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# TENTATIVE TRACT MAP 17168

## PHASES 3 TO 8

### TRAFFIC ANALYSIS

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## TABLE OF CONTENTS

|          |                                                                 |           |
|----------|-----------------------------------------------------------------|-----------|
| <b>1</b> | <b>INTRODUCTION .....</b>                                       | <b>1</b>  |
| 1.1      | Summary of Findings.....                                        | 1         |
| 1.2      | Analysis Scenarios .....                                        | 4         |
| 1.3      | Study Area.....                                                 | 4         |
| 1.4      | Recommendations .....                                           | 5         |
| <b>2</b> | <b>METHODOLOGIES .....</b>                                      | <b>9</b>  |
| 2.1      | Level of Service .....                                          | 9         |
| 2.2      | Intersection Capacity Analysis .....                            | 9         |
| 2.3      | Minimum Acceptable Levels of Service (LOS) .....                | 11        |
| 2.4      | Traffic Signal Warrant Analysis Methodology.....                | 11        |
| <b>3</b> | <b>EXISTING CONDITIONS .....</b>                                | <b>13</b> |
| 3.1      | Existing Circulation Network .....                              | 13        |
| 3.2      | City of Twentynine Palms General Plan Circulation Element ..... | 13        |
| 3.3      | Transit Service .....                                           | 13        |
| 3.4      | Bicycle, Equestrian, and Pedestrian Facilities.....             | 13        |
| 3.5      | Existing (2025) Traffic Volumes.....                            | 18        |
| 3.6      | Intersection Operations Analysis.....                           | 20        |
| <b>4</b> | <b>PROJECTED FUTURE TRAFFIC .....</b>                           | <b>23</b> |
| 4.1      | Project Trip Generation.....                                    | 23        |
| 4.2      | Project Trip Distribution.....                                  | 24        |
| 4.3      | Modal Split .....                                               | 24        |
| 4.4      | Project Trip Assignment.....                                    | 24        |
| 4.5      | Background Traffic.....                                         | 24        |
| 4.6      | Cumulative Development Traffic.....                             | 27        |
| <b>5</b> | <b>EXISTING PLUS PROJECT TRAFFIC CONDITIONS .....</b>           | <b>29</b> |
| 5.1      | Roadway Improvements.....                                       | 29        |
| 5.2      | Existing Plus Project Traffic Volume Forecasts.....             | 29        |
| 5.3      | Intersection Operations Analysis.....                           | 29        |
| 5.4      | Traffic Signal Warrants Analysis .....                          | 32        |
| <b>6</b> | <b>CUMULATIVE (2027) TRAFFIC CONDITIONS.....</b>                | <b>33</b> |
| 6.1      | Roadway Improvements.....                                       | 33        |
| 6.2      | Cumulative (2027) Without Project Traffic Volume Forecasts..... | 33        |
| 6.3      | Cumulative (2027) With Project Traffic Volume Forecasts .....   | 33        |
| 6.4      | Intersection Operations Analysis.....                           | 33        |
| 6.5      | Traffic Signal Warrants Analysis .....                          | 36        |
| 6.6      | Queueing Analysis .....                                         | 36        |
| <b>7</b> | <b>REFERENCES .....</b>                                         | <b>41</b> |

## **APPENDICES**

- APPENDIX 1.1: TRAFFIC STUDY SCOPING AGREEMENT**
- APPENDIX 3.1: TRAFFIC COUNTS – DECEMBER 2025**
- APPENDIX 3.2: EXISTING (2025) CONDITIONS**
  - INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 3.3: TRAFFIC SIGNAL WARRANT WORKSHEETS**
- APPENDIX 5.1: EXISTING PLUS PROJECT CONDITIONS**
  - INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.1: CUMULATIVE (2027) WITHOUT PROJECT CONDITIONS**
  - INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.2: CUMULATIVE (2027) WITH PROJECT CONDITIONS**
  - INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**
- APPENDIX 6.3: CUMULATIVE (2027) WITH PROJECT CONDITIONS**
  - QUEUEING ANALYSIS WORKSHEETS**

## LIST OF EXHIBITS

|                                                                               |    |
|-------------------------------------------------------------------------------|----|
| EXHIBIT 1-1: PRELIMINARY SITE PLAN .....                                      | 2  |
| EXHIBIT 1-2: TRAFFIC ANALYSIS STUDY AREA.....                                 | 3  |
| EXHIBIT 1-3: CIRCULATION RECOMMENDATIONS .....                                | 6  |
| EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS ..... | 14 |
| EXHIBIT 3-2: CITY OF TWENTYNINE PALMS CIRCULATION PLAN .....                  | 15 |
| EXHIBIT 3-3: CITY OF TWENTYNINE PALMS ROADWAY CROSS-SECTIONS .....            | 16 |
| EXHIBIT 3-4: CITY OF TWENTYNINE PALMS TRAIL FACILITIES.....                   | 17 |
| EXHIBIT 3-5: EXISTING (2025) TRAFFIC VOLUMES .....                            | 19 |
| EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION .....                                  | 25 |
| EXHIBIT 4-2: PROJECT ONLY VOLUMES .....                                       | 26 |
| EXHIBIT 4-3: CUMULATIVE DEVELOPMENT LOCATION MAP .....                        | 28 |
| EXHIBIT 5-1: EXISTING PLUS PROJECT TRAFFIC VOLUMES .....                      | 30 |
| EXHIBIT 6-1: CUMULATIVE (2027) WITHOUT PROJECT TRAFFIC VOLUMES .....          | 34 |
| EXHIBIT 6-2: CUMULATIVE (2027) WITH PROJECT TRAFFIC VOLUMES.....              | 35 |

## LIST OF TABLES

|                                                                                  |    |
|----------------------------------------------------------------------------------|----|
| TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS .....                                 | 5  |
| TABLE 2-1: SIGNALIZED INTERSECTION DESCRIPTION OF LOS .....                      | 10 |
| TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS .....                        | 11 |
| TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS.....                        | 12 |
| TABLE 3-1: EXISTING (2025) INTERSECTION ANALYSIS.....                            | 21 |
| TABLE 4-1: PROJECT TRIP GENERATION .....                                         | 23 |
| TABLE 4-2: CUMULATIVE DEVELOPMENT LAND USE SUMMARY .....                         | 27 |
| TABLE 5-1: EXISTING PLUS PROJECT INTERSECTION ANALYSIS .....                     | 31 |
| TABLE 6-1: CUMULATIVE (2027) WITHOUT PROJECT INTERSECTION ANALYSIS .....         | 37 |
| TABLE 6-2: CUMULATIVE (2027) WITH PROJECT INTERSECTION ANALYSIS .....            | 38 |
| TABLE 6-3: QUEUEING ANALYSIS FOR CUMULATIVE (2027) WITH PROJECT CONDITIONS ..... | 39 |

## LIST OF ABBREVIATED TERMS

|          |                                                      |
|----------|------------------------------------------------------|
| (1)      | Reference                                            |
| ADT      | Average Daily Traffic                                |
| CAMUTCD  | California Manual on Uniform Traffic Control Devices |
| Caltrans | California Department of Transportation              |
| DIF      | Development Impact Fee                               |
| HCM      | Highway Capacity Manual                              |
| ITE      | Institute of Transportation Engineers                |
| LOS      | Level of Service                                     |
| PHF      | Peak Hour Factor                                     |
| Project  | Tentative Tract Map 17168 Phases 3 to 8              |
| TA       | Traffic Analysis                                     |
| V/C      | Volume-to-Capacity Ratio                             |
| VMT      | Vehicle Miles Traveled                               |
| vphgpl   | Vehicles per Hour Green per Lane                     |

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# 1 INTRODUCTION

This report presents the results of the Traffic Access Analysis for the Tentative Tract Map 17168 Phases 3 to 8 (Project), which is located south of the future extension of Samarkand Drive, between Desert Knoll Avenue and Utah Trail in the City of Twentynine Palms.

The Project consists of 137 dwelling units within phases 3 to 8 of Tentative Tract Map 17168. For analysis purposes, the Project is anticipated to have an Opening Year of 2027. A preliminary site plan of the proposed Project is shown on Exhibit 1-1.

The purpose of this traffic analysis (TA) is to evaluate traffic operations with development of the proposed Project and recommend improvements to achieve acceptable circulation system levels of services. This TA has been prepared based in accordance with the City of Twentynine Palms' Traffic Study Policy (February, 2005), the San Bernardino County Congestion Management Program (CMP) Guidelines for CMP Traffic Impact Analysis Reports (Appendix B, 2016 Update), the City of Twentynine Palms' Vehicle Miles Traveled Policy Guidance (August 2020) and consultation with City staff during the traffic study scoping process. (1) (2) (3)

To ensure that this TA satisfies the City of Twentynine Palms's traffic study requirements, Urban Crossroads, Inc. prepared a traffic study scoping package for review by County staff. The scope provides an outline of the Project study area, trip generation, trip distribution, analysis methodology, and VMT screening. The scope and VMT screening approved by the City is included in Appendix 1.1. Exhibit 1-2 shows the intersection analysis locations included in this study.

## 1.1 SUMMARY OF FINDINGS

Access to the Project is provided via Desert Knoll Avenue and Manana Drive, as well as the future extension of Samarkand Drive between Desert Knoll Avenue and Utah Trail. Manana Drive east of Desert Knoll Avenue and Marine Avenue north of Two Mile Road were constructed in conjunction with phases 1 and 2 of Tentative Tract Map 17168. A north-south local street connects Phase 3 to Manana Drive east of Desert Knoll Avenue and west of Marine Avenue. Phases 4 to 8 are connected to Samarkand Drive as well as the north-south roadway extending through Phase 3.

The Project is anticipated to generate 1,245 two-way vehicle trip-ends per day with 96 AM peak hour vehicle trips and 127 PM peak hour vehicle trips.

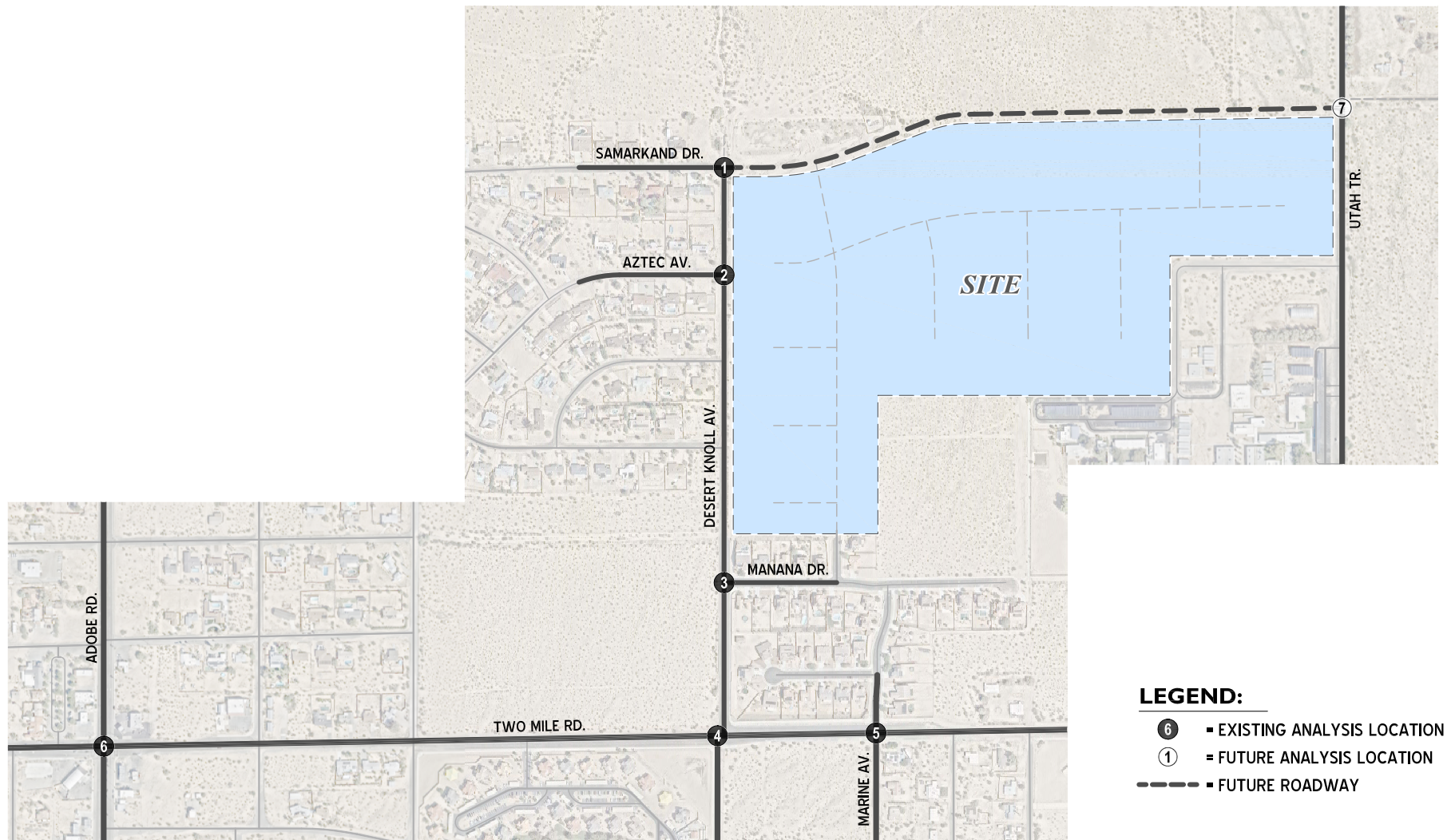
For Existing (2025), Existing plus Project, Cumulative (2027), and Cumulative plus Project conditions, the study area intersections are operating at acceptable levels of service (LOS "C" or better). In conjunction with site development, Samarkand Drive will be extended between Desert Knoll Avenue and Utah Trail as a 2-lane local roadway.

The unsignalized intersections in the study area are not anticipated to satisfy traffic signal warrants for any of the analysis scenarios.

# EXHIBIT 1-1: TTM 17168 PHASES 3 TO 8 SITE PLAN



## EXHIBIT 1-2: TRAFFIC ANALYSIS STUDY AREA



A queuing analysis was performed for Cumulative (2027) Plus Project conditions at the following intersections, adjacent to the Project:

- Desert Knoll Avenue / Samarkand Drive (#1)
- Desert Knoll Avenue / Manana Drive (#3)
- Marine Avenue / Two Mile Road (#5)
- Utah Trail / Samarkand Drive (#7)

As shown in Table 6-2 of this report, the evaluated intersection lanes provide adequate storage to accommodate the anticipated 95th percentile peak hour traffic queues for cumulative conditions with the Project.

## **1.2 ANALYSIS SCENARIOS**

For the purposes of this Traffic Access Analysis, peak hour intersection operations have been evaluated for each of the following traffic conditions:

- Existing (2025) Conditions
- Existing Plus Project Conditions
- Cumulative (2027) Conditions
- Cumulative (2027) Plus Project Conditions

All study area intersections are evaluated using the Highway Capacity Manual (HCM, 7<sup>th</sup> Edition) analysis methodology.

### **1.2.1 Existing (2025) Conditions**

Information for Existing (2025) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. For a detailed discussion on the existing traffic counts, see Section 3.5 Existing Traffic Volumes.

### **1.2.2 Existing (2025) Conditions**

The Existing Plus Project conditions represents Existing (2025) with the addition of the Project. The Existing Plus Project analysis is purely hypothetical because it assumes development occurs instantaneously, and does not portray a realistic analysis of cumulative growth.

### **1.2.3 Cumulative (2027) Conditions**

The Cumulative (2027) traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. To account for background traffic growth, an ambient growth factor from Existing (2025) conditions of 4.04% (2 percent per year over 2 years) is included for Cumulative (2027) traffic conditions. Conservatively, this TA estimates the area ambient traffic growth and then adds traffic generated by other known or probable related projects.

## **1.3 STUDY AREA**

For the purposes of this Traffic Access Analysis, study area intersections were selected for evaluation based on consultation with City staff.

At a minimum, the study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips per the City's traffic study policy. (1) The "50 peak hour trip" criterion represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. The 50 peak hour trip criterion is a traffic engineering rule of thumb that is accepted and widely used within San Bernardino County for estimating a potential area of influence (i.e., study area).

The seven study area intersections shown in Exhibit 1-2 and listed in Table 1-1 have been selected for assessment based on the approved scope.

**TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS**

| # | Intersection                     | # | Intersection              |
|---|----------------------------------|---|---------------------------|
| 1 | Desert Knoll Av. / Samarkand Dr. | 5 | Marine Av. / Two Mile Rd. |
| 2 | Desert Knoll Av. / Aztec Av.     | 6 | Adobe Rd. / Two Mile Rd.  |
| 3 | Desert Knoll Av. / Manana Dr.    | 7 | Utah Tr. / Samarkand Dr.  |
| 4 | Desert Knoll Av. / Two Mile Rd.  |   |                           |

## 1.4 RECOMMENDATIONS

### 1.4.1 Site Access Recommendations

The following recommendations are based on the minimum improvements needed to accommodate site access and maintain acceptable peak hour operations for the proposed Project. Circulation recommendations are shown on Exhibit 1-3.

In conjunction with site development of Project Phases 3 and 4, widen Desert Knoll Avenue from the southern boundary of Phase 3 to the northern boundary of Phase 4 at its ultimate half-section width as a Secondary roadway, including an additional 14 feet of east side pavement width (added to the existing 18 feet of east side pavement), as well as 8 feet of east side added parkway width.

In conjunction with site development of Project Phase 4, construct Samarkand Drive from the Desert Knoll Avenue intersection to the east side Phase 4 (adjacent to the Phase 5 Retention Basin Lot 'A') at its ultimate width as a local roadway, including 36 feet of pavement width as well as 12 feet of parkway width on each side of the roadway.

In conjunction with site development of Project Phase 5, transition the full-width Samarkand Drive improvement on the east side Phase 4 to a half-section width local roadway improvement on east side of Phase 5. The half-section improvement of Samarkand Drive will include 26 feet of pavement width (18 feet south of the centerline and 8 feet north of the centerline), as well as 12 feet of parkway width on the south side of the roadway.

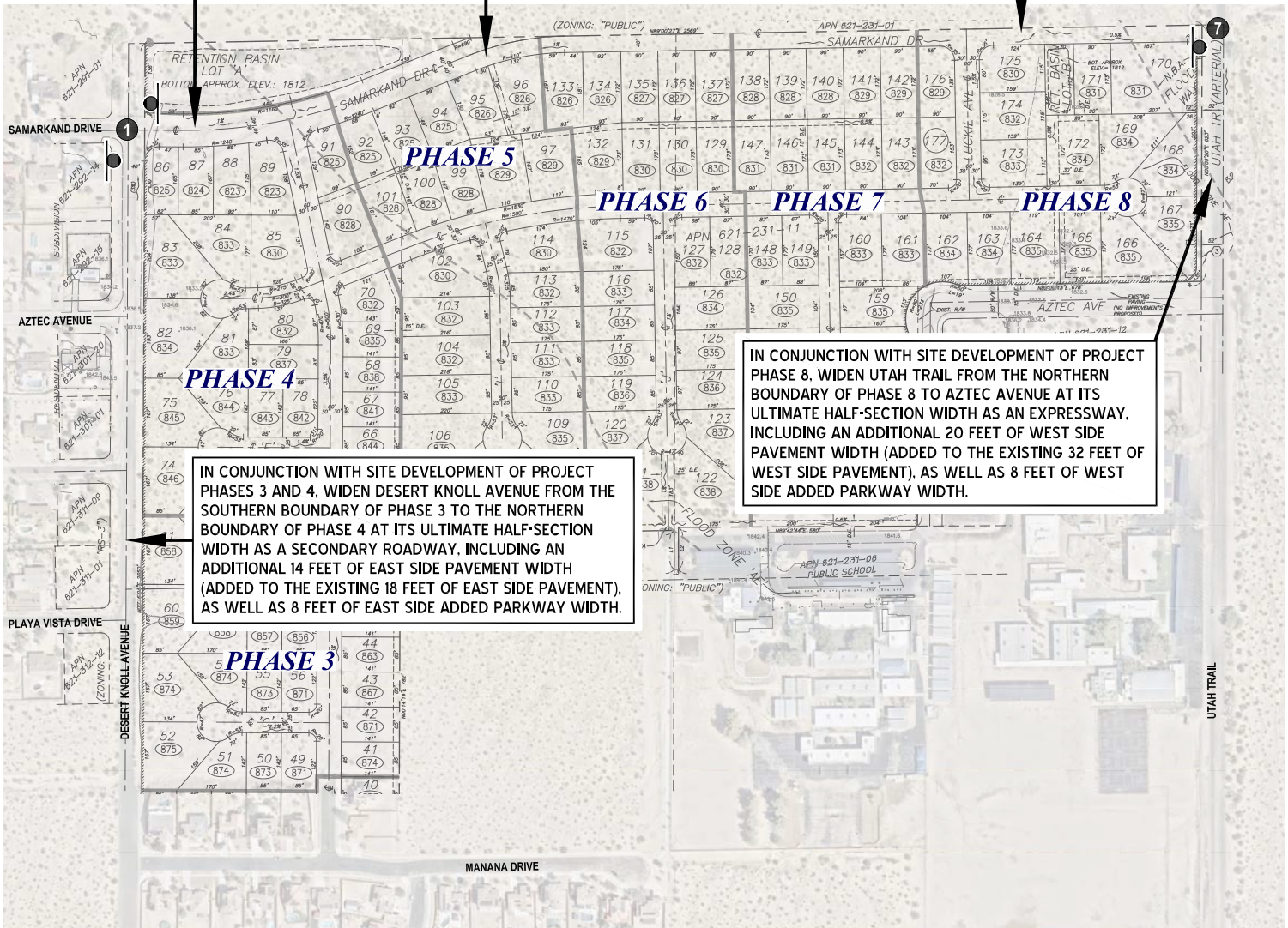
In conjunction with site development of Phases 6, 7, and 8, construct Samarkand Drive from the west side of Phase 6 to the east side of Phase 8 at its ultimate-half-section width as a local roadway, including 26 feet of pavement width (18 feet south of the centerline and 8 feet north of the centerline), as well as 12 feet of parkway width on the south side of the roadway.

## EXHIBIT 1-3: CIRCULATION RECOMMENDATIONS

IN CONJUNCTION WITH SITE DEVELOPMENT OF PROJECT PHASE 4, CONSTRUCT SAMARKAND DRIVE FROM THE DESERT KNOLL AVENUE INTERSECTION TO THE EAST SIDE PHASE 4 (ADJACENT TO THE PHASE 5 RETENTION BASIN LOT 'A') AT ITS ULTIMATE WIDTH AS A LOCAL ROADWAY, INCLUDING 36 FEET OF PAVEMENT WIDTH AS WELL AS 12 FEET OF PARKWAY WIDTH ON EACH SIDE OF THE ROADWAY.

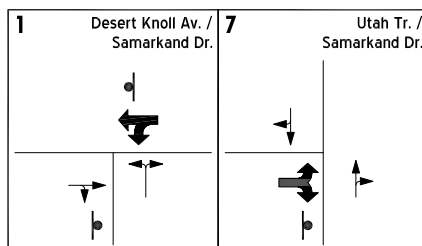
IN CONJUNCTION WITH SITE DEVELOPMENT OF PROJECT PHASE 5, TRANSITION THE FULL-WIDTH SAMARKAND DRIVE IMPROVEMENT ON THE EAST SIDE PHASE 4 TO A HALF-SECTION WIDTH LOCAL ROADWAY IMPROVEMENT ON EAST SIDE OF PHASE 5. THE HALF-SECTION IMPROVEMENT OF SAMARKAND DRIVE WILL INCLUDE 26 FEET OF PAVEMENT WIDTH (18 FEET SOUTH OF THE CENTERLINE AND 8 FEET NORTH OF THE CENTERLINE), AS WELL AS 12 FEET OF PARKWAY WIDTH ON THE SOUTH SIDE OF THE ROADWAY.

IN CONJUNCTION WITH SITE DEVELOPMENT OF PHASES 6, 7, AND 8, CONSTRUCT SAMARKAND DRIVE FROM THE WEST SIDE OF PHASE 6 TO THE EAST SIDE OF PHASE 8 AT ITS ULTIMATE-HALF-SECTION WIDTH AS A LOCAL ROADWAY, INCLUDING 26 FEET OF PAVEMENT WIDTH (18 FEET SOUTH OF THE CENTERLINE AND 8 FEET NORTH OF THE CENTERLINE), AS WELL AS 12 FEET OF PARKWAY WIDTH ON THE SOUTH SIDE OF THE ROADWAY.



IN CONJUNCTION WITH SITE DEVELOPMENT OF PROJECT PHASES 3 AND 4, WIDEN DESERT KNOLL AVENUE FROM THE SOUTHERN BOUNDARY OF PHASE 3 TO THE NORTHERN BOUNDARY OF PHASE 4 AT ITS ULTIMATE HALF-SECTION WIDTH AS A SECONDARY ROADWAY, INCLUDING AN ADDITIONAL 14 FEET OF EAST SIDE PAVEMENT WIDTH (ADDED TO THE EXISTING 18 FEET OF EAST SIDE PAVEMENT), AS WELL AS 8 FEET OF EAST SIDE ADDED PARKWAY WIDTH.

IN CONJUNCTION WITH SITE DEVELOPMENT OF PROJECT PHASE 8, WIDEN UTAH TRAIL FROM THE NORTHERN BOUNDARY OF PHASE 8 TO AZTEC AVENUE AT ITS ULTIMATE HALF-SECTION WIDTH AS AN EXPRESSWAY, INCLUDING AN ADDITIONAL 20 FEET OF WEST SIDE PAVEMENT WIDTH (ADDED TO THE EXISTING 32 FEET OF WEST SIDE PAVEMENT), AS WELL AS 8 FEET OF WEST SIDE ADDED PARKWAY WIDTH.



ON-SITE TRAFFIC SIGNING AND STRIPING SHOULD BE IMPLEMENTED AGREEABLE WITH THE PROVISIONS OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD) AND IN CONJUNCTION WITH DETAILED CONSTRUCTION PLANS FOR THE PROJECT SITE.

SIGHT DISTANCE AT EACH PROJECT ACCESS POINT SHOULD BE REVIEWED WITH RESPECT TO STANDARD CALTRANS AND CITY OF TWENTYNINE PALMS SIGHT DISTANCE STANDARDS AT THE TIME OF PREPARATION OF FINAL GRADING, LANDSCAPE, AND STREET IMPROVEMENT PLANS.

### LEGEND:

- ⑦ - INTERSECTION ID
- - EXISTING LANE
- ↩ - LANE IMPROVEMENT
- - STOP SIGN

In conjunction with site development of Project Phase 8, widen Utah Trail from the northern boundary of Phase 8 to Aztec Avenue at its ultimate half-section width as an Expressway, including an additional 20 feet of west side pavement width (added to the existing 32 feet of west side pavement), as well as 8 feet of west side added parkway width.

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard Caltrans and City of Twentynine Palms sight distance standards at the time of preparation of final grading, landscape, and street improvement plans.

Site adjacent intersection improvements include the following:

***Desert Knoll Avenue / Samarkand Drive (#1)***

- Install a stop controls on the eastbound and westbound approaches.
- Provide one westbound shared left-through lane.

***Utah Trail / Samarkand Drive (#7)***

- Install a stop control on the eastbound approach.
- Provide one eastbound shared left-right lane.

Transportation improvements within the City of Twentynine Palms are funded through a combination of direct project mitigation, fair share contributions or development impact fee programs, such as the County's Measure "I" Fund and the City of Twentynine Palms DIF program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors. The proposed Project would be required to pay DIF fees.

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## 2 METHODOLOGIES

This section documents the methodologies and assumptions used to perform this traffic assessment.

### 2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term “Level of Service” (LOS). LOS is a qualitative description of traffic flow based on several factors, such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing a breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

### 2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 7<sup>th</sup> Edition Highway Capacity Manual (HCM) methodology expresses LOS at an intersection in terms of delay time for the various intersection approaches. (4) The HCM uses different procedures depending on the type of intersection control.

#### 2.2.1 Signalized Intersections

The City of Twentynine Palms require signalized intersection operations analysis based on the methodology described in the HCM. (4) Intersection LOS operations are based on an intersection’s average control delay. Control delays include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, LOS is related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

Consistent with County guidelines, the following saturation flow rates, in vehicles per hour green per lane (vphgpl), are utilized in the traffic analysis for signalized intersections:

Existing and Cumulative Traffic Conditions:

- Exclusive through and right: 1800 vphgpl
- Exclusive left: 1700 vphgpl
- Exclusive dual left: 1600 vphgpl
- Exclusive triple left: 1500 vphgpl

Study area intersections have been evaluated using the Synchro (Version 12) analysis software package.

Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections.

**TABLE 2-1: SIGNALIZED INTERSECTION DESCRIPTION OF LOS**

| Description                                                                                                                                                                                                         | Average Control Delay<br>(Seconds), $V/C \leq 1.0$ | Level of Service<br>$V/C \leq 1.0^1$ |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------|
| Operations with very low delay occurring with favorable progression and/or short cycle length.                                                                                                                      | 0 to 10.00                                         | A                                    |
| Operations with low delay occurring with good progression and/or short cycle lengths.                                                                                                                               | 10.01 to 20.00                                     | B                                    |
| Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.                                                                              | 20.01 to 35.00                                     | C                                    |
| Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.                             | 35.01 to 55.00                                     | D                                    |
| Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay. | 55.01 to 80.00                                     | E                                    |
| Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.                                                                                 | 80.01 and up                                       | F                                    |

Source: HCM, 7th Edition

<sup>1</sup> If V/C is greater than 1.0, then LOS is F per HCM

Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Customary practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g.,  $PHF = [Hourly Volume] / [4 \times Peak 15-minute Flow Rate]$ ). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour.

## 2.2.2 Unsignalized Intersections

The City of Twentynine Palms requires the operations of unsignalized intersections to be evaluated using the methodology described in the HCM. (4) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. Delay for the intersection is reported for the worst individual movement at a two-way stop-controlled intersection. For all-way stop controlled intersections, LOS is computed for the intersection as a whole (average delay).

**TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS**

| Description                                                 | Average Control Delay (Seconds), $V/C \leq 1.0$ | Level of Service $V/C \leq 1.0^1$ |
|-------------------------------------------------------------|-------------------------------------------------|-----------------------------------|
| Little or no delays.                                        | 0 to 10.00                                      | A                                 |
| Short traffic delays.                                       | 10.01 to 15.00                                  | B                                 |
| Average traffic delays.                                     | 15.01 to 25.00                                  | C                                 |
| Long traffic delays.                                        | 25.01 to 35.00                                  | D                                 |
| Very long traffic delays.                                   | 35.01 to 50.00                                  | E                                 |
| Extreme traffic delays with intersection capacity exceeded. | > 50.00                                         | F                                 |

Source: HCM, 7th Edition

<sup>1</sup> If  $V/C$  is greater than 1.0, then LOS is F per HCM

## 2.3 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

The City of Twentynine Palms has established LOS C as the minimum level of service for all **new streets** within the City (Implementation Policy CI-1.1 of the General Plan Circulation Element).

The City of Twentynine Palms' Vehicle Miles Traveled Policy Guidance (August 2020) indicates that "LOS is generally not a problem in the City of Twentynine Palms. Most streets and intersection function at LOS A or B. Rush hours are generally not congested. And intersections that were a problem have been improved with traffic signals and upgrades – Rt. 62 at Lear Avenue, Adobe Road, and Utah Trail. The City has no policy requiring LOS to be maintained on **existing roads** at C or better as some cities do."

For the purposes of this this analysis, LOS D is recognized as the minimum level of service for existing intersections along Two Mile Road and Desert Knoll Avenue, while LOS C is the minimum acceptable for future roadways which include Samarkand Drive.

## 2.4 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the California Department of Transportation (Caltrans) California Manual on Uniform Traffic Control Devices (CA MUTCD) for all study area intersections. (5)

The signal warrant criteria for Existing conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (5) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing study area intersections for all analysis scenarios. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with urban characteristics (e.g., adjacent major streets operating at or below 40 miles per hour) or rural characteristics (e.g., adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets.

Traffic signal warrant analyses were performed for the following study area intersections shown in Table 2-3.

**TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS**

| # | Intersection                     | # | Intersection                    |
|---|----------------------------------|---|---------------------------------|
| 1 | Desert Knoll Av. / Samarkand Dr. | 4 | Desert Knoll Av. / Two Mile Rd. |
| 2 | Desert Knoll Av. / Aztec Av.     | 5 | Marine Av. / Two Mile Rd.       |
| 3 | Desert Knoll Av. / Manana Dr.    | 7 | Utah Tr. / Samarkand Dr.        |

The traffic signal warrant analysis for Existing (2025) conditions are presented in *Section 3*. The traffic signal warrant analyses for future conditions are presented in *Section 5 Existing Plus Project Traffic Conditions* and *Section 6 Cumulative (2027) Traffic Conditions of this report*.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

### 3 EXISTING CONDITIONS

This section provides a summary of the existing circulation network and the City of Twentynine Palms General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrants.

#### 3.1 EXISTING CIRCULATION NETWORK

Pursuant to the Project scope (Appendix 1.1), the study area includes 6 existing intersections and 1 future intersection as shown previously in Exhibit 1-2.

Exhibit 3-1 identifies the number of through traffic lanes for existing roadways, the intersection approach lanes, and intersection traffic controls at all study area intersections.

#### 3.2 CITY OF TWENTYNINE PALMS GENERAL PLAN CIRCULATION ELEMENT

The City of Twentynine Palms General Plan Circulation Element is depicted on Exhibit 3-2 and Exhibit 3-3 shows the typical roadway cross-sections. As shown on Exhibit 3-2, Desert Knoll Avenue is classified as Secondary roadway (80' right-of-way with 64' of pavement width).

Two Mile Road and Adobe Road south of Two Mile Road are classified as Arterial roadways (104' right-of-way with 80' of pavement width).

Adobe Road north of Two Mile Road and Utah Trail are classified as Expressway (120' right-of-way with 104' of pavement width).

#### 3.3 TRANSIT SERVICE

Morongo Basin Transit Authority (MBTA) connects Twentynine Palms and nearby communities. Route 1 (Yucca Valley-Twentynine Palms), Route 3A (Twentynine Palms Marine Base), and Route 3B (Twentynine Palms Neighborhood) serves the study area.

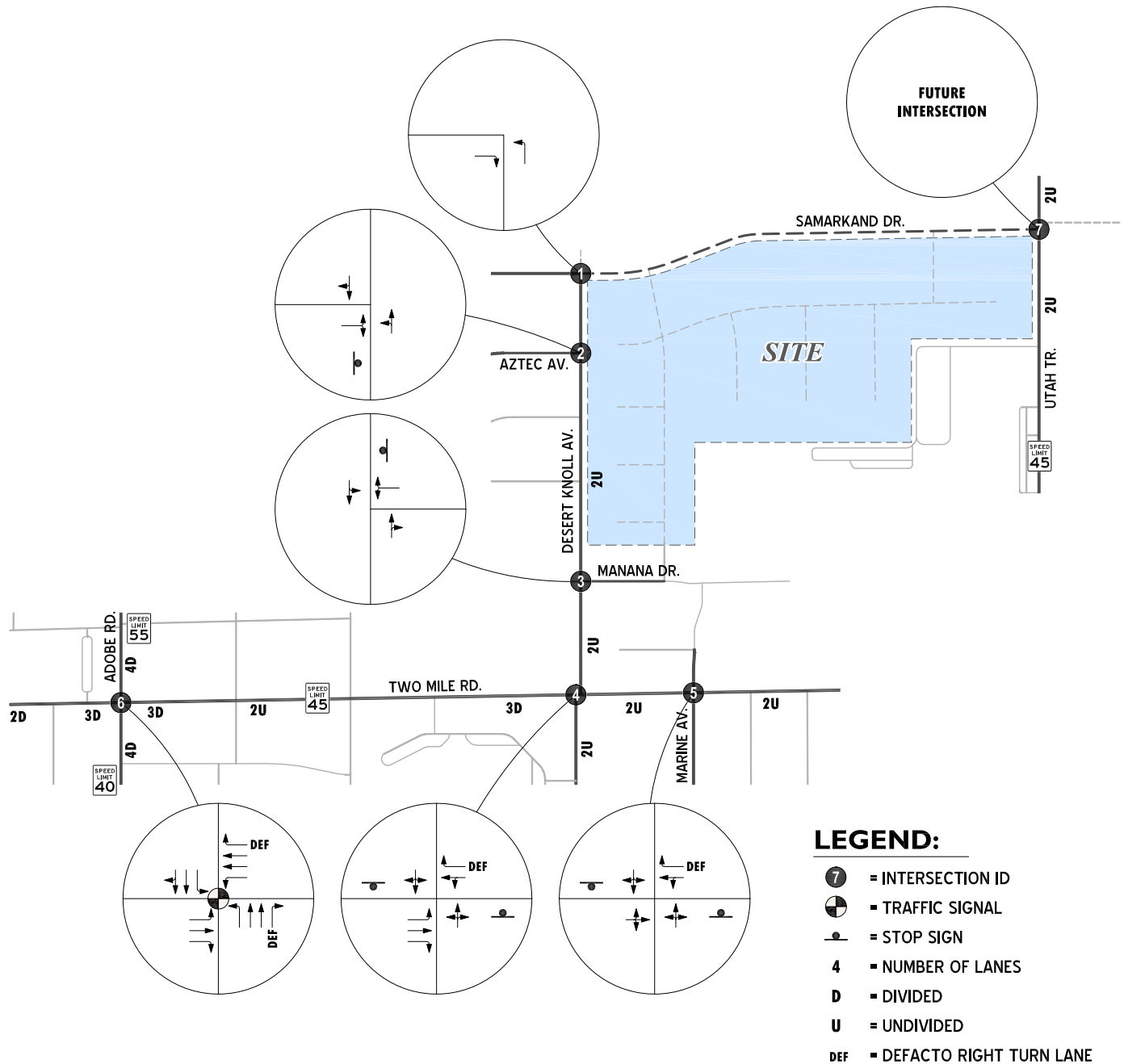
Route 1 and Route 3A runs along Adobe Road, and Route 3B runs along Two Mile Road and Utah Trail (south of Two Mile Road) within the study area.

Transit service is reviewed and updated by MBTA periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. As such, it is recommended that the applicant work in conjunction with MBTA to potentially provide bus service to the site.

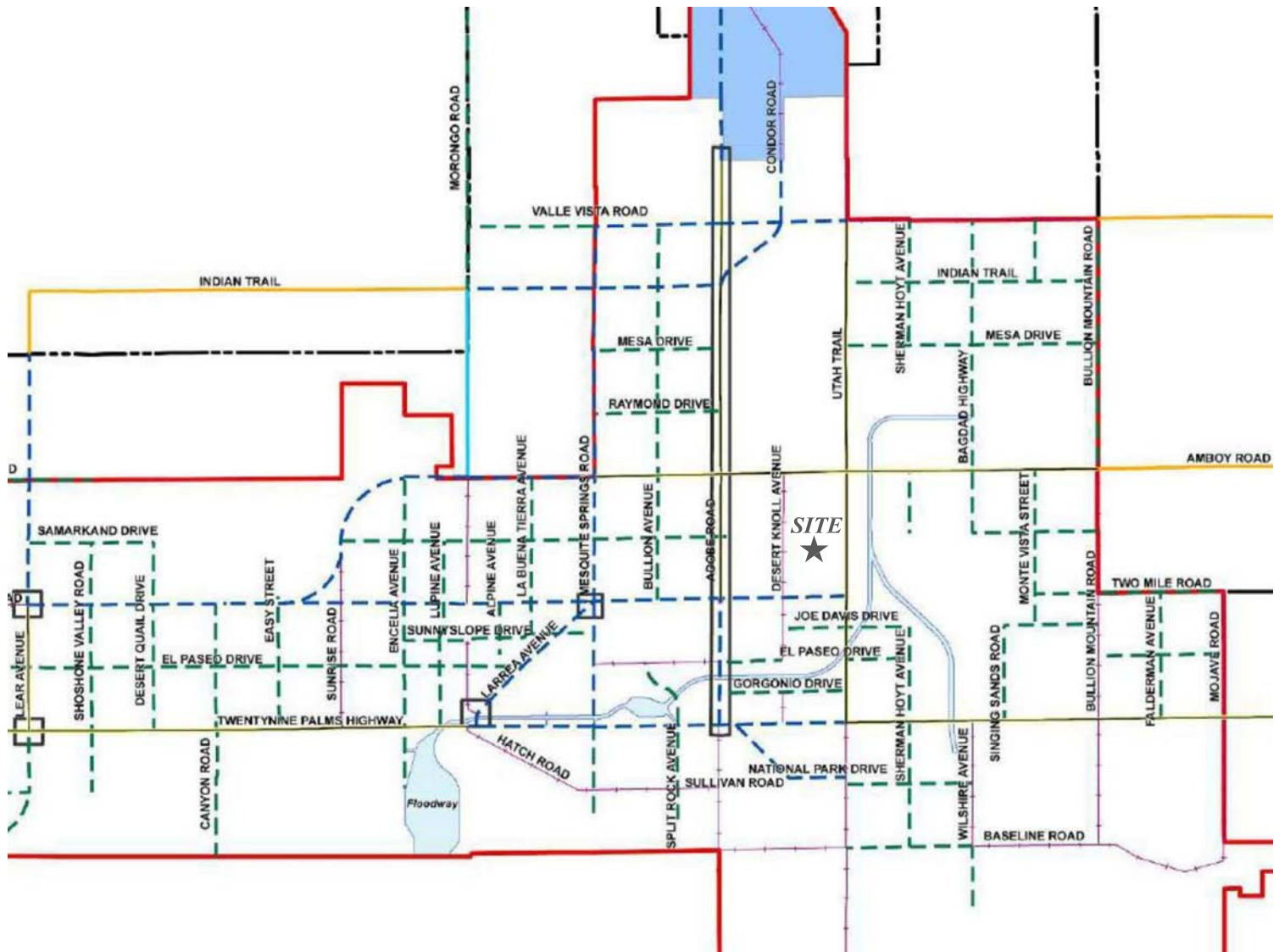
#### 3.4 BICYCLE, EQUESTRIAN, AND PEDESTRIAN FACILITIES

Exhibit 3-4 illustrates the City of Twentynine Palms plans for bicycle, equestrian, and pedestrian facilities. Multi-purpose trails are designated to occur on Adobe Road, Utah Trail, and Two Mile Road.

# EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



## EXHIBIT 3-2: CITY OF TWENTYNINE PALMS CIRCULATION PLAN



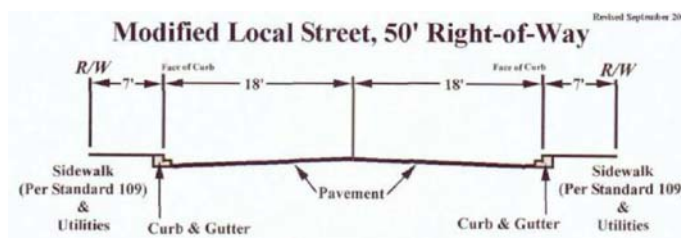
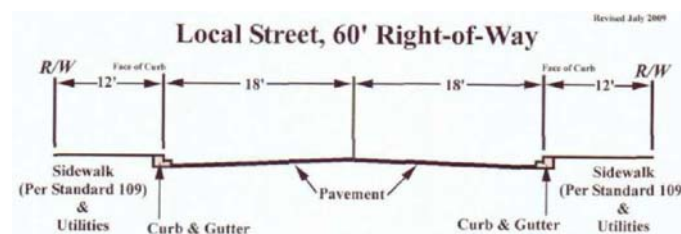
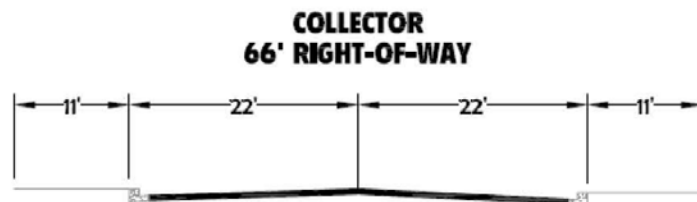
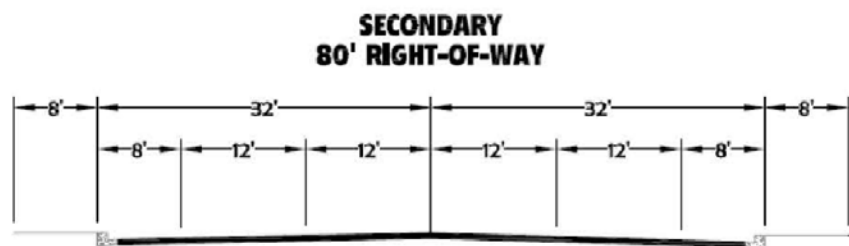
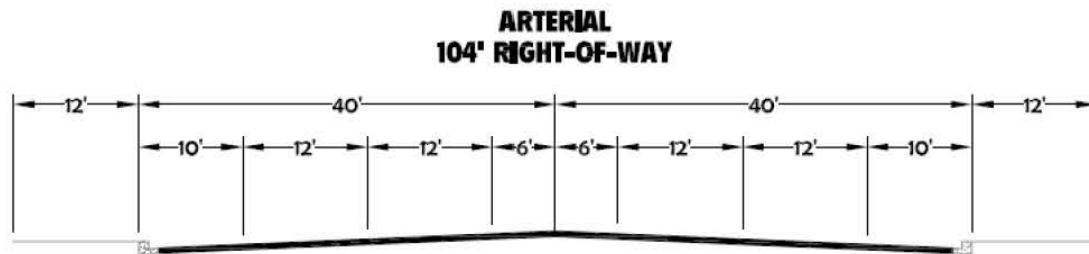
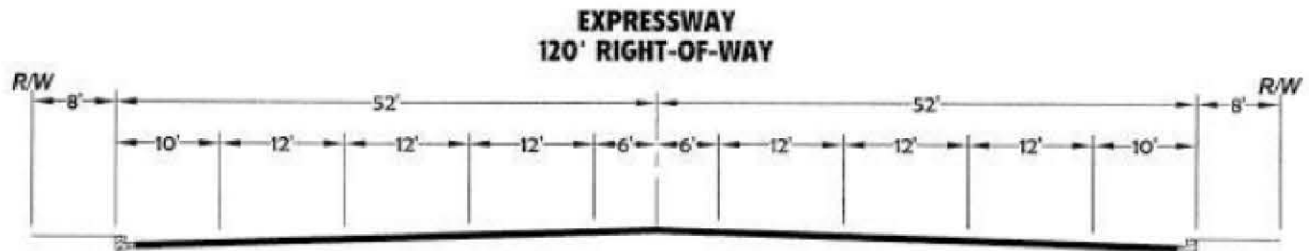
SOURCE: CITY OF TWENTYNINE PALMS GENERAL PLAN (2012)

### LEGEND:

- |                                                                                                    |                                                                    |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <span style="color: red;">—</span> City Boundary                                                   | <b>Twentynine Palms Circulation</b>                                |
| <span style="color: black;">---</span> Sphere of Influence (SOI) Boundary                          | <span style="color: green;">—</span> 6-Lane Expressway (120' ROW)  |
| <span style="background-color: lightblue;"> </span> Marine Corps Air Ground Combat Center (MCAGCC) | <span style="color: blue;">---</span> Arterial (104' ROW)          |
| <span style="background-color: lightblue;"> </span> Floodways                                      | <span style="color: purple;">---</span> Secondary (80' ROW)        |
| <b>San Bernardino County Circulation</b>                                                           | <span style="color: green;">---</span> Collector (66' ROW)         |
| <span style="color: yellow;">—</span> Major Highway (104' ROW)                                     | <span style="border: 1px solid black;"> </span> Special Study Area |
| <span style="color: cyan;">—</span> Secondary Highway (88' ROW)                                    |                                                                    |

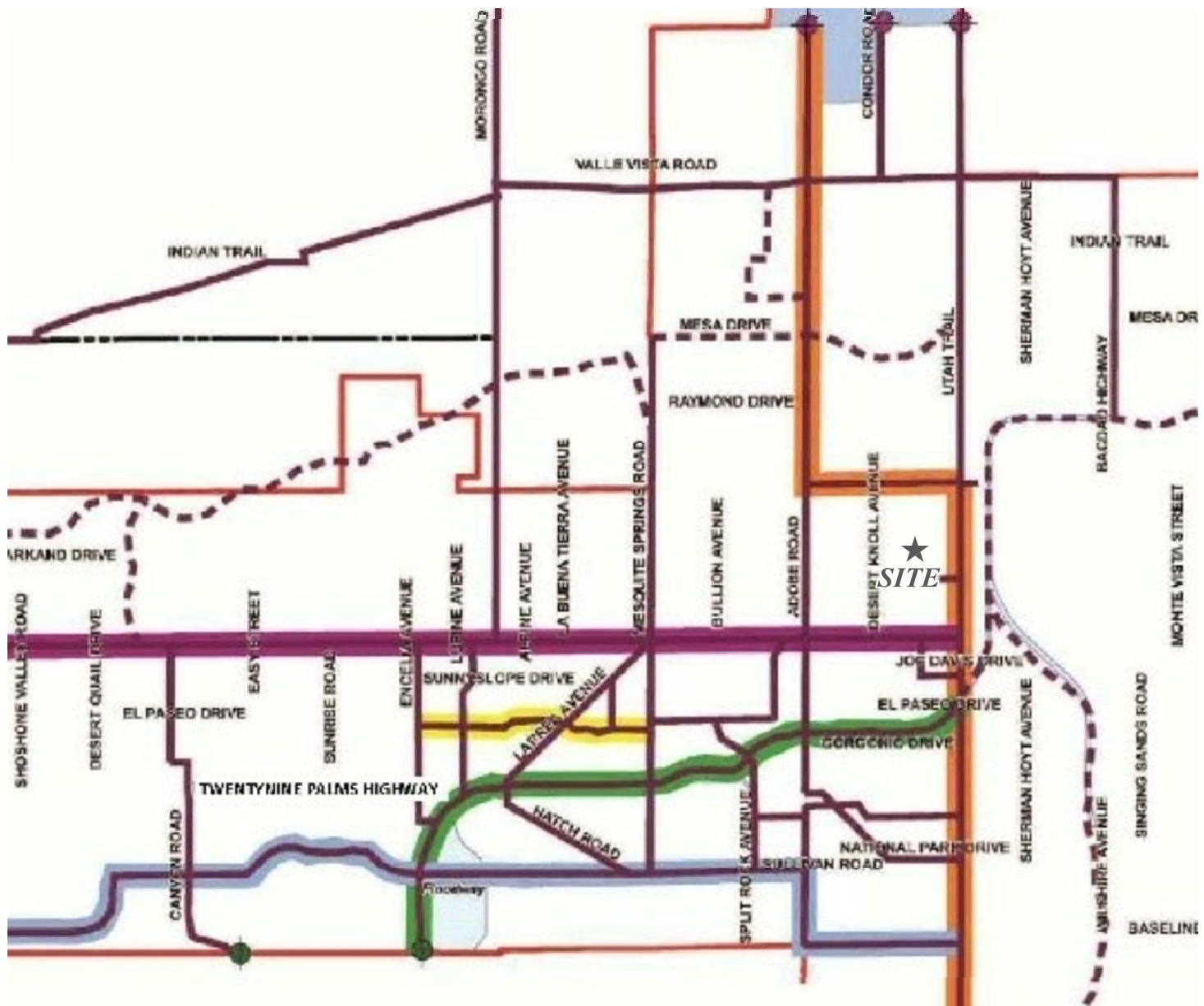


### EXHIBIT 3-3: CITY OF TWENTYNINE PALMS ROADWAY CROSS-SECTIONS



SOURCE: CITY OF TWENTYNINE PALMS GENERAL PLAN (2012)

### EXHIBIT 3-4: CITY OF TWENTYNINE PALMS TRAIL FACILITIES



SOURCE: CITY OF TWENTYNINE PALMS GENERAL PLAN (2012)

**LEGEND:**

-  City Boundary  
 Sphere of Influence (SOI) Boundary  
 Marine Corps Air Ground Combat Center (MCAGCC)  
 Floodways
- Trail Type**
-  Copper Mt. College Connection
  -  Multi-Purpose - Pedestrian, Equestrian & Bicycle
  -  Multi-Purpose - Pedestrian & Equestrian
- Proposed Connector Routes**
-  Base-Park Connection
  -  City Center
  -  Copper Mt. College Connection
  -  Foothill Connection
  -  High School Connection
- Connections**
-  BLM
  -  Base
  -  City Property
  -  County
  -  JTNP



Existing pedestrian facilities within the study area consist of marked crosswalks at the intersection of Adobe Road / Two-Mile Road (#6), bike lanes on both sides of Utah Trail north of Aztec Avenue, and sidewalks located at the following locations within the study area:

- Adobe Road, west and east sides.
- Desert Knoll Avenue, east side between Two Mile Road and approximately 150 ft. north of Manana Drive
- Marine Avenue, west and east sides north of Two Mile Road.
- Portions of Two Mile Road
  - North and south sides west of Adobe Road.
  - South side between Aztec Avenue and Desert Knoll Avenue.
  - North side between Desert Knoll Avenue and approximately 200 ft. east of Marine Avenue.
- Manana Drive, north and south sides.

### 3.5 EXISTING (2025) TRAFFIC VOLUMES

The intersection LOS analysis is based on traffic volumes adjusted upwards from count data collected in December 2025 during the peak hour conditions using traffic. A 5% increase is applied to counts taken in December to estimate peak season.

The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1.

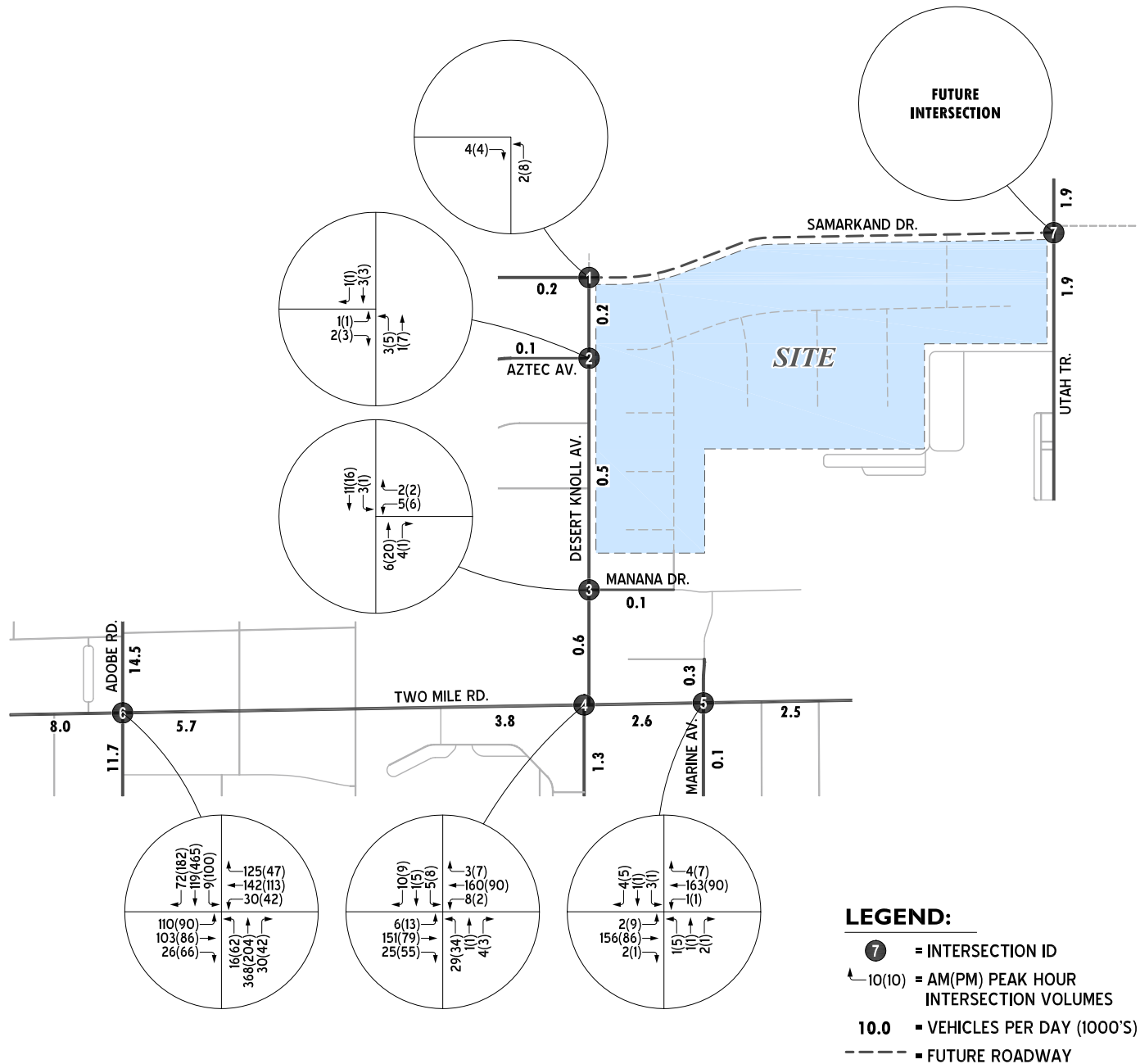
There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity that would prevent or limit roadway access and detour routes. These raw turning volumes have been flow conserved between intersections with limited access, no access and where there are currently no uses generating traffic. Existing weekday peak hour intersection volumes are shown on Exhibit 3-5.

Existing weekday ADT volumes are also shown on Exhibit 3-5. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 13.333 = \text{Leg Volume}$$

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 7.50 percent. As such, the above equation utilizing a factor of 13.333 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.50 percent (i.e.,  $1/0.075 = 13.333$ ) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses.

# EXHIBIT 3-5: EXISTING (2025) TRAFFIC VOLUMES



### 3.6 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis*. The intersection operations analysis results are summarized in Table 3-1, which indicates that the study area intersections are operating at acceptable LOS.

The intersection operations analysis worksheets are included in Appendix 3.2 of this Traffic Analysis.

**TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING CONDITIONS**

| # | Intersection                     | Traffic Control <sup>1</sup> | Intersection Approach Lanes <sup>2</sup> |    |   |            |     |   |           |    |   |           |     |   | Delay <sup>3</sup><br>(secs.) |      | Level of Service |    |
|---|----------------------------------|------------------------------|------------------------------------------|----|---|------------|-----|---|-----------|----|---|-----------|-----|---|-------------------------------|------|------------------|----|
|   |                                  |                              | Northbound                               |    |   | Southbound |     |   | Eastbound |    |   | Westbound |     |   |                               |      |                  |    |
|   |                                  |                              | L                                        | T  | R | L          | T   | R | L         | T  | R | L         | T   | R | AM                            | PM   | AM               | PM |
| 1 | Desert Knoll Av. / Samarkand Dr. | UNC                          | 1                                        | 0  | 0 | 0          | 0   | 0 | 0         | 0  | 1 | 0         | 0   | 0 | 8.5                           | 8.5  | A                | A  |
| 2 | Desert Knoll Av. / Aztec Av.     | CSS                          | 0                                        | 1  | 0 | 0          | 1   | 0 | 0         | 1! | 0 | 0         | 0   | 0 | 8.4                           | 8.4  | A                | A  |
| 3 | Desert Knoll Av. / Manana Dr.    | CSS                          | 0                                        | 1  | 0 | 0.5        | 0.5 | 0 | 0         | 0  | 0 | 0         | 1!  | 0 | 8.7                           | 8.7  | A                | A  |
| 4 | Desert Knoll Av. / Two Mile Rd.  | CSS                          | 0                                        | 1! | 0 | 0          | 1!  | 0 | 1         | 1  | 1 | 0.5       | 0.5 | d | 12.6                          | 10.3 | B                | B  |
| 5 | Marine Av. / Two Mile Rd.        | CSS                          | 0                                        | 1! | 0 | 0          | 1!  | 0 | 0         | 1! | 0 | 0.5       | 0.5 | d | 10.9                          | 9.8  | B                | A  |
| 6 | Adobe Rd. / Two Mile Rd.         | TS                           | 1                                        | 2  | d | 1          | 2   | 0 | 1         | 1  | 1 | 1         | 2   | d | 27.9                          | 26.8 | C                | C  |
| 7 | Utah Tr. / Samarkand Dr.         |                              | Future Intersection                      |    |   |            |     |   |           |    |   |           |     |   | -                             | -    | -                | -  |

<sup>1</sup> TS = Traffic Signal; CSS = Cross-street Stop; UNC = Uncontrolled

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

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; 1! = Shared Left/Through/Right lane

<sup>3</sup> Per the Highway Capacity Manual (7th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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## 4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volume estimates for the Project along with the Project's trip distribution and assignment to the study area roadway network. The Project consists of 137 dwelling units within phases 3 to 8 of Tentative Tract Map 17168.

Access to the Project is provided via Desert Knoll Avenue and Manana Drive, as well as the future extension of Samarkand Drive between Desert Knoll Avenue and Utah Trail. Manana Drive east of Desert Knoll Avenue and Marine Avenue north of Two Mile Road were constructed in conjunction with phases 1 and 2 of Tentative Tract Map 17168. A north-south local street connects Phase 3 to Manana Drive east of Desert Knoll Avenue and west of Marine Avenue. Phases 4 to 8 are connected to Samarkand Drive as well as the north-south roadway extending through Phase 3.

For analysis purposes, the Project is anticipated to have an Opening Year of 2027.

### 4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to, and produced by, a land use project. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to, and produced by, the specific land uses being proposed for a given development.

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (12<sup>th</sup> Edition, 2025) were used to estimate the Project's trip generation based on the ITE Land Use Code 210 (Single Family Detached Residential).(6)

Trip generation rates are summarized in Table 4-1. The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project are also shown in Table 4-1. The proposed Project is anticipated to generate 1,245 two-way vehicle trip-ends per day with 96 AM peak hour vehicle trips and 127 PM peak hour vehicle trips.

**TABLE 4-1: PROJECT TRIP GENERATION**

| Trip Generation Rates <sup>1</sup> |             |          |              |      |       |              |      |       |       |
|------------------------------------|-------------|----------|--------------|------|-------|--------------|------|-------|-------|
| Land Use                           | ITE LU Code | Quantity | AM Peak Hour |      |       | PM Peak Hour |      |       | Daily |
|                                    |             |          | In           | Out  | Total | In           | Out  | Total |       |
| Single Family Detached             | 210         | per DU   | 0.19         | 0.51 | 0.70  | 0.58         | 0.35 | 0.93  | 9.09  |

| Trip Generation Results |             |          |              |     |       |              |     |       |       |
|-------------------------|-------------|----------|--------------|-----|-------|--------------|-----|-------|-------|
| Land Use                | ITE LU Code | Quantity | AM Peak Hour |     |       | PM Peak Hour |     |       | Daily |
|                         |             |          | In           | Out | Total | In           | Out | Total |       |
| Single Family Detached  | 210         | 137 DU   | 26           | 70  | 96    | 79           | 48  | 127   | 1,245 |

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 12th Edition (2025).

<sup>2</sup> DU = Dwelling Units

## 4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The Project trip distribution patterns are graphically depicted in Exhibit 4-1.

## 4.3 MODAL SPLIT

The potential for Project vehicle trips to be reduced by utilization of alternative modes is partially accounted for in the trip generation rates presented in Table 4-1. The potential for Project trips to be further reduced by the use of public transit, walking or bicycling has not been included in the traffic projections utilized for this analysis. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes could further reduce the forecasted vehicle traffic volumes.

## 4.4 PROJECT TRIP ASSIGNMENT

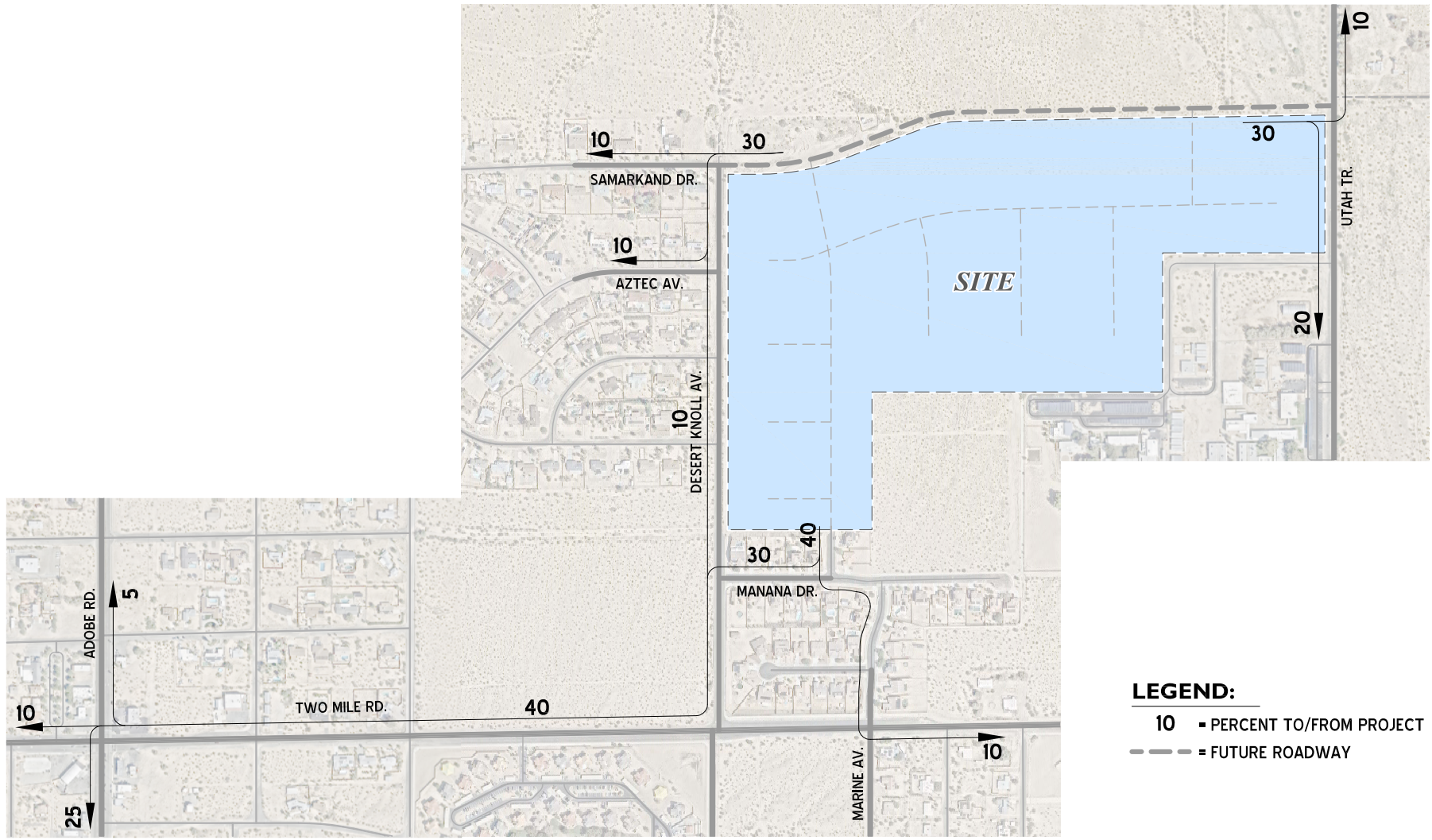
The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project weekday peak hour intersection turn movement volumes and ADT, are shown on Exhibit 4-2.

## 4.5 BACKGROUND TRAFFIC

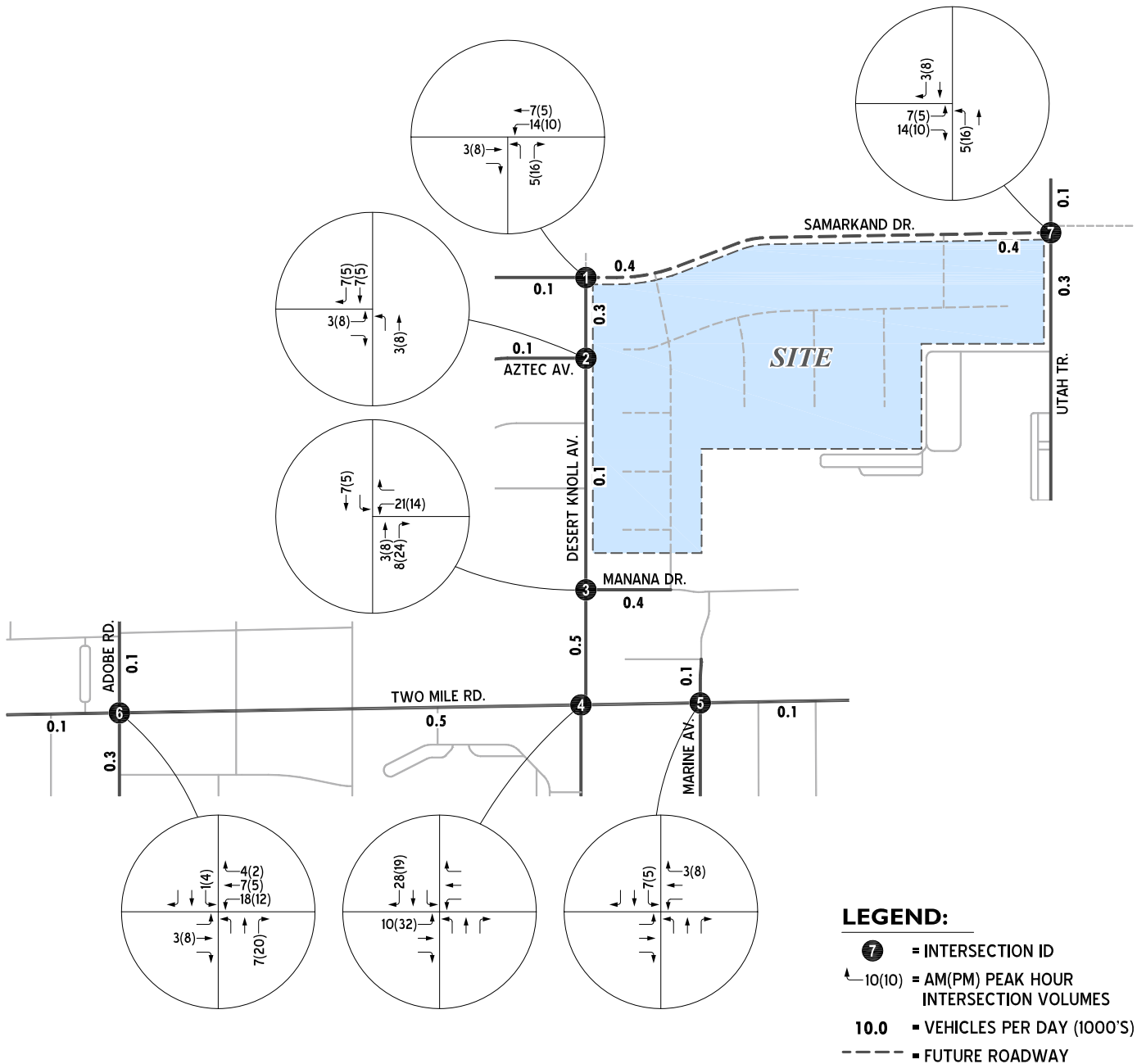
The traffic analysis includes the following future traffic conditions, with the various traffic components:

- Cumulative (2027)
  - Existing volumes (adjusted upwards for peak season)
  - Ambient growth traffic (4.04% over 2 years)
  - Cumulative development traffic
- Cumulative (2027) Plus Project
  - Existing volumes (adjusted upwards for peak season)
  - Ambient growth traffic (4.04% over 2 years)
  - Cumulative development traffic
  - Project traffic

**EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION**



## EXHIBIT 4-2: PROJECT ONLY TRAFFIC VOLUMES



## 4.6 CUMULATIVE DEVELOPMENT TRAFFIC

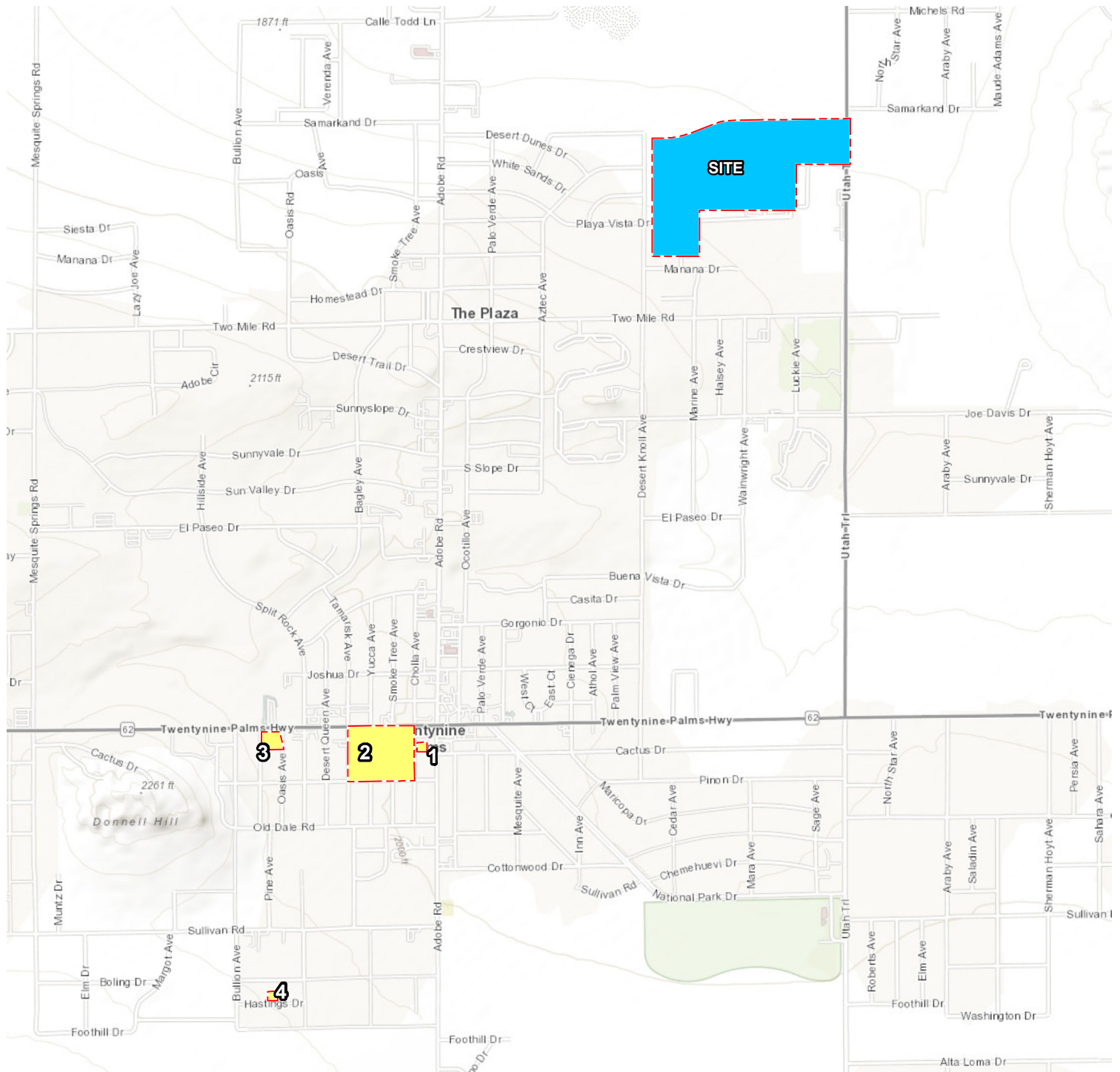
A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Twentynine Palms. Exhibit 4-3 illustrates the cumulative development location map. The cumulative projects listed are those that would generate traffic and would contribute traffic to study area intersections. A summary of cumulative development projects and their proposed land uses are shown on Table 4-2. The traffic generated by individual cumulative projects was manually added to the Cumulative (2027) forecasts to ensure that traffic generated by the listed cumulative development projects on Table 4-2 are reflected as part of the background traffic.

**TABLE 4-2: CUMULATIVE DEVELOPMENT LAND USE SUMMARY**

| ID | Project Name                                                                                     | Land Use                            | Quantity <sup>1</sup> |
|----|--------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------|
| 1  | Laundromat Building Renovation<br>(south of Twentynine Palms Hwy.; east of Cholla Av.)           | --                                  | 4 TSF                 |
| 2  | Project Phoenix<br>(south of Twentynine Palms Hwy.; east of Tamarisk Av.)                        | Business Hotel                      | 95 Room               |
|    |                                                                                                  | Recreational Community Center       | 27 TSF                |
|    |                                                                                                  | Shopping Center                     | 3 TSF                 |
|    |                                                                                                  | High-Turnover (Sit-Down) Restaurant | 3 TSF                 |
| 3  | Depierro Car Wash & Restaurant (TPM 20501)<br>(south of Twentynine Palms Hwy.; east of Pine Av.) | Fast Food Restaurant w/o Drive Thru | 3 TSF                 |
|    |                                                                                                  | Automated Car Wash                  | 1 Tunnel              |
| 4  | Wander Hotel<br>(South of Boling Dr.; east of Bullion Av.)                                       | Hotel                               | 95 Room               |

<sup>1</sup> TSF = Thousand Square Feet

## EXHIBIT 4-3: CUMULATIVE DEVELOPMENT LOCATION MAP



### LEGEND:

**4** = CUMULATIVE DEVELOPMENT ID

## 5 EXISTING PLUS PROJECT TRAFFIC CONDITIONS

This section discusses the methods used to develop Existing Plus Project traffic forecasts, and the resulting intersection operations and traffic signal warrant analyses.

### 5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Existing Plus Project conditions include roadway improvements needed to provide access to the site, as follows:

- Project Phases 3 and 4 to widen Desert Knoll Avenue from the southern boundary of Phase 3 to the northern boundary of Phase 4 at its ultimate half-section width as a Secondary roadway, including an additional 14 feet of east side pavement width (added to the existing 18 feet of east side pavement), as well as 8 feet of east side added parkway width.
- Project Phase 4 to construct Samarkand Drive from the Desert Knoll Avenue intersection to the east side Phase 4 (adjacent to the Phase 5 Retention Basin Lot 'A') at its ultimate width as a local roadway, including 36 feet of pavement width as well as 12 feet of parkway width on each side of the roadway.
- Project Phase 5 to transition the full-width Samarkand Drive improvement on the east side Phase 4 to a half-section width local roadway improvement on east side of Phase 5. The half-section improvement of Samarkand Drive will include 26 feet of pavement width (18 feet south of the centerline and 8 feet north of the centerline), as well as 12 feet of parkway width on the south side of the roadway.
- Project Phases 6, 7, and 8 to construct Samarkand Drive from the west side of Phase 6 to the east side of Phase 8 at its ultimate-half-section width as a local roadway, including 26 feet of pavement width (18 feet south of the centerline and 8 feet north of the centerline), as well as 12 feet of parkway width on the south side of the roadway.
- Project Phase 8 to widen Utah Trail from the northern boundary of Phase 8 to Aztec Avenue at its ultimate half-section width as an Expressway, including an additional 20 feet of west side pavement width (added to the existing 32 feet of west side pavement), as well as 8 feet of west side added parkway width.

### 5.2 EXISTING PLUS PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing (2025) traffic in conjunction with the addition of Project traffic. The weekday ADT and peak hour volumes which can be expected for Existing Plus Project traffic conditions are shown on Exhibit 5-1.

### 5.3 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under Existing Plus Project conditions with roadway and intersection geometrics consistent with Section 5.1 Roadway Improvements. As shown on Table 5-1, the study area intersections are anticipated to operate at an acceptable LOS under Existing Plus Project traffic conditions.

