(X)	0.86	0.61	0.00	0.00	0.89	0.92	0.88	0.00	1.16			
Avail Cap(c_a), veh/h	312	2123	0	0	819	763	560	0	496			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	46.8	0.0	0.0	0.0	29.6	30.2	39.0	0.0	41.2			
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.0	14.1	17.5	14.4	0.0	91.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	0.0	21.7	21.7	15.8	0.0	27.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	0.1	0.0	0.0	43.7	47.6	53.4	0.0	132.6			
LnGrp LOS	D	A	A	A	D	D	D	A	F			
Approach Vol, veh/h		1457			1429			1066				
Approach Delay, s/veh		5.3			45.6			96.0				
Approach LOS		A			D			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.0			16.4	60.6		43.0				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		71.7			21.0	46.7		37.7				
Max Q Clear Time (g_c+I1), s		2.0			12.3	49.2		39.7				
Green Ext Time (p_c), s		8.0			0.1	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			44.3									
HCM 6th LOS			D									

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1259	0	0	917	469	477	3	554	0	0	0
Future Volume (vph)	154	1259	0	0	917	469	477	3	554	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	255		0	0		0	300		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		611			271			602			698	
Travel Time (s)		11.9			5.3			13.7			15.9	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Prot	NA			NA	Perm	Perm	NA				
Protected Phases	5	2			6			8				
Permitted Phases						6	8					
Detector Phase	5	2			6	6	8	8				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	25.0	45.0			45.0	45.0	25.0	25.0				
Total Split (s)	25.0	70.0			45.0	45.0	50.0	50.0				
Total Split (%)	20.8%	58.3%			37.5%	37.5%	41.7%	41.7%				
Yellow Time (s)	3.0	4.3			4.3	4.3	4.3	4.3				
All-Red Time (s)	1.0	1.0			1.0	1.0	1.0	1.0				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.0	5.3			5.3	5.3	5.3	5.3				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?	Yes				Yes	Yes						
Recall Mode	None	C-Min			C-Min	C-Min	None	None				

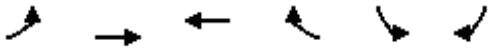
Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: I-15 NB Ramps & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1259	0	0	917	469	477	3	554	0	0	0
Future Volume (veh/h)	154	1259	0	0	917	469	477	3	554	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	159	1298	0	0	945	484	492	3	571			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	184	1916	0	0	1430	634	664	3	585			
Arrive On Green	0.21	1.00	0.00	0.00	0.13	0.13	0.37	0.37	0.37			
Sat Flow, veh/h	1781	3647	0	0	3647	1575	1781	8	1572			
Grp Volume(v), veh/h	159	1298	0	0	945	484	492	0	574			
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1777	1575	1781	0	1580			
Q Serve(g_s), s	10.3	0.0	0.0	0.0	30.3	35.6	28.7	0.0	43.0			
Cycle Q Clear(g_c), s	10.3	0.0	0.0	0.0	30.3	35.6	28.7	0.0	43.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.99			
Lane Grp Cap(c), veh/h	184	1916	0	0	1430	634	664	0	589			
V/C Ratio(X)	0.86	0.68	0.00	0.00	0.66	0.76	0.74	0.00	0.98			
Avail Cap(c_a), veh/h	312	1916	0	0	1430	634	664	0	589			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00			
Upstream Filter(I)	0.68	0.68	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	46.8	0.0	0.0	0.0	44.2	46.5	32.6	0.0	37.1			
Incr Delay (d2), s/veh	3.9	1.3	0.0	0.0	1.9	6.9	3.9	0.0	30.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.3	0.4	0.0	0.0	14.8	16.2	13.0	0.0	21.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	1.3	0.0	0.0	46.2	53.4	36.6	0.0	67.8			
LnGrp LOS	D	A	A	A	D	D	D	A	E			
Approach Vol, veh/h		1457			1429			1066				
Approach Delay, s/veh		6.7			48.6			53.4				
Approach LOS		A			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.0			16.4	53.6		50.0				
Change Period (Y+Rc), s		5.3			4.0	5.3		5.3				
Max Green Setting (Gmax), s		64.7			21.0	39.7		44.7				
Max Q Clear Time (g_c+I1), s		2.0			12.3	37.6		45.0				
Green Ext Time (p_c), s		8.0			0.1	1.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			34.5									
HCM 6th LOS			C									



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	322	1491	1094	125	97	294
Future Volume (vph)	322	1491	1094	125	97	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	66.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	322	1491	1094	125	97	294
Future Vol, veh/h	322	1491	1094	125	97	294
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	332	1537	1128	129	100	303

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1262	0	-	0	2417	574
Stage 1	-	-	-	-	1133	-
Stage 2	-	-	-	-	1284	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	547	-	-	-	~ 39	462
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	204	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	544	-	-	-	~ 15	458
Mov Cap-2 Maneuver	-	-	-	-	~ 68	-
Stage 1	-	-	-	-	102	-
Stage 2	-	-	-	-	203	-

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	$ 567.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	544	-	-	-	189
HCM Lane V/C Ratio	0.61	-	-	-	2.133
HCM Control Delay (s)	21.4	-	-	-	$ 567.4
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	4.1	-	-	-	31.6

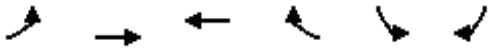
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	322	1491	1094	125	97	294
Future Volume (vph)	322	1491	1094	125	97	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	100	0
Storage Lanes	1			0	1	1
Taper Length (ft)	50				30	
Right Turn on Red				Yes		Yes
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Turn Type	Prot	NA	NA	Perm	Prot	pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases				6		4
Detector Phase	5	2	6	6	4	5
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	9.5
Total Split (s)	40.0	97.0	57.0	57.0	23.0	40.0
Total Split (%)	33.3%	80.8%	47.5%	47.5%	19.2%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead		Lag	Lag		Lead
Lead-Lag Optimize?	Yes		Yes	Yes		Yes
Recall Mode	None	C-Max	C-Max	C-Max	None	None

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	

Splits and Phases: 5: Bundy Cyn. Rd. & Cherry St.

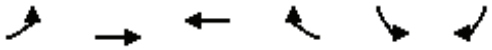




Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	322	1491	1094	125	97	294
Future Volume (veh/h)	322	1491	1094	125	97	294
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	332	1537	1128	129	100	303
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	358	3936	1892	840	275	563
Arrive On Green	0.40	1.00	0.53	0.53	0.15	0.15
Sat Flow, veh/h	1781	5274	3647	1578	1781	1585
Grp Volume(v), veh/h	332	1537	1128	129	100	303
Grp Sat Flow(s),veh/h/ln	1781	1702	1777	1578	1781	1585
Q Serve(g_s), s	21.3	0.0	26.1	5.0	6.0	18.3
Cycle Q Clear(g_c), s	21.3	0.0	26.1	5.0	6.0	18.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	358	3936	1892	840	275	563
V/C Ratio(X)	0.93	0.39	0.60	0.15	0.36	0.54
Avail Cap(c_a), veh/h	527	3936	1892	840	275	563
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	19.2	14.3	45.5	30.8
Incr Delay (d2), s/veh	13.1	0.2	1.4	0.4	0.8	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.1	10.7	1.8	2.7	16.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.1	0.2	20.6	14.7	46.3	31.9
LnGrp LOS	D	A	C	B	D	C
Approach Vol, veh/h		1869	1257		403	
Approach Delay, s/veh		8.7	20.0		35.4	
Approach LOS		A	C		D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.0		23.0	28.6	68.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		92.5		18.5	35.5	52.5
Max Q Clear Time (g_c+I1), s		2.0		20.3	23.3	28.1
Green Ext Time (p_c), s		18.2		0.0	0.8	9.4

Intersection Summary		
HCM 6th Ctrl Delay		15.8
HCM 6th LOS		B



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	322	1491	1094	125	0	294
Future Volume (vph)	322	1491	1094	125	0	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			100	0	0
Storage Lanes	1			0	0	1
Taper Length (ft)	50				90	
Link Speed (mph)		35	35		30	
Link Distance (ft)		271	254		299	
Travel Time (s)		5.3	4.9		6.8	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	322	1491	1094	125	0	294
Future Vol, veh/h	322	1491	1094	125	0	294
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	332	1537	1128	129	0	303

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1262	0	-	0	-	574
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	4.14	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	-	-	3.32
Pot Cap-1 Maneuver	547	-	-	-	0	462
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	544	-	-	-	-	458
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	26.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	544	-	-	-	458
HCM Lane V/C Ratio	0.61	-	-	-	0.662
HCM Control Delay (s)	21.4	-	-	-	26.9
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	4.1	-	-	-	4.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	1390	26	26	959	65	130	8	8	54	17	77
Future Volume (vph)	142	1390	26	26	959	65	130	8	8	54	17	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	150		285	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	60			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		377			612			347			1298	
Travel Time (s)		7.3			11.9			9.5			35.4	
Confl. Peds. (#/hr)	5					5				5		5
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
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	23.3	23.3	9.5	22.5		22.5	22.5	
Total Split (s)	23.0	64.4		10.6	52.0	52.0	22.0	22.5		22.5	23.0	
Total Split (%)	19.2%	53.7%		8.8%	43.3%	43.3%	18.3%	18.8%		18.8%	19.2%	
Yellow Time (s)	3.5	4.3		3.5	4.3	4.3	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3	5.3	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Sellers Rd. & Bundy Cyn. Rd.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	1390	26	26	959	65	130	8	8	54	17	77
Future Volume (veh/h)	142	1390	26	26	959	65	130	8	8	54	17	77
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		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1463	27	27	1009	68	137	8	8	57	18	81
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	176	2951	54	44	1768	784	165	83	83	267	45	204
Arrive On Green	0.10	0.57	0.57	0.05	0.99	0.99	0.09	0.10	0.10	0.15	0.15	0.15
Sat Flow, veh/h	1781	5162	95	1781	3554	1577	1781	858	858	1781	294	1323
Grp Volume(v), veh/h	149	965	525	27	1009	68	137	0	16	57	0	99
Grp Sat Flow(s),veh/h/ln	1781	1702	1853	1781	1777	1577	1781	0	1716	1781	0	1617
Q Serve(g_s), s	9.9	20.3	20.3	1.8	0.4	0.0	9.1	0.0	1.0	3.4	0.0	6.6
Cycle Q Clear(g_c), s	9.9	20.3	20.3	1.8	0.4	0.0	9.1	0.0	1.0	3.4	0.0	6.6
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.50	1.00		0.82
Lane Grp Cap(c), veh/h	176	1946	1059	44	1768	784	165	0	166	267	0	249
V/C Ratio(X)	0.84	0.50	0.50	0.61	0.57	0.09	0.83	0.00	0.10	0.21	0.00	0.40
Avail Cap(c_a), veh/h	275	1946	1059	91	1768	784	260	0	257	267	0	249
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.2	15.4	15.4	56.5	0.2	0.2	53.5	0.0	49.4	44.8	0.0	45.7
Incr Delay (d2), s/veh	7.9	0.9	1.7	12.0	1.2	0.2	11.9	0.0	0.2	1.8	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	7.8	8.7	0.9	0.4	0.1	4.6	0.0	0.5	1.6	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	16.3	17.0	68.5	1.4	0.4	65.4	0.0	49.6	46.6	0.0	50.4
LnGrp LOS	E	B	B	E	A	A	E	A	D	D	A	D
Approach Vol, veh/h		1639			1104			153			156	
Approach Delay, s/veh		20.6			3.0			63.8			49.0	
Approach LOS		C			A			E			D	

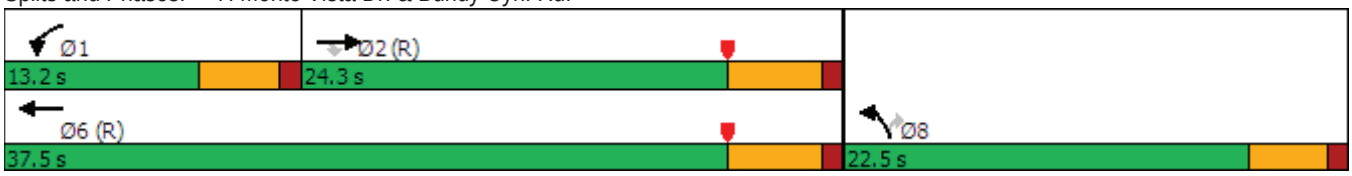
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	73.9	15.6	23.0	16.4	65.0	22.5	16.1
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	6.1	59.1	17.5	18.5	18.5	46.7	18.0	18.0
Max Q Clear Time (g_c+I1), s	3.8	22.3	11.1	8.6	11.9	2.4	5.4	3.0
Green Ext Time (p_c), s	0.0	8.2	0.2	0.2	0.1	5.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1173	279	150	733	317	235
Future Volume (vph)	1173	279	150	733	317	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		200	200		100	0
Storage Lanes		1	1		2	1
Taper Length (ft)			120		90	
Right Turn on Red		Yes				Yes
Link Speed (mph)	35			40	55	
Link Distance (ft)	612			588	284	
Travel Time (s)	11.9			10.0	3.5	
Confl. Peds. (#/hr)		5	5		5	5
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	2		1	6	8	
Permitted Phases		2				8
Detector Phase	2	2	1	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.3	23.3	9.5	22.5	22.5	22.5
Total Split (s)	24.3	24.3	13.2	37.5	22.5	22.5
Total Split (%)	40.5%	40.5%	22.0%	62.5%	37.5%	37.5%
Yellow Time (s)	4.3	4.3	3.5	4.3	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.3	5.3	4.5	5.3	4.5	4.5
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	

Splits and Phases: 7: Monte Vista Dr. & Bundy Cyn. Rd.





