Transportation Impact Analysis

For the Proposed

Walmart Fuel Project

In the Town of Yucca Valley

Prepared for:

Town of Yucca Valley

January 2025

Kimley»Horn

TRANSPORTATION IMPACT ANALYSIS
FOR THE PROPOSED
WALMART FUEL PROJECT
IN THE TOWN OF YUCCA VALLEY

Prepared by:

Kimley-Horn and Associates, Inc.
1100 Town and Country Road, Suite 700
Orange, California 92868

January 2025

TABLE OF CONTENTS Page

LIST OF FIGURES Page

LIST OF TABLES Page

APPENDICES

TRANSPORTATION IMPACT ANALYSIS
FOR THE PROPOSED
WALMART FUEL STATION PROJECT
IN THE TOWN OF YUCCA VALLEY

INTRODUCTION

Purpose and Study Objectives

This Transportation Impact Analysis has been prepared to address the traffic-related effects of the proposed Walmart Fuel Station project in the Town of Yucca Valley in San Bernardino County. This analysis has been conducted in accordance with the San Bernardino County *Transportation Impact Study Guidelines* (July 2019).

This report includes a description of existing traffic conditions in the surrounding area, estimated project trip generation and distribution, future traffic growth, and an assessment of project-related effects on the transportation system.

Project Overview

The project site is currently an existing Walmart parking lot and is bounded by drive aisles to the north and east and parking lot to the south and west. The project consists of the construction of a new fuel station with twelve fueling positions and a 1,556 square-foot convenience store within the northeast corner of the existing Walmart parking lot located at 58501 Twentynine Palms Highway. The project location is shown in its regional setting on Figure 1. The proposed project site plan is shown on Figure 2.

Proposed project ingress and egress will be facilitated via two existing drive aisles. One driveway and one intersection along Twentynine Palms Highway allow direct access to the proposed project; the westernmost driveway is right-in, right-out only (RIRO), and the easternmost intersection is full-access.

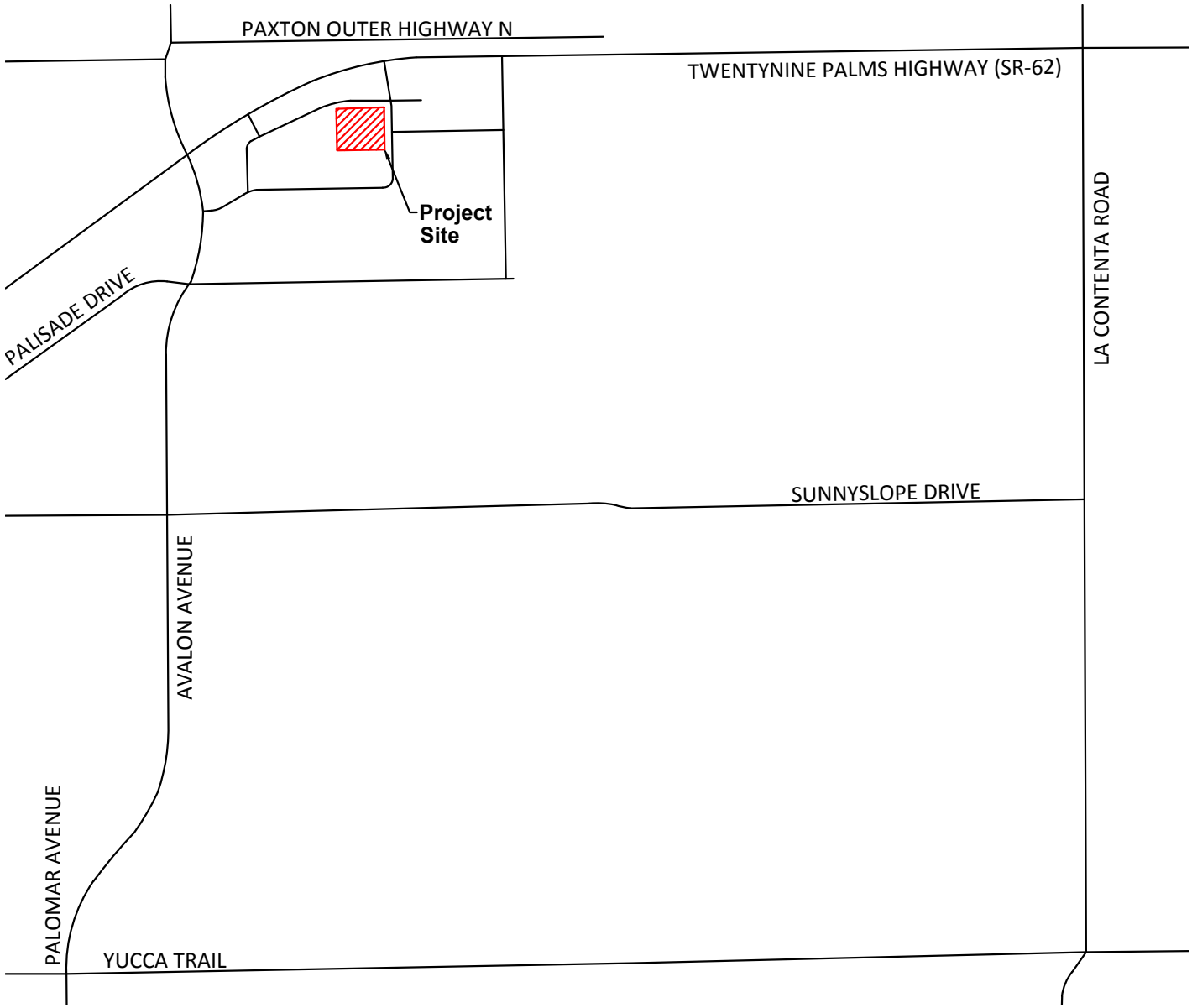


FIGURE 1
VICINITY MAP

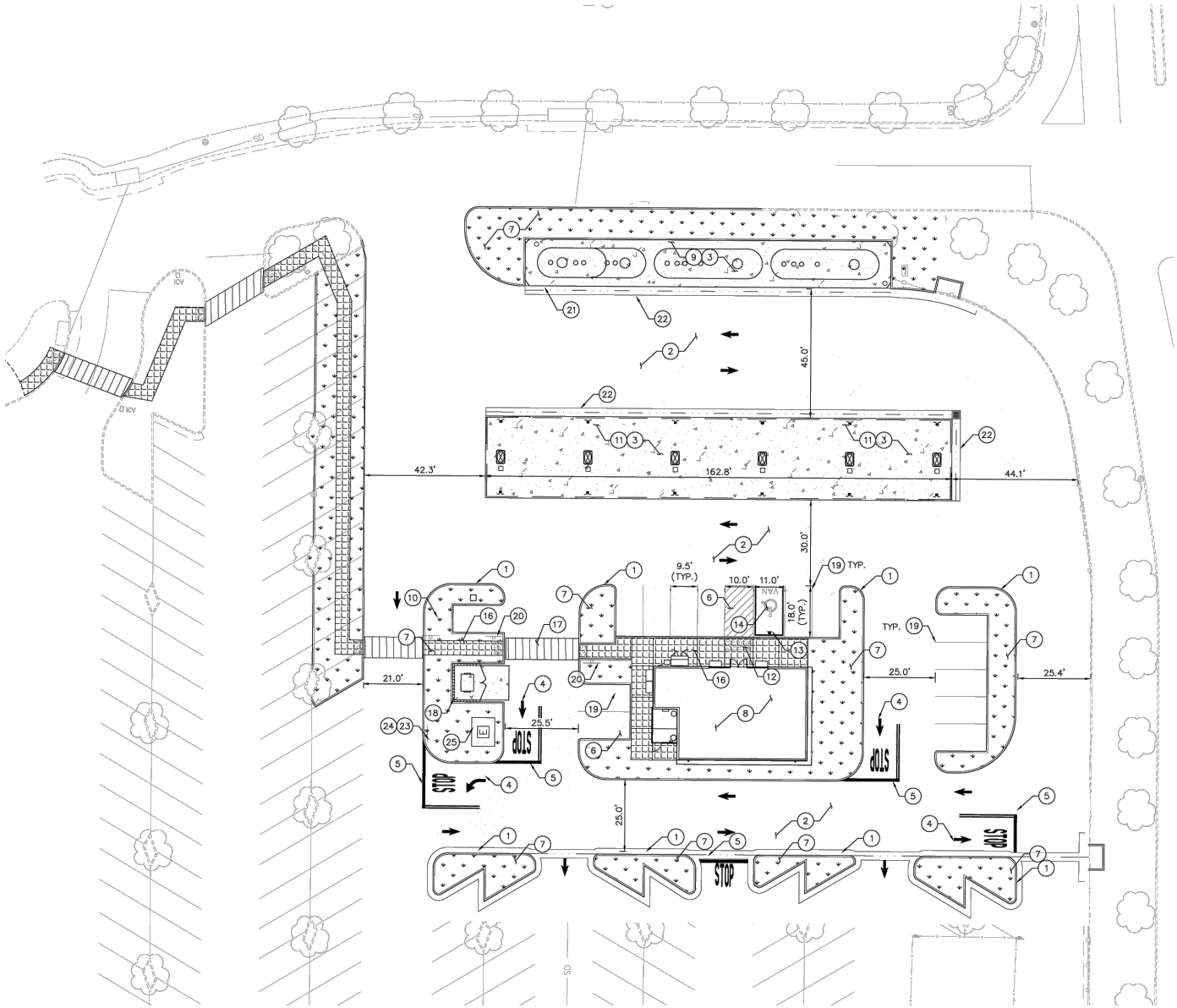


FIGURE 2
PROJECT SITE PLAN

ANALYSIS SCENARIOS AND METHODOLOGY

The analysis scenarios and methodology were established with Town of Yucca Valley staff through the Scoping Agreement process. As part of this process, a Traffic Consistency Analysis Memorandum was created to analyze the proposed project's consistency with the development assumed in the Environmental Impact Report (EIR) for the Yucca Valley Retail Specific Plan (March 2008). A copy of the approved Traffic Consistency Analysis Memorandum with the revised scope is provided in *Appendix A*.

Analysis Scenarios

Based on the San Bernardino County *Transportation Impact Study Guidelines* (July 2019*)*, the study intersections will be evaluated in the morning and evening peak hours on a typical weekday for the following conditions:

- Existing Conditions
- Opening Year 2025
- Opening Year 2025 Plus Project

Intersection Analysis – HCM Methodology

Peak hour intersection operations at the study intersections and driveways were evaluated using the methods prescribed in the Highway Capacity Manual 7th Edition (HCM), consistent with San Bernardino County guidelines. The intersection analysis was conducted using Synchro 12 software.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, considering a number of factors, including the number of lanes, volume of traffic, and the signal timing phasing.

For unsignalized intersections, the HCM methodology analysis determines the worst-case delay per lane for each vehicle making any movement from the stop-controlled minor street, as well as left turns from the major street. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable gaps in the traffic stream through which conflicting traffic movements can be made.

In order to generate HCM results for Intersection #D2 (Twentynine Palms Highway (SR-62) & Commercial Driveway 2), the northbound approach was considered to be free moving to be most representative of the worst-case scenario.

The HCM delay forecast translates to a Level of Service designation, ranging from LOS A to LOS F. A summary of each Level of Service and the corresponding delay is provided in the following chart.

LEVEL OF SERVICE DEFINITIONS	
Level of Service	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service	Signalized Intersection (Average delay per vehicle, in seconds) [1]	Unsignalized Intersections (Average delay per vehicle, in seconds) [2]
A	≤ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

[1] Source: Highway Capacity Manual (HCM 7th Edition), Exhibit 19-8.

[2] Source: Highway Capacity Manual (HCM 7th Edition), Exhibit 20-2.

Level of Service Standards

The County of San Bernardino General Plan standard in the Desert Region for level of service for signalized and unsignalized intersections is LOS C.

Thresholds of Significance

The Town of Yucca Valley is located in the East Desert Region of San Bernardino County. The County requires that improvements shall be identified when any of the following occurs between the "without project" and the "plus project" conditions:

- Any signalized study intersection in the Desert region that is operating at an LOS C or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS D, E, or F shall identify improvements to improve operations to LOS C.

- Any signalized study intersection in the Desert region that is operating at LOS D, E, or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

For unsignalized intersections, an operational improvement achieving LOS C or better or to pre-project LOS would be required if the analysis determines that either section a) or both sections b) and c) occur:

a) The addition of project-related traffic causes the intersection to degrade from an LOS D or better to a LOS E or worse in the Valley and Mountain regions or from an LOS C or better to an LOS D or worse in the Desert region.

OR

b) The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at an LOS E or F in the Valley and Mountain regions or at an LOS D, E, or F in the Desert region (per Section 10.5.2 b).

AND

c) One or both of the following conditions are met:
   1) The project adds ten (10) or more trips to any minor street approach
   2) The intersection meets the peak hour traffic signal warrant after the addition of project traffic (per Section 10.5.2 c).

STUDY AREA

This Transportation Impact Analysis includes documentation of existing conditions, future conditions, and identification of project-related deficiencies at the following study locations:

Existing Intersections

1. Avalon Avenue & Twentynine Palms Highway (SR-62)
2. Avalon Avenue & Palisade Drive
3. Twentynine Palms Highway (SR-62) & West Commercial Access Road
4. Twentynine Palms Highway (SR-62) & East Commercial Access Road
5. Twentynine Palms Highway (SR-62) & La Contenta Road
6. Palomar Avenue & Yucca Trail
7. Yucca Trail & La Contenta Road

Future Project Driveways

D1. Twentynine Palms Highway (SR-62) & Commercial Driveway 1
D2. Twentynine Palms Highway (SR-62) & Commercial Driveway 2

The study locations were established in consultation with Town of Yucca Valley staff through the Scoping Agreement process.

AREA CONDITIONS

Existing Street System

Regional access to the site is provided primarily by the Twentynine Palms Freeway (SR-62).

Existing lane configurations and intersection controls at the study intersections are shown on Figure 3. A copy of the Town of Yucca Valley *Roadway Classifications at General Plan Buildout* is provided on Figure 4. The following provides a description of the roadways surrounding the project site.

Twentynine Palms Highway (SR-62) is an east-west roadway with two travel lanes in each direction. The posted speed limit is 50 miles per hour (mph). On-street parking is prohibited on both sides of the street and there are no bike lanes in either direction. Twentynine Palms Highway is classified as a Highway in the Town of Yucca Valley *Roadway Classifications at General Plan Buildout*.

Avalon Avenue is a north-west roadway with one travel lane in each direction. The posted speed limit is 45 mph. On-street parking is prohibited on both sides of the street and there are no bike lanes in either direction. Avalon Avenue is classified as an Arterial in the Town of Yucca Valley *Roadway Classifications at General Plan Buildout*.

Palisade Drive is an east-west roadway with one lane in each direction. There is on-street parking on both sides of the street and there are no bike lanes in either direction.

Yucca Trail is an east-west roadway with one lane in each direction. There is no on-street parking on both sides of the street and there are no bike lanes in either direction. The posted speed limit is 50 mph. Yucca Trail is classified as an Arterial in the Town of Yucca Valley *Roadway Classifications at General Plan Buildout*.

Palomar Avenue is a north-south roadway with one travel lane in each direction. The posted speed limit is 45 mph. On-street parking is prohibited on both sides of the street and there are no bike lanes in either direction. Palomar Avenue is classified as an Arterial in the Town of Yucca Valley *Roadway Classifications at General Plan Buildout.*

La Contenta Road is a north-south roadway with one travel lane in each direction. The posted speed limit is 55 mph. On-street parking is prohibited on both sides of the street and there are no bike lanes in either direction. La Contenta Road is classified as an Arterial in the Town of Yucca Valley *Roadway Classifications at General Plan Buildout.*

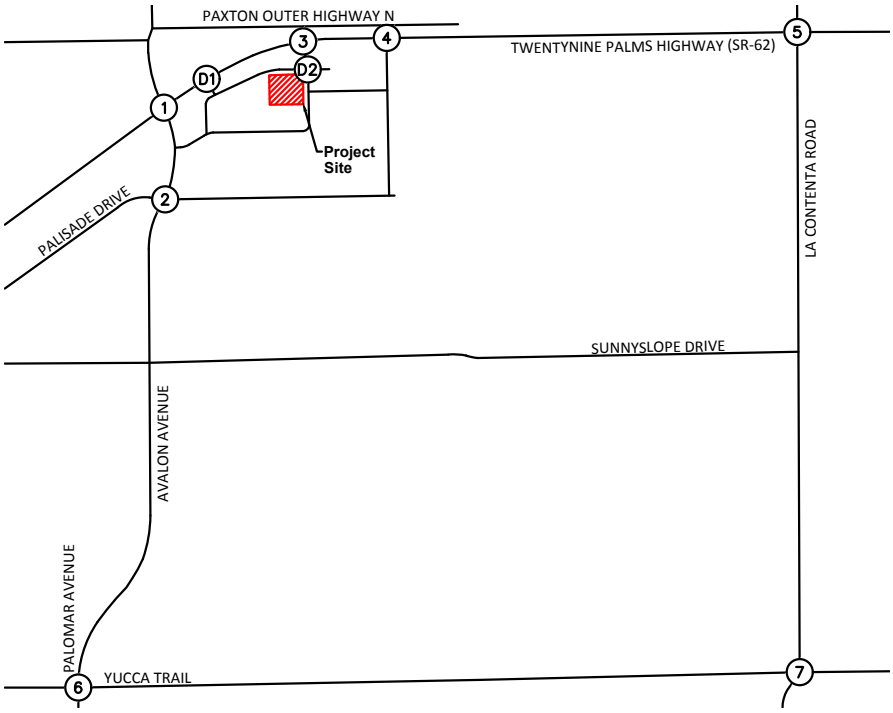
Yucca Mesa Road is an east-west roadway with one travel lane in each direction. The posted speed limit is 55 mph. On-street parking is prohibited on both sides of the street and there are no bike lanes in either direction. Yucca Mesa Road is classified as an Arterial in the Town of Yucca Valley *Roadway Classifications at General Plan Buildout.*

Existing Traffic Volumes

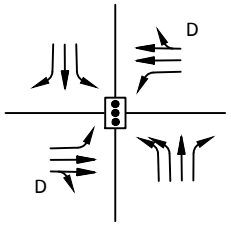
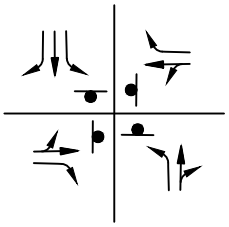
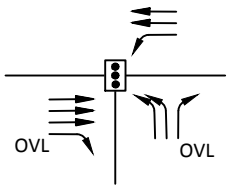
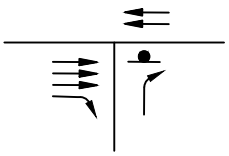
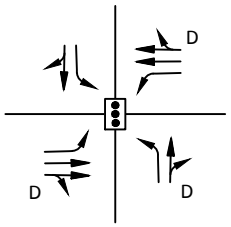
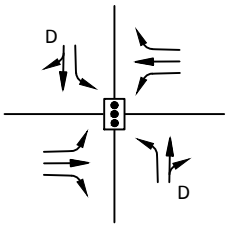
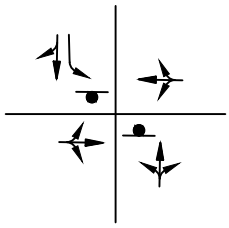
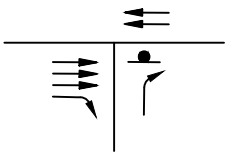
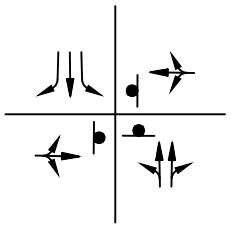
Existing morning peak hour and evening peak hour counts were conducted at the study intersections on a typical weekday. The counts were completed in December 2024, while schools were in session. Peak hour intersection traffic count worksheets are provided in *Appendix B*. Existing morning and evening peak hour volumes are presented on Figure 5.

Intersection Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for Existing Conditions are shown on Table 1. Copies of Existing Conditions intersection analysis worksheets are provided in *Appendix C*. Review of this table shows that all study intersections currently operate at an acceptable Level of Service during the morning and evening peak hours.



NOT TO SCALE

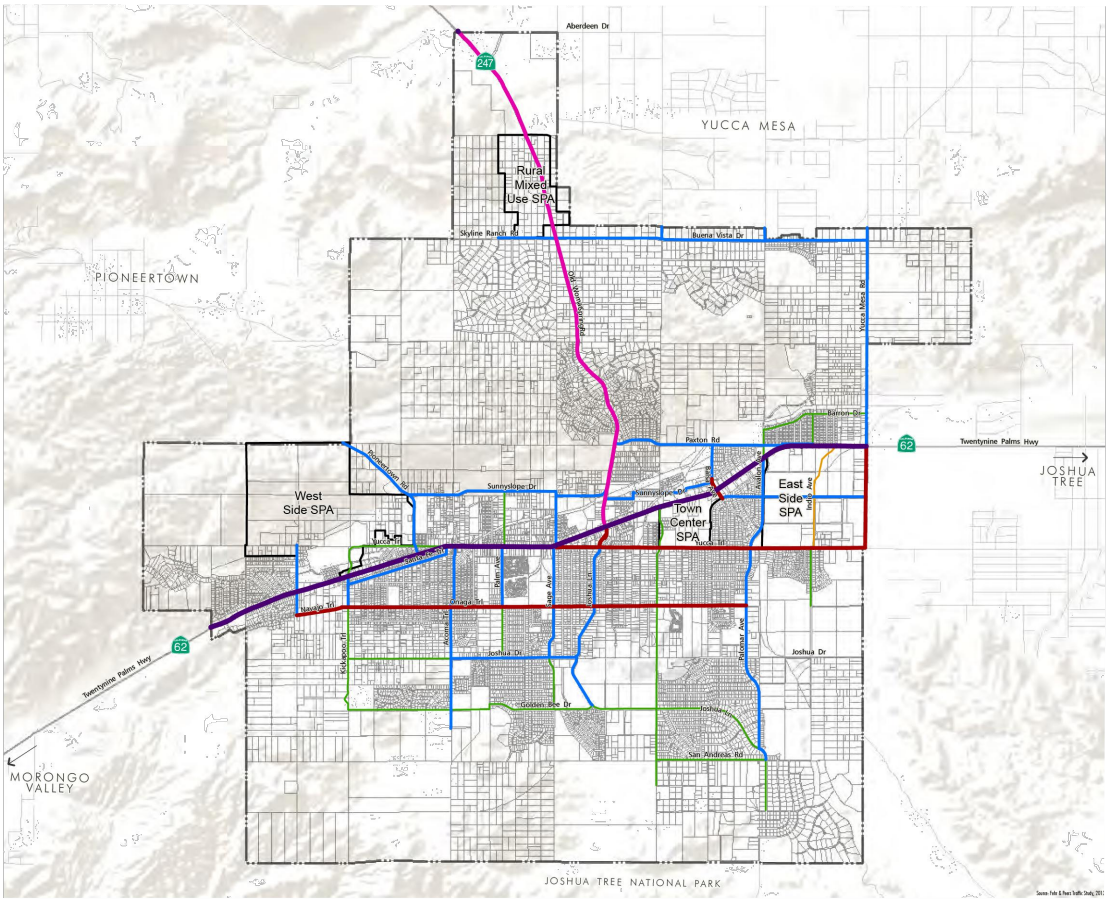
1. Avalon Ave at Twentynine Palms Hwy (SR-62)	2. Avalon Ave at Palisade Dr	3. Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	4. Twentynine Palms Hwy (SR-62) at East Commercial Access Rd
			
5. Twentynine Palms Hwy (SR-62) at La Contenta Rd	6. Palomar Ave at Yucca Trail	7. Yucca Trail at La Contenta Rd	D1. Twentynine Palms Hwy (SR-62) at Commercial Dwy 1
			
D2. Twentynine Palms Hwy (SR-62) at Commercial Dwy 2			
			

LEGEND:

- (X) = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- OVL = Right Turn Overlap
- D = Defacto Right Turn

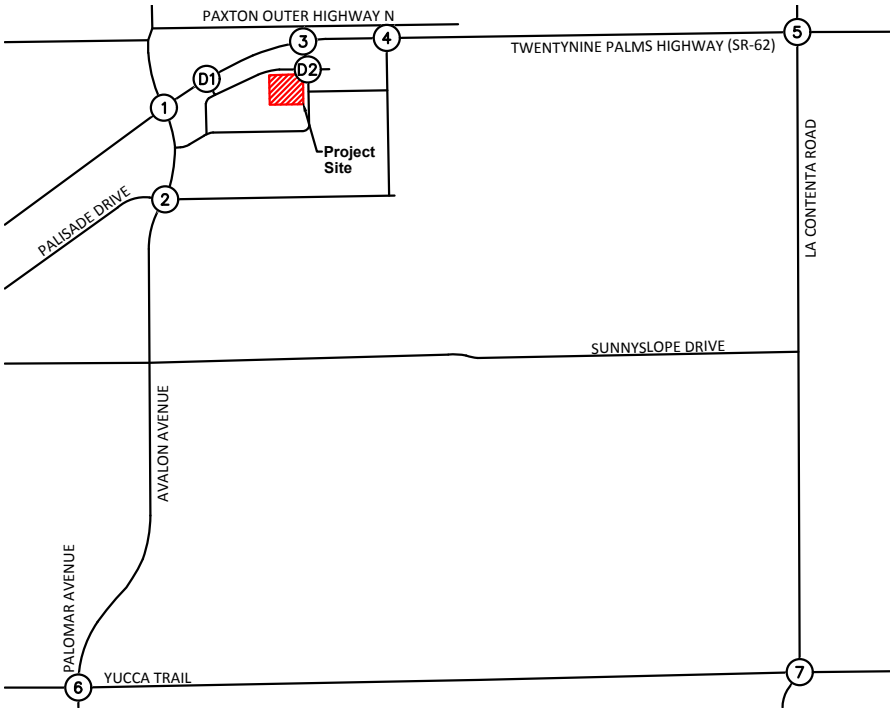
FIGURE 3
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

NOT TO SCALE



ROADWAY CLASSIFICATIONS
- Highway – 6 Lanes Divided – 134′
- Highway – 4 Lanes Divided – 92′
- Arterial – 4 Lanes Divided – 100′
- Arterial – 2 Lanes – 70′
- Industrial – 2 Lanes with Striped Median – 70′
- Collector – 2 Lanes – 66′
- SPA - Special Policy Area
- Town Limits

FIGURE 4
TOWN OF YUCCA VALLEY GENERAL PLAN
ROADWAY CLASSIFICATION MAP



NOT TO SCALE

1. Avalon Ave at Twentynine Palms Hwy (SR-62)	2. Avalon Ave at Palisade Dr	3. Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	4. Twentynine Palms Hwy (SR-62) at East Commercial Access Rd
14(12) 36(23) 20(20) ↖ 14(36) ← 595(768) ↙ 37(62) 6(31) → 521(722) → 37(108) ↘ ↗ 39(107) ↑ 26(39) ↑ 43(44)	27(25) 70(148) 3(5) ↖ 10(11) ← 3(2) ↙ 25(115) 25(41) → 3(4) → 4(23) ↘ ↗ 21(12) ↑ 104(121) ↑ 61(86)	← 586(729) ← 118(180) 454(659) → 76(76) ↘ ↗ 48(126) ↑ 46(171)	← 689(905) 521(839) → 2(5) ↘ ↗ 59(50)
5. Twentynine Palms Hwy (SR-62) at La Contenta Rd	**6. Palomar Ave at Yucca Trail**	**7. Yucca Trail at La Contenta Rd**	**D1. Twentynine Palms Hwy (SR-62) at Commercial Dwy 1**
108(80) 44(21) 54(63) ↖ 44(72) ← 548(795) ↙ 19(15) 57(132) → 482(691) → 21(22) ↘ ↗ 32(23) ↑ 32(28) ↑ 15(17)	28(82) 44(132) 16(64) ↖ 30(51) ← 227(238) ↙ 56(84) 30(54) → 177(198) → 19(51) ↘ ↗ 42(46) ↑ 65(101) ↑ 151(94)	98(41) 20(26) ↖ 16(13) ← 172(261) 103(28) → 226(256) →	← 647(866) 549(728) → 30(51) ↘ ↗ 7(39)
D2. Twentynine Palms Hwy (SR-62) at Commercial Dwy 2			
40(53) 137(153) 18(67) ↖ 1(49) ← 1(3) ↙ 0(4) 27(118) → 1(5) → 1(8) ↘ ↗ 2(3) ↑ 69(146) ↑ 0(1)			

LEGEND:

(X) = Study Intersection

XX(YY) = AM(PM) Peak Hour Turning Movement Volumes

FIGURE 5
EXISTING YEAR (2024)
TRAFFIC VOLUMES

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Avalon Ave at Twentynine Palms Hwy (SR-62)	S	21.6	C	22.2	C
2	Avalon Ave at Palisade Dr	U	9.6	A	10.8	B
3	Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	S	15.5	B	16.1	B
4	Twentynine Palms Hwy (SR-62) at East Commercial Access Rd	U	11.8	B	13.6	B
5	Twentynine Palms Hwy (SR-62) at La Contenta Rd	S	18.5	B	17.8	B
6	Palomar Ave at Yucca Trail	S	22.3	C	22.7	C
7	Yucca Trail at La Contenta Rd	U	13.0	B	11.9	B
8	Twentynine Palms Hwy (SR-62) at Commercial Driveway 1	U	11.3	B	12.3	B
9	Twentynine Palms Hwy (SR-62) at Commercial Driveway 2	U	10.9	B	15.2	C

Notes:
- Intersection operation is expressed in average delay for signalized and unsignalized intersections.

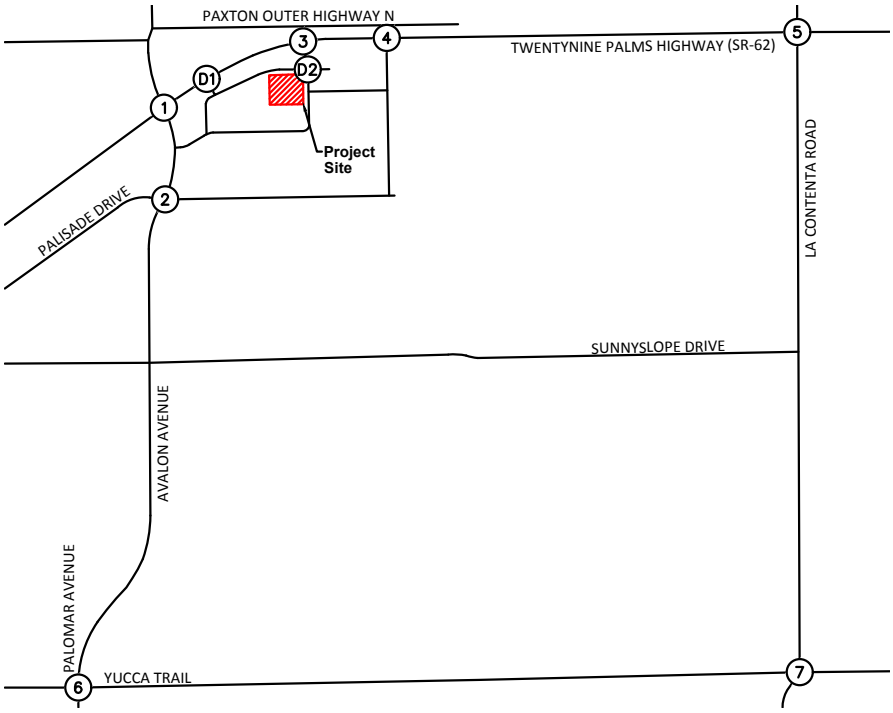
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

OPENING YEAR 2025 CONDITIONS

The Project Opening Year (the year the project would be constructed and occupied) is anticipated to be Year 2025. Based on consultation with City staff, an ambient growth rate of 2.0% per year to Opening Year 2025 was applied to existing traffic volumes. The resulting peak hour turning movement volumes at the study locations are shown in Figure 6.

Intersection Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Opening Year 2025 conditions. The results are shown on Table 2. Intersection analysis worksheets are provided in *Appendix C*. Review of this table indicates that, with the addition of ambient growth, all intersections would continue to operate at an acceptable Level of Service under Opening Year 2025 conditions.



NOT TO SCALE

1. Avalon Ave at Twentynine Palms Hwy (SR-62)	2. Avalon Ave at Palisade Dr	3. Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	4. Twentynine Palms Hwy (SR-62) at East Commercial Access Rd
14(12) 37(23) 20(20) ← 14(37) ← 607(783) ← 38(63) 6(32) → 531(736) → 38(110) ↘ 40(109) 27(40) 44(45)	28(26) 71(151) 3(5) ← 10(11) ← 3(2) ← 26(117) 26(42) → 3(4) → 4(23) ↘ 21(12) 106(123) 62(88)	← 598(744) ← 120(184) 463(672) → 78(78) ↘ 49(129) 47(174)	← 703(923) 531(856) → 2(5) ↘ 60(51)
5. Twentynine Palms Hwy (SR-62) at La Contenta Rd	**6. Palomar Ave at Yucca Trail**	**7. Yucca Trail at La Contenta Rd**	**D1. Twentynine Palms Hwy (SR-62) at Commercial Dwy 1**
110(82) 45(21) 55(64) ← 45(73) ← 559(811) ← 19(15) 58(135) → 492(705) → 21(22) ↘ 33(23) 33(29) 15(17)	29(84) 45(135) 16(65) ← 31(52) ← 232(243) ← 57(86) 31(55) → 181(202) → 19(52) ↘ 43(47) 66(103) 154(96)	100(42) 20(27) ← 16(13) ← 175(266) 105(29) → 231(261) →	← 660(883) 560(743) → 31(52) ↘ 7(40)
D2. Twentynine Palms Hwy (SR-62) at Commercial Dwy 2			
41(54) 140(156) 18(68) ← 1(50) ← 1(3) ← 0(4) 28(120) → 1(5) → 1(8) ↘ 2(3) 70(149) 0(1)			

LEGEND:

(X) = Study Intersection

XX(YY) = AM(PM) Peak Hour Turning Movement Volumes

FIGURE 6
OPENING YEAR 2025
TRAFFIC VOLUMES

TABLE 2
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2025 WITHOUT PROJECT CONDITIONS

Int. #	Intersection	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1	Avalon Ave at Twentynine Palms Hwy (SR-62)	21.4	C	22.3	C
2	Avalon Ave at Palisade Dr	8.8	A	10.8	B
3	Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	15.5	B	16.2	B
4	Twentynine Palms Hwy (SR-62) at East Commercial Access Rd	11.6	B	13.5	B
5	Twentynine Palms Hwy (SR-62) at La Contenta Rd	18.4	B	18.0	B
6	Palomar Ave at Yucca Trail	21.1	C	22.9	C
7	Yucca Trail at La Contenta Rd	10.8	B	12.0	B
8	Twentynine Palms Hwy (SR-62) at Commercial Driveway 1	11.1	B	12.5	B
9	Twentynine Palms Hwy (SR-62) at Commercial Driveway 2	10.3	B	14.7	B

Notes:
- Intersection operation is expressed in average delay for signalized and unsignalized intersections.
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

PROJECT TRAFFIC

Project Trip Generation

Peak hour trips for the proposed project were calculated using the trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2021). Trip rates are based on the following ITE Land Use Category:

- LU 944 – Gasoline/Service Station

It is recognized that not all inbound and outbound trips to the proposed project will be "new" trips on the roadway system in the vicinity of the project site. Some trips to the project site will consist of "pass-by" trips -- motorists who are already traveling on the surrounding roadways from one place to another. Common pass-by trips for a gas station would be individuals who stop at the project site on the way to work, home, shopping, or school.

Based on the latest version of the ITE Trip Generation Handbook, 3rd Edition (2017), a pass-by rate of 63% in the morning peak hour and 57% in the evening peak hour were applied to the trips for the proposed land use. As the ITE Trip Generation Handbook does not provide pass-by rates for daily trips, the daily pass-by trip percentage was assumed to be the average of the morning and evening peak periods (60%).