# EXHIBIT 5-1: EXISTING PLUS PROJECT TRAFFIC VOLUMES

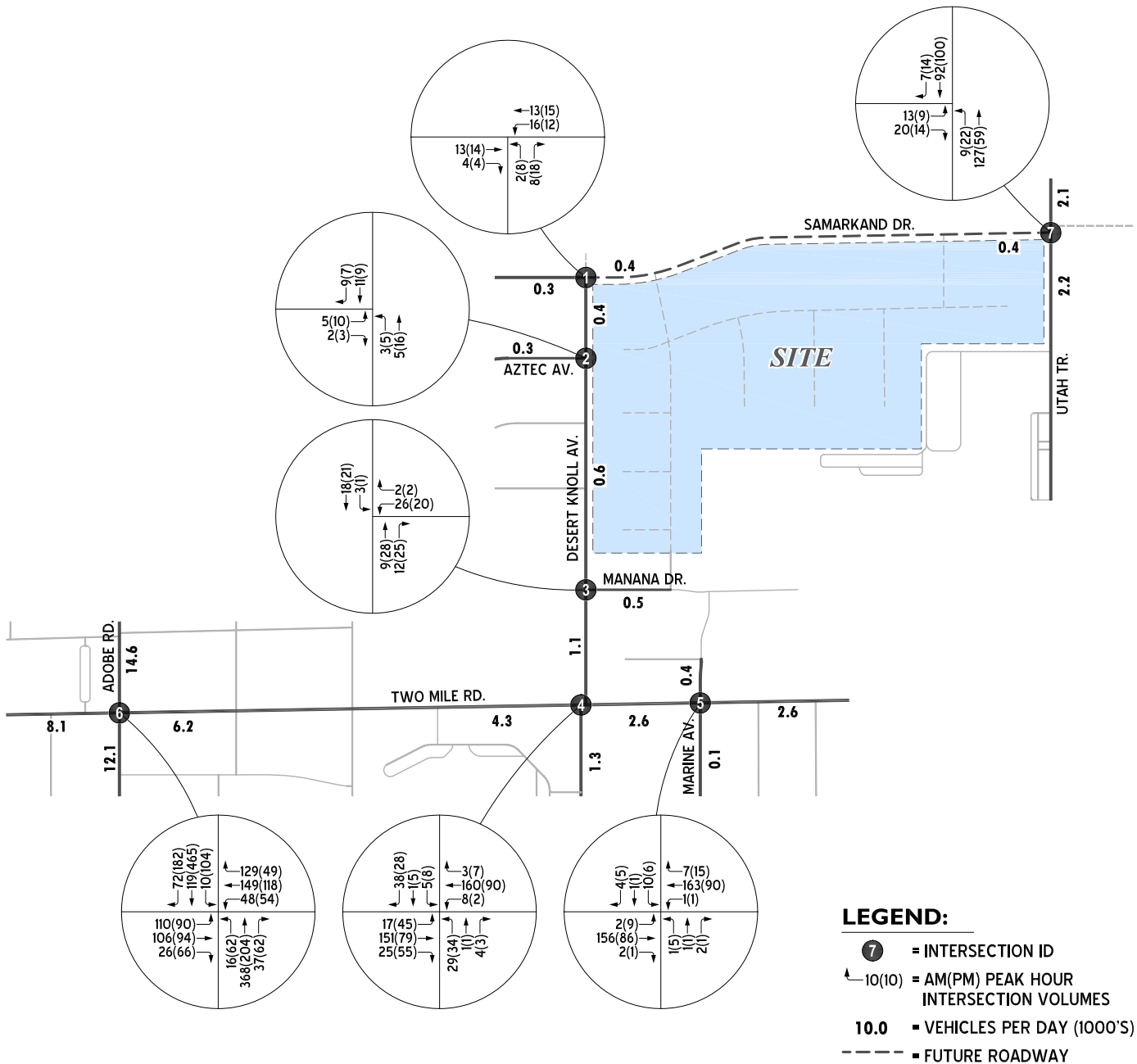


**TABLE 5-1: INTERSECTION ANALYSIS FOR EXISTING PLUS PROJECT CONDITIONS**

| # | Intersection                     | Traffic Control <sup>1</sup> | Intersection Approach Lanes <sup>2</sup> |    |   |            |     |   |           |           |            |            |     |     | Delay <sup>3</sup><br>(secs.) |      | Level of Service |    |
|---|----------------------------------|------------------------------|------------------------------------------|----|---|------------|-----|---|-----------|-----------|------------|------------|-----|-----|-------------------------------|------|------------------|----|
|   |                                  |                              | Northbound                               |    |   | Southbound |     |   | Eastbound |           |            | Westbound  |     |     |                               |      |                  |    |
|   |                                  |                              | L                                        | T  | R | L          | T   | R | L         | T         | R          | L          | T   | R   | AM                            | PM   | AM               | PM |
| 1 | Desert Knoll Av. / Samarkand Dr. | <b>CSS</b>                   | 0                                        | 1! | 0 | 0          | 0   | 0 | 1         | 0         | <b>0.5</b> | <b>0.5</b> | 0   | 8.5 | 8.6                           | A    | A                |    |
| 2 | Desert Knoll Av. / Aztec Av.     | CSS                          | 0                                        | 1  | 0 | 0          | 1   | 0 | 0         | 1!        | 0          | 0          | 0   | 0   | 8.7                           | 8.7  | A                | A  |
| 3 | Desert Knoll Av. / Manana Dr.    | CSS                          | 0                                        | 1  | 0 | 0.5        | 0.5 | 0 | 0         | 0         | 0          | 0          | 1!  | 0   | 9.0                           | 9.0  | A                | A  |
| 4 | Desert Knoll Av. / Two Mile Rd.  | CSS                          | 0                                        | 1! | 0 | 0          | 1!  | 0 | 1         | 1         | 1          | 0.5        | 0.5 | d   | 13.4                          | 11.2 | B                | B  |
| 5 | Marine Av. / Two Mile Rd.        | CSS                          | 0                                        | 1! | 0 | 0          | 1!  | 0 | 0         | 1!        | 0          | 0.5        | 0.5 | d   | 11.6                          | 9.8  | B                | A  |
| 6 | Adobe Rd. / Two Mile Rd.         | TS                           | 1                                        | 2  | d | 1          | 2   | 0 | 1         | 1         | 1          | 1          | 2   | d   | 28.3                          | 27.3 | C                | C  |
| 7 | Utah Tr. / Samarkand Dr.         | <b>CSS</b>                   | 0                                        | 1  | 0 | 0          | 1   | 0 | 0         | <b>1!</b> | 0          | 0          | 0   | 0   | 9.4                           | 9.3  | A                | A  |

<sup>1</sup> TS = Traffic Signal; CSS = Cross-Street Stop

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

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; 1! = Shared Left/Through/Right lane; **1** = Improvement

<sup>3</sup> Per the Highway Capacity Manual (7th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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The intersection operations analysis worksheets for Existing Plus Project traffic conditions are included in Appendix 5.1 of this TA.

## **5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS**

The traffic signal warrant analysis for Existing Plus Project traffic conditions are based on the peak hour volumes or planning level ADT volume-based traffic signal warrants.

The unsignalized intersections within the study area are not anticipated to meet either peak hour volume or ADT volume-based warrants for Existing Plus Project traffic conditions (see Appendix 3.3).

## **6 CUMULATIVE (2027) TRAFFIC CONDITIONS**

This section discusses the methods used to develop Cumulative (2027) Without and With Project traffic forecasts, and the resulting intersection operations and traffic signal warrant analyses.

### **6.1 ROADWAY IMPROVEMENTS**

The lane configurations and traffic controls assumed to be in place for Cumulative (2027) conditions include Project driveways and those facilities to be constructed by the Project to provide site access. The site access improvements are assumed to be in place for Cumulative Plus Project conditions (e.g., intersection and roadway improvements along the Project's frontage and driveways as identified in Section 5.1).

### **6.2 CUMULATIVE (2027) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS**

This scenario includes Existing traffic volumes plus an ambient growth factor of 4.04% plus traffic from pending and approved but not yet constructed known development projects in the area.

The weekday ADT and peak hour volumes which can be expected for Cumulative (2027) Without Project traffic conditions are shown on Exhibit 6-1.

### **6.3 CUMULATIVE (2027) WITH PROJECT TRAFFIC VOLUME FORECASTS**

This scenario includes Cumulative (2027) Without Project traffic in conjunction with the addition of Project traffic.

The weekday ADT and peak hour volumes which can be expected for Cumulative (2027) With Project traffic conditions are shown on Exhibit 6-2.

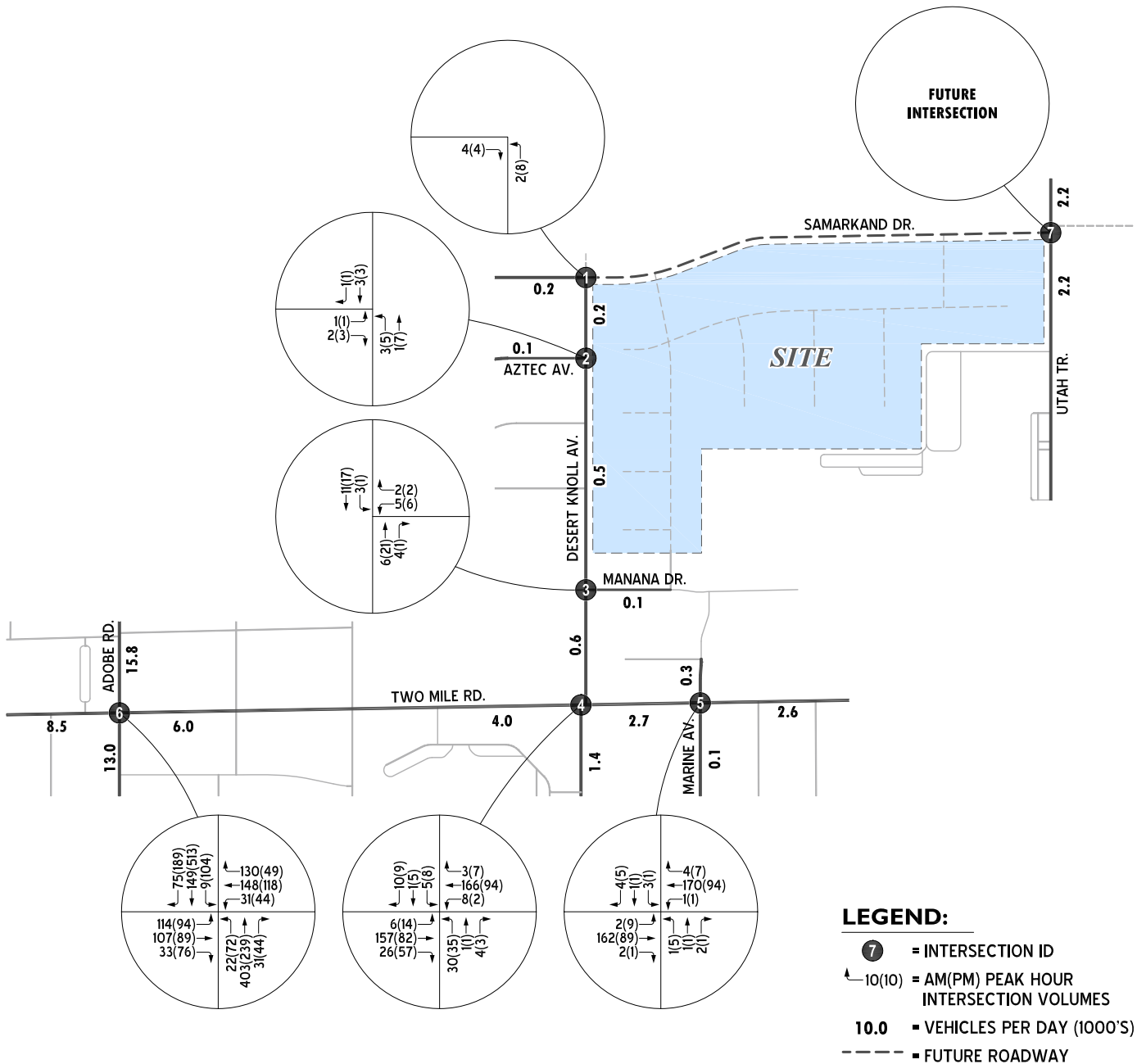
### **6.4 INTERSECTION OPERATIONS ANALYSIS**

#### **6.4.1 Cumulative (2027) Without Project Traffic Conditions**

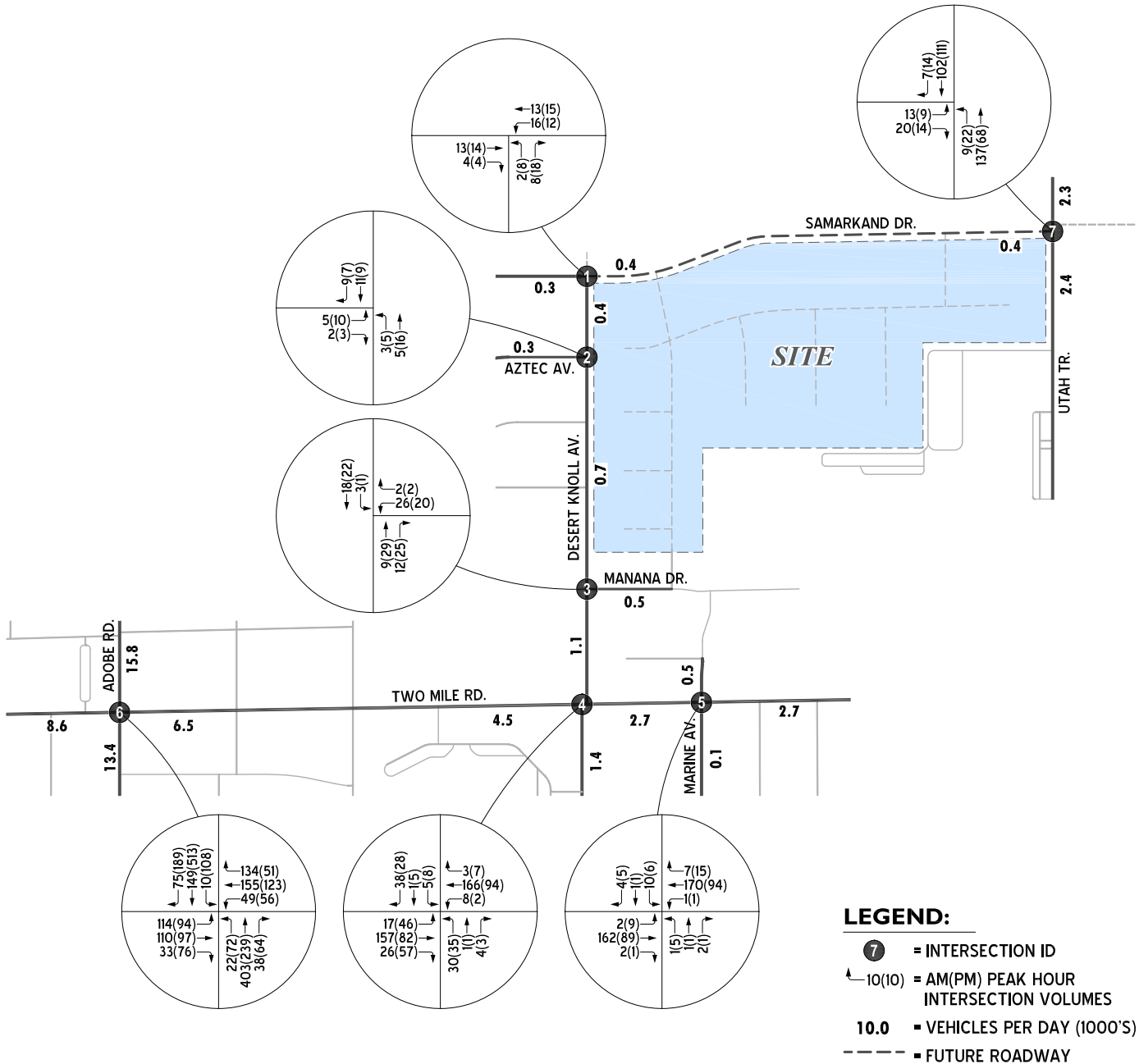
LOS calculations were conducted for the study intersections to evaluate their operations under Cumulative (2027) Without Project conditions with roadway and intersection geometrics consistent with Section 6.1 Roadway Improvements. As shown on Table 6-1, the study area intersections are anticipated to operate at an acceptable LOS under Cumulative (2027) Without Project traffic conditions.

The intersection operations analysis worksheets for Cumulative (2027) Without Project traffic conditions are included in Appendix 6.1 of this TA.

# EXHIBIT 6-1: CUMULATIVE (2027) WITHOUT PROJECT TRAFFIC VOLUMES



## EXHIBIT 6-2: CUMULATIVE (2027) PLUS PROJECT TRAFFIC VOLUMES



#### **6.4.2 Cumulative (2027) With Project Traffic Conditions**

As shown on Table 6-2, the study area intersections are anticipated to continue to operate at a acceptable LOS during any of the peak hours with the addition of Project traffic.

The intersection operations analysis worksheets for Cumulative (2027) With Project traffic conditions are included in Appendix 6.2 of this TA.

### **6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS**

The traffic signal warrant analysis for Cumulative (2027) traffic conditions are based on the peak hour volumes or planning level ADT volume-based traffic signal warrants.

The unsignalized intersections within the study area are not anticipated to meet either peak hour volume or ADT volume-based warrants for Cumulative (2027) conditions (see Appendix 3.3).

### **6.6 QUEUEING ANALYSIS**

As mentioned previously, a queuing analysis was performed for Cumulative (2027) Plus Project conditions at the following intersections, adjacent to the Project:

- Desert Knoll Avenue / Samarkand Drive (#1)
- Desert Knoll Avenue / Manana Drive (#3)
- Marine Avenue / Two Mile Road (#5)
- Utah Trail / Samarkand Drive (#7)

Queuing analysis findings are presented in Table 6-3. As shown in Table 6-3, adequate storage lengths are provided to accommodate 95<sup>th</sup> percentile queues.

Cumulative (2027) Plus Project traffic conditions, with improvements, queuing analysis worksheets are provided in Appendix 6.3.

**TABLE 6-1: INTERSECTION ANALYSIS FOR CUMULATIVE (2027) WITHOUT PROJECT CONDITIONS**

| # | Intersection                     | Traffic Control <sup>1</sup> | Intersection Approach Lanes <sup>2</sup> |    |   |            |     |   |           |    |   |           |     |   | Delay <sup>3</sup><br>(secs.) |      | Level of Service |    |
|---|----------------------------------|------------------------------|------------------------------------------|----|---|------------|-----|---|-----------|----|---|-----------|-----|---|-------------------------------|------|------------------|----|
|   |                                  |                              | Northbound                               |    |   | Southbound |     |   | Eastbound |    |   | Westbound |     |   |                               |      |                  |    |
|   |                                  |                              | L                                        | T  | R | L          | T   | R | L         | T  | R | L         | T   | R | AM                            | PM   | AM               | PM |
| 1 | Desert Knoll Av. / Samarkand Dr. | UNC                          | 1                                        | 0  | 0 | 0          | 0   | 0 | 0         | 0  | 1 | 0         | 0   | 0 | 8.5                           | 8.5  | A                | A  |
| 2 | Desert Knoll Av. / Aztec Av.     | CSS                          | 0                                        | 1  | 0 | 0          | 1   | 0 | 0         | 1! | 0 | 0         | 0   | 0 | 8.4                           | 8.4  | A                | A  |
| 3 | Desert Knoll Av. / Manana Dr.    | CSS                          | 0                                        | 1  | 0 | 0.5        | 0.5 | 0 | 0         | 0  | 0 | 0         | 1!  | 0 | 8.7                           | 8.7  | A                | A  |
| 4 | Desert Knoll Av. / Two Mile Rd.  | CSS                          | 0                                        | 1! | 0 | 0          | 1!  | 0 | 1         | 1  | 1 | 0.5       | 0.5 | d | 12.9                          | 10.4 | B                | B  |
| 5 | Marine Av. / Two Mile Rd.        | CSS                          | 0                                        | 1! | 0 | 0          | 1!  | 0 | 0         | 1! | 0 | 0.5       | 0.5 | d | 11.0                          | 9.9  | B                | A  |
| 6 | Adobe Rd. / Two Mile Rd.         | TS                           | 1                                        | 2  | d | 1          | 2   | 0 | 1         | 1  | 1 | 1         | 2   | d | 27.8                          | 26.9 | C                | C  |
| 7 | Utah Tr. / Samarkand Dr.         |                              | Future Intersection                      |    |   |            |     |   |           |    |   |           |     |   | -                             | -    | -                | -  |

<sup>1</sup> TS = Traffic Signal; CSS = Cross-Street Stop

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

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; 1! = Shared Left/Through/Right lane; **1** = Improvement

<sup>3</sup> Per the Highway Capacity Manual (7th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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**TABLE 6-2: INTERSECTION ANALYSIS FOR CUMULATIVE (2027) PLUS PROJECT CONDITIONS**

| # | Intersection                     | Traffic Control <sup>1</sup> | Intersection Approach Lanes <sup>2</sup> |    |   |            |     |   |           |           |   |            |            |   | Delay <sup>3</sup><br>(secs.) |      | Level of Service |    |
|---|----------------------------------|------------------------------|------------------------------------------|----|---|------------|-----|---|-----------|-----------|---|------------|------------|---|-------------------------------|------|------------------|----|
|   |                                  |                              | Northbound                               |    |   | Southbound |     |   | Eastbound |           |   | Westbound  |            |   |                               |      |                  |    |
|   |                                  |                              | L                                        | T  | R | L          | T   | R | L         | T         | R | L          | T          | R | AM                            | PM   | AM               | PM |
| 1 | Desert Knoll Av. / Samarkand Dr. | <b>CSS</b>                   | 0                                        | 1! | 0 | 0          | 0   | 0 | 0         | 1         | 0 | <b>0.5</b> | <b>0.5</b> | 0 | 8.5                           | 8.6  | A                | A  |
| 2 | Desert Knoll Av. / Aztec Av.     | CSS                          | 0                                        | 1  | 0 | 0          | 1   | 0 | 0         | 1!        | 0 | 0          | 0          | 0 | 8.7                           | 8.7  | A                | A  |
| 3 | Desert Knoll Av. / Manana Dr.    | CSS                          | 0                                        | 1  | 0 | 0.5        | 0.5 | 0 | 0         | 0         | 0 | 0          | 1!         | 0 | 9.0                           | 9.0  | A                | A  |
| 4 | Desert Knoll Av. / Two Mile Rd.  | CSS                          | 0                                        | 1! | 0 | 0          | 1!  | 0 | 1         | 1         | 1 | 0.5        | 0.5        | d | 13.8                          | 11.3 | B                | B  |
| 5 | Marine Av. / Two Mile Rd.        | CSS                          | 0                                        | 1! | 0 | 0          | 1!  | 0 | 0         | 1!        | 0 | 0.5        | 0.5        | d | 11.8                          | 9.9  | B                | A  |
| 6 | Adobe Rd. / Two Mile Rd.         | TS                           | 1                                        | 2  | d | 1          | 2   | 0 | 1         | 1         | 1 | 1          | 2          | d | 28.6                          | 27.3 | C                | C  |
| 7 | Utah Tr. / Samarkand Dr.         | <b>CSS</b>                   | 0                                        | 1  | 0 | 0          | 1   | 0 | 0         | <b>1!</b> | 0 | 0          | 0          | 0 | 9.5                           | 9.4  | A                | A  |

<sup>1</sup> TS = Traffic Signal; CSS = Cross-Street Stop

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

L = Left; T = Through; R = Right; d = Defacto Right Turn Lane; 0.5 = Shared Lane; 1! = Shared Left/Through/Right lane; **1** = Improvement

<sup>3</sup> Per the Highway Capacity Manual (7th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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**TABLE 6-3: QUEUING ANALYSIS SUMMARY FOR CUMULATIVE (2027) PLUS PROJECT CONDITIONS**

| ID | Intersection                     | Movement | Cumulative (2027) Plus Project |     |           |        | Lanes   | Existing/<br>Provided<br>Length <sup>2</sup> (ft.) | 95th Percentile<br>Queue Length Per<br>Lane (feet) <sup>1</sup> |     |
|----|----------------------------------|----------|--------------------------------|-----|-----------|--------|---------|----------------------------------------------------|-----------------------------------------------------------------|-----|
|    |                                  |          | AM                             | PM  | Peak Hour | Volume |         |                                                    | AM                                                              | PM  |
| 1  | Desert Knoll Av. / Samarkand Dr. |          |                                |     |           |        |         |                                                    |                                                                 |     |
|    |                                  | NBL/R    | 10                             | 26  | PM        | 26     | 1       | >300                                               | 29                                                              | 41  |
|    |                                  | WBL/T    | 29                             | 27  | AM        | 29     | 1       | >50                                                | NOM                                                             | NOM |
| 3  | Desert Knoll Av. / Manana Dr.    |          |                                |     |           |        |         |                                                    |                                                                 |     |
|    |                                  | NBT/R    | 21                             | 54  | PM        | 54     | 1       | >300                                               | NOM                                                             | NOM |
|    |                                  | SBL/T    | 21                             | 23  | PM        | 23     | 1       | >300                                               | NOM                                                             | NOM |
|    |                                  | WBL/R    | 28                             | 22  | AM        | 28     | 1       | >50                                                | 43                                                              | 42  |
| 5  | Marine Av. / Two Mile Rd.        |          |                                |     |           |        |         |                                                    |                                                                 |     |
|    |                                  | SBL/T/R  | 15                             | 12  | AM        | 15     | 1       | 200                                                | 27                                                              | 24  |
|    |                                  | EBL/T/R  | 166                            | 99  | AM        | 166    | 1       | >300                                               | 14                                                              | 10  |
|    |                                  | WBL/T    | 171                            | 95  | AM        | 171    | 1       | 300                                                | NOM                                                             | NOM |
|    |                                  | WBR      | 7                              | 15  | PM        | 15     | DEFACTO | 50                                                 | NOM                                                             | NOM |
| 7  | Utah Tr. / Samarkand Dr.         |          |                                |     |           |        |         |                                                    |                                                                 |     |
|    |                                  | NBL/T    | 146                            | 90  | AM        | 146    | 1       | >300                                               | NOM                                                             | 14  |
|    |                                  | SBT/R    | 109                            | 125 | PM        | 125    | 1       | >300                                               | NOM                                                             | NOM |
|    |                                  | EBL/R    | 33                             | 23  | AM        | 33     | 1       | >50                                                | 46                                                              | 35  |

<sup>1</sup> Queue length calculated using Synchro 12 with SimTraffic.

NOM = Nominal (less than 5 vehicles per hour)

<sup>2</sup> 100 = Existing storage length; **100** = Provided storage length

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## 7 REFERENCES

1. **City of Twentynine Palms.** *Traffic Study Policy*. Twentynine Palms : s.n., February 22, 2005 (Adopted).
2. **San Bernardino Associated Governments.** *Congestion Management Program for County of San Bernardino*. County of San Bernardino : s.n., Updated June 2016.
3. **City of Twentynine Palms.** *Vehicle Miles Traveled Policy Guidance*. Twentynine Palms : s.n., August 25, 2020.
4. **Transportation Research Board.** *Highway Capacity Manual (HCM, 7th Edition)*. National Academy of Sciences 2022.
5. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD)*. 2014, Updated April 1, 2025 (Revision 9).
6. **Institute of Transportation Engineers.** Trip Generation Manual, 12th Edition. 2025.

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## **APPENDIX 1.1:**

### **TRAFFIC STUDY SCOPING AGREEMENT**

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# TECHNICAL MEMORANDUM

**DATE:** November 20, 2025  
**TO:** Richard Pedersen, City of Twentynine Palms  
**FROM:** John Kain, AICP and Bill Lawson, PE, Urban Crossroads, Inc.  
**JOB NO:** 16572 LOS Scope & VMT Screening.docx

## **SUBJECT: TENTATIVE TRACT MAP 17168 PHASES 3 TO 8 TRAFFIC ANALYSIS SCOPE AND VMT SCREENING**

Urban Crossroads, Inc. has prepared the following Traffic Analysis Scope and VMT Screening for the proposed Tentative Tract Map 17168 Phases 3 to 8 development (Project). The Project is located south of the future extension of Samarkand Drive, between Desert Knoll Avenue and Utah Trail in the City of Twentynine Palms.

This letter describes the proposed Project trip generation, trip distribution, and analysis methodology, which have been used to establish the draft proposed Project study area and analysis locations.

The following scoping parameters have been prepared in accordance with the City of Twentynine Palms' Traffic Study Policy (February, 2005), City of Twentynine Palms' Vehicle Miles Traveled Policy Guidance (August 2020), and the San Bernardino County Congestion Management Program (CMP) Guidelines for CMP Traffic Impact Analysis Reports (Appendix B, 2016 Update).

### **PROJECT DESCRIPTION**

The Project consists of 137 dwelling units within phases 3 to 8 of Tentative Tract Map 17168. The site plan for the proposed Project is shown on Exhibit 1. For analysis purposes, the Project is anticipated to have an Opening Year of 2027.

Access to the Project is provided via Manana Drive from Desert Knoll Avenue and the future extension of Samarkand Drive between Desert Knoll Avenue and Utah Trail. Manana Drive east of Desert Knoll Avenue and Marine Avenue north of Two Mile Road were constructed in conjunction with phases 1 and 2 of Tentative Tract Map 17168. A north-south local street connects Phase 3 to Manana Drive east of Desert Knoll Avenue and west of Marine Avenue. Phases 4 to 8 are connected to Samarkand Drive as well as the north-south roadway extending through Phase 3.

### **TRIP GENERATION**

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (12<sup>th</sup> Edition, 2025) were used to estimate the Project's trip generation based on the ITE Land Use Code 210 (Single Family Detached Residential).

# EXHIBIT 1: TTM 17168 PHASES 3 TO 8 SITE PLAN



Trip generation rates and resulting estimates for daily and peak hour conditions are shown in Table 1. The proposed Project is anticipated to generate 1,245 two-way vehicle trip-ends per day with 96 AM peak hour vehicle trips and 127 PM peak hour vehicle trips.

**TABLE 1: PROJECT TRIP GENERATION SUMMARY**

| Trip Generation Rates <sup>1</sup> |             |          |              |      |       |              |      |       |       |
|------------------------------------|-------------|----------|--------------|------|-------|--------------|------|-------|-------|
| Land Use                           | ITE LU Code | Quantity | AM Peak Hour |      |       | PM Peak Hour |      |       | Daily |
|                                    |             |          | In           | Out  | Total | In           | Out  | Total |       |
| Single Family Detached             | 210         | per DU   | 0.19         | 0.51 | 0.70  | 0.58         | 0.35 | 0.93  | 9.09  |

| Trip Generation Results |             |          |              |     |       |              |     |       |       |
|-------------------------|-------------|----------|--------------|-----|-------|--------------|-----|-------|-------|
| Land Use                | ITE LU Code | Quantity | AM Peak Hour |     |       | PM Peak Hour |     |       | Daily |
|                         |             |          | In           | Out | Total | In           | Out | Total |       |
| Single Family Detached  | 210         | 137 DU   | 26           | 70  | 96    | 79           | 48  | 127   | 1,245 |

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 12th Edition (2025).

<sup>2</sup> DU = Dwelling Units

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## STUDY AREA

Intersections of “Collector” or higher classification at which the proposed project will add 50 or more peak hour trips are to be evaluated in the traffic study.

Table 2 lists the intersection analysis locations proposed to be evaluated for access assessment purposes.

Exhibit 2 identifies the proposed study area intersection analysis locations and depicts the location of the proposed project in relation to the existing roadway network.

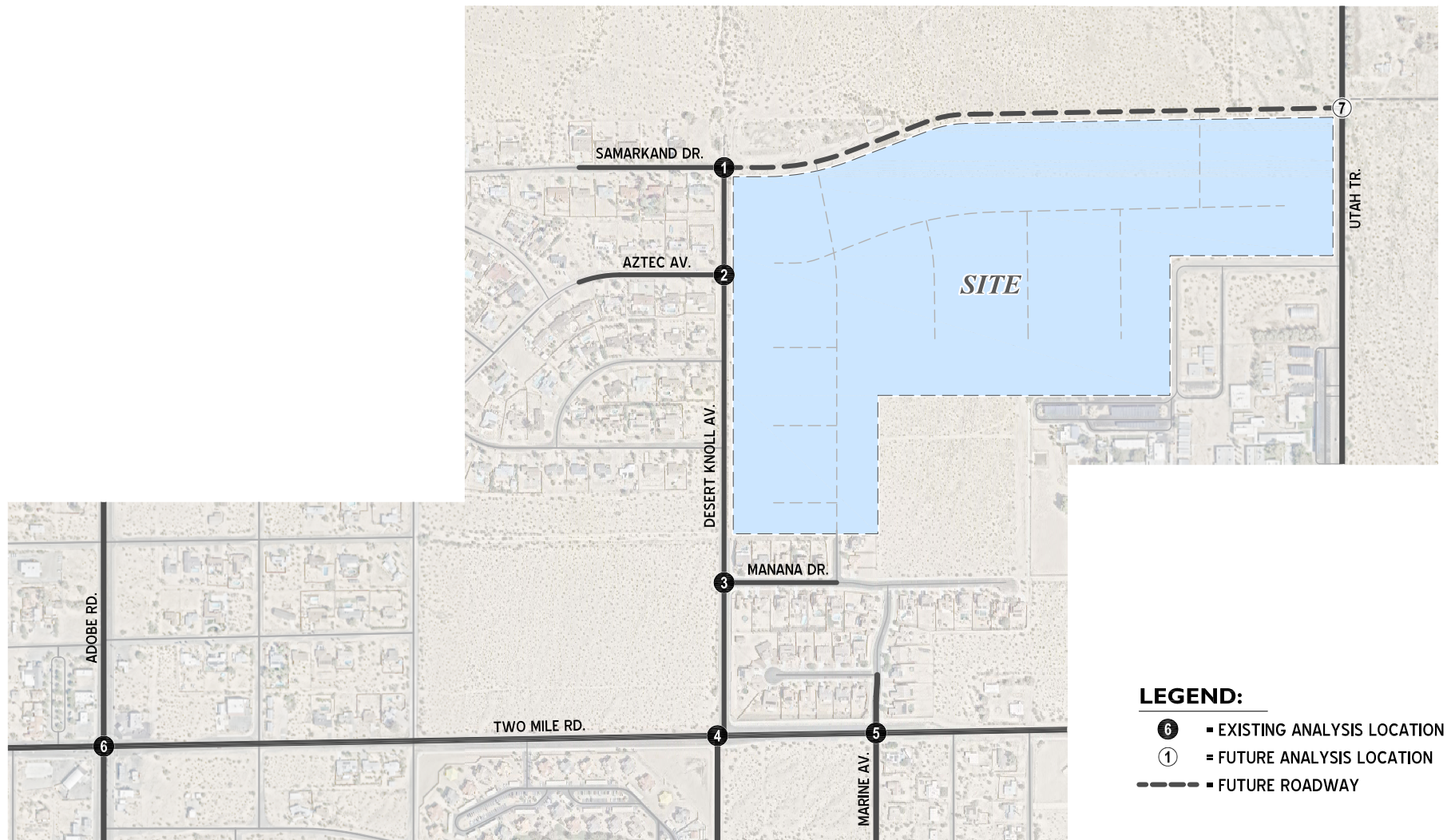
**TABLE 2: STUDY AREA INTERSECTIONS**

| # | Intersection                     | # | Intersection              |
|---|----------------------------------|---|---------------------------|
| 1 | Desert Knoll Av. / Samarkand Dr. | 5 | Marine Av. / Two Mile Rd. |
| 2 | Desert Knoll Av. / Aztec Av.     | 6 | Adobe Rd. / Two Mile Rd.  |
| 3 | Desert Knoll Av. / Manana Dr.    | 7 | Utah Tr. / Samarkand Dr.  |
| 4 | Desert Knoll Av. / Two Mile Rd.  |   |                           |

## TRIP DISTRIBUTION AND TRIP ASSIGNMENT

The Project trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations and directions of traffic routes that will be utilized by Project traffic.

## EXHIBIT 2: TRAFFIC ANALYSIS STUDY AREA



The potential interaction between the planned land uses and surrounding regional access routes are considered, to identify the route where the Project traffic would distribute. Exhibit 3 shows the Project trip distribution patterns.

Based on the identified Project traffic generation and trip distribution pattern, Project Average Daily Traffic (ADT) and peak hour intersection turning movement volumes are shown on Exhibit 4.

## ANALYSIS SCENARIOS

Peak hour intersection analysis will be provided for the following analysis scenarios:

- Existing (2025) Conditions
- Existing Plus Project Conditions
- Cumulative (2027) Conditions
- Cumulative (2027) Plus Project Conditions

## GENERAL PLAN CIRCULATION ELEMENT

The City of Twentynine Palms General Plan Circulation Element is depicted on Exhibit 5 and Exhibit 6 shows the typical roadway cross-sections. As shown on Exhibit 5, Desert Knoll Avenue is classified as Secondary roadway (4-lane undivided).

Two Mile Road and Adobe Road south of Two Mile Road are classified as Arterial roadways (4-lane divided).

Adobe Road north of Two Mile Road and Utah Trail are classified as 6-Lane Expressways.

## LEVEL OF SERVICE (LOS) CRITERIA

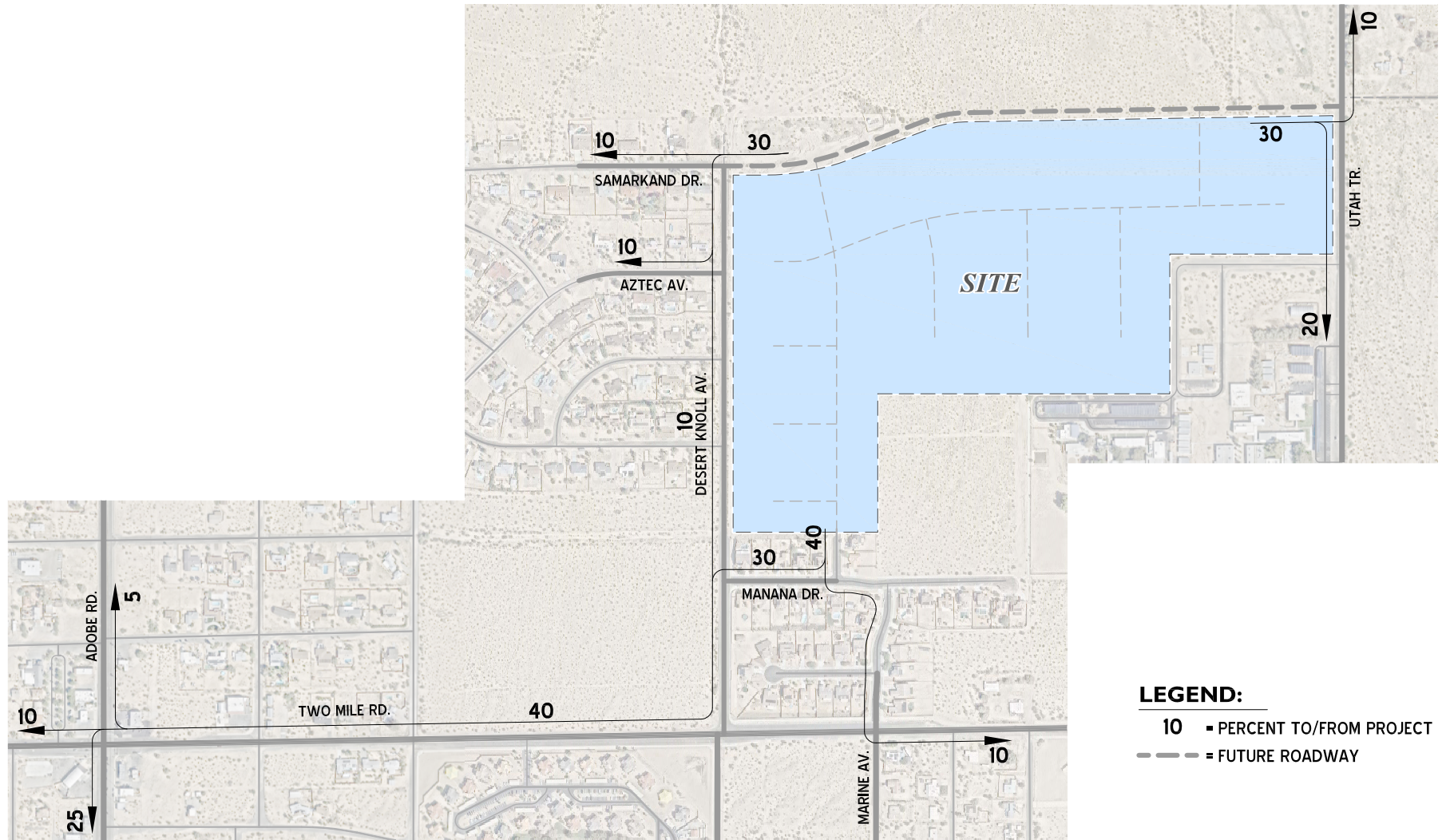
The City of Twentynine Palms has established LOS C as the minimum level of service for all **new streets** within the City (Implementation Policy CI-1.1 of the General Plan Circulation Element).

The City of Twentynine Palms' Vehicle Miles Traveled Policy Guidance (August 2020) indicates that "LOS is generally not a problem in the City of Twentynine Palms. Most streets and intersection function at LOS A or B. Rush hours are generally not congested. And intersections that were a problem have been improved with traffic signals and upgrades – Rt. 62 at Lear Avenue, Adobe Road, and Utah Trail. The City has no policy requiring LOS to be maintained on **existing roads** at C or better as some cities do."