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1173	279	150	733	317	235
Future Volume (veh/h)	1173	279	150	733	317	235
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.99	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1289	307	165	805	348	258
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1764	544	207	1907	1037	476
Arrive On Green	0.35	0.35	0.12	0.54	0.30	0.30
Sat Flow, veh/h	5274	1574	1781	3647	3456	1585
Grp Volume(v), veh/h	1289	307	165	805	348	258
Grp Sat Flow(s),veh/h/ln	1702	1574	1781	1777	1728	1585
Q Serve(g_s), s	13.3	9.5	5.4	8.1	4.7	8.2
Cycle Q Clear(g_c), s	13.3	9.5	5.4	8.1	4.7	8.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1764	544	207	1907	1037	476
V/C Ratio(X)	0.73	0.56	0.80	0.42	0.34	0.54
Avail Cap(c_a), veh/h	1764	544	258	1907	1037	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	16.0	25.8	8.3	16.3	17.6
Incr Delay (d2), s/veh	2.2	3.5	10.3	0.7	0.9	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	3.5	2.7	2.5	1.6	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	19.4	19.4	36.2	9.0	17.2	22.0
LnGrp LOS	B	B	D	A	B	C
Approach Vol, veh/h	1596			970	606	
Approach Delay, s/veh	19.4			13.6	19.2	
Approach LOS	B			B	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	11.5	26.0				37.5	22.5
Change Period (Y+Rc), s	4.5	5.3				5.3	4.5
Max Green Setting (Gmax), s	8.7	19.0				32.2	18.0
Max Q Clear Time (g_c+I1), s	7.4	15.3				10.1	10.2
Green Ext Time (p_c), s	0.0	2.4				3.5	0.8

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	1308	26	36	949	65	140	8	8	137	17	77
Future Volume (vph)	127	1308	26	36	949	65	140	8	8	137	17	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120		0	150		285	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	60			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			25			25	
Link Distance (ft)		377			612			347			1298	
Travel Time (s)		7.3			11.9			9.5			35.4	
Confl. Peds. (#/hr)	5					5				5		5
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
Shared Lane Traffic (%)												
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						6						
Detector Phase	5	2		1	6	6	3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	23.3	23.3	9.5	22.5		22.5	22.5	
Total Split (s)	21.1	63.2		11.3	53.4	53.4	23.0	22.5		23.0	22.5	
Total Split (%)	17.6%	52.7%		9.4%	44.5%	44.5%	19.2%	18.8%		19.2%	18.8%	
Yellow Time (s)	3.5	4.3		3.5	4.3	4.3	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	5.3		4.5	5.3	5.3	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		Max	Max	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	

Splits and Phases: 6: Sellers Rd. & Bundy Cyn. Rd.

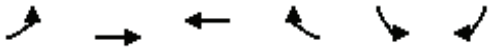




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	1308	26	36	949	65	140	8	8	137	17	77
Future Volume (veh/h)	127	1308	26	36	949	65	140	8	8	137	17	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	1377	27	38	999	68	147	8	8	144	18	81
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	161	2911	57	53	1793	796	176	81	81	275	44	198
Arrive On Green	0.09	0.56	0.56	0.06	1.00	1.00	0.10	0.09	0.09	0.15	0.15	0.15
Sat Flow, veh/h	1781	5155	101	1781	3554	1577	1781	858	858	1781	294	1323
Grp Volume(v), veh/h	134	909	495	38	999	68	147	0	16	144	0	99
Grp Sat Flow(s),veh/h/ln	1781	1702	1852	1781	1777	1577	1781	0	1716	1781	0	1617
Q Serve(g_s), s	8.9	19.0	19.0	2.5	0.0	0.0	9.7	0.0	1.0	8.9	0.0	6.7
Cycle Q Clear(g_c), s	8.9	19.0	19.0	2.5	0.0	0.0	9.7	0.0	1.0	8.9	0.0	6.7
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.50	1.00		0.82
Lane Grp Cap(c), veh/h	161	1923	1046	53	1793	796	176	0	162	275	0	242
V/C Ratio(X)	0.83	0.47	0.47	0.71	0.56	0.09	0.84	0.00	0.10	0.52	0.00	0.41
Avail Cap(c_a), veh/h	246	1923	1046	101	1793	796	275	0	257	275	0	242
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.7	15.5	15.5	55.9	0.0	0.0	53.1	0.0	49.7	46.7	0.0	46.2
Incr Delay (d2), s/veh	8.1	0.8	1.5	14.9	1.2	0.2	12.2	0.0	0.3	7.0	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	7.3	8.1	1.3	0.3	0.0	5.0	0.0	0.5	4.5	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.8	16.3	17.0	70.8	1.2	0.2	65.3	0.0	49.9	53.7	0.0	51.2
LnGrp LOS	E	B	B	E	A	A	E	A	D	D	A	D
Approach Vol, veh/h		1538			1105			163			243	
Approach Delay, s/veh		20.5			3.5			63.8			52.7	
Approach LOS		C			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	73.1	16.3	22.5	15.3	65.8	23.0	15.8
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	6.8	57.9	18.5	18.0	16.6	48.1	18.5	18.0
Max Q Clear Time (g_c+I1), s	4.5	21.0	11.7	8.7	10.9	2.0	10.9	3.0
Green Ext Time (p_c), s	0.0	7.5	0.2	0.2	0.1	5.5	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	105	1303	816	19	9	68
Future Volume (vph)	105	1303	816	19	9	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	120			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	120				90	
Link Speed (mph)		40	40		25	
Link Distance (ft)		588	428		597	
Travel Time (s)		10.0	7.3		16.3	
Confl. Peds. (#/hr)	5			5	5	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

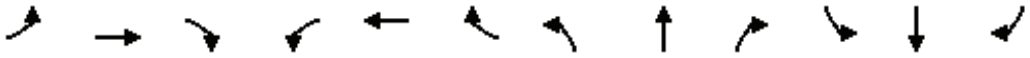
Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	105	1303	816	19	9	68
Future Vol, veh/h	105	1303	816	19	9	68
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	114	1416	887	21	10	74

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	913	0	-	0	1702	464
Stage 1	-	-	-	-	903	-
Stage 2	-	-	-	-	799	-
Critical Hdwy	4.14	-	-	-	6.29	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	2.22	-	-	-	3.67	3.32
Pot Cap-1 Maneuver	742	-	-	-	106	545
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	375	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	738	-	-	-	89	540
Mov Cap-2 Maneuver	-	-	-	-	189	-
Stage 1	-	-	-	-	292	-
Stage 2	-	-	-	-	373	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	738	-	-	-	444
HCM Lane V/C Ratio	0.155	-	-	-	0.189
HCM Control Delay (s)	10.8	-	-	-	15
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	0.7



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	7	18	1	4	57	11	206	2	69	217	95
Future Volume (vph)	110	7	18	1	4	57	11	206	2	69	217	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	7	18	1	4	57	11	206	2	69	217	95
Future Vol, veh/h	110	7	18	1	4	57	11	206	2	69	217	95
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	8	19	1	4	61	12	222	2	74	233	102
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.4	8.8	10.6	13.1
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	81%	2%	18%
Vol Thru, %	94%	5%	6%	57%
Vol Right, %	1%	13%	92%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	135	62	381
LT Vol	11	110	1	69
Through Vol	206	7	4	217
RT Vol	2	18	57	95
Lane Flow Rate	235	145	67	410
Geometry Grp	1	1	1	1
Degree of Util (X)	0.333	0.23	0.097	0.532
Departure Headway (Hd)	5.095	5.711	5.249	4.678
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	711	631	685	758
Service Time	3.095	3.726	3.267	2.777
HCM Lane V/C Ratio	0.331	0.23	0.098	0.541
HCM Control Delay	10.6	10.4	8.8	13.1
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.5	0.9	0.3	3.2



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	7	18	1	4	57	11	206	2	69	217	95
Future Volume (vph)	110	7	18	1	4	57	11	206	2	69	217	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	90		0	0		0	100		0	0		100
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		35			25			35			35	
Link Distance (ft)		626			301			322			1323	
Travel Time (s)		12.2			8.2			6.3			25.8	
Confl. Peds. (#/hr)	5		5	5		5	5		5	5		5
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

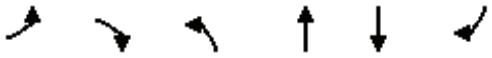
Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	7	18	1	4	57	11	206	2	69	217	95
Future Vol, veh/h	110	7	18	1	4	57	11	206	2	69	217	95
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	118	8	19	1	4	61	12	222	2	74	233	102
Number of Lanes	1	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	2
HCM Control Delay	11	9.7	11.5	12.3
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	2%	24%	0%
Vol Thru, %	0%	99%	0%	28%	6%	76%	0%
Vol Right, %	0%	1%	0%	72%	92%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	208	110	25	62	286	95
LT Vol	11	0	110	0	1	69	0
Through Vol	0	206	0	7	4	217	0
RT Vol	0	2	0	18	57	0	95
Lane Flow Rate	12	224	118	27	67	308	102
Geometry Grp	7	7	7	7	6	7	7
Degree of Util (X)	0.02	0.355	0.224	0.043	0.11	0.484	0.137
Departure Headway (Hd)	6.226	5.713	6.829	5.813	5.963	5.666	4.837
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	576	631	526	616	601	640	746
Service Time	3.951	3.439	4.563	3.546	4.001	3.366	2.537
HCM Lane V/C Ratio	0.021	0.355	0.224	0.044	0.111	0.481	0.137
HCM Control Delay	9.1	11.6	11.5	8.8	9.7	13.6	8.3
HCM Lane LOS	A	B	B	A	A	B	A
HCM 95th-tile Q	0.1	1.6	0.9	0.1	0.4	2.6	0.5



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	17	167	173	116	70	19
Future Volume (vph)	17	167	173	116	70	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

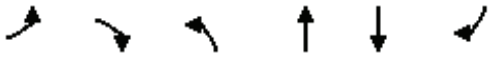
Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	167	173	116	70	19
Future Vol, veh/h	17	167	173	116	70	19
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	182	188	126	76	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	599	97	102	0	-	0
Stage 1	92	-	-	-	-	-
Stage 2	507	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	465	959	1490	-	-	-
Stage 1	932	-	-	-	-	-
Stage 2	605	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	398	950	1483	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	802	-	-	-	-	-
Stage 2	602	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	4.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1483	-	842	-	-
HCM Lane V/C Ratio	0.127	-	0.238	-	-
HCM Control Delay (s)	7.8	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.9	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	63	121	173	162	65	19
Future Volume (vph)	63	121	173	162	65	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			30	30	
Link Distance (ft)	300			240	763	
Travel Time (s)	6.8			5.5	17.3	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

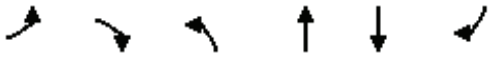
Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	63	121	173	162	65	19
Future Vol, veh/h	63	121	173	162	65	19
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	132	188	176	71	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	644	92	97	0	-	0
Stage 1	87	-	-	-	-	-
Stage 2	557	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	437	965	1496	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	372	956	1489	-	-	-
Mov Cap-2 Maneuver	372	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1489	-	622	-	-
HCM Lane V/C Ratio	0.126	-	0.322	-	-
HCM Control Delay (s)	7.8	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.4	-	1.4	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	16	169	173	273	221	16
Future Volume (vph)	16	169	173	273	221	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

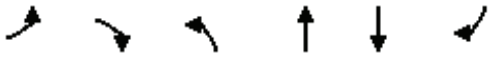
Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	169	173	273	221	16
Future Vol, veh/h	16	169	173	273	221	16
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	184	188	297	240	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	932	259	262	0	-	0
Stage 1	254	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	296	780	1302	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	250	773	1296	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	3.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1296	-	655	-	-
HCM Lane V/C Ratio	0.145	-	0.307	-	-
HCM Control Delay (s)	8.2	-	12.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.3	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	62	123	173	273	170	16
Future Volume (vph)	62	123	173	273	170	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	0	1			0
Taper Length (ft)	90		90			
Link Speed (mph)	30			30	30	
Link Distance (ft)	219			299	240	
Travel Time (s)	5.0			6.8	5.5	
Confl. Peds. (#/hr)	5	5	5			5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

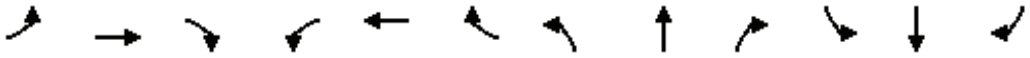
Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	123	173	273	170	16
Future Vol, veh/h	62	123	173	273	170	16
Conflicting Peds, #/hr	5	5	5	0	0	5
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	67	134	188	297	185	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	877	204	207	0	-	0
Stage 1	199	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	319	837	1364	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	272	829	1358	-	-	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.3	3.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1358	-	492	-	-
HCM Lane V/C Ratio	0.138	-	0.409	-	-
HCM Control Delay (s)	8.1	-	17.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.5	-	2	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	52	66	16	47	1	130	5	27	1	3	1
Future Volume (vph)	1	52	66	16	47	1	130	5	27	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

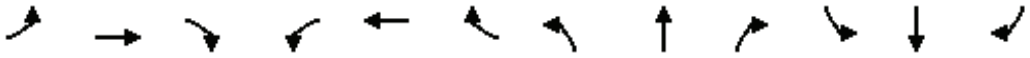
Intersection	
Int Delay, s/veh	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	52	66	16	47	1	130	5	27	1	3	1
Future Vol, veh/h	1	52	66	16	47	1	130	5	27	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	59	75	18	53	1	148	6	31	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	54	0	0	134	0	0	191	189	97	207	226	54
Stage 1	-	-	-	-	-	-	99	99	-	90	90	-
Stage 2	-	-	-	-	-	-	92	90	-	117	136	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1551	-	-	1451	-	-	769	706	959	751	673	1013
Stage 1	-	-	-	-	-	-	907	813	-	917	820	-
Stage 2	-	-	-	-	-	-	915	820	-	888	784	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1551	-	-	1451	-	-	757	696	959	715	664	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	757	696	-	715	664	-
Stage 1	-	-	-	-	-	-	906	812	-	916	809	-
Stage 2	-	-	-	-	-	-	898	809	-	853	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.9	11	10
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	782	1551	-	-	1451	-	-	724
HCM Lane V/C Ratio	0.235	0.001	-	-	0.013	-	-	0.008
HCM Control Delay (s)	11	7.3	0	-	7.5	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.9	0	-	-	0	-	-	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	52	66	16	47	1	130	5	87	1	3	1
Future Volume (vph)	1	52	66	16	47	1	130	5	87	1	3	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		731			648			763			309	
Travel Time (s)		19.9			17.7			17.3			7.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

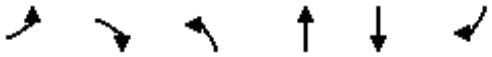
Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	1	52	66	16	47	1	130	5	87	1	3	1
Future Vol, veh/h	1	52	66	16	47	1	130	5	87	1	3	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	59	75	18	53	1	148	6	99	1	3	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	54	0	0	134	0	0	191	189	97	241	226	54
Stage 1	-	-	-	-	-	-	99	99	-	90	90	-
Stage 2	-	-	-	-	-	-	92	90	-	151	136	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1551	-	-	1451	-	-	769	706	959	713	673	1013
Stage 1	-	-	-	-	-	-	907	813	-	917	820	-
Stage 2	-	-	-	-	-	-	915	820	-	851	784	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1551	-	-	1451	-	-	757	696	959	629	664	1013
Mov Cap-2 Maneuver	-	-	-	-	-	-	757	696	-	629	664	-
Stage 1	-	-	-	-	-	-	906	812	-	916	809	-
Stage 2	-	-	-	-	-	-	898	809	-	757	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	1.9	11.3	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	823	1551	-	-	1451	-	-	705
HCM Lane V/C Ratio	0.307	0.001	-	-	0.013	-	-	0.008
HCM Control Delay (s)	11.3	7.3	0	-	7.5	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.3	0	-	-	0	-	-	0