The project is estimated to generate approximately 826 trips daily, with 46 trips in the morning peak hour (23 inbound, 23 outbound) and 72 trips in the evening peak hour (36 inbound, 36 outbound). The resulting trip rates and the project trip generation estimates are shown on Table 3.

Trip Distribution and Assignment

Project trip distribution assumptions for the project site were developed taking into account the proposed site uses, existing travel patterns, and routes to and from the freeway system. Trip distribution assumptions are shown on Figure 7.

Based on the proposed project trip distribution, project trips were assigned through the study intersections. Figure **8** shows new project trips that would be added to the study intersections. However, these trips do not include pass-by trips, which would typically be added to project driveways but not to non-adjacent study intersections; pass-by trips are assumed to be part of the existing flow of traffic until reaching the project site. Pass-by trips are shown on Figure 9 and should be added to the volumes shown on Figure 8 to determine the total project trips at each study intersection. The total project trips are shown on Figure 10.

TABLE 3
SUMMARY OF PROJECT TRIP GENERATION
YUCCA VALLEY WALMART FUEL STATION

Land Use	ITE Code	Unit	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Gasoline/Service Station	944	Fueling Position	172.01	5.14	5.14	10.28	6.955	6.955	13.91

Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Gasoline/Service Station	12	Fueling Position	2,064	62	62	124	83	83	166
Pass-by Trips (60% Daily, 63% AM, 57% PM) [1,2]			*-1,238*	*-39*	*-39*	*-78*	*-47*	*-47*	*-94*
Net Trips			*826*	*23*	*23*	*46*	*36*	*36*	*72*
Total Project Trips			826	23	23	46	36	36	72

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

[2] Note: The Trip Generation Manual does not provide pass-by rates for daily trip generation. The daily pass-by trip percentage shown is the average of the AM and the PM pass-by trip percentages.

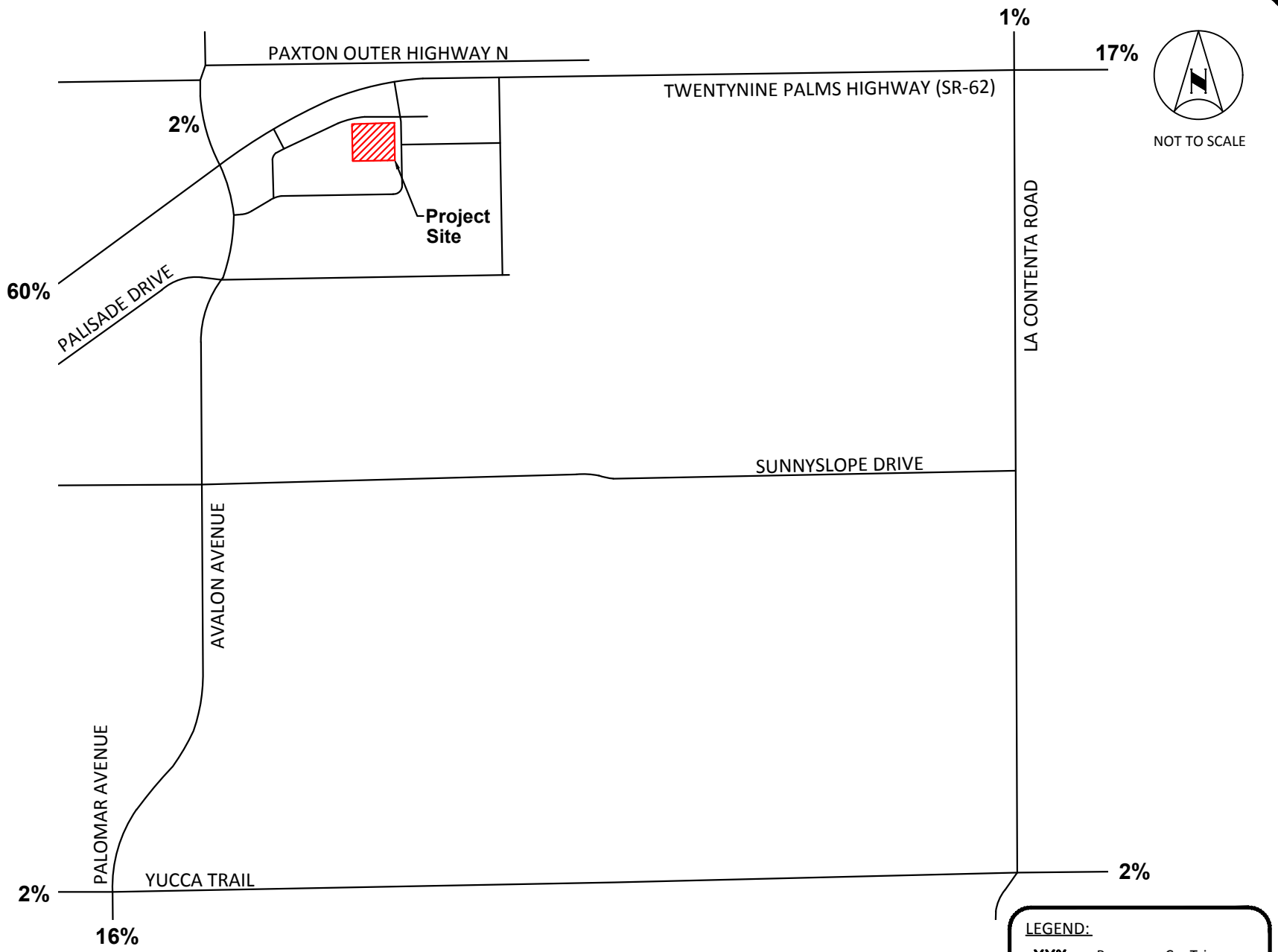
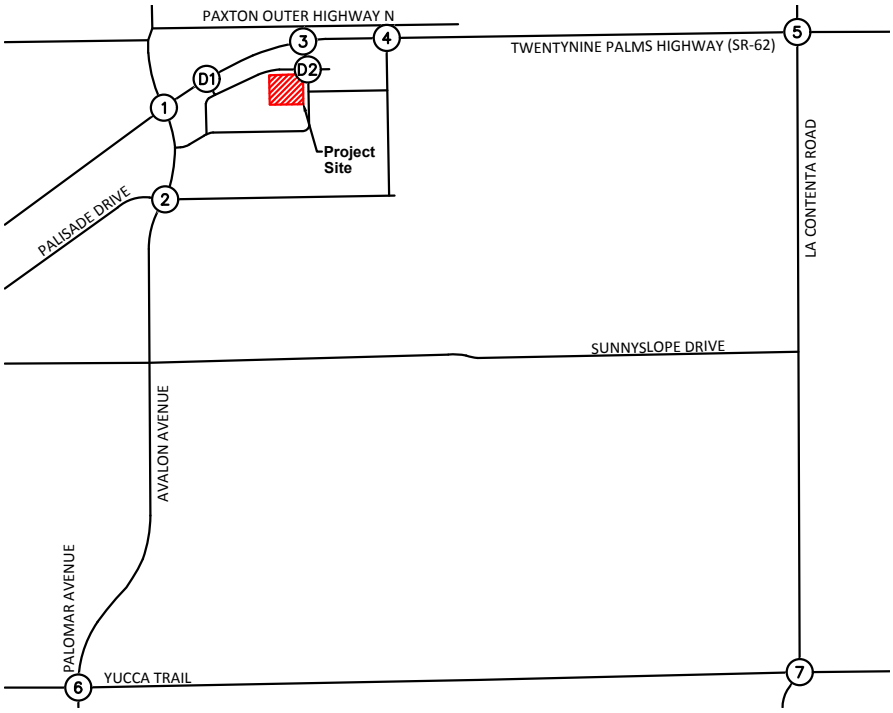
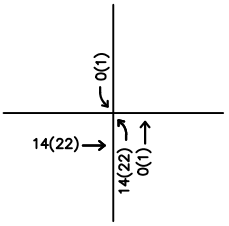
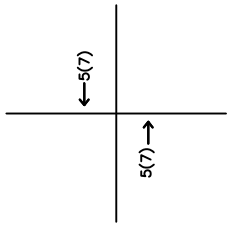
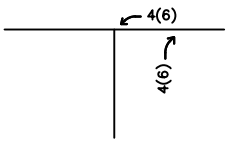
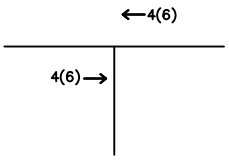
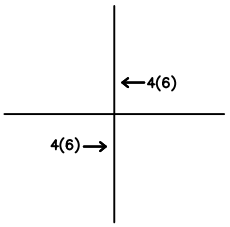
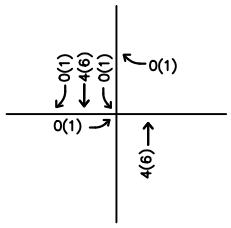
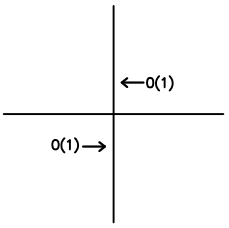
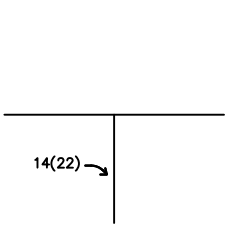
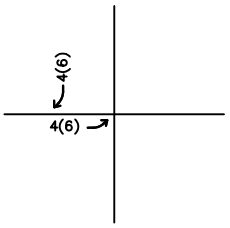


FIGURE 7
PROJECT TRIP DISTRIBUTION



NOT TO SCALE

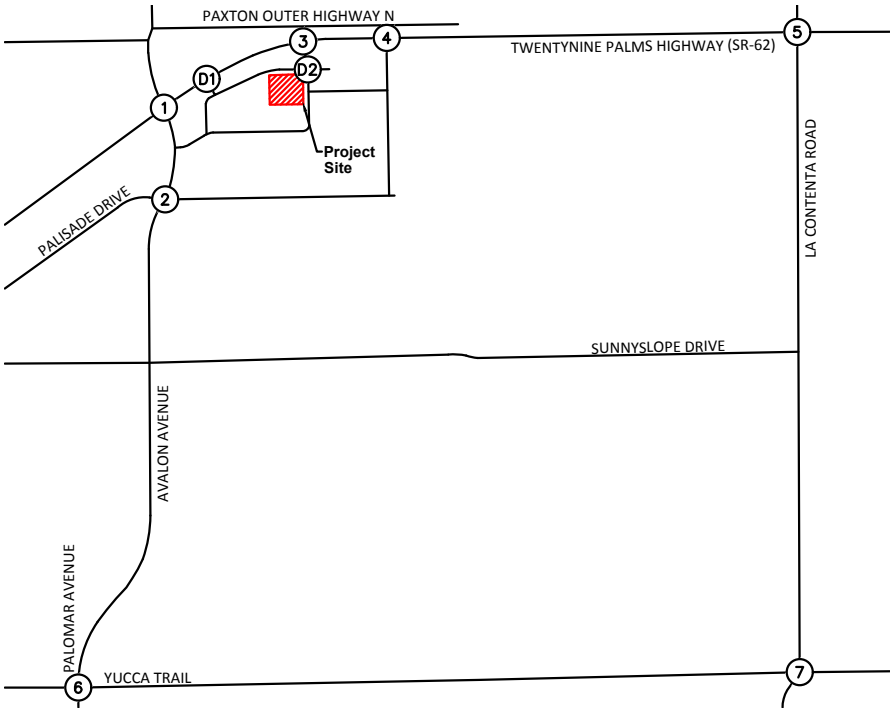
1. Avalon Ave at Twentynine Palms Hwy (SR-62)	2. Avalon Ave at Palisade Dr	3. Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	4. Twentynine Palms Hwy (SR-62) at East Commercial Access Rd
			
5. Twentynine Palms Hwy (SR-62) at La Contenta Rd	**6. Palomar Ave at Yucca Trail**	**7. Yucca Trail at La Contenta Rd**	**D1. Twentynine Palms Hwy (SR-62) at Commercial Dwy 1**
			
D2. Twentynine Palms Hwy (SR-62) at Commercial Dwy 2			
			

LEGEND:

(X) = Study Intersection

XX(YY) = AM(PM) Peak Hour Turning Movement Volumes

FIGURE 8
PROJECT-RELATED TRAFFIC VOLUMES



NOT TO SCALE

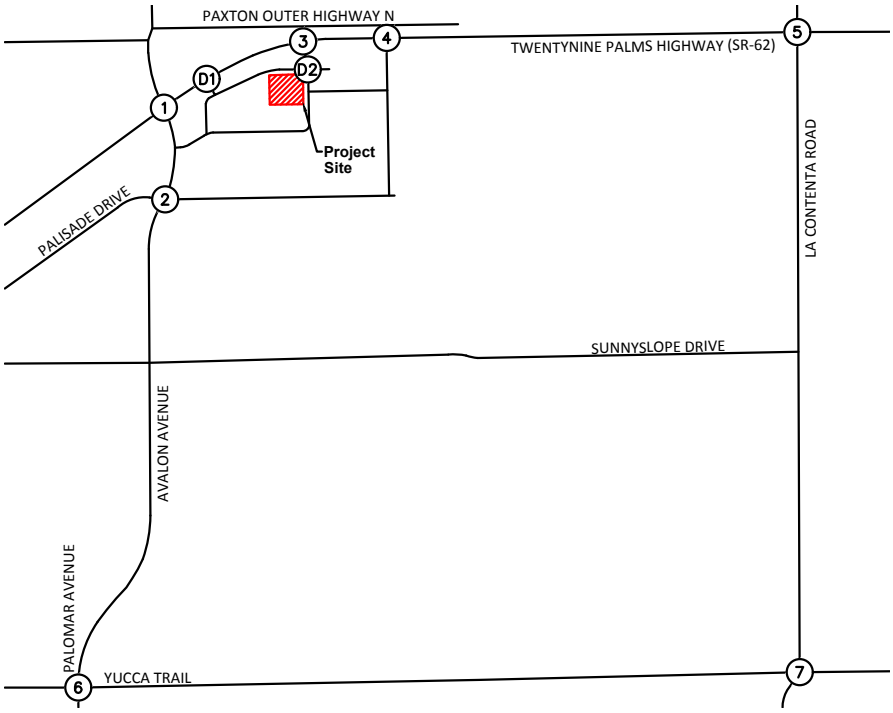
1. Avalon Ave at Twentynine Palms Hwy (SR-62)	2. Avalon Ave at Palisade Dr	3. Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	4. Twentynine Palms Hwy (SR-62) at East Commercial Access Rd
		←7(–8) 7(8) –24(–29)→ 7(8) 24(29)	
5. Twentynine Palms Hwy (SR-62) at La Contenta Rd	**6. Palomar Ave at Yucca Trail**	**7. Yucca Trail at La Contenta Rd**	**D1. Twentynine Palms Hwy (SR-62) at Commercial Dwy 1**
			–24(–29)→ 24(29)
D2. Twentynine Palms Hwy (SR-62) at Commercial Dwy 2			
7(8) 31(37)			

LEGEND:

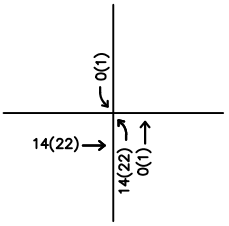
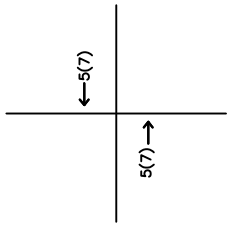
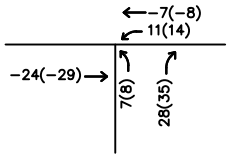
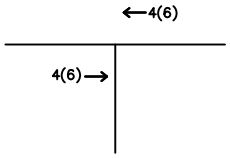
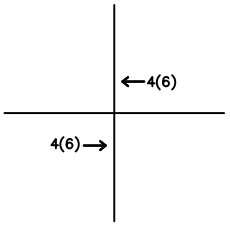
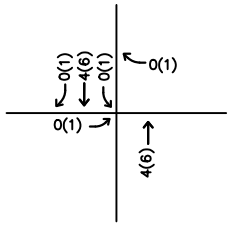
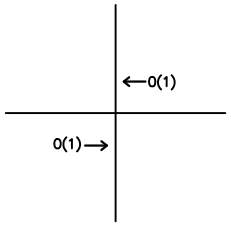
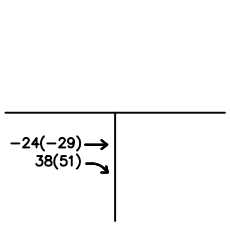
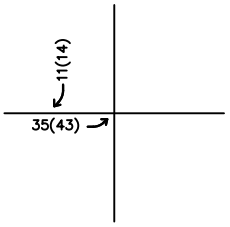
(X) = Study Intersection

XX(YY) = AM(PM) Peak Hour Turning Movement Volumes

FIGURE 9
PASS-BY TRAFFIC VOLUMES



NOT TO SCALE

1. Avalon Ave at Twentynine Palms Hwy (SR-62)	2. Avalon Ave at Palisade Dr	3. Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	4. Twentynine Palms Hwy (SR-62) at East Commercial Access Rd
			
5. Twentynine Palms Hwy (SR-62) at La Contenta Rd	**6. Palomar Ave at Yucca Trail**	**7. Yucca Trail at La Contenta Rd**	**D1. Twentynine Palms Hwy (SR-62) at Commercial Dwy 1**
			
D2. Twentynine Palms Hwy (SR-62) at Commercial Dwy 2			
			

LEGEND:

(X) = Study Intersection

XX(YY) = AM(PM) Peak Hour Turning Movement Volumes

FIGURE 10
TOTAL PROJECT TRAFFIC VOLUMES

OPENING YEAR 2025 PLUS PROJECT CONDITIONS

Project-related traffic was added to the Opening Year 2025 traffic volumes, and the resulting morning and evening peak hour volumes volumes are presented on Figure 11.

Intersection Operating Conditions

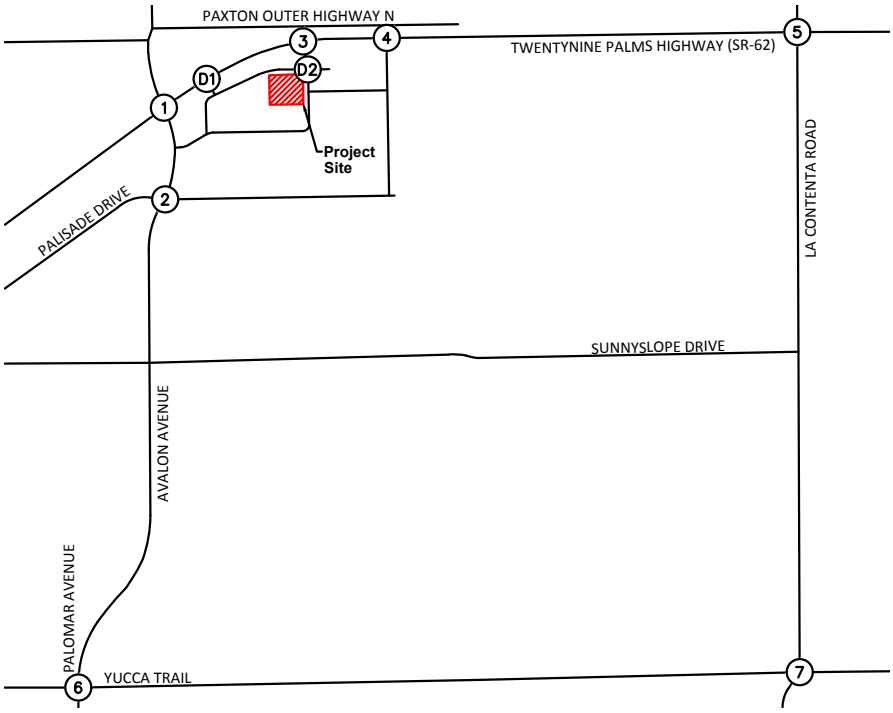
Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Opening Year 2025 With Project conditions. The results of the intersection analysis are shown on Table 4. Copies of intersection analysis worksheets for this scenario are provided in *Appendix C*.

Review of this Table indicates that, with the addition of project traffic, all intersections would continue to operate at an acceptable Level of Service under Opening Year 2025 Plus Project conditions.

TABLE 4
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2025 PLUS PROJECT CONDITIONS

Int. #	Intersection	AM Peak Hour						PM Peak Hour					
		Without Project		With Project		Change in Delay	Mitgation Req?	Without Project		With Project		Change in Delay	Mitgation Req?
		Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Avalon Ave at Twentynine Palms Hwy (SR-62)	21.4	C	21.7	C	0.3	No	22.3	C	22.5	C	0.2	No
2	Avalon Ave at Palisade Dr	8.8	A	8.9	A	0.1	No	10.8	B	11.0	B	0.2	No
3	Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	15.5	B	15.3	B	-0.2	No	16.2	B	16.1	B	-0.1	No
4	Twentynine Palms Hwy (SR-62) at East Commercial Access Rd	11.6	B	11.6	B	0.0	No	13.5	B	13.6	B	0.1	No
5	Twentynine Palms Hwy (SR-62) at La Contenta Rd	18.4	B	18.4	B	0.0	No	18.0	B	18.0	B	0.0	No
6	Palomar Ave at Yucca Trail	21.1	C	21.0	C	-0.1	No	22.9	C	22.8	C	-0.1	No
7	Yucca Trail at La Contenta Rd	10.8	B	10.9	B	0.1	No	12.0	B	12.0	B	0.0	No
8	Twentynine Palms Hwy (SR-62) at Commercial Driveway 1	11.1	B	11.0	B	-0.1	No	12.5	B	12.4	B	-0.2	No
9	Twentynine Palms Hwy (SR-62) at Commercial Driveway 2	10.3	B	10.6	B	0.3	No	14.7	B	16.3	C	1.6	No

Notes:
- Intersection operation is expressed in average delay for signalized and unsignalized intersections.
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.



NOT TO SCALE

1. Avalon Ave at Twentynine Palms Hwy (SR-62)	2. Avalon Ave at Palisade Dr	3. Twentynine Palms Hwy (SR-62) at West Commercial Access Rd	4. Twentynine Palms Hwy (SR-62) at East Commercial Access Rd
14(12) 37(23) 20(21) ← 14(37) ← 607(783) ← 38(63) 6(32) → 545(758) → 38(110) ↘ 54(131) 27(41) 44(45)	28(26) 76(158) 3(5) ← 10(11) ← 3(2) ← 26(117) 26(42) → 3(4) → 4(23) ↘ 21(12) 111(130) 62(88)	← 591(736) ← 131(198) 439(643) → 78(78) ↘ 56(137) 75(209)	← 707(929) 535(862) → 2(5) ↘ 60(51)
5. Twentynine Palms Hwy (SR-62) at La Contenta Rd	**6. Palomar Ave at Yucca Trail**	**7. Yucca Trail at La Contenta Rd**	**D1. Twentynine Palms Hwy (SR-62) at Commercial Dwy 1**
110(82) 45(21) 55(64) ← 45(73) ← 563(817) ← 19(15) 58(135) → 496(711) → 21(22) ↘ 33(23) 33(29) 15(17)	29(85) 49(141) 16(66) ← 31(53) ← 232(243) ← 57(86) 31(56) → 181(202) → 19(52) ↘ 43(47) 70(109) 154(96)	100(42) 20(27) ← 16(13) ← 175(267) 105(29) → 231(262) →	← 660(883) 536(714) → 69(103) ↘ 7(40)
D2. Twentynine Palms Hwy (SR-62) at Commercial Dwy 2			
52(68) 140(156) 18(68) ← 1(50) ← 1(3) ← 0(4) 63(163) → 1(5) → 1(8) ↘ 2(3) 70(149) 0(1)			

LEGEND:

(X) = Study Intersection

XX(YY) = AM(PM) Peak Hour Turning Movement Volumes

FIGURE 11
OPENING YEAR 2025 PLUS PROJECT TRAFFIC VOLUMES

RECOMMENDED IMPROVEMENTS

Based on the Level of Service standards and significant impact criteria discussed previously, the project-related effect would not be considered significant; therefore, no improvements are identified.

SITE ACCESS ANALYSIS

Vehicular access for the project site will be facilitated via two existing drive aisles. One driveway and one intersection along Twentynine Palms Highway allow direct access to the proposed project; the westernmost driveway is right-in, right-out only (RIRO), and the easternmost intersection is full-access.

ON-SITE QUEUING ANALYSIS

The 95th percentile queuing capacity was analyzed at the project driveways. 95th percentile queue is defined as the queue length that has only a 5% probability of being exceeded during the analysis period; in other words, the typical worst-case queue. The goal of the analysis was to demonstrate the 95th percentile queue can be contained within the provided storage without disrupting the flow of traffic at surrounding drive aisles in the Walmart parking lot. The distance per vehicle was assumed to be 20 feet, to account for the length of the passenger vehicle and spacing from the next queued vehicle. For the 95th percentile queue, the following stop-controlled egress movements were evaluated in the Opening Year Plus Project scenario:

- Northbound movements at Project Driveway 1 (Commercial Dwy 1 & Twentynine Palms Hwy (SR-62))
- Eastbound movements at Project Driveway 2 (Commercial Dwy 2 & Twentynine Palms Hwy (SR-62))

The results of the analysis are summarized below. Overall, 95th percentile queues at the project driveways will not back up into surrounding drive aisles. No impacts to circulation or to ingress / egress to surrounding properties are anticipated due to proposed conditions. See *Appendix D* for queueing analysis worksheets.

Project Driveway 1 (Commercial Dwy 1 & Twentynine Palms Hwy (SR-62)):

- Queue Storage – 65 feet (just over 3 passenger vehicles)
- Morning Peak Hour 95th Percentile Queue – 19 feet (just under 1 passenger vehicle)
- Evening Peak Hour 95th Percentile Queue – 38 feet (just under 2 passenger vehicles)

Project Driveway 2 (Commercial Dwy 2 & Twentynine Palms Hwy (SR-62)):

- Queue Storage – 140 feet (7 passenger vehicles)
- Morning Peak Hour 95th Percentile Queue – 52 feet (just under 3 passenger vehicles)
- Evening Peak Hour 95th Percentile Queue – 82 feet (just over 4 passenger vehicles)

VEHICLE MILES TRAVELED ANALYSIS

With the passage of Senate Bill (SB) 743 by the California Legislature in September 2013, VMT has become an important indicator for determining if a new development will result in a "significant transportation impact" as required by the California Environmental Quality Act (CEQA). Under SB 743, the state Office of Planning and Research (OPR) was charged with developing new guidelines for evaluating transportation impacts under CEQA in order to replace methods measuring automobile delay and Level of Service. In response to this mandate, the Office of Planning and Research proposed, and the California Natural Resources Agency adopted CEQA Guidelines Section 15064.3, which indicates that VMT exceeding an applicable threshold of significance is the most appropriate measure for evaluating a project's transportation impacts. Section 15064.3 goes on to clarify that except for projects regarding roadway capacity, "…a project's effect on automobile delay does not constitute a significant environmental impact." The OPR further elaborates on VMT metrics within the *Technical Advisory on Evaluating Transportation Impacts in CEQA* document, published in December 2018. Subsequently, the San Bernardino County, via the *San Bernardino County Transportation Impact Study Guidelines (July 2019)* has established VMT screening thresholds of significance for projects within the City.

The County's VMT guidelines provide details on appropriate screening thresholds that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed analysis. The County's screening criteria are as follows:

1. Projects which serve the local community and have the potential to reduce VMT
2. Projects generating less than 110 daily vehicle trips
3. Projects located within a Transit Priority Area (TPA)
4. Projects located within a low VMT generating area

Projects which serve the local community and have the potential to reduce VMT would be considered to have a less-than-significant impact. Since the project is a fuel station under 50,000 square feet, the project would screen out of VMT under qualifying local-serving criteria.

In accordance with the Technical Advisory and with San Bernardino County, it is appropriate that the proposed project be presumed to result in a less-than-significant VMT impact and support the goals of SB 743. Therefore, the Project screens out and no further VMT analysis is required.

The Town of Yucca Valley VMT Screening Justification is included as part of the Approved Traffic Consistency Analysis Memorandum in *Appendix A*.

SUMMARY OF FINDINGS AND CONCLUSIONS

- The project site is currently an existing Walmart parking lot and is bounded by drive aisles to the north and east and parking lot to the south and west.

- The project consists of the construction of a new fuel station with twelve fueling positions and a 1,556 square-foot convenience store within the northeast corner of the existing Walmart parking lot located at 58501 Twentynine Palms Highway.

- Vehicular access for the project site will be facilitated via two existing drive aisles. One driveway and one intersection along Twentynine Palms Highway allow direct access to the proposed project; the westernmost driveway is right-in, right-out only (RIRO), and the easternmost intersection is full-access.

- Morning and evening peak hour operating conditions were evaluated at the study intersections for the following study scenarios:
  - Existing Conditions
  - Opening Year 2025
  - Opening Year 2025 Plus Project

- Existing peak hour traffic counts were collected in December 2024.

- Under Existing Conditions, all study intersections currently operate at an acceptable LOS.

- Under Opening Year 2025 Conditions, all study intersections would continue to operate at an acceptable LOS.

- The project is estimated to generate approximately 826 trips daily, with 46 trips in the morning peak hour (23 inbound, 23 outbound) and 72 trips in the evening peak hour (36 inbound, 36 outbound).

- Under Opening Year 2025 Plus Project Conditions, all study intersections would continue to operate at an acceptable LOS.

- 95th percentile queues for the project driveways will not back up into surrounding drive aisles. No impacts to circulation or to ingress / egress to surrounding properties are anticipated due to proposed conditions.

- Based on the Level of Service standards and significant impact criteria, the project-related effect would not be considered significant; therefore, no improvements were identified.

- Per the County of San Bernardino's VMT guidelines, the proposed project meets the local-serving land use VMT screening criteria. Therefore, the Project screens out and no further VMT analysis is required.

APPENDIX A

APPROVED TRAFFIC CONSISTENCY
ANALYSIS MEMORANDUM

Kimley»Horn

MEMORANDUM

To: Alex Qishta, P.E.
Public Works Director, Town of Yucca Valley

From: Ryan Alvarez, P.E. (C95193)
Kimley-Horn and Associates, Inc.

Date: November 21, 2024

Subject: *Traffic Consistency Analysis Memorandum for the Proposed Walmart Fuel Station in the Town of Yucca Valley*

Kimley-Horn and Associates, Inc. is submitting this Traffic Consistency Analysis Memorandum to the Town of Yucca Valley regarding the revised traffic study scope and assumptions for the proposed Walmart Fuel Station project located in the Town of Yucca Valley. The proposed traffic scope and assumptions for the project are presented below. This memorandum also analyzes the proposed project's consistency with the development assumed in the Environmental Impact Report (EIR) for the Yucca Valley Retail Specific Plan (March 2008).

PROJECT DESCRIPTION

The applicant proposes to construct a new fuel station with twelve fueling positions and a 1,556 square-foot convenience store within the northeast corner of the existing Walmart parking lot located at 58501 Twentynine Palms Highway. The project, in its local setting, is shown on Figure 1. The project site plan is shown on Figure 2. The project is anticipated to open in 2025.

Proposed project ingress and egress will be facilitated via two existing drive aisles. One driveway and one intersection along Twentynine Palms Highway allow direct access to the proposed project; the westernmost driveway is right-in, right-out only (RIRO), and the easternmost intersection is full-access.

SCOPE OF STUDY

Project Trip Generation

Trip estimates for the proposed uses were calculated using the trip generation rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, (11th Edition) for Gasoline/Service Station (ITE Land Use 944). Pass-by reduction factors were applied to applicable uses based on the ITE Trip Generation Handbook, (3rd Edition).

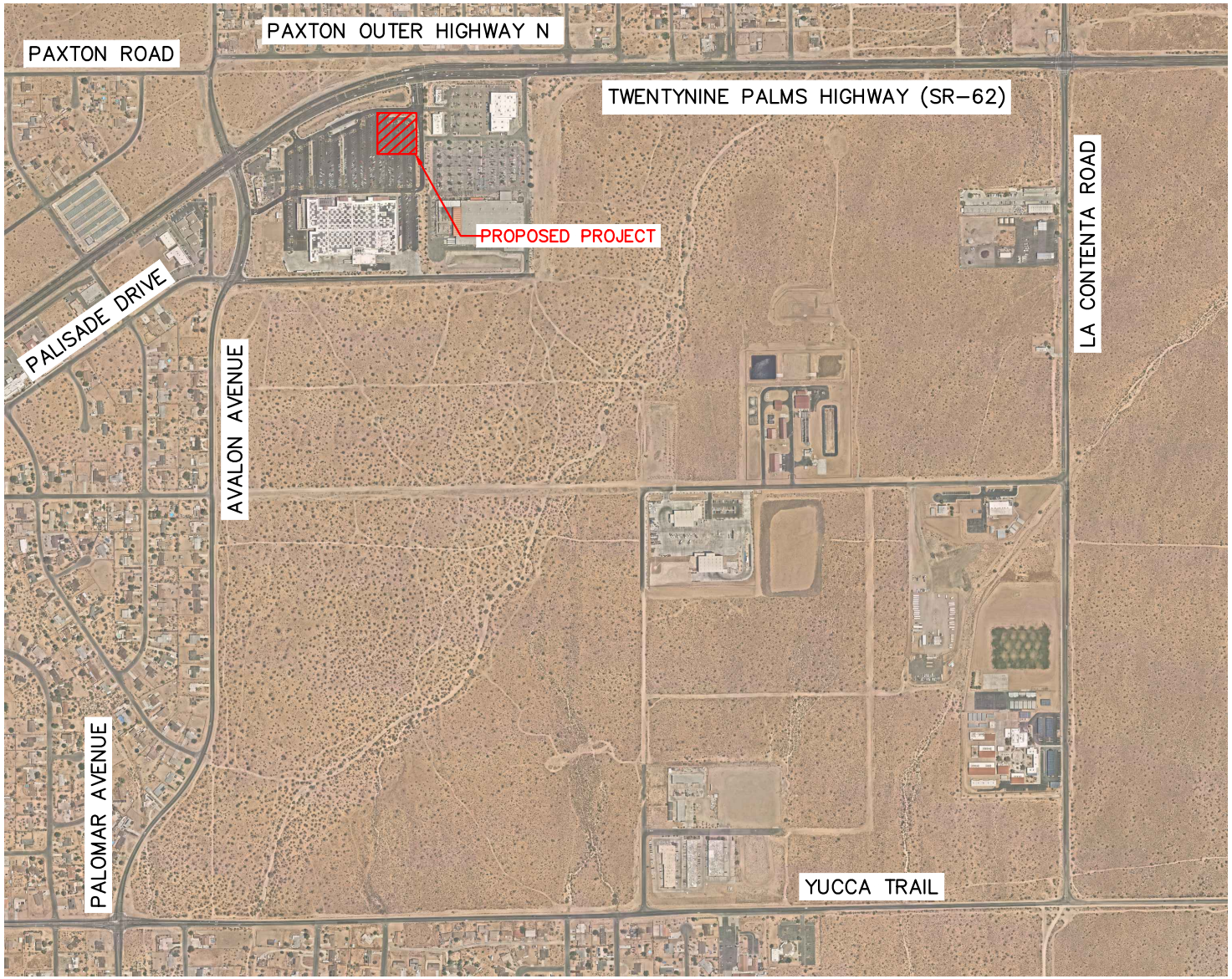
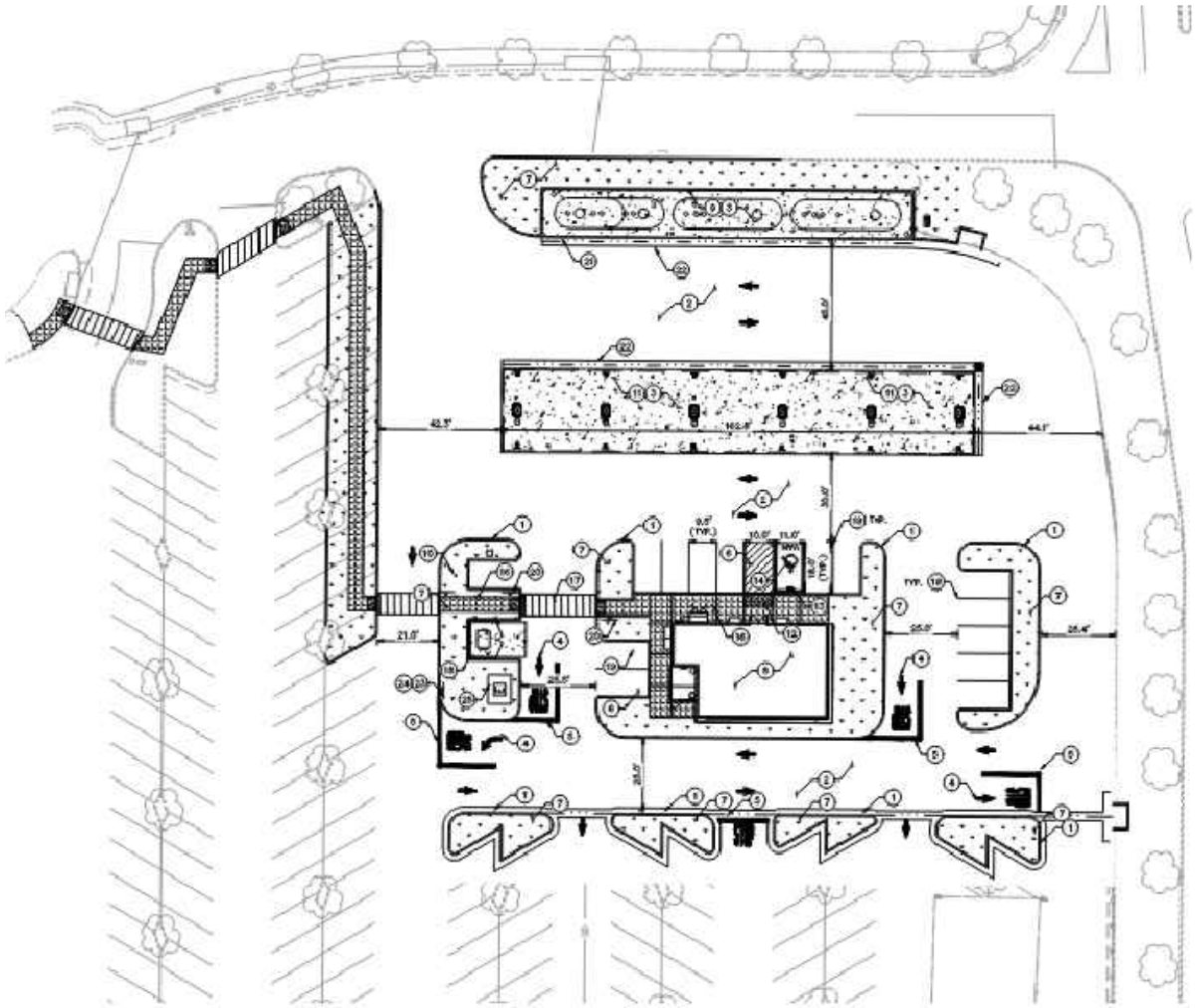


FIGURE 1
VICINITY MAP

Kimley»Horn

NOT TO SCALE



WALMART FUEL STATION - STORE #1915
58501 TWENTYNINE PALMS HIGHWAY, YUCCA VALLEY, CA 92284

FIGURE 2
SITE PLAN

Kimley»Horn

Trip generation rates and the resulting trip generation estimates for the existing and proposed uses are summarized on Table 1. The project is estimated to generate approximately 826 trips daily, with 46 trips in the morning peak hour (23 inbound, 23 outbound) and 72 trips in the evening peak hour (36 inbound, 36 outbound).