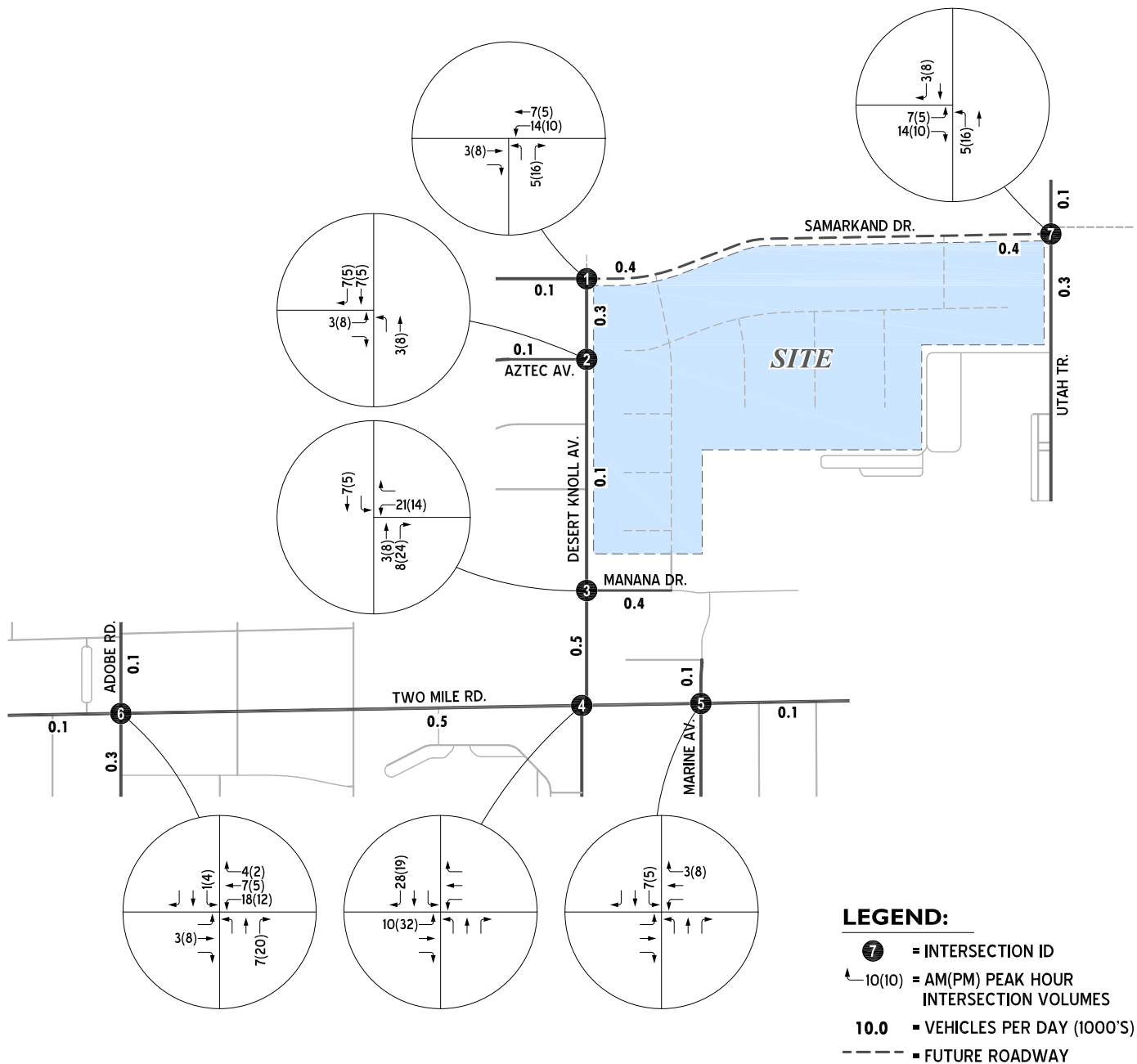
## ANALYSIS METHODOLOGY

For the purposes of this analysis, signalized intersection operations analysis will be based on the methodology described in the Highway Capacity Manual (7th Edition). Intersection LOS operations are based on an intersection's average control delay. Unsignalized intersections will be evaluated using the methodology described in the HCM 7th Edition. At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane.

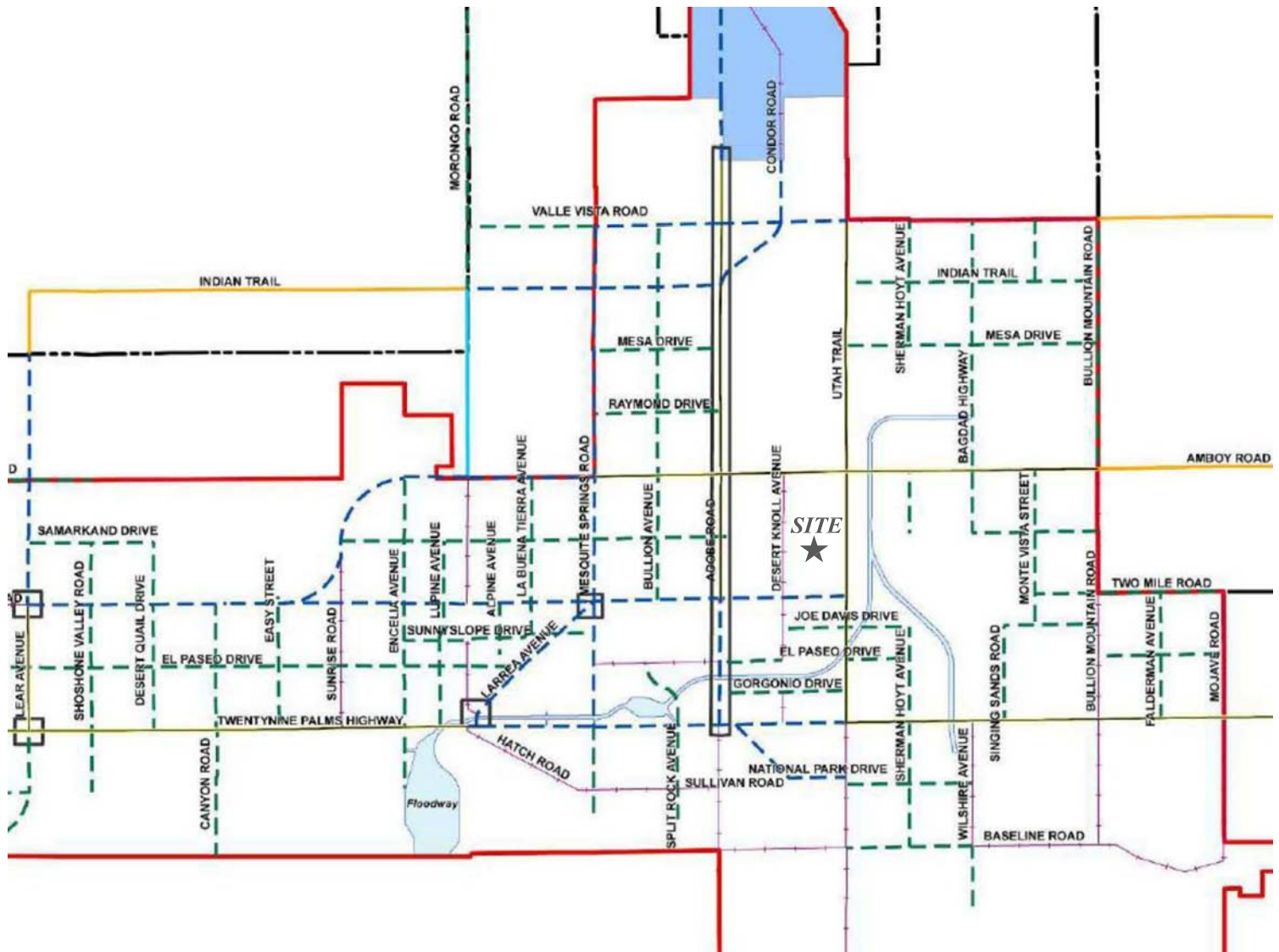
### EXHIBIT 3: PROJECT TRIP DISTRIBUTION



## EXHIBIT 4: PROJECT ONLY TRAFFIC VOLUMES



## EXHIBIT 5: CITY OF TWENTYNINE PALMS CIRCULATION PLAN



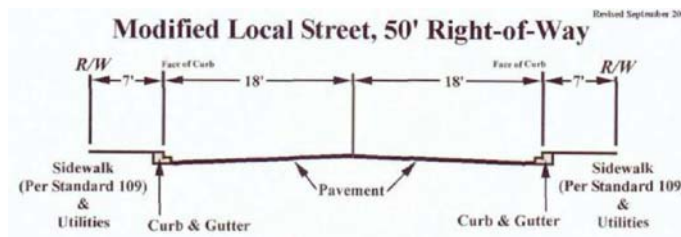
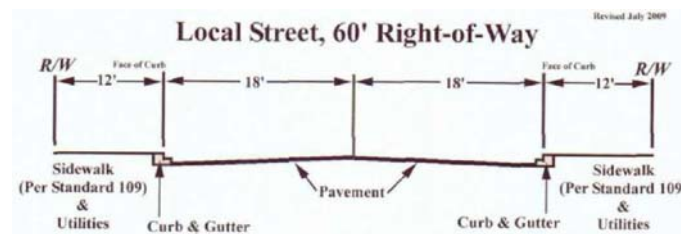
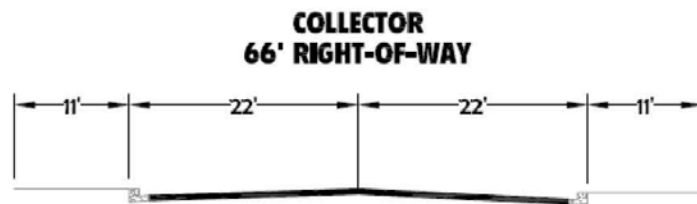
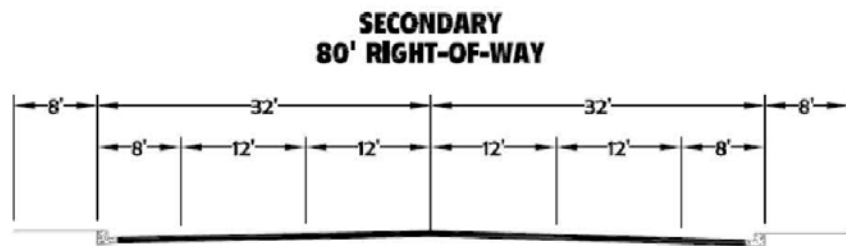
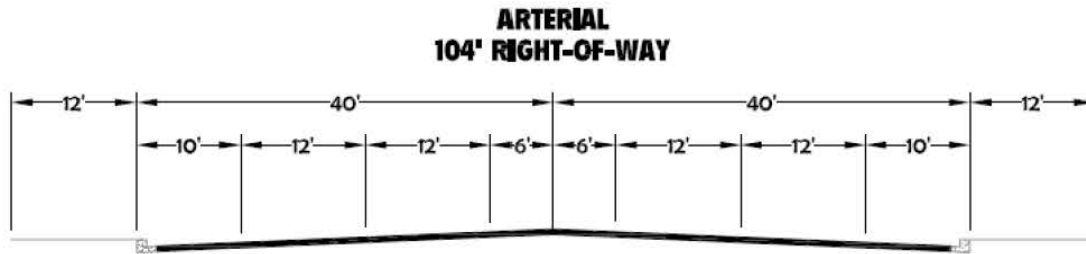
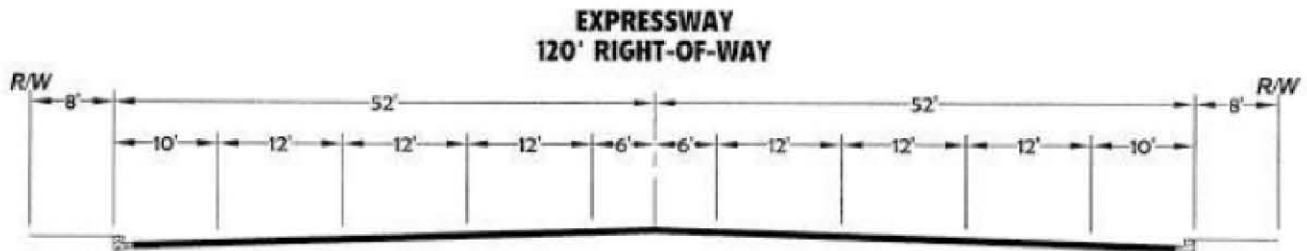
SOURCE: CITY OF TWENTYNINE PALMS GENERAL PLAN (2012)

### LEGEND:

- |                                                |                                     |
|------------------------------------------------|-------------------------------------|
| City Boundary                                  | <b>Twentynine Palms Circulation</b> |
| Sphere of Influence (SOI) Boundary             | 6-Lane Expressway (120' ROW)        |
| Marine Corps Air Ground Combat Center (MCAGCC) | Arterial (104' ROW)                 |
| Floodways                                      | Secondary (80' ROW)                 |
| <b>San Bernardino County Circulation</b>       | Collector (66' ROW)                 |
| Major Highway (104' ROW)                       | Special Study Area                  |
| Secondary Highway (88' ROW)                    |                                     |



## EXHIBIT 6: CITY OF TWENTYNINE PALMS ROADWAY CROSS-SECTIONS



SOURCE: CITY OF TWENTYNINE PALMS GENERAL PLAN (2012)

## TRAFFIC COUNTS

Traffic count data will be collected during the second week of December 2025 during the AM peak period of 7:00 AM to 9:00 AM and PM peak period of 4:00 PM to 6:00 PM.

The City of Twentynine Palms experiences seasonal population variations over the course of the year, with relatively higher populations during the winter months from January to the end of March. To compensate for the discrepancy, counts not taken during this peak winter period (January 2 to March 31) require seasonal adjustments. A 5% increase will be applied to counts taken in December to estimate peak season.

## CUMULATIVE DEVELOPMENT TRAFFIC

It is requested that City staff review the list of cumulative development projects (shown on Exhibit 7 and listed on Table 3) and provide any additional information for projects that should be included in this traffic study that may not be reflected Exhibit 7.

Information pertaining to project location, land use, and intensity are necessary for consideration and to estimate trip generation.

**TABLE 3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY**

| ID | Project Name                                                                                     | Land Use                            | Quantity <sup>1</sup> |
|----|--------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------|
| 1  | Laundromat Building Renovation<br>(south of Twentynine Palms Hwy.; east of Cholla Av.)           | --                                  | 4 TSF                 |
| 2  | Project Phoenix<br>(south of Twentynine Palms Hwy.; east of Tamarisk Av.)                        | Business Hotel                      | 95 Room               |
|    |                                                                                                  | Recreational Community Center       | 27 TSF                |
|    |                                                                                                  | Shopping Center                     | 3 TSF                 |
|    |                                                                                                  | High-Turnover (Sit-Down) Restaurant | 3 TSF                 |
| 3  | Depierro Car Wash & Restaurant (TPM 20501)<br>(south of Twentynine Palms Hwy.; east of Pine Av.) | Fast Food Restaurant w/o Drive Thru | 3 TSF                 |
|    |                                                                                                  | Automated Car Wash                  | 1 Tunnel              |
| 4  | Wander Hotel<br>(South of Boling Dr.; east of Bullion Av.)                                       | Hotel                               | 95 Room               |

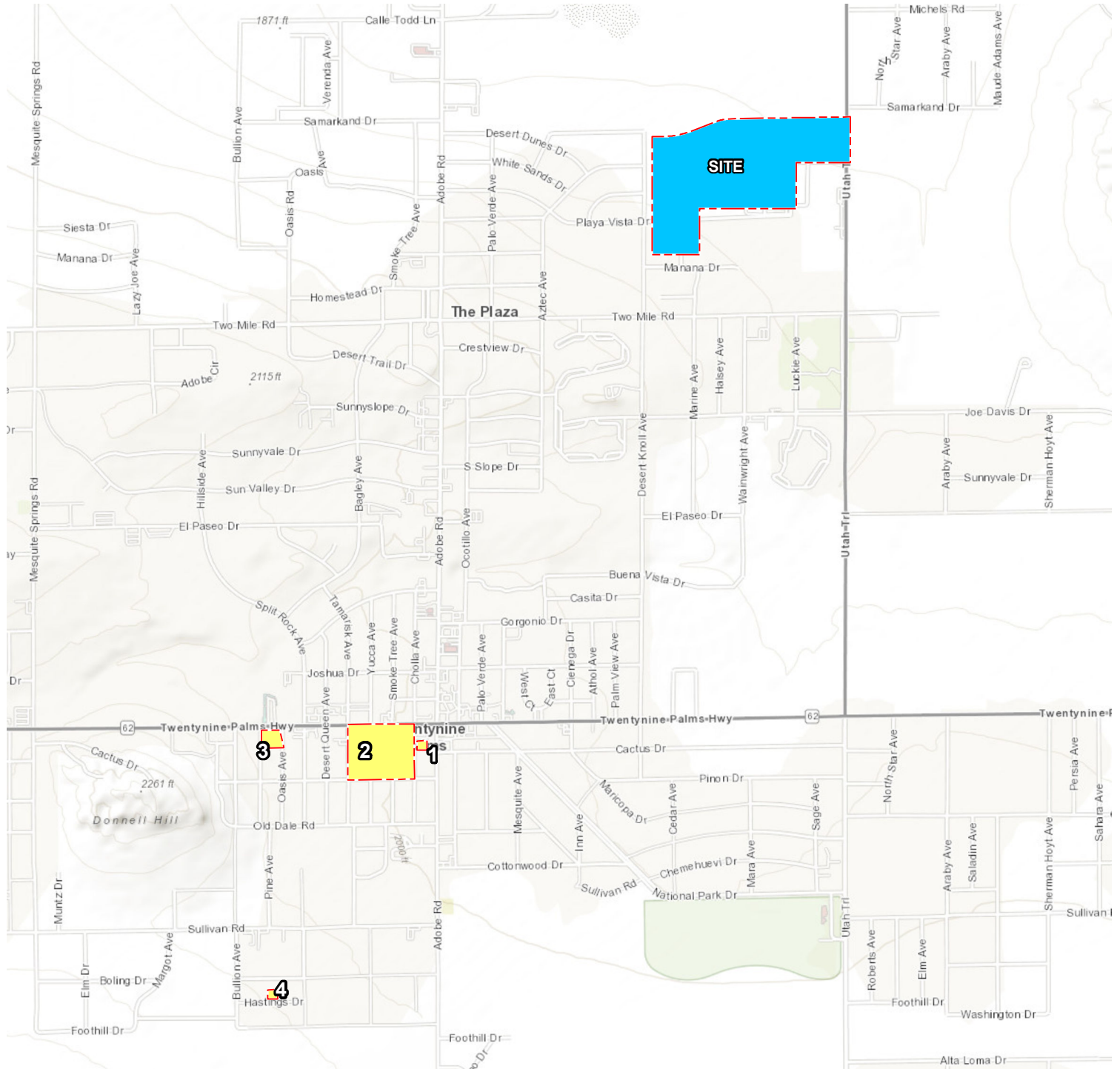
<sup>1</sup> TSF = Thousand Square Feet

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## AMBIENT GROWTH

In addition to the traffic generated by cumulative development, an ambient growth rate of 2% per year is added to approximate background growth not identified by nearby cumulative development projects. The rate will be compounded over a 2-year period (i.e.,  $1.02^{2\text{years}} = 1.0404$  or 4.04%) for 2027 conditions.

## EXHIBIT 7: CUMULATIVE DEVELOPMENT LOCATION MAP



**LEGEND:**

**4** = CUMULATIVE DEVELOPMENT ID



## SPECIAL ISSUES

The following special issues will also be addressed:

- **Traffic Signal Warrant Analysis:** Signal warrant analysis will be prepared for all unsignalized study area intersections that allow for full access (no traffic signal warrants to be performed for restricted access locations due to infeasibility of installing a signal at these types of locations).
- **Improvements:** Based on the traffic analysis results, the TA will indicate new improvement requirements and fair share contribution for the proposed Project.
- **Site Access Queuing Analysis:** Conduct intersection peak hour queuing analysis at Project access Points. The analysis will identify the necessary lengths of turn pockets with storage and appropriate turn pocket transitions which adheres to the General Plan roadway classifications for the site adjacent roadways.

## VMT SCREENING

Consistent with City Guidelines, projects should evaluate available screening criteria based on their location and project type to determine if a presumption of a less than significant transportation impact can be made. The following screening criteria listed on Table 4 are listed in the City Guidelines for Land Use Projects, and those applicable to the proposed Project (highlighted in **bold**) were selected for further review.

**TABLE 4: PROJECT SCREENING SUMMARY**

| Screening Steps                                             | Description                                                                                                                                                                                                                                                                                                                                                            | Result                      |
|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 1. Transit Priority Area (TPA) Screening                    | Presumed less than significant VMT impact for projects located in TPAs.                                                                                                                                                                                                                                                                                                | Not Applicable.             |
| 2. Low VMT area screening                                   | Presumed less than significant VMT impact for projects located in low VMT generating model traffic analysis zones (TAZs). These TAZs generate total daily VMT/SP that is 15% less than the baseline level for the County.                                                                                                                                              | Does Not Meet.              |
| 3. Project type screening                                   | Local serving retail projects (Per OPR's Technical Advisory less than 50,000 square feet), neighborhood schools, churches, daycare, public institutions, affordable housing, or project within half a mile of a transit center, are presumed to have a less than significant VMT impact. Projects that generate less than 250 daily trips do not require VMT analysis. | Not Applicable.             |
| 4. VMT analysis using SBTAM forecast of total daily VMT/SP. | A significant impact would occur if the project VMT/SP exceeds the Citywide average under General Plan Buildout Conditions.                                                                                                                                                                                                                                            | Met for Project Residential |

## Low VMT AREA SCREENING

Map based or low VMT area Screening eliminates the need for complex analyses by allowing existing VMT data to serve as a basis for screening. A Project is presumed to have a less-than-significant impact if the area of development is under the threshold as shown on the screening map.

Map-based screening is performed using the map titled: SBCTA VMT Screening tool. The Project is located within TAZ 53992205 and experiences 34.3 VMT / service population. The existing Project TAZ residential VMT exceeds County average of 27.6 VMT / service population.

**Map Based screening criteria is not met.**

### **VTM ANALYSIS USING SBTAM FORECAST OF TOTAL DAILY VMT/SERVICE POPULATION**

Per City guidelines, if the Project is located within a TAZ forecasted to have a lower VMT than the projected future daily average VMT (29.57), then the Project VMT is less than significant.

For the 2040 VMT forecast, the SBCTA VMT Screening tool is utilized. The Project is located within TAZ 53992205 and is projected to experience 29.38 VMT / service population for 2040 conditions. The Project TAZ is projected to generate a VMT / service population less than the 2040 County average of 29.5.

**VTM Analysis Using SBTAM Forecast of Total Daily VMT/SP screening criteria is met for the Project.**

In summary, the Project was evaluated against VMT screening criteria as outlined in the City Guidelines. Based on the results of this screening assessment the Project satisfies the VMT Analysis Using SBTAM Forecast of Total Daily VMT/SP screening, and no further full VMT analysis is necessary.

If you have any questions, please contact us directly at [jkain@urbanxroads.com](mailto:jkain@urbanxroads.com) for John or [blawson@urbanxroads.com](mailto:blawson@urbanxroads.com) for Bill.

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## **APPENDIX 3.1:**

### **TRAFFIC COUNTS – DECEMBER 2025**

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City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Aztec Avenue  
Weather: Clear

File Name : 02\_TNP\_DK\_Aztec AM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

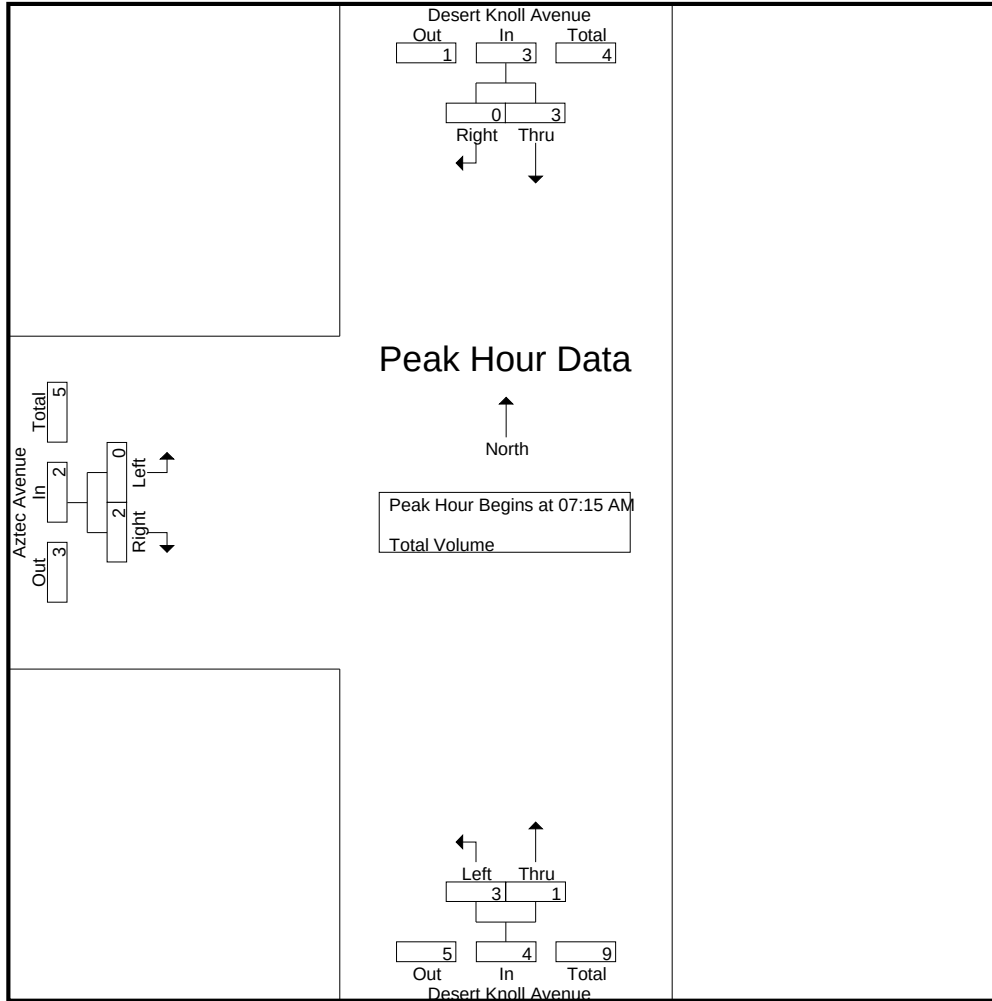
Groups Printed- Total Volume

|             | Desert Knoll Avenue<br>Southbound |       |            | Desert Knoll Avenue<br>Northbound |      |            | Aztec Avenue<br>Eastbound |       |            |            |
|-------------|-----------------------------------|-------|------------|-----------------------------------|------|------------|---------------------------|-------|------------|------------|
| Start Time  | Thru                              | Right | App. Total | Left                              | Thru | App. Total | Left                      | Right | App. Total | Int. Total |
| 07:00 AM    | 0                                 | 0     | 0          | 1                                 | 0    | 1          | 0                         | 0     | 0          | 1          |
| 07:15 AM    | 1                                 | 0     | 1          | 2                                 | 0    | 2          | 0                         | 0     | 0          | 3          |
| 07:30 AM    | 0                                 | 0     | 0          | 0                                 | 1    | 1          | 0                         | 0     | 0          | 1          |
| 07:45 AM    | 1                                 | 0     | 1          | 0                                 | 0    | 0          | 0                         | 0     | 0          | 1          |
| Total       | 2                                 | 0     | 2          | 3                                 | 1    | 4          | 0                         | 0     | 0          | 6          |
| 08:00 AM    | 1                                 | 0     | 1          | 1                                 | 0    | 1          | 0                         | 2     | 2          | 4          |
| 08:15 AM    | 0                                 | 0     | 0          | 0                                 | 0    | 0          | 0                         | 0     | 0          | 0          |
| 08:30 AM    | 0                                 | 0     | 0          | 0                                 | 0    | 0          | 0                         | 2     | 2          | 2          |
| 08:45 AM    | 1                                 | 1     | 2          | 0                                 | 0    | 0          | 1                         | 0     | 1          | 3          |
| Total       | 2                                 | 1     | 3          | 1                                 | 0    | 1          | 1                         | 4     | 5          | 9          |
| Grand Total | 4                                 | 1     | 5          | 4                                 | 1    | 5          | 1                         | 4     | 5          | 15         |
| Apprch %    | 80                                | 20    |            | 80                                | 20   |            | 20                        | 80    |            |            |
| Total %     | 26.7                              | 6.7   | 33.3       | 26.7                              | 6.7  | 33.3       | 6.7                       | 26.7  | 33.3       |            |

|                                                            | Desert Knoll Avenue<br>Southbound |       |            | Desert Knoll Avenue<br>Northbound |      |            | Aztec Avenue<br>Eastbound |       |            |            |
|------------------------------------------------------------|-----------------------------------|-------|------------|-----------------------------------|------|------------|---------------------------|-------|------------|------------|
| Start Time                                                 | Thru                              | Right | App. Total | Left                              | Thru | App. Total | Left                      | Right | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                                   |       |            |                                   |      |            |                           |       |            |            |
| Peak Hour for Entire Intersection Begins at 07:15 AM       |                                   |       |            |                                   |      |            |                           |       |            |            |
| 07:15 AM                                                   | 1                                 | 0     | 1          | 2                                 | 0    | 2          | 0                         | 0     | 0          | 3          |
| 07:30 AM                                                   | 0                                 | 0     | 0          | 0                                 | 1    | 1          | 0                         | 0     | 0          | 1          |
| 07:45 AM                                                   | 1                                 | 0     | 1          | 0                                 | 0    | 0          | 0                         | 0     | 0          | 1          |
| 08:00 AM                                                   | 1                                 | 0     | 1          | 1                                 | 0    | 1          | 0                         | 2     | 2          | 4          |
| Total Volume                                               | 3                                 | 0     | 3          | 3                                 | 1    | 4          | 0                         | 2     | 2          | 9          |
| % App. Total                                               | 100                               | 0     |            | 75                                | 25   |            | 0                         | 100   |            |            |
| PHF                                                        | .750                              | .000  | .750       | .375                              | .250 | .500       | .000                      | .250  | .250       | .563       |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Aztec Avenue  
Weather: Clear

File Name : 02\_TNP\_DK\_Aztec AM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 2



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

|              | 07:15 AM |      |      | 07:00 AM |      |      | 08:00 AM |      |      |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins.     | 1        | 0    | 1    | 1        | 0    | 1    | 0        | 2    | 2    |
| +15 mins.    | 0        | 0    | 0    | 2        | 0    | 2    | 0        | 0    | 0    |
| +30 mins.    | 1        | 0    | 1    | 0        | 1    | 1    | 0        | 2    | 2    |
| +45 mins.    | 1        | 0    | 1    | 0        | 0    | 0    | 1        | 0    | 1    |
| Total Volume | 3        | 0    | 3    | 3        | 1    | 4    | 1        | 4    | 5    |
| % App. Total | 100      | 0    |      | 75       | 25   |      | 20       | 80   |      |
| PHF          | .750     | .000 | .750 | .375     | .250 | .500 | .250     | .500 | .625 |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Aztec Avenue  
Weather: Clear

File Name : 02\_TNP\_DK\_Aztec PM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

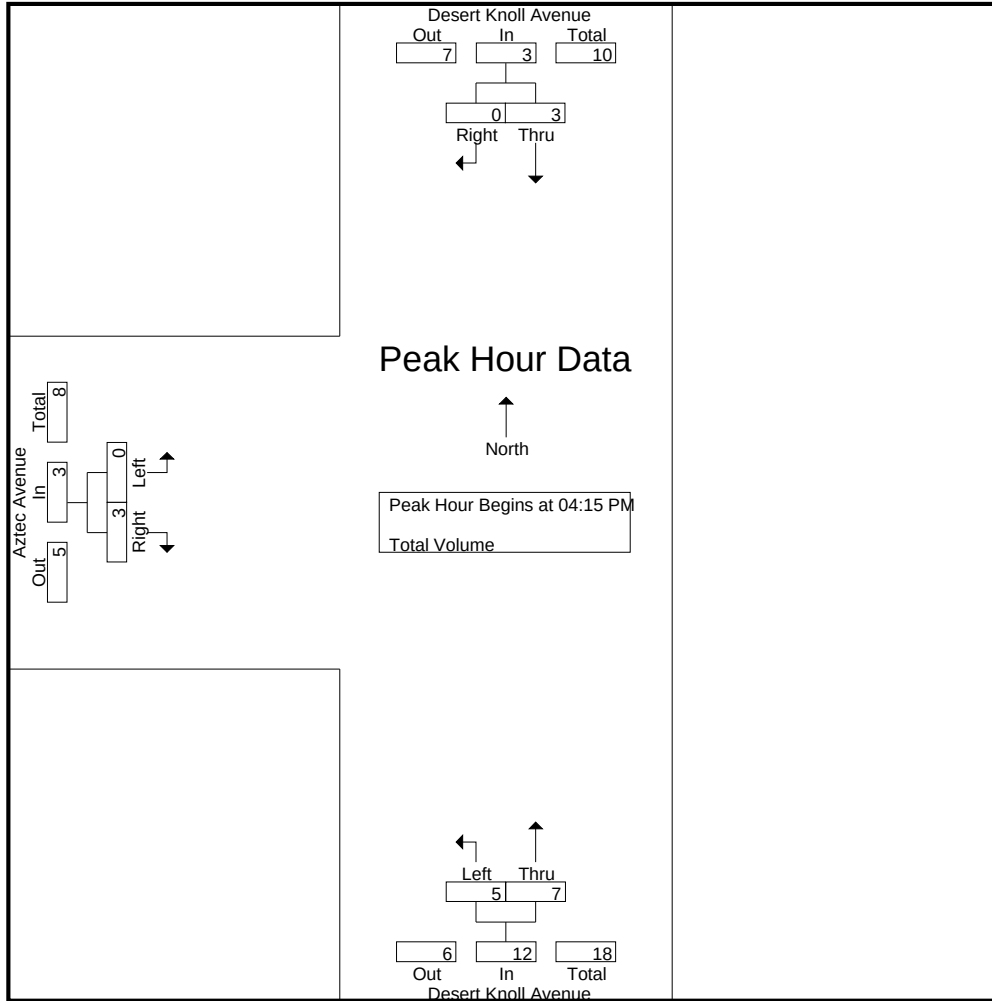
Groups Printed- Total Volume

|             | Desert Knoll Avenue<br>Southbound |       |            | Desert Knoll Avenue<br>Northbound |      |            | Aztec Avenue<br>Eastbound |       |            |            |
|-------------|-----------------------------------|-------|------------|-----------------------------------|------|------------|---------------------------|-------|------------|------------|
| Start Time  | Thru                              | Right | App. Total | Left                              | Thru | App. Total | Left                      | Right | App. Total | Int. Total |
| 04:00 PM    | 0                                 | 0     | 0          | 0                                 | 3    | 3          | 0                         | 0     | 0          | 3          |
| 04:15 PM    | 0                                 | 0     | 0          | 1                                 | 3    | 4          | 0                         | 1     | 1          | 5          |
| 04:30 PM    | 2                                 | 0     | 2          | 2                                 | 1    | 3          | 0                         | 0     | 0          | 5          |
| 04:45 PM    | 0                                 | 0     | 0          | 0                                 | 0    | 0          | 0                         | 2     | 2          | 2          |
| Total       | 2                                 | 0     | 2          | 3                                 | 7    | 10         | 0                         | 3     | 3          | 15         |
| 05:00 PM    | 1                                 | 0     | 1          | 2                                 | 3    | 5          | 0                         | 0     | 0          | 6          |
| 05:15 PM    | 1                                 | 0     | 1          | 2                                 | 2    | 4          | 0                         | 0     | 0          | 5          |
| 05:30 PM    | 1                                 | 0     | 1          | 0                                 | 1    | 1          | 0                         | 0     | 0          | 2          |
| 05:45 PM    | 0                                 | 0     | 0          | 0                                 | 0    | 0          | 1                         | 0     | 1          | 1          |
| Total       | 3                                 | 0     | 3          | 4                                 | 6    | 10         | 1                         | 0     | 1          | 14         |
| Grand Total | 5                                 | 0     | 5          | 7                                 | 13   | 20         | 1                         | 3     | 4          | 29         |
| Apprch %    | 100                               | 0     |            | 35                                | 65   |            | 25                        | 75    |            |            |
| Total %     | 17.2                              | 0     | 17.2       | 24.1                              | 44.8 | 69         | 3.4                       | 10.3  | 13.8       |            |

|                                                            | Desert Knoll Avenue<br>Southbound |       |            | Desert Knoll Avenue<br>Northbound |      |            | Aztec Avenue<br>Eastbound |       |            |            |
|------------------------------------------------------------|-----------------------------------|-------|------------|-----------------------------------|------|------------|---------------------------|-------|------------|------------|
| Start Time                                                 | Thru                              | Right | App. Total | Left                              | Thru | App. Total | Left                      | Right | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                                   |       |            |                                   |      |            |                           |       |            |            |
| Peak Hour for Entire Intersection Begins at 04:15 PM       |                                   |       |            |                                   |      |            |                           |       |            |            |
| 04:15 PM                                                   | 0                                 | 0     | 0          | 1                                 | 3    | 4          | 0                         | 1     | 1          | 5          |
| 04:30 PM                                                   | 2                                 | 0     | 2          | 2                                 | 1    | 3          | 0                         | 0     | 0          | 5          |
| 04:45 PM                                                   | 0                                 | 0     | 0          | 0                                 | 0    | 0          | 0                         | 2     | 2          | 2          |
| 05:00 PM                                                   | 1                                 | 0     | 1          | 2                                 | 3    | 5          | 0                         | 0     | 0          | 6          |
| Total Volume                                               | 3                                 | 0     | 3          | 5                                 | 7    | 12         | 0                         | 3     | 3          | 18         |
| % App. Total                                               | 100                               | 0     |            | 41.7                              | 58.3 |            | 0                         | 100   |            |            |
| PHF                                                        | .375                              | .000  | .375       | .625                              | .583 | .600       | .000                      | .375  | .375       | .750       |

City of Twentynine Palms  
 N/S: Desert Knoll Avenue  
 E/W: Aztec Avenue  
 Weather: Clear

File Name : 02\_TNP\_DK\_Aztec PM  
 Site Code : 251180  
 Start Date : 12/11/2025  
 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 |      |      | 04:00 PM |      |      |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins.     | 2        | 0    | 2    | 1        | 3    | 4    | 0        | 0    | 0    |
| +15 mins.    | 0        | 0    | 0    | 2        | 1    | 3    | 0        | 1    | 1    |
| +30 mins.    | 1        | 0    | 1    | 0        | 0    | 0    | 0        | 0    | 0    |
| +45 mins.    | 1        | 0    | 1    | 2        | 3    | 5    | 0        | 2    | 2    |
| Total Volume | 4        | 0    | 4    | 5        | 7    | 12   | 0        | 3    | 3    |
| % App. Total | 100      | 0    |      | 41.7     | 58.3 |      | 0        | 100  |      |
| PHF          | .500     | .000 | .500 | .625     | .583 | .600 | .000     | .375 | .375 |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Manana Drive  
Weather: Clear

File Name : 03\_TNP\_DK\_Man AM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