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	50	47	87	51	8
Future Volume (vph)	6	50	47	87	51	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

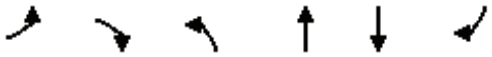
Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	50	47	87	51	8
Future Vol, veh/h	6	50	47	87	51	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	63	59	109	64	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	296	69	74	0	-	0
Stage 1	69	-	-	-	-	-
Stage 2	227	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	695	994	1526	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	667	994	1526	-	-	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	2.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1526	-	944	-	-
HCM Lane V/C Ratio	0.038	-	0.074	-	-
HCM Control Delay (s)	7.5	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	95	47	72	51	8
Future Volume (vph)	21	95	47	72	51	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	648			1298	431	
Travel Time (s)	17.7			35.4	11.8	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

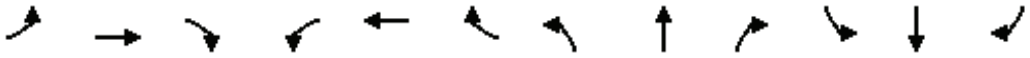
Intersection	
Int Delay, s/veh	5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	95	47	72	51	8
Future Vol, veh/h	21	95	47	72	51	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	119	59	90	64	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	277	69	74	0	-	0
Stage 1	69	-	-	-	-	-
Stage 2	208	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	713	994	1526	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	684	994	1526	-	-	-
Mov Cap-2 Maneuver	684	-	-	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	827	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	2.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1526	-	919	-	-
HCM Lane V/C Ratio	0.038	-	0.158	-	-
HCM Control Delay (s)	7.5	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	63	93	28	46	1	89	22	41	1	12	9
Future Volume (vph)	14	63	93	28	46	1	89	22	41	1	12	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		50	0		0	0		0
Storage Lanes	0		0	0		1	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		1291			669			448			292	
Travel Time (s)		22.0			11.4			12.2			8.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

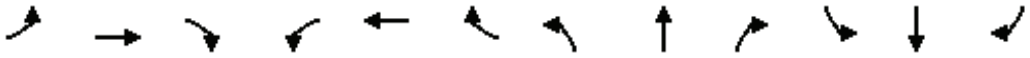
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	63	93	28	46	1	89	22	41	1	12	9
Future Vol, veh/h	14	63	93	28	46	1	89	22	41	1	12	9
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	68	100	30	49	1	96	24	44	1	13	10
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	8.5	8.7	8.7	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	59%	8%	38%	0%	5%
Vol Thru, %	14%	37%	62%	0%	55%
Vol Right, %	27%	55%	0%	100%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	152	170	74	1	22
LT Vol	89	14	28	0	1
Through Vol	22	63	46	0	12
RT Vol	41	93	0	1	9
Lane Flow Rate	163	183	80	1	24
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.206	0.217	0.117	0.001	0.03
Departure Headway (Hd)	4.529	4.27	5.313	4.419	4.506
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	793	841	676	810	794
Service Time	2.551	2.292	3.04	2.145	2.536
HCM Lane V/C Ratio	0.206	0.218	0.118	0.001	0.03
HCM Control Delay	8.7	8.5	8.7	7.1	7.7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.8	0.8	0.4	0	0.1



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	163	67	74	100	1	87	35	61	1	37	1
Future Volume (vph)	1	163	67	74	100	1	87	35	61	1	37	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0	0		0	0		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	90			90			90			90		
Link Speed (mph)		40			40			25			25	
Link Distance (ft)		496			1291			1349			223	
Travel Time (s)		8.5			22.0			36.8			6.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

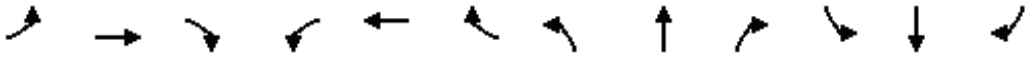
Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	163	67	74	100	1	87	35	61	1	37	1
Future Vol, veh/h	1	163	67	74	100	1	87	35	61	1	37	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	175	72	80	108	1	94	38	66	1	40	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	109	0	0	247	0	0	466	446	175	534	518	109
Stage 1	-	-	-	-	-	-	177	177	-	269	269	-
Stage 2	-	-	-	-	-	-	289	269	-	265	249	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1481	-	-	1319	-	-	507	507	868	457	462	945
Stage 1	-	-	-	-	-	-	825	753	-	737	687	-
Stage 2	-	-	-	-	-	-	719	687	-	740	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1481	-	-	1319	-	-	447	474	868	377	432	945
Mov Cap-2 Maneuver	-	-	-	-	-	-	447	474	-	377	432	-
Stage 1	-	-	-	-	-	-	824	752	-	736	642	-
Stage 2	-	-	-	-	-	-	630	642	-	649	700	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	3.3	15.4	14.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	540	1481	-	-	1319	-	-	436
HCM Lane V/C Ratio	0.364	0.001	-	-	0.06	-	-	0.096
HCM Control Delay (s)	15.4	7.4	0	-	7.9	0	-	14.1
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.7	0	-	-	0.2	-	-	0.3



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	78	9	1	101	111	16	79	8	74	91	8
Future Volume (vph)	2	78	9	1	101	111	16	79	8	74	91	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		400			740			1314			1349	
Travel Time (s)		9.1			16.8			35.8			36.8	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	78	9	1	101	111	16	79	8	74	91	8
Future Vol, veh/h	2	78	9	1	101	111	16	79	8	74	91	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	89	10	1	115	126	18	90	9	84	103	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	9.6	9	9.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	2%	0%	43%
Vol Thru, %	77%	88%	47%	53%
Vol Right, %	8%	10%	52%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	89	213	173
LT Vol	16	2	1	74
Through Vol	79	78	101	91
RT Vol	8	9	111	8
Lane Flow Rate	117	101	242	197
Geometry Grp	1	1	1	1
Degree of Util (X)	0.162	0.139	0.305	0.27
Departure Headway (Hd)	4.975	4.949	4.529	4.94
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	715	719	789	721
Service Time	3.048	3.018	2.584	3.006
HCM Lane V/C Ratio	0.164	0.14	0.307	0.273
HCM Control Delay	9	8.8	9.6	9.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.5	1.3	1.1

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1029**

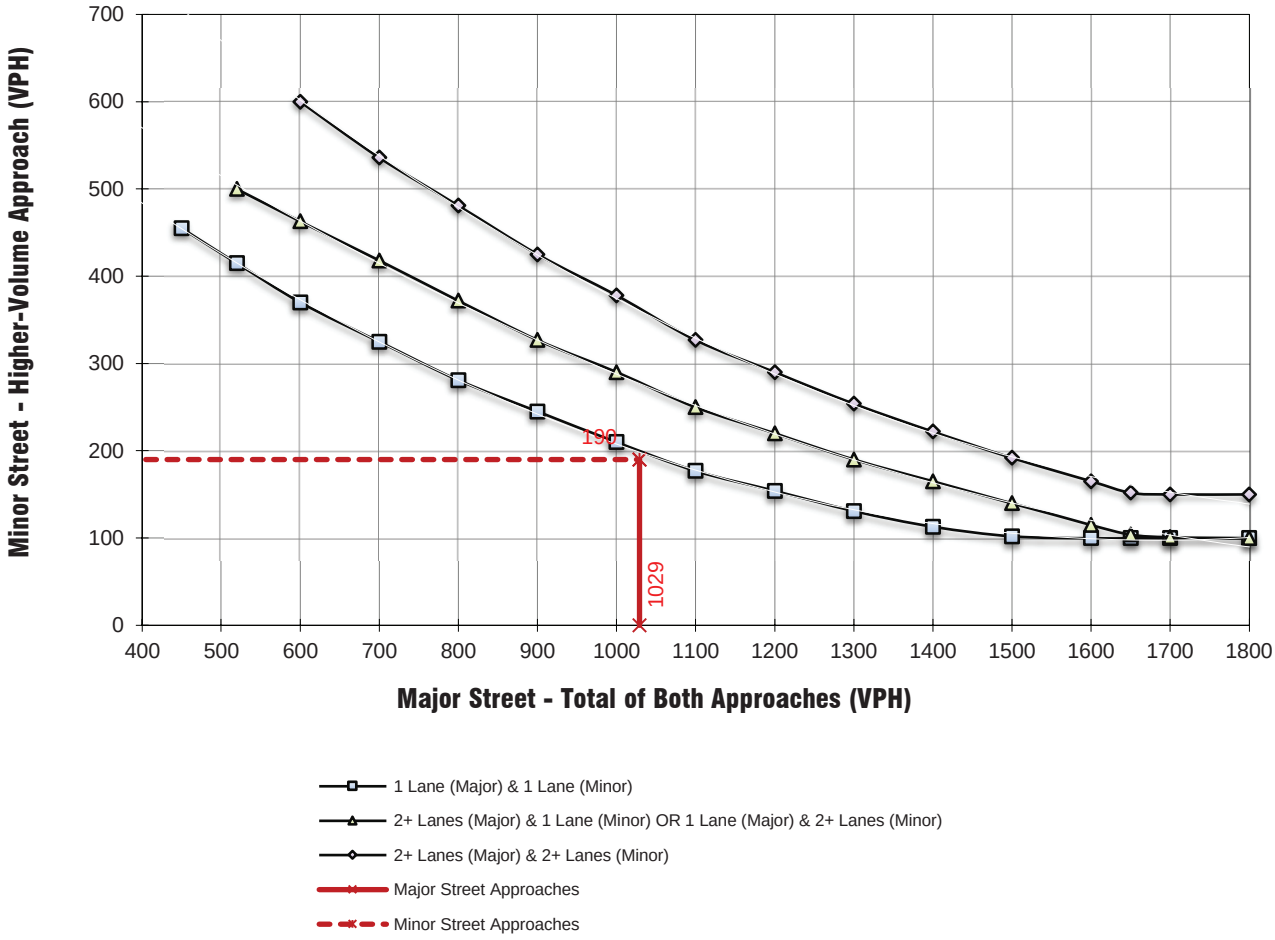
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **190**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1297**

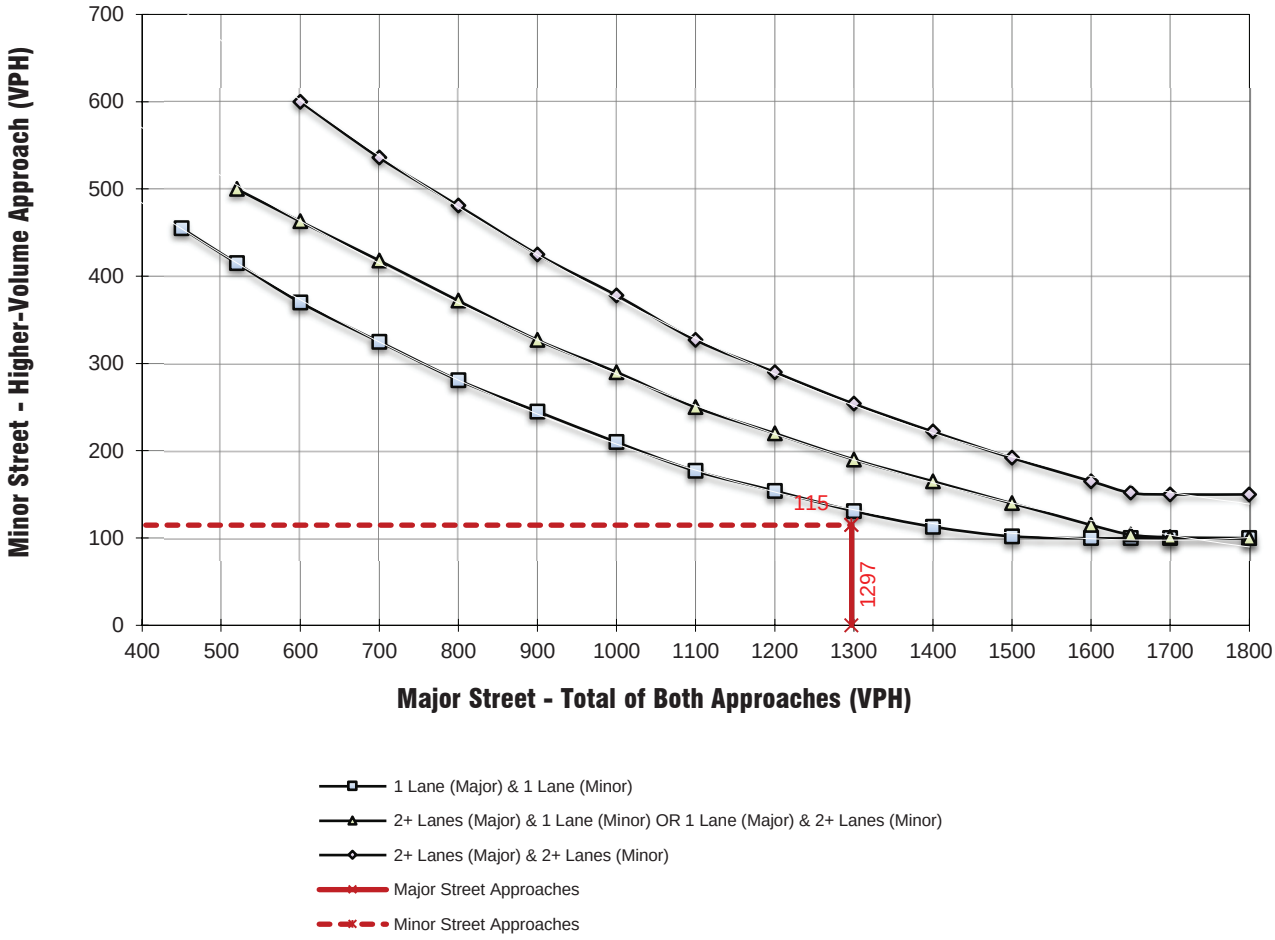
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **115**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **1851**