Project Trip Distribution

Project distribution assumptions were developed based on existing travel patterns, and the likely origins and destinations of the proposed project. Trip distribution assumptions are shown on Figure 3.

Study Area

The following study intersections are proposed, and are shown on Figure 3:

1. Avalon Avenue & Twentynine Palms Highway (SR-62)
2. Avalon Avenue & Palisade Drive
3. Twentynine Palms Highway (SR-62) & West Commercial Access Road
4. Twentynine Palms Highway (SR-62) & East Commercial Access Road
5. Twentynine Palms Highway (SR-62) & La Contenta Road
6. Palomar Avenue & Yucca Trail
7. Yucca Trail & La Contenta Road

D1. Twentynine Palms Highway (SR-62) & Commercial Driveway 1
D2. Twentynine Palms Highway (SR-62) & Commercial Driveway 2

Study Scenarios

- Existing Conditions
- Opening Year 2025
- Opening Year 2025 with Project

Opening Year 2025 base traffic, without the addition of the proposed project traffic, will be determined by growing existing volumes by 2% per year, and by adding traffic from cumulative projects in the town to the study intersections. A list of cumulative projects, and their associated traffic, will be provided by the Town.

TABLE 1
SUMMARY OF PROJECT TRIP GENERATION
YUCCA VALLEY WALMART FUEL STATION

Land Use	ITE Code	Unit	Trip Generation Rates [1]						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Gasoline/Service Station	944	Fueling Position	172.01	5.14	5.14	10.28	6.955	6.955	13.91

Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Gasoline/Service Station	12	Fueling Position	2,064	62	62	124	83	83	166
Pass-by Trips (60% Daily, 63% AM, 57% PM) [1,2]			*-1,238*	*-39*	*-39*	*-78*	*-47*	*-47*	*-94*
Net Trips			*826*	*23*	*23*	*46*	*36*	*36*	*72*
Total Project Trips			826	23	23	46	36	36	72

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

[2] Note: The Trip Generation Manual does not provide pass-by rates for daily trip generation. The daily pass-by trip percentage shown is the average of the AM and the PM pass-by trip percentages.

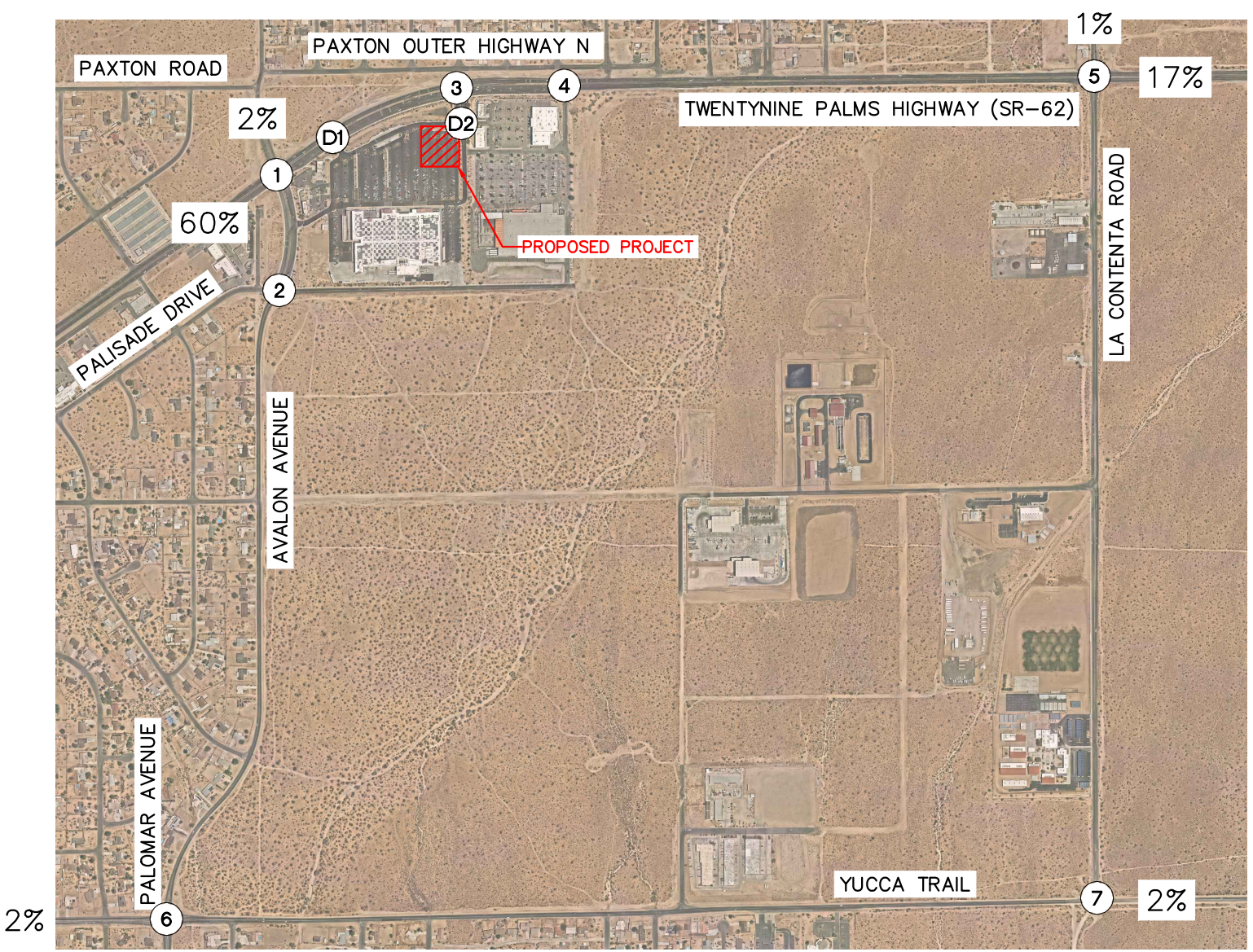


FIGURE 3
TRIP DISTRIBUTION ASSUMPTIONS

Kimley»Horn

VEHICLE MILES TRAVELED (VMT) SCREENING

With the passage of Senate Bill (SB) 743 by the California Legislature in September 2013, VMT has become an important indicator for determining if a new development will result in a "significant transportation impact" as required by the California Environmental Quality Act (CEQA). Under SB 743, the state Office of Planning and Research (OPR) was charged with developing new guidelines for evaluating transportation impacts under CEQA in order to replace methods measuring automobile delay and Level of Service. In response to this mandate, the Office of Planning and Research proposed, and the California Natural Resources Agency adopted CEQA Guidelines Section 15064.3, which indicates that VMT exceeding an applicable threshold of significance is the most appropriate measure for evaluating a project's transportation impacts. Section 15064.3 goes on to clarify that except for projects regarding roadway capacity, "…a project's effect on automobile delay does not constitute a significant environmental impact." The OPR further elaborates on VMT metrics within the *Technical Advisory on Evaluating Transportation Impacts in CEQA* document, published in December 2018. Subsequently, the San Bernardino County, via the *San Bernardino County Transportation Impact Study Guidelines (July 2019)* has established VMT screening thresholds of significance for projects within the City.

The County's VMT guidelines provide details on appropriate screening thresholds that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed analysis. The County's screening criteria are as follows:

1. Projects which serve the local community and have the potential to reduce VMT
2. Projects generating less than 110 daily vehicle trips
3. Projects located within a Transit Priority Area (TPA)
4. Projects located within a low VMT generating area

Projects which serve the local community and have the potential to reduce VMT would be considered to have a less-than-significant impact. Since the project is a fuel station under 50,000 square feet, the project would screen out of VMT under qualifying local-serving criteria.

In accordance with the Technical Advisory and with San Bernardino County, it is appropriate that the proposed project be presumed to result in a less-than-significant VMT impact and support the goals of SB 743. No further VMT assessment is anticipated.

TRAFFIC CONSISTENCY WITH THE YUCCA VALLEY RETAIL SPECIFIC PLAN EIR

The project site is located within Yucca Valley Retail Specific Plan area in the Town of Yucca Valley. The Environmental Impact Report (EIR) for the Yucca Valley Retail Specific Plan was approved in March 2008. The approved EIR serves as an environmental review for commercial retail center development of approximately 25.51 acres in the Town of Yucca Valley. The retail center development consists of approximately 229,000 square feet of retail space composed of a major retail store, one fast-food restaurant with a drive-through, and a gas station with 12 fueling positions. The study area evaluates the following study intersections:

1. Inca Trail & Twentynine Palms Highway (SR-62)
2. Pioneertown Toad & Deer Trail & SR-62
3. Sage Avenue & SR-62 & Yucca Trail
4. Old Woman Springs Road (SR-247) & Aberdeen Drive
5. SR-247 & Buena Vista Drive
6. SR-247 & SR-62
7. Joshua Lane & Yucca Trail
8. Joshua Lane & Onaga Trail
9. Balsa Avenue & Hanford Avenue & SR-62
10. Avalon Avenue & SR-62
11. Avalon Avenue & Palisades Drive
12. Avalon Avenue & Palomar Avenue & Yucca Trail
13. Palomar Avenue & Joshua Lane
14. Yucca Mesa Road & La Contenta Road & SR-62
15. La Contenta Road & Yucca Trail
16. Sunny Vista Road & Yucca Trail
17. Sunny Vista Road & Alta Loma Drive
18. Park Boulevard & SR-62
19. Alta Loma Drive & Park Boulevard & Quail Springs Road

D1. Avalon Avenue & Driveway 1
D2. Driveway 2 & SR-62
D3. Driveway 3 & SR-62

The EIR analyzes an additional 14 intersections in comparison to the scoped study area for the proposed Walmart Fuel Station TIA. However, Intersection 4 (Twentynine Palms Highway (SR-62) & East Commercial Access Road) to be analyzed in the proposed Walmart Fuel Station TIA was not analyzed in the previous EIR.

The trip generation in the EIR is based on rates contained in the ITE *Trip Generation*, 7th Edition (2003) and pass-by percentages from the ITE *Trip Generation Handbook* (1998). An internal capture rate of 10% is applied to all land uses. Pass-by reduction factors of 56%, 17.2%, and 50% are applied to the fueling station, retail store, and fast-food restaurant w/drive-thru land uses in the EIR, respectively.

The revised scope for the proposed Walmart Fuel Station TIA lists pass-by percentages of 60% daily, 63% in the AM Peak, and 57% in the PM Peak. The EIR estimated the fueling station would generate approximately 776 trips daily, with 48 trips in the morning peak hour (24 inbound, 24 outbound), and 64 trips in the evening peak hour (32 inbound, 32 outbound). The net difference between the EIR trips versus the proposed trip generation is a net increase of 50 trips daily, 2 trips in the morning peak hour, and a net decrease of 8 trips in the evening peak hour.

In addition, the EIR calculated trip generation for the retail store with 229,000 square feet, while the existing Walmart Supercenter is 206,965 square feet. The EIR estimates 9,560 trips daily, with 143 trips in the morning peak hour (77 inbound, 66 outbound), and 863 trips in the evening peak hour (453 inbound, 411 outbound). The net difference between the EIR trips versus the existing trip generation is a net decrease of 2,373 trips daily, 263 trips in the evening peak hour, and a net increase of 193 trips in the evening peak hour.

The EIR also calculated trip generation for a 4,000 square-feet fast-food restaurant w/drive-thru. The existing two fast-food restaurants with drive-thru have a roughly combined area of 5,200 square feet. The EIE estimates 893 trips daily, with 96 trips in the morning peak hour (50 inbound, 46 outbound), and 62 trips in the evening peak hour (34 inbound, 29 outbound). The net difference between the EIR trips versus the existing trip generation is a net increase of 280 trips daily, 20 trips in the morning peak hour, and 15 trips in the evening peak hour.

The net difference in the trip generation between the EIR and the existing land uses plus the proposed gas station is a net increase of 1,229 trips daily, 260 trips in the morning peak hour, and a net decrease of 56 trips in the evening peak hour. The resulting trip generation estimates and comparisons are shown on Table 2.

The trip generation of the proposed project and existing uses plus the proposed project is not within the analyzed scope of the EIR, therefore, a LOS analysis is required for the Walmart Fuel Station.

TABLE 2
SUMMARY OF PROJECT TRIP GENERATION COMPARISON

Land Use	Quantity	Unit	Trip Generation Estimates						
			Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
EIR USE[1]									
Retail Store	229.000	KSF	12,829	102	90	192	603	556	1,159
Sub-Total after Pass-by & Internal Trips			9,560	77	66	143	453	411	863
Fueling Station	12	Fueling Position	1,953	60	60	121	80	80	161
Sub-Total after Pass-by & Internal Trips			774	24	24	48	32	32	64
Fast-Food Rest w/ Drive-thru	4.000	KSF	1,984	108	104	212	72	67	139
Sub-Total after Pass-by & Internal Trips			893	50	46	96	34	29	62
Total Net Trips			11,226	150	136	287	518	471	989
EXISTING USE[2]									
Free Standing Discount Superstore	206.965	KSF	10,456	216	169	385	439	457	896
Fast-Food Restaurant w/ Drive-thru	2.868	KSF	1,341	65	63	128	49	45	94
Pass-by Trips (52.5% Daily, 50% AM, 55% PM)[2,3]			-704	-33	-32	-65	-27	-25	-52
Sub-Total			637	32	31	63	22	20	42
Fast-Food Restaurant w/ Drive-thru	2.415	KSF	1,129	55	53	108	41	38	79
Pass-by Trips (52.5% Daily, 50% AM, 55% PM)[2,3]			-593	-28	-27	-55	-23	-21	-44
Sub-Total			536	27	26	53	18	17	35
Total Existing Trips			11,629	275	226	501	479	494	973
PROPOSED USE[2]									
Gasoline/Service Station	12	Fueling Position	2,064	62	62	124	83	83	166
Pass-by Trips (60% Daily, 63% AM, 57% PM)[2,3]			-1,238	-39	-39	-78	-47	-47	-94
Sub-Total			826	23	23	46	36	36	72
Total Existing & Proposed Trips			12,455	298	249	547	515	530	1,045
NET DIFFERENCE (Existing & Proposed Use Minus EIR Use)			1,229	148	113	260	-3	59	56

[1] Source: Yucca Valley Retail Specific Plan Draft Environmental Impact Report (July 2007).

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

[3] Note: The Trip Generation Manual does not provide pass-by rates for daily trip generation. The daily pass-by trip percentage shown is the average of the AM and the PM pass-by trip percentages.

FINDINGS AND CONCLUSIONS

Based on the project trip generation for the existing and proposed land uses in comparison with the Yucca Valley Retail Specific Plan EIR, a Level of Service (LOS) analysis is required for the proposed project. The proposed project would screen out of VMT based on the project qualifying as local serving to the community. As such, the proposed project would be presumed to have a less-than-significant impact. Therefore, no further VMT analysis is required for the proposed project.

Please contact me if you have any questions or comments.

APPROVED:

By:

_____.

Alex Qishta

Public Works Director, Town of Yucca Valley

APPENDIX B

TRAFFIC COUNT DATA SHEETS

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

City of Yucca Valley
N/S: Avalon Avenue
E/W: SR-62
Weather: Clear

File Name : 01_YCV_Ava_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

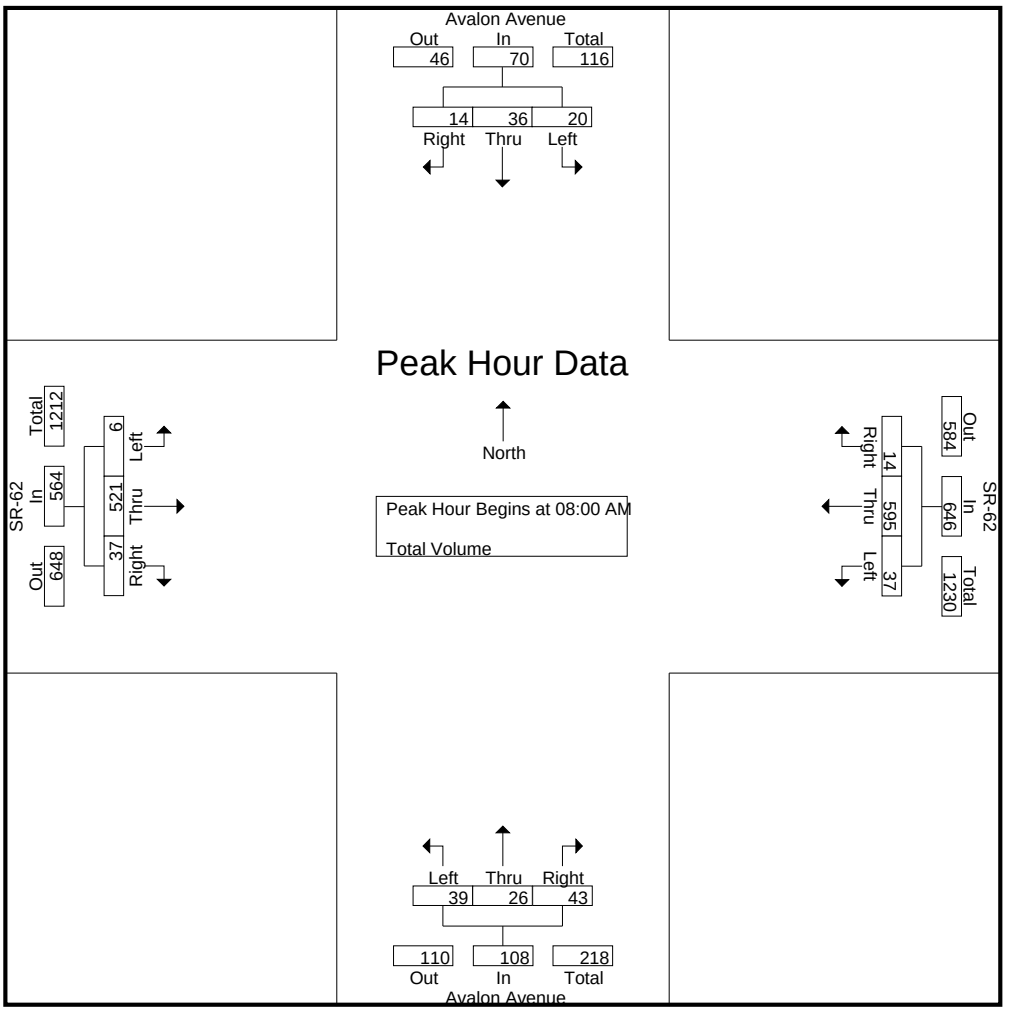
	Avalon Avenue Southbound				SR-62 Westbound				Avalon Avenue Northbound				SR-62 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	7	4	21	5	95	4	104	5	3	8	16	1	138	5	144	285
07:15 AM	5	5	3	13	7	109	7	123	7	11	5	23	0	103	11	114	273
07:30 AM	9	9	4	22	14	107	2	123	11	8	11	30	0	110	2	112	287
07:45 AM	7	6	4	17	9	162	3	174	10	2	9	21	2	150	13	165	377
Total	31	27	15	73	35	473	16	524	33	24	33	90	3	501	31	535	1222
08:00 AM	0	5	4	9	7	122	2	131	9	5	9	23	1	133	5	139	302
08:15 AM	4	10	2	16	13	136	3	152	7	2	12	21	3	111	9	123	312
08:30 AM	6	12	5	23	12	170	4	186	9	5	8	22	0	121	7	128	359
08:45 AM	10	9	3	22	5	167	5	177	14	14	14	42	2	156	16	174	415
Total	20	36	14	70	37	595	14	646	39	26	43	108	6	521	37	564	1388
Grand Total	51	63	29	143	72	1068	30	1170	72	50	76	198	9	1022	68	1099	2610
Apprch %	35.7	44.1	20.3		6.2	91.3	2.6		36.4	25.3	38.4		0.8	93	6.2		
Total %	2	2.4	1.1	5.5	2.8	40.9	1.1	44.8	2.8	1.9	2.9	7.6	0.3	39.2	2.6	42.1	

	Avalon Avenue Southbound				SR-62 Westbound				Avalon Avenue Northbound				SR-62 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 08:00 AM																	
08:00 AM	0	5	4	9	7	122	2	131	9	5	9	23	1	133	5	139	302
08:15 AM	4	10	2	16	**13**	136	3	152	7	2	12	21	**3**	111	9	123	312
08:30 AM	6	**12**	**5**	**23**	12	**170**	4	**186**	9	5	8	22	0	121	7	128	359
08:45 AM	**10**	9	3	22	5	167	**5**	177	**14**	**14**	**14**	**42**	2	**156**	**16**	**174**	**415**
Total Volume	20	36	14	70	37	595	14	646	39	26	43	108	6	521	37	564	1388
% App. Total	28.6	51.4	20		5.7	92.1	2.2		36.1	24.1	39.8		1.1	92.4	6.6		
PHF	.500	.750	.700	.761	.712	.875	.700	.868	.696	.464	.768	.643	.500	.835	.578	.810	.836

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

City of Yucca Valley
N/S: Avalon Avenue
E/W: SR-62
Weather: Clear

File Name : 01_YCV_Ava_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
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:

	07:00 AM				08:00 AM				08:00 AM				08:00 AM			
+0 mins.	**10**	7	**4**	21	7	122	2	131	9	5	9	23	1	133	5	139
+15 mins.	5	5	3	13	**13**	136	3	152	7	2	12	21	**3**	111	9	123
+30 mins.	9	**9**	4	**22**	12	**170**	4	**186**	9	5	8	22	0	121	7	128
+45 mins.	7	6	4	17	5	167	**5**	177	**14**	**14**	**14**	**42**	2	**156**	**16**	**174**
Total Volume	31	27	15	73	37	595	14	646	39	26	43	108	6	521	37	564
% App. Total	42.5	37	20.5		5.7	92.1	2.2		36.1	24.1	39.8		1.1	92.4	6.6	
PHF	.775	.750	.938	.830	.712	.875	.700	.868	.696	.464	.768	.643	.500	.835	.578	.810

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

City of Yucca Valley
N/S: Avalon Avenue
E/W: SR-62
Weather: Clear

File Name : 01_YCV_Ava_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

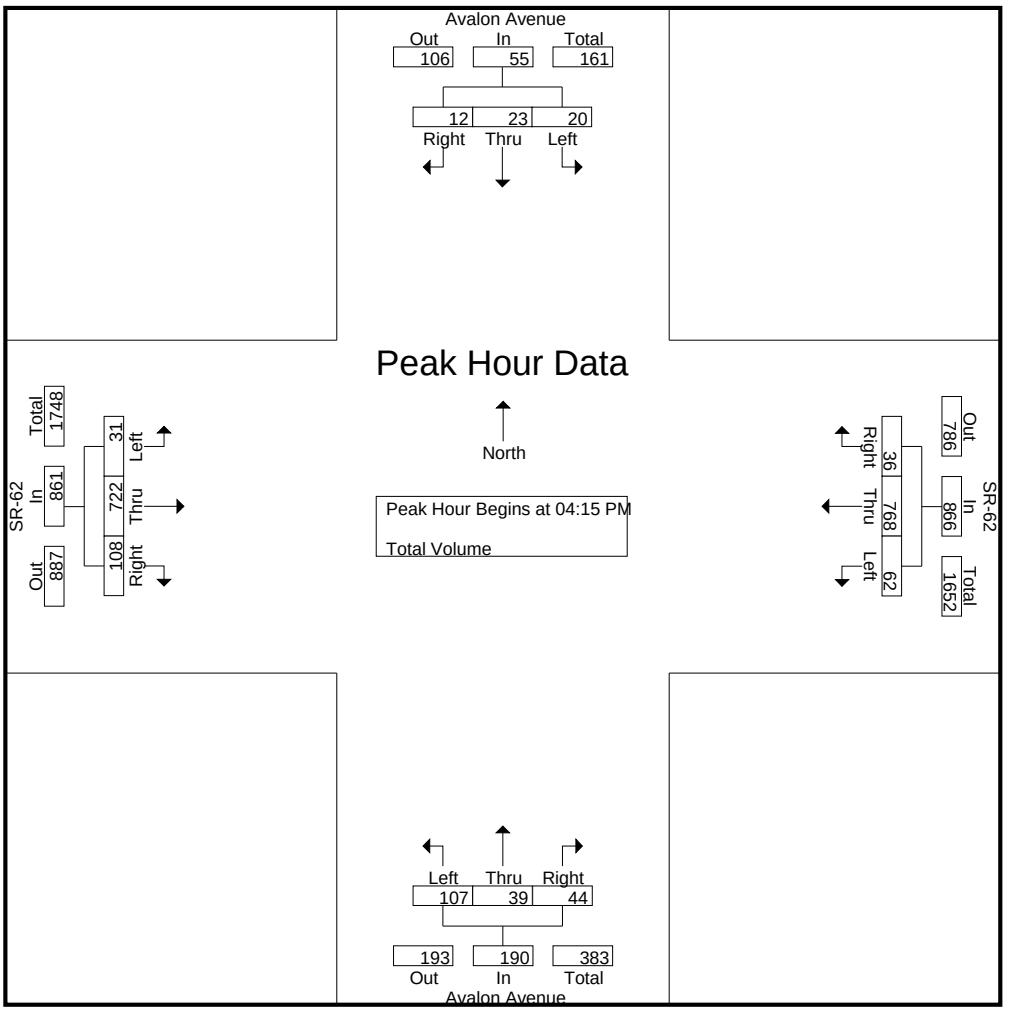
	Avalon Avenue Southbound				SR-62 Westbound				Avalon Avenue Northbound				SR-62 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	5	4	6	15	15	170	15	200	26	18	14	58	8	169	27	204	477
04:15 PM	3	6	5	14	23	194	5	222	22	13	12	47	5	171	26	202	485
04:30 PM	3	9	3	15	11	181	12	204	28	5	9	42	8	184	22	214	475
04:45 PM	6	7	0	13	18	205	10	233	20	6	11	37	10	178	30	218	501
Total	17	26	14	57	67	750	42	859	96	42	46	184	31	702	105	838	1938
05:00 PM	8	1	4	13	10	188	9	207	37	15	12	64	8	189	30	227	511
05:15 PM	6	10	3	19	24	182	8	214	20	7	9	36	5	160	28	193	462
05:30 PM	7	1	1	9	10	145	6	161	37	11	9	57	8	172	21	201	428
05:45 PM	7	8	1	16	13	150	7	170	12	10	8	30	6	172	17	195	411
Total	28	20	9	57	57	665	30	752	106	43	38	187	27	693	96	816	1812
Grand Total	45	46	23	114	124	1415	72	1611	202	85	84	371	58	1395	201	1654	3750
Apprch %	39.5	40.4	20.2		7.7	87.8	4.5		54.4	22.9	22.6		3.5	84.3	12.2		
Total %	1.2	1.2	0.6	3	3.3	37.7	1.9	43	5.4	2.3	2.2	9.9	1.5	37.2	5.4	44.1	

	Avalon Avenue Southbound				SR-62 Westbound				Avalon Avenue Northbound				SR-62 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 04:15 PM																	
04:15 PM	3	6	**5**	14	**23**	194	5	222	22	13	**12**	47	5	171	26	202	485
04:30 PM	3	**9**	3	**15**	11	181	**12**	204	28	5	9	42	8	184	22	214	475
04:45 PM	6	7	0	13	18	**205**	10	**233**	20	6	11	37	**10**	178	**30**	218	501
05:00 PM	**8**	1	4	13	10	188	9	207	**37**	**15**	12	**64**	8	**189**	30	**227**	**511**
Total Volume	20	23	12	55	62	768	36	866	107	39	44	190	31	722	108	861	1972
% App. Total	36.4	41.8	21.8		7.2	88.7	4.2		56.3	20.5	23.2		3.6	83.9	12.5		
PHF	.625	.639	.600	.917	.674	.937	.750	.929	.723	.650	.917	.742	.775	.955	.900	.948	.965

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

City of Yucca Valley
N/S: Avalon Avenue
E/W: SR-62
Weather: Clear

File Name : 01_YCV_Ava_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
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:

	04:30 PM				04:15 PM				04:45 PM				04:15 PM			
+0 mins.	3	9	3	15	**23**	194	5	222	20	6	11	37	5	171	26	202
+15 mins.	6	7	0	13	11	181	**12**	204	**37**	**15**	**12**	**64**	8	184	22	214
+30 mins.	**8**	1	**4**	13	18	**205**	10	**233**	20	7	9	36	**10**	178	**30**	218
+45 mins.	6	**10**	3	**19**	10	188	9	207	37	11	9	57	8	**189**	30	**227**
Total Volume	23	27	10	60	62	768	36	866	114	39	41	194	31	722	108	861
% App. Total	38.3	45	16.7		7.2	88.7	4.2		58.8	20.1	21.1		3.6	83.9	12.5	
PHF	.719	.675	.625	.789	.674	.937	.750	.929	.770	.650	.854	.758	.775	.955	.900	.948

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

City of Yucca Valley
N/S: Avalon Avenue
E/W: Palisade Drive
Weather: Clear

File Name : 02_YCV_Ava_Pali AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

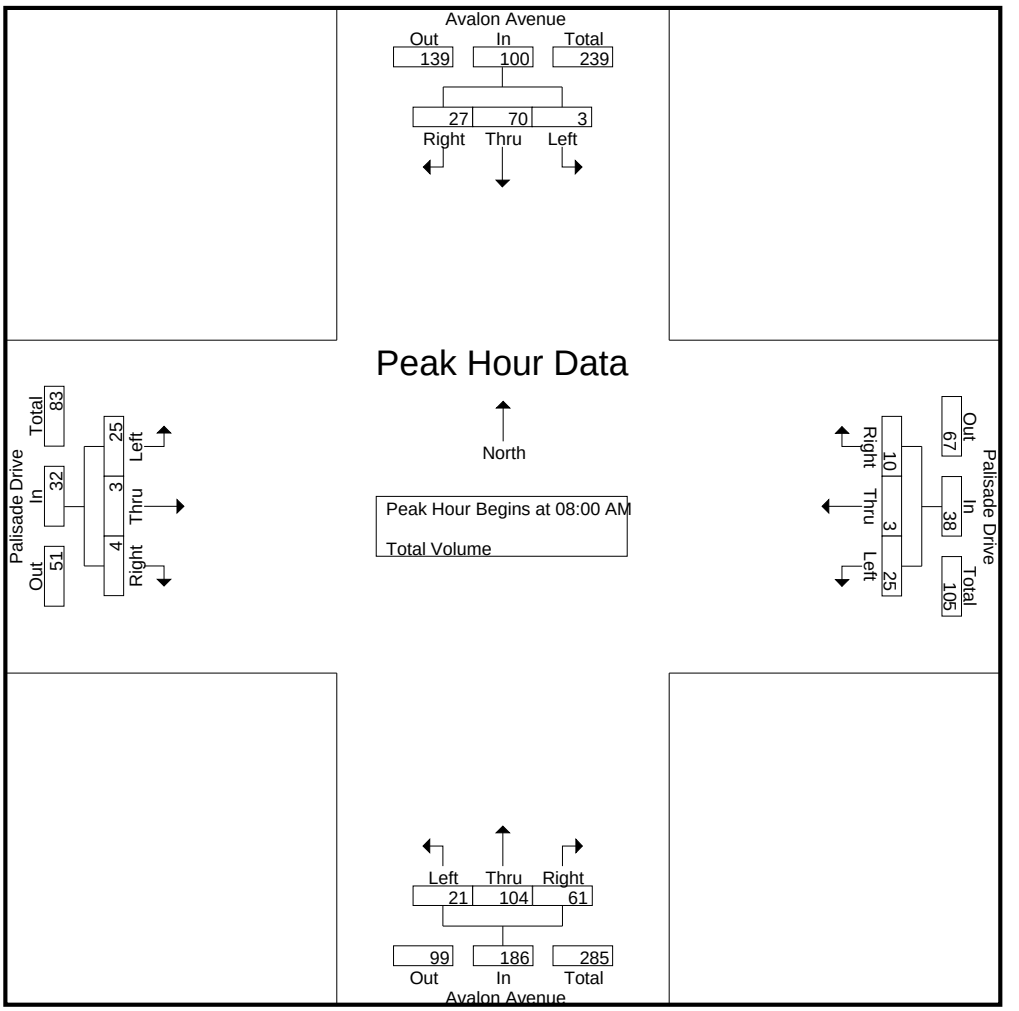
	Avalon Avenue Southbound				Palisade Drive Westbound				Avalon Avenue Northbound				Palisade Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	12	2	16	5	0	1	6	2	18	11	31	1	1	0	2	55
07:15 AM	1	11	5	17	6	1	7	14	2	13	8	23	0	1	0	1	55
07:30 AM	2	23	3	28	6	0	2	8	3	19	9	31	1	1	0	2	69
07:45 AM	2	12	10	24	5	1	3	9	9	15	15	39	0	2	1	3	75
Total	7	58	20	85	22	2	13	37	16	65	43	124	2	5	1	8	254
08:00 AM	0	12	5	17	7	0	2	9	5	18	10	33	7	1	0	8	67
08:15 AM	1	19	8	28	5	0	0	5	1	16	16	33	6	0	1	7	73
08:30 AM	0	26	6	32	6	0	4	10	9	22	17	48	2	1	2	5	95
08:45 AM	2	13	8	23	7	3	4	14	6	48	18	72	10	1	1	12	121
Total	3	70	27	100	25	3	10	38	21	104	61	186	25	3	4	32	356
Grand Total	10	128	47	185	47	5	23	75	37	169	104	310	27	8	5	40	610
Apprch %	5.4	69.2	25.4		62.7	6.7	30.7		11.9	54.5	33.5		67.5	20	12.5		
Total %	1.6	21	7.7	30.3	7.7	0.8	3.8	12.3	6.1	27.7	17	50.8	4.4	1.3	0.8	6.6	