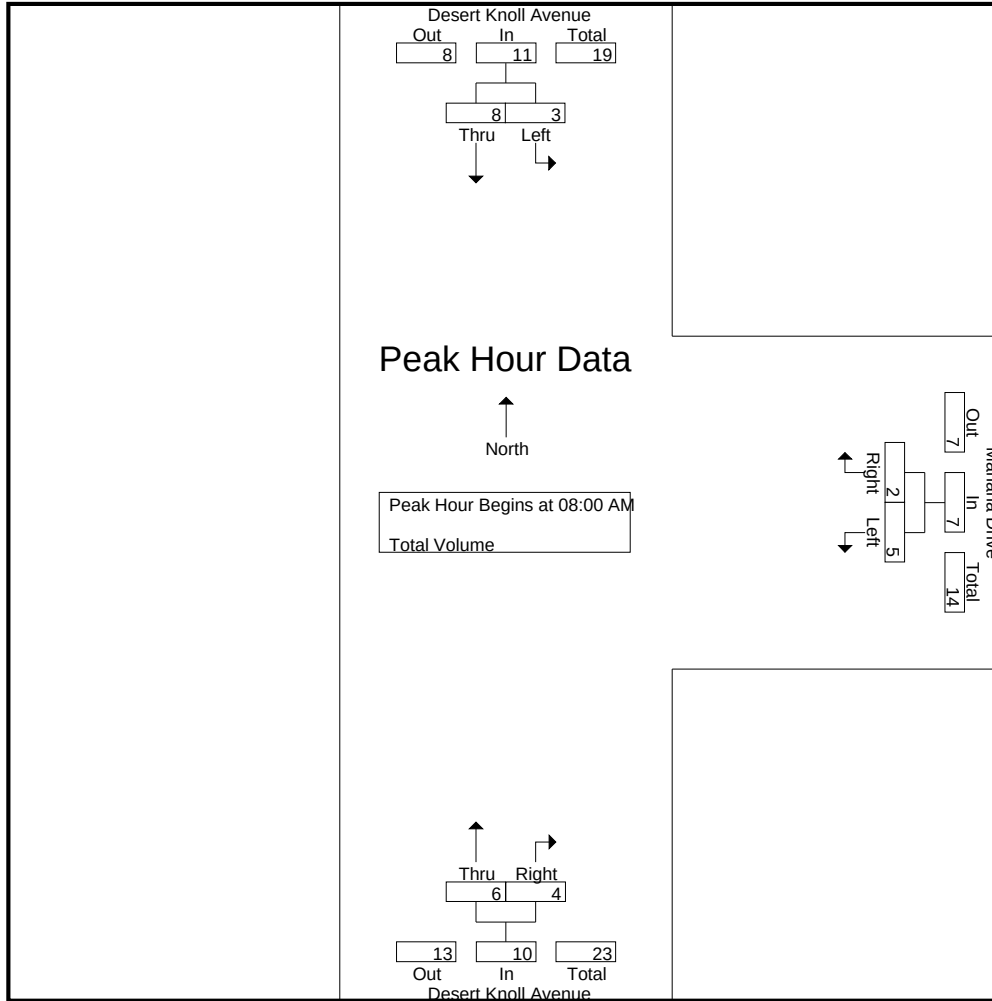
Groups Printed- Total Volume

|             | Desert Knoll Avenue<br>Southbound |      |            | Manana Drive<br>Westbound |       |            | Desert Knoll Avenue<br>Northbound |       |            |            |
|-------------|-----------------------------------|------|------------|---------------------------|-------|------------|-----------------------------------|-------|------------|------------|
| Start Time  | Left                              | Thru | App. Total | Left                      | Right | App. Total | Thru                              | Right | App. Total | Int. Total |
| 07:00 AM    | 0                                 | 0    | 0          | 1                         | 0     | 1          | 2                                 | 1     | 3          | 4          |
| 07:15 AM    | 1                                 | 1    | 2          | 1                         | 2     | 3          | 0                                 | 0     | 0          | 5          |
| 07:30 AM    | 0                                 | 0    | 0          | 1                         | 0     | 1          | 1                                 | 0     | 1          | 2          |
| 07:45 AM    | 0                                 | 2    | 2          | 1                         | 1     | 2          | 0                                 | 1     | 1          | 5          |
| Total       | 1                                 | 3    | 4          | 4                         | 3     | 7          | 3                                 | 2     | 5          | 16         |
| 08:00 AM    | 1                                 | 2    | 3          | 2                         | 1     | 3          | 0                                 | 1     | 1          | 7          |
| 08:15 AM    | 1                                 | 3    | 4          | 2                         | 1     | 3          | 3                                 | 2     | 5          | 12         |
| 08:30 AM    | 0                                 | 2    | 2          | 0                         | 0     | 0          | 1                                 | 0     | 1          | 3          |
| 08:45 AM    | 1                                 | 1    | 2          | 1                         | 0     | 1          | 2                                 | 1     | 3          | 6          |
| Total       | 3                                 | 8    | 11         | 5                         | 2     | 7          | 6                                 | 4     | 10         | 28         |
| Grand Total | 4                                 | 11   | 15         | 9                         | 5     | 14         | 9                                 | 6     | 15         | 44         |
| Apprch %    | 26.7                              | 73.3 |            | 64.3                      | 35.7  |            | 60                                | 40    |            |            |
| Total %     | 9.1                               | 25   | 34.1       | 20.5                      | 11.4  | 31.8       | 20.5                              | 13.6  | 34.1       |            |

|                                                            | Desert Knoll Avenue<br>Southbound |      |            | Manana Drive<br>Westbound |       |            | Desert Knoll Avenue<br>Northbound |       |            |            |
|------------------------------------------------------------|-----------------------------------|------|------------|---------------------------|-------|------------|-----------------------------------|-------|------------|------------|
| 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                                 | 2    | 3          | 2                         | 1     | 3          | 0                                 | 1     | 1          | 7          |
| 08:15 AM                                                   | 1                                 | 3    | 4          | 2                         | 1     | 3          | 3                                 | 2     | 5          | 12         |
| 08:30 AM                                                   | 0                                 | 2    | 2          | 0                         | 0     | 0          | 1                                 | 0     | 1          | 3          |
| 08:45 AM                                                   | 1                                 | 1    | 2          | 1                         | 0     | 1          | 2                                 | 1     | 3          | 6          |
| Total Volume                                               | 3                                 | 8    | 11         | 5                         | 2     | 7          | 6                                 | 4     | 10         | 28         |
| % App. Total                                               | 27.3                              | 72.7 |            | 71.4                      | 28.6  |            | 60                                | 40    |            |            |
| PHF                                                        | .750                              | .667 | .688       | .625                      | .500  | .583       | .500                              | .500  | .500       | .583       |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Manana Drive  
Weather: Clear

File Name : 03\_TNP\_DK\_Man AM  
Site Code : 251180  
Start Date : 12/11/2025  
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 |      |      |
|--------------|----------|------|------|----------|------|------|----------|------|------|
| +0 mins.     | 0        | 2    | 2    | 1        | 2    | 3    | 0        | 1    | 1    |
| +15 mins.    | 1        | 2    | 3    | 1        | 0    | 1    | 3        | 2    | 5    |
| +30 mins.    | 1        | 3    | 4    | 1        | 1    | 2    | 1        | 0    | 1    |
| +45 mins.    | 0        | 2    | 2    | 2        | 1    | 3    | 2        | 1    | 3    |
| Total Volume | 2        | 9    | 11   | 5        | 4    | 9    | 6        | 4    | 10   |
| % App. Total | 18.2     | 81.8 |      | 55.6     | 44.4 |      | 60       | 40   |      |
| PHF          | .500     | .750 | .688 | .625     | .500 | .750 | .500     | .500 | .500 |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Manana Drive  
Weather: Clear

File Name : 03\_TNP\_DK\_Man PM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

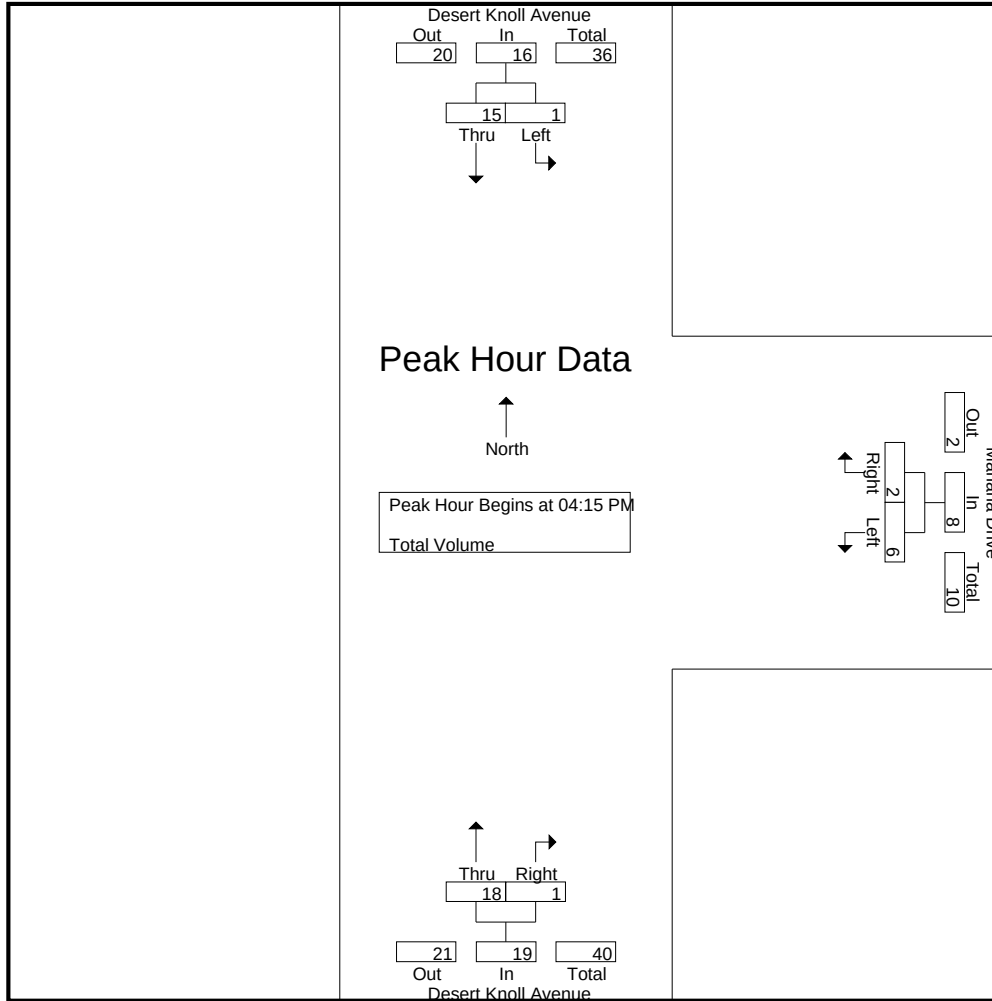
Groups Printed- Total Volume

|             | Desert Knoll Avenue<br>Southbound |      |            | Manana Drive<br>Westbound |       |            | Desert Knoll Avenue<br>Northbound |       |            |            |
|-------------|-----------------------------------|------|------------|---------------------------|-------|------------|-----------------------------------|-------|------------|------------|
| Start Time  | Left                              | Thru | App. Total | Left                      | Right | App. Total | Thru                              | Right | App. Total | Int. Total |
| 04:00 PM    | 0                                 | 1    | 1          | 1                         | 1     | 2          | 4                                 | 1     | 5          | 8          |
| 04:15 PM    | 0                                 | 4    | 4          | 3                         | 1     | 4          | 6                                 | 0     | 6          | 14         |
| 04:30 PM    | 0                                 | 3    | 3          | 3                         | 0     | 3          | 1                                 | 1     | 2          | 8          |
| 04:45 PM    | 1                                 | 2    | 3          | 0                         | 0     | 0          | 5                                 | 0     | 5          | 8          |
| Total       | 1                                 | 10   | 11         | 7                         | 2     | 9          | 16                                | 2     | 18         | 38         |
| 05:00 PM    | 0                                 | 6    | 6          | 0                         | 1     | 1          | 6                                 | 0     | 6          | 13         |
| 05:15 PM    | 1                                 | 1    | 2          | 0                         | 2     | 2          | 4                                 | 0     | 4          | 8          |
| 05:30 PM    | 1                                 | 0    | 1          | 2                         | 1     | 3          | 2                                 | 1     | 3          | 7          |
| 05:45 PM    | 0                                 | 0    | 0          | 1                         | 0     | 1          | 1                                 | 2     | 3          | 4          |
| Total       | 2                                 | 7    | 9          | 3                         | 4     | 7          | 13                                | 3     | 16         | 32         |
| Grand Total | 3                                 | 17   | 20         | 10                        | 6     | 16         | 29                                | 5     | 34         | 70         |
| Apprch %    | 15                                | 85   |            | 62.5                      | 37.5  |            | 85.3                              | 14.7  |            |            |
| Total %     | 4.3                               | 24.3 | 28.6       | 14.3                      | 8.6   | 22.9       | 41.4                              | 7.1   | 48.6       |            |

|                                                            | Desert Knoll Avenue<br>Southbound |      |            | Manana Drive<br>Westbound |       |            | Desert Knoll Avenue<br>Northbound |       |            |            |
|------------------------------------------------------------|-----------------------------------|------|------------|---------------------------|-------|------------|-----------------------------------|-------|------------|------------|
| 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                                 | 4    | 4          | 3                         | 1     | 4          | 6                                 | 0     | 6          | 14         |
| 04:30 PM                                                   | 0                                 | 3    | 3          | 3                         | 0     | 3          | 1                                 | 1     | 2          | 8          |
| 04:45 PM                                                   | 1                                 | 2    | 3          | 0                         | 0     | 0          | 5                                 | 0     | 5          | 8          |
| 05:00 PM                                                   | 0                                 | 6    | 6          | 0                         | 1     | 1          | 6                                 | 0     | 6          | 13         |
| Total Volume                                               | 1                                 | 15   | 16         | 6                         | 2     | 8          | 18                                | 1     | 19         | 43         |
| % App. Total                                               | 6.2                               | 93.8 |            | 75                        | 25    |            | 94.7                              | 5.3   |            |            |
| PHF                                                        | .250                              | .625 | .667       | .500                      | .500  | .500       | .750                              | .250  | .792       | .768       |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Manana Drive  
Weather: Clear

File Name : 03\_TNP\_DK\_Man PM  
Site Code : 251180  
Start Date : 12/11/2025  
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        | 4    | 4    | 1        | 1    | 2    | 6        | 0    | 6    |
| +15 mins.    | 0        | 3    | 3    | 3        | 1    | 4    | 1        | 1    | 2    |
| +30 mins.    | 1        | 2    | 3    | 3        | 0    | 3    | 5        | 0    | 5    |
| +45 mins.    | 0        | 6    | 6    | 0        | 0    | 0    | 6        | 0    | 6    |
| Total Volume | 1        | 15   | 16   | 7        | 2    | 9    | 18       | 1    | 19   |
| % App. Total | 6.2      | 93.8 |      | 77.8     | 22.2 |      | 94.7     | 5.3  |      |
| PHF          | .250     | .625 | .667 | .583     | .500 | .563 | .750     | .250 | .792 |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Two Mile Road  
Weather: Clear

File Name : 04\_TNP\_DK\_2M AM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

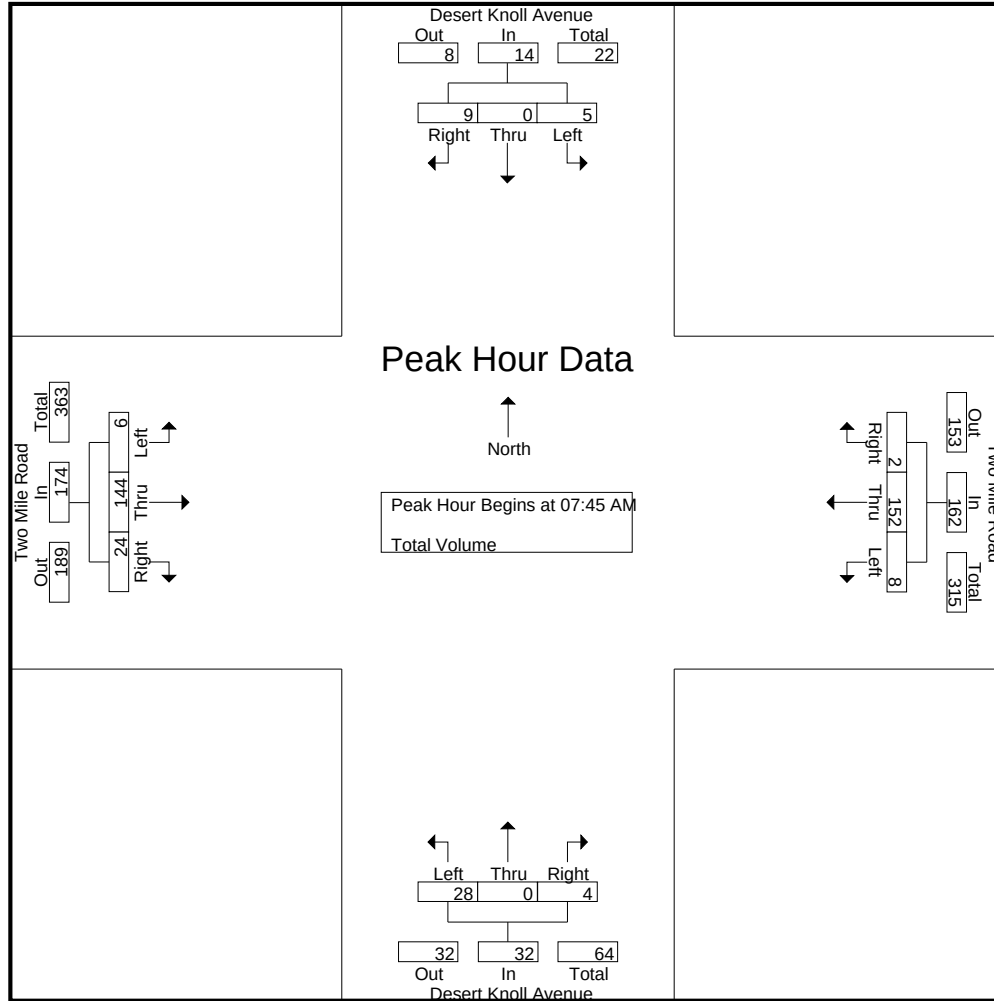
Groups Printed- Total Volume

|             | Desert Knoll Avenue<br>Southbound |      |       |            | Two Mile Road<br>Westbound |      |       |            | Desert Knoll Avenue<br>Northbound |      |       |            | Two Mile Road<br>Eastbound |      |       |            |            |
|-------------|-----------------------------------|------|-------|------------|----------------------------|------|-------|------------|-----------------------------------|------|-------|------------|----------------------------|------|-------|------------|------------|
| Start Time  | Left                              | Thru | Right | App. Total | Left                       | Thru | Right | App. Total | Left                              | Thru | Right | App. Total | Left                       | Thru | Right | App. Total | Int. Total |
| 07:00 AM    | 0                                 | 0    | 1     | 1          | 0                          | 77   | 1     | 78         | 6                                 | 0    | 2     | 8          | 2                          | 60   | 2     | 64         | 151        |
| 07:15 AM    | 1                                 | 0    | 1     | 2          | 2                          | 31   | 0     | 33         | 8                                 | 0    | 0     | 8          | 0                          | 18   | 1     | 19         | 62         |
| 07:30 AM    | 0                                 | 0    | 1     | 1          | 0                          | 28   | 1     | 29         | 8                                 | 0    | 0     | 8          | 0                          | 15   | 2     | 17         | 55         |
| 07:45 AM    | 1                                 | 0    | 2     | 3          | 0                          | 18   | 0     | 18         | 4                                 | 0    | 1     | 5          | 1                          | 24   | 6     | 31         | 57         |
| Total       | 2                                 | 0    | 5     | 7          | 2                          | 154  | 2     | 158        | 26                                | 0    | 3     | 29         | 3                          | 117  | 11    | 131        | 325        |
| 08:00 AM    | 1                                 | 0    | 3     | 4          | 1                          | 30   | 0     | 31         | 5                                 | 0    | 0     | 5          | 1                          | 46   | 3     | 50         | 90         |
| 08:15 AM    | 2                                 | 0    | 3     | 5          | 2                          | 53   | 1     | 56         | 8                                 | 0    | 1     | 9          | 4                          | 51   | 6     | 61         | 131        |
| 08:30 AM    | 1                                 | 0    | 1     | 2          | 5                          | 51   | 1     | 57         | 11                                | 0    | 2     | 13         | 0                          | 23   | 9     | 32         | 104        |
| 08:45 AM    | 0                                 | 0    | 2     | 2          | 0                          | 21   | 1     | 22         | 7                                 | 0    | 0     | 7          | 2                          | 18   | 6     | 26         | 57         |
| Total       | 4                                 | 0    | 9     | 13         | 8                          | 155  | 3     | 166        | 31                                | 0    | 3     | 34         | 7                          | 138  | 24    | 169        | 382        |
| Grand Total | 6                                 | 0    | 14    | 20         | 10                         | 309  | 5     | 324        | 57                                | 0    | 6     | 63         | 10                         | 255  | 35    | 300        | 707        |
| Apprch %    | 30                                | 0    | 70    |            | 3.1                        | 95.4 | 1.5   |            | 90.5                              | 0    | 9.5   |            | 3.3                        | 85   | 11.7  |            |            |
| Total %     | 0.8                               | 0    | 2     | 2.8        | 1.4                        | 43.7 | 0.7   | 45.8       | 8.1                               | 0    | 0.8   | 8.9        | 1.4                        | 36.1 | 5     | 42.4       |            |

|                                                            | Desert Knoll Avenue<br>Southbound |      |          |            | Two Mile Road<br>Westbound |           |          |            | Desert Knoll Avenue<br>Northbound |      |          |            | Two Mile Road<br>Eastbound |           |          |            |            |
|------------------------------------------------------------|-----------------------------------|------|----------|------------|----------------------------|-----------|----------|------------|-----------------------------------|------|----------|------------|----------------------------|-----------|----------|------------|------------|
| Start Time                                                 | Left                              | Thru | Right    | App. Total | Left                       | Thru      | Right    | App. Total | Left                              | Thru | Right    | App. Total | Left                       | Thru      | Right    | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                                   |      |          |            |                            |           |          |            |                                   |      |          |            |                            |           |          |            |            |
| Peak Hour for Entire Intersection Begins at 07:45 AM       |                                   |      |          |            |                            |           |          |            |                                   |      |          |            |                            |           |          |            |            |
| 07:45 AM                                                   | 1                                 | 0    | 2        | 3          | 0                          | 18        | 0        | 18         | 4                                 | 0    | 1        | 5          | 1                          | 24        | 6        | 31         | 57         |
| 08:00 AM                                                   | 1                                 | 0    | <b>3</b> | 4          | 1                          | 30        | 0        | 31         | 5                                 | 0    | 0        | 5          | 1                          | 46        | 3        | 50         | 90         |
| 08:15 AM                                                   | <b>2</b>                          | 0    | 3        | <b>5</b>   | 2                          | <b>53</b> | <b>1</b> | 56         | 8                                 | 0    | 1        | 9          | <b>4</b>                   | <b>51</b> | 6        | <b>61</b>  | <b>131</b> |
| 08:30 AM                                                   | 1                                 | 0    | 1        | 2          | <b>5</b>                   | 51        | 1        | <b>57</b>  | <b>11</b>                         | 0    | <b>2</b> | <b>13</b>  | 0                          | 23        | <b>9</b> | 32         | 104        |
| Total Volume                                               | 5                                 | 0    | 9        | 14         | 8                          | 152       | 2        | 162        | 28                                | 0    | 4        | 32         | 6                          | 144       | 24       | 174        | 382        |
| % App. Total                                               | 35.7                              | 0    | 64.3     |            | 4.9                        | 93.8      | 1.2      |            | 87.5                              | 0    | 12.5     |            | 3.4                        | 82.8      | 13.8     |            |            |
| PHF                                                        | .625                              | .000 | .750     | .700       | .400                       | .717      | .500     | .711       | .636                              | .000 | .500     | .615       | .375                       | .706      | .667     | .713       | .729       |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Two Mile Road  
Weather: Clear

File Name : 04\_TNP\_DK\_2M AM  
Site Code : 251180  
Start Date : 12/11/2025  
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 |      |      |      | 08:00 AM |      |      |      | 07:45 AM |      |      |      |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins.     | 1        | 0    | 2    | 3    | 1        | 30   | 0    | 31   | 5        | 0    | 0    | 5    | 1        | 24   | 6    | 31   |
| +15 mins.    | 1        | 0    | 3    | 4    | 2        | 53   | 1    | 56   | 8        | 0    | 1    | 9    | 1        | 46   | 3    | 50   |
| +30 mins.    | 2        | 0    | 3    | 5    | 5        | 51   | 1    | 57   | 11       | 0    | 2    | 13   | 4        | 51   | 6    | 61   |
| +45 mins.    | 1        | 0    | 1    | 2    | 0        | 21   | 1    | 22   | 7        | 0    | 0    | 7    | 0        | 23   | 9    | 32   |
| Total Volume | 5        | 0    | 9    | 14   | 8        | 155  | 3    | 166  | 31       | 0    | 3    | 34   | 6        | 144  | 24   | 174  |
| % App. Total | 35.7     | 0    | 64.3 |      | 4.8      | 93.4 | 1.8  |      | 91.2     | 0    | 8.8  |      | 3.4      | 82.8 | 13.8 |      |
| PHF          | .625     | .000 | .750 | .700 | .400     | .731 | .750 | .728 | .705     | .000 | .375 | .654 | .375     | .706 | .667 | .713 |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Two Mile Road  
Weather: Clear

File Name : 04\_TNP\_DK\_2M PM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

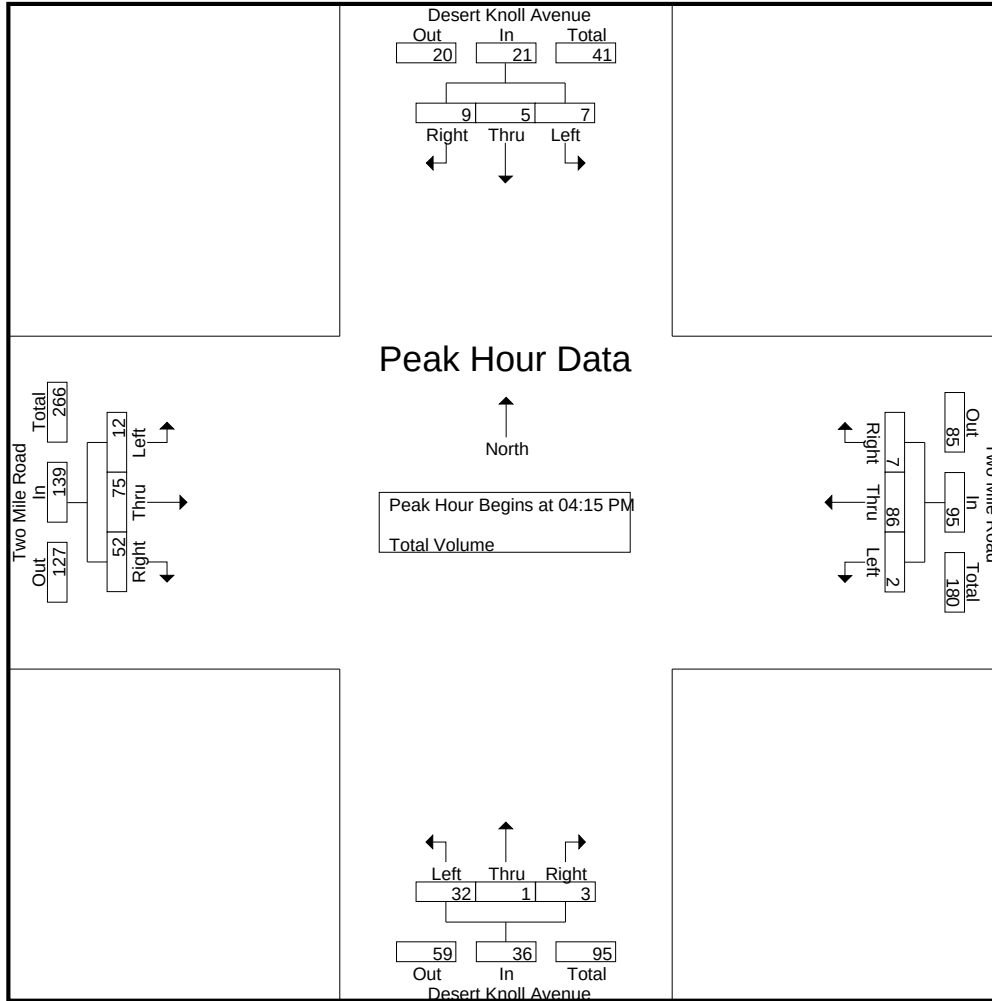
Groups Printed- Total Volume

|             | Desert Knoll Avenue<br>Southbound |      |       |            | Two Mile Road<br>Westbound |      |       |            | Desert Knoll Avenue<br>Northbound |      |       |            | Two Mile Road<br>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    | 1                                 | 0    | 1     | 2          | 2                          | 23   | 1     | 26         | 6                                 | 1    | 0     | 7          | 2                          | 20   | 9     | 31         | 66         |
| 04:15 PM    | 3                                 | 1    | 3     | 7          | 1                          | 23   | 1     | 25         | 2                                 | 0    | 2     | 4          | 4                          | 20   | 11    | 35         | 71         |
| 04:30 PM    | 0                                 | 2    | 4     | 6          | 0                          | 15   | 0     | 15         | 9                                 | 0    | 1     | 10         | 2                          | 24   | 14    | 40         | 71         |
| 04:45 PM    | 0                                 | 1    | 1     | 2          | 1                          | 29   | 1     | 31         | 8                                 | 1    | 0     | 9          | 3                          | 19   | 18    | 40         | 82         |
| Total       | 4                                 | 4    | 9     | 17         | 4                          | 90   | 3     | 97         | 25                                | 2    | 3     | 30         | 11                         | 83   | 52    | 146        | 290        |
| 05:00 PM    | 4                                 | 1    | 1     | 6          | 0                          | 19   | 5     | 24         | 13                                | 0    | 0     | 13         | 3                          | 12   | 9     | 24         | 67         |
| 05:15 PM    | 0                                 | 0    | 1     | 1          | 0                          | 21   | 2     | 23         | 12                                | 0    | 1     | 13         | 4                          | 19   | 8     | 31         | 68         |
| 05:30 PM    | 0                                 | 0    | 2     | 2          | 2                          | 16   | 0     | 18         | 10                                | 0    | 2     | 12         | 3                          | 20   | 9     | 32         | 64         |
| 05:45 PM    | 0                                 | 0    | 1     | 1          | 0                          | 21   | 0     | 21         | 9                                 | 0    | 1     | 10         | 3                          | 22   | 11    | 36         | 68         |
| Total       | 4                                 | 1    | 5     | 10         | 2                          | 77   | 7     | 86         | 44                                | 0    | 4     | 48         | 13                         | 73   | 37    | 123        | 267        |
| Grand Total | 8                                 | 5    | 14    | 27         | 6                          | 167  | 10    | 183        | 69                                | 2    | 7     | 78         | 24                         | 156  | 89    | 269        | 557        |
| Apprch %    | 29.6                              | 18.5 | 51.9  |            | 3.3                        | 91.3 | 5.5   |            | 88.5                              | 2.6  | 9     |            | 8.9                        | 58   | 33.1  |            |            |
| Total %     | 1.4                               | 0.9  | 2.5   | 4.8        | 1.1                        | 30   | 1.8   | 32.9       | 12.4                              | 0.4  | 1.3   | 14         | 4.3                        | 28   | 16    | 48.3       |            |

|                                                            | Desert Knoll Avenue<br>Southbound |      |       |            | Two Mile Road<br>Westbound |      |       |            | Desert Knoll Avenue<br>Northbound |      |       |            | Two Mile Road<br>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                                 | 1    | 3     | 7          | 1                          | 23   | 1     | 25         | 2                                 | 0    | 2     | 4          | 4                          | 20   | 11    | 35         | 71         |
| 04:30 PM                                                   | 0                                 | 2    | 4     | 6          | 0                          | 15   | 0     | 15         | 9                                 | 0    | 1     | 10         | 2                          | 24   | 14    | 40         | 71         |
| 04:45 PM                                                   | 0                                 | 1    | 1     | 2          | 1                          | 29   | 1     | 31         | 8                                 | 1    | 0     | 9          | 3                          | 19   | 18    | 40         | 82         |
| 05:00 PM                                                   | 4                                 | 1    | 1     | 6          | 0                          | 19   | 5     | 24         | 13                                | 0    | 0     | 13         | 3                          | 12   | 9     | 24         | 67         |
| Total Volume                                               | 7                                 | 5    | 9     | 21         | 2                          | 86   | 7     | 95         | 32                                | 1    | 3     | 36         | 12                         | 75   | 52    | 139        | 291        |
| % App. Total                                               | 33.3                              | 23.8 | 42.9  |            | 2.1                        | 90.5 | 7.4   |            | 88.9                              | 2.8  | 8.3   |            | 8.6                        | 54   | 37.4  |            |            |
| PHF                                                        | .438                              | .625 | .563  | .750       | .500                       | .741 | .350  | .766       | .615                              | .250 | .375  | .692       | .750                       | .781 | .722  | .869       | .887       |

City of Twentynine Palms  
N/S: Desert Knoll Avenue  
E/W: Two Mile Road  
Weather: Clear

File Name : 04\_TNP\_DK\_2M PM  
Site Code : 251180  
Start Date : 12/11/2025  
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 |      |      |      | 05:00 PM |      |      |      | 04:00 PM |      |      |      |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins.     | 3        | 1    | 3    | 7    | 2        | 23   | 1    | 26   | 13       | 0    | 0    | 13   | 2        | 20   | 9    | 31   |
| +15 mins.    | 0        | 2    | 4    | 6    | 1        | 23   | 1    | 25   | 12       | 0    | 1    | 13   | 4        | 20   | 11   | 35   |
| +30 mins.    | 0        | 1    | 1    | 2    | 0        | 15   | 0    | 15   | 10       | 0    | 2    | 12   | 2        | 24   | 14   | 40   |
| +45 mins.    | 4        | 1    | 1    | 6    | 1        | 29   | 1    | 31   | 9        | 0    | 1    | 10   | 3        | 19   | 18   | 40   |
| Total Volume | 7        | 5    | 9    | 21   | 4        | 90   | 3    | 97   | 44       | 0    | 4    | 48   | 11       | 83   | 52   | 146  |
| % App. Total | 33.3     | 23.8 | 42.9 |      | 4.1      | 92.8 | 3.1  |      | 91.7     | 0    | 8.3  |      | 7.5      | 56.8 | 35.6 |      |
| PHF          | .438     | .625 | .563 | .750 | .500     | .776 | .750 | .782 | .846     | .000 | .500 | .923 | .688     | .865 | .722 | .913 |

City of Twentynine Palms  
N/S: Marine Avenue  
E/W: Two Mile Road  
Weather: Clear

File Name : 05\_TNP\_Mar\_2M AM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

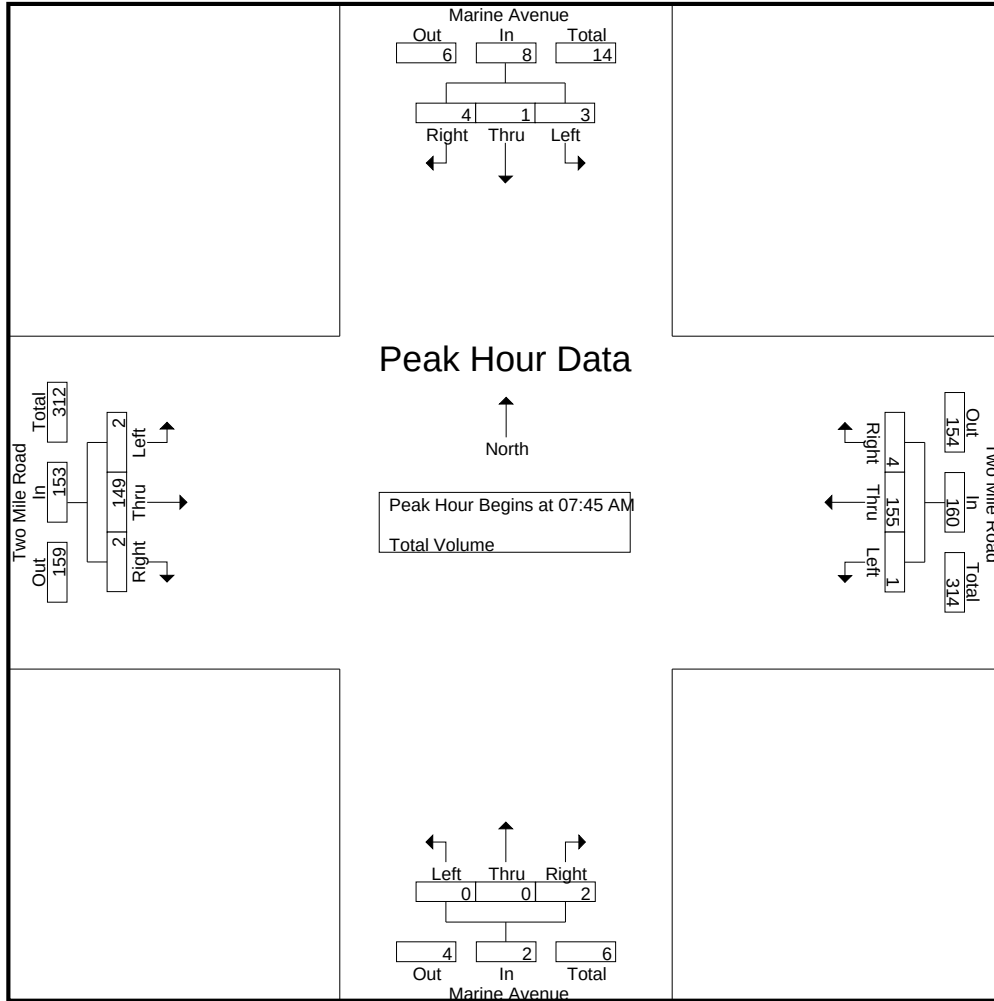
Groups Printed- Total Volume

|             | Marine Avenue<br>Southbound |      |       |            | Two Mile Road<br>Westbound |      |       |            | Marine Avenue<br>Northbound |      |       |            | Two Mile Road<br>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                           | 0    | 7     | 9          | 0                          | 71   | 0     | 71         | 0                           | 0    | 0     | 0          | 2                          | 58   | 1     | 61         | 141        |
| 07:15 AM    | 3                           | 0    | 3     | 6          | 0                          | 30   | 0     | 30         | 0                           | 0    | 0     | 0          | 1                          | 19   | 0     | 20         | 56         |
| 07:30 AM    | 0                           | 0    | 3     | 3          | 0                          | 24   | 0     | 24         | 0                           | 0    | 0     | 0          | 1                          | 14   | 1     | 16         | 43         |
| 07:45 AM    | 0                           | 0    | 1     | 1          | 0                          | 16   | 0     | 16         | 0                           | 0    | 0     | 0          | 1                          | 24   | 1     | 26         | 43         |
| Total       | 5                           | 0    | 14    | 19         | 0                          | 141  | 0     | 141        | 0                           | 0    | 0     | 0          | 5                          | 115  | 3     | 123        | 283        |
| 08:00 AM    | 0                           | 0    | 1     | 1          | 0                          | 32   | 1     | 33         | 0                           | 0    | 1     | 1          | 0                          | 47   | 0     | 47         | 82         |
| 08:15 AM    | 3                           | 1    | 2     | 6          | 0                          | 52   | 1     | 53         | 0                           | 0    | 1     | 1          | 1                          | 53   | 0     | 54         | 114        |
| 08:30 AM    | 0                           | 0    | 0     | 0          | 1                          | 55   | 2     | 58         | 0                           | 0    | 0     | 0          | 0                          | 25   | 1     | 26         | 84         |
| 08:45 AM    | 0                           | 0    | 2     | 2          | 0                          | 19   | 0     | 19         | 1                           | 0    | 0     | 1          | 0                          | 16   | 1     | 17         | 39         |
| Total       | 3                           | 1    | 5     | 9          | 1                          | 158  | 4     | 163        | 1                           | 0    | 2     | 3          | 1                          | 141  | 2     | 144        | 319        |
| Grand Total | 8                           | 1    | 19    | 28         | 1                          | 299  | 4     | 304        | 1                           | 0    | 2     | 3          | 6                          | 256  | 5     | 267        | 602        |
| Apprch %    | 28.6                        | 3.6  | 67.9  |            | 0.3                        | 98.4 | 1.3   |            | 33.3                        | 0    | 66.7  |            | 2.2                        | 95.9 | 1.9   |            |            |
| Total %     | 1.3                         | 0.2  | 3.2   | 4.7        | 0.2                        | 49.7 | 0.7   | 50.5       | 0.2                         | 0    | 0.3   | 0.5        | 1                          | 42.5 | 0.8   | 44.4       |            |

|                                                            | Marine Avenue<br>Southbound |      |       |            | Two Mile Road<br>Westbound |      |       |            | Marine Avenue<br>Northbound |      |       |            | Two Mile Road<br>Eastbound |      |       |            |            |
|------------------------------------------------------------|-----------------------------|------|-------|------------|----------------------------|------|-------|------------|-----------------------------|------|-------|------------|----------------------------|------|-------|------------|------------|
| Start Time                                                 | Left                        | Thru | Right | App. Total | Left                       | Thru | Right | App. Total | Left                        | Thru | Right | App. Total | Left                       | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                             |      |       |            |                            |      |       |            |                             |      |       |            |                            |      |       |            |            |
| Peak Hour for Entire Intersection Begins at 07:45 AM       |                             |      |       |            |                            |      |       |            |                             |      |       |            |                            |      |       |            |            |
| 07:45 AM                                                   | 0                           | 0    | 1     | 1          | 0                          | 16   | 0     | 16         | 0                           | 0    | 0     | 0          | 1                          | 24   | 1     | 26         | 43         |
| 08:00 AM                                                   | 0                           | 0    | 1     | 1          | 0                          | 32   | 1     | 33         | 0                           | 0    | 1     | 1          | 0                          | 47   | 0     | 47         | 82         |
| 08:15 AM                                                   | 3                           | 1    | 2     | 6          | 0                          | 52   | 1     | 53         | 0                           | 0    | 1     | 1          | 1                          | 53   | 0     | 54         | 114        |
| 08:30 AM                                                   | 0                           | 0    | 0     | 0          | 1                          | 55   | 2     | 58         | 0                           | 0    | 0     | 0          | 0                          | 25   | 1     | 26         | 84         |
| Total Volume                                               | 3                           | 1    | 4     | 8          | 1                          | 155  | 4     | 160        | 0                           | 0    | 2     | 2          | 2                          | 149  | 2     | 153        | 323        |
| % App. Total                                               | 37.5                        | 12.5 | 50    |            | 0.6                        | 96.9 | 2.5   |            | 0                           | 0    | 100   |            | 1.3                        | 97.4 | 1.3   |            |            |
| PHF                                                        | .250                        | .250 | .500  | .333       | .250                       | .705 | .500  | .690       | .000                        | .000 | .500  | .500       | .500                       | .703 | .500  | .708       | .708       |