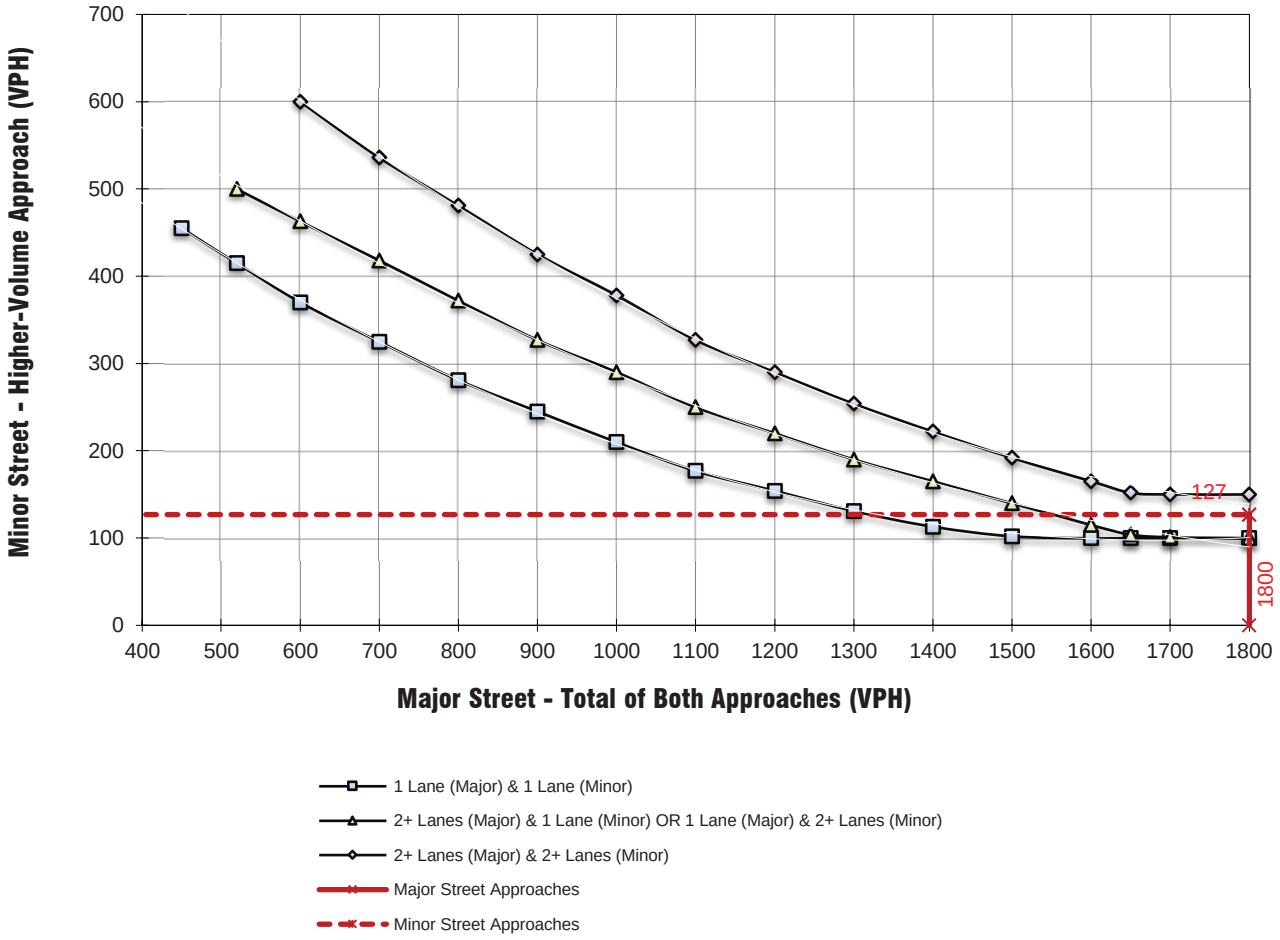
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cyn. Ranch Rd.**

High Volume Approach (VPH) = **127**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Bundy Cyn. Rd.**

Total of Both Approaches (VPH) = **2243**

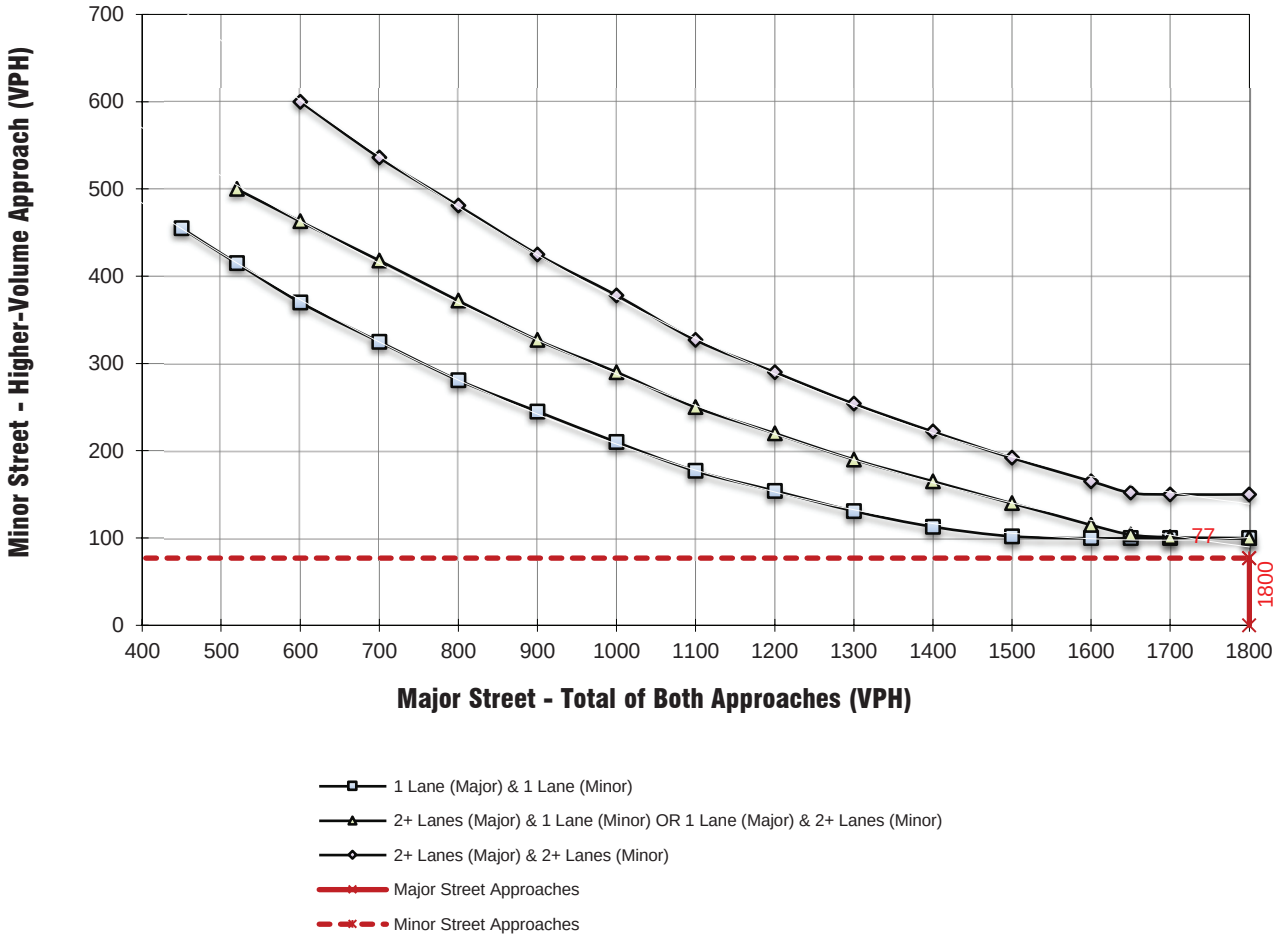
Number of Approach Lanes Major Street = **2**

Minor Street Name = **Cyn. Ranch Rd.**

High Volume Approach (VPH) = **77**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Waite St.**

Total of Both Approaches (VPH) = **287**

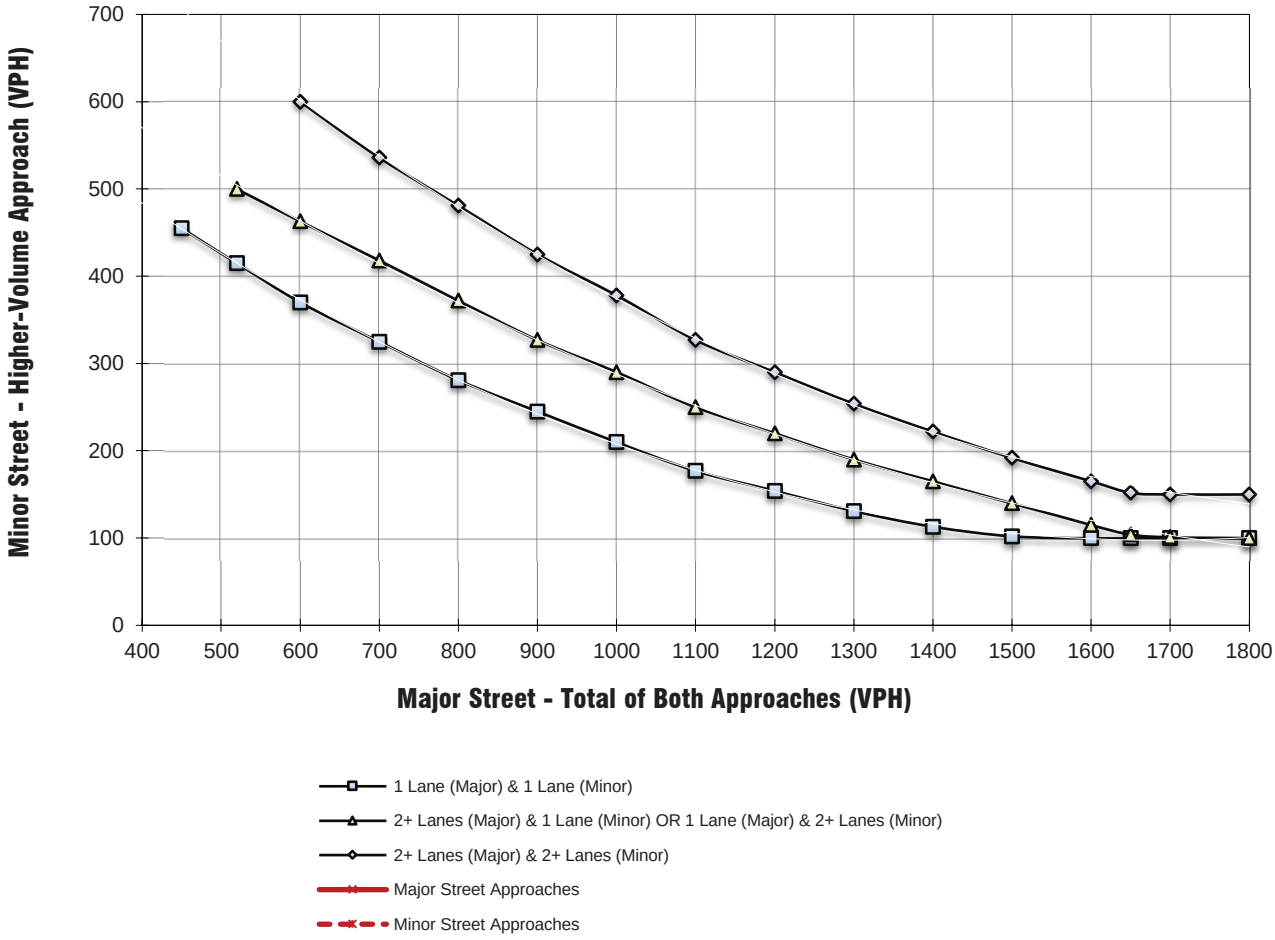
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Cherry St.**

High Volume Approach (VPH) = **65**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Waite St.**

Total of Both Approaches (VPH) = **183**

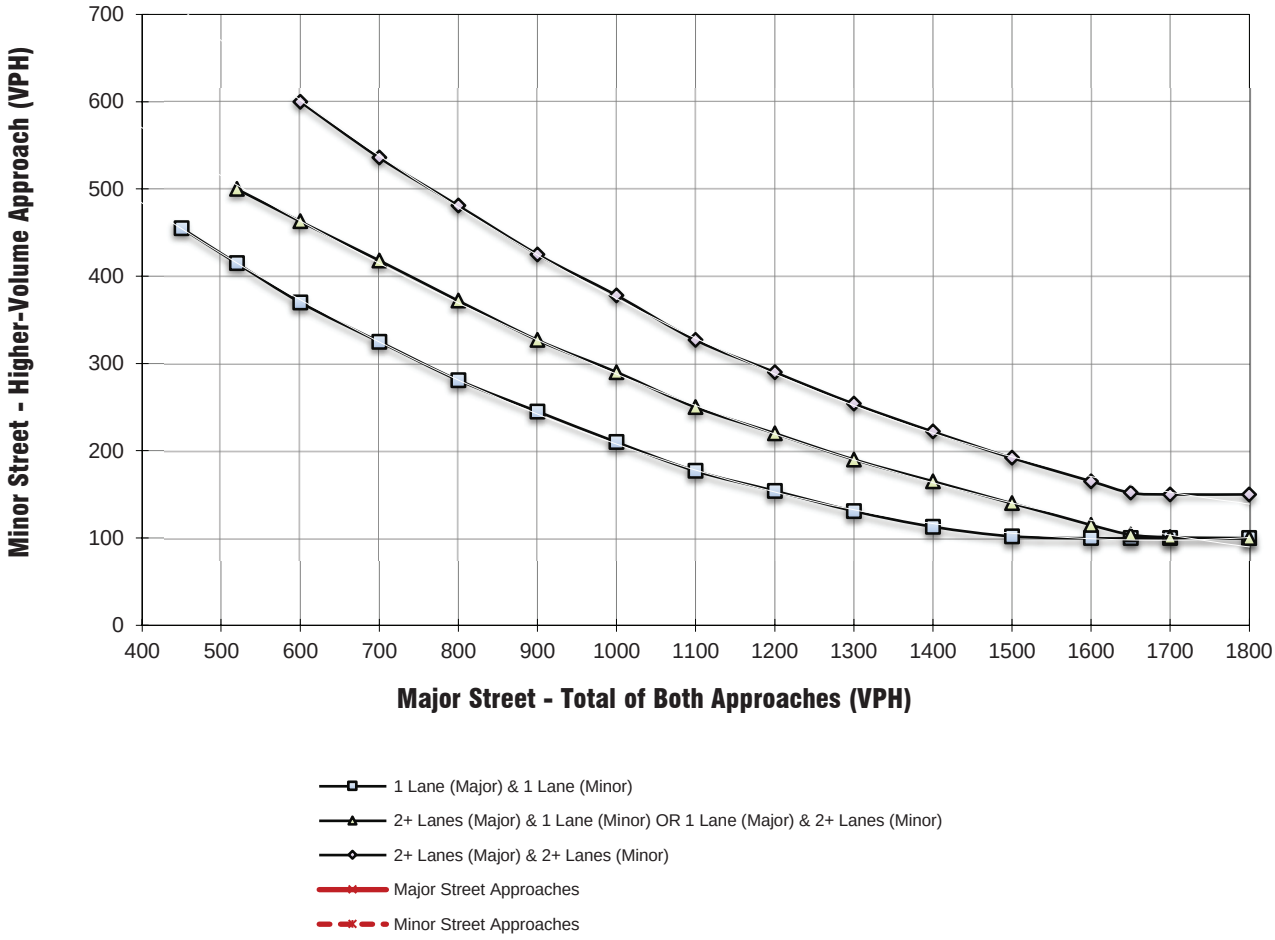
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Cherry St.**