	Avalon Avenue Southbound				Palisade Drive Westbound				Avalon Avenue Northbound				Palisade 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 08:00 AM																	
08:00 AM	0	12	5	17	**7**	0	2	9	5	18	10	33	7	**1**	0	8	67
08:15 AM	1	19	**8**	28	5	0	0	5	1	16	16	33	6	0	1	7	73
08:30 AM	0	**26**	6	**32**	6	0	**4**	10	**9**	22	17	48	2	1	**2**	5	95
08:45 AM	**2**	13	8	23	7	**3**	4	**14**	6	**48**	**18**	**72**	**10**	1	1	**12**	**121**
Total Volume	3	70	27	100	25	3	10	38	21	104	61	186	25	3	4	32	356
% App. Total	3	70	27		65.8	7.9	26.3		11.3	55.9	32.8		78.1	9.4	12.5		
PHF	.375	.673	.844	.781	.893	.250	.625	.679	.583	.542	.847	.646	.625	.750	.500	.667	.736

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

City of Yucca Valley
N/S: Avalon Avenue
E/W: Palisade Drive
Weather: Clear

File Name : 02_YCV_Ava_Pali AM
Site Code : 241081
Start Date : 12/11/2024
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:

	07:45 AM				07:15 AM				08:00 AM				08:00 AM			
+0 mins.	**2**	12	**10**	24	6	**1**	**7**	**14**	5	18	10	33	7	**1**	0	8
+15 mins.	0	12	5	17	6	0	2	8	1	16	16	33	6	0	1	7
+30 mins.	1	19	8	28	5	1	3	9	**9**	22	17	48	2	1	**2**	5
+45 mins.	0	**26**	6	**32**	**7**	0	2	9	6	**48**	**18**	**72**	**10**	1	1	**12**
Total Volume	3	69	29	101	24	2	14	40	21	104	61	186	25	3	4	32
% App. Total	3	68.3	28.7		60	5	35		11.3	55.9	32.8		78.1	9.4	12.5	
PHF	.375	.663	.725	.789	.857	.500	.500	.714	.583	.542	.847	.646	.625	.750	.500	.667

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

City of Yucca Valley
N/S: Avalon Avenue
E/W: Palisade Drive
Weather: Clear

File Name : 02_YCV_Ava_Pali PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

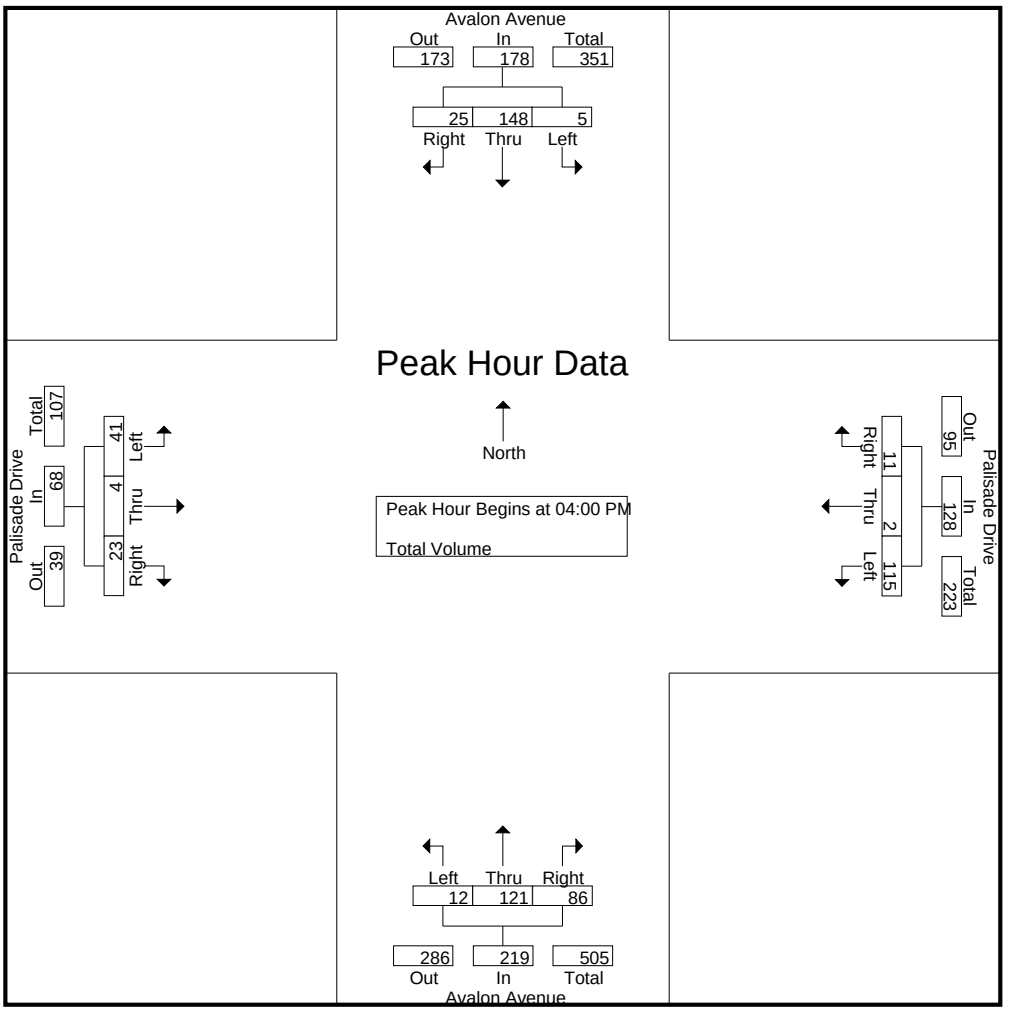
	Avalon Avenue Southbound				Palisade Drive Westbound				Avalon Avenue Northbound				Palisade Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	29	6	37	20	1	3	24	3	34	24	61	12	2	5	19	141
04:15 PM	0	32	7	39	26	0	5	31	1	36	23	60	9	0	5	14	144
04:30 PM	2	35	7	44	35	0	1	36	5	28	22	55	13	1	6	20	155
04:45 PM	1	52	5	58	34	1	2	37	3	23	17	43	7	1	7	15	153
Total	5	148	25	178	115	2	11	128	12	121	86	219	41	4	23	68	593
05:00 PM	2	24	4	30	21	2	7	30	0	28	23	51	12	6	4	22	133
05:15 PM	1	33	9	43	23	0	5	28	3	23	15	41	2	3	3	8	120
05:30 PM	0	33	3	36	23	1	3	27	1	35	15	51	8	1	3	12	126
05:45 PM	3	31	2	36	11	2	0	13	1	20	18	39	4	0	3	7	95
Total	6	121	18	145	78	5	15	98	5	106	71	182	26	10	13	49	474
Grand Total	11	269	43	323	193	7	26	226	17	227	157	401	67	14	36	117	1067
Apprch %	3.4	83.3	13.3		85.4	3.1	11.5		4.2	56.6	39.2		57.3	12	30.8		
Total %	1	25.2	4	30.3	18.1	0.7	2.4	21.2	1.6	21.3	14.7	37.6	6.3	1.3	3.4	11	

	Avalon Avenue Southbound				Palisade Drive Westbound				Avalon Avenue Northbound				Palisade 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	**2**	29	6	37	20	**1**	3	24	3	34	**24**	**61**	12	**2**	5	19	141
04:15 PM	0	32	**7**	39	26	0	**5**	31	1	**36**	23	60	9	0	5	14	144
04:30 PM	2	35	7	44	**35**	0	1	36	**5**	28	22	55	**13**	1	6	**20**	**155**
04:45 PM	1	**52**	5	**58**	34	1	2	**37**	3	23	17	43	7	1	**7**	15	153
Total Volume	5	148	25	178	115	2	11	128	12	121	86	219	41	4	23	68	593
% App. Total	2.8	83.1	14		89.8	1.6	8.6		5.5	55.3	39.3		60.3	5.9	33.8		
PHF	.625	.712	.893	.767	.821	.500	.550	.865	.600	.840	.896	.898	.788	.500	.821	.850	.956

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

City of Yucca Valley
N/S: Avalon Avenue
E/W: Palisade Drive
Weather: Clear

File Name : 02_YCV_Ava_Pali PM
Site Code : 241081
Start Date : 12/11/2024
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				04:15 PM				04:00 PM				04:15 PM			
+0 mins.	**2**	29	6	37	26	0	5	31	3	34	**24**	**61**	9	0	5	14
+15 mins.	0	32	**7**	39	**35**	0	1	36	1	**36**	23	60	**13**	1	6	20
+30 mins.	2	35	7	44	34	1	2	**37**	**5**	28	22	55	7	1	**7**	15
+45 mins.	1	**52**	5	**58**	21	**2**	**7**	30	3	23	17	43	12	**6**	4	**22**
Total Volume	5	148	25	178	116	3	15	134	12	121	86	219	41	8	22	71
% App. Total	2.8	83.1	14		86.6	2.2	11.2		5.5	55.3	39.3		57.7	11.3	31	
PHF	.625	.712	.893	.767	.829	.375	.536	.905	.600	.840	.896	.898	.788	.333	.786	.807

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

City of Yucca Valley
N/S: West Commercial Access Road
E/W: SR-62
Weather: Clear

File Name : 03_YCV_W CAR_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

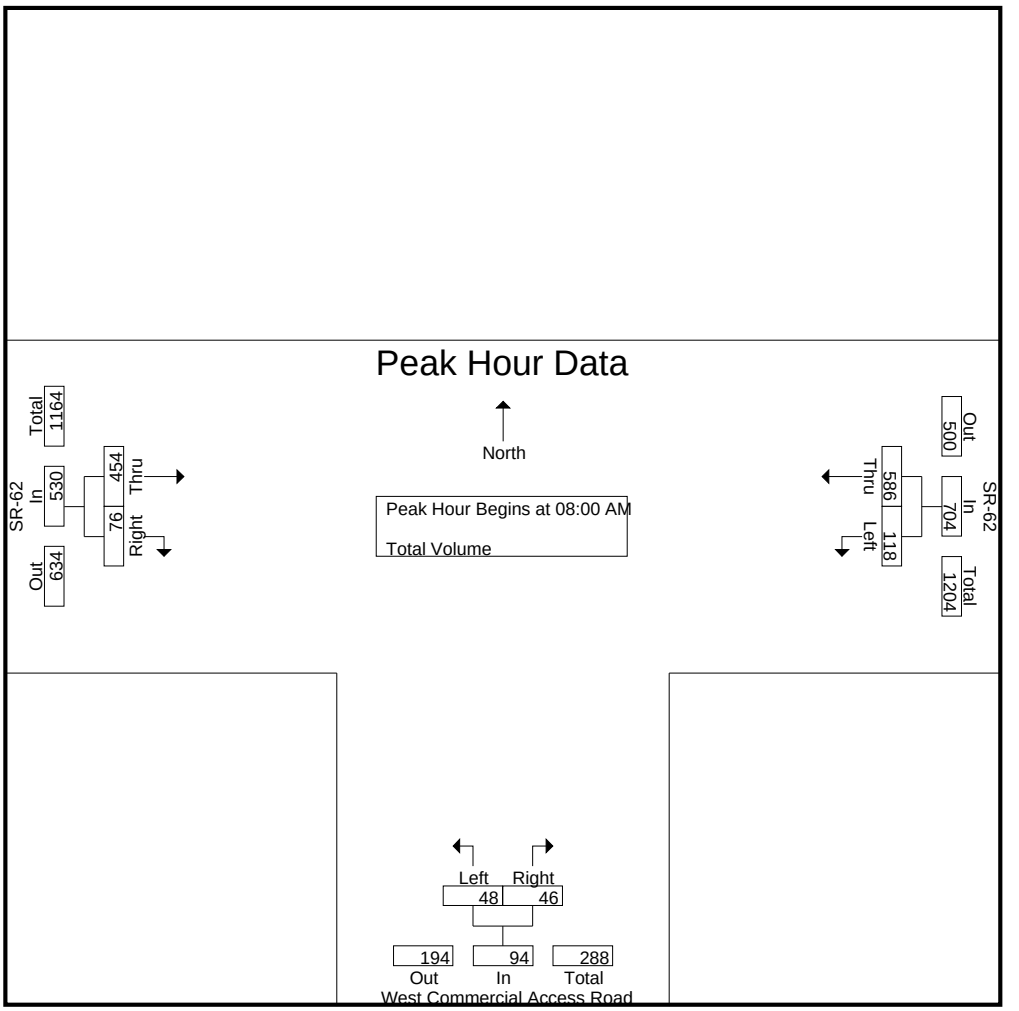
	SR-62 Westbound			West Commercial Access Road Northbound			SR-62 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	13	83	96	8	10	18	132	12	144	258
07:15 AM	14	112	126	9	4	13	112	7	119	258
07:30 AM	15	106	121	8	7	15	117	12	129	265
07:45 AM	24	165	189	9	10	19	136	16	152	360
Total	66	466	532	34	31	65	497	47	544	1141
08:00 AM	18	115	133	10	8	18	114	19	133	284
08:15 AM	35	136	171	14	10	24	93	12	105	300
08:30 AM	22	174	196	14	13	27	119	16	135	358
08:45 AM	43	161	204	10	15	25	128	29	157	386
Total	118	586	704	48	46	94	454	76	530	1328
Grand Total	184	1052	1236	82	77	159	951	123	1074	2469
Apprch %	14.9	85.1		51.6	48.4		88.5	11.5		
Total %	7.5	42.6	50.1	3.3	3.1	6.4	38.5	5	43.5	

	SR-62 Westbound			West Commercial Access Road Northbound			SR-62 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 08:00 AM										
08:00 AM	18	115	133	10	8	18	114	19	133	284
08:15 AM	35	136	171	**14**	10	24	93	12	105	300
08:30 AM	22	**174**	196	14	13	**27**	119	16	135	358
08:45 AM	**43**	161	**204**	10	**15**	25	**128**	**29**	**157**	**386**
Total Volume	118	586	704	48	46	94	454	76	530	1328
% App. Total	16.8	83.2		51.1	48.9		85.7	14.3		
PHF	.686	.842	.863	.857	.767	.870	.887	.655	.844	.860

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

City of Yucca Valley
N/S: West Commercial Access Road
E/W: SR-62
Weather: Clear

File Name : 03_YCV_W CAR_SR62 AM
Site Code : 241081
Start Date : 12/11/2024



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

	08:00 AM			08:00 AM			07:00 AM		
+0 mins.	18	115	133	10	8	18	132	12	144
+15 mins.	35	136	171	**14**	10	24	112	7	119
+30 mins.	22	**174**	196	14	13	**27**	117	12	129
+45 mins.	**43**	161	**204**	10	**15**	25	**136**	**16**	**152**
Total Volume	118	586	704	48	46	94	497	47	544
% App. Total	16.8	83.2		51.1	48.9		91.4	8.6	
PHF	.686	.842	.863	.857	.767	.870	.914	.734	.895

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

City of Yucca Valley
N/S: West Commercial Access Road
E/W: SR-62
Weather: Clear

File Name : 03_YCV_W CAR_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

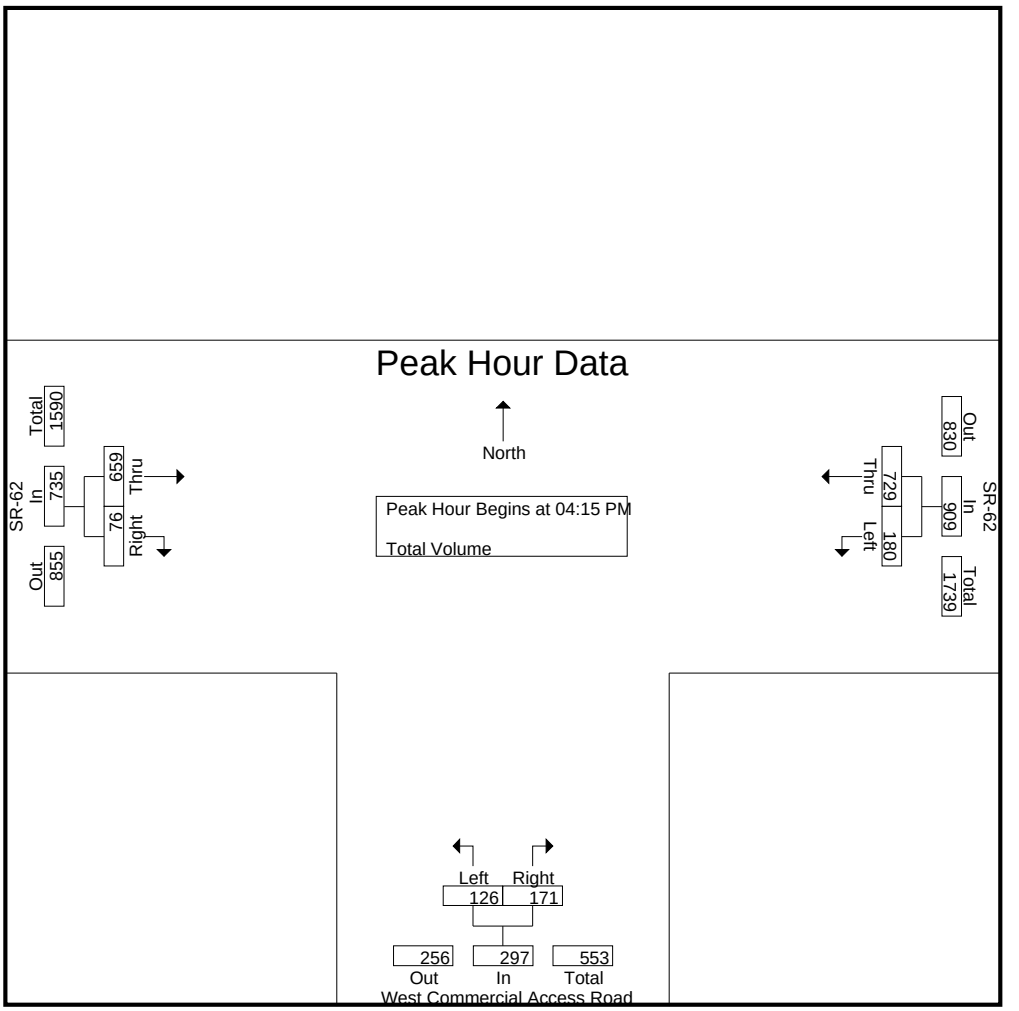
	SR-62 Westbound			West Commercial Access Road Northbound			SR-62 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	48	160	208	32	45	77	141	34	175	460
04:15 PM	31	175	206	33	48	81	157	17	174	461
04:30 PM	49	188	237	34	41	75	158	18	176	488
04:45 PM	48	176	224	32	44	76	165	19	184	484
Total	176	699	875	131	178	309	621	88	709	1893
05:00 PM	52	190	242	27	38	65	179	22	201	508
05:15 PM	34	176	210	16	35	51	152	14	166	427
05:30 PM	46	137	183	23	49	72	168	25	193	448
05:45 PM	43	122	165	26	43	69	157	19	176	410
Total	175	625	800	92	165	257	656	80	736	1793
Grand Total	351	1324	1675	223	343	566	1277	168	1445	3686
Apprch %	21	79		39.4	60.6		88.4	11.6		
Total %	9.5	35.9	45.4	6	9.3	15.4	34.6	4.6	39.2	

	SR-62 Westbound			West Commercial Access Road Northbound			SR-62 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 04:15 PM										
04:15 PM	31	175	206	33	**48**	**81**	157	17	174	461
04:30 PM	49	188	237	**34**	41	75	158	18	176	488
04:45 PM	48	176	224	32	44	76	165	19	184	484
05:00 PM	**52**	**190**	**242**	27	38	65	**179**	**22**	**201**	**508**
Total Volume	180	729	909	126	171	297	659	76	735	1941
% App. Total	19.8	80.2		42.4	57.6		89.7	10.3		
PHF	.865	.959	.939	.926	.891	.917	.920	.864	.914	.955

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

City of Yucca Valley
N/S: West Commercial Access Road
E/W: SR-62
Weather: Clear

File Name : 03_YCV_W CAR_SR62 PM
Site Code : 241081
Start Date : 12/11/2024



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

	04:30 PM			04:00 PM			04:45 PM		
+0 mins.	49	188	237	32	45	77	165	19	184
+15 mins.	48	176	224	33	**48**	**81**	**179**	22	**201**
+30 mins.	**52**	**190**	**242**	**34**	41	75	152	14	166
+45 mins.	34	176	210	32	44	76	168	**25**	193
Total Volume	183	730	913	131	178	309	664	80	744
% App. Total	20	80		42.4	57.6		89.2	10.8	
PHF	.880	.961	.943	.963	.927	.954	.927	.800	.925

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

City of Yucca Valley
N/S: East Commercial Access Road
E/W: SR-62
Weather: Clear

File Name : 04_YCV_E CAR_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

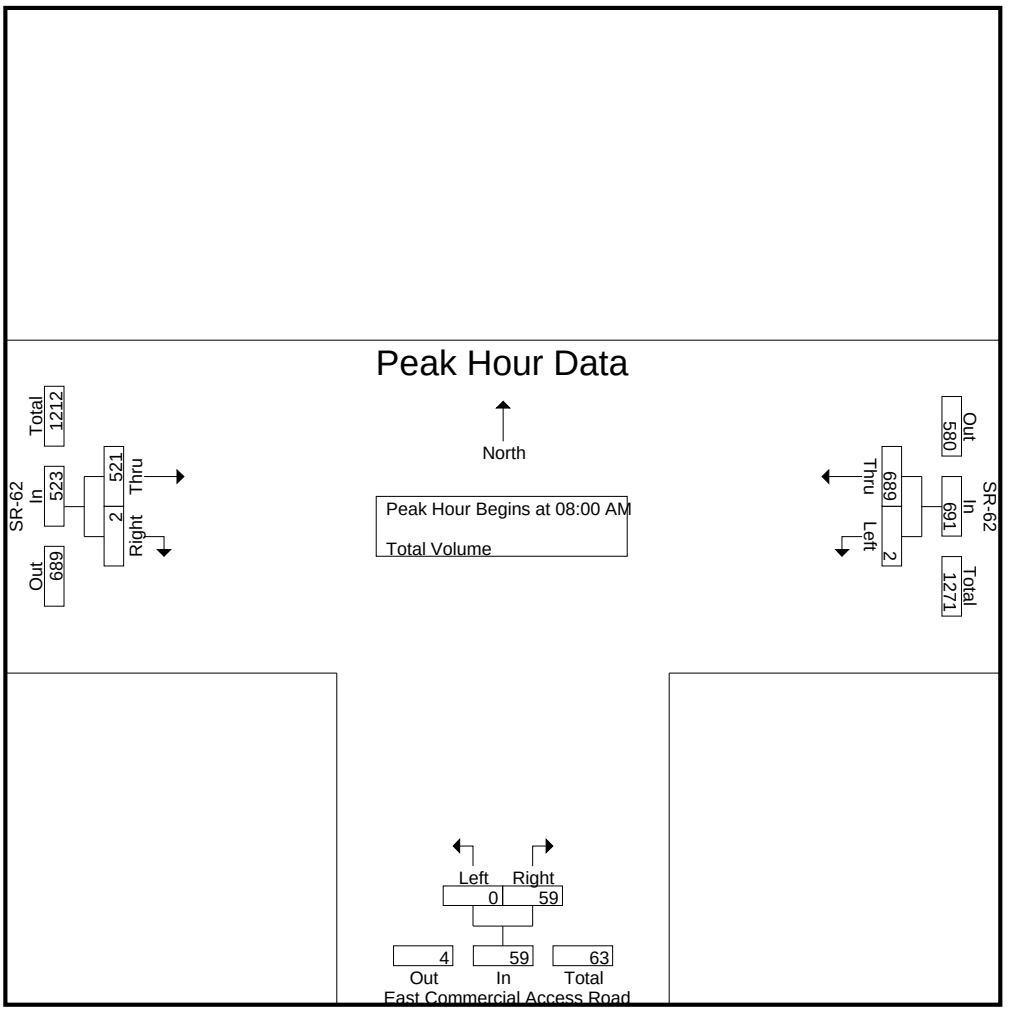
	SR-62 Westbound			East Commercial Access Road Northbound			SR-62 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	115	116	0	6	6	148	3	151	273
07:15 AM	0	120	120	0	10	10	111	0	111	241
07:30 AM	0	126	126	0	13	13	124	0	124	263
07:45 AM	0	191	191	0	11	11	155	1	156	358
Total	1	552	553	0	40	40	538	4	542	1135
08:00 AM	1	138	139	0	6	6	132	0	132	277
08:15 AM	1	160	161	0	20	20	105	1	106	287
08:30 AM	0	197	197	0	14	14	133	1	134	345
08:45 AM	0	194	194	0	19	19	151	0	151	364
Total	2	689	691	0	59	59	521	2	523	1273
Grand Total	3	1241	1244	0	99	99	1059	6	1065	2408
Apprch %	0.2	99.8		0	100		99.4	0.6		
Total %	0.1	51.5	51.7	0	4.1	4.1	44	0.2	44.2	

	SR-62 Westbound			East Commercial Access Road Northbound			SR-62 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 08:00 AM										
08:00 AM	**1**	138	139	0	6	6	132	0	132	277
08:15 AM	1	160	161	0	**20**	**20**	105	**1**	106	287
08:30 AM	0	**197**	**197**	0	14	14	133	1	134	345
08:45 AM	0	194	194	0	19	19	**151**	0	**151**	**364**
Total Volume	2	689	691	0	59	59	521	2	523	1273
% App. Total	0.3	99.7		0	100		99.6	0.4		
PHF	.500	.874	.877	.000	.738	.738	.863	.500	.866	.874

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

City of Yucca Valley
N/S: East Commercial Access Road
E/W: SR-62
Weather: Clear

File Name : 04_YCV_E CAR_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
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:

	08:00 AM			08:00 AM			07:00 AM		
+0 mins.	**1**	138	139	0	6	6	148	**3**	151
+15 mins.	1	160	161	0	**20**	**20**	111	0	111
+30 mins.	0	**197**	**197**	0	14	14	124	0	124
+45 mins.	0	194	194	0	19	19	**155**	1	**156**
Total Volume	2	689	691	0	59	59	538	4	542
% App. Total	0.3	99.7		0	100		99.3	0.7	
PHF	.500	.874	.877	.000	.738	.738	.868	.333	.869

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

City of Yucca Valley
N/S: East Commercial Access Road
E/W: SR-62
Weather: Clear

File Name : 04_YCV_E CAR_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

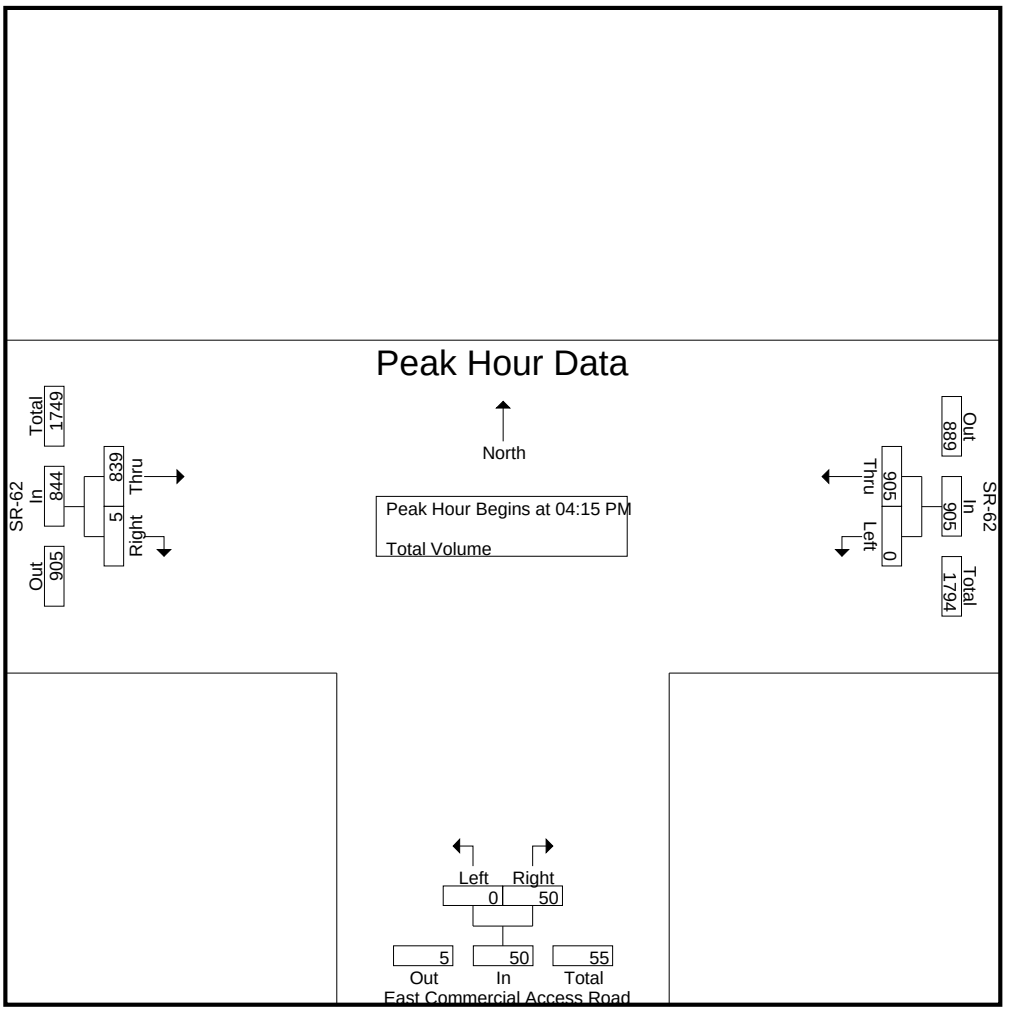
	SR-62 Westbound			East Commercial Access Road Northbound			SR-62 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	203	203	0	16	16	189	2	191	410
04:15 PM	0	212	212	0	9	9	202	1	203	424
04:30 PM	0	237	237	0	14	14	203	3	206	457
04:45 PM	0	204	204	0	18	18	209	1	210	432
Total	0	856	856	0	57	57	803	7	810	1723
05:00 PM	0	252	252	0	9	9	225	0	225	486
05:15 PM	0	200	200	0	13	13	183	0	183	396
05:30 PM	0	179	179	0	4	4	219	1	220	403
05:45 PM	0	171	171	0	11	11	198	0	198	380
Total	0	802	802	0	37	37	825	1	826	1665
Grand Total	0	1658	1658	0	94	94	1628	8	1636	3388
Apprch %	0	100		0	100		99.5	0.5		
Total %	0	48.9	48.9	0	2.8	2.8	48.1	0.2	48.3	

	SR-62 Westbound			East Commercial Access Road Northbound			SR-62 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 04:15 PM										
04:15 PM	0	212	212	0	9	9	202	1	203	424
04:30 PM	0	237	237	0	14	14	203	**3**	206	457
04:45 PM	0	204	204	0	**18**	**18**	209	1	210	432
05:00 PM	0	**252**	**252**	0	9	9	**225**	0	**225**	**486**
Total Volume	0	905	905	0	50	50	839	5	844	1799
% App. Total	0	100		0	100		99.4	0.6		
PHF	.000	.898	.898	.000	.694	.694	.932	.417	.938	.925

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

City of Yucca Valley
N/S: East Commercial Access Road
E/W: SR-62
Weather: Clear

File Name : 04_YCV_E CAR_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
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			04:00 PM			04:15 PM		
+0 mins.	0	212	212	0	16	16	202	1	203
+15 mins.	0	237	237	0	9	9	203	**3**	206
+30 mins.	0	204	204	0	14	14	209	1	210
+45 mins.	0	**252**	**252**	0	**18**	**18**	**225**	0	**225**
Total Volume	0	905	905	0	57	57	839	5	844
% App. Total	0	100		0	100		99.4	0.6	
PHF	.000	.898	.898	.000	.792	.792	.932	.417	.938

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

City of Yucca Valley
N/S: Yucca Mesa Road/La Contenta Road
E/W: SR-62
Weather: Clear

File Name : 05_YCV_YM_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

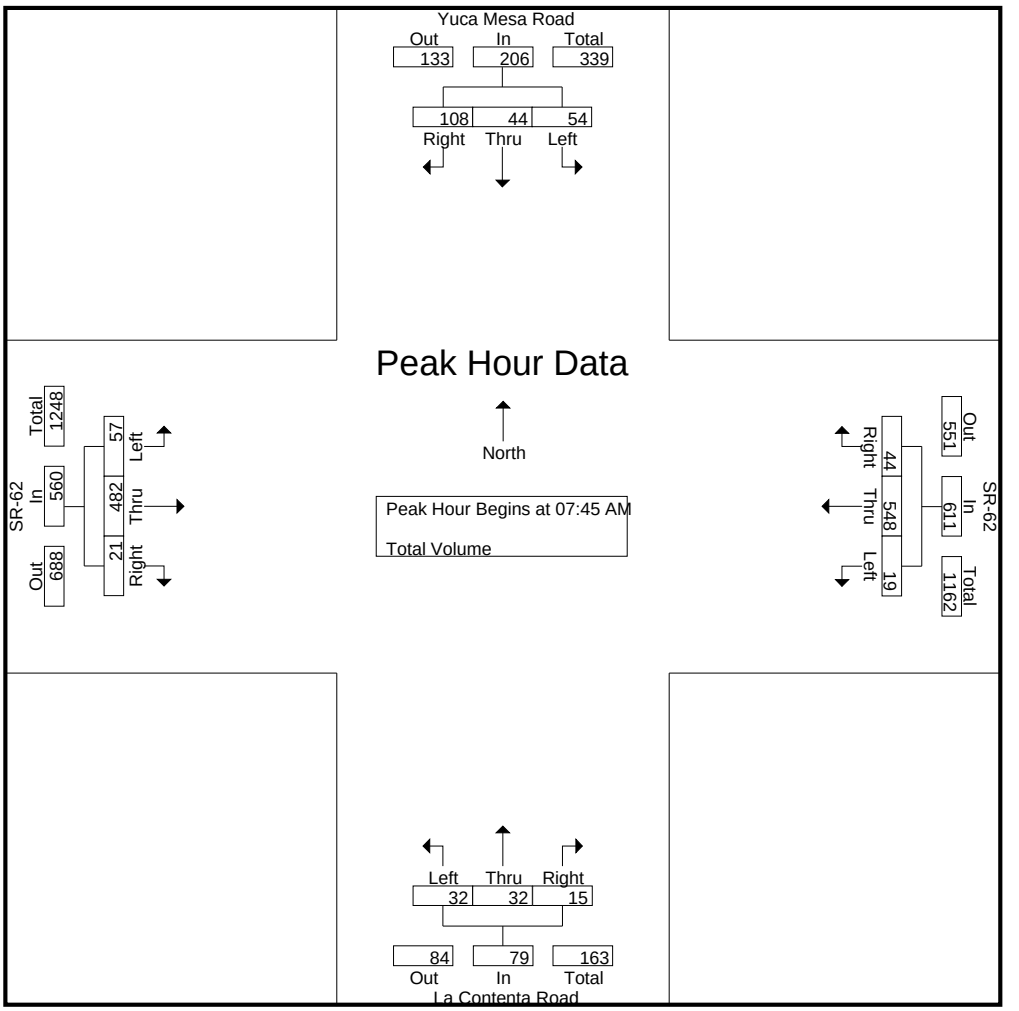
	Yuca Mesa Road Southbound				SR-62 Westbound				La Contenta Road Northbound				SR-62 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	15	18	8	41	9	88	4	101	16	13	10	39	12	112	16	140	321
07:15 AM	11	3	11	25	3	102	6	111	7	5	3	15	9	116	8	133	284
07:30 AM	26	4	7	37	3	111	10	124	3	4	3	10	7	118	6	131	302
07:45 AM	16	15	33	64	6	151	15	172	8	5	6	19	12	136	8	156	411
Total	68	40	59	167	21	452	35	508	34	27	22	83	40	482	38	560	1318
08:00 AM	12	11	28	51	5	106	8	119	8	8	3	19	16	122	3	141	330
08:15 AM	10	8	19	37	2	136	14	152	10	11	2	23	10	113	4	127	339
08:30 AM	16	10	28	54	6	155	7	168	6	8	4	18	19	111	6	136	376
08:45 AM	15	16	26	57	7	176	9	192	2	4	4	10	11	129	12	152	411
Total	53	45	101	199	20	573	38	631	26	31	13	70	56	475	25	556	1456
Grand Total	121	85	160	366	41	1025	73	1139	60	58	35	153	96	957	63	1116	2774
Apprch %	33.1	23.2	43.7		3.6	90	6.4		39.2	37.9	22.9		8.6	85.8	5.6		
Total %	4.4	3.1	5.8	13.2	1.5	37	2.6	41.1	2.2	2.1	1.3	5.5	3.5	34.5	2.3	40.2	