City of Twentynine Palms  
N/S: Marine Avenue  
E/W: Two Mile Road  
Weather: Clear

File Name : 05\_TNP\_Mar\_2M AM  
Site Code : 251180  
Start Date : 12/11/2025  
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 |      |      |      | 07:45 AM |      |      |      |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins.     | 2        | 0    | 7    | 9    | 0        | 32   | 1    | 33   | 0        | 0    | 1    | 1    | 1        | 24   | 1    | 26   |
| +15 mins.    | 3        | 0    | 3    | 6    | 0        | 52   | 1    | 53   | 0        | 0    | 1    | 1    | 0        | 47   | 0    | 47   |
| +30 mins.    | 0        | 0    | 3    | 3    | 1        | 55   | 2    | 58   | 0        | 0    | 0    | 0    | 1        | 53   | 0    | 54   |
| +45 mins.    | 0        | 0    | 1    | 1    | 0        | 19   | 0    | 19   | 1        | 0    | 0    | 1    | 0        | 25   | 1    | 26   |
| Total Volume | 5        | 0    | 14   | 19   | 1        | 158  | 4    | 163  | 1        | 0    | 2    | 3    | 2        | 149  | 2    | 153  |
| % App. Total | 26.3     | 0    | 73.7 |      | 0.6      | 96.9 | 2.5  |      | 33.3     | 0    | 66.7 |      | 1.3      | 97.4 | 1.3  |      |
| PHF          | .417     | .000 | .500 | .528 | .250     | .718 | .500 | .703 | .250     | .000 | .500 | .750 | .500     | .703 | .500 | .708 |

City of Twentynine Palms  
N/S: Marine Avenue  
E/W: Two Mile Road  
Weather: Clear

File Name : 05\_TNP\_Mar\_2M PM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

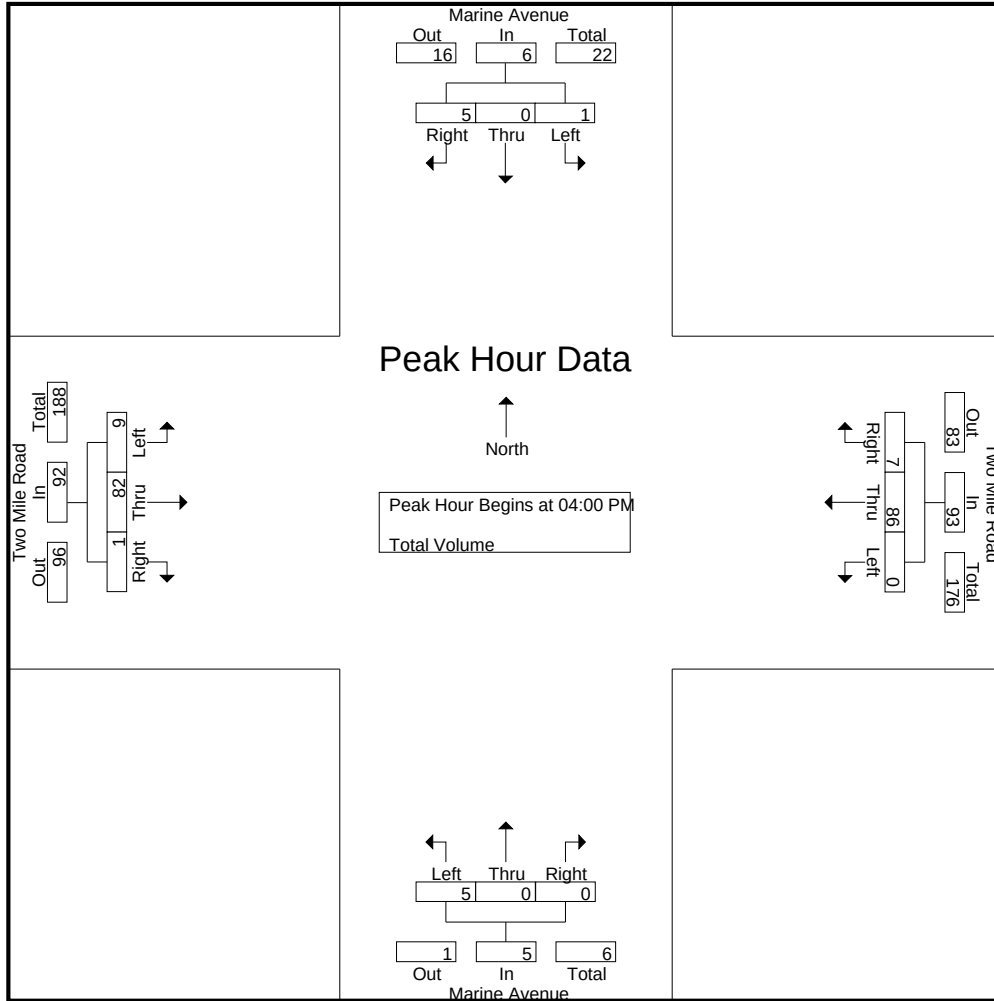
Groups Printed- Total Volume

|             | Marine Avenue<br>Southbound |      |       |            | Two Mile Road<br>Westbound |      |       |            | Marine Avenue<br>Northbound |      |       |            | Two Mile Road<br>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    | 1                           | 0    | 1     | 2          | 0                          | 24   | 3     | 27         | 1                           | 0    | 0     | 1          | 2                          | 20   | 1     | 23         | 53         |
| 04:15 PM    | 0                           | 0    | 2     | 2          | 0                          | 23   | 1     | 24         | 0                           | 0    | 0     | 0          | 0                          | 25   | 0     | 25         | 51         |
| 04:30 PM    | 0                           | 0    | 0     | 0          | 0                          | 14   | 2     | 16         | 1                           | 0    | 0     | 1          | 1                          | 23   | 0     | 24         | 41         |
| 04:45 PM    | 0                           | 0    | 2     | 2          | 0                          | 25   | 1     | 26         | 3                           | 0    | 0     | 3          | 6                          | 14   | 0     | 20         | 51         |
| Total       | 1                           | 0    | 5     | 6          | 0                          | 86   | 7     | 93         | 5                           | 0    | 0     | 5          | 9                          | 82   | 1     | 92         | 196        |
| 05:00 PM    | 1                           | 0    | 2     | 3          | 1                          | 25   | 1     | 27         | 0                           | 0    | 0     | 0          | 1                          | 15   | 0     | 16         | 46         |
| 05:15 PM    | 0                           | 0    | 1     | 1          | 1                          | 19   | 2     | 22         | 1                           | 0    | 0     | 1          | 3                          | 15   | 3     | 21         | 45         |
| 05:30 PM    | 0                           | 1    | 0     | 1          | 0                          | 19   | 0     | 19         | 0                           | 0    | 0     | 0          | 3                          | 18   | 0     | 21         | 41         |
| 05:45 PM    | 0                           | 0    | 2     | 2          | 0                          | 18   | 0     | 18         | 1                           | 0    | 0     | 1          | 0                          | 23   | 0     | 23         | 44         |
| Total       | 1                           | 1    | 5     | 7          | 2                          | 81   | 3     | 86         | 2                           | 0    | 0     | 2          | 7                          | 71   | 3     | 81         | 176        |
| Grand Total | 2                           | 1    | 10    | 13         | 2                          | 167  | 10    | 179        | 7                           | 0    | 0     | 7          | 16                         | 153  | 4     | 173        | 372        |
| Apprch %    | 15.4                        | 7.7  | 76.9  |            | 1.1                        | 93.3 | 5.6   |            | 100                         | 0    | 0     |            | 9.2                        | 88.4 | 2.3   |            |            |
| Total %     | 0.5                         | 0.3  | 2.7   | 3.5        | 0.5                        | 44.9 | 2.7   | 48.1       | 1.9                         | 0    | 0     | 1.9        | 4.3                        | 41.1 | 1.1   | 46.5       |            |

|                                                            | Marine Avenue<br>Southbound |      |       |            | Two Mile Road<br>Westbound |      |       |            | Marine Avenue<br>Northbound |      |       |            | Two Mile Road<br>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                                                   | 1                           | 0    | 1     | 2          | 0                          | 24   | 3     | 27         | 1                           | 0    | 0     | 1          | 2                          | 20   | 1     | 23         | 53         |
| 04:15 PM                                                   | 0                           | 0    | 2     | 2          | 0                          | 23   | 1     | 24         | 0                           | 0    | 0     | 0          | 0                          | 25   | 0     | 25         | 51         |
| 04:30 PM                                                   | 0                           | 0    | 0     | 0          | 0                          | 14   | 2     | 16         | 1                           | 0    | 0     | 1          | 1                          | 23   | 0     | 24         | 41         |
| 04:45 PM                                                   | 0                           | 0    | 2     | 2          | 0                          | 25   | 1     | 26         | 3                           | 0    | 0     | 3          | 6                          | 14   | 0     | 20         | 51         |
| Total Volume                                               | 1                           | 0    | 5     | 6          | 0                          | 86   | 7     | 93         | 5                           | 0    | 0     | 5          | 9                          | 82   | 1     | 92         | 196        |
| % App. Total                                               | 16.7                        | 0    | 83.3  |            | 0                          | 92.5 | 7.5   |            | 100                         | 0    | 0     |            | 9.8                        | 89.1 | 1.1   |            |            |
| PHF                                                        | .250                        | .000 | .625  | .750       | .000                       | .860 | .583  | .861       | .417                        | .000 | .000  | .417       | .375                       | .820 | .250  | .920       | .925       |

City of Twentynine Palms  
N/S: Marine Avenue  
E/W: Two Mile Road  
Weather: Clear

File Name : 05\_TNP\_Mar\_2M PM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 2



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

|              | 04:15 PM |      |      |      | 04:45 PM |      |      |      | 04:00 PM |      |      |      | 04:00 PM |      |      |      |
|--------------|----------|------|------|------|----------|------|------|------|----------|------|------|------|----------|------|------|------|
| +0 mins.     | 0        | 0    | 2    | 2    | 0        | 25   | 1    | 26   | 1        | 0    | 0    | 1    | 2        | 20   | 1    | 23   |
| +15 mins.    | 0        | 0    | 0    | 0    | 1        | 25   | 1    | 27   | 0        | 0    | 0    | 0    | 0        | 25   | 0    | 25   |
| +30 mins.    | 0        | 0    | 2    | 2    | 1        | 19   | 2    | 22   | 1        | 0    | 0    | 1    | 1        | 23   | 0    | 24   |
| +45 mins.    | 1        | 0    | 2    | 3    | 0        | 19   | 0    | 19   | 3        | 0    | 0    | 3    | 6        | 14   | 0    | 20   |
| Total Volume | 1        | 0    | 6    | 7    | 2        | 88   | 4    | 94   | 5        | 0    | 0    | 5    | 9        | 82   | 1    | 92   |
| % App. Total | 14.3     | 0    | 85.7 |      | 2.1      | 93.6 | 4.3  |      | 100      | 0    | 0    |      | 9.8      | 89.1 | 1.1  |      |
| PHF          | .250     | .000 | .750 | .583 | .500     | .880 | .500 | .870 | .417     | .000 | .000 | .417 | .375     | .820 | .250 | .920 |

City of Twentynine Palms  
N/S: Adobe Road  
E/W: Two Mile Road  
Weather: Clear

File Name : 06\_TNP\_Ado\_2M AM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

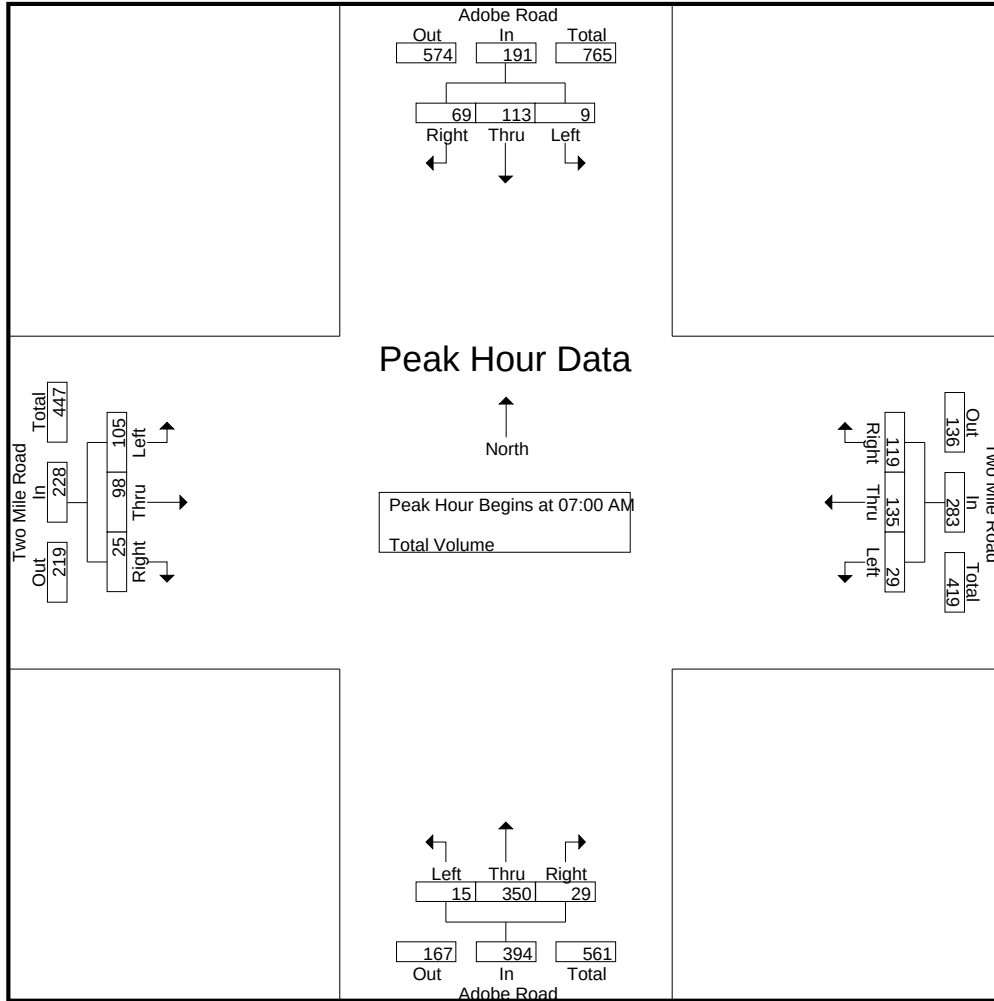
Groups Printed- Total Volume

|             | Adobe Road Southbound |      |       |            | Two Mile Road Westbound |      |       |            | Adobe Road Northbound |      |       |            | Two Mile Road Eastbound |      |       |            |            |
|-------------|-----------------------|------|-------|------------|-------------------------|------|-------|------------|-----------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| Start Time  | Left                  | Thru | Right | App. Total | Left                    | Thru | Right | App. Total | Left                  | Thru | Right | App. Total | Left                    | Thru | Right | App. Total | Int. Total |
| 07:00 AM    | 1                     | 24   | 15    | 40         | 7                       | 70   | 32    | 109        | 8                     | 98   | 11    | 117        | 30                      | 53   | 7     | 90         | 356        |
| 07:15 AM    | 1                     | 28   | 13    | 42         | 9                       | 22   | 32    | 63         | 5                     | 95   | 4     | 104        | 23                      | 12   | 7     | 42         | 251        |
| 07:30 AM    | 4                     | 23   | 19    | 46         | 5                       | 26   | 32    | 63         | 0                     | 90   | 9     | 99         | 29                      | 10   | 3     | 42         | 250        |
| 07:45 AM    | 3                     | 38   | 22    | 63         | 8                       | 17   | 23    | 48         | 2                     | 67   | 5     | 74         | 23                      | 23   | 8     | 54         | 239        |
| Total       | 9                     | 113  | 69    | 191        | 29                      | 135  | 119   | 283        | 15                    | 350  | 29    | 394        | 105                     | 98   | 25    | 228        | 1096       |
| 08:00 AM    | 2                     | 26   | 12    | 40         | 7                       | 24   | 16    | 47         | 1                     | 68   | 12    | 81         | 16                      | 37   | 14    | 67         | 235        |
| 08:15 AM    | 8                     | 55   | 29    | 92         | 14                      | 41   | 19    | 74         | 4                     | 51   | 7     | 62         | 24                      | 42   | 14    | 80         | 308        |
| 08:30 AM    | 6                     | 28   | 17    | 51         | 17                      | 44   | 19    | 80         | 4                     | 46   | 9     | 59         | 31                      | 22   | 6     | 59         | 249        |
| 08:45 AM    | 7                     | 38   | 20    | 65         | 11                      | 16   | 9     | 36         | 8                     | 51   | 11    | 70         | 20                      | 13   | 8     | 41         | 212        |
| Total       | 23                    | 147  | 78    | 248        | 49                      | 125  | 63    | 237        | 17                    | 216  | 39    | 272        | 91                      | 114  | 42    | 247        | 1004       |
| Grand Total | 32                    | 260  | 147   | 439        | 78                      | 260  | 182   | 520        | 32                    | 566  | 68    | 666        | 196                     | 212  | 67    | 475        | 2100       |
| Apprch %    | 7.3                   | 59.2 | 33.5  |            | 15                      | 50   | 35    |            | 4.8                   | 85   | 10.2  |            | 41.3                    | 44.6 | 14.1  |            |            |
| Total %     | 1.5                   | 12.4 | 7     | 20.9       | 3.7                     | 12.4 | 8.7   | 24.8       | 1.5                   | 27   | 3.2   | 31.7       | 9.3                     | 10.1 | 3.2   | 22.6       |            |

|                                                            | Adobe Road Southbound |           |           |            | Two Mile Road Westbound |           |           |            | Adobe Road Northbound |           |           |            | Two Mile Road Eastbound |           |          |            |            |
|------------------------------------------------------------|-----------------------|-----------|-----------|------------|-------------------------|-----------|-----------|------------|-----------------------|-----------|-----------|------------|-------------------------|-----------|----------|------------|------------|
| Start Time                                                 | Left                  | Thru      | Right     | App. Total | Left                    | Thru      | Right     | App. Total | Left                  | Thru      | Right     | App. Total | Left                    | Thru      | Right    | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |                       |           |           |            |                         |           |           |            |                       |           |           |            |                         |           |          |            |            |
| Peak Hour for Entire Intersection Begins at 07:00 AM       |                       |           |           |            |                         |           |           |            |                       |           |           |            |                         |           |          |            |            |
| 07:00 AM                                                   | 1                     | 24        | 15        | 40         | 7                       | <b>70</b> | <b>32</b> | <b>109</b> | <b>8</b>              | <b>98</b> | <b>11</b> | <b>117</b> | <b>30</b>               | <b>53</b> | 7        | <b>90</b>  | <b>356</b> |
| 07:15 AM                                                   | 1                     | 28        | 13        | 42         | <b>9</b>                | 22        | 32        | 63         | 5                     | 95        | 4         | 104        | 23                      | 12        | 7        | 42         | 251        |
| 07:30 AM                                                   | <b>4</b>              | 23        | 19        | 46         | 5                       | 26        | 32        | 63         | 0                     | 90        | 9         | 99         | 29                      | 10        | 3        | 42         | 250        |
| 07:45 AM                                                   | 3                     | <b>38</b> | <b>22</b> | <b>63</b>  | 8                       | 17        | 23        | 48         | 2                     | 67        | 5         | 74         | 23                      | 23        | <b>8</b> | 54         | 239        |
| Total Volume                                               | 9                     | 113       | 69        | 191        | 29                      | 135       | 119       | 283        | 15                    | 350       | 29        | 394        | 105                     | 98        | 25       | 228        | 1096       |
| % App. Total                                               | 4.7                   | 59.2      | 36.1      |            | 10.2                    | 47.7      | 42        |            | 3.8                   | 88.8      | 7.4       |            | 46.1                    | 43        | 11       |            |            |
| PHF                                                        | .563                  | .743      | .784      | .758       | .806                    | .482      | .930      | .649       | .469                  | .893      | .659      | .842       | .875                    | .462      | .781     | .633       | .770       |

City of Twentynine Palms  
N/S: Adobe Road  
E/W: Two Mile Road  
Weather: Clear

File Name : 06\_TNP\_Ado\_2M AM  
Site Code : 251180  
Start Date : 12/11/2025  
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 |           |           |            | 07:45 AM  |           |           |           |
|--------------|----------|-----------|-----------|-----------|----------|-----------|-----------|------------|----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|
| +0 mins.     | 2        | 26        | 12        | 40        | 7        | <b>70</b> | <b>32</b> | <b>109</b> | <b>8</b> | <b>98</b> | <b>11</b> | <b>117</b> | 23        | 23        | 8         | 54        |
| +15 mins.    | <b>8</b> | <b>55</b> | <b>29</b> | <b>92</b> | <b>9</b> | 22        | 32        | 63         | 5        | 95        | 4         | 104        | 16        | 37        | <b>14</b> | 67        |
| +30 mins.    | 6        | 28        | 17        | 51        | 5        | 26        | 32        | 63         | 0        | 90        | 9         | 99         | 24        | <b>42</b> | 14        | <b>80</b> |
| +45 mins.    | 7        | 38        | 20        | 65        | 8        | 17        | 23        | 48         | 2        | 67        | 5         | 74         | <b>31</b> | 22        | 6         | 59        |
| Total Volume | 23       | 147       | 78        | 248       | 29       | 135       | 119       | 283        | 15       | 350       | 29        | 394        | 94        | 124       | 42        | 260       |
| % App. Total | 9.3      | 59.3      | 31.5      |           | 10.2     | 47.7      | 42        |            | 3.8      | 88.8      | 7.4       |            | 36.2      | 47.7      | 16.2      |           |
| PHF          | .719     | .668      | .672      | .674      | .806     | .482      | .930      | .649       | .469     | .893      | .659      | .842       | .758      | .738      | .750      | .813      |

City of Twentynine Palms  
N/S: Adobe Road  
E/W: Two Mile Road  
Weather: Clear

File Name : 06\_TNP\_Ado\_2M PM  
Site Code : 251180  
Start Date : 12/11/2025  
Page No : 1

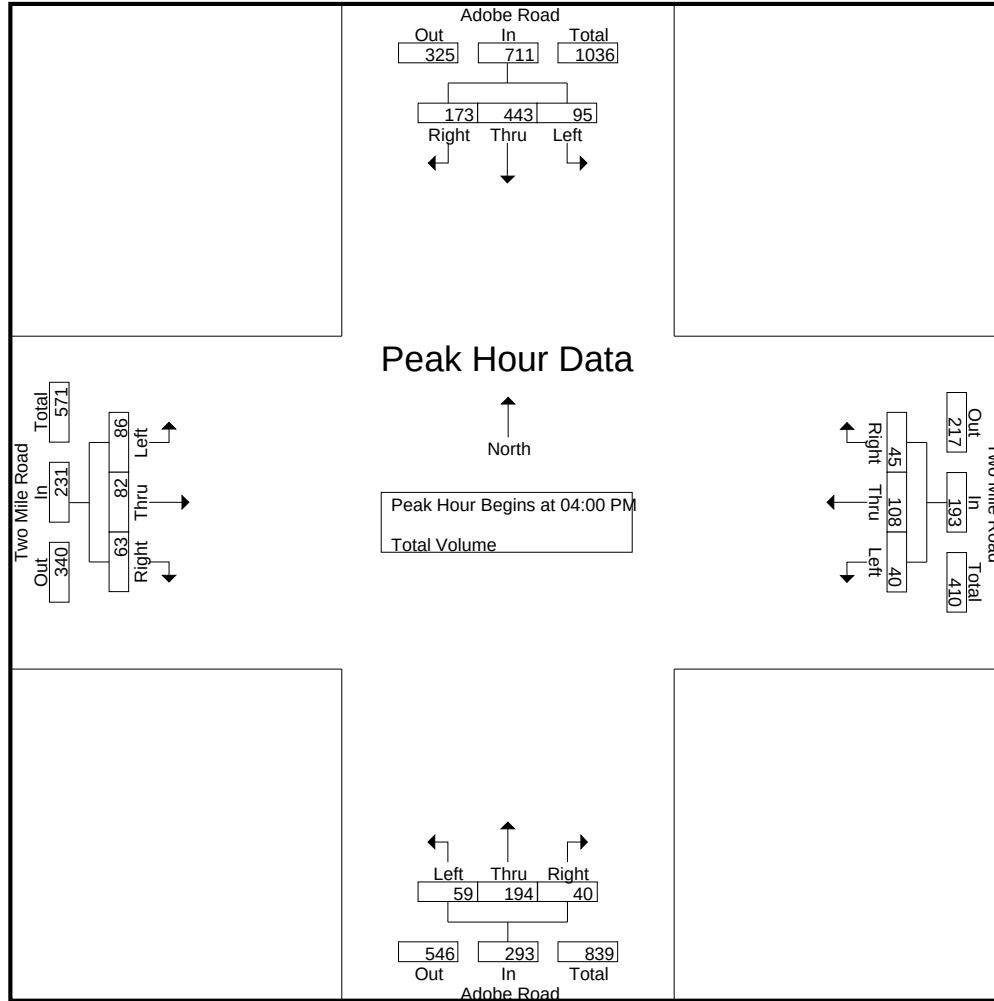
Groups Printed- Total Volume

|             | Adobe Road Southbound |      |       |            | Two Mile Road Westbound |      |       |            | Adobe Road Northbound |      |       |            | Two Mile Road Eastbound |      |       |            |            |
|-------------|-----------------------|------|-------|------------|-------------------------|------|-------|------------|-----------------------|------|-------|------------|-------------------------|------|-------|------------|------------|
| Start Time  | Left                  | Thru | Right | App. Total | Left                    | Thru | Right | App. Total | Left                  | Thru | Right | App. Total | Left                    | Thru | Right | App. Total | Int. Total |
| 04:00 PM    | 20                    | 107  | 51    | 178        | 9                       | 22   | 12    | 43         | 12                    | 57   | 8     | 77         | 16                      | 21   | 11    | 48         | 346        |
| 04:15 PM    | 19                    | 106  | 35    | 160        | 8                       | 31   | 8     | 47         | 14                    | 52   | 16    | 82         | 16                      | 17   | 18    | 51         | 340        |
| 04:30 PM    | 27                    | 105  | 52    | 184        | 10                      | 25   | 9     | 44         | 24                    | 47   | 8     | 79         | 29                      | 28   | 16    | 73         | 380        |
| 04:45 PM    | 29                    | 125  | 35    | 189        | 13                      | 30   | 16    | 59         | 9                     | 38   | 8     | 55         | 25                      | 16   | 18    | 59         | 362        |
| Total       | 95                    | 443  | 173   | 711        | 40                      | 108  | 45    | 193        | 59                    | 194  | 40    | 293        | 86                      | 82   | 63    | 231        | 1428       |
| 05:00 PM    | 12                    | 102  | 36    | 150        | 11                      | 33   | 10    | 54         | 15                    | 65   | 6     | 86         | 24                      | 18   | 10    | 52         | 342        |
| 05:15 PM    | 17                    | 95   | 36    | 148        | 10                      | 22   | 8     | 40         | 11                    | 49   | 11    | 71         | 24                      | 28   | 10    | 62         | 321        |
| 05:30 PM    | 13                    | 91   | 24    | 128        | 16                      | 20   | 9     | 45         | 13                    | 66   | 14    | 93         | 18                      | 19   | 18    | 55         | 321        |
| 05:45 PM    | 18                    | 110  | 27    | 155        | 12                      | 20   | 13    | 45         | 19                    | 57   | 5     | 81         | 23                      | 18   | 16    | 57         | 338        |
| Total       | 60                    | 398  | 123   | 581        | 49                      | 95   | 40    | 184        | 58                    | 237  | 36    | 331        | 89                      | 83   | 54    | 226        | 1322       |
| Grand Total | 155                   | 841  | 296   | 1292       | 89                      | 203  | 85    | 377        | 117                   | 431  | 76    | 624        | 175                     | 165  | 117   | 457        | 2750       |
| Apprch %    | 12                    | 65.1 | 22.9  |            | 23.6                    | 53.8 | 22.5  |            | 18.8                  | 69.1 | 12.2  |            | 38.3                    | 36.1 | 25.6  |            |            |
| Total %     | 5.6                   | 30.6 | 10.8  | 47         | 3.2                     | 7.4  | 3.1   | 13.7       | 4.3                   | 15.7 | 2.8   | 22.7       | 6.4                     | 6    | 4.3   | 16.6       |            |

|                                                            | Adobe Road Southbound |            |           |            | Two Mile Road Westbound |           |           |            | Adobe Road Northbound |           |           |            | Two Mile Road Eastbound |           |           |            |            |
|------------------------------------------------------------|-----------------------|------------|-----------|------------|-------------------------|-----------|-----------|------------|-----------------------|-----------|-----------|------------|-------------------------|-----------|-----------|------------|------------|
| Start Time                                                 | Left                  | Thru       | Right     | App. Total | Left                    | Thru      | Right     | App. Total | Left                  | Thru      | Right     | App. Total | Left                    | Thru      | Right     | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 |                       |            |           |            |                         |           |           |            |                       |           |           |            |                         |           |           |            |            |
| Peak Hour for Entire Intersection Begins at 04:00 PM       |                       |            |           |            |                         |           |           |            |                       |           |           |            |                         |           |           |            |            |
| 04:00 PM                                                   | 20                    | 107        | 51        | 178        | 9                       | 22        | 12        | 43         | 12                    | <b>57</b> | 8         | 77         | 16                      | 21        | 11        | 48         | 346        |
| 04:15 PM                                                   | 19                    | 106        | 35        | 160        | 8                       | <b>31</b> | 8         | 47         | 14                    | 52        | <b>16</b> | <b>82</b>  | 16                      | 17        | <b>18</b> | 51         | 340        |
| 04:30 PM                                                   | 27                    | 105        | <b>52</b> | 184        | 10                      | 25        | 9         | 44         | <b>24</b>             | 47        | 8         | 79         | <b>29</b>               | <b>28</b> | 16        | <b>73</b>  | <b>380</b> |
| 04:45 PM                                                   | <b>29</b>             | <b>125</b> | 35        | <b>189</b> | <b>13</b>               | 30        | <b>16</b> | <b>59</b>  | 9                     | 38        | 8         | 55         | 25                      | 16        | 18        | 59         | 362        |
| Total Volume                                               | 95                    | 443        | 173       | 711        | 40                      | 108       | 45        | 193        | 59                    | 194       | 40        | 293        | 86                      | 82        | 63        | 231        | 1428       |
| % App. Total                                               | 13.4                  | 62.3       | 24.3      |            | 20.7                    | 56        | 23.3      |            | 20.1                  | 66.2      | 13.7      |            | 37.2                    | 35.5      | 27.3      |            |            |
| PHF                                                        | .819                  | .886       | .832      | .940       | .769                    | .871      | .703      | .818       | .615                  | .851      | .625      | .893       | .741                    | .732      | .875      | .791       | .939       |

City of Twentynine Palms  
N/S: Adobe Road  
E/W: Two Mile Road  
Weather: Clear

File Name : 06\_TNP\_Ado\_2M PM  
Site Code : 251180  
Start Date : 12/11/2025  
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  |           |           |           | 05:00 PM  |           |           |           | 04:30 PM  |           |           |           |
|--------------|-----------|------------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| +0 mins.     | 20        | 107        | 51        | 178        | 8         | 31        | 8         | 47        | 15        | 65        | 6         | 86        | <b>29</b> | <b>28</b> | 16        | <b>73</b> |
| +15 mins.    | 19        | 106        | 35        | 160        | 10        | 25        | 9         | 44        | 11        | 49        | 11        | 71        | 25        | 16        | <b>18</b> | 59        |
| +30 mins.    | 27        | 105        | <b>52</b> | 184        | <b>13</b> | 30        | <b>16</b> | <b>59</b> | 13        | <b>66</b> | <b>14</b> | <b>93</b> | 24        | 18        | 10        | 52        |
| +45 mins.    | <b>29</b> | <b>125</b> | 35        | <b>189</b> | 11        | <b>33</b> | 10        | 54        | <b>19</b> | 57        | 5         | 81        | 24        | 28        | 10        | 62        |
| Total Volume | 95        | 443        | 173       | 711        | 42        | 119       | 43        | 204       | 58        | 237       | 36        | 331       | 102       | 90        | 54        | 246       |
| % App. Total | 13.4      | 62.3       | 24.3      |            | 20.6      | 58.3      | 21.1      |           | 17.5      | 71.6      | 10.9      |           | 41.5      | 36.6      | 22        |           |
| PHF          | .819      | .886       | .832      | .940       | .808      | .902      | .672      | .864      | .763      | .898      | .643      | .890      | .879      | .804      | .750      | .842      |

# Counts Unlimited, Inc.

Page 1

City of Twentynine Palms  
Desert Knoll Avenue  
N/ Two Mile Road  
24 Hour Directional Volume Count

PO Box 1178  
Corona, CA 92878  
(951) 268-6268  
email: counts@countsunlimited.com

TNP001  
Site Code: 051-251180

| Start Time     | 12/11/25 Thu | Northbound |           | Hour Totals |           | Southbound |           | Hour Totals |           | Combined Totals |           |
|----------------|--------------|------------|-----------|-------------|-----------|------------|-----------|-------------|-----------|-----------------|-----------|
|                |              | Morning    | Afternoon | Morning     | Afternoon | Morning    | Afternoon | Morning     | Afternoon | Morning         | Afternoon |
| 12:00          |              | 0          | 2         |             |           | 0          | 2         |             |           |                 |           |
| 12:15          |              | 0          | 3         |             |           | 0          | 2         |             |           |                 |           |
| 12:30          |              | 0          | 2         |             |           | 0          | 2         |             |           |                 |           |
| 12:45          |              | 0          | 4         | 0           | 11        | 0          | 1         | 0           | 7         | 0               | 18        |
| 01:00          |              | 0          | 2         |             |           | 0          | 2         |             |           |                 |           |
| 01:15          |              | 0          | 0         |             |           | 0          | 1         |             |           |                 |           |
| 01:30          |              | 0          | 0         |             |           | 0          | 0         |             |           |                 |           |
| 01:45          |              | 0          | 1         | 0           | 3         | 0          | 2         | 0           | 5         | 0               | 8         |
| 02:00          |              | 0          | 5         |             |           | 0          | 2         |             |           |                 |           |
| 02:15          |              | 0          | 6         |             |           | 0          | 3         |             |           |                 |           |
| 02:30          |              | 0          | 5         |             |           | 0          | 3         |             |           |                 |           |
| 02:45          |              | 0          | 5         | 0           | 21        | 0          | 11        | 0           | 19        | 0               | 40        |
| 03:00          |              | 0          | 1         |             |           | 0          | 2         |             |           |                 |           |
| 03:15          |              | 0          | 4         |             |           | 0          | 4         |             |           |                 |           |
| 03:30          |              | 0          | 1         |             |           | 0          | 4         |             |           |                 |           |
| 03:45          |              | 0          | 3         | 0           | 9         | 0          | 2         | 0           | 12        | 0               | 21        |
| 04:00          |              | 0          | 4         |             |           | 0          | 2         |             |           |                 |           |
| 04:15          |              | 0          | 5         |             |           | 0          | 7         |             |           |                 |           |
| 04:30          |              | 0          | 2         |             |           | 0          | 6         |             |           |                 |           |
| 04:45          |              | 0          | 5         | 0           | 16        | 0          | 2         | 0           | 17        | 0               | 33        |
| 05:00          |              | 0          | 8         |             |           | 1          | 6         |             |           |                 |           |
| 05:15          |              | 0          | 6         |             |           | 0          | 1         |             |           |                 |           |
| 05:30          |              | 1          | 3         |             |           | 2          | 2         |             |           |                 |           |
| 05:45          |              | 0          | 3         | 1           | 20        | 0          | 1         | 3           | 10        | 4               | 30        |
| 06:00          |              | 1          | 3         |             |           | 2          | 3         |             |           |                 |           |
| 06:15          |              | 1          | 3         |             |           | 1          | 0         |             |           |                 |           |
| 06:30          |              | 1          | 2         |             |           | 2          | 0         |             |           |                 |           |
| 06:45          |              | 3          | 0         | 6           | 8         | 6          | 2         | 11          | 5         | 17              | 13        |
| 07:00          |              | 3          | 2         |             |           | 1          | 1         |             |           |                 |           |
| 07:15          |              | 0          | 1         |             |           | 2          | 1         |             |           |                 |           |
| 07:30          |              | 1          | 3         |             |           | 1          | 1         |             |           |                 |           |
| 07:45          |              | 1          | 1         | 5           | 7         | 3          | 3         | 7           | 6         | 12              | 13        |
| 08:00          |              | 1          | 1         |             |           | 4          | 1         |             |           |                 |           |
| 08:15          |              | 5          | 2         |             |           | 5          | 1         |             |           |                 |           |
| 08:30          |              | 1          | 0         |             |           | 2          | 1         |             |           |                 |           |
| 08:45          |              | 3          | 2         | 10          | 5         | 2          | 0         | 13          | 3         | 23              | 8         |
| 09:00          |              | 2          | 2         |             |           | 4          | 0         |             |           |                 |           |
| 09:15          |              | 3          | 2         |             |           | 3          | 0         |             |           |                 |           |
| 09:30          |              | 0          | 2         |             |           | 2          | 0         |             |           |                 |           |
| 09:45          |              | 3          | 0         | 8           | 6         | 3          | 1         | 12          | 1         | 20              | 7         |
| 10:00          |              | 1          | 1         |             |           | 0          | 2         |             |           |                 |           |
| 10:15          |              | 0          | 2         |             |           | 3          | 1         |             |           |                 |           |
| 10:30          |              | 1          | 1         |             |           | 1          | 0         |             |           |                 |           |
| 10:45          |              | 1          | 0         | 3           | 4         | 3          | 0         | 7           | 3         | 10              | 7         |
| 11:00          |              | 1          | 0         |             |           | 1          | 0         |             |           |                 |           |
| 11:15          |              | 1          | 1         |             |           | 2          | 0         |             |           |                 |           |
| 11:30          |              | 1          | 0         |             |           | 3          | 0         |             |           |                 |           |
| 11:45          |              | 1          | 0         | 4           | 1         | 1          | 0         | 7           | 0         | 11              | 1         |
| Total          |              | 37         | 111       | 37          | 111       | 60         | 88        | 60          | 88        | 97              | 199       |
| Combined Total |              | 148        |           | 148         |           | 148        |           | 148         |           | 296             |           |
| AM Peak        | -            | 08:15      | -         | -           | -         | 07:45      | -         | -           | -         | -               | -         |
| Vol.           | -            | 11         | -         | -           | -         | 14         | -         | -           | -         | -               | -         |
| P.H.F.         |              | 0.550      |           |             |           | 0.700      |           |             |           |                 |           |
| PM Peak        | -            | -          | 04:45     | -           | -         | -          | 02:45     | -           | -         | -               | -         |
| Vol.           | -            | -          | 22        | -           | -         | -          | 21        | -           | -         | -               | -         |
| P.H.F.         |              |            | 0.688     |             |           |            | 0.477     |             |           |                 |           |
| Percentage     |              | 25.0%      | 75.0%     |             |           | 40.5%      | 59.5%     |             |           |                 |           |
| ADT/AADT       |              | ADT 296    |           | AADT 296    |           |            |           |             |           |                 |           |