High Volume Approach (VPH) = **162**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Sellers Rd.**

Total of Both Approaches (VPH) = **207**

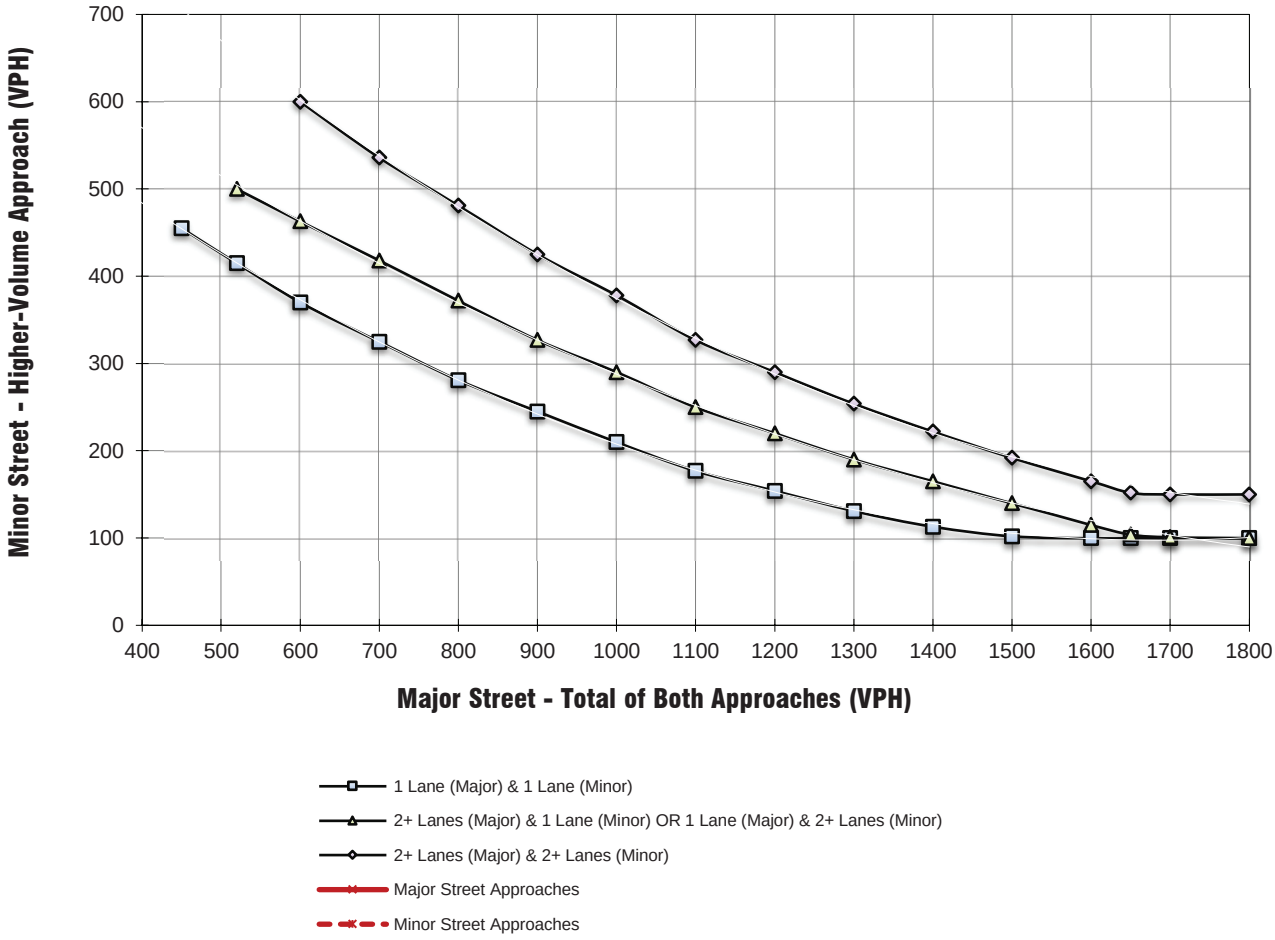
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **95**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Sellers Rd.**

Total of Both Approaches (VPH) = **193**

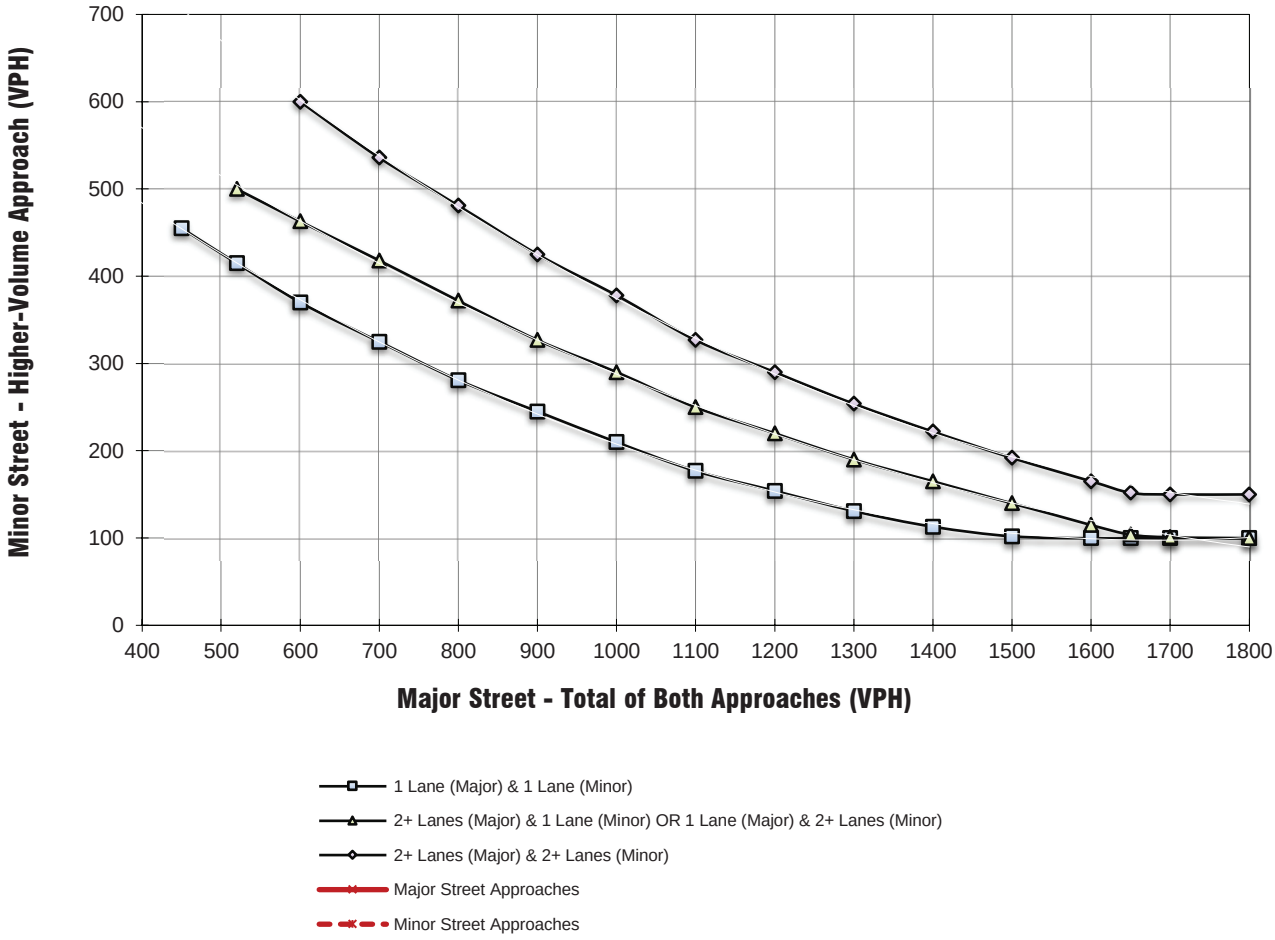
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **56**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **278**

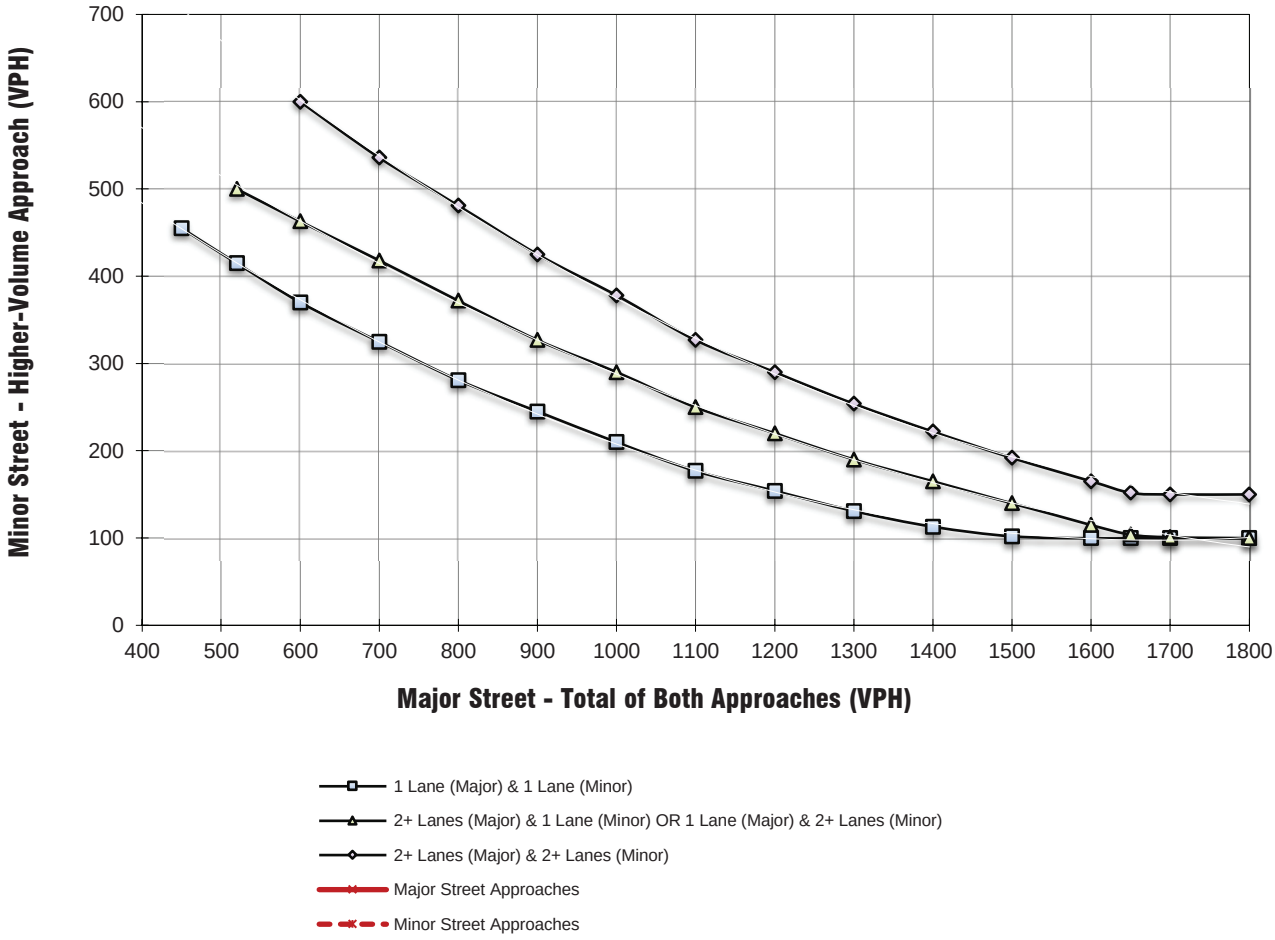
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Orange St.**

High Volume Approach (VPH) = **162**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **245**