	Yuca Mesa Road Southbound				SR-62 Westbound				La Contenta Road Northbound				SR-62 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	**16**	**15**	**33**	**64**	**6**	151	**15**	**172**	8	5	**6**	19	12	**136**	**8**	**156**	**411**
08:00 AM	12	11	28	51	5	106	8	119	8	8	3	19	16	122	3	141	330
08:15 AM	10	8	19	37	2	136	14	152	**10**	**11**	2	**23**	10	113	4	127	339
08:30 AM	16	10	28	54	6	**155**	7	168	6	8	4	18	**19**	111	6	136	376
Total Volume	54	44	108	206	19	548	44	611	32	32	15	79	57	482	21	560	1456
% App. Total	26.2	21.4	52.4		3.1	89.7	7.2		40.5	40.5	19		10.2	86.1	3.8		
PHF	.844	.733	.818	.805	.792	.884	.733	.888	.800	.727	.625	.859	.750	.886	.656	.897	.886

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

City of Yucca Valley
N/S: Yucca Mesa Road/La Contenta Road
E/W: SR-62
Weather: Clear

File Name : 05_YCV_YM_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
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:

	07:45 AM				08:00 AM				07:00 AM				07:15 AM			
+0 mins.	**16**	**15**	**33**	**64**	5	106	8	119	**16**	**13**	**10**	**39**	9	116	**8**	133
+15 mins.	12	11	28	51	2	136	**14**	152	7	5	3	15	7	118	6	131
+30 mins.	10	8	19	37	6	155	7	168	3	4	3	10	12	**136**	8	**156**
+45 mins.	16	10	28	54	**7**	**176**	9	**192**	8	5	6	19	**16**	122	3	141
Total Volume	54	44	108	206	20	573	38	631	34	27	22	83	44	492	25	561
% App. Total	26.2	21.4	52.4		3.2	90.8	6		41	32.5	26.5		7.8	87.7	4.5	
PHF	.844	.733	.818	.805	.714	.814	.679	.822	.531	.519	.550	.532	.688	.904	.781	.899

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

City of Yucca Valley
N/S: Yucca Mesa Road/La Contenta Road
E/W: SR-62
Weather: Clear

File Name : 05_YCV_YM_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

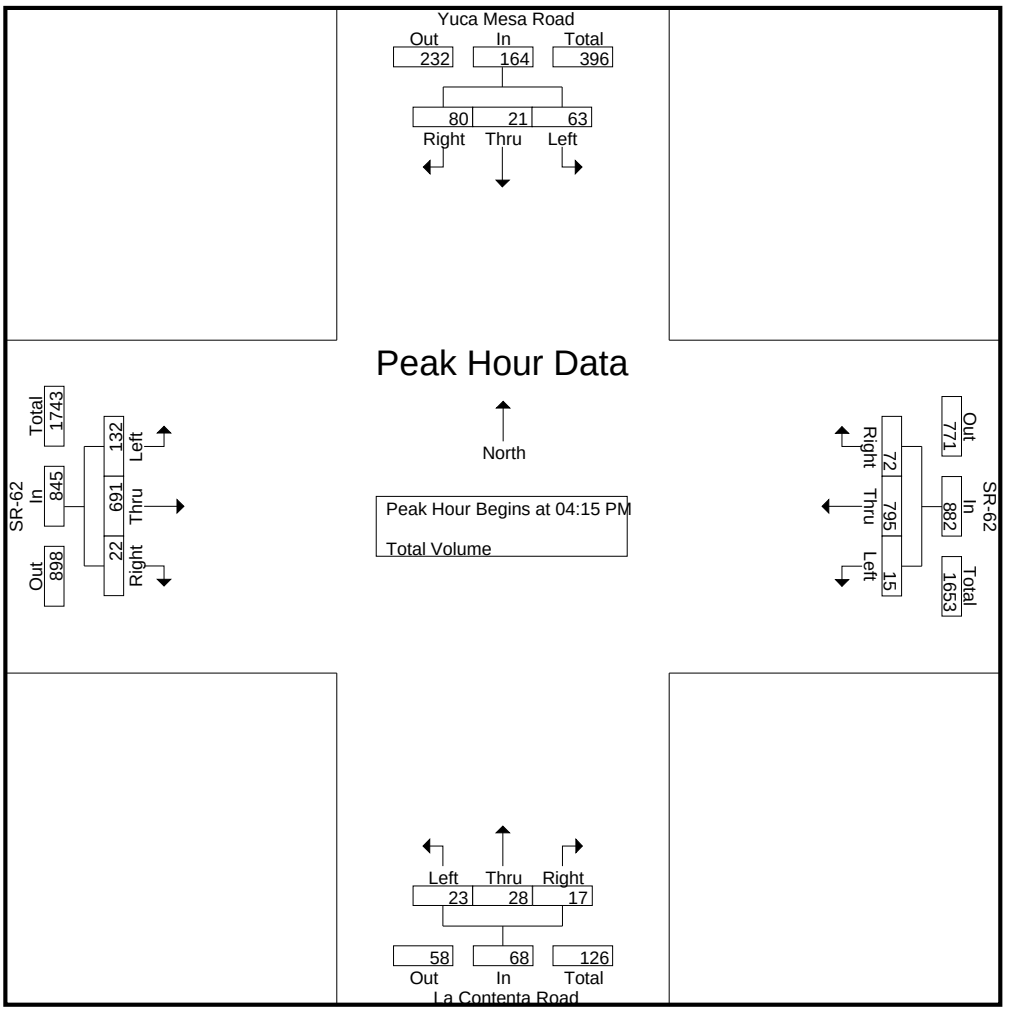
	Yuca Mesa Road Southbound				SR-62 Westbound				La Contenta Road Northbound				SR-62 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	13	4	21	38	6	172	9	187	5	9	2	16	41	155	8	204	445
04:15 PM	18	6	13	37	3	193	22	218	6	8	2	16	35	172	6	213	484
04:30 PM	16	6	19	41	3	213	13	229	7	9	8	24	33	154	5	192	486
04:45 PM	12	5	22	39	4	198	21	223	2	6	2	10	30	186	6	222	494
Total	59	21	75	155	16	776	65	857	20	32	14	66	139	667	25	831	1909
05:00 PM	17	4	26	47	5	191	16	212	8	5	5	18	34	179	5	218	495
05:15 PM	11	5	6	22	3	194	18	215	1	6	4	11	32	141	5	178	426
05:30 PM	11	2	21	34	8	136	11	155	3	6	3	12	24	148	5	177	378
05:45 PM	10	2	24	36	3	157	9	169	5	6	2	13	32	149	3	184	402
Total	49	13	77	139	19	678	54	751	17	23	14	54	122	617	18	757	1701
Grand Total	108	34	152	294	35	1454	119	1608	37	55	28	120	261	1284	43	1588	3610
Apprch %	36.7	11.6	51.7		2.2	90.4	7.4		30.8	45.8	23.3		16.4	80.9	2.7		
Total %	3	0.9	4.2	8.1	1	40.3	3.3	44.5	1	1.5	0.8	3.3	7.2	35.6	1.2	44	

	Yuca Mesa Road Southbound				SR-62 Westbound				La Contenta Road Northbound				SR-62 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 04:15 PM																	
04:15 PM	**18**	**6**	13	37	3	193	**22**	218	6	8	2	16	**35**	172	**6**	213	484
04:30 PM	16	6	19	41	3	**213**	13	**229**	7	**9**	**8**	**24**	33	154	5	192	486
04:45 PM	12	5	22	39	4	198	21	223	2	6	2	10	30	**186**	6	**222**	494
05:00 PM	17	4	**26**	**47**	**5**	191	16	212	**8**	5	5	18	34	179	5	218	**495**
Total Volume	63	21	80	164	15	795	72	882	23	28	17	68	132	691	22	845	1959
% App. Total	38.4	12.8	48.8		1.7	90.1	8.2		33.8	41.2	25		15.6	81.8	2.6		
PHF	.875	.875	.769	.872	.750	.933	.818	.963	.719	.778	.531	.708	.943	.929	.917	.952	.989

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

City of Yucca Valley
N/S: Yucca Mesa Road/La Contenta Road
E/W: SR-62
Weather: Clear

File Name : 05_YCV_YM_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
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				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	**18**	**6**	13	37	3	193	**22**	218	6	8	2	16	**35**	172	**6**	213
+15 mins.	16	6	19	41	3	**213**	13	**229**	7	**9**	**8**	**24**	33	154	5	192
+30 mins.	12	5	22	39	4	198	21	223	2	6	2	10	30	**186**	6	**222**
+45 mins.	17	4	**26**	**47**	**5**	191	16	212	**8**	5	5	18	34	179	5	218
Total Volume	63	21	80	164	15	795	72	882	23	28	17	68	132	691	22	845
% App. Total	38.4	12.8	48.8		1.7	90.1	8.2		33.8	41.2	25		15.6	81.8	2.6	
PHF	.875	.875	.769	.872	.750	.933	.818	.963	.719	.778	.531	.708	.943	.929	.917	.952

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

City of Yucca Valley
N/S: Palomar Avenue
E/W: Yucca Trail
Weather: Clear

File Name : 06_YCV_Pal_YT AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

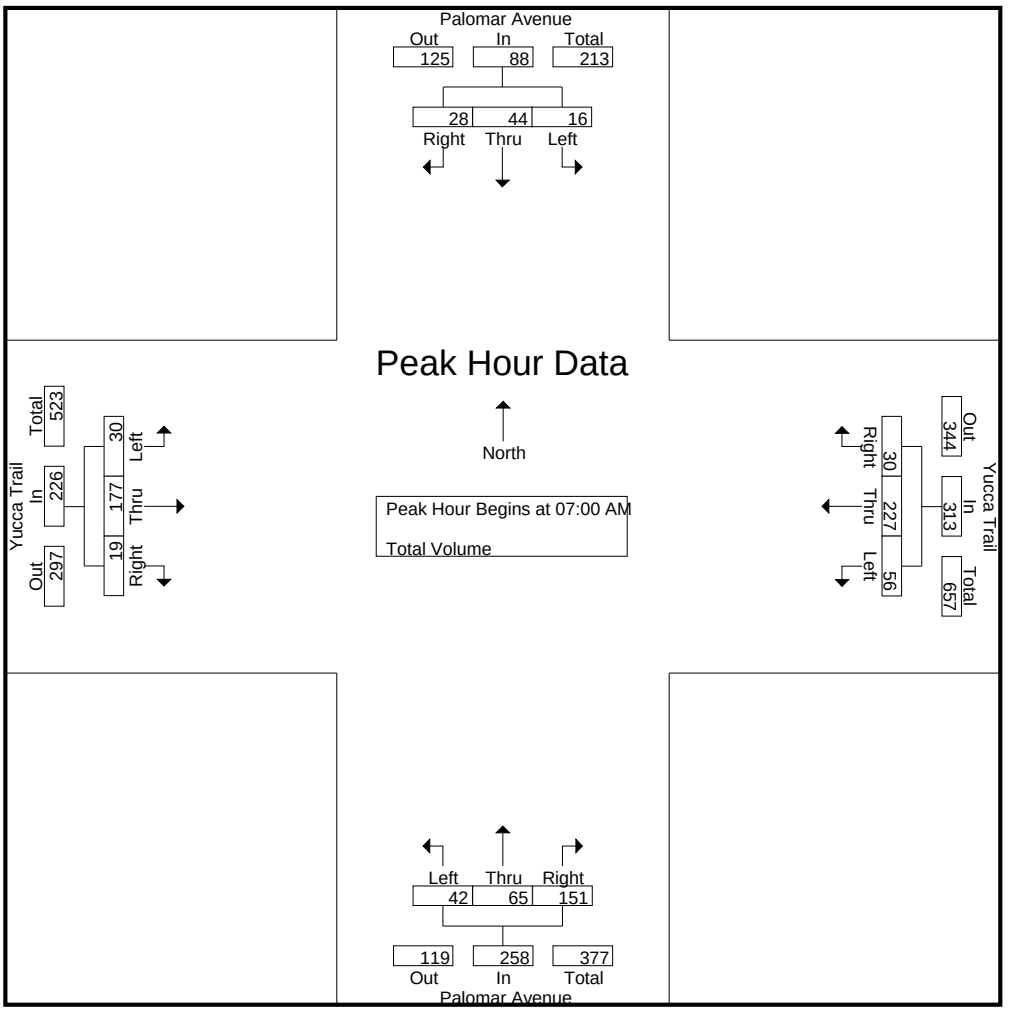
	Palomar Avenue Southbound				Yucca Trail Westbound				Palomar Avenue Northbound				Yucca Trail Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	11	9	25	22	95	9	126	16	16	42	74	10	61	4	75	300
07:15 AM	4	7	4	15	10	42	5	57	5	12	40	57	5	39	4	48	177
07:30 AM	4	16	8	28	12	39	8	59	11	14	32	57	6	31	4	41	185
07:45 AM	3	10	7	20	12	51	8	71	10	23	37	70	9	46	7	62	223
Total	16	44	28	88	56	227	30	313	42	65	151	258	30	177	19	226	885
08:00 AM	0	10	9	19	12	47	4	63	11	22	32	65	8	38	6	52	199
08:15 AM	3	18	3	24	17	49	1	67	9	15	26	50	15	41	8	64	205
08:30 AM	4	17	14	35	9	36	9	54	9	31	22	62	15	23	4	42	193
08:45 AM	6	14	7	27	14	54	15	83	12	33	23	68	20	51	6	77	255
Total	13	59	33	105	52	186	29	267	41	101	103	245	58	153	24	235	852
Grand Total	29	103	61	193	108	413	59	580	83	166	254	503	88	330	43	461	1737
Apprch %	15	53.4	31.6		18.6	71.2	10.2		16.5	33	50.5		19.1	71.6	9.3		
Total %	1.7	5.9	3.5	11.1	6.2	23.8	3.4	33.4	4.8	9.6	14.6	29	5.1	19	2.5	26.5	

	Palomar Avenue Southbound				Yucca Trail Westbound				Palomar Avenue Northbound				Yucca Trail 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 07:00 AM																	
07:00 AM	**5**	11	**9**	25	**22**	**95**	**9**	**126**	**16**	16	**42**	**74**	**10**	**61**	4	**75**	**300**
07:15 AM	4	7	4	15	10	42	5	57	5	12	40	57	5	39	4	48	177
07:30 AM	4	**16**	8	**28**	12	39	8	59	11	14	32	57	6	31	4	41	185
07:45 AM	3	10	7	20	12	51	8	71	10	**23**	37	70	9	46	**7**	62	223
Total Volume	16	44	28	88	56	227	30	313	42	65	151	258	30	177	19	226	885
% App. Total	18.2	50	31.8		17.9	72.5	9.6		16.3	25.2	58.5		13.3	78.3	8.4		
PHF	.800	.688	.778	.786	.636	.597	.833	.621	.656	.707	.899	.872	.750	.725	.679	.753	.738

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

City of Yucca Valley
N/S: Palomar Avenue
E/W: Yucca Trail
Weather: Clear

File Name : 06_YCV_Pal_YT AM
Site Code : 241081
Start Date : 12/11/2024
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:

	08:00 AM				07:00 AM				07:00 AM				08:00 AM			
+0 mins.	0	10	9	19	**22**	**95**	**9**	**126**	**16**	16	**42**	**74**	8	38	6	52
+15 mins.	3	**18**	3	24	10	42	5	57	5	12	40	57	15	41	**8**	64
+30 mins.	4	17	**14**	**35**	12	39	8	59	11	14	32	57	15	23	4	42
+45 mins.	**6**	14	7	27	12	51	8	71	10	**23**	37	70	**20**	**51**	6	**77**
Total Volume	13	59	33	105	56	227	30	313	42	65	151	258	58	153	24	235
% App. Total	12.4	56.2	31.4		17.9	72.5	9.6		16.3	25.2	58.5		24.7	65.1	10.2	
PHF	.542	.819	.589	.750	.636	.597	.833	.621	.656	.707	.899	.872	.725	.750	.750	.763

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

City of Yucca Valley
N/S: Palomar Avenue
E/W: Yucca Trail
Weather: Clear

File Name : 06_YCV_Pal_YT PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

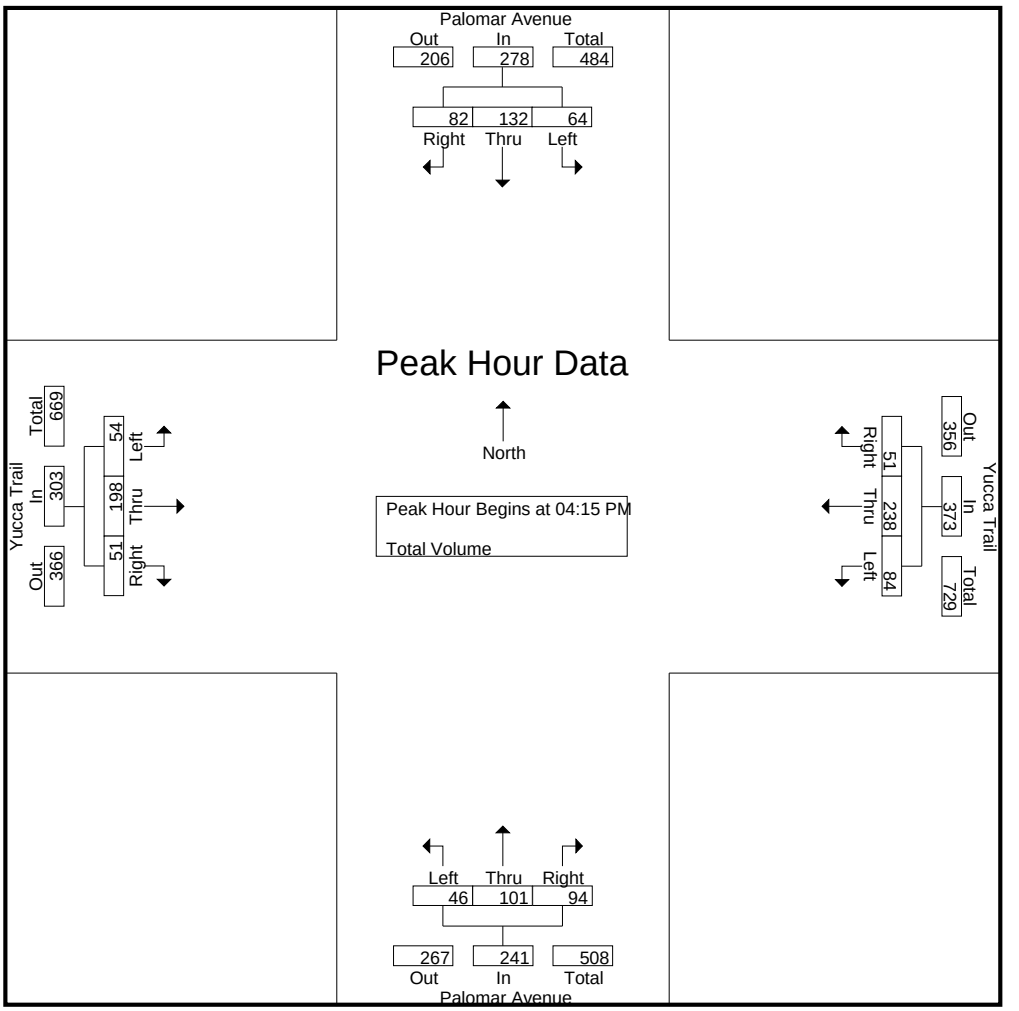
	Palomar Avenue Southbound				Yucca Trail Westbound				Palomar Avenue Northbound				Yucca Trail Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	16	25	14	55	12	62	16	90	7	29	23	59	19	48	8	75	279
04:15 PM	8	31	20	59	18	58	15	91	7	27	23	57	16	44	12	72	279
04:30 PM	19	32	20	71	24	57	10	91	14	25	26	65	18	39	11	68	295
04:45 PM	23	38	29	90	15	58	13	86	13	24	23	60	10	55	8	73	309
Total	66	126	83	275	69	235	54	358	41	105	95	241	63	186	39	288	1162
05:00 PM	14	31	13	58	27	65	13	105	12	25	22	59	10	60	20	90	312
05:15 PM	11	25	12	48	19	59	7	85	7	22	16	45	10	48	15	73	251
05:30 PM	4	33	20	57	14	42	15	71	7	26	25	58	9	46	11	66	252
05:45 PM	7	22	16	45	7	42	7	56	6	26	15	47	15	49	15	79	227
Total	36	111	61	208	67	208	42	317	32	99	78	209	44	203	61	308	1042
Grand Total	102	237	144	483	136	443	96	675	73	204	173	450	107	389	100	596	2204
Apprch %	21.1	49.1	29.8		20.1	65.6	14.2		16.2	45.3	38.4		18	65.3	16.8		
Total %	4.6	10.8	6.5	21.9	6.2	20.1	4.4	30.6	3.3	9.3	7.8	20.4	4.9	17.6	4.5	27	

	Palomar Avenue Southbound				Yucca Trail Westbound				Palomar Avenue Northbound				Yucca Trail 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 04:15 PM																	
04:15 PM	8	31	20	59	18	58	**15**	91	7	**27**	23	57	16	44	12	72	279
04:30 PM	19	32	20	71	24	57	10	91	**14**	25	**26**	**65**	**18**	39	11	68	295
04:45 PM	**23**	**38**	**29**	**90**	15	58	13	86	13	24	23	60	10	55	8	73	309
05:00 PM	14	31	13	58	**27**	**65**	13	**105**	12	25	22	59	10	**60**	**20**	**90**	**312**
Total Volume	64	132	82	278	84	238	51	373	46	101	94	241	54	198	51	303	1195
% App. Total	23	47.5	29.5		22.5	63.8	13.7		19.1	41.9	39		17.8	65.3	16.8		
PHF	.696	.868	.707	.772	.778	.915	.850	.888	.821	.935	.904	.927	.750	.825	.638	.842	.958

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

City of Yucca Valley
N/S: Palomar Avenue
E/W: Yucca Trail
Weather: Clear

File Name : 06_YCV_Pal_YT PM
Site Code : 241081
Start Date : 12/11/2024
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				04:15 PM				04:00 PM				05:00 PM			
+0 mins.	8	31	20	59	18	58	**15**	91	7	**29**	23	59	10	**60**	**20**	**90**
+15 mins.	19	32	20	71	24	57	10	91	7	27	23	57	10	48	15	73
+30 mins.	**23**	**38**	**29**	**90**	15	58	13	86	**14**	25	**26**	**65**	9	46	11	66
+45 mins.	14	31	13	58	**27**	**65**	13	**105**	13	24	23	60	**15**	49	15	79
Total Volume	64	132	82	278	84	238	51	373	41	105	95	241	44	203	61	308
% App. Total	23	47.5	29.5		22.5	63.8	13.7		17	43.6	39.4		14.3	65.9	19.8	
PHF	.696	.868	.707	.772	.778	.915	.850	.888	.732	.905	.913	.927	.733	.846	.763	.856

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

City of Yucca Valley
N/S: La Contenta Road
E/W: Yucca Trail/Alta Loma Road
Weather: Clear

File Name : 07_YCV_LaC_YT AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

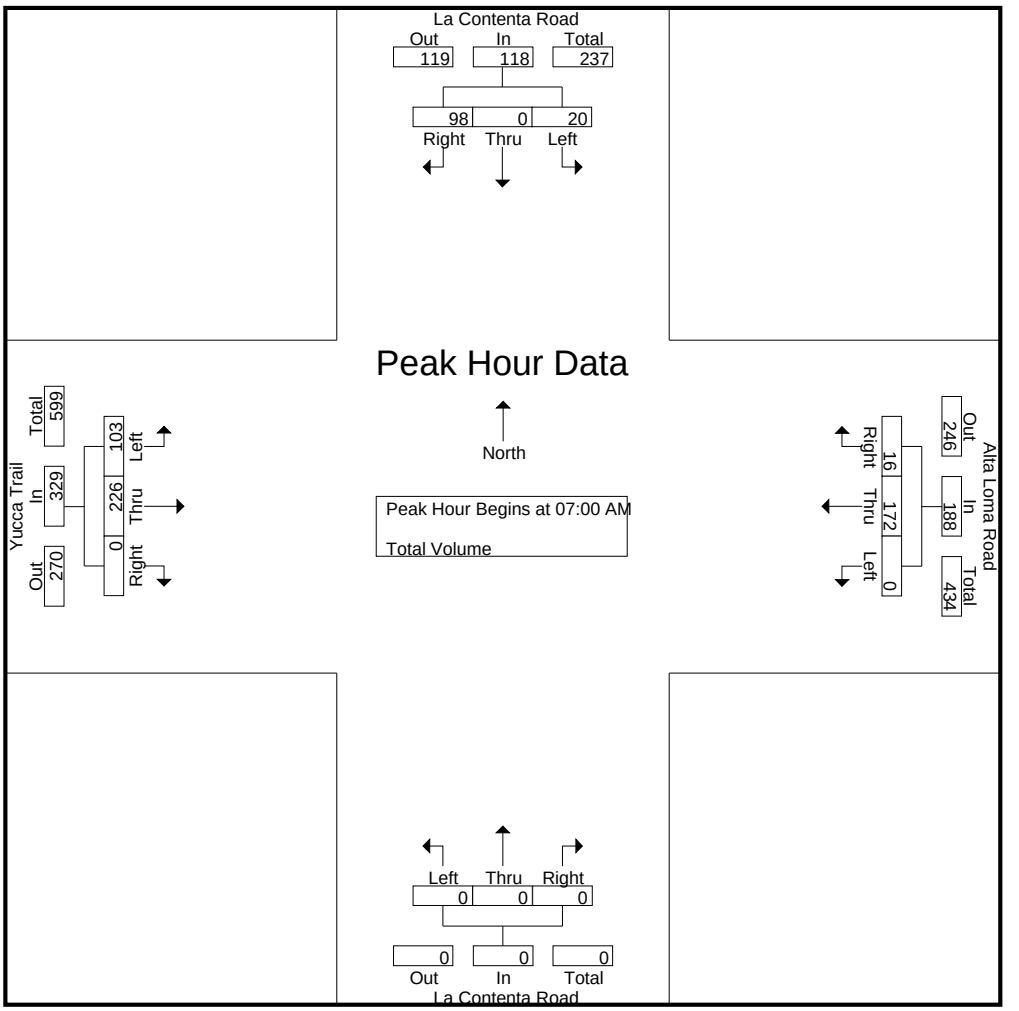
	La Contenta Road Southbound				Alta Loma Road Westbound				La Contenta Road Northbound				Yucca Trail Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	0	65	77	0	42	10	52	0	0	0	0	67	46	0	113	242
07:15 AM	5	0	12	17	0	34	1	35	0	0	0	0	12	71	0	83	135
07:30 AM	0	0	9	9	0	50	1	51	0	0	0	0	8	53	0	61	121
07:45 AM	3	0	12	15	0	46	4	50	0	0	0	0	16	56	0	72	137
Total	20	0	98	118	0	172	16	188	0	0	0	0	103	226	0	329	635
08:00 AM	5	0	14	19	0	39	5	44	0	0	0	0	20	39	0	59	122
08:15 AM	1	0	10	11	0	47	3	50	0	0	0	0	14	40	0	54	115
08:30 AM	2	0	7	9	0	43	2	45	0	0	0	0	16	33	0	49	103
08:45 AM	4	0	18	22	0	49	0	49	0	0	0	0	10	60	0	70	141
Total	12	0	49	61	0	178	10	188	0	0	0	0	60	172	0	232	481
Grand Total	32	0	147	179	0	350	26	376	0	0	0	0	163	398	0	561	1116
Apprch %	17.9	0	82.1		0	93.1	6.9		0	0	0		29.1	70.9	0		
Total %	2.9	0	13.2	16	0	31.4	2.3	33.7	0	0	0	0	14.6	35.7	0	50.3	

	La Contenta Road Southbound				Alta Loma Road Westbound				La Contenta Road Northbound				Yucca Trail 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 07:00 AM																	
07:00 AM	**12**	0	**65**	**77**	0	42	**10**	**52**	0	0	0	0	**67**	46	0	**113**	**242**
07:15 AM	5	0	12	17	0	34	1	35	0	0	0	0	12	**71**	0	83	135
07:30 AM	0	0	9	9	0	**50**	1	51	0	0	0	0	8	53	0	61	121
07:45 AM	3	0	12	15	0	46	4	50	0	0	0	0	16	56	0	72	137
Total Volume	20	0	98	118	0	172	16	188	0	0	0	0	103	226	0	329	635
% App. Total	16.9	0	83.1		0	91.5	8.5		0	0	0		31.3	68.7	0		
PHF	.417	.000	.377	.383	.000	.860	.400	.904	.000	.000	.000	.000	.384	.796	.000	.728	.656

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

City of Yucca Valley
N/S: La Contenta Road
E/W: Yucca Trail/Alta Loma Road
Weather: Clear

File Name : 07_YCV_LaC_YT AM
Site Code : 241081
Start Date : 12/11/2024
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:

	07:00 AM				07:30 AM				07:00 AM				07:00 AM			
+0 mins.	**12**	0	**65**	**77**	0	**50**	1	**51**	0	0	0	0	**67**	46	0	**113**
+15 mins.	5	0	12	17	0	46	4	50	0	0	0	0	12	**71**	0	83
+30 mins.	0	0	9	9	0	39	**5**	44	0	0	0	0	8	53	0	61
+45 mins.	3	0	12	15	0	47	3	50	0	0	0	0	16	56	0	72
Total Volume	20	0	98	118	0	182	13	195	0	0	0	0	103	226	0	329
% App. Total	16.9	0	83.1		0	93.3	6.7		0	0	0		31.3	68.7	0	
PHF	.417	.000	.377	.383	.000	.910	.650	.956	.000	.000	.000	.000	.384	.796	.000	.728

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

City of Yucca Valley
N/S: La Contenta Road
E/W: Yucca Trail/Alta Loma Road
Weather: Clear

File Name : 07_YCV_LaC_YT PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

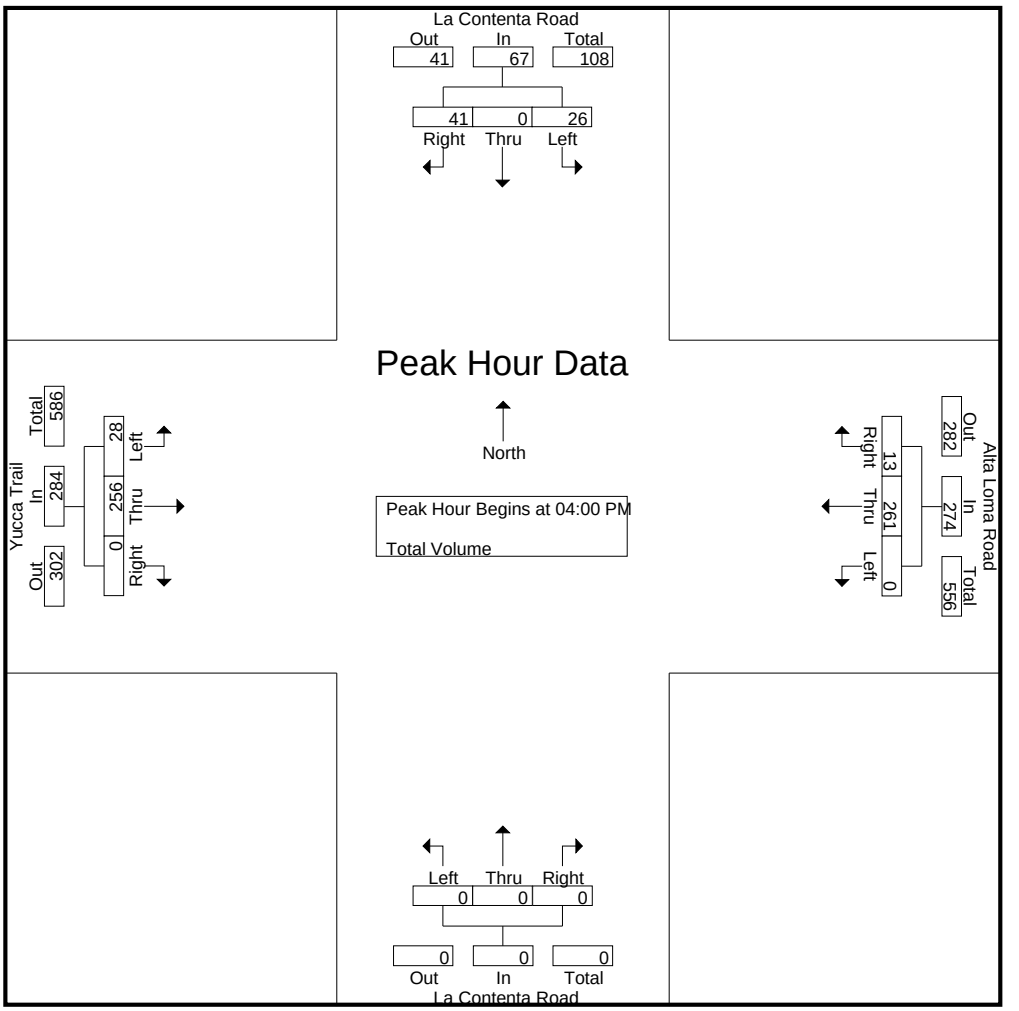
	La Contenta Road Southbound				Alta Loma Road Westbound				La Contenta Road Northbound				Yucca Trail Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	0	10	16	0	66	4	70	0	0	0	0	11	69	0	80	166
04:15 PM	7	0	12	19	0	56	5	61	0	0	0	0	6	58	0	64	144
04:30 PM	7	0	8	15	0	77	1	78	0	0	0	0	4	61	0	65	158
04:45 PM	6	0	11	17	0	62	3	65	0	0	0	0	7	68	0	75	157
Total	26	0	41	67	0	261	13	274	0	0	0	0	28	256	0	284	625
05:00 PM	5	0	8	13	0	74	1	75	0	0	0	0	9	60	0	69	157
05:15 PM	3	0	12	15	0	59	1	60	0	0	0	0	6	56	0	62	137
05:30 PM	4	0	11	15	0	48	3	51	0	0	0	0	12	48	0	60	126
05:45 PM	1	0	7	8	0	40	5	45	0	0	0	0	1	55	0	56	109
Total	13	0	38	51	0	221	10	231	0	0	0	0	28	219	0	247	529
Grand Total	39	0	79	118	0	482	23	505	0	0	0	0	56	475	0	531	1154
Apprch %	33.1	0	66.9		0	95.4	4.6		0	0	0		10.5	89.5	0		
Total %	3.4	0	6.8	10.2	0	41.8	2	43.8	0	0	0	0	4.9	41.2	0	46	