# Counts Unlimited, Inc.

Page 1

City of Twentynine Palms  
Two Mile Road  
W/ Desert Knoll Avenue  
24 Hour Directional Volume Count

PO Box 1178  
Corona, CA 92878  
(951) 268-6268  
email: counts@countsunlimited.com

TNP002  
Site Code: 051-251180

| Start Time     | 12/11/25 Thu | Eastbound |           | Hour Totals |           | Westbound |           | Hour Totals |           | Combined Totals |           |
|----------------|--------------|-----------|-----------|-------------|-----------|-----------|-----------|-------------|-----------|-----------------|-----------|
|                |              | Morning   | Afternoon | Morning     | Afternoon | Morning   | Afternoon | Morning     | Afternoon | Morning         | Afternoon |
| 12:00          |              | 2         | 20        |             |           | 2         | 19        |             |           |                 |           |
| 12:15          |              | 2         | 22        |             |           | 3         | 24        |             |           |                 |           |
| 12:30          |              | 0         | 16        |             |           | 0         | 33        |             |           |                 |           |
| 12:45          |              | 1         | 25        | 5           | 83        | 1         | 48        | 6           | 124       | 11              | 207       |
| 01:00          |              | 2         | 22        |             |           | 2         | 20        |             |           |                 |           |
| 01:15          |              | 1         | 23        |             |           | 2         | 17        |             |           |                 |           |
| 01:30          |              | 2         | 31        |             |           | 2         | 29        |             |           |                 |           |
| 01:45          |              | 0         | 52        | 5           | 128       | 2         | 35        | 8           | 101       | 13              | 229       |
| 02:00          |              | 2         | 63        |             |           | 0         | 73        |             |           |                 |           |
| 02:15          |              | 0         | 55        |             |           | 1         | 54        |             |           |                 |           |
| 02:30          |              | 0         | 57        |             |           | 0         | 29        |             |           |                 |           |
| 02:45          |              | 0         | 36        | 2           | 211       | 1         | 90        | 2           | 246       | 4               | 457       |
| 03:00          |              | 0         | 33        |             |           | 2         | 46        |             |           |                 |           |
| 03:15          |              | 0         | 36        |             |           | 1         | 30        |             |           |                 |           |
| 03:30          |              | 0         | 38        |             |           | 2         | 54        |             |           |                 |           |
| 03:45          |              | 1         | 39        | 1           | 146       | 0         | 36        | 5           | 166       | 6               | 312       |
| 04:00          |              | 0         | 31        |             |           | 2         | 30        |             |           |                 |           |
| 04:15          |              | 0         | 35        |             |           | 2         | 28        |             |           |                 |           |
| 04:30          |              | 2         | 40        |             |           | 4         | 28        |             |           |                 |           |
| 04:45          |              | 1         | 40        | 3           | 146       | 10        | 38        | 18          | 124       | 21              | 270       |
| 05:00          |              | 2         | 24        |             |           | 6         | 33        |             |           |                 |           |
| 05:15          |              | 1         | 31        |             |           | 5         | 34        |             |           |                 |           |
| 05:30          |              | 7         | 32        |             |           | 17        | 28        |             |           |                 |           |
| 05:45          |              | 10        | 36        | 20          | 123       | 6         | 31        | 34          | 126       | 54              | 249       |
| 06:00          |              | 6         | 24        |             |           | 7         | 24        |             |           |                 |           |
| 06:15          |              | 18        | 21        |             |           | 13        | 21        |             |           |                 |           |
| 06:30          |              | 32        | 24        |             |           | 18        | 16        |             |           |                 |           |
| 06:45          |              | 100       | 23        | 156         | 92        | 82        | 19        | 120         | 80        | 276             | 172       |
| 07:00          |              | 64        | 23        |             |           | 84        | 21        |             |           |                 |           |
| 07:15          |              | 19        | 19        |             |           | 40        | 18        |             |           |                 |           |
| 07:30          |              | 17        | 21        |             |           | 37        | 9         |             |           |                 |           |
| 07:45          |              | 31        | 13        | 131         | 76        | 24        | 12        | 185         | 60        | 316             | 136       |
| 08:00          |              | 50        | 6         |             |           | 38        | 10        |             |           |                 |           |
| 08:15          |              | 61        | 19        |             |           | 64        | 8         |             |           |                 |           |
| 08:30          |              | 32        | 12        |             |           | 63        | 15        |             |           |                 |           |
| 08:45          |              | 26        | 15        | 169         | 52        | 30        | 10        | 195         | 43        | 364             | 95        |
| 09:00          |              | 29        | 8         |             |           | 18        | 7         |             |           |                 |           |
| 09:15          |              | 25        | 8         |             |           | 27        | 6         |             |           |                 |           |
| 09:30          |              | 9         | 12        |             |           | 16        | 2         |             |           |                 |           |
| 09:45          |              | 25        | 9         | 88          | 37        | 14        | 5         | 75          | 20        | 163             | 57        |
| 10:00          |              | 25        | 8         |             |           | 12        | 4         |             |           |                 |           |
| 10:15          |              | 17        | 5         |             |           | 21        | 10        |             |           |                 |           |
| 10:30          |              | 16        | 11        |             |           | 17        | 5         |             |           |                 |           |
| 10:45          |              | 28        | 11        | 86          | 35        | 15        | 3         | 65          | 22        | 151             | 57        |
| 11:00          |              | 22        | 3         |             |           | 20        | 2         |             |           |                 |           |
| 11:15          |              | 33        | 5         |             |           | 23        | 3         |             |           |                 |           |
| 11:30          |              | 21        | 3         |             |           | 20        | 2         |             |           |                 |           |
| 11:45          |              | 25        | 1         | 101         | 12        | 23        | 5         | 86          | 12        | 187             | 24        |
| Total          |              | 767       | 1141      | 767         | 1141      | 799       | 1124      | 799         | 1124      | 1566            | 2265      |
| Combined Total |              | 1908      |           | 1908        |           | 1923      |           | 1923        |           | 3831            |           |
| AM Peak        | -            | 06:30     | -         | -           | -         | 06:45     | -         | -           | -         | -               | -         |
| Vol.           | -            | 215       | -         | -           | -         | 243       | -         | -           | -         | -               | -         |
| P.H.F.         |              | 0.538     |           |             |           | 0.723     |           |             |           |                 |           |
| PM Peak        | -            | -         | 01:45     | -           | -         | -         | 02:00     | -           | -         | -               | -         |
| Vol.           | -            | -         | 227       | -           | -         | -         | 246       | -           | -         | -               | -         |
| P.H.F.         |              |           | 0.901     |             |           |           | 0.683     |             |           |                 |           |
| Percentage     |              | 40.2%     | 59.8%     |             |           | 41.5%     | 58.5%     |             |           |                 |           |
| ADT/AADT       |              | ADT 3,831 |           | AADT 3,831  |           |           |           |             |           |                 |           |

# Counts Unlimited, Inc.

City of Twentynine Palms  
Utah Trail  
N/ Aztec Avenue  
24 Hour Directional Volume Count

PO Box 1178  
Corona, CA 92878  
(951) 268-6268  
email: counts@countsunlimited.com

TNP003  
Site Code: 051-251180

| Start Time     | 12/11/25 Thu | Northbound |           | Hour Totals |           | Southbound |           | Hour Totals |           | Combined Totals |           |
|----------------|--------------|------------|-----------|-------------|-----------|------------|-----------|-------------|-----------|-----------------|-----------|
|                |              | Morning    | Afternoon | Morning     | Afternoon | Morning    | Afternoon | Morning     | Afternoon | Morning         | Afternoon |
| 12:00          |              | 2          | 13        |             |           | 0          | 15        |             |           |                 |           |
| 12:15          |              | 1          | 16        |             |           | 0          | 14        |             |           |                 |           |
| 12:30          |              | 2          | 17        |             |           | 1          | 9         |             |           |                 |           |
| 12:45          |              | 0          | 19        | 5           | 65        | 0          | 8         | 1           | 46        | 6               | 111       |
| 01:00          |              | 1          | 17        |             |           | 1          | 7         |             |           |                 |           |
| 01:15          |              | 1          | 13        |             |           | 2          | 11        |             |           |                 |           |
| 01:30          |              | 0          | 21        |             |           | 0          | 17        |             |           |                 |           |
| 01:45          |              | 0          | 9         | 2           | 60        | 0          | 14        | 3           | 49        | 5               | 109       |
| 02:00          |              | 0          | 39        |             |           | 0          | 22        |             |           |                 |           |
| 02:15          |              | 0          | 18        |             |           | 0          | 31        |             |           |                 |           |
| 02:30          |              | 1          | 22        |             |           | 0          | 44        |             |           |                 |           |
| 02:45          |              | 0          | 34        | 1           | 113       | 1          | 23        | 1           | 120       | 2               | 233       |
| 03:00          |              | 0          | 16        |             |           | 1          | 21        |             |           |                 |           |
| 03:15          |              | 0          | 23        |             |           | 0          | 25        |             |           |                 |           |
| 03:30          |              | 0          | 27        |             |           | 0          | 18        |             |           |                 |           |
| 03:45          |              | 0          | 8         | 0           | 74        | 0          | 22        | 1           | 86        | 1               | 160       |
| 04:00          |              | 1          | 11        |             |           | 0          | 19        |             |           |                 |           |
| 04:15          |              | 3          | 11        |             |           | 1          | 26        |             |           |                 |           |
| 04:30          |              | 2          | 13        |             |           | 0          | 29        |             |           |                 |           |
| 04:45          |              | 2          | 16        | 8           | 51        | 1          | 23        | 2           | 97        | 10              | 148       |
| 05:00          |              | 10         | 16        |             |           | 1          | 17        |             |           |                 |           |
| 05:15          |              | 6          | 7         |             |           | 1          | 15        |             |           |                 |           |
| 05:30          |              | 18         | 14        |             |           | 2          | 19        |             |           |                 |           |
| 05:45          |              | 7          | 9         | 41          | 46        | 2          | 10        | 6           | 61        | 47              | 107       |
| 06:00          |              | 15         | 8         |             |           | 4          | 9         |             |           |                 |           |
| 06:15          |              | 14         | 8         |             |           | 2          | 9         |             |           |                 |           |
| 06:30          |              | 20         | 14        |             |           | 18         | 7         |             |           |                 |           |
| 06:45          |              | 36         | 5         | 85          | 35        | 47         | 6         | 71          | 31        | 156             | 66        |
| 07:00          |              | 52         | 7         |             |           | 16         | 7         |             |           |                 |           |
| 07:15          |              | 22         | 6         |             |           | 7          | 6         |             |           |                 |           |
| 07:30          |              | 35         | 10        |             |           | 10         | 5         |             |           |                 |           |
| 07:45          |              | 19         | 7         | 128         | 30        | 9          | 6         | 42          | 24        | 170             | 54        |
| 08:00          |              | 21         | 4         |             |           | 35         | 6         |             |           |                 |           |
| 08:15          |              | 46         | 7         |             |           | 34         | 4         |             |           |                 |           |
| 08:30          |              | 27         | 5         |             |           | 11         | 4         |             |           |                 |           |
| 08:45          |              | 7          | 5         | 101         | 21        | 13         | 5         | 93          | 19        | 194             | 40        |
| 09:00          |              | 13         | 2         |             |           | 5          | 3         |             |           |                 |           |
| 09:15          |              | 14         | 3         |             |           | 6          | 4         |             |           |                 |           |
| 09:30          |              | 11         | 2         |             |           | 7          | 4         |             |           |                 |           |
| 09:45          |              | 11         | 3         | 49          | 10        | 5          | 3         | 23          | 14        | 72              | 24        |
| 10:00          |              | 11         | 3         |             |           | 10         | 2         |             |           |                 |           |
| 10:15          |              | 12         | 3         |             |           | 11         | 1         |             |           |                 |           |
| 10:30          |              | 8          | 4         |             |           | 12         | 4         |             |           |                 |           |
| 10:45          |              | 9          | 3         | 40          | 13        | 24         | 2         | 57          | 9         | 97              | 22        |
| 11:00          |              | 12         | 2         |             |           | 6          | 1         |             |           |                 |           |
| 11:15          |              | 12         | 2         |             |           | 15         | 0         |             |           |                 |           |
| 11:30          |              | 12         | 1         |             |           | 9          | 3         |             |           |                 |           |
| 11:45          |              | 14         | 0         | 50          | 5         | 19         | 2         | 49          | 6         | 99              | 11        |
| Total          |              | 510        | 523       | 510         | 523       | 349        | 562       | 349         | 562       | 859             | 1085      |
| Combined Total |              | 1033       |           | 1033        |           | 911        |           | 911         |           | 1944            |           |
| AM Peak        | -            | 06:45      | -         | -           | -         | 08:00      | -         | -           | -         | -               | -         |
| Vol.           | -            | 145        | -         | -           | -         | 93         | -         | -           | -         | -               | -         |
| P.H.F.         |              | 0.697      |           |             |           | 0.664      |           |             |           |                 |           |
| PM Peak        | -            | -          | 02:00     | -           | -         | -          | 02:00     | -           | -         | -               | -         |
| Vol.           | -            | -          | 113       | -           | -         | -          | 120       | -           | -         | -               | -         |
| P.H.F.         |              |            | 0.724     |             |           |            | 0.682     |             |           |                 |           |
| Percentage     |              | 49.4%      | 50.6%     |             |           | 38.3%      | 61.7%     |             |           |                 |           |
| ADT/AADT       |              | ADT 1,944  |           | AADT 1,944  |           |            |           |             |           |                 |           |

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## **APPENDIX 3.2:**

### **EXISTING (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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## 1: Desert Knoll Av. &amp; Samarkand Dr.



| Lane Group              | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Configurations     |      |      |      |      |      |      |
| Traffic Volume (vph)    | 0    | 4    | 0    | 0    | 2    | 0    |
| Future Volume (vph)     | 0    | 4    | 0    | 0    | 2    | 0    |
| Ideal Flow (vphpl)      | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph)        | 30   |      |      | 30   | 30   |      |
| Link Distance (ft)      | 969  |      |      | 1300 | 437  |      |
| Travel Time (s)         | 22.0 |      |      | 29.5 | 9.9  |      |
| Peak Hour Factor        | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Shared Lane Traffic (%) |      |      |      |      |      |      |
| Sign Control            | Free |      |      | Free | Stop |      |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

1: Desert Knoll Av. & Samarkand Dr.

| Intersection             |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.4                                                                               |      |        |                                                                                   |                                                                                   |      |
| Movement                 | EBT                                                                               | EBR  | WBL    | WBT                                                                               | NBL                                                                               | NBR  |
| Lane Configurations      |  |      |        |  |  |      |
| Traffic Vol, veh/h       | 0                                                                                 | 4    | 0      | 0                                                                                 | 2                                                                                 | 0    |
| Future Vol, veh/h        | 0                                                                                 | 4    | 0      | 0                                                                                 | 2                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Free                                                                              | Free | Free   | Free                                                                              | Stop                                                                              | Stop |
| RT Channelized           | -                                                                                 | None | -      | None                                                                              | -                                                                                 | None |
| Storage Length           | -                                                                                 | -    | -      | -                                                                                 | 0                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92     | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 0                                                                                 | 4    | 0      | 0                                                                                 | 2                                                                                 | 0    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Major/Minor              | Major1                                                                            |      | Major2 |                                                                                   | Minor1                                                                            |      |
| Conflicting Flow All     | 0                                                                                 | 0    | 4      | 0                                                                                 | 3                                                                                 | 2    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 2                                                                                 | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1                                                                                 | -    |
| Critical Hdwy            | -                                                                                 | -    | 4.1    | -                                                                                 | 6.4                                                                               | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Follow-up Hdwy           | -                                                                                 | -    | 2.2    | -                                                                                 | 3.5                                                                               | 3.3  |
| Pot Cap-1 Maneuver       | -                                                                                 | -    | 1630   | -                                                                                 | 1024                                                                              | 1088 |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1026                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1027                                                                              | -    |
| Platoon blocked, %       | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | -                                                                                 | -    | 1630   | -                                                                                 | 1024                                                                              | 1088 |
| Mov Cap-2 Maneuver       | -                                                                                 | -    | -      | -                                                                                 | 1024                                                                              | -    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1026                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1027                                                                              | -    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                |      | WB     |                                                                                   | NB                                                                                |      |
| HCM Ctrl Dly, s/v        | 0                                                                                 |      | 0      |                                                                                   | 8.52                                                                              |      |
| HCM LOS                  |                                                                                   |      |        |                                                                                   | A                                                                                 |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBT  | EBR    | WBL                                                                               | WBT                                                                               |      |
| Capacity (veh/h)         | 1024                                                                              | -    | -      | 1630                                                                              | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.002                                                                             | -    | -      | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 8.5                                                                               | -    | -      | 0                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -    | -      | A                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -    | -      | 0                                                                                 | -                                                                                 |      |

Lanes, Volumes, Timings  
 2: Desert Knoll Av. & Aztec Av.

Existing (2025) AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |  |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 1                                                                                 | 2                                                                                 | 3                                                                                 | 1                                                                                 | 3                                                                                 | 1                                                                                 |
| Future Volume (vph)         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 1                                                                                 | 3                                                                                 | 1                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 523                                                                               |                                                                                   |                                                                                   | 1360                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 11.9                                                                              |                                                                                   |                                                                                   | 30.9                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |       |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 4.3                                                                               |        |       |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR    | NBL   | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |        |       |  |  |      |
| Traffic Vol, veh/h       | 1                                                                                 | 2      | 3     | 1                                                                                 | 3                                                                                 | 1    |
| Future Vol, veh/h        | 1                                                                                 | 2      | 3     | 1                                                                                 | 3                                                                                 | 1    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Stop                                                                              | Stop   | Free  | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None   | -     | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 56                                                                                | 56     | 56    | 56                                                                                | 56                                                                                | 56   |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 2                                                                                 | 4      | 5     | 2                                                                                 | 5                                                                                 | 2    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Major/Minor              | Minor2                                                                            | Major1 |       | Major2                                                                            |                                                                                   |      |
| Conflicting Flow All     | 19                                                                                | 6      | 7     | 0                                                                                 | -                                                                                 | 0    |
| Stage 1                  | 6                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 13                                                                                | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2    | 4.1   | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | 2.2   | -                                                                                 | -                                                                                 | -    |
| Pot Cap-1 Maneuver       | 1004                                                                              | 1082   | 1627  | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 1022                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 1016                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Platoon blocked, %       |                                                                                   |        |       | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | 1001                                                                              | 1082   | 1627  | -                                                                                 | -                                                                                 | -    |
| Mov Cap-2 Maneuver       | 1001                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 1019                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 1016                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                | NB     |       | SB                                                                                |                                                                                   |      |
| HCM Ctrl Dly, s/v        | 8.43                                                                              | 5.42   |       | 0                                                                                 |                                                                                   |      |
| HCM LOS                  | A                                                                                 |        |       |                                                                                   |                                                                                   |      |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT    | EBLn1 | SBT                                                                               | SBR                                                                               |      |
| Capacity (veh/h)         | 1350                                                                              | -      | 1054  | -                                                                                 | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.003                                                                             | -      | 0.005 | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 7.2                                                                               | 0      | 8.4   | -                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | A      | A     | -                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -      | 0     | -                                                                                 | -                                                                                 |      |

Lanes, Volumes, Timings  
3: Desert Knoll Av. & Manana Dr.

Existing (2025) AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations         |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)        | 5                                                                                 | 2                                                                                 | 6                                                                                 | 4                                                                                 | 3                                                                                 | 11                                                                                |
| Future Volume (vph)         | 5                                                                                 | 2                                                                                 | 6                                                                                 | 4                                                                                 | 3                                                                                 | 11                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)          | 401                                                                               |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 1360                                                                              |
| Travel Time (s)             | 9.1                                                                               |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                   | 30.9                                                                              |
| Peak Hour Factor            | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |        |           |        |       |      |      |
|--------------------------|--------|-----------|--------|-------|------|------|
| Int Delay, s/veh         | 2.7    |           |        |       |      |      |
| Movement                 | WBL    | WBR       | NBT    | NBR   | SBL  | SBT  |
| Lane Configurations      | W      | W         | T      | T     | T    | T    |
| Traffic Vol, veh/h       | 5      | 2         | 6      | 4     | 3    | 11   |
| Future Vol, veh/h        | 5      | 2         | 6      | 4     | 3    | 11   |
| Conflicting Peds, #/hr   | 0      | 0         | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop      | Free   | Free  | Free | Free |
| RT Channelized           | -      | None      | -      | None  | -    | None |
| Storage Length           | 0      | -         | -      | -     | -    | -    |
| Veh in Median Storage, # | 0      | -         | 0      | -     | -    | 0    |
| Grade, %                 | 0      | -         | 0      | -     | -    | 0    |
| Peak Hour Factor         | 58     | 58        | 58     | 58    | 58   | 58   |
| Heavy Vehicles, %        | 0      | 0         | 0      | 0     | 0    | 0    |
| Mvmt Flow                | 9      | 3         | 10     | 7     | 5    | 19   |
| Major/Minor              | Minor1 | Major1    | Major2 |       |      |      |
| Conflicting Flow All     | 43     | 14        | 0      | 0     | 17   | 0    |
| Stage 1                  | 14     | -         | -      | -     | -    | -    |
| Stage 2                  | 29     | -         | -      | -     | -    | -    |
| Critical Hdwy            | 6.4    | 6.2       | -      | -     | 4.1  | -    |
| Critical Hdwy Stg 1      | 5.4    | -         | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 5.4    | -         | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.5    | 3.3       | -      | -     | 2.2  | -    |
| Pot Cap-1 Maneuver       | 973    | 1072      | -      | -     | 1613 | -    |
| Stage 1                  | 1014   | -         | -      | -     | -    | -    |
| Stage 2                  | 998    | -         | -      | -     | -    | -    |
| Platoon blocked, %       |        |           | -      | -     |      | -    |
| Mov Cap-1 Maneuver       | 970    | 1072      | -      | -     | 1613 | -    |
| Mov Cap-2 Maneuver       | 970    | -         | -      | -     | -    | -    |
| Stage 1                  | 1014   | -         | -      | -     | -    | -    |
| Stage 2                  | 995    | -         | -      | -     | -    | -    |
| Approach                 | WB     | NB        | SB     |       |      |      |
| HCM Ctrl Dly, s/v        | 8.66   | 0         | 1.55   |       |      |      |
| HCM LOS                  | A      |           |        |       |      |      |
| Minor Lane/Major Mvmt    | NBT    | NBR WBLn1 | SBL    | SBT   |      |      |
| Capacity (veh/h)         | -      | -         | 997    | 386   | -    |      |
| HCM Lane V/C Ratio       | -      | -         | 0.012  | 0.003 | -    |      |
| HCM Ctrl Dly (s/v)       | -      | -         | 8.7    | 7.2   | 0    |      |
| HCM Lane LOS             | -      | -         | A      | A     | A    |      |
| HCM 95th %tile Q(veh)    | -      | -         | 0      | 0     | -    |      |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |  |  |  |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)        | 6                                                                                 | 151                                                                               | 25                                                                                | 8                                                                                 | 160                                                                               | 3                                                                                 | 29                                                                                | 1                                                                                  | 4                                                                                   | 5                                                                                   | 1                                                                                   | 10                                                                                  |
| Future Volume (vph)         | 6                                                                                 | 151                                                                               | 25                                                                                | 8                                                                                 | 160                                                                               | 3                                                                                 | 29                                                                                | 1                                                                                  | 4                                                                                   | 5                                                                                   | 1                                                                                   | 10                                                                                  |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 80                                                                                |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 1358                                                                              |                                                                                   |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 932                                                                                |                                                                                     |                                                                                     | 646                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 20.6                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 21.2                                                                               |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |
| Peak Hour Factor            | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                               | 0.73                                                                                | 0.73                                                                                | 0.73                                                                                | 0.73                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

4: Desert Knoll Av. & Two Mile Rd.

| 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       | 6                                                                                 | 151                                                                               | 25                                                                                | 8      | 160                                                                               | 3                                                                                 | 29     | 1                                                                                 | 4    | 5      | 1                                                                                   | 10   |
| Future Vol, veh/h        | 6                                                                                 | 151                                                                               | 25                                                                                | 8      | 160                                                                               | 3                                                                                 | 29     | 1                                                                                 | 4    | 5      | 1                                                                                   | 10   |
| 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           | 80                                                                                | -                                                                                 | 0                                                                                 | -      | -                                                                                 | 50                                                                                | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 73                                                                                | 73                                                                                | 73                                                                                | 73     | 73                                                                                | 73                                                                                | 73     | 73                                                                                | 73   | 73     | 73                                                                                  | 73   |
| Heavy Vehicles, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0      | 0                                                                                 | 0                                                                                 | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 8                                                                                 | 207                                                                               | 34                                                                                | 11     | 219                                                                               | 4                                                                                 | 40     | 1                                                                                 | 5    | 7      | 1                                                                                   | 14   |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1                                                                            |                                                                                   |                                                                                   | Major2 |                                                                                   |                                                                                   | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 223                                                                               | 0                                                                                 | 0                                                                                 | 241    | 0                                                                                 | 0                                                                                 | 465    | 468                                                                               | 207  | 465    | 499                                                                                 | 219  |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 223    | 223                                                                               | -    | 241    | 241                                                                                 | -    |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 242    | 245                                                                               | -    | 224    | 258                                                                                 | -    |
| Critical Hdwy            | 4.1                                                                               | -                                                                                 | -                                                                                 | 4.1    | -                                                                                 | -                                                                                 | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2                                                                               | -                                                                                 | -                                                                                 | 2.2    | -                                                                                 | -                                                                                 | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1357                                                                              | -                                                                                 | -                                                                                 | 1337   | -                                                                                 | -                                                                                 | 511    | 495                                                                               | 839  | 511    | 476                                                                                 | 826  |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 784    | 723                                                                               | -    | 767    | 710                                                                                 | -    |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 766    | 707                                                                               | -    | 783    | 698                                                                                 | -    |
| Platoon blocked, %       | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 1357                                                                              | -                                                                                 | -                                                                                 | 1337   | -                                                                                 | -                                                                                 | 493    | 488                                                                               | 839  | 498    | 469                                                                                 | 826  |
| Mov Cap-2 Maneuver       | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 493    | 488                                                                               | -    | 498    | 469                                                                                 | -    |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 779    | 718                                                                               | -    | 760    | 703                                                                                 | -    |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 745    | 700                                                                               | -    | 772    | 694                                                                                 | -    |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB                                                                                |                                                                                   |                                                                                   | WB     |                                                                                   |                                                                                   | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 0.25                                                                              |                                                                                   |                                                                                   | 0.36   |                                                                                   |                                                                                   | 12.63  |                                                                                   |      | 10.65  |                                                                                     |      |
| HCM LOS                  |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   | B      |                                                                                   |      | B      |                                                                                     |      |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBL                                                                               | EBT                                                                               | EBR    | WBL                                                                               | WBT                                                                               | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 518                                                                               | 1357                                                                              | -                                                                                 | -      | 86                                                                                | -                                                                                 | -      | 659                                                                               |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.09                                                                              | 0.006                                                                             | -                                                                                 | -      | 0.008                                                                             | -                                                                                 | -      | 0.033                                                                             |      |        |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 12.6                                                                              | 7.7                                                                               | -                                                                                 | -      | 7.7                                                                               | 0                                                                                 | -      | 10.6                                                                              |      |        |                                                                                     |      |
| HCM Lane LOS             | B                                                                                 | A                                                                                 | -                                                                                 | -      | A                                                                                 | A                                                                                 | -      | B                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0.3                                                                               | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0.1                                                                               |      |        |                                                                                     |      |

Lanes, Volumes, Timings  
5: Marine Av. & Two Mile Rd.

Existing (2025) AM Peak Hour

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 2                                                                                 | 156                                                                               | 2                                                                                 | 1                                                                                 | 163                                                                               | 4                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 3                                                                                   | 1                                                                                   | 4                                                                                   |
| Future Volume (vph)         | 2                                                                                 | 156                                                                               | 2                                                                                 | 1                                                                                 | 163                                                                               | 4                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 3                                                                                   | 1                                                                                   | 4                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 404                                                                               |                                                                                   |                                                                                   | 287                                                                                |                                                                                     |                                                                                     | 353                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                                |                                                                                     |                                                                                     | 8.0                                                                                 |                                                                                     |
| Peak Hour Factor            | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                               | 0.71                                                                                | 0.71                                                                                | 0.71                                                                                | 0.71                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection             |        |       |      |        |       |      |        |       |      |        |      |      |
|--------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|------|------|
| Int Delay, s/veh         | 0.5    |       |      |        |       |      |        |       |      |        |      |      |
| Movement                 | EBL    | EBT   | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR  | SBL    | SBT  | SBR  |
| Lane Configurations      |        | ↰     |      |        | ↱     | ↱    |        | ↰     |      |        | ↰    |      |
| Traffic Vol, veh/h       | 2      | 156   | 2    | 1      | 163   | 4    | 1      | 1     | 2    | 3      | 1    | 4    |
| Future Vol, veh/h        | 2      | 156   | 2    | 1      | 163   | 4    | 1      | 1     | 2    | 3      | 1    | 4    |
| Conflicting Peds, #/hr   | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Sign Control             | Free   | Free  | Free | Free   | Free  | Free | Stop   | Stop  | Stop | Stop   | Stop | Stop |
| RT Channelized           | -      | -     | None | -      | -     | None | -      | -     | None | -      | -    | None |
| Storage Length           | -      | -     | -    | -      | -     | 50   | -      | -     | -    | -      | -    | -    |
| Veh in Median Storage, # | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Grade, %                 | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Peak Hour Factor         | 71     | 71    | 71   | 71     | 71    | 71   | 71     | 71    | 71   | 71     | 71   | 71   |
| Heavy Vehicles, %        | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Mvmt Flow                | 3      | 220   | 3    | 1      | 230   | 6    | 1      | 1     | 3    | 4      | 1    | 6    |
| Major/Minor              | Major1 |       |      | Major2 |       |      | Minor1 |       |      | Minor2 |      |      |
| Conflicting Flow All     | 235    | 0     | 0    | 223    | 0     | 0    | 460    | 465   | 221  | 458    | 461  | 230  |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 227    | 227   | -    | 232    | 232  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 233    | 238   | -    | 226    | 228  | -    |
| Critical Hdwy            | 4.1    | -     | -    | 4.1    | -     | -    | 7.1    | 6.5   | 6.2  | 7.1    | 6.5  | 6.2  |
| Critical Hdwy Stg 1      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Critical Hdwy Stg 2      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Follow-up Hdwy           | 2.2    | -     | -    | 2.2    | -     | -    | 3.5    | 4     | 3.3  | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver       | 1344   | -     | -    | 1358   | -     | -    | 515    | 498   | 824  | 516    | 501  | 815  |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 780    | 720   | -    | 775    | 716  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 774    | 712   | -    | 781    | 719  | -    |
| Platoon blocked, %       | -      | -     | -    | -      | -     | -    | -      | -     | -    | -      | -    | -    |
| Mov Cap-1 Maneuver       | 1344   | -     | -    | 1358   | -     | -    | 508    | 496   | 824  | 511    | 499  | 815  |
| Mov Cap-2 Maneuver       | -      | -     | -    | -      | -     | -    | 508    | 496   | -    | 511    | 499  | -    |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 779    | 718   | -    | 774    | 715  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 767    | 711   | -    | 775    | 717  | -    |
| Approach                 | EB     |       |      | WB     |       |      | NB     |       |      | SB     |      |      |
| HCM Ctrl Dly, s/v        | 0.1    |       |      | 0.05   |       |      | 10.82  |       |      | 10.86  |      |      |
| HCM LOS                  |        |       |      |        |       |      | B      |       |      | B      |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL   | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |      |        |      |      |
| Capacity (veh/h)         | 624    | 1344  | -    | -      | 11    | -    | -      | 626   |      |        |      |      |
| HCM Lane V/C Ratio       | 0.009  | 0.002 | -    | -      | 0.001 | -    | -      | 0.018 |      |        |      |      |
| HCM Ctrl Dly (s/v)       | 10.8   | 7.7   | -    | -      | 7.7   | 0    | -      | 10.9  |      |        |      |      |
| HCM Lane LOS             | B      | A     | -    | -      | A     | A    | -      | B     |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0      | 0     | -    | -      | 0     | -    | -      | 0.1   |      |        |      |      |

Lanes, Volumes, Timings  
6: Adobe Rd. & Two Mile Rd.

Existing (2025) AM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 110                                                                               | 103                                                                               | 26                                                                                | 30                                                                                | 142                                                                               | 125                                                                               | 16                                                                                | 368                                                                                | 30                                                                                  | 9                                                                                   | 119                                                                                 | 72                                                                                  |
| Future Volume (vph)     | 110                                                                               | 103                                                                               | 26                                                                                | 30                                                                                | 142                                                                               | 125                                                                               | 16                                                                                | 368                                                                                | 30                                                                                  | 9                                                                                   | 119                                                                                 | 72                                                                                  |
| Ideal Flow (vphpl)      | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)     | 120                                                                               |                                                                                   | 120                                                                               | 90                                                                                |                                                                                   | 90                                                                                | 80                                                                                |                                                                                    | 50                                                                                  | 100                                                                                 |                                                                                     | 0                                                                                   |
| Storage Lanes           | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 2                                                                                 | 1                                                                                 |                                                                                    | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)       | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Right Turn on Red       |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                    | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Link Speed (mph)        |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 40                                                                                 |                                                                                     |                                                                                     | 55                                                                                  |                                                                                     |
| Link Distance (ft)      |                                                                                   | 632                                                                               |                                                                                   |                                                                                   | 1344                                                                              |                                                                                   |                                                                                   | 691                                                                                |                                                                                     |                                                                                     | 541                                                                                 |                                                                                     |
| Travel Time (s)         |                                                                                   | 9.6                                                                               |                                                                                   |                                                                                   | 20.4                                                                              |                                                                                   |                                                                                   | 11.8                                                                               |                                                                                     |                                                                                     | 6.7                                                                                 |                                                                                     |
| Peak Hour Factor        | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Shared Lane Traffic (%) |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                 | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 |                                                                                   | 5                                                                                 | 2                                                                                  |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Detector Phase          | 7                                                                                 | 4                                                                                 | 4                                                                                 | 3                                                                                 | 8                                                                                 | 8                                                                                 | 5                                                                                 | 2                                                                                  | 2                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                                | 5.0                                                                                 | 5.0                                                                                 | 5.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 9.5                                                                               | 22.5                                                                              | 22.5                                                                              | 9.5                                                                               | 22.5                                                                              | 22.5                                                                              | 9.5                                                                               | 22.5                                                                               | 22.5                                                                                | 9.5                                                                                 | 22.5                                                                                |                                                                                     |
| Total Split (s)         | 27.0                                                                              | 39.0                                                                              | 39.0                                                                              | 14.0                                                                              | 26.0                                                                              | 26.0                                                                              | 13.0                                                                              | 36.0                                                                               | 36.0                                                                                | 11.0                                                                                | 34.0                                                                                |                                                                                     |
| Total Split (%)         | 27.0%                                                                             | 39.0%                                                                             | 39.0%                                                                             | 14.0%                                                                             | 26.0%                                                                             | 26.0%                                                                             | 13.0%                                                                             | 36.0%                                                                              | 36.0%                                                                               | 11.0%                                                                               | 34.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 22.5                                                                              | 34.5                                                                              | 34.5                                                                              | 9.5                                                                               | 21.5                                                                              | 21.5                                                                              | 8.5                                                                               | 31.5                                                                               | 31.5                                                                                | 6.5                                                                                 | 29.5                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                                | 3.5                                                                                 | 3.5                                                                                 | 3.5                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                                | 1.0                                                                                 | 1.0                                                                                 | 1.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                                | 4.5                                                                                 | 4.5                                                                                 | 4.5                                                                                 |                                                                                     |
| Lead/Lag                | Lag                                                                               | Lead                                                                              | Lead                                                                              | Lag                                                                               | Lead                                                                              | Lead                                                                              | Lead                                                                              | Lag                                                                                | Lag                                                                                 | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | C-Max                                                                              | C-Max                                                                               | None                                                                                | C-Max                                                                               |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Don't Walk (s)    |                                                                                   | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                               | 11.0                                                                                |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                  | 5                                                                                   |                                                                                     | 5                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Adobe Rd. & Two Mile Rd.



HCM 7th Signalized Intersection Summary  
6: Adobe Rd. & Two Mile Rd.