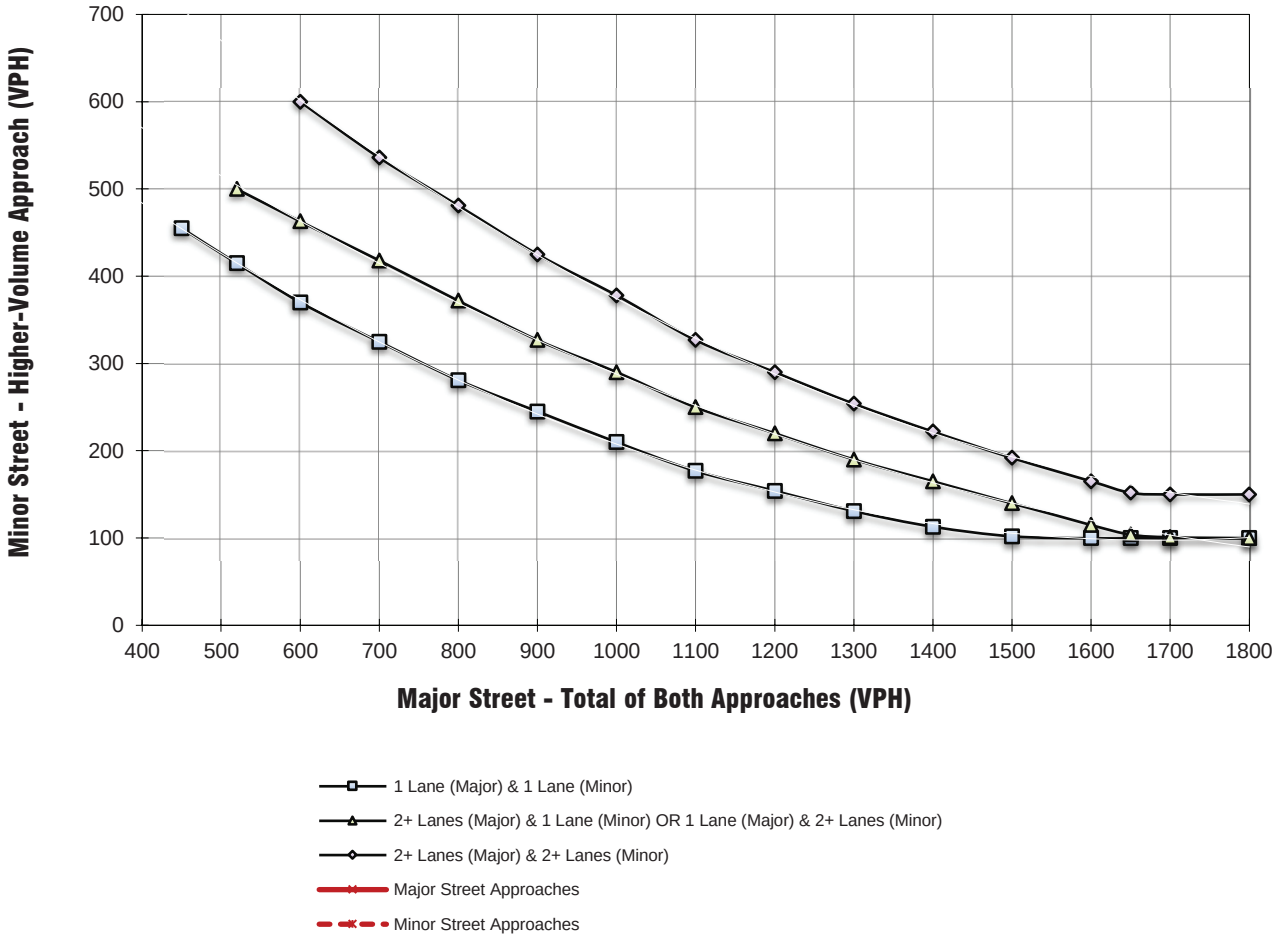
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Orange St.**

High Volume Approach (VPH) = **152**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **487**

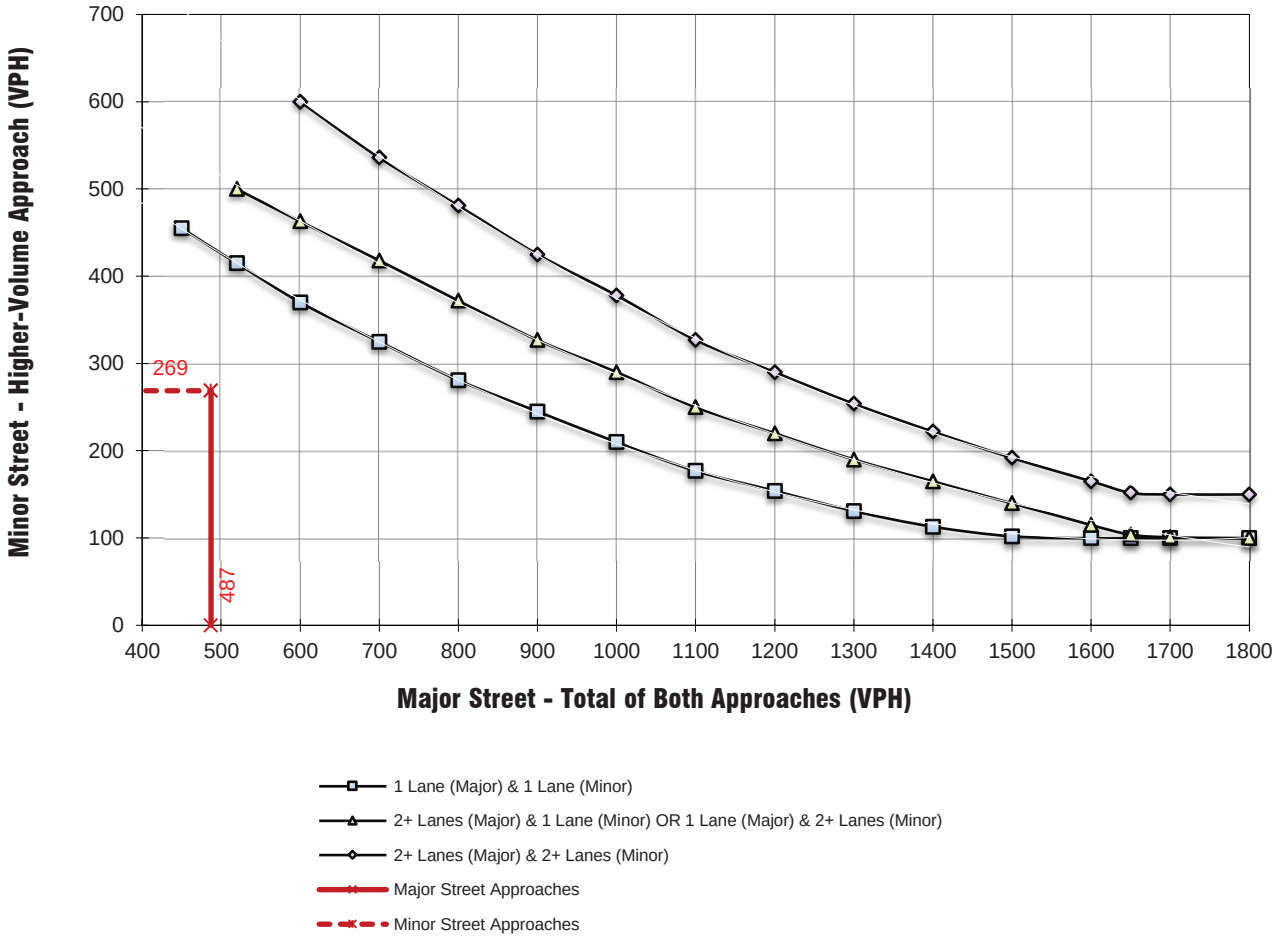
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **269**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Lemon St.**

Total of Both Approaches (VPH) = **406**

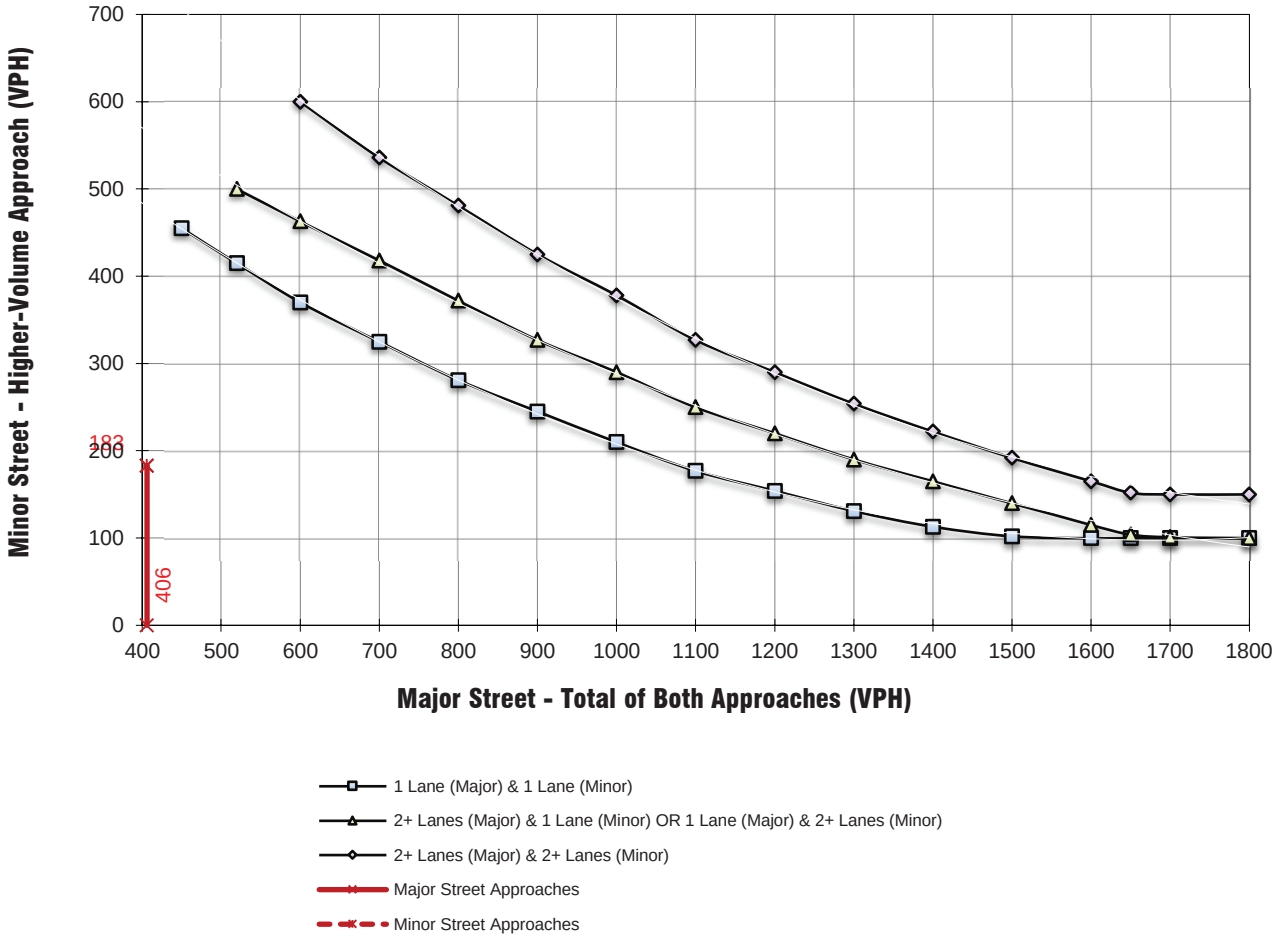
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **183**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (AM Peak Hour)

Major Street Name = **Almond St.**

Total of Both Approaches (VPH) = **423**

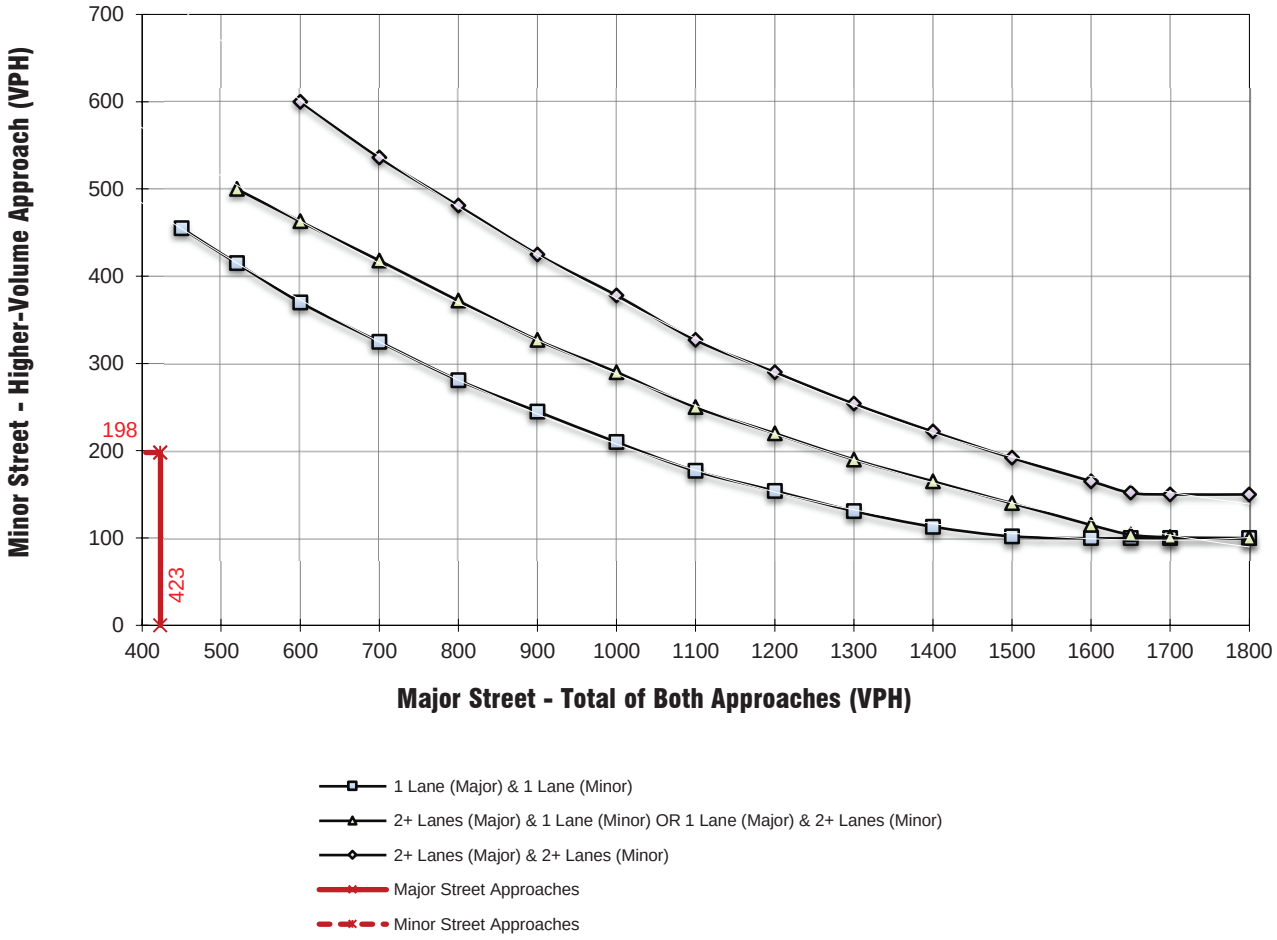
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Waite St.**

High Volume Approach (VPH) = **198**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-3. Warrant 3, Peak Hour

EAPC CONDITIONS (PM Peak Hour)