	La Contenta Road Southbound				Alta Loma Road Westbound				La Contenta Road Northbound				Yucca Trail 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	6	0	10	16	0	66	4	70	0	0	0	0	**11**	**69**	0	**80**	**166**
04:15 PM	**7**	0	**12**	**19**	0	56	**5**	61	0	0	0	0	6	58	0	64	144
04:30 PM	7	0	8	15	0	**77**	1	**78**	0	0	0	0	4	61	0	65	158
04:45 PM	6	0	11	17	0	62	3	65	0	0	0	0	7	68	0	75	157
Total Volume	26	0	41	67	0	261	13	274	0	0	0	0	28	256	0	284	625
% App. Total	38.8	0	61.2		0	95.3	4.7		0	0	0		9.9	90.1	0		
PHF	.929	.000	.854	.882	.000	.847	.650	.878	.000	.000	.000	.000	.636	.928	.000	.888	.941

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

City of Yucca Valley
N/S: La Contenta Road
E/W: Yucca Trail/Alta Loma Road
Weather: Clear

File Name : 07_YCV_LaC_YT PM
Site Code : 241081
Start Date : 12/11/2024
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				04:15 PM				04:00 PM				04:00 PM			
+0 mins.	6	0	10	16	0	56	**5**	61	0	0	0	0	**11**	**69**	0	**80**
+15 mins.	**7**	0	**12**	**19**	0	**77**	1	**78**	0	0	0	0	6	58	0	64
+30 mins.	7	0	8	15	0	62	3	65	0	0	0	0	4	61	0	65
+45 mins.	6	0	11	17	0	74	1	75	0	0	0	0	7	68	0	75
Total Volume	26	0	41	67	0	269	10	279	0	0	0	0	28	256	0	284
% App. Total	38.8	0	61.2		0	96.4	3.6		0	0	0		9.9	90.1	0	
PHF	.929	.000	.854	.882	.000	.873	.500	.894	.000	.000	.000	.000	.636	.928	.000	.888

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

City of Yucca Valley
N/S: Commercial Driveway 1
E/W: SR-62
Weather: Clear

File Name : 08_YCV_DW1_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

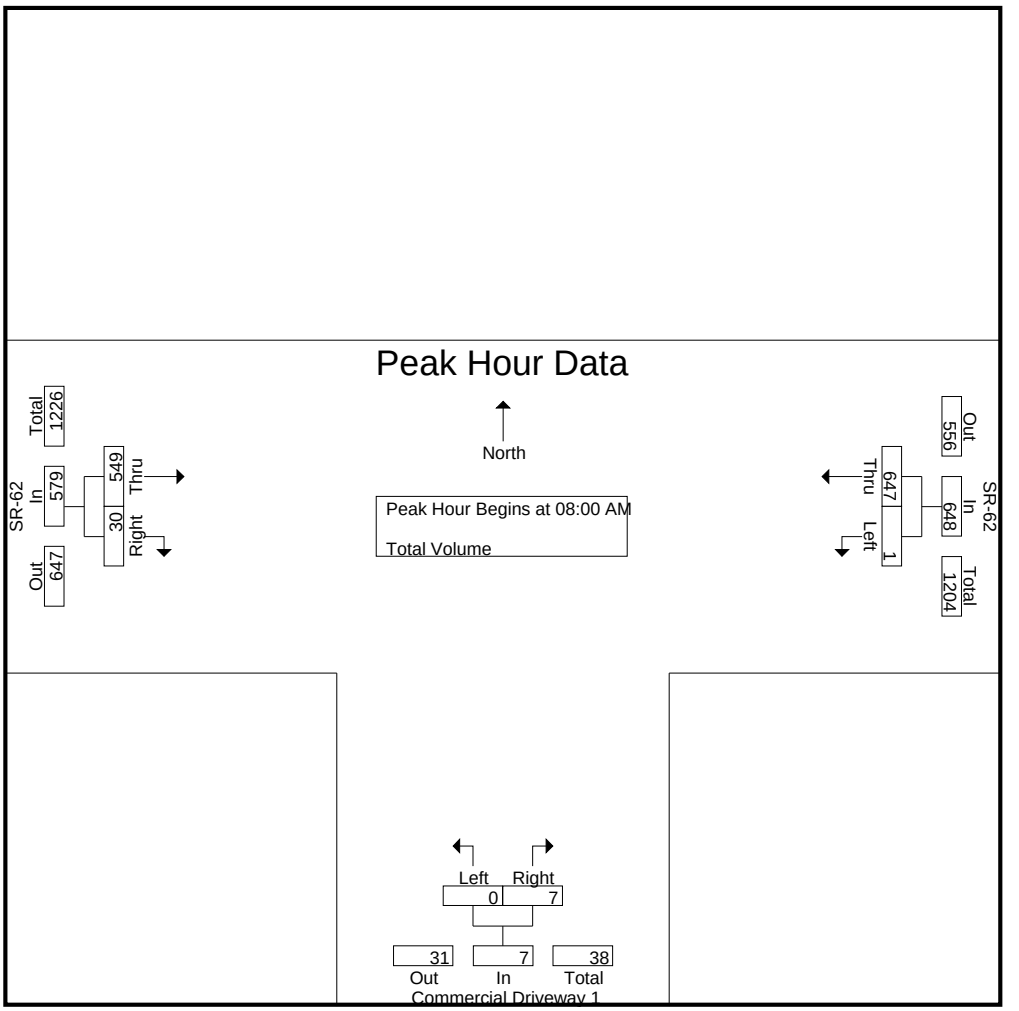
	SR-62 Westbound			Commercial Driveway 1 Northbound			SR-62 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	103	103	0	1	1	157	4	161	265
07:15 AM	0	119	119	0	1	1	115	5	120	240
07:30 AM	0	128	128	0	3	3	127	1	128	259
07:45 AM	0	175	175	0	0	0	160	1	161	336
Total	0	525	525	0	5	5	559	11	570	1100
08:00 AM	0	134	134	0	2	2	138	3	141	277
08:15 AM	1	150	151	0	3	3	118	8	126	280
08:30 AM	0	191	191	0	1	1	125	9	134	326
08:45 AM	0	172	172	0	1	1	168	10	178	351
Total	1	647	648	0	7	7	549	30	579	1234
Grand Total	1	1172	1173	0	12	12	1108	41	1149	2334
Apprch %	0.1	99.9		0	100		96.4	3.6		
Total %	0	50.2	50.3	0	0.5	0.5	47.5	1.8	49.2	

	SR-62 Westbound			Commercial Driveway 1 Northbound			SR-62 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 08:00 AM										
08:00 AM	0	134	134	0	2	2	138	3	141	277
08:15 AM	**1**	150	151	0	**3**	**3**	118	8	126	280
08:30 AM	0	**191**	**191**	0	1	1	125	9	134	326
08:45 AM	0	172	172	0	1	1	**168**	**10**	**178**	**351**
Total Volume	1	647	648	0	7	7	549	30	579	1234
% App. Total	0.2	99.8		0	100		94.8	5.2		
PHF	.250	.847	.848	.000	.583	.583	.817	.750	.813	.879

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

City of Yucca Valley
N/S: Commercial Driveway 1
E/W: SR-62
Weather: Clear

File Name : 08_YCV_DW1_SR62 AM
Site Code : 241081
Start Date : 12/11/2024
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:

	07:45 AM			07:30 AM			08:00 AM		
+0 mins.	0	175	175	0	**3**	**3**	138	3	141
+15 mins.	0	134	134	0	0	0	118	8	126
+30 mins.	**1**	150	151	0	2	2	125	9	134
+45 mins.	0	**191**	**191**	0	3	3	**168**	**10**	**178**
Total Volume	1	650	651	0	8	8	549	30	579
% App. Total	0.2	99.8		0	100		94.8	5.2	
PHF	.250	.851	.852	.000	.667	.667	.817	.750	.813

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

City of Yucca Valley
N/S: Commercial Driveway 1
E/W: SR-62
Weather: Clear

File Name : 08_YCV_DW1_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

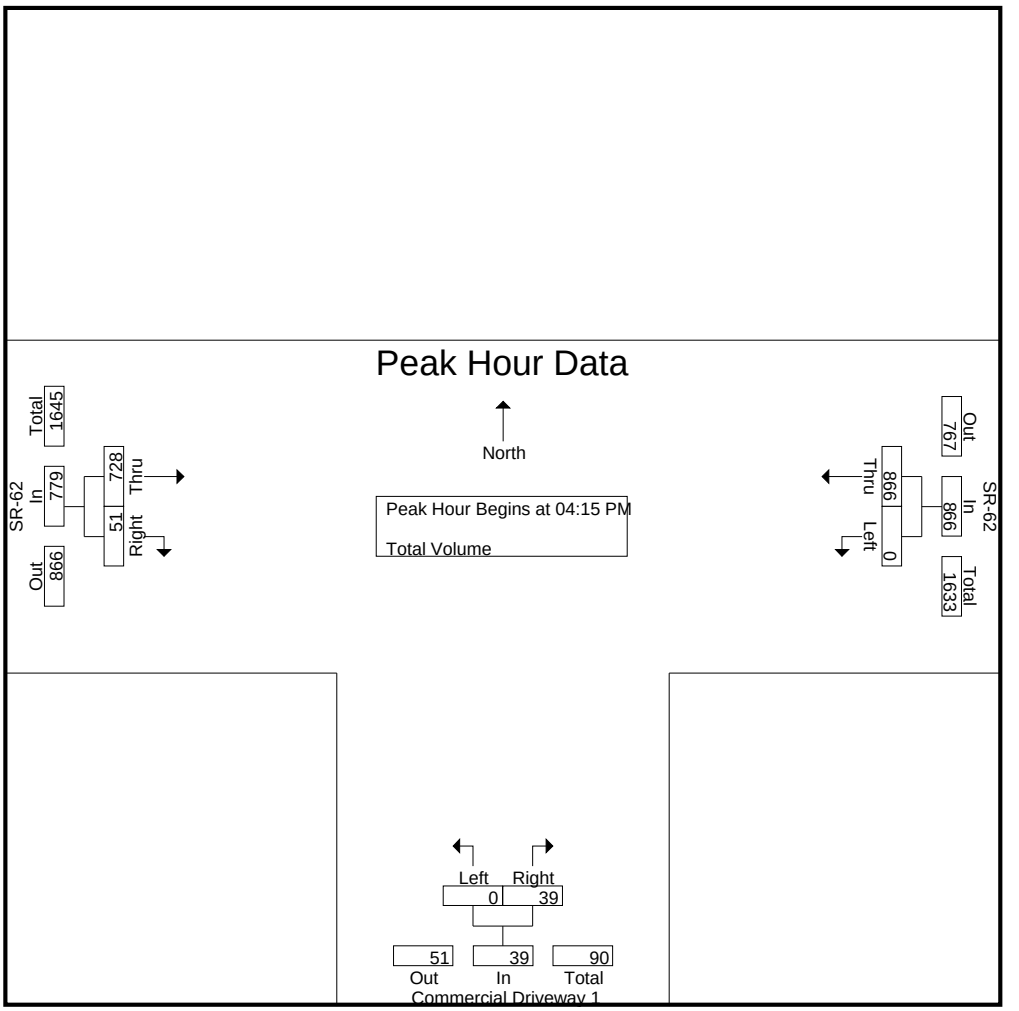
	SR-62 Westbound			Commercial Driveway 1 Northbound			SR-62 Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	194	194	0	8	8	178	12	190	392
04:15 PM	0	210	210	0	12	12	172	14	186	408
04:30 PM	0	215	215	0	6	6	176	17	193	414
04:45 PM	0	221	221	0	11	11	184	10	194	426
Total	0	840	840	0	37	37	710	53	763	1640
05:00 PM	0	220	220	0	10	10	196	10	206	436
05:15 PM	0	206	206	0	8	8	171	11	182	396
05:30 PM	0	157	157	0	10	10	185	9	194	361
05:45 PM	0	154	154	0	6	6	187	11	198	358
Total	0	737	737	0	34	34	739	41	780	1551
Grand Total	0	1577	1577	0	71	71	1449	94	1543	3191
Apprch %	0	100		0	100		93.9	6.1		
Total %	0	49.4	49.4	0	2.2	2.2	45.4	2.9	48.4	

	SR-62 Westbound			Commercial Driveway 1 Northbound			SR-62 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 04:15 PM										
04:15 PM	0	210	210	0	**12**	**12**	172	14	186	408
04:30 PM	0	215	215	0	6	6	176	**17**	193	414
04:45 PM	0	**221**	**221**	0	11	11	184	10	194	426
05:00 PM	0	220	220	0	10	10	**196**	10	**206**	**436**
Total Volume	0	866	866	0	39	39	728	51	779	1684
% App. Total	0	100		0	100		93.5	6.5		
PHF	.000	.980	.980	.000	.813	.813	.929	.750	.945	.966

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

City of Yucca Valley
N/S: Commercial Driveway 1
E/W: SR-62
Weather: Clear

File Name : 08_YCV_DW1_SR62 PM
Site Code : 241081
Start Date : 12/11/2024
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			04:15 PM			05:00 PM		
+0 mins.	0	210	210	0	**12**	**12**	**196**	10	**206**
+15 mins.	0	215	215	0	6	6	171	**11**	182
+30 mins.	0	**221**	**221**	0	11	11	185	9	194
+45 mins.	0	220	220	0	10	10	187	11	198
Total Volume	0	866	866	0	39	39	739	41	780
% App. Total	0	100		0	100		94.7	5.3	
PHF	.000	.980	.980	.000	.813	.813	.943	.932	.947

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

City of Yucca Valley
N/S: West Commercial Access Road
E/W: Commercial Driveway 2
Weather: Clear

File Name : 09_YCV_W CAR_DW2 AM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

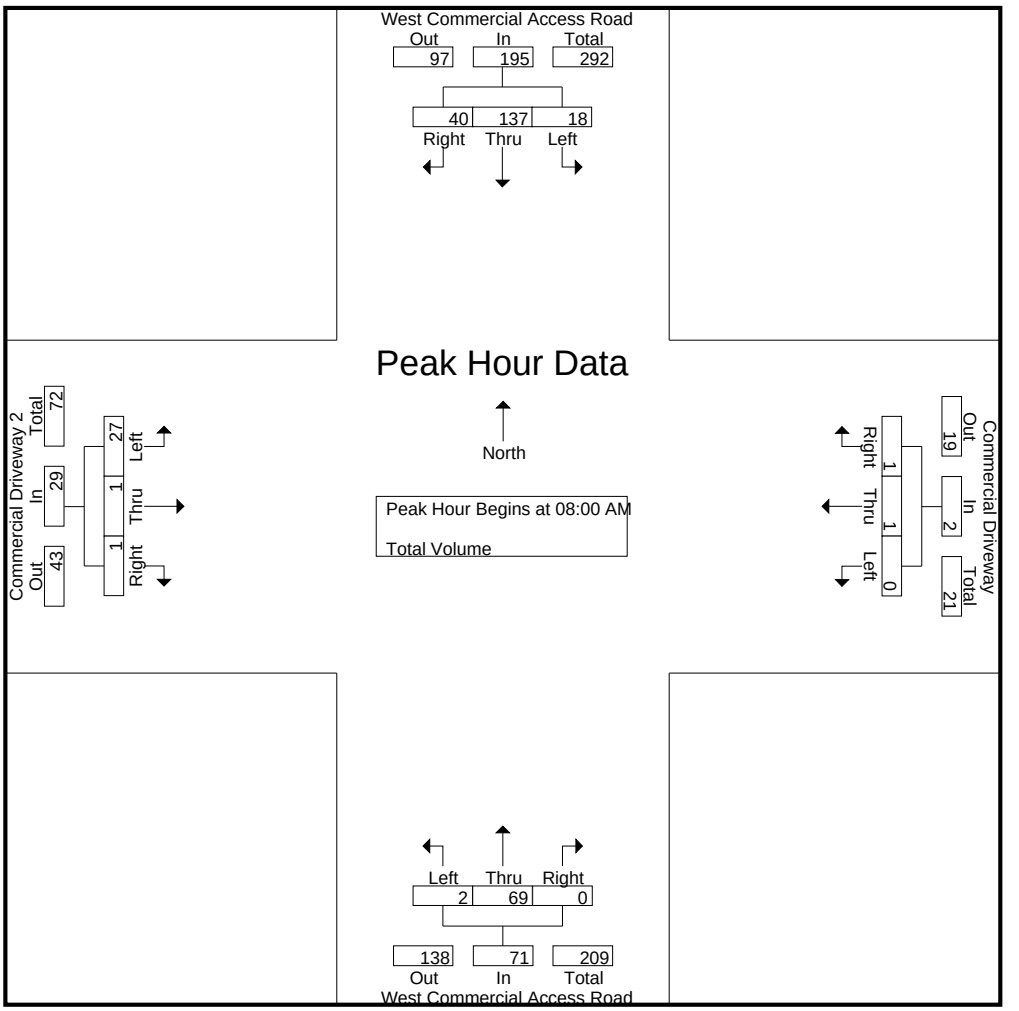
	West Commercial Access Road Southbound				Commercial Driveway Westbound				West Commercial Access Road Northbound				Commercial Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	21	5	26	0	0	0	0	0	13	0	13	6	0	0	6	45
07:15 AM	1	16	5	22	0	0	1	1	2	7	0	9	4	0	1	5	37
07:30 AM	2	20	6	28	0	0	0	0	1	13	0	14	3	0	0	3	45
07:45 AM	0	36	6	42	0	0	0	0	0	13	0	13	5	0	0	5	60
Total	3	93	22	118	0	0	1	1	3	46	0	49	18	0	1	19	187
08:00 AM	1	28	10	39	0	0	1	1	0	14	0	14	4	0	0	4	58
08:15 AM	3	32	8	43	0	1	0	1	1	16	0	17	10	0	0	10	71
08:30 AM	5	26	10	41	0	0	0	0	1	23	0	24	5	0	1	6	71
08:45 AM	9	51	12	72	0	0	0	0	0	16	0	16	8	1	0	9	97
Total	18	137	40	195	0	1	1	2	2	69	0	71	27	1	1	29	297
Grand Total	21	230	62	313	0	1	2	3	5	115	0	120	45	1	2	48	484
Apprch %	6.7	73.5	19.8		0	33.3	66.7		4.2	95.8	0		93.8	2.1	4.2		
Total %	4.3	47.5	12.8	64.7	0	0.2	0.4	0.6	1	23.8	0	24.8	9.3	0.2	0.4	9.9	

	West Commercial Access Road Southbound				Commercial Driveway Westbound				West Commercial Access Road Northbound				Commercial Driveway 2 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 08:00 AM																	
08:00 AM	1	28	10	39	0	0	**1**	**1**	0	14	0	14	4	0	0	4	58
08:15 AM	3	32	8	43	0	**1**	0	1	**1**	16	0	17	**10**	0	0	**10**	71
08:30 AM	5	26	10	41	0	0	0	0	1	**23**	0	**24**	5	0	**1**	6	71
08:45 AM	**9**	**51**	**12**	**72**	0	0	0	0	0	16	0	16	8	**1**	0	9	**97**
Total Volume	18	137	40	195	0	1	1	2	2	69	0	71	27	1	1	29	297
% App. Total	9.2	70.3	20.5		0	50	50		2.8	97.2	0		93.1	3.4	3.4		
PHF	.500	.672	.833	.677	.000	.250	.250	.500	.500	.750	.000	.740	.675	.250	.250	.725	.765

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

City of Yucca Valley
N/S: West Commercial Access Road
E/W: Commercial Driveway 2
Weather: Clear

File Name : 09_YCV_W CAR_DW2 AM
Site Code : 241081
Start Date : 12/11/2024
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:

	08:00 AM				07:15 AM				08:00 AM				08:00 AM			
+0 mins.	1	28	10	39	0	0	**1**	**1**	0	14	0	14	4	0	0	4
+15 mins.	3	32	8	43	0	0	0	0	**1**	16	0	17	**10**	0	0	**10**
+30 mins.	5	26	10	41	0	0	0	0	1	**23**	0	**24**	5	0	**1**	6
+45 mins.	**9**	**51**	**12**	**72**	0	0	1	1	0	16	0	16	8	**1**	0	9
Total Volume	18	137	40	195	0	0	2	2	2	69	0	71	27	1	1	29
% App. Total	9.2	70.3	20.5		0	0	100		2.8	97.2	0		93.1	3.4	3.4	
PHF	.500	.672	.833	.677	.000	.000	.500	.500	.500	.750	.000	.740	.675	.250	.250	.725

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

City of Yucca Valley
N/S: West Commercial Access Road
E/W: Commercial Driveway 2
Weather: Clear

File Name : 09_YCV_W CAR_DW2 PM
Site Code : 241081
Start Date : 12/11/2024
Page No : 1

Groups Printed- Total Volume

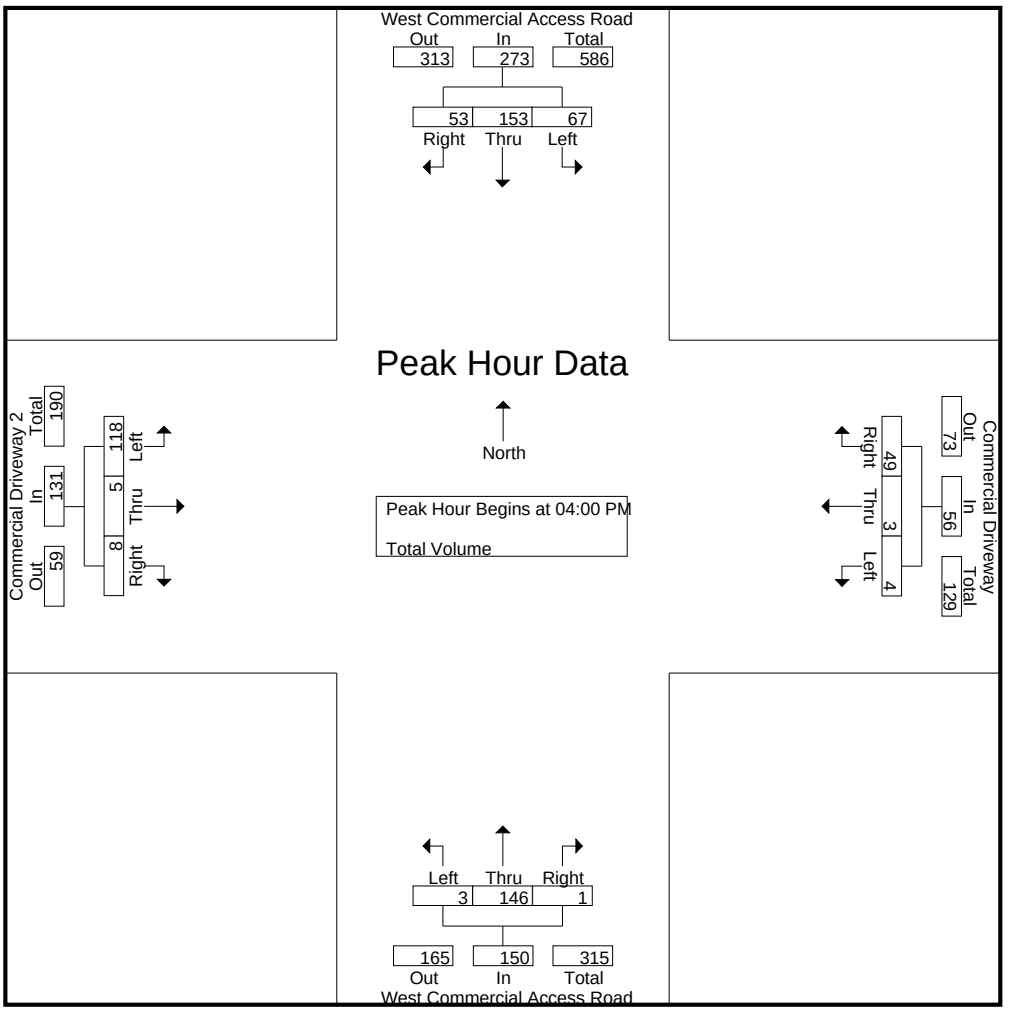
	West Commercial Access Road Southbound				Commercial Driveway Westbound				West Commercial Access Road Northbound				Commercial Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	19	45	19	83	2	2	12	16	0	35	1	36	32	1	2	35	170
04:15 PM	15	27	8	50	0	1	13	14	0	30	0	30	37	3	0	40	134
04:30 PM	21	42	8	71	1	0	15	16	2	33	0	35	27	1	1	29	151
04:45 PM	12	39	18	69	1	0	9	10	1	48	0	49	22	0	5	27	155
Total	67	153	53	273	4	3	49	56	3	146	1	150	118	5	8	131	610
05:00 PM	25	32	21	78	1	1	13	15	0	35	2	37	20	0	1	21	151
05:15 PM	11	30	10	51	0	1	16	17	0	20	0	20	14	5	1	20	108
05:30 PM	20	40	16	76	0	1	10	11	2	37	2	41	26	3	0	29	157
05:45 PM	16	27	18	61	1	2	10	13	0	39	0	39	13	0	0	13	126
Total	72	129	65	266	2	5	49	56	2	131	4	137	73	8	2	83	542
Grand Total	139	282	118	539	6	8	98	112	5	277	5	287	191	13	10	214	1152
Apprch %	25.8	52.3	21.9		5.4	7.1	87.5		1.7	96.5	1.7		89.3	6.1	4.7		
Total %	12.1	24.5	10.2	46.8	0.5	0.7	8.5	9.7	0.4	24	0.4	24.9	16.6	1.1	0.9	18.6	

	West Commercial Access Road Southbound				Commercial Driveway Westbound				West Commercial Access Road Northbound				Commercial Driveway 2 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	19	**45**	**19**	**83**	**2**	**2**	12	**16**	0	35	**1**	36	32	1	2	35	**170**
04:15 PM	15	27	8	50	0	1	13	14	0	30	0	30	**37**	**3**	0	**40**	134
04:30 PM	**21**	42	8	71	1	0	**15**	16	**2**	33	0	35	27	1	1	29	151
04:45 PM	12	39	18	69	1	0	9	10	1	**48**	0	**49**	22	0	**5**	27	155
Total Volume	67	153	53	273	4	3	49	56	3	146	1	150	118	5	8	131	610
% App. Total	24.5	56	19.4		7.1	5.4	87.5		2	97.3	0.7		90.1	3.8	6.1		
PHF	.798	.850	.697	.822	.500	.375	.817	.875	.375	.760	.250	.765	.797	.417	.400	.819	.897

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

City of Yucca Valley
N/S: West Commercial Access Road
E/W: Commercial Driveway 2
Weather: Clear

File Name : 09_YCV_W CAR_DW2 PM
Site Code : 241081
Start Date : 12/11/2024
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:

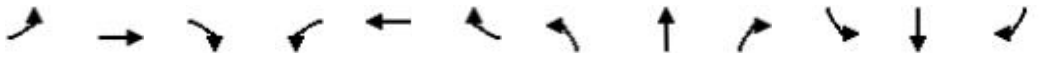
	04:45 PM				04:30 PM				04:15 PM				04:00 PM			
+0 mins.	12	39	18	69	**1**	0	15	16	0	30	0	30	32	1	2	35
+15 mins.	**25**	32	**21**	**78**	1	0	9	10	**2**	33	0	35	**37**	**3**	0	**40**
+30 mins.	11	30	10	51	1	**1**	13	15	1	**48**	0	**49**	27	1	1	29
+45 mins.	20	**40**	16	76	0	1	**16**	**17**	0	35	**2**	37	22	0	**5**	27
Total Volume	68	141	65	274	3	2	53	58	3	146	2	151	118	5	8	131
% App. Total	24.8	51.5	23.7		5.2	3.4	91.4		2	96.7	1.3		90.1	3.8	6.1	
PHF	.680	.881	.774	.878	.750	.500	.828	.853	.375	.760	.250	.770	.797	.417	.400	.819

APPENDIX C

INTERSECTION ANALYSIS WORKSHEETS

HCM 6th Signalized Intersection Summary
1: Twentynine Palms Hwy (SR-62) & Avalon Ave

12/27/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	521	37	37	595	14	39	26	43	20	36	14
Future Volume (veh/h)	6	521	37	37	595	14	39	26	43	20	36	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	620	44	44	708	17	46	31	51	24	43	17
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	887	396	76	1006	449	152	734	622	49	703	596
Arrive On Green	0.01	0.25	0.25	0.04	0.28	0.28	0.04	0.39	0.39	0.03	0.38	0.38
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	7	620	44	44	708	17	46	31	51	24	43	17
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.2	9.9	1.3	1.5	11.2	0.5	0.8	0.6	1.3	0.8	0.9	0.4
Cycle Q Clear(g_c), s	0.2	9.9	1.3	1.5	11.2	0.5	0.8	0.6	1.3	0.8	0.9	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	16	887	396	76	1006	449	152	734	622	49	703	596
V/C Ratio(X)	0.43	0.70	0.11	0.58	0.70	0.04	0.30	0.04	0.08	0.49	0.06	0.03
Avail Cap(c_a), veh/h	185	1790	798	271	1961	874	414	734	622	242	703	596
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	21.3	18.1	29.4	20.1	16.2	29.0	11.7	11.9	30.0	12.5	12.3
Incr Delay (d2), s/veh	16.8	1.0	0.1	6.8	0.9	0.0	1.1	0.1	0.3	7.6	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.6	0.4	0.7	4.0	0.2	0.3	0.2	0.4	0.4	0.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.7	22.3	18.2	36.1	21.0	16.3	30.1	11.8	12.2	37.6	12.6	12.4
LnGrp LOS	D	C	B	D	C	B	C	B	B	D	B	B
Approach Vol, veh/h		671			769			128			84	
Approach Delay, s/veh		22.3			21.7			18.5			19.7	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	29.0	7.2	20.1	7.3	28.0	5.1	22.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	22.5	9.5	31.5	7.5	23.5	6.5	34.5
Max Q Clear Time (g_c+I1), s	2.8	3.3	3.5	11.9	2.8	2.9	2.2	13.2
Green Ext Time (p_c), s	0.0	0.2	0.0	3.7	0.0	0.2	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	21.6
HCM 6th LOS	C

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	25	3	4	25	3	10	21	104	61	3	70	27
Future Vol, veh/h	25	3	4	25	3	10	21	104	61	3	70	27
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	4	5	34	4	14	28	141	82	4	95	36
Number of Lanes	0	1	1	0	1	1	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay, s/veh	9.1	8.9	9.6	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	89%	0%	89%	0%	100%	0%	0%
Vol Thru, %	0%	63%	11%	0%	11%	0%	0%	100%	0%
Vol Right, %	0%	37%	0%	100%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	165	28	4	28	10	3	70	27
LT Vol	21	0	25	0	25	0	3	0	0
Through Vol	0	104	3	0	3	0	0	70	0
RT Vol	0	61	0	4	0	10	0	0	27
Lane Flow Rate	28	223	38	5	38	14	4	95	36
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.044	0.3	0.064	0.007	0.064	0.019	0.007	0.14	0.047
Departure Headway (Hd)	5.61	4.849	6.109	4.959	6.094	4.944	5.834	5.332	4.629
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	638	740	585	718	586	721	613	672	771
Service Time	3.347	2.586	3.865	2.715	3.847	2.696	3.576	3.073	2.37
HCM Lane V/C Ratio	0.044	0.301	0.065	0.007	0.065	0.019	0.007	0.141	0.047
HCM Control Delay, s/veh	8.6	9.7	9.3	7.8	9.3	7.8	8.6	8.9	7.6
HCM Lane LOS	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	1.3	0.2	0	0.2	0.1	0	0.5	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	454	76	118	586	48	46
Future Volume (veh/h)	454	76	118	586	48	46
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	528	88	137	681	56	53
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	996	1016	182	1361	1542	870
Arrive On Green	0.20	0.20	0.10	0.38	0.45	0.45
Sat Flow, veh/h	5274	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	528	88	137	681	56	53
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1777	1728	1585
Q Serve(g_s), s	4.9	1.1	3.9	7.7	0.5	0.8
Cycle Q Clear(g_c), s	4.9	1.1	3.9	7.7	0.5	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	996	1016	182	1361	1542	870
V/C Ratio(X)	0.53	0.09	0.75	0.50	0.04	0.06
Avail Cap(c_a), veh/h	2763	1565	829	3880	1542	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	3.6	23.0	12.4	8.2	5.6
Incr Delay (d2), s/veh	0.4	0.0	6.1	0.3	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.8	1.7	2.2	0.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	19.5	3.6	29.1	12.7	8.3	5.7
LnGrp LOS	B	A	C	B	A	A
Approach Vol, veh/h	616			818	109	
Approach Delay, s/veh	17.2			15.4	7.0	
Approach LOS	B			B	A	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	28.0	9.9	14.8	24.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	23.5	24.5	28.5	57.5
Max Q Clear Time (g_c+I1), s	2.8	5.9	6.9	9.7
Green Ext Time (p_c), s	0.3	0.3	3.4	4.6

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	15.5
HCM 6th LOS	B

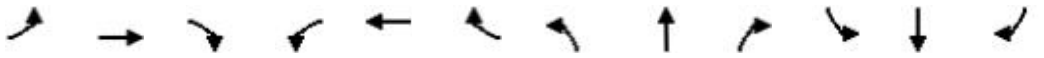
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	521	2	0	689	0	59
Future Vol, veh/h	521	2	0	689	0	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	599	2	0	792	0	68