Existing (2025) AM Peak Hour

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                 | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |  |  |  |  |  |    |    |  |  |  |
| Traffic Volume (veh/h)       | 110                                                                               | 103                                                                               | 26                                                                                | 30                                                                                | 142                                                                               | 125                                                                               | 16                                                                                | 368                                                                                 | 30                                                                                  | 9                                                                                   | 119                                                                                 | 72                                                                                  |
| Future Volume (veh/h)        | 110                                                                               | 103                                                                               | 26                                                                                | 30                                                                                | 142                                                                               | 125                                                                               | 16                                                                                | 368                                                                                 | 30                                                                                  | 9                                                                                   | 119                                                                                 | 72                                                                                  |
| 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       | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                                | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Adj Flow Rate, veh/h         | 143                                                                               | 134                                                                               | 34                                                                                | 39                                                                                | 184                                                                               | 162                                                                               | 21                                                                                | 478                                                                                 | 39                                                                                  | 12                                                                                  | 155                                                                                 | 94                                                                                  |
| Peak Hour Factor             | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 173                                                                               | 179                                                                               | 152                                                                               | 211                                                                               | 420                                                                               | 187                                                                               | 36                                                                                | 1970                                                                                | 879                                                                                 | 23                                                                                  | 1189                                                                                | 682                                                                                 |
| Arrive On Green              | 0.11                                                                              | 0.10                                                                              | 0.10                                                                              | 0.13                                                                              | 0.12                                                                              | 0.12                                                                              | 0.02                                                                              | 0.58                                                                                | 0.58                                                                                | 0.01                                                                                | 0.57                                                                                | 0.57                                                                                |
| Sat Flow, veh/h              | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                                | 1525                                                                                | 1619                                                                                | 2093                                                                                | 1201                                                                                |
| Grp Volume(v), veh/h         | 143                                                                               | 134                                                                               | 34                                                                                | 39                                                                                | 184                                                                               | 162                                                                               | 21                                                                                | 478                                                                                 | 39                                                                                  | 12                                                                                  | 125                                                                                 | 124                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                                | 1525                                                                                | 1619                                                                                | 1710                                                                                | 1584                                                                                |
| Q Serve(g_s), s              | 8.7                                                                               | 7.2                                                                               | 1.8                                                                               | 2.1                                                                               | 5.0                                                                               | 9.2                                                                               | 1.3                                                                               | 6.9                                                                                 | 0.5                                                                                 | 0.7                                                                                 | 3.4                                                                                 | 3.7                                                                                 |
| Cycle Q Clear(g_c), s        | 8.7                                                                               | 7.2                                                                               | 1.8                                                                               | 2.1                                                                               | 5.0                                                                               | 9.2                                                                               | 1.3                                                                               | 6.9                                                                                 | 0.5                                                                                 | 0.7                                                                                 | 3.4                                                                                 | 3.7                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                     | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.76                                                                                |
| Lane Grp Cap(c), veh/h       | 173                                                                               | 179                                                                               | 152                                                                               | 211                                                                               | 420                                                                               | 187                                                                               | 36                                                                                | 1970                                                                                | 879                                                                                 | 23                                                                                  | 971                                                                                 | 900                                                                                 |
| V/C Ratio(X)                 | 0.83                                                                              | 0.75                                                                              | 0.22                                                                              | 0.18                                                                              | 0.44                                                                              | 0.86                                                                              | 0.59                                                                              | 0.24                                                                                | 0.04                                                                                | 0.52                                                                                | 0.13                                                                                | 0.14                                                                                |
| Avail Cap(c_a), veh/h        | 364                                                                               | 621                                                                               | 526                                                                               | 211                                                                               | 735                                                                               | 328                                                                               | 138                                                                               | 1970                                                                                | 879                                                                                 | 105                                                                                 | 971                                                                                 | 900                                                                                 |
| 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     | 43.7                                                                              | 43.8                                                                              | 31.8                                                                              | 38.8                                                                              | 40.7                                                                              | 33.4                                                                              | 48.4                                                                              | 10.5                                                                                | 2.1                                                                                 | 49.0                                                                                | 10.1                                                                                | 10.1                                                                                |
| Incr Delay (d2), s/veh       | 9.5                                                                               | 6.1                                                                               | 0.7                                                                               | 0.4                                                                               | 0.7                                                                               | 11.2                                                                              | 14.3                                                                              | 0.3                                                                                 | 0.1                                                                                 | 17.2                                                                                | 0.3                                                                                 | 0.3                                                                                 |
| Initial Q Delay(d3), s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 3.8                                                                               | 3.4                                                                               | 0.8                                                                               | 0.8                                                                               | 2.1                                                                               | 3.8                                                                               | 0.6                                                                               | 2.4                                                                                 | 0.3                                                                                 | 0.4                                                                                 | 1.1                                                                                 | 1.2                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 53.2                                                                              | 49.9                                                                              | 32.5                                                                              | 39.2                                                                              | 41.4                                                                              | 44.6                                                                              | 62.8                                                                              | 10.7                                                                                | 2.2                                                                                 | 66.2                                                                                | 10.3                                                                                | 10.4                                                                                |
| LnGrp LOS                    | D                                                                                 | D                                                                                 | C                                                                                 | D                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | B                                                                                   | A                                                                                   | E                                                                                   | B                                                                                   | B                                                                                   |
| Approach Vol, veh/h          | 311                                                                               |                                                                                   |                                                                                   | 385                                                                               |                                                                                   |                                                                                   | 538                                                                               |                                                                                     |                                                                                     | 261                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 49.5                                                                              |                                                                                   |                                                                                   | 42.5                                                                              |                                                                                   |                                                                                   | 12.2                                                                              |                                                                                     |                                                                                     | 13.0                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                     |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 5.9                                                                               | 62.1                                                                              | 17.5                                                                              | 14.5                                                                              | 6.7                                                                               | 61.3                                                                              | 15.2                                                                              | 16.8                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 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                                                                               | 31.5                                                                              | 9.5                                                                               | 34.5                                                                              | 8.5                                                                               | 29.5                                                                              | 22.5                                                                              | 21.5                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 2.7                                                                               | 8.9                                                                               | 4.1                                                                               | 9.2                                                                               | 3.3                                                                               | 5.7                                                                               | 10.7                                                                              | 11.2                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               | 3.1                                                                               | 0.0                                                                               | 0.7                                                                               | 0.0                                                                               | 1.2                                                                               | 0.3                                                                               | 1.1                                                                                 |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th Control Delay, s/veh | 27.9                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th LOS                  | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## 1: Desert Knoll Av. &amp; Samarkand Dr.



| Lane Group              | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Configurations     |      |      |      |      |      |      |
| Traffic Volume (vph)    | 0    | 4    | 0    | 0    | 8    | 0    |
| Future Volume (vph)     | 0    | 4    | 0    | 0    | 8    | 0    |
| Ideal Flow (vphpl)      | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph)        | 30   |      |      | 30   | 30   |      |
| Link Distance (ft)      | 969  |      |      | 1245 | 437  |      |
| Travel Time (s)         | 22.0 |      |      | 28.3 | 9.9  |      |
| Peak Hour Factor        | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Shared Lane Traffic (%) |      |      |      |      |      |      |
| Sign Control            | Free |      |      | Free | Stop |      |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

1: Desert Knoll Av. & Samarkand Dr.

| Intersection             |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 5.3                                                                               |      |        |                                                                                   |                                                                                   |      |
| Movement                 | EBT                                                                               | EBR  | WBL    | WBT                                                                               | NBL                                                                               | NBR  |
| Lane Configurations      |  |      |        |  |  |      |
| Traffic Vol, veh/h       | 0                                                                                 | 4    | 0      | 0                                                                                 | 8                                                                                 | 0    |
| Future Vol, veh/h        | 0                                                                                 | 4    | 0      | 0                                                                                 | 8                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Free                                                                              | Free | Free   | Free                                                                              | Stop                                                                              | Stop |
| RT Channelized           | -                                                                                 | None | -      | None                                                                              | -                                                                                 | None |
| Storage Length           | -                                                                                 | -    | -      | -                                                                                 | 0                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92     | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 0                                                                                 | 4    | 0      | 0                                                                                 | 9                                                                                 | 0    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Major/Minor              | Major1                                                                            |      | Major2 |                                                                                   | Minor1                                                                            |      |
| Conflicting Flow All     | 0                                                                                 | 0    | 4      | 0                                                                                 | 3                                                                                 | 2    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 2                                                                                 | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1                                                                                 | -    |
| Critical Hdwy            | -                                                                                 | -    | 4.1    | -                                                                                 | 6.4                                                                               | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Follow-up Hdwy           | -                                                                                 | -    | 2.2    | -                                                                                 | 3.5                                                                               | 3.3  |
| Pot Cap-1 Maneuver       | -                                                                                 | -    | 1630   | -                                                                                 | 1024                                                                              | 1088 |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1026                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1027                                                                              | -    |
| Platoon blocked, %       | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | -                                                                                 | -    | 1630   | -                                                                                 | 1024                                                                              | 1088 |
| Mov Cap-2 Maneuver       | -                                                                                 | -    | -      | -                                                                                 | 1024                                                                              | -    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1026                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1027                                                                              | -    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                |      | WB     |                                                                                   | NB                                                                                |      |
| HCM Ctrl Dly, s/v        | 0                                                                                 |      | 0      |                                                                                   | 8.54                                                                              |      |
| HCM LOS                  |                                                                                   |      |        |                                                                                   | A                                                                                 |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBT  | EBR    | WBL                                                                               | WBT                                                                               |      |
| Capacity (veh/h)         | 1024                                                                              | -    | -      | 1630                                                                              | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.008                                                                             | -    | -      | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 8.5                                                                               | -    | -      | 0                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -    | -      | A                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -    | -      | 0                                                                                 | -                                                                                 |      |

Lanes, Volumes, Timings  
 2: Desert Knoll Av. & Aztec Av.

Existing (2025) PM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 1                                                                                 | 3                                                                                 | 5                                                                                 | 7                                                                                 | 3                                                                                 | 1                                                                                 |
| Future Volume (vph)         | 1                                                                                 | 3                                                                                 | 5                                                                                 | 7                                                                                 | 3                                                                                 | 1                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 523                                                                               |                                                                                   |                                                                                   | 1360                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 11.9                                                                              |                                                                                   |                                                                                   | 30.9                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |        |        |       |        |      |      |
|--------------------------|--------|--------|-------|--------|------|------|
| Int Delay, s/veh         | 3.5    |        |       |        |      |      |
| Movement                 | EBL    | EBR    | NBL   | NBT    | SBT  | SBR  |
| Lane Configurations      |        |        |       |        |      |      |
| Traffic Vol, veh/h       | 1      | 3      | 5     | 7      | 3    | 1    |
| Future Vol, veh/h        | 1      | 3      | 5     | 7      | 3    | 1    |
| Conflicting Peds, #/hr   | 0      | 0      | 0     | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free  | Free   | Free | Free |
| RT Channelized           | -      | None   | -     | None   | -    | None |
| Storage Length           | 0      | -      | -     | -      | -    | -    |
| Veh in Median Storage, # | 0      | -      | -     | 0      | 0    | -    |
| Grade, %                 | 0      | -      | -     | 0      | 0    | -    |
| Peak Hour Factor         | 75     | 75     | 75    | 75     | 75   | 75   |
| Heavy Vehicles, %        | 0      | 0      | 0     | 0      | 0    | 0    |
| Mvmt Flow                | 1      | 4      | 7     | 9      | 4    | 1    |
|                          |        |        |       |        |      |      |
| Major/Minor              | Minor2 | Major1 |       | Major2 |      |      |
| Conflicting Flow All     | 27     | 5      | 5     | 0      | -    | 0    |
| Stage 1                  | 5      | -      | -     | -      | -    | -    |
| Stage 2                  | 23     | -      | -     | -      | -    | -    |
| Critical Hdwy            | 6.4    | 6.2    | 4.1   | -      | -    | -    |
| Critical Hdwy Stg 1      | 5.4    | -      | -     | -      | -    | -    |
| Critical Hdwy Stg 2      | 5.4    | -      | -     | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 3.3    | 2.2   | -      | -    | -    |
| Pot Cap-1 Maneuver       | 993    | 1084   | 1629  | -      | -    | -    |
| Stage 1                  | 1024   | -      | -     | -      | -    | -    |
| Stage 2                  | 1005   | -      | -     | -      | -    | -    |
| Platoon blocked, %       |        |        |       | -      | -    | -    |
| Mov Cap-1 Maneuver       | 989    | 1084   | 1629  | -      | -    | -    |
| Mov Cap-2 Maneuver       | 989    | -      | -     | -      | -    | -    |
| Stage 1                  | 1020   | -      | -     | -      | -    | -    |
| Stage 2                  | 1005   | -      | -     | -      | -    | -    |
|                          |        |        |       |        |      |      |
| Approach                 | EB     | NB     |       | SB     |      |      |
| HCM Ctrl Dly, s/v        | 8.42   | 3.01   |       | 0      |      |      |
| HCM LOS                  | A      |        |       |        |      |      |
|                          |        |        |       |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1 | SBT    | SBR  |      |
| Capacity (veh/h)         | 750    | -      | 1059  | -      | -    |      |
| HCM Lane V/C Ratio       | 0.004  | -      | 0.005 | -      | -    |      |
| HCM Ctrl Dly (s/v)       | 7.2    | 0      | 8.4   | -      | -    |      |
| HCM Lane LOS             | A      | A      | A     | -      | -    |      |
| HCM 95th %tile Q(veh)    | 0      | -      | 0     | -      | -    |      |

Lanes, Volumes, Timings  
3: Desert Knoll Av. & Manana Dr.

Existing (2025) PM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations         |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)        | 6                                                                                 | 2                                                                                 | 20                                                                                | 1                                                                                 | 1                                                                                 | 16                                                                                |
| Future Volume (vph)         | 6                                                                                 | 2                                                                                 | 20                                                                                | 1                                                                                 | 1                                                                                 | 16                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)          | 401                                                                               |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 1360                                                                              |
| Travel Time (s)             | 9.1                                                                               |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                   | 30.9                                                                              |
| Peak Hour Factor            | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |        |           |        |       |      |      |
|--------------------------|--------|-----------|--------|-------|------|------|
| Int Delay, s/veh         | 1.7    |           |        |       |      |      |
| Movement                 | WBL    | WBR       | NBT    | NBR   | SBL  | SBT  |
| Lane Configurations      | W      | W         | T      | T     | T    | T    |
| Traffic Vol, veh/h       | 6      | 2         | 20     | 1     | 1    | 16   |
| Future Vol, veh/h        | 6      | 2         | 20     | 1     | 1    | 16   |
| Conflicting Peds, #/hr   | 0      | 0         | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop      | Free   | Free  | Free | Free |
| RT Channelized           | -      | None      | -      | None  | -    | None |
| Storage Length           | 0      | -         | -      | -     | -    | -    |
| Veh in Median Storage, # | 0      | -         | 0      | -     | -    | 0    |
| Grade, %                 | 0      | -         | 0      | -     | -    | 0    |
| Peak Hour Factor         | 77     | 77        | 77     | 77    | 77   | 77   |
| Heavy Vehicles, %        | 0      | 0         | 0      | 0     | 0    | 0    |
| Mvmt Flow                | 8      | 3         | 26     | 1     | 1    | 21   |
| Major/Minor              | Minor1 | Major1    | Major2 |       |      |      |
| Conflicting Flow All     | 50     | 27        | 0      | 0     | 27   | 0    |
| Stage 1                  | 27     | -         | -      | -     | -    | -    |
| Stage 2                  | 23     | -         | -      | -     | -    | -    |
| Critical Hdwy            | 6.4    | 6.2       | -      | -     | 4.1  | -    |
| Critical Hdwy Stg 1      | 5.4    | -         | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 5.4    | -         | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.5    | 3.3       | -      | -     | 2.2  | -    |
| Pot Cap-1 Maneuver       | 964    | 1055      | -      | -     | 1600 | -    |
| Stage 1                  | 1001   | -         | -      | -     | -    | -    |
| Stage 2                  | 1004   | -         | -      | -     | -    | -    |
| Platoon blocked, %       |        |           | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 963    | 1055      | -      | -     | 1600 | -    |
| Mov Cap-2 Maneuver       | 963    | -         | -      | -     | -    | -    |
| Stage 1                  | 1001   | -         | -      | -     | -    | -    |
| Stage 2                  | 1004   | -         | -      | -     | -    | -    |
| Approach                 | WB     | NB        | SB     |       |      |      |
| HCM Ctrl Dly, s/v        | 8.69   | 0         | 0.43   |       |      |      |
| HCM LOS                  | A      |           |        |       |      |      |
| Minor Lane/Major Mvmt    | NBT    | NBR WBLn1 | SBL    | SBT   |      |      |
| Capacity (veh/h)         | -      | -         | 985    | 106   | -    |      |
| HCM Lane V/C Ratio       | -      | -         | 0.011  | 0.001 | -    |      |
| HCM Ctrl Dly (s/v)       | -      | -         | 8.7    | 7.3   | 0    |      |
| HCM Lane LOS             | -      | -         | A      | A     | A    |      |
| HCM 95th %tile Q(veh)    | -      | -         | 0      | 0     | -    |      |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |  |  |  |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 13                                                                                | 79                                                                                | 55                                                                                | 2                                                                                 | 90                                                                                | 7                                                                                 | 34                                                                                | 1                                                                                  | 3                                                                                   | 8                                                                                   | 5                                                                                   | 9                                                                                   |
| Future Volume (vph)         | 13                                                                                | 79                                                                                | 55                                                                                | 2                                                                                 | 90                                                                                | 7                                                                                 | 34                                                                                | 1                                                                                  | 3                                                                                   | 8                                                                                   | 5                                                                                   | 9                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 80                                                                                |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 1358                                                                              |                                                                                   |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 932                                                                                |                                                                                     |                                                                                     | 646                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 20.6                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 21.2                                                                               |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |
| 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                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

| Intersection             |                                                                                   |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |      |      |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|
| Int Delay, s/veh         | 2.3                                                                               |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |      |                                                                                   |                                                                                   |                                                                                   |      |      |
| Movement                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL  | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT  | SBR  |
| Lane Configurations      |  |  |  |      |  |  |      |  |  |  |      |      |
| Traffic Vol, veh/h       | 13                                                                                | 79                                                                                | 55                                                                                | 2    | 90                                                                                | 7                                                                                 | 34   | 1                                                                                 | 3                                                                                 | 8                                                                                 | 5    | 9    |
| Future Vol, veh/h        | 13                                                                                | 79                                                                                | 55                                                                                | 2    | 90                                                                                | 7                                                                                 | 34   | 1                                                                                 | 3                                                                                 | 8                                                                                 | 5    | 9    |
| 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           | 80                                                                                | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 50                                                                                | -    | -                                                                                 | -                                                                                 | -                                                                                 | -    | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -                                                                                 | 0    | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -                                                                                 | 0    | -    |
| Peak Hour Factor         | 89                                                                                | 89                                                                                | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89                                                                                | 89   | 89   |
| Heavy Vehicles, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0    |
| Mvmt Flow                | 15                                                                                | 89                                                                                | 62                                                                                | 2    | 101                                                                               | 8                                                                                 | 38   | 1                                                                                 | 3                                                                                 | 9                                                                                 | 6    | 10   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |     |     | Minor2 |     |     |
|----------------------|--------|---|---|--------|---|---|--------|-----|-----|--------|-----|-----|
| Conflicting Flow All | 109    | 0 | 0 | 151    | 0 | 0 | 226    | 231 | 89  | 224    | 285 | 101 |
| Stage 1              | -      | - | - | -      | - | - | 118    | 118 | -   | 106    | 106 | -   |
| Stage 2              | -      | - | - | -      | - | - | 108    | 113 | -   | 119    | 180 | -   |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.1    | 6.5 | 6.2 | 7.1    | 6.5 | 6.2 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4   | 3.3 | 3.5    | 4   | 3.3 |
| Pot Cap-1 Maneuver   | 1494   | - | - | 1443   | - | - | 733    | 672 | 975 | 736    | 627 | 960 |
| Stage 1              | -      | - | - | -      | - | - | 891    | 802 | -   | 905    | 812 | -   |
| Stage 2              | -      | - | - | -      | - | - | 902    | 805 | -   | 891    | 754 | -   |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -   | -   | -      | -   | -   |
| Mov Cap-1 Maneuver   | 1494   | - | - | 1443   | - | - | 711    | 664 | 975 | 724    | 620 | 960 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 711    | 664 | -   | 724    | 620 | -   |
| Stage 1              | -      | - | - | -      | - | - | 883    | 794 | -   | 903    | 810 | -   |
| Stage 2              | -      | - | - | -      | - | - | 885    | 804 | -   | 878    | 747 | -   |

| Approach          | EB   |  |  | WB   |  |  | NB    |  |  | SB   |  |  |
|-------------------|------|--|--|------|--|--|-------|--|--|------|--|--|
| HCM Ctrl Dly, s/v | 0.66 |  |  | 0.15 |  |  | 10.28 |  |  | 9.82 |  |  |
| HCM LOS           |      |  |  |      |  |  | B     |  |  | A    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL  | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 725   | 1494 | -   | -   | 39    | -   | -   | 772   |
| HCM Lane V/C Ratio    | 0.059 | 0.01 | -   | -   | 0.002 | -   | -   | 0.032 |
| HCM Ctrl Dly (s/v)    | 10.3  | 7.4  | -   | -   | 7.5   | 0   | -   | 9.8   |
| HCM Lane LOS          | B     | A    | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0.2   | 0    | -   | -   | 0     | -   | -   | 0.1   |

Lanes, Volumes, Timings  
5: Marine Av. & Two Mile Rd.

Existing (2025) PM Peak Hour

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 9                                                                                 | 86                                                                                | 1                                                                                 | 1                                                                                 | 90                                                                                | 7                                                                                 | 5                                                                                 | 1                                                                                  | 1                                                                                   | 1                                                                                   | 1                                                                                   | 5                                                                                   |
| Future Volume (vph)         | 9                                                                                 | 86                                                                                | 1                                                                                 | 1                                                                                 | 90                                                                                | 7                                                                                 | 5                                                                                 | 1                                                                                  | 1                                                                                   | 1                                                                                   | 1                                                                                   | 5                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 404                                                                               |                                                                                   |                                                                                   | 287                                                                                |                                                                                     |                                                                                     | 353                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                                |                                                                                     |                                                                                     | 8.0                                                                                 |                                                                                     |
| Peak Hour Factor            | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                               | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      | ↔    |      |      |
| Traffic Vol, veh/h       | 9    | 86   | 1    | 1    | 90   | 7    | 5    | 1    | 1    | 1    | 1    | 5    |
| Future Vol, veh/h        | 9    | 86   | 1    | 1    | 90   | 7    | 5    | 1    | 1    | 1    | 1    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 50   | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   |
| Heavy Vehicles, %        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 10   | 92   | 1    | 1    | 97   | 8    | 5    | 1    | 1    | 1    | 1    | 5    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |     |     | Minor2 |     |     |
|----------------------|--------|---|---|--------|---|---|--------|-----|-----|--------|-----|-----|
| Conflicting Flow All | 104    | 0 | 0 | 94     | 0 | 0 | 212    | 219 | 93  | 211    | 212 | 97  |
| Stage 1              | -      | - | - | -      | - | - | 112    | 112 | -   | 99     | 99  | -   |
| Stage 2              | -      | - | - | -      | - | - | 99     | 106 | -   | 112    | 113 | -   |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.1    | 6.5 | 6.2 | 7.1    | 6.5 | 6.2 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4   | 3.3 | 3.5    | 4   | 3.3 |
| Pot Cap-1 Maneuver   | 1500   | - | - | 1513   | - | - | 749    | 683 | 970 | 750    | 689 | 965 |
| Stage 1              | -      | - | - | -      | - | - | 898    | 806 | -   | 912    | 817 | -   |
| Stage 2              | -      | - | - | -      | - | - | 912    | 811 | -   | 898    | 806 | -   |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -   | -   | -      | -   | -   |
| Mov Cap-1 Maneuver   | 1500   | - | - | 1513   | - | - | 739    | 678 | 970 | 742    | 684 | 965 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 739    | 678 | -   | 742    | 684 | -   |
| Stage 1              | -      | - | - | -      | - | - | 891    | 801 | -   | 912    | 816 | -   |
| Stage 2              | -      | - | - | -      | - | - | 905    | 810 | -   | 889    | 800 | -   |

| Approach          | EB  |  |  | WB   |  |  | NB   |  |  | SB   |  |  |
|-------------------|-----|--|--|------|--|--|------|--|--|------|--|--|
| HCM Ctrl Dly, s/v | 0.7 |  |  | 0.08 |  |  | 9.82 |  |  | 9.15 |  |  |
| HCM LOS           |     |  |  |      |  |  | A    |  |  | A    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 755   | 1500  | -   | -   | 20    | -   | -   | 876   |
| HCM Lane V/C Ratio    | 0.01  | 0.006 | -   | -   | 0.001 | -   | -   | 0.009 |
| HCM Ctrl Dly (s/v)    | 9.8   | 7.4   | -   | -   | 7.4   | 0   | -   | 9.1   |
| HCM Lane LOS          | A     | A     | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -   | 0     | -   | -   | 0     |

Lanes, Volumes, Timings  
6: Adobe Rd. & Two Mile Rd.

Existing (2025) PM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 90                                                                                | 86                                                                                | 66                                                                                | 42                                                                                | 113                                                                               | 47                                                                                | 62                                                                                | 204                                                                                | 42                                                                                  | 100                                                                                 | 465                                                                                 | 182                                                                                 |
| Future Volume (vph)     | 90                                                                                | 86                                                                                | 66                                                                                | 42                                                                                | 113                                                                               | 47                                                                                | 62                                                                                | 204                                                                                | 42                                                                                  | 100                                                                                 | 465                                                                                 | 182                                                                                 |
| Ideal Flow (vphpl)      | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)     | 120                                                                               |                                                                                   | 120                                                                               | 90                                                                                |                                                                                   | 90                                                                                | 80                                                                                |                                                                                    | 50                                                                                  | 100                                                                                 |                                                                                     | 0                                                                                   |
| Storage Lanes           | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 2                                                                                 | 1                                                                                 |                                                                                    | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)       | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Right Turn on Red       |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                    | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Link Speed (mph)        |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 40                                                                                 |                                                                                     |                                                                                     | 55                                                                                  |                                                                                     |
| Link Distance (ft)      |                                                                                   | 632                                                                               |                                                                                   |                                                                                   | 1344                                                                              |                                                                                   |                                                                                   | 691                                                                                |                                                                                     |                                                                                     | 541                                                                                 |                                                                                     |
| Travel Time (s)         |                                                                                   | 9.6                                                                               |                                                                                   |                                                                                   | 20.4                                                                              |                                                                                   |                                                                                   | 11.8                                                                               |                                                                                     |                                                                                     | 6.7                                                                                 |                                                                                     |
| Peak Hour Factor        | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Shared Lane Traffic (%) |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                 | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 |                                                                                   | 5                                                                                 | 2                                                                                  |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Detector Phase          | 7                                                                                 | 4                                                                                 | 4                                                                                 | 3                                                                                 | 8                                                                                 | 8                                                                                 | 5                                                                                 | 2                                                                                  | 2                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                                | 5.0                                                                                 | 5.0                                                                                 | 5.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 9.5                                                                               | 22.5                                                                              | 22.5                                                                              | 9.5                                                                               | 22.5                                                                              | 22.5                                                                              | 9.5                                                                               | 22.5                                                                               | 22.5                                                                                | 9.5                                                                                 | 22.5                                                                                |                                                                                     |
| Total Split (s)         | 20.0                                                                              | 30.0                                                                              | 30.0                                                                              | 13.0                                                                              | 23.0                                                                              | 23.0                                                                              | 16.0                                                                              | 36.0                                                                               | 36.0                                                                                | 21.0                                                                                | 41.0                                                                                |                                                                                     |
| Total Split (%)         | 20.0%                                                                             | 30.0%                                                                             | 30.0%                                                                             | 13.0%                                                                             | 23.0%                                                                             | 23.0%                                                                             | 16.0%                                                                             | 36.0%                                                                              | 36.0%                                                                               | 21.0%                                                                               | 41.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 15.5                                                                              | 25.5                                                                              | 25.5                                                                              | 8.5                                                                               | 18.5                                                                              | 18.5                                                                              | 11.5                                                                              | 31.5                                                                               | 31.5                                                                                | 16.5                                                                                | 36.5                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                                | 3.5                                                                                 | 3.5                                                                                 | 3.5                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                                | 1.0                                                                                 | 1.0                                                                                 | 1.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                                | 4.5                                                                                 | 4.5                                                                                 | 4.5                                                                                 |                                                                                     |
| Lead/Lag                | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                               | Lag                                                                               | Lead                                                                              | Lag                                                                                | Lag                                                                                 | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | C-Max                                                                              | C-Max                                                                               | None                                                                                | C-Max                                                                               |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Don't Walk (s)    |                                                                                   | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                               | 11.0                                                                                |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                  | 5                                                                                   |                                                                                     | 5                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Adobe Rd. & Two Mile Rd.



HCM 7th Signalized Intersection Summary  
6: Adobe Rd. & Two Mile Rd.

Existing (2025) PM Peak Hour

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 90                                                                                | 86                                                                                | 66                                                                                | 42                                                                                | 113                                                                               | 47                                                                                | 62                                                                                | 204                                                                                | 42                                                                                  | 100                                                                                 | 465                                                                                 | 182                                                                                 |
| Future Volume (veh/h)        | 90                                                                                | 86                                                                                | 66                                                                                | 42                                                                                | 113                                                                               | 47                                                                                | 62                                                                                | 204                                                                                | 42                                                                                  | 100                                                                                 | 465                                                                                 | 182                                                                                 |
| 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       | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Adj Flow Rate, veh/h         | 96                                                                                | 91                                                                                | 70                                                                                | 45                                                                                | 120                                                                               | 50                                                                                | 66                                                                                | 217                                                                                | 45                                                                                  | 106                                                                                 | 495                                                                                 | 194                                                                                 |
| Peak Hour Factor             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 120                                                                               | 177                                                                               | 150                                                                               | 58                                                                                | 205                                                                               | 91                                                                                | 83                                                                                | 2069                                                                               | 923                                                                                 | 131                                                                                 | 1527                                                                                | 595                                                                                 |
| Arrive On Green              | 0.07                                                                              | 0.10                                                                              | 0.10                                                                              | 0.04                                                                              | 0.06                                                                              | 0.06                                                                              | 0.05                                                                              | 0.61                                                                               | 0.61                                                                                | 0.08                                                                                | 0.64                                                                                | 0.64                                                                                |
| Sat Flow, veh/h              | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                               | 1525                                                                                | 1619                                                                                | 2404                                                                                | 937                                                                                 |
| Grp Volume(v), veh/h         | 96                                                                                | 91                                                                                | 70                                                                                | 45                                                                                | 120                                                                               | 50                                                                                | 66                                                                                | 217                                                                                | 45                                                                                  | 106                                                                                 | 351                                                                                 | 338                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                               | 1525                                                                                | 1619                                                                                | 1710                                                                                | 1631                                                                                |
| Q Serve(g_s), s              | 5.8                                                                               | 4.8                                                                               | 4.3                                                                               | 2.8                                                                               | 3.4                                                                               | 3.2                                                                               | 4.0                                                                               | 2.7                                                                                | 1.2                                                                                 | 6.4                                                                                 | 9.4                                                                                 | 9.5                                                                                 |
| Cycle Q Clear(g_c), s        | 5.8                                                                               | 4.8                                                                               | 4.3                                                                               | 2.8                                                                               | 3.4                                                                               | 3.2                                                                               | 4.0                                                                               | 2.7                                                                                | 1.2                                                                                 | 6.4                                                                                 | 9.4                                                                                 | 9.5                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                    | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.57                                                                                |
| Lane Grp Cap(c), veh/h       | 120                                                                               | 177                                                                               | 150                                                                               | 58                                                                                | 205                                                                               | 91                                                                                | 83                                                                                | 2069                                                                               | 923                                                                                 | 131                                                                                 | 1086                                                                                | 1036                                                                                |
| V/C Ratio(X)                 | 0.80                                                                              | 0.52                                                                              | 0.47                                                                              | 0.78                                                                              | 0.59                                                                              | 0.55                                                                              | 0.80                                                                              | 0.10                                                                               | 0.05                                                                                | 0.81                                                                                | 0.32                                                                                | 0.33                                                                                |
| Avail Cap(c_a), veh/h        | 251                                                                               | 459                                                                               | 389                                                                               | 138                                                                               | 633                                                                               | 282                                                                               | 186                                                                               | 2069                                                                               | 923                                                                                 | 267                                                                                 | 1086                                                                                | 1036                                                                                |
| 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     | 45.6                                                                              | 42.8                                                                              | 42.6                                                                              | 47.8                                                                              | 45.8                                                                              | 45.7                                                                              | 46.9                                                                              | 8.3                                                                                | 8.0                                                                                 | 45.2                                                                                | 8.4                                                                                 | 8.4                                                                                 |
| Incr Delay (d2), s/veh       | 11.7                                                                              | 2.3                                                                               | 2.3                                                                               | 19.8                                                                              | 2.7                                                                               | 5.0                                                                               | 15.8                                                                              | 0.1                                                                                | 0.1                                                                                 | 11.0                                                                                | 0.8                                                                                 | 0.8                                                                                 |
| Initial Q Delay(d3), s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 2.7                                                                               | 2.2                                                                               | 1.7                                                                               | 1.4                                                                               | 1.5                                                                               | 1.3                                                                               | 1.9                                                                               | 0.9                                                                                | 0.4                                                                                 | 2.8                                                                                 | 3.0                                                                                 | 2.8                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 57.2                                                                              | 45.2                                                                              | 44.9                                                                              | 67.6                                                                              | 48.5                                                                              | 50.7                                                                              | 62.8                                                                              | 8.4                                                                                | 8.1                                                                                 | 56.2                                                                                | 9.2                                                                                 | 9.2                                                                                 |
| LnGrp LOS                    | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | A                                                                                  | A                                                                                   | E                                                                                   | A                                                                                   | A                                                                                   |
| Approach Vol, veh/h          | 257                                                                               |                                                                                   |                                                                                   | 215                                                                               |                                                                                   |                                                                                   | 328                                                                               |                                                                                    |                                                                                     | 795                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 49.6                                                                              |                                                                                   |                                                                                   | 53.0                                                                              |                                                                                   |                                                                                   | 19.3                                                                              |                                                                                    |                                                                                     | 15.5                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                    |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                              | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 12.6                                                                              | 65.0                                                                              | 8.1                                                                               | 14.3                                                                              | 9.6                                                                               | 68.0                                                                              | 11.9                                                                              | 10.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 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  | 16.5                                                                              | 31.5                                                                              | 8.5                                                                               | 25.5                                                                              | 11.5                                                                              | 36.5                                                                              | 15.5                                                                              | 18.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 8.4                                                                               | 4.7                                                                               | 4.8                                                                               | 6.8                                                                               | 6.0                                                                               | 11.5                                                                              | 7.8                                                                               | 5.4                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.1                                                                               | 1.4                                                                               | 0.0                                                                               | 0.5                                                                               | 0.0                                                                               | 3.8                                                                               | 0.1                                                                               | 0.6                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th Control Delay, s/veh | 26.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th LOS                  | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## **APPENDIX 3.3:**

### **TRAFFIC SIGNAL WARRANT WORKSHEETS**

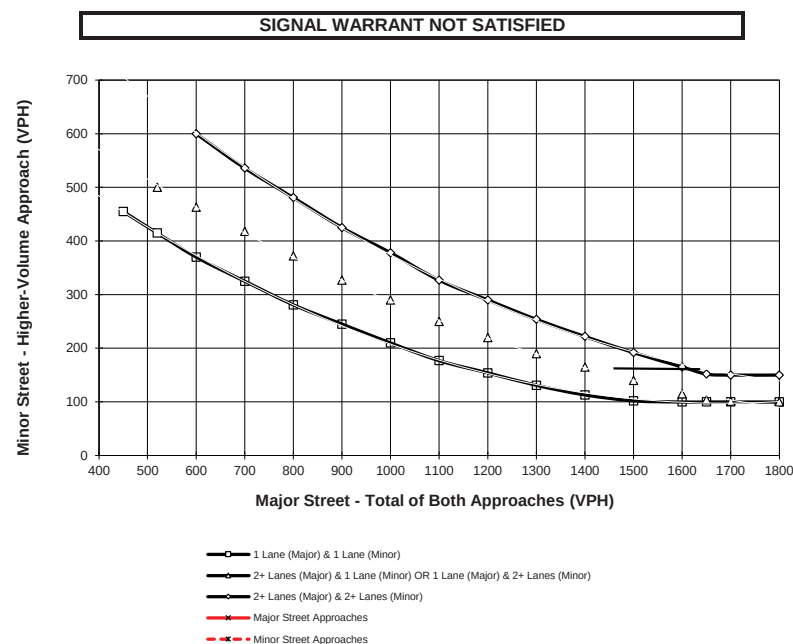
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**Figure 4C-3. Warrant 3, Peak Hour**

Traffic Conditions = **EXISTING AM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **8**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Aztec Av.** High Volume Approach (VPH) = **3**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

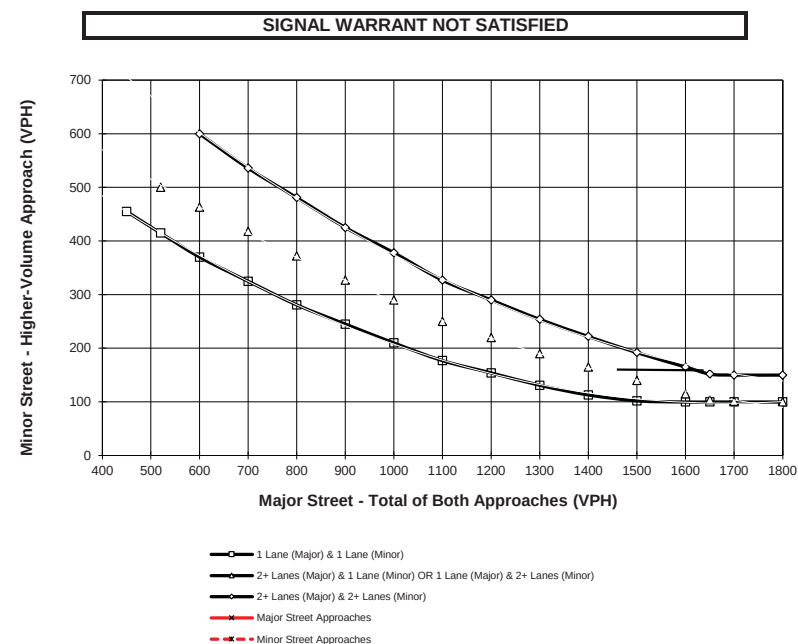
Intersection ID: #2

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

Traffic Conditions = **EXISTING PM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **16**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Aztec Av.** High Volume Approach (VPH) = **4**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

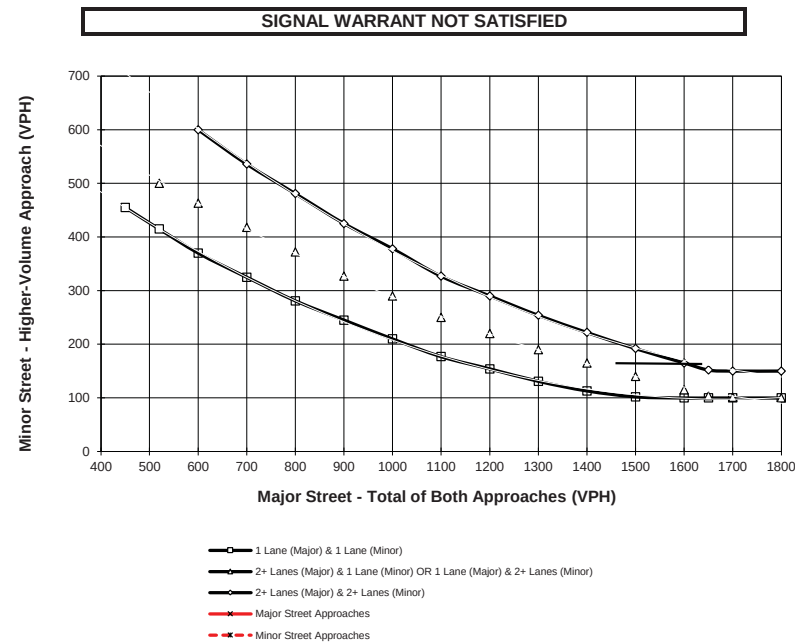
Intersection ID: #2

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = EXISTING AM PEAK HOUR WARRANTS

Major Street Name = Desert Knoll Av.      Total of Both Approaches (VPH) = 24  
Number of Approach Lanes on Major Street = 1

Minor Street Name = Manana Dr.      High Volume Approach (VPH) = 7  
Number of Approach Lanes On Minor Street = 1



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

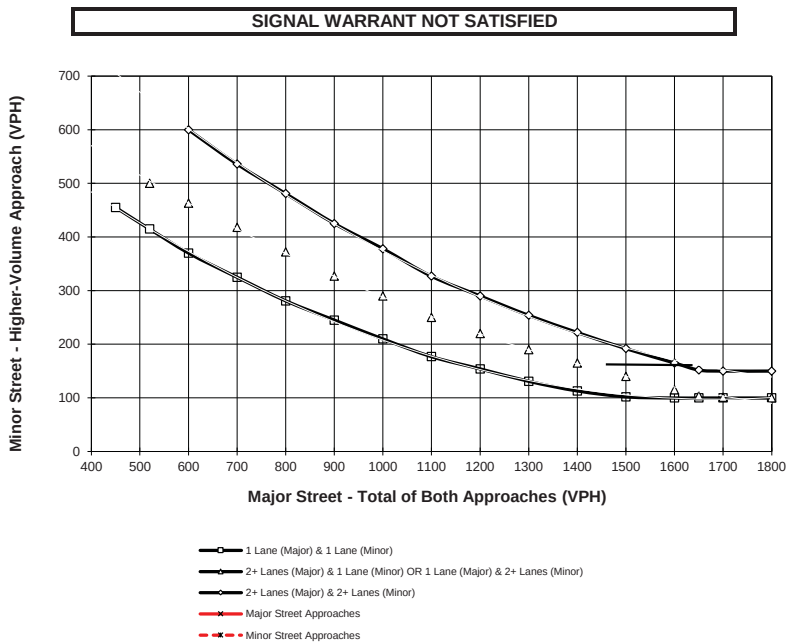
Intersection ID: #3

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = EXISTING PM PEAK HOUR WARRANTS

Major Street Name = Desert Knoll Av.      Total of Both Approaches (VPH) = 38  
Number of Approach Lanes on Major Street = 1

Minor Street Name = Manana Dr.      High Volume Approach (VPH) = 8  
Number of Approach Lanes On Minor Street = 1



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

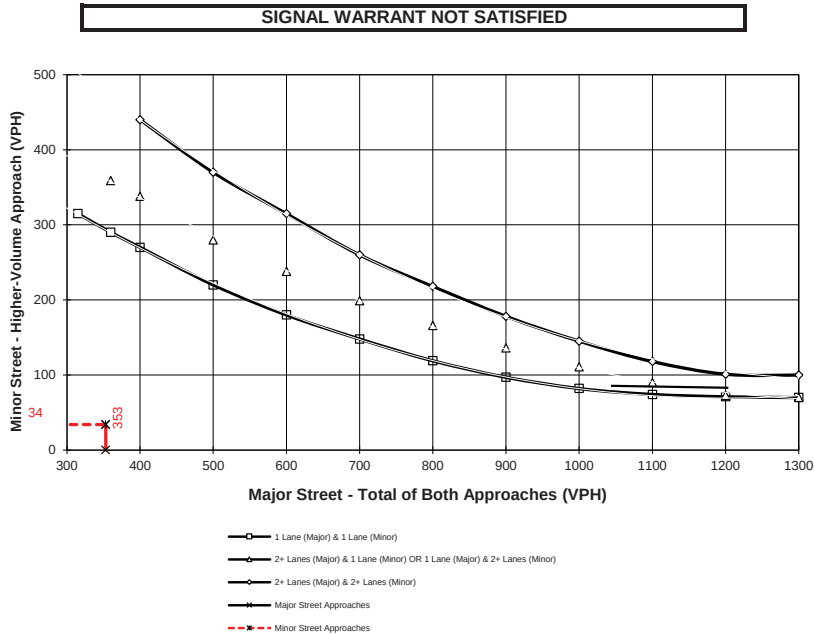
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING AM PEAK HOUR WARRANTS**

Major Street Name = **Two Mile Rd.**      Total of Both Approaches (VPH) = **353**  
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Desert Knoll Av.**      High Volume Approach (VPH) = **34**  
Number of Approach Lanes Minor Street = **1**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #4