Major Street Name = **Waite St.**

Total of Both Approaches (VPH) = **302**

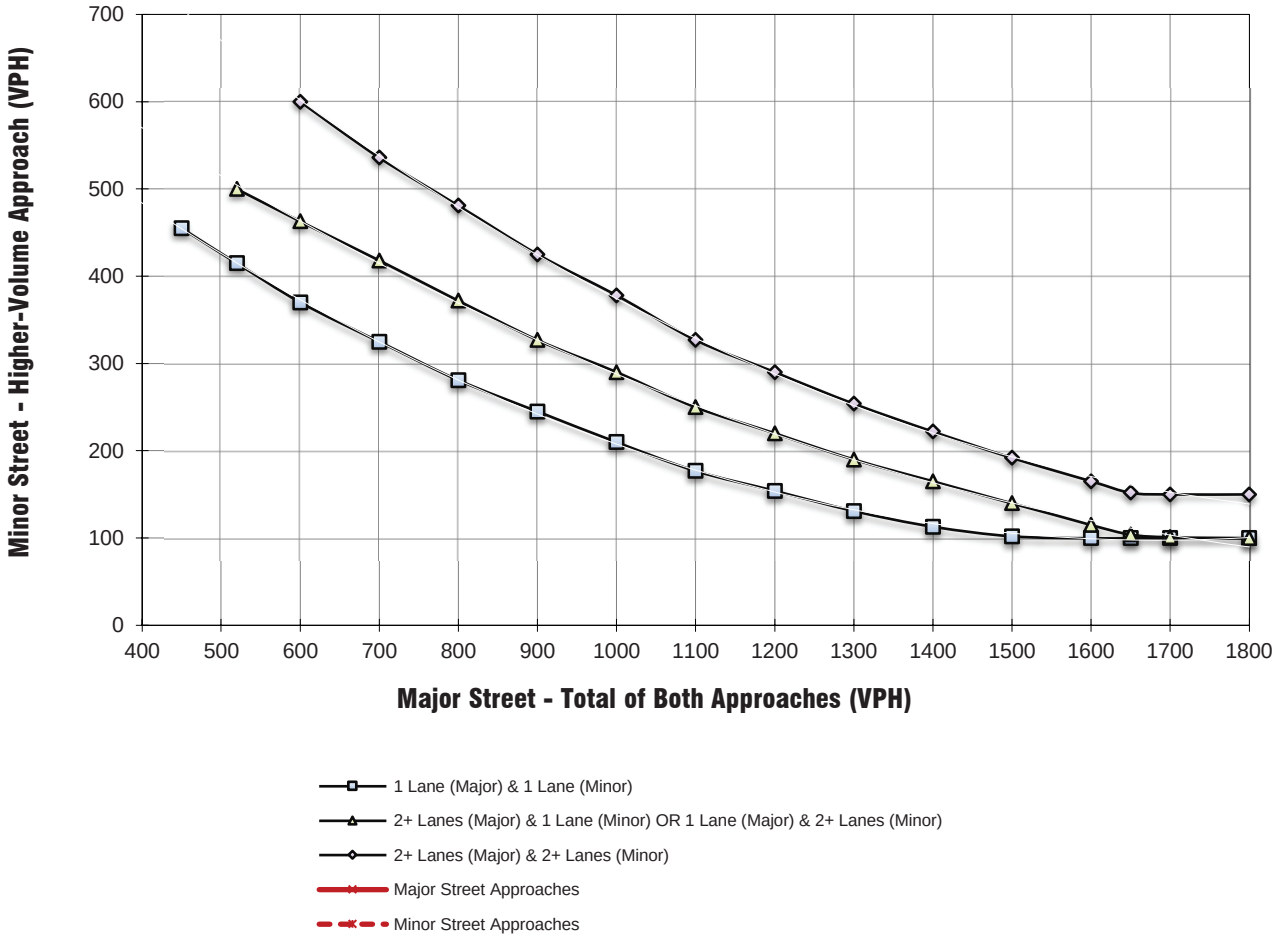
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Almond St.**

High Volume Approach (VPH) = **173**

Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



** NOTE:
150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

EAPC (2025) CONDITIONS

Jurisdiction: City of Wildomar
Major Street: Cherry St.
Minor Street: N. Dwy.

Critical Approach Speed (Major): 35 mph
Critical Approach Speed (Minor): 30 mph

Major Street Approach Lanes = 1 lane
Minor Street Approach Lanes = 1 lane

Major Street Future ADT = 4,653 vpd
Minor Street Future ADT = 2,231 vpd

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL		Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
Satisfied	Not Satisfied XX	*Vehicles Per Day on Major Street (Total of Both Approaches)*		*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*	
Number of lanes for moving traffic on each approa					
Major Street	Minor Street	*Urban*	*Rural*	*Urban*	*Rural*
1 4,653	*1* 2,231	*8,000*	*5,600*	*2,400*	*1,680*
2 +	*1*	*9,600*	*6,720*	*2,400*	*1,680*
2 +	*2 +*	*9,600*	*6,720*	*3,200*	*2,240*
1	*2 +*	*8,000*	*5,600*	*3,200*	*2,240*
CONDITION B - Interruption of Continuous Traffic					
Satisfied	Not Satisfied XX	*Vehicles Per Day on Major Street (Total of Both Approaches)*		*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*	
Number of lanes for moving traffic on each approa					
Major Street	Minor Street	*Urban*	*Rural*	*Urban*	*Rural*
1 4,653	*1* 2,231	*12,000*	*8,400*	*1,200* *	*850*
2 +	*1*	*14,400*	*10,080*	*1,200*	*850*
2 +	*2 +*	*14,400*	*10,080*	*1,600*	*1,120*
1	*2 +*	*12,000*	*8,400*	*1,600*	*1,120*
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following condition fulfilled 80% of more	A 58% B 39%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

EAPC (2025) CONDITIONS

Jurisdiction: City of Wildomar
Major Street: Cherry St.
Minor Street: S. Dwy.

Critical Approach Speed (Major): 35 mph
Critical Approach Speed (Minor): 30 mph

Major Street Approach Lanes = 1 lane
Minor Street Approach Lanes = 1 lane

Major Street Future ADT = 8,083 vpd
Minor Street Future ADT = 2,216 vpd

(Based on Estimated Average Daily Traffic - See Note)

URBAN / RURAL		Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume		*Vehicles Per Day on Major Street (Total of Both Approaches)*		*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approa					
Major Street	Minor Street	*Urban*	*Rural*	*Urban*	*Rural*
1 8,083	*1* 2,216	*8,000* *	*5,600*	*2,400*	*1,680*
2 +	*1*	*9,600*	*6,720*	*2,400*	*1,680*
2 +	*2 +*	*9,600*	*6,720*	*3,200*	*2,240*
1	*2 +*	*8,000*	*5,600*	*3,200*	*2,240*
CONDITION B - Interruption of Continuous Traffic		*Vehicles Per Day on Major Street (Total of Both Approaches)*		*Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)*	
Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approa					
Major Street	Minor Street	*Urban*	*Rural*	*Urban*	*Rural*
1 8,083	*1* 2,216	*12,000*	*8,400*	*1,200* *	*850*
2 +	*1*	*14,400*	*10,080*	*1,200*	*850*
2 +	*2 +*	*14,400*	*10,080*	*1,600*	*1,120*
1	*2 +*	*12,000*	*8,400*	*1,600*	*1,120*
Combination of CONDITIONS A + B					
Satisfied	Not Satisfied XX	2 CONDITIONS		2 CONDITIONS	
No one condition satisfied, but following condition fulfilled 80% of more .... A 92% B 67%		80%		80%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

APPENDIX J

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT QUEUEING ANALYSIS WORKSHEETS

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Intersection: 3: I-15 SB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LTR	R
Maximum Queue (ft)	178	328	230	344	415	85	185	214	135
Average Queue (ft)	153	86	155	262	119	52	182	181	81
95th Queue (ft)	193	159	235	294	179	66	186	236	170
Link Distance (ft)	324	324			551	551		716	
Upstream Blk Time (%)		4							
Queuing Penalty (veh)		28							
Storage Bay Dist (ft)			150	255			300		300
Storage Blk Time (%)		0	22	18					
Queuing Penalty (veh)		0	80	71					

Intersection: 4: I-15 NB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	TR
Maximum Queue (ft)	164	85	38	175	171	119	316	124
Average Queue (ft)	105	41	17	174	171	110	230	107
95th Queue (ft)	201	44	17	176	171	126	371	135
Link Distance (ft)		551	551	171	171	171		518
Upstream Blk Time (%)				23	13			
Queuing Penalty (veh)				117	66			
Storage Bay Dist (ft)	255						300	
Storage Blk Time (%)							3	
Queuing Penalty (veh)							11	

Intersection: 5: Bundy Cyn. Rd. & Cherry St.

Movement	EB	EB	EB	EB	WB	WB	WB	B23	B23	SB	SB
Directions Served	L	T	T	T	T	T	R	T	T	L	R
Maximum Queue (ft)	140	214	30	74	293	264	53	300	342	130	227
Average Queue (ft)	129	100	30	53	279	264	53	262	279	93	222
95th Queue (ft)	147	264	31	88	302	264	53	325	383	153	229
Link Distance (ft)		171	171	171	192	192	192	315	315		218
Upstream Blk Time (%)		13			65	49		0	7		6
Queuing Penalty (veh)		55			292	219		1	32		27
Storage Bay Dist (ft)	100									100	
Storage Blk Time (%)	34										37
Queuing Penalty (veh)	115										41

Intersection: 6: Bundy Cyn. Rd. & Sellers Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	93	29	31	226	31	264	356	28	111	29	74	96
Average Queue (ft)	82	28	30	150	31	246	347	26	82	15	51	51
95th Queue (ft)	101	29	31	275	31	275	361	29	130	39	54	51
Link Distance (ft)		315	315	315		538	538	538		289		1218
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	120				150				150		100	
Storage Blk Time (%)						16						1
Queuing Penalty (veh)						4						1

Intersection: 10: Cherry St. & N. Dwy.

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	52	55
Average Queue (ft)	31	0
95th Queue (ft)	31	0
Link Distance (ft)	271	183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Cherry St. & S. Dwy.

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	78	54
Average Queue (ft)	65	27
95th Queue (ft)	86	70
Link Distance (ft)	184	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 1154

Intersection: 3: I-15 SB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LTR	R
Maximum Queue (ft)	194	198	79	268	288	290	270	320	196
Average Queue (ft)	150	133	24	224	167	163	229	272	96
95th Queue (ft)	233	232	59	275	313	324	282	316	212
Link Distance (ft)	324	324			551	551		716	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150	255			300		300
Storage Blk Time (%)		5		8	4			4	
Queuing Penalty (veh)		17		42	15			19	

Intersection: 4: I-15 NB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	TR
Maximum Queue (ft)	166	344	323	181	144	68	333	475
Average Queue (ft)	122	279	284	162	122	30	321	379
95th Queue (ft)	188	418	373	208	196	94	405	594
Link Distance (ft)		551	551	171	171	171		518
Upstream Blk Time (%)				11	7			26
Queuing Penalty (veh)				51	33			0
Storage Bay Dist (ft)	255						300	
Storage Blk Time (%)		10					7	36
Queuing Penalty (veh)		16					43	176

Intersection: 5: Bundy Cyn. Rd. & Cherry St.

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	T	T	T	T	T	R	L	R
Maximum Queue (ft)	148	216	107	113	195	215	37	129	204
Average Queue (ft)	145	181	14	47	141	181	27	100	167
95th Queue (ft)	151	278	49	98	247	246	52	148	239
Link Distance (ft)		171	171	171	192	192	192		218
Upstream Blk Time (%)		28	0		3	13			19
Queuing Penalty (veh)		176	0		11	51			80
Storage Bay Dist (ft)	100							100	
Storage Blk Time (%)	52							4	34
Queuing Penalty (veh)	264							12	34

Intersection: 6: Bundy Cyn. Rd. & Sellers Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	134	136	116	151	28	243	249	40	125	27	50	52
Average Queue (ft)	106	88	97	140	17	205	228	20	106	14	41	42
95th Queue (ft)	161	167	121	165	49	305	273	59	152	47	61	59
Link Distance (ft)		315	315	315		538	538	538		289		1218
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	120				150				150		100	
Storage Blk Time (%)	18					15			2			
Queuing Penalty (veh)	89					4			0			

Intersection: 10: Cherry St. & N. Dwy.

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	54	70
Average Queue (ft)	50	40
95th Queue (ft)	63	122
Link Distance (ft)	271	183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Cherry St. & S. Dwy.

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	110	69	10	100
Average Queue (ft)	86	36	5	46
95th Queue (ft)	188	93	24	156
Link Distance (ft)	184		218	183
Upstream Blk Time (%)	11			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		100		
Storage Blk Time (%)		0		
Queuing Penalty (veh)		1		

Zone Summary

Zone wide Queuing Penalty: 1042

Intersection: 3: I-15 SB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LTR	R
Maximum Queue (ft)	176	147	182	337	345	63	198	283	228
Average Queue (ft)	122	105	122	276	181	54	185	269	190
95th Queue (ft)	180	175	222	321	410	69	207	292	254
Link Distance (ft)	324	324			551	551		716	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150	255			300		300
Storage Blk Time (%)		1	5	24				0	
Queuing Penalty (veh)		7	18	93				1	

Intersection: 4: I-15 NB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	TR
Maximum Queue (ft)	196	162	140	174	57	49	276	288
Average Queue (ft)	184	144	70	173	36	40	201	210
95th Queue (ft)	204	173	186	175	70	54	325	335
Link Distance (ft)		551	551	171	171	171		518
Upstream Blk Time (%)				25				
Queuing Penalty (veh)				128				
Storage Bay Dist (ft)	255						300	
Storage Blk Time (%)								1
Queuing Penalty (veh)								2

Intersection: 5: Bundy Cyn. Rd. & Cherry St.

Movement	EB	EB	EB	WB	SB
Directions Served	L	T	T	T	R
Maximum Queue (ft)	149	239	171	122	226
Average Queue (ft)	149	220	85	87	226
95th Queue (ft)	150	251	226	145	226
Link Distance (ft)		171	171	192	218
Upstream Blk Time (%)		43	1		34
Queuing Penalty (veh)		186	2		122
Storage Bay Dist (ft)	100				
Storage Blk Time (%)	67	4			
Queuing Penalty (veh)	227	13			

Intersection: 6: Bundy Cyn. Rd. & Sellers Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	L	TR	L	TR
Maximum Queue (ft)	51	70	114	156	20	235	316	128	29	154	173
Average Queue (ft)	40	35	102	148	10	229	222	111	15	60	51
95th Queue (ft)	58	93	122	161	27	238	288	139	39	81	90
Link Distance (ft)		315	315	315		538	538		289		1218
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	120				150			150		100	
Storage Blk Time (%)						11				17	
Queuing Penalty (veh)						5				24	

Intersection: 10: Cherry St. & N. Dwy.