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	300
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	594
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	594
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	594	-	-	-
HCM Lane V/C Ratio	0.114	-	-	-
HCM Control Delay (s/veh)	11.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.4	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	482	21	19	548	44	32	32	15	54	44	108
Future Volume (veh/h)	57	482	21	19	548	44	32	32	15	54	44	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	542	24	21	616	49	36	36	17	61	49	121
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	1008	450	44	900	402	611	868	735	734	222	547
Arrive On Green	0.05	0.28	0.28	0.02	0.25	0.25	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1215	1870	1585	1351	478	1180
Grp Volume(v), veh/h	64	542	24	21	616	49	36	36	17	61	0	170
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1215	1870	1585	1351	0	1658
Q Serve(g_s), s	2.1	7.6	0.7	0.7	9.3	1.4	1.1	0.6	0.3	1.5	0.0	3.6
Cycle Q Clear(g_c), s	2.1	7.6	0.7	0.7	9.3	1.4	4.7	0.6	0.3	2.2	0.0	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	98	1008	450	44	900	402	611	868	735	734	0	769
V/C Ratio(X)	0.65	0.54	0.05	0.48	0.68	0.12	0.06	0.04	0.02	0.08	0.00	0.22
Avail Cap(c_a), veh/h	436	2368	1056	285	2068	923	611	868	735	734	0	769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.5	17.9	15.4	28.5	20.0	17.0	10.9	8.7	8.6	9.3	0.0	9.5
Incr Delay (d2), s/veh	7.2	0.4	0.0	7.8	0.9	0.1	0.2	0.1	0.1	0.2	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.5	0.2	0.4	3.2	0.4	0.2	0.2	0.1	0.4	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.6	18.4	15.5	36.4	20.9	17.2	11.1	8.8	8.7	9.5	0.0	10.2
LnGrp LOS	C	B	B	D	C	B	B	A	A	A		B
Approach Vol, veh/h		630			686			89			231	
Approach Delay, s/veh		19.9			21.1			9.7			10.0	
Approach LOS		B			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	6.0	21.3		32.0	7.8	19.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	9.5	39.5		27.5	14.5	34.5				
Max Q Clear Time (g_c+I1), s		6.7	2.7	9.6		5.6	4.1	11.3				
Green Ext Time (p_c), s		0.2	0.0	3.3		1.0	0.1	3.7				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			18.5									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	177	19	56	227	30	42	65	151	16	44	28
Future Volume (veh/h)	30	177	19	56	227	30	42	65	151	16	44	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	239	26	76	307	41	57	88	204	22	59	38
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	363	308	106	398	337	91	790	670	46	742	629
Arrive On Green	0.04	0.19	0.19	0.06	0.21	0.21	0.05	0.42	0.42	0.03	0.40	0.40
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	41	239	26	76	307	41	57	88	204	22	59	38
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.4	7.1	0.8	2.5	9.3	1.3	1.9	1.7	5.2	0.7	1.2	0.9
Cycle Q Clear(g_c), s	1.4	7.1	0.8	2.5	9.3	1.3	1.9	1.7	5.2	0.7	1.2	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	73	363	308	106	398	337	91	790	670	46	742	629
V/C Ratio(X)	0.56	0.66	0.08	0.72	0.77	0.12	0.63	0.11	0.30	0.48	0.08	0.06
Avail Cap(c_a), veh/h	251	852	722	339	945	801	280	790	670	221	742	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	22.5	19.9	27.9	22.4	19.2	28.1	10.6	11.6	29.0	11.3	11.2
Incr Delay (d2), s/veh	6.5	2.0	0.1	8.6	3.2	0.2	6.9	0.3	1.2	7.7	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.9	0.3	1.2	3.7	0.4	0.9	0.6	1.5	0.4	0.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.9	24.5	20.0	36.5	25.6	19.4	35.0	10.9	12.7	36.8	11.5	11.4
LnGrp LOS	C	C	C	D	C	B	D	B	B	D	B	B
Approach Vol, veh/h		306			424			349			119	
Approach Delay, s/veh		25.5			26.9			15.9			16.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	30.0	8.1	16.2	7.6	28.5	7.0	17.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.5	25.5	11.5	27.5	9.5	23.5	8.5	30.5
Max Q Clear Time (g_c+I1), s	2.7	7.2	4.5	9.1	3.9	3.2	3.4	11.3
Green Ext Time (p_c), s	0.0	1.0	0.1	1.1	0.0	0.3	0.0	1.5

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		22.3
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	103	226	0	0	172	16	0	0	0	20	0	98
Future Vol, veh/h	103	226	0	0	172	16	0	0	0	20	0	98
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	-	-	-	-	-	-	-	-	-	220	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	66	66	66	66	66	66	66	66	66	66	66	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	156	342	0	0	261	24	0	0	0	30	0	148

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	285	0	-	-	-	0	1001	939	342	927	-	273
Stage 1	-	-	-	-	-	-	654	654	-	273	-	-
Stage 2	-	-	-	-	-	-	347	285	-	654	-	-
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	-	3.318
Pot Cap-1 Maneuver	1277	-	0	0	-	-	222	264	701	249	0	766
Stage 1	-	-	0	0	-	-	456	463	-	733	0	-
Stage 2	-	-	0	0	-	-	669	676	-	456	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1277	-	-	-	-	-	158	224	701	220	-	766
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	224	-	220	-	-
Stage 1	-	-	-	-	-	-	387	393	-	622	-	-
Stage 2	-	-	-	-	-	-	539	676	-	387	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	2.6	0	0	13
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1277	-	-	-	220	766
HCM Lane V/C Ratio	-	0.122	-	-	-	0.138	0.194
HCM Control Delay (s/veh)	0	8.2	0	-	-	24	10.8
HCM Lane LOS	A	A	A	-	-	C	B
HCM 95th %tile Q (veh)	-	0.4	-	-	-	0.5	0.7

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	549	30	0	647	0	7
Future Vol, veh/h	549	30	0	647	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	624	34	0	735	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	312
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	583
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	583
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	583	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-
HCM Control Delay (s/veh)	11.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	1	1	0	1	1	2	69	0	18	137	40
Future Vol, veh/h	27	1	1	0	1	1	2	69	0	18	137	40
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	1	1	0	1	1	3	91	0	24	180	53

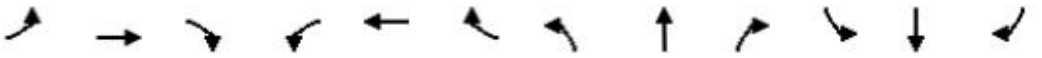
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	280	325	180	326	325	46	180	0	0	91	0	0
Stage 1	228	228	-	97	97	-	-	-	-	-	-	-
Stage 2	52	97	-	229	228	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	661	592	862	615	592	1014	1394	-	-	1503	-	0
Stage 1	774	715	-	899	814	-	-	-	-	-	-	0
Stage 2	955	814	-	773	715	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	650	581	862	605	581	1014	1394	-	-	1503	-	-
Mov Cap-2 Maneuver	650	581	-	605	581	-	-	-	-	-	-	-
Stage 1	772	704	-	897	812	-	-	-	-	-	-	-
Stage 2	950	812	-	758	704	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.9	9.9	0.2	0.9
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	1394	-	-	653	739	1503	-
HCM Lane V/C Ratio	0.002	-	-	0.058	0.004	0.016	-
HCM Control Delay (s/veh)	7.6	0	-	10.9	9.9	7.4	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0.2	0	0	-

HCM 6th Signalized Intersection Summary
1: Twentynine Palms Hwy (SR-62) & Avalon Ave

12/27/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	722	108	62	768	36	107	39	44	20	23	12
Future Volume (veh/h)	31	722	108	62	768	36	107	39	44	20	23	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	752	112	65	800	38	111	41	46	21	24	12
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1039	463	94	1107	494	229	665	563	43	586	497
Arrive On Green	0.03	0.29	0.29	0.05	0.31	0.31	0.07	0.36	0.36	0.02	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	32	752	112	65	800	38	111	41	46	21	24	12
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.2	12.4	3.5	2.3	13.1	1.1	2.0	0.9	1.3	0.8	0.6	0.3
Cycle Q Clear(g_c), s	1.2	12.4	3.5	2.3	13.1	1.1	2.0	0.9	1.3	0.8	0.6	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	1039	463	94	1107	494	229	665	563	43	586	497
V/C Ratio(X)	0.53	0.72	0.24	0.69	0.72	0.08	0.48	0.06	0.08	0.49	0.04	0.02
Avail Cap(c_a), veh/h	204	1766	787	286	1928	860	449	665	563	177	586	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	20.8	17.6	30.4	20.0	15.9	29.5	13.9	14.0	31.5	15.6	15.5
Incr Delay (d2), s/veh	7.2	1.0	0.3	8.6	0.9	0.1	1.6	0.2	0.3	8.2	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.5	1.1	1.1	4.6	0.3	0.8	0.4	0.4	0.4	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.3	21.8	17.9	39.0	20.9	16.0	31.1	14.1	14.3	39.7	15.8	15.6
LnGrp LOS	D	C	B	D	C	B	C	B	B	D	B	B
Approach Vol, veh/h		896			903			198			57	
Approach Delay, s/veh		21.9			22.0			23.6			24.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	27.7	8.0	23.6	8.8	25.0	6.7	24.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	22.5	10.5	32.5	8.5	20.5	7.5	35.5
Max Q Clear Time (g_c+I1), s	2.8	3.3	4.3	14.4	4.0	2.6	3.2	15.1
Green Ext Time (p_c), s	0.0	0.2	0.0	4.7	0.1	0.1	0.0	5.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	22.2
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	4	23	115	2	11	12	121	86	5	148	25
Future Vol, veh/h	41	4	23	115	2	11	12	121	86	5	148	25
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	4	24	120	2	11	13	126	90	5	154	26
Number of Lanes	0	1	1	0	1	1	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay, s/veh	9.4	10.8	10.6	10
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	91%	0%	98%	0%	100%	0%	0%
Vol Thru, %	0%	58%	9%	0%	2%	0%	0%	100%	0%
Vol Right, %	0%	42%	0%	100%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	207	45	23	117	11	5	148	25
LT Vol	12	0	41	0	115	0	5	0	0
Through Vol	0	121	4	0	2	0	0	148	0
RT Vol	0	86	0	23	0	11	0	0	25
Lane Flow Rate	13	216	47	24	122	11	5	154	26
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.022	0.324	0.086	0.036	0.218	0.017	0.009	0.248	0.037
Departure Headway (Hd)	6.212	5.415	6.584	5.421	6.443	5.245	6.295	5.791	5.086
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	579	666	545	661	558	683	571	623	707
Service Time	3.921	3.124	4.316	3.153	4.171	2.973	4.006	3.502	2.797
HCM Lane V/C Ratio	0.022	0.324	0.086	0.036	0.219	0.016	0.009	0.247	0.037
HCM Control Delay, s/veh	9.1	10.7	9.9	8.4	11	8.1	9.1	10.4	8
HCM Lane LOS	A	B	A	A	B	A	A	B	A
HCM 95th-tile Q	0.1	1.4	0.3	0.1	0.8	0.1	0	1	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	659	76	180	729	126	171
Future Volume (veh/h)	659	76	180	729	126	171
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	686	79	188	759	131	178
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1141	1008	243	1548	1426	870
Arrive On Green	0.22	0.22	0.14	0.44	0.41	0.41
Sat Flow, veh/h	5274	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	686	79	188	759	131	178
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1777	1728	1585
Q Serve(g_s), s	7.2	1.1	6.0	9.1	1.4	3.4
Cycle Q Clear(g_c), s	7.2	1.1	6.0	9.1	1.4	3.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1141	1008	243	1548	1426	870
V/C Ratio(X)	0.60	0.08	0.77	0.49	0.09	0.20
Avail Cap(c_a), veh/h	2280	1362	765	3383	1426	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	4.1	24.7	12.0	10.6	6.8
Incr Delay (d2), s/veh	0.5	0.0	5.2	0.2	0.1	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.8	2.5	2.7	0.5	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.2	4.2	30.0	12.3	10.8	7.3
LnGrp LOS	C	A	C	B	B	A
Approach Vol, veh/h	765			947	309	
Approach Delay, s/veh	19.4			15.8	8.8	
Approach LOS	B			B	A	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	29.0	12.6	17.8		30.4
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	24.5	25.5	26.5		56.5
Max Q Clear Time (g_c+I1), s	5.4	8.0	9.2		11.1
Green Ext Time (p_c), s	1.0	0.4	4.1		5.3

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	16.1
HCM 6th LOS	B

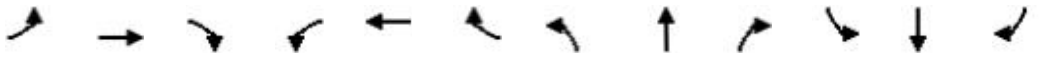
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	839	5	0	905	0	50
Future Vol, veh/h	839	5	0	905	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	912	5	0	984	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	456
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	472
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	472
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	472	-	-	-
HCM Lane V/C Ratio	0.115	-	-	-
HCM Control Delay (s/veh)	13.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.4	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	691	22	15	795	72	23	28	17	63	21	80
Future Volume (veh/h)	132	691	22	15	795	72	23	28	17	63	21	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	133	698	22	15	803	73	23	28	17	64	21	81
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	1403	626	33	1121	500	537	686	581	603	124	477
Arrive On Green	0.10	0.39	0.39	0.02	0.32	0.32	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1293	1870	1585	1361	337	1300
Grp Volume(v), veh/h	133	698	22	15	803	73	23	28	17	64	0	102
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1293	1870	1585	1361	0	1636
Q Serve(g_s), s	4.5	9.1	0.5	0.5	12.3	2.0	0.8	0.6	0.4	1.9	0.0	2.6
Cycle Q Clear(g_c), s	4.5	9.1	0.5	0.5	12.3	2.0	3.3	0.6	0.4	2.5	0.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.79
Lane Grp Cap(c), veh/h	174	1403	626	33	1121	500	537	686	581	603	0	600
V/C Ratio(X)	0.77	0.50	0.04	0.46	0.72	0.15	0.04	0.04	0.03	0.11	0.00	0.17
Avail Cap(c_a), veh/h	508	2752	1227	189	2114	943	537	686	581	603	0	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	14.0	11.4	29.8	18.6	15.1	14.2	12.5	12.4	13.3	0.0	13.1
Incr Delay (d2), s/veh	6.8	0.3	0.0	9.7	0.9	0.1	0.1	0.1	0.1	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.8	0.1	0.3	4.1	0.6	0.2	0.2	0.1	0.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.8	14.3	11.4	39.5	19.4	15.2	14.4	12.6	12.5	13.7	0.0	13.7
LnGrp LOS	C	B	B	D	B	B	B	B	B	B		B
Approach Vol, veh/h		853			891			68			166	
Approach Delay, s/veh		17.2			19.4			13.2			13.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		27.0	5.6	28.7		27.0	10.5	23.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		22.5	6.5	47.5		22.5	17.5	36.5				
Max Q Clear Time (g_c+I1), s		5.3	2.5	11.1		4.6	6.5	14.3				
Green Ext Time (p_c), s		0.1	0.0	4.6		0.6	0.2	5.1				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			17.8									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	198	51	84	238	51	46	101	94	64	132	82
Future Volume (veh/h)	54	198	51	84	238	51	46	101	94	64	132	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	206	53	88	248	53	48	105	98	67	138	85
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	309	262	115	335	284	82	776	657	100	795	673
Arrive On Green	0.05	0.17	0.17	0.06	0.18	0.18	0.05	0.41	0.41	0.06	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	56	206	53	88	248	53	48	105	98	67	138	85
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.8	6.2	1.7	2.9	7.5	1.7	1.6	2.1	2.3	2.2	2.8	2.0
Cycle Q Clear(g_c), s	1.8	6.2	1.7	2.9	7.5	1.7	1.6	2.1	2.3	2.2	2.8	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	309	262	115	335	284	82	776	657	100	795	673
V/C Ratio(X)	0.62	0.67	0.20	0.77	0.74	0.19	0.59	0.14	0.15	0.67	0.17	0.13
Avail Cap(c_a), veh/h	282	732	621	401	857	726	282	776	657	341	795	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	23.5	21.6	27.6	23.3	20.9	28.1	10.9	11.0	27.8	10.7	10.5
Incr Delay (d2), s/veh	6.8	2.5	0.4	10.2	3.2	0.3	6.5	0.4	0.5	7.6	0.5	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.6	0.6	1.4	3.1	0.6	0.7	0.7	0.7	1.1	1.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.8	26.0	22.0	37.9	26.6	21.3	34.6	11.3	11.4	35.4	11.2	10.9
LnGrp LOS	C	C	C	D	C	C	C	B	B	D	B	B
Approach Vol, veh/h		315			389			251			290	
Approach Delay, s/veh		26.9			28.4			15.8			16.7	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	29.4	8.4	14.4	7.3	30.0	7.5	15.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.5	23.5	13.5	23.5	9.5	25.5	9.5	27.5
Max Q Clear Time (g_c+I1), s	4.3	4.3	4.9	8.2	3.6	4.8	3.8	9.5
Green Ext Time (p_c), s	0.1	0.7	0.1	1.0	0.0	0.9	0.0	1.2

Intersection Summary		
HCM 6th Ctrl Delay, s/veh		22.7
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	256	0	0	261	13	0	0	0	26	0	41
Future Vol, veh/h	28	256	0	0	261	13	0	0	0	26	0	41
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	-	-	-	-	-	-	-	-	-	220	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	272	0	0	278	14	0	0	0	28	0	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	292	0	-	-	-	0	639	624	272	617	-	285
Stage 1	-	-	-	-	-	-	332	332	-	285	-	-
Stage 2	-	-	-	-	-	-	307	292	-	332	-	-
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	-	3.318
Pot Cap-1 Maneuver	1270	-	0	0	-	-	389	402	767	402	0	754
Stage 1	-	-	0	0	-	-	681	644	-	722	0	-
Stage 2	-	-	0	0	-	-	703	671	-	681	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1270	-	-	-	-	-	359	391	767	394	-	754
Mov Cap-2 Maneuver	-	-	-	-	-	-	359	391	-	394	-	-
Stage 1	-	-	-	-	-	-	662	626	-	702	-	-
Stage 2	-	-	-	-	-	-	662	671	-	662	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.8	0	0	11.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1270	-	-	-	394	754
HCM Lane V/C Ratio	-	0.023	-	-	-	0.07	0.058
HCM Control Delay (s/veh)	0	7.9	0	-	-	14.8	10.1
HCM Lane LOS	A	A	A	-	-	B	B
HCM 95th %tile Q (veh)	-	0.1	-	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	728	51	0	866	0	39
Future Vol, veh/h	728	51	0	866	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	751	53	0	893	0	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	376
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	531
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	531
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	531	-	-	-
HCM Lane V/C Ratio	0.076	-	-	-
HCM Control Delay (s/veh)	12.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.2	-	-	-

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	118	5	8	4	3	49	3	146	1	67	153	53
Future Vol, veh/h	118	5	8	4	3	49	3	146	1	67	153	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	131	6	9	4	3	54	3	162	1	74	170	59

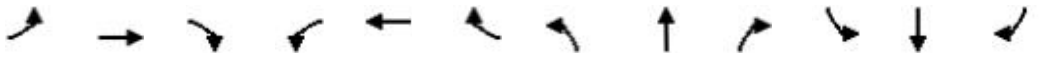
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	407	487	170	495	487	82	170	0	0	163	0	0
Stage 1	318	318	-	169	169	-	-	-	-	-	-	-
Stage 2	89	169	-	326	318	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	541	480	873	471	480	962	1406	-	-	1414	-	0
Stage 1	693	653	-	817	758	-	-	-	-	-	-	0
Stage 2	909	758	-	686	653	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	486	454	873	443	454	962	1406	-	-	1414	-	-
Mov Cap-2 Maneuver	486	454	-	443	454	-	-	-	-	-	-	-
Stage 1	692	619	-	815	756	-	-	-	-	-	-	-
Stage 2	852	756	-	638	619	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	15.2	9.6	0.2	2.3
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	1406	-	-	498	841	1414	-
HCM Lane V/C Ratio	0.002	-	-	0.292	0.074	0.053	-
HCM Control Delay (s/veh)	7.6	0	-	15.2	9.6	7.7	-
HCM Lane LOS	A	A	-	C	A	A	-
HCM 95th %tile Q (veh)	0	-	-	1.2	0.2	0.2	-

HCM 6th Signalized Intersection Summary
1: Twentynine Palms Hwy (SR-62) & Avalon Ave

12/27/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	531	38	38	607	14	40	27	44	20	37	14
Future Volume (veh/h)	6	531	38	38	607	14	40	27	44	20	37	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	559	40	40	639	15	42	28	46	21	39	15
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	14	823	367	72	939	419	145	759	643	44	727	616
Arrive On Green	0.01	0.23	0.23	0.04	0.26	0.26	0.04	0.41	0.41	0.02	0.39	0.39
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	6	559	40	40	639	15	42	28	46	21	39	15
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.2	8.7	1.2	1.3	9.8	0.4	0.7	0.5	1.1	0.7	0.8	0.4
Cycle Q Clear(g_c), s	0.2	8.7	1.2	1.3	9.8	0.4	0.7	0.5	1.1	0.7	0.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	823	367	72	939	419	145	759	643	44	727	616
V/C Ratio(X)	0.42	0.68	0.11	0.56	0.68	0.04	0.29	0.04	0.07	0.48	0.05	0.02
Avail Cap(c_a), veh/h	191	1850	825	280	2027	904	428	759	643	250	727	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	21.2	18.3	28.5	20.0	16.5	28.1	10.8	11.0	29.1	11.6	11.4
Incr Delay (d2), s/veh	19.0	1.0	0.1	6.5	0.9	0.0	1.1	0.1	0.2	7.9	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.1	0.4	0.6	3.5	0.1	0.3	0.2	0.3	0.4	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.8	22.2	18.4	35.0	20.8	16.6	29.2	10.9	11.2	37.0	11.7	11.5
LnGrp LOS	D	C	B	D	C	B	C	B	B	D	B	B
Approach Vol, veh/h		605			694			116			75	
Approach Delay, s/veh		22.2			21.6			17.7			18.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	29.0	6.9	18.5	7.0	28.0	5.0	20.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	22.5	9.5	31.5	7.5	23.5	6.5	34.5
Max Q Clear Time (g_c+I1), s	2.7	3.1	3.3	10.7	2.7	2.8	2.2	11.8
Green Ext Time (p_c), s	0.0	0.2	0.0	3.3	0.0	0.1	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	21.4
HCM 6th LOS	C

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	26	3	4	26	3	10	21	106	62	3	71	28
Future Vol, veh/h	26	3	4	26	3	10	21	106	62	3	71	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	3	4	27	3	11	22	112	65	3	75	29
Number of Lanes	0	1	1	0	1	1	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay, s/veh	8.7	8.5	8.8	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	90%	0%	90%	0%	100%	0%	0%
Vol Thru, %	0%	63%	10%	0%	10%	0%	0%	100%	0%
Vol Right, %	0%	37%	0%	100%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	168	29	4	29	10	3	71	28
LT Vol	21	0	26	0	26	0	3	0	0
Through Vol	0	106	3	0	3	0	0	71	0
RT Vol	0	62	0	4	0	10	0	0	28
Lane Flow Rate	22	177	31	4	31	11	3	75	29
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.034	0.232	0.05	0.006	0.05	0.014	0.005	0.107	0.036
Departure Headway (Hd)	5.485	4.725	5.87	4.719	5.858	4.707	5.658	5.157	4.455
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	654	760	610	758	611	760	633	695	803
Service Time	3.209	2.449	3.604	2.452	3.591	2.44	3.389	2.887	2.185
HCM Lane V/C Ratio	0.034	0.233	0.051	0.005	0.051	0.014	0.005	0.108	0.036
HCM Control Delay, s/veh	8.4	8.9	8.9	7.5	8.9	7.5	8.4	8.5	7.4
HCM Lane LOS	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.9	0.2	0	0.2	0	0	0.4	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	463	78	120	598	49	47
Future Volume (veh/h)	463	78	120	598	49	47
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	487	82	126	629	52	49
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	947	1019	168	1305	1581	875
Arrive On Green	0.19	0.19	0.09	0.37	0.46	0.46
Sat Flow, veh/h	5274	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	487	82	126	629	52	49
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1777	1728	1585
Q Serve(g_s), s	4.4	1.0	3.5	7.0	0.4	0.7
Cycle Q Clear(g_c), s	4.4	1.0	3.5	7.0	0.4	0.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	947	1019	168	1305	1581	875
V/C Ratio(X)	0.51	0.08	0.75	0.48	0.03	0.06
Avail Cap(c_a), veh/h	2833	1604	850	3978	1581	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	3.5	22.7	12.5	7.7	5.3
Incr Delay (d2), s/veh	0.4	0.0	6.6	0.3	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.7	1.5	2.0	0.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	19.3	3.5	29.2	12.8	7.7	5.4
LnGrp LOS	B	A	C	B	A	A
Approach Vol, veh/h	569			755	101	
Approach Delay, s/veh	17.0			15.5	6.6	
Approach LOS	B			B	A	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	28.0	9.3	14.0		23.4
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	23.5	24.5	28.5		57.5
Max Q Clear Time (g_c+I1), s	2.7	5.5	6.4		9.0
Green Ext Time (p_c), s	0.3	0.3	3.1		4.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	15.5
HCM 6th LOS	B

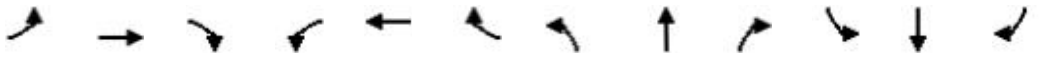
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	531	2	0	703	0	60
Future Vol, veh/h	531	2	0	703	0	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	559	2	0	740	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	280
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	611
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	611
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	611	-	-	-
HCM Lane V/C Ratio	0.103	-	-	-
HCM Control Delay (s/veh)	11.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.3	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	492	21	19	559	45	33	33	15	55	45	110
Future Volume (veh/h)	58	492	21	19	559	45	33	33	15	55	45	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	518	22	20	588	47	35	35	16	58	47	116
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	96	977	436	42	870	388	628	880	746	746	225	555
Arrive On Green	0.05	0.27	0.27	0.02	0.24	0.24	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1223	1870	1585	1354	478	1180
Grp Volume(v), veh/h	61	518	22	20	588	47	35	35	16	58	0	163
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1223	1870	1585	1354	0	1658
Q Serve(g_s), s	2.0	7.2	0.6	0.6	8.8	1.3	1.0	0.6	0.3	1.4	0.0	3.4
Cycle Q Clear(g_c), s	2.0	7.2	0.6	0.6	8.8	1.3	4.4	0.6	0.3	2.0	0.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	96	977	436	42	870	388	628	880	746	746	0	780
V/C Ratio(X)	0.64	0.53	0.05	0.47	0.68	0.12	0.06	0.04	0.02	0.08	0.00	0.21
Avail Cap(c_a), veh/h	442	2401	1071	289	2097	935	628	880	746	746	0	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.1	18.0	15.6	28.2	20.0	17.2	10.4	8.4	8.3	8.9	0.0	9.1
Incr Delay (d2), s/veh	6.8	0.4	0.0	8.0	0.9	0.1	0.2	0.1	0.1	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.4	0.2	0.3	3.0	0.4	0.2	0.2	0.1	0.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.9	18.4	15.6	36.2	20.9	17.3	10.5	8.4	8.3	9.1	0.0	9.7
LnGrp LOS	C	B	B	D	C	B	B	A	A	A		A
Approach Vol, veh/h		601			655			86			221	
Approach Delay, s/veh		19.9			21.1			9.3			9.5	
Approach LOS		B			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	5.9	20.6		32.0	7.6	18.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	9.5	39.5		27.5	14.5	34.5				
Max Q Clear Time (g_c+I1), s		6.4	2.6	9.2		5.4	4.0	10.8				
Green Ext Time (p_c), s		0.2	0.0	3.1		0.9	0.1	3.6				

Intersection Summary												
HCM 6th Ctrl Delay, s/veh			18.4									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	181	19	57	232	31	43	66	154	16	45	29
Future Volume (veh/h)	31	181	19	57	232	31	43	66	154	16	45	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	191	20	60	244	33	45	69	162	17	47	31
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	64	301	255	96	335	284	80	838	710	37	793	672
Arrive On Green	0.04	0.16	0.16	0.05	0.18	0.18	0.04	0.45	0.45	0.02	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	191	20	60	244	33	45	69	162	17	47	31
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	5.4	0.6	1.9	7.0	1.0	1.4	1.2	3.6	0.5	0.8	0.7
Cycle Q Clear(g_c), s	1.0	5.4	0.6	1.9	7.0	1.0	1.4	1.2	3.6	0.5	0.8	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	301	255	96	335	284	80	838	710	37	793	672
V/C Ratio(X)	0.52	0.63	0.08	0.63	0.73	0.12	0.56	0.08	0.23	0.46	0.06	0.05
Avail Cap(c_a), veh/h	266	904	766	360	1002	850	297	838	710	235	793	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	22.3	20.3	26.4	22.0	19.6	26.6	9.0	9.7	27.5	9.7	9.6
Incr Delay (d2), s/veh	6.4	2.2	0.1	6.5	3.0	0.2	6.1	0.2	0.7	8.7	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.2	0.2	0.9	2.8	0.3	0.7	0.4	1.0	0.3	0.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.4	24.5	20.4	32.9	25.1	19.8	32.8	9.2	10.4	36.3	9.8	9.8
LnGrp LOS	C	C	C	C	C	B	C	A	B	D	A	A
Approach Vol, veh/h		244			337			276			95	
Approach Delay, s/veh		25.4			26.0			13.7			14.5	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	30.0	7.6	13.7	7.0	28.6	6.5	14.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.5	25.5	11.5	27.5	9.5	23.5	8.5	30.5
Max Q Clear Time (g_c+I1), s	2.5	5.6	3.9	7.4	3.4	2.8	3.0	9.0
Green Ext Time (p_c), s	0.0	0.7	0.0	0.9	0.0	0.2	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	21.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	231	0	0	175	16	0	0	0	20	0	100
Future Vol, veh/h	105	231	0	0	175	16	0	0	0	20	0	100
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	-	-	-	-	-	-	-	-	-	220	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	111	243	0	0	184	17	0	0	0	21	0	105

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	201	0	-	-	-	0	710	666	243	658	-	193
Stage 1	-	-	-	-	-	-	465	465	-	193	-	-
Stage 2	-	-	-	-	-	-	245	201	-	465	-	-
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	-	3.318
Pot Cap-1 Maneuver	1371	-	0	0	-	-	348	380	796	378	0	849
Stage 1	-	-	0	0	-	-	578	563	-	809	0	-
Stage 2	-	-	0	0	-	-	759	735	-	578	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1371	-	-	-	-	-	283	344	796	351	-	849
Mov Cap-2 Maneuver	-	-	-	-	-	-	283	344	-	351	-	-
Stage 1	-	-	-	-	-	-	524	510	-	733	-	-
Stage 2	-	-	-	-	-	-	665	735	-	524	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	2.5	0	0	10.8
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1371	-	-	-	351	849
HCM Lane V/C Ratio	-	0.081	-	-	-	0.06	0.124
HCM Control Delay (s/veh)	0	7.9	0	-	-	15.9	9.8
HCM Lane LOS	A	A	A	-	-	C	A
HCM 95th %tile Q (veh)	-	0.3	-	-	-	0.2	0.4

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	560	31	0	660	0	7
Future Vol, veh/h	560	31	0	660	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	589	33	0	695	0	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	295
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	598
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	598
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	598	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s/veh)	11.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	1	1	0	1	1	2	70	0	18	140	41
Future Vol, veh/h	28	1	1	0	1	1	2	70	0	18	140	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	1	1	0	1	1	2	74	0	19	147	43

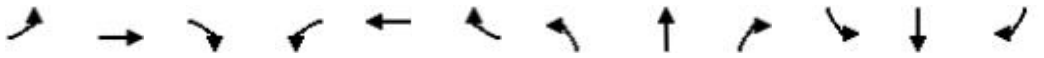
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	227	263	147	264	263	37	147	0	0	74	0	0
Stage 1	185	185	-	78	78	-	-	-	-	-	-	-
Stage 2	42	78	-	186	185	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	719	642	899	678	642	1027	1434	-	-	1525	-	0
Stage 1	816	746	-	922	830	-	-	-	-	-	-	0
Stage 2	968	830	-	815	746	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	710	634	899	669	634	1027	1434	-	-	1525	-	-
Mov Cap-2 Maneuver	710	634	-	669	634	-	-	-	-	-	-	-
Stage 1	815	737	-	921	829	-	-	-	-	-	-	-
Stage 2	965	829	-	803	737	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.3	9.6	0.2	0.8
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	1434	-	-	712	784	1525	-
HCM Lane V/C Ratio	0.001	-	-	0.044	0.003	0.012	-
HCM Control Delay (s/veh)	7.5	0	-	10.3	9.6	7.4	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q (veh)	0	-	-	0.1	0	0	-

HCM 6th Signalized Intersection Summary
1: Twentynine Palms Hwy (SR-62) & Avalon Ave

12/27/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	736	110	63	783	37	109	40	45	20	23	12
Future Volume (veh/h)	32	736	110	63	783	37	109	40	45	20	23	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	775	116	66	824	39	115	42	47	21	24	13
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	63	1061	473	95	1125	502	230	659	558	43	580	491
Arrive On Green	0.04	0.30	0.30	0.05	0.32	0.32	0.07	0.35	0.35	0.02	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	34	775	116	66	824	39	115	42	47	21	24	13
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.2	12.9	3.7	2.4	13.7	1.1	2.1	1.0	1.3	0.8	0.6	0.4
Cycle Q Clear(g_c), s	1.2	12.9	3.7	2.4	13.7	1.1	2.1	1.0	1.3	0.8	0.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	63	1061	473	95	1125	502	230	659	558	43	580	491
V/C Ratio(X)	0.54	0.73	0.25	0.70	0.73	0.08	0.50	0.06	0.08	0.49	0.04	0.03
Avail Cap(c_a), veh/h	202	1746	779	283	1907	851	444	659	558	175	580	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	20.8	17.6	30.8	20.1	15.8	29.8	14.2	14.3	31.9	16.0	15.9
Incr Delay (d2), s/veh	7.2	1.0	0.3	8.9	0.9	0.1	1.7	0.2	0.3	8.3	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.7	1.2	1.2	4.9	0.4	0.9	0.4	0.4	0.4	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.6	21.8	17.8	39.7	21.1	15.9	31.5	14.4	14.6	40.1	16.1	16.0
LnGrp LOS	D	C	B	D	C	B	C	B	B	D	B	B
Approach Vol, veh/h		925			929			204			58	
Approach Delay, s/veh		21.9			22.2			24.1			24.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	27.8	8.0	24.2	8.9	25.0	6.8	25.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	22.5	10.5	32.5	8.5	20.5	7.5	35.5
Max Q Clear Time (g_c+I1), s	2.8	3.3	4.4	14.9	4.1	2.6	3.2	15.7
Green Ext Time (p_c), s	0.0	0.2	0.0	4.8	0.1	0.1	0.0	5.1

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	22.3
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	4	23	117	2	11	12	123	88	5	151	26
Future Vol, veh/h	42	4	23	117	2	11	12	123	88	5	151	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	4	24	123	2	12	13	129	93	5	159	27
Number of Lanes	0	1	1	0	1	1	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay, s/veh	9.5	10.8	10.8	10.2
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	91%	0%	98%	0%	100%	0%	0%
Vol Thru, %	0%	58%	9%	0%	2%	0%	0%	100%	0%
Vol Right, %	0%	42%	0%	100%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	211	46	23	119	11	5	151	26
LT Vol	12	0	42	0	117	0	5	0	0
Through Vol	0	123	4	0	2	0	0	151	0
RT Vol	0	88	0	23	0	11	0	0	26
Lane Flow Rate	13	222	48	24	125	12	5	159	27
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.022	0.336	0.089	0.037	0.226	0.017	0.009	0.257	0.039
Departure Headway (Hd)	6.241	5.443	6.644	5.48	6.495	5.297	6.328	5.824	5.118
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	575	662	540	654	554	676	567	618	701
Service Time	3.962	3.164	4.374	3.209	4.221	3.023	4.049	3.545	2.839
HCM Lane V/C Ratio	0.023	0.335	0.089	0.037	0.226	0.018	0.009	0.257	0.039
HCM Control Delay, s/veh	9.1	10.9	10	8.4	11.1	8.1	9.1	10.6	8
HCM Lane LOS	A	B	A	A	B	A	A	B	A
HCM 95th-tile Q	0.1	1.5	0.3	0.1	0.9	0.1	0	1	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	672	78	184	744	129	174
Future Volume (veh/h)	672	78	184	744	129	174
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	707	82	194	783	136	183
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	1162	1007	249	1573	1409	868
Arrive On Green	0.23	0.23	0.14	0.44	0.41	0.41
Sat Flow, veh/h	5274	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	707	82	194	783	136	183
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1777	1728	1585
Q Serve(g_s), s	7.5	1.2	6.3	9.5	1.5	3.5
Cycle Q Clear(g_c), s	7.5	1.2	6.3	9.5	1.5	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1162	1007	249	1573	1409	868
V/C Ratio(X)	0.61	0.08	0.78	0.50	0.10	0.21
Avail Cap(c_a), veh/h	2252	1345	756	3341	1409	868
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	4.2	24.9	12.0	11.0	6.9
Incr Delay (d2), s/veh	0.5	0.0	5.2	0.2	0.1	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	2.5	0.8	2.7	2.8	0.5	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.3	4.2	30.1	12.2	11.1	7.5
LnGrp LOS	C	A	C	B	B	A
Approach Vol, veh/h	789			977	319	
Approach Delay, s/veh	19.5			15.8	9.0	
Approach LOS	B			B	A	