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	56	31
Average Queue (ft)	53	15
95th Queue (ft)	59	41
Link Distance (ft)	271	183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Cherry St. & S. Dwy.

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	158	31	69
Average Queue (ft)	51	30	63
95th Queue (ft)	83	32	73
Link Distance (ft)	184		183
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		100	
Storage Blk Time (%)			
Queuing Penalty (veh)			

Zone Summary

Zone wide Queuing Penalty: 798

Intersection: 3: I-15 SB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LTR	R
Maximum Queue (ft)	171	161	37	270	269	234	247	320	243
Average Queue (ft)	118	126	22	214	205	178	208	302	216
95th Queue (ft)	165	187	57	291	313	286	234	403	284
Link Distance (ft)	324	324			551	551		716	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150	255			300		300
Storage Blk Time (%)		6		10	3			10	0
Queuing Penalty (veh)		21		54	10			49	2

Intersection: 4: I-15 NB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	TR
Maximum Queue (ft)	119	304	518	187	179	100	312	290
Average Queue (ft)	101	254	382	163	129	82	291	235
95th Queue (ft)	157	384	656	220	201	187	332	329
Link Distance (ft)		551	551	171	171	171		518
Upstream Blk Time (%)			3	21	8	0		
Queuing Penalty (veh)			19	98	36	2		
Storage Bay Dist (ft)	255						300	
Storage Blk Time (%)		20					3	1
Queuing Penalty (veh)		32					19	3

Intersection: 5: Bundy Cyn. Rd. & Cherry St.

Movement	EB	EB	EB	EB	WB	WB	WB	B23	SB
Directions Served	L	T	T	T	T	T	R	T	R
Maximum Queue (ft)	150	206	81	14	27	57	11	12	146
Average Queue (ft)	147	145	0	7	20	29	6	6	146
95th Queue (ft)	147	289	0	28	55	111	21	23	275
Link Distance (ft)		171	171	171	192	192	192	315	218
Upstream Blk Time (%)		23	0						41
Queuing Penalty (veh)		145	1						129
Storage Bay Dist (ft)	100								
Storage Blk Time (%)	56								
Queuing Penalty (veh)	289								

Intersection: 6: Bundy Cyn. Rd. & Sellers Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	R	L	TR	L	TR
Maximum Queue (ft)	143	135	128	190	59	278	329	29	163	42	118	29
Average Queue (ft)	106	84	109	146	48	225	259	21	140	31	99	20
95th Queue (ft)	181	150	135	205	72	335	387	40	180	63	154	40
Link Distance (ft)		315	315	315		538	538	538		289		1218
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	120				150				150		100	
Storage Blk Time (%)	7	3				12			3		17	
Queuing Penalty (veh)	30	3				5			0		17	

Intersection: 10: Cherry St. & N. Dwy.

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	55	97
Average Queue (ft)	43	27
95th Queue (ft)	63	70
Link Distance (ft)	271	183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Cherry St. & S. Dwy.

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	88	57
Average Queue (ft)	60	55
95th Queue (ft)	107	58
Link Distance (ft)	184	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 725

Intersection: 3: I-15 SB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LTR	R
Maximum Queue (ft)	152	105	143	263	120	63	393	472	349
Average Queue (ft)	133	84	111	247	108	42	338	376	329
95th Queue (ft)	164	119	164	250	111	77	393	429	363
Link Distance (ft)	324	324			551	551		716	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150	255			300		300
Storage Blk Time (%)			1	9			17	39	1
Queuing Penalty (veh)			2	35			91	154	10

Intersection: 4: I-15 NB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	TR
Maximum Queue (ft)	252	128	164	176	183	93	232	242
Average Queue (ft)	214	109	145	175	171	73	171	153
95th Queue (ft)	277	139	177	176	190	106	213	158
Link Distance (ft)		551	551	171	171	171		518
Upstream Blk Time (%)				28	11			
Queuing Penalty (veh)				143	55			
Storage Bay Dist (ft)	255						300	
Storage Blk Time (%)	7							
Queuing Penalty (veh)	35							

Intersection: 5: Bundy Cyn. Rd. & Cherry St.

Movement	EB	EB	EB	WB	WB	SB
Directions Served	T	T	T	T	T	R
Maximum Queue (ft)	203	144	78	184	115	228
Average Queue (ft)	139	72	0	140	83	193
95th Queue (ft)	245	190	0	213	135	251
Link Distance (ft)	171	171	171	192	192	218
Upstream Blk Time (%)	13			1		41
Queuing Penalty (veh)	56			4		147
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Bundy Cyn. Rd. & Sellers Rd.

Movement	EB	EB	EB	EB	B23	B23	WB	WB	WB	WB	NB	NB
Directions Served	L	T	T	TR	T	T	L	T	T	R	L	TR
Maximum Queue (ft)	180	386	74	140	276	186	50	202	327	27	144	31
Average Queue (ft)	179	386	64	139	218	93	30	171	307	14	108	16
95th Queue (ft)	180	386	81	140	248	247	31	222	340	36	167	41
Link Distance (ft)		315	315	315	192	192		538	538	538		289
Upstream Blk Time (%)		91			57	1						
Queuing Penalty (veh)		410			257	3						
Storage Bay Dist (ft)	120						150				150	
Storage Blk Time (%)	92							5			2	
Queuing Penalty (veh)	241							2			0	

Intersection: 6: Bundy Cyn. Rd. & Sellers Rd.

Movement	SB	SB
Directions Served	L	TR
Maximum Queue (ft)	113	160
Average Queue (ft)	104	128
95th Queue (ft)	113	181
Link Distance (ft)		1218
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)	10	3
Queuing Penalty (veh)	14	5

Intersection: 10: Cherry St. & N. Dwy.

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	50	31
Average Queue (ft)	40	16
95th Queue (ft)	56	42
Link Distance (ft)	271	183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Cherry St. & S. Dwy.

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	181	112	94
Average Queue (ft)	65	56	47
95th Queue (ft)	121	149	124
Link Distance (ft)	184		183
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)		100	
Storage Blk Time (%)		3	
Queuing Penalty (veh)		7	

Zone Summary

Zone wide Queuing Penalty: 738

Intersection: 3: I-15 SB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LTR	R
Maximum Queue (ft)	178	105	14	320	287	284	340	296	150
Average Queue (ft)	103	104	12	172	275	283	228	234	139
95th Queue (ft)	226	105	14	236	296	284	412	336	157
Link Distance (ft)	324	324			551	551		716	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			150	255			300		300
Storage Blk Time (%)				8	13		6	1	
Queuing Penalty (veh)				44	51		34	6	

Intersection: 4: I-15 NB Ramps & Bundy Cyn. Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	TR
Maximum Queue (ft)	175	338	356	171	171	180	305	268
Average Queue (ft)	163	323	339	171	136	168	283	245
95th Queue (ft)	183	348	367	171	193	188	320	254
Link Distance (ft)		551	551	171	171	171		518
Upstream Blk Time (%)				10	8	8		
Queuing Penalty (veh)				48	40	36		
Storage Bay Dist (ft)	255						300	
Storage Blk Time (%)		13					6	
Queuing Penalty (veh)		20					35	

Intersection: 5: Bundy Cyn. Rd. & Cherry St.

Movement	EB	EB	WB	WB	WB	SB
Directions Served	T	T	T	T	R	R
Maximum Queue (ft)	202	160	54	157	115	205
Average Queue (ft)	101	80	27	93	0	181
95th Queue (ft)	267	212	72	199	0	186
Link Distance (ft)	171	171	192	192	192	218
Upstream Blk Time (%)	24	0				0
Queuing Penalty (veh)	150	2				1
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Bundy Cyn. Rd. & Sellers Rd.

Movement	EB	EB	EB	EB	B23	B23	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	TR	T	T	L	T	T	R	L	L
Maximum Queue (ft)	180	386	314	205	276	192	53	314	550	30	116	84
Average Queue (ft)	180	386	304	193	272	96	21	227	538	14	113	79
95th Queue (ft)	180	386	321	212	278	255	32	370	558	37	118	86
Link Distance (ft)		315	315	315	192	192		538	538	538		
Upstream Blk Time (%)		88	0		55	1			10			
Queuing Penalty (veh)		547	0		345	6			39			
Storage Bay Dist (ft)	120						150				150	100
Storage Blk Time (%)	89	1						16				0
Queuing Penalty (veh)	407	3						6				0

Intersection: 6: Bundy Cyn. Rd. & Sellers Rd.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	116
Average Queue (ft)	66
95th Queue (ft)	77
Link Distance (ft)	1218
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	9
Queuing Penalty (veh)	13

Intersection: 10: Cherry St. & N. Dwy.

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	53	31
Average Queue (ft)	52	16
95th Queue (ft)	53	41
Link Distance (ft)	271	183
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 11: Cherry St. & S. Dwy.

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	72	29	51	28
Average Queue (ft)	51	0	41	0
95th Queue (ft)	85	0	58	0
Link Distance (ft)	184		218	183
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		100		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Zone Summary

Zone wide Queuing Penalty: 468

APPENDIX K

EXISTING PLUS AMBIENT PLUS CUMULATIVE PLUS PROJECT RAMP JUNCTION ANALYSIS WORKSHEETS

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAPC (2025)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	230
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	4351	784
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4826	870
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.68	0.44

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.441
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1586
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	54.9
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.599	Outer Lanes Freeway Speed (SO), mi/h	69.0
Flow in Lanes 1 and 2 (v12), pc/h	3240	Ramp Junction Speed (S), mi/h	58.9
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	27.3
Level of Service (LOS)	D	Density in Ramp Influence Area (DR), pc/mi/ln	30.0

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAPC (2025)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	400
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3567	1066
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3956	1182
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.73	0.59

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.420
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1626
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	55.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.589	Outer Lanes Freeway Speed (SO), mi/h	60.9
Flow in Lanes 1 and 2 (v12), pc/h	2330	Ramp Junction Speed (S), mi/h	57.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	3512	Average Density (D), pc/mi/ln	30.0
Level of Service (LOS)	D	Density in Ramp Influence Area (DR), pc/mi/ln	29.9

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAPC (2025)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	160
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3142	642
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3485	712
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.49	0.36

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.427
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	998
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	55.2
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.640	Outer Lanes Freeway Speed (SO), mi/h	71.3
Flow in Lanes 1 and 2 (v12), pc/h	2487	Ramp Junction Speed (S), mi/h	59.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	19.7
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	24.2

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAPC (2025)
Jurisdiction	Caltrans	Time Period Analyzed	AM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	555
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2500	785
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	2773	871
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.52	0.44

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.325
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1129
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.5
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.593	Outer Lanes Freeway Speed (SO), mi/h	62.7
Flow in Lanes 1 and 2 (v12), pc/h	1644	Ramp Junction Speed (S), mi/h	59.0
Flow Entering Ramp-Infl. Area (vR12), pc/h	2515	Average Density (D), pc/mi/ln	20.6
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	21.3

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAPC (2025)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	230
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3746	912
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4155	1012
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.59	0.51

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.454
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1226
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	54.6
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.610	Outer Lanes Freeway Speed (SO), mi/h	70.4
Flow in Lanes 1 and 2 (v12), pc/h	2929	Ramp Junction Speed (S), mi/h	58.5
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	23.7
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	27.4

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAPC (2025)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 SB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	400
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	2834	681
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3143	755
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.55	0.38

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.342
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1292
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.1
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.589	Outer Lanes Freeway Speed (SO), mi/h	62.1
Flow in Lanes 1 and 2 (v12), pc/h	1851	Ramp Junction Speed (S), mi/h	58.7
Flow Entering Ramp-Infl. Area (vR12), pc/h	2606	Average Density (D), pc/mi/ln	22.1
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	23.0

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HCS7 Freeway Diverge Report

Project Information

Analyst		Date	1/4/2024
Agency	Trames Solutions, Inc.	Analysis Year	EAPC (2025)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB Off-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Deceleration Length (LA),ft	1500	160
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	4049	1042
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	4491	1156
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.64	0.58

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (DS)	0.467
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1351
Distance to Downstream Ramp (LDOWN), ft	-	Off-Ramp Influence Area Speed (SR), mi/h	54.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFD)	0.595	Outer Lanes Freeway Speed (SO), mi/h	69.9
Flow in Lanes 1 and 2 (v12), pc/h	3140	Ramp Junction Speed (S), mi/h	58.2
Flow Entering Ramp-Infl. Area (vR12), pc/h	-	Average Density (D), pc/mi/ln	25.7
Level of Service (LOS)	D	Density in Ramp Influence Area (DR), pc/mi/ln	29.8

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HCS7 Freeway Merge Report

Project Information

Analyst		Date	12/18/19
Agency	Trames Solutions, Inc.	Analysis Year	EAPC (2025)
Jurisdiction	Caltrans	Time Period Analyzed	PM Peak Hour
Project Description	Cherry Outpost Traffic Study; I-15 NB On-Ramp @ Bundy	Unit	United States Customary

Geometric Data

	Freeway	Ramp
Number of Lanes (N), ln	3	1
Free-Flow Speed (FFS), mi/h	65.0	40.0
Segment Length (L) / Acceleration Length (LA),ft	1500	555
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Type	Freeway	Right-Sided One-Lane

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (Vi)	3007	637
Peak Hour Factor (PHF)	0.92	0.92
Total Trucks, %	2.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (fHV)	0.980	0.980
Flow Rate (vi),pc/h	3335	707
Capacity (c), pc/h	7050	2000
Volume-to-Capacity Ratio (v/c)	0.57	0.35

Speed and Density

Upstream Equilibrium Distance (LEQ), ft	-	Number of Outer Lanes on Freeway (NO)	1
Distance to Upstream Ramp (LUP), ft	-	Speed Index (MS)	0.334
Downstream Equilibrium Distance (LEQ), ft	-	Flow Outer Lanes (vOA), pc/h/ln	1357
Distance to Downstream Ramp (LDOWN), ft	-	On-Ramp Influence Area Speed (SR), mi/h	57.3
Prop. Freeway Vehicles in Lane 1 and 2 (PFM)	0.593	Outer Lanes Freeway Speed (SO), mi/h	61.9
Flow in Lanes 1 and 2 (v12), pc/h	1978	Ramp Junction Speed (S), mi/h	58.8
Flow Entering Ramp-Infl. Area (vR12), pc/h	2685	Average Density (D), pc/mi/ln	22.9
Level of Service (LOS)	C	Density in Ramp Influence Area (DR), pc/mi/ln	22.7

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