Timer - Assigned Phs	2	3	4		8
Phs Duration (G+Y+Rc), s	29.0	12.9	18.2		31.1
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	24.5	25.5	26.5		56.5
Max Q Clear Time (g_c+I1), s	5.5	8.3	9.5		11.5
Green Ext Time (p_c), s	1.0	0.4	4.2		5.5

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	16.2
HCM 6th LOS	B

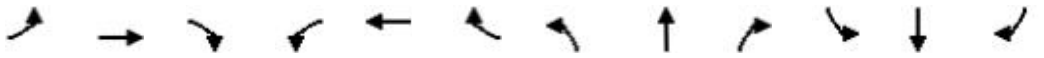
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	856	5	0	923	0	51
Future Vol, veh/h	856	5	0	923	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	901	5	0	972	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	451
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	475
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	475
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	475	-	-	-
HCM Lane V/C Ratio	0.113	-	-	-
HCM Control Delay (s/veh)	13.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.4	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	705	22	15	811	73	23	29	17	64	21	82
Future Volume (veh/h)	135	705	22	15	811	73	23	29	17	64	21	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	742	23	16	854	77	24	31	18	67	22	86
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	184	1468	655	34	1169	521	511	663	562	580	118	462
Arrive On Green	0.10	0.41	0.41	0.02	0.33	0.33	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1286	1870	1585	1356	333	1303
Grp Volume(v), veh/h	142	742	23	16	854	77	24	31	18	67	0	108
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1286	1870	1585	1356	0	1636
Q Serve(g_s), s	4.9	9.8	0.5	0.6	13.5	2.2	0.8	0.7	0.5	2.2	0.0	2.9
Cycle Q Clear(g_c), s	4.9	9.8	0.5	0.6	13.5	2.2	3.7	0.7	0.5	2.9	0.0	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	184	1468	655	34	1169	521	511	663	562	580	0	580
V/C Ratio(X)	0.77	0.51	0.04	0.46	0.73	0.15	0.05	0.05	0.03	0.12	0.00	0.19
Avail Cap(c_a), veh/h	491	2661	1187	183	2045	912	511	663	562	580	0	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.7	13.8	11.1	30.8	18.8	15.0	15.4	13.4	13.4	14.4	0.0	14.1
Incr Delay (d2), s/veh	6.6	0.3	0.0	9.4	0.9	0.1	0.2	0.1	0.1	0.4	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.0	0.2	0.3	4.5	0.6	0.2	0.3	0.2	0.6	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.3	14.1	11.1	40.2	19.7	15.1	15.6	13.6	13.5	14.8	0.0	14.8
LnGrp LOS	C	B	B	D	B	B	B	B	B	B		B
Approach Vol, veh/h		907			947			73			175	
Approach Delay, s/veh		17.2			19.7			14.2			14.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		27.0	5.7	30.7		27.0	11.1	25.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		22.5	6.5	47.5		22.5	17.5	36.5				
Max Q Clear Time (g_c+I1), s		5.7	2.6	11.8		4.9	6.9	15.5				
Green Ext Time (p_c), s		0.2	0.0	4.9		0.6	0.2	5.4				

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	18.0
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	202	52	86	243	52	47	103	96	65	135	84
Future Volume (veh/h)	55	202	52	86	243	52	47	103	96	65	135	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	213	55	91	256	55	49	108	101	68	142	88
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	92	314	266	119	343	290	83	770	652	100	788	668
Arrive On Green	0.05	0.17	0.17	0.07	0.18	0.18	0.05	0.41	0.41	0.06	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	58	213	55	91	256	55	49	108	101	68	142	88
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.9	6.5	1.8	3.0	7.8	1.8	1.6	2.2	2.4	2.3	2.9	2.1
Cycle Q Clear(g_c), s	1.9	6.5	1.8	3.0	7.8	1.8	1.6	2.2	2.4	2.3	2.9	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	314	266	119	343	290	83	770	652	100	788	668
V/C Ratio(X)	0.63	0.68	0.21	0.77	0.75	0.19	0.59	0.14	0.15	0.68	0.18	0.13
Avail Cap(c_a), veh/h	280	726	616	397	850	720	280	770	652	339	788	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	23.6	21.7	27.8	23.4	20.9	28.3	11.1	11.2	28.0	11.0	10.7
Incr Delay (d2), s/veh	7.0	2.6	0.4	9.9	3.3	0.3	6.6	0.4	0.5	7.8	0.5	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.7	0.6	1.4	3.2	0.6	0.8	0.8	0.7	1.1	1.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.1	26.2	22.1	37.7	26.6	21.2	34.9	11.5	11.7	35.8	11.5	11.1
LnGrp LOS	D	C	C	D	C	C	C	B	B	D	B	B
Approach Vol, veh/h		326			402			258			298	
Approach Delay, s/veh		27.1			28.4			16.0			16.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	29.4	8.5	14.7	7.3	30.0	7.6	15.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.5	23.5	13.5	23.5	9.5	25.5	9.5	27.5
Max Q Clear Time (g_c+I1), s	4.3	4.4	5.0	8.5	3.6	4.9	3.9	9.8
Green Ext Time (p_c), s	0.1	0.7	0.1	1.0	0.0	0.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	22.9
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	261	0	0	266	13	0	0	0	27	0	42
Future Vol, veh/h	29	261	0	0	266	13	0	0	0	27	0	42
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	-	-	-	-	-	-	-	-	-	220	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	275	0	0	280	14	0	0	0	28	0	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	294	0	-	-	-	0	646	631	275	624	-	287
Stage 1	-	-	-	-	-	-	337	337	-	287	-	-
Stage 2	-	-	-	-	-	-	309	294	-	337	-	-
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	-	3.318
Pot Cap-1 Maneuver	1268	-	0	0	-	-	385	398	764	398	0	752
Stage 1	-	-	0	0	-	-	677	641	-	720	0	-
Stage 2	-	-	0	0	-	-	701	670	-	677	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1268	-	-	-	-	-	354	386	764	389	-	752
Mov Cap-2 Maneuver	-	-	-	-	-	-	354	386	-	389	-	-
Stage 1	-	-	-	-	-	-	657	622	-	699	-	-
Stage 2	-	-	-	-	-	-	660	670	-	657	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.8	0	0	12
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	1268	-	-	-	389	752
HCM Lane V/C Ratio	-	0.024	-	-	-	0.073	0.059
HCM Control Delay (s/veh)	0	7.9	0	-	-	15	10.1
HCM Lane LOS	A	A	A	-	-	C	B
HCM 95th %tile Q (veh)	-	0.1	-	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	743	52	0	883	0	40
Future Vol, veh/h	743	52	0	883	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	782	55	0	929	0	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	391
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	519
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	519
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	519	-	-	-
HCM Lane V/C Ratio	0.081	-	-	-
HCM Control Delay (s/veh)	12.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q (veh)	0.3	-	-	-

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	120	5	8	4	3	50	3	149	1	68	156	54
Future Vol, veh/h	120	5	8	4	3	50	3	149	1	68	156	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	126	5	8	4	3	53	3	157	1	72	164	57

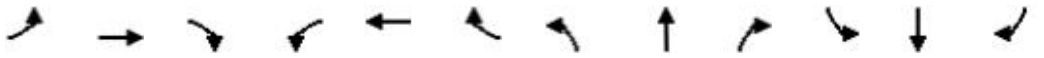
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	394	472	164	479	472	79	164	0	0	158	0	0
Stage 1	308	308	-	164	164	-	-	-	-	-	-	-
Stage 2	86	164	-	315	308	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	553	490	880	483	490	966	1413	-	-	1420	-	0
Stage 1	701	660	-	822	762	-	-	-	-	-	-	0
Stage 2	913	762	-	695	660	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	499	464	880	455	464	966	1413	-	-	1420	-	-
Mov Cap-2 Maneuver	499	464	-	455	464	-	-	-	-	-	-	-
Stage 1	700	626	-	820	760	-	-	-	-	-	-	-
Stage 2	858	760	-	648	626	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	14.7	9.6	0.1	2.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	1413	-	-	511	851	1420	-
HCM Lane V/C Ratio	0.002	-	-	0.274	0.071	0.05	-
HCM Control Delay (s/veh)	7.6	0	-	14.7	9.6	7.7	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q (veh)	0	-	-	1.1	0.2	0.2	-

HCM 7th Signalized Intersection Summary
1: Twentynine Palms Hwy (SR-62) & Avalon Ave

01/21/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	545	38	38	607	14	54	27	44	20	37	14
Future Volume (veh/h)	6	545	38	38	607	14	54	27	44	20	37	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	6	574	40	40	639	15	57	28	46	21	39	15
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	14	836	373	72	951	424	175	762	646	44	714	605
Arrive On Green	0.01	0.24	0.24	0.04	0.27	0.27	0.05	0.41	0.41	0.02	0.38	0.38
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	6	574	40	40	639	15	57	28	46	21	39	15
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.2	9.1	1.2	1.4	9.9	0.4	1.0	0.6	1.1	0.7	0.8	0.4
Cycle Q Clear(g_c), s	0.2	9.1	1.2	1.4	9.9	0.4	1.0	0.6	1.1	0.7	0.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	836	373	72	951	424	175	762	646	44	714	605
V/C Ratio(X)	0.43	0.69	0.11	0.56	0.67	0.04	0.33	0.04	0.07	0.48	0.05	0.02
Avail Cap(c_a), veh/h	188	1818	811	275	1991	888	421	762	646	246	714	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	21.5	18.5	29.0	20.1	16.7	28.2	11.0	11.1	29.7	12.0	11.9
Incr Delay (d2), s/veh	19.0	1.0	0.1	6.6	0.8	0.0	1.1	0.1	0.2	8.0	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	3.3	0.4	0.6	3.5	0.1	0.4	0.2	0.3	0.4	0.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.4	22.5	18.6	35.6	21.0	16.7	29.3	11.1	11.3	37.6	12.2	12.0
LnGrp LOS	D	C	B	D	C	B	C	B	B	D	B	B
Approach Vol, veh/h		620			694			131			75	
Approach Delay, s/veh		22.5			21.7			19.1			19.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	29.6	7.0	19.0	7.6	28.0	5.0	21.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	8.5	22.5	9.5	31.5	7.5	23.5	6.5	34.5
Max Q Clear Time (g_c+I1), s	2.7	3.1	3.4	11.1	3.0	2.8	2.2	11.9
Green Ext Time (p_c), s	0.0	0.2	0.0	3.4	0.0	0.1	0.0	3.9

Intersection Summary	
HCM 7th Control Delay, s/veh	21.7
HCM 7th LOS	C

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	26	3	4	26	3	10	21	111	62	3	76	28
Future Vol, veh/h	26	3	4	26	3	10	21	111	62	3	76	28
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	3	4	27	3	11	22	117	65	3	80	29
Number of Lanes	0	1	1	0	1	1	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay, s/veh	8.7	8.5	8.9	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	90%	0%	90%	0%	100%	0%	0%
Vol Thru, %	0%	64%	10%	0%	10%	0%	0%	100%	0%
Vol Right, %	0%	36%	0%	100%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	173	29	4	29	10	3	76	28
LT Vol	21	0	26	0	26	0	3	0	0
Through Vol	0	111	3	0	3	0	0	76	0
RT Vol	0	62	0	4	0	10	0	0	28
Lane Flow Rate	22	182	31	4	31	11	3	80	29
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.034	0.24	0.05	0.006	0.05	0.014	0.005	0.115	0.037
Departure Headway (Hd)	5.497	4.744	5.898	4.746	5.887	4.736	5.671	5.169	4.467
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	652	758	607	752	608	754	632	694	801
Service Time	3.222	2.469	3.636	2.485	3.624	2.473	3.401	2.899	2.197
HCM Lane V/C Ratio	0.034	0.24	0.051	0.005	0.051	0.015	0.005	0.115	0.036
HCM Control Delay, s/veh	8.4	9	8.9	7.5	8.9	7.5	8.4	8.6	7.4
HCM Lane LOS	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.9	0.2	0	0.2	0	0	0.4	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	439	78	131	591	56	75
Future Volume (veh/h)	439	78	131	591	56	75
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	462	82	138	622	59	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	909	1006	184	1310	1577	887
Arrive On Green	0.18	0.18	0.10	0.37	0.46	0.46
Sat Flow, veh/h	5274	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	462	82	138	622	59	79
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1777	1728	1585
Q Serve(g_s), s	4.2	1.0	3.9	6.9	0.5	1.2
Cycle Q Clear(g_c), s	4.2	1.0	3.9	6.9	0.5	1.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	909	1006	184	1310	1577	887
V/C Ratio(X)	0.51	0.08	0.75	0.47	0.04	0.09
Avail Cap(c_a), veh/h	2827	1601	848	3969	1577	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	3.6	22.4	12.4	7.7	5.3
Incr Delay (d2), s/veh	0.4	0.0	6.0	0.3	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.7	1.7	2.0	0.2	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	19.6	3.7	28.5	12.7	7.8	5.5
LnGrp LOS	B	A	C	B	A	A
Approach Vol, veh/h	544			760	138	
Approach Delay, s/veh	17.2			15.6	6.4	
Approach LOS	B			B	A	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	28.0	9.8	13.7	23.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	23.5	24.5	28.5	57.5
Max Q Clear Time (g_c+I1), s	3.2	5.9	6.2	8.9
Green Ext Time (p_c), s	0.4	0.3	3.0	4.1

Intersection Summary	
HCM 7th Control Delay, s/veh	15.3
HCM 7th LOS	B

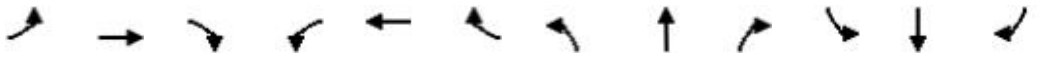
Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	535	2	0	707	0	60
Future Vol, veh/h	535	2	0	707	0	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	563	2	0	744	0	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	282
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	610
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	610
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	11.58
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	610	-	-	-
HCM Lane V/C Ratio	0.104	-	-	-
HCM Control Delay (s/veh)	11.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	496	21	19	563	45	33	33	15	55	45	110
Future Volume (veh/h)	58	496	21	19	563	45	33	33	15	55	45	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	522	22	20	593	47	35	35	16	58	47	116
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	96	982	438	42	876	391	626	878	744	745	224	554
Arrive On Green	0.05	0.28	0.28	0.02	0.25	0.25	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1223	1870	1585	1354	478	1180
Grp Volume(v), veh/h	61	522	22	20	593	47	35	35	16	58	0	163
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1223	1870	1585	1354	0	1658
Q Serve(g_s), s	2.0	7.3	0.6	0.6	8.8	1.3	1.0	0.6	0.3	1.4	0.0	3.4
Cycle Q Clear(g_c), s	2.0	7.3	0.6	0.6	8.8	1.3	4.4	0.6	0.3	2.0	0.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	96	982	438	42	876	391	626	878	744	745	0	778
V/C Ratio(X)	0.64	0.53	0.05	0.47	0.68	0.12	0.06	0.04	0.02	0.08	0.00	0.21
Avail Cap(c_a), veh/h	441	2396	1069	289	2093	933	626	878	744	745	0	778
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.2	18.0	15.6	28.2	20.0	17.1	10.4	8.4	8.3	8.9	0.0	9.1
Incr Delay (d2), s/veh	6.9	0.4	0.0	8.0	0.9	0.1	0.2	0.1	0.1	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.4	0.2	0.3	3.0	0.4	0.2	0.2	0.1	0.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.0	18.4	15.6	36.2	20.9	17.3	10.6	8.5	8.4	9.2	0.0	9.8
LnGrp LOS	C	B	B	D	C	B	B	A	A	A		A
Approach Vol, veh/h		605			660			86			221	
Approach Delay, s/veh		19.9			21.1			9.3			9.6	
Approach LOS		B			C			A			A	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	5.9	20.7		32.0	7.6	18.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	9.5	39.5		27.5	14.5	34.5				
Max Q Clear Time (g_c+I1), s		6.4	2.6	9.3		5.4	4.0	10.8				
Green Ext Time (p_c), s		0.2	0.0	3.2		0.9	0.1	3.6				

Intersection Summary	
HCM 7th Control Delay, s/veh	18.4
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	181	19	57	232	31	43	70	154	16	49	29
Future Volume (veh/h)	31	181	19	57	232	31	43	70	154	16	49	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	191	20	60	244	33	45	74	162	17	52	31
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	64	301	255	96	335	284	80	838	710	37	793	672
Arrive On Green	0.04	0.16	0.16	0.05	0.18	0.18	0.04	0.45	0.45	0.02	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	33	191	20	60	244	33	45	74	162	17	52	31
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.0	5.4	0.6	1.9	7.0	1.0	1.4	1.3	3.6	0.5	0.9	0.7
Cycle Q Clear(g_c), s	1.0	5.4	0.6	1.9	7.0	1.0	1.4	1.3	3.6	0.5	0.9	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	301	255	96	335	284	80	838	710	37	793	672
V/C Ratio(X)	0.52	0.63	0.08	0.63	0.73	0.12	0.56	0.09	0.23	0.46	0.07	0.05
Avail Cap(c_a), veh/h	266	904	766	360	1002	850	297	838	710	235	793	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	22.3	20.3	26.4	22.0	19.6	26.6	9.0	9.7	27.5	9.7	9.6
Incr Delay (d2), s/veh	6.4	2.2	0.1	6.5	3.0	0.2	6.1	0.2	0.7	8.7	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.2	0.2	0.9	2.8	0.3	0.7	0.4	1.0	0.3	0.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.4	24.5	20.4	32.9	25.1	19.8	32.8	9.2	10.4	36.3	9.9	9.8
LnGrp LOS	C	C	C	C	C	B	C	A	B	D	A	A
Approach Vol, veh/h		244			337			281			100	
Approach Delay, s/veh		25.4			26.0			13.7			14.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	30.0	7.6	13.7	7.0	28.6	6.5	14.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	7.5	25.5	11.5	27.5	9.5	23.5	8.5	30.5
Max Q Clear Time (g_c+I1), s	2.5	5.6	3.9	7.4	3.4	2.9	3.0	9.0
Green Ext Time (p_c), s	0.0	0.8	0.0	0.9	0.0	0.3	0.0	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	21.0
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	231	0	0	175	16	0	0	0	20	0	100
Future Vol, veh/h	105	231	0	0	175	16	0	0	0	20	0	100
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	-	-	-	-	-	-	-	-	-	220	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	111	243	0	0	184	17	0	0	0	21	0	105

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	201	0	-	-	-	0	648	665	243	657	-	193
Stage 1	-	-	-	-	-	-	464	464	-	193	-	-
Stage 2	-	-	-	-	-	-	184	201	-	464	-	-
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	-	3.318
Pot Cap-1 Maneuver	1371	-	0	0	-	-	383	380	796	378	0	849
Stage 1	-	-	0	0	-	-	578	563	-	809	0	-
Stage 2	-	-	0	0	-	-	818	735	-	578	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1371	-	-	-	-	-	304	345	796	343	-	849
Mov Cap-2 Maneuver	-	-	-	-	-	-	304	345	-	343	-	-
Stage 1	-	-	-	-	-	-	524	511	-	809	-	-
Stage 2	-	-	-	-	-	-	716	735	-	524	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	2.45	0	0	10.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	563	-	-	-	343	849
HCM Lane V/C Ratio	-	0.081	-	-	-	0.061	0.124
HCM Control Delay (s/veh)	0	7.9	0	-	-	16.2	9.8
HCM Lane LOS	A	A	A	-	-	C	A
HCM 95th %tile Q(veh)	-	0.3	-	-	-	0.2	0.4

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	536	69	0	660	0	7
Future Vol, veh/h	536	69	0	660	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	564	73	0	695	0	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	282
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	610
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	610
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	10.98
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	610	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s/veh)	11	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

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	63	1	1	0	1	1	2	70	0	18	140	52
Future Vol, veh/h	63	1	1	0	1	1	2	70	0	18	140	52
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	1	1	0	1	1	2	74	0	19	147	55

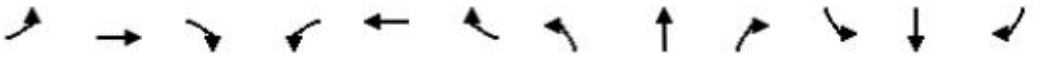
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	227	263	147	264	263	37	147	0	0	74	0	0
Stage 1	185	185	-	78	78	-	-	-	-	-	-	-
Stage 2	42	78	-	186	185	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	719	641	899	678	641	1028	1433	-	-	1525	-	0
Stage 1	816	746	-	922	830	-	-	-	-	-	-	0
Stage 2	968	830	-	815	746	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	707	632	899	667	632	1028	1433	-	-	1525	-	-
Mov Cap-2 Maneuver	707	632	-	667	632	-	-	-	-	-	-	-
Stage 1	806	737	-	921	829	-	-	-	-	-	-	-
Stage 2	964	829	-	803	737	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	10.63	9.61	0.22	0.84
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	100	-	-	708	783	1525	-
HCM Lane V/C Ratio	0.001	-	-	0.097	0.003	0.012	-
HCM Control Delay (s/veh)	7.5	0	-	10.6	9.6	7.4	-
HCM Lane LOS	A	A	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-

HCM 7th Signalized Intersection Summary
1: Twentynine Palms Hwy (SR-62) & Avalon Ave

01/21/2025



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	758	110	63	783	37	131	41	45	21	23	12
Future Volume (veh/h)	32	758	110	63	783	37	131	41	45	21	23	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	798	116	66	824	39	138	43	47	22	24	13
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	62	1081	482	94	1144	510	238	654	554	45	572	485
Arrive On Green	0.03	0.30	0.30	0.05	0.32	0.32	0.07	0.35	0.35	0.03	0.31	0.31
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3456	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	34	798	116	66	824	39	138	43	47	22	24	13
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1728	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	13.5	3.7	2.4	13.7	1.1	2.6	1.0	1.3	0.8	0.6	0.4
Cycle Q Clear(g_c), s	1.3	13.5	3.7	2.4	13.7	1.1	2.6	1.0	1.3	0.8	0.6	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	1081	482	94	1144	510	238	654	554	45	572	485
V/C Ratio(X)	0.55	0.74	0.24	0.70	0.72	0.08	0.58	0.07	0.08	0.49	0.04	0.03
Avail Cap(c_a), veh/h	199	1722	768	279	1881	839	438	654	554	173	572	485
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	20.9	17.5	31.2	20.1	15.8	30.3	14.5	14.6	32.3	16.4	16.3
Incr Delay (d2), s/veh	7.2	1.0	0.3	9.1	0.9	0.1	2.2	0.2	0.3	8.2	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.9	1.2	1.2	4.9	0.4	1.1	0.4	0.4	0.4	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.1	21.9	17.8	40.4	20.9	15.9	32.5	14.7	14.9	40.4	16.5	16.4
LnGrp LOS	D	C	B	D	C	B	C	B	B	D	B	B
Approach Vol, veh/h		948			929			228			59	
Approach Delay, s/veh		22.0			22.1			25.5			25.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	27.9	8.0	24.9	9.1	25.0	6.8	26.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.5	22.5	10.5	32.5	8.5	20.5	7.5	35.5
Max Q Clear Time (g_c+I1), s	2.8	3.3	4.4	15.5	4.6	2.6	3.3	15.7
Green Ext Time (p_c), s	0.0	0.2	0.0	4.9	0.1	0.1	0.0	5.1

Intersection Summary	
HCM 7th Control Delay, s/veh	22.5
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	4	23	117	2	11	12	130	88	5	158	26
Future Vol, veh/h	42	4	23	117	2	11	12	130	88	5	158	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	4	24	123	2	12	13	137	93	5	166	27
Number of Lanes	0	1	1	0	1	1	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay, s/veh	9.6	10.9	11	10.3
HCM LOS	A	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	91%	0%	98%	0%	100%	0%	0%
Vol Thru, %	0%	60%	9%	0%	2%	0%	0%	100%	0%
Vol Right, %	0%	40%	0%	100%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	218	46	23	119	11	5	158	26
LT Vol	12	0	42	0	117	0	5	0	0
Through Vol	0	130	4	0	2	0	0	158	0
RT Vol	0	88	0	23	0	11	0	0	26
Lane Flow Rate	13	229	48	24	125	12	5	166	27
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.022	0.349	0.09	0.037	0.228	0.017	0.009	0.27	0.039
Departure Headway (Hd)	6.262	5.473	6.694	5.529	6.543	5.344	6.348	5.844	5.138
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	573	659	536	648	550	670	565	615	697
Service Time	3.987	3.198	4.427	3.261	4.272	3.073	4.075	3.571	2.865
HCM Lane V/C Ratio	0.023	0.347	0.09	0.037	0.227	0.018	0.009	0.27	0.039
HCM Control Delay, s/veh	9.1	11.1	10.1	8.5	11.2	8.2	9.1	10.7	8.1
HCM Lane LOS	A	B	B	A	B	A	A	B	A
HCM 95th-tile Q	0.1	1.6	0.3	0.1	0.9	0.1	0	1.1	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	643	78	198	736	137	209
Future Volume (veh/h)	643	78	198	736	137	209
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
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	677	82	208	775	144	220
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	1123	994	265	1576	1406	881
Arrive On Green	0.22	0.22	0.15	0.44	0.41	0.41
Sat Flow, veh/h	5274	1585	1781	3647	3456	1585
Grp Volume(v), veh/h	677	82	208	775	144	220
Grp Sat Flow(s),veh/h/ln	1702	1585	1781	1777	1728	1585
Q Serve(g_s), s	7.2	1.2	6.8	9.3	1.6	4.3
Cycle Q Clear(g_c), s	7.2	1.2	6.8	9.3	1.6	4.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1123	994	265	1576	1406	881
V/C Ratio(X)	0.60	0.08	0.78	0.49	0.10	0.25
Avail Cap(c_a), veh/h	2248	1343	755	3335	1406	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	4.4	24.7	11.9	11.0	6.9
Incr Delay (d2), s/veh	0.5	0.0	5.1	0.2	0.1	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.8	2.8	2.8	0.6	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	21.6	4.5	29.8	12.2	11.2	7.6
LnGrp LOS	C	A	C	B	B	A
Approach Vol, veh/h	759			983	364	
Approach Delay, s/veh	19.8			15.9	9.0	
Approach LOS	B			B	A	

Timer - Assigned Phs	2	3	4	8
Phs Duration (G+Y+Rc), s	29.0	13.5	17.7	31.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	24.5	25.5	26.5	56.5
Max Q Clear Time (g_c+I1), s	6.3	8.8	9.2	11.3
Green Ext Time (p_c), s	1.2	0.5	4.1	5.4

Intersection Summary	
HCM 7th Control Delay, s/veh	16.1
HCM 7th LOS	B

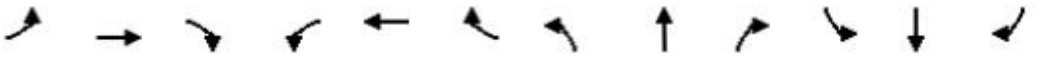
Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	862	5	0	929	0	51
Future Vol, veh/h	862	5	0	929	0	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	907	5	0	978	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	454
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	473
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	473
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	13.58
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	473	-	-	-
HCM Lane V/C Ratio	0.113	-	-	-
HCM Control Delay (s/veh)	13.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	711	22	15	817	73	23	29	17	64	21	82
Future Volume (veh/h)	135	711	22	15	817	73	23	29	17	64	21	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	142	748	23	16	860	77	24	31	18	67	22	86
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	184	1474	657	34	1175	524	509	662	561	578	118	461
Arrive On Green	0.10	0.41	0.41	0.02	0.33	0.33	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1286	1870	1585	1356	333	1303
Grp Volume(v), veh/h	142	748	23	16	860	77	24	31	18	67	0	108
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1286	1870	1585	1356	0	1636
Q Serve(g_s), s	4.9	9.9	0.5	0.6	13.6	2.2	0.8	0.7	0.5	2.2	0.0	2.9
Cycle Q Clear(g_c), s	4.9	9.9	0.5	0.6	13.6	2.2	3.7	0.7	0.5	2.9	0.0	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	184	1474	657	34	1175	524	509	662	561	578	0	579
V/C Ratio(X)	0.77	0.51	0.03	0.46	0.73	0.15	0.05	0.05	0.03	0.12	0.00	0.19
Avail Cap(c_a), veh/h	490	2654	1184	182	2039	909	509	662	561	578	0	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	13.8	11.1	30.9	18.8	15.0	15.5	13.5	13.4	14.5	0.0	14.2
Incr Delay (d2), s/veh	6.6	0.3	0.0	9.4	0.9	0.1	0.2	0.1	0.1	0.4	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	3.1	0.2	0.3	4.6	0.6	0.2	0.3	0.2	0.6	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.4	14.1	11.1	40.3	19.7	15.1	15.7	13.6	13.5	14.9	0.0	14.9
LnGrp LOS	C	B	B	D	B	B	B	B	B	B		B
Approach Vol, veh/h		913			953			73			175	
Approach Delay, s/veh		17.2			19.7			14.3			14.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	27.0	5.7	30.9	27.0	11.1	25.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	22.5	6.5	47.5	22.5	17.5	36.5
Max Q Clear Time (g_c+I1), s	5.7	2.6	11.9	4.9	6.9	15.6
Green Ext Time (p_c), s	0.2	0.0	5.0	0.6	0.2	5.4

Intersection Summary	
HCM 7th Control Delay, s/veh	18.0
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	202	52	86	243	53	47	109	96	66	141	85
Future Volume (veh/h)	56	202	52	86	243	53	47	109	96	66	141	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	213	55	91	256	56	49	115	101	69	148	89
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	93	315	267	119	343	290	83	768	651	101	788	668
Arrive On Green	0.05	0.17	0.17	0.07	0.18	0.18	0.05	0.41	0.41	0.06	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	59	213	55	91	256	56	49	115	101	69	148	89
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.0	6.5	1.8	3.0	7.8	1.8	1.6	2.3	2.4	2.3	3.0	2.1
Cycle Q Clear(g_c), s	2.0	6.5	1.8	3.0	7.8	1.8	1.6	2.3	2.4	2.3	3.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	315	267	119	343	290	83	768	651	101	788	668
V/C Ratio(X)	0.64	0.68	0.21	0.77	0.75	0.19	0.59	0.15	0.16	0.68	0.19	0.13
Avail Cap(c_a), veh/h	280	726	615	397	850	720	280	768	651	338	788	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	23.6	21.7	27.8	23.4	20.9	28.3	11.2	11.2	28.0	11.0	10.7
Incr Delay (d2), s/veh	7.1	2.5	0.4	9.9	3.3	0.3	6.6	0.4	0.5	7.9	0.5	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.7	0.6	1.4	3.2	0.6	0.8	0.8	0.7	1.1	1.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.2	26.1	22.1	37.7	26.7	21.3	34.9	11.6	11.7	35.9	11.5	11.2
LnGrp LOS	D	C	C	D	C	C	C	B	B	D	B	B
Approach Vol, veh/h		327			403			265			306	
Approach Delay, s/veh		27.1			28.4			16.0			16.9	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	29.4	8.5	14.7	7.3	30.0	7.6	15.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	11.5	23.5	13.5	23.5	9.5	25.5	9.5	27.5
Max Q Clear Time (g_c+I1), s	4.3	4.4	5.0	8.5	3.6	5.0	4.0	9.8
Green Ext Time (p_c), s	0.1	0.7	0.1	1.0	0.0	1.0	0.0	1.2

Intersection Summary	
HCM 7th Control Delay, s/veh	22.8
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	262	0	0	267	13	0	0	0	27	0	42
Future Vol, veh/h	29	262	0	0	267	13	0	0	0	27	0	42
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	-	-	-	-	-	-	-	-	-	220	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	276	0	0	281	14	0	0	0	28	0	44

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	295	0	-	-	-	0	618	632	276	625	-	288
Stage 1	-	-	-	-	-	-	337	337	-	288	-	-
Stage 2	-	-	-	-	-	-	281	295	-	337	-	-
Critical Hdwy	4.12	-	-	-	-	-	7.12	6.52	6.22	7.12	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	-	-
Follow-up Hdwy	2.218	-	-	-	-	-	3.518	4.018	3.318	3.518	-	3.318
Pot Cap-1 Maneuver	1267	-	0	0	-	-	402	398	763	397	0	751
Stage 1	-	-	0	0	-	-	677	641	-	720	0	-
Stage 2	-	-	0	0	-	-	726	669	-	677	0	-
Platoon blocked, %		-			-	-						
Mov Cap-1 Maneuver	1267	-	-	-	-	-	367	386	763	386	-	751
Mov Cap-2 Maneuver	-	-	-	-	-	-	367	386	-	386	-	-
Stage 1	-	-	-	-	-	-	658	623	-	720	-	-
Stage 2	-	-	-	-	-	-	683	669	-	658	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.79	0	0	12.04
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	179	-	-	-	386	751
HCM Lane V/C Ratio	-	0.024	-	-	-	0.074	0.059
HCM Control Delay (s/veh)	0	7.9	0	-	-	15.1	10.1
HCM Lane LOS	A	A	A	-	-	C	B
HCM 95th %tile Q(veh)	-	0.1	-	-	-	0.2	0.2

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	714	103	0	883	0	40
Future Vol, veh/h	714	103	0	883	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	300	-	-	-	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	752	108	0	929	0	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	376
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	531
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	531
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	12.36
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	531	-	-	-
HCM Lane V/C Ratio	0.079	-	-	-
HCM Control Delay (s/veh)	12.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	5	8	4	3	50	3	149	1	68	156	68
Future Vol, veh/h	163	5	8	4	3	50	3	149	1	68	156	68
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	-	-	-	-	-	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	172	5	8	4	3	53	3	157	1	72	164	72

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	394	472	164	474	471	79	164	0	0	158	0	0
Stage 1	307	307	-	164	164	-	-	-	-	-	-	-
Stage 2	86	164	-	310	307	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.219	-	-	2.219	-	-
Pot Cap-1 Maneuver	553	490	880	487	490	966	1413	-	-	1420	-	0
Stage 1	702	660	-	823	762	-	-	-	-	-	-	0
Stage 2	912	762	-	699	660	-	-	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	492	464	880	452	464	966	1413	-	-	1420	-	-
Mov Cap-2 Maneuver	492	464	-	452	464	-	-	-	-	-	-	-
Stage 1	666	627	-	821	760	-	-	-	-	-	-	-
Stage 2	857	760	-	652	627	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	16.33	9.56	0.16	2.33
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	70	-	-	501	850	1420	-
HCM Lane V/C Ratio	0.002	-	-	0.37	0.071	0.05	-
HCM Control Delay (s/veh)	7.6	0	-	16.3	9.6	7.7	-
HCM Lane LOS	A	A	-	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.7	0.2	0.2	-

APPENDIX D

QUEUEING ANALYSIS WORKSHEETS

Intersection: 101: Commercial Dwy 1 & Twentynine Palms Hwy (SR-62)

Movement	NB
Directions Served	R
Maximum Queue (ft)	21
Average Queue (ft)	5
95th Queue (ft)	19
Link Distance (ft)	86
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 102: Commercial Dwy 2 & Twentynine Palms Hwy (SR-62)

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LT	L
Maximum Queue (ft)	61	28	11	23
Average Queue (ft)	28	2	0	1
95th Queue (ft)	52	13	6	10
Link Distance (ft)	151	145	293	135
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 101: Commercial Dwy 1 & Twentynine Palms Hwy (SR-62)

Movement	NB
Directions Served	R
Maximum Queue (ft)	52
Average Queue (ft)	15
95th Queue (ft)	38
Link Distance (ft)	86
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 102: Commercial Dwy 2 & Twentynine Palms Hwy (SR-62)

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	L
Maximum Queue (ft)	90	53	12	18	48
Average Queue (ft)	50	26	0	0	9
95th Queue (ft)	82	50	6	5	36
Link Distance (ft)	151	145	293	293	135
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Zone Summary

Zone wide Queuing Penalty: 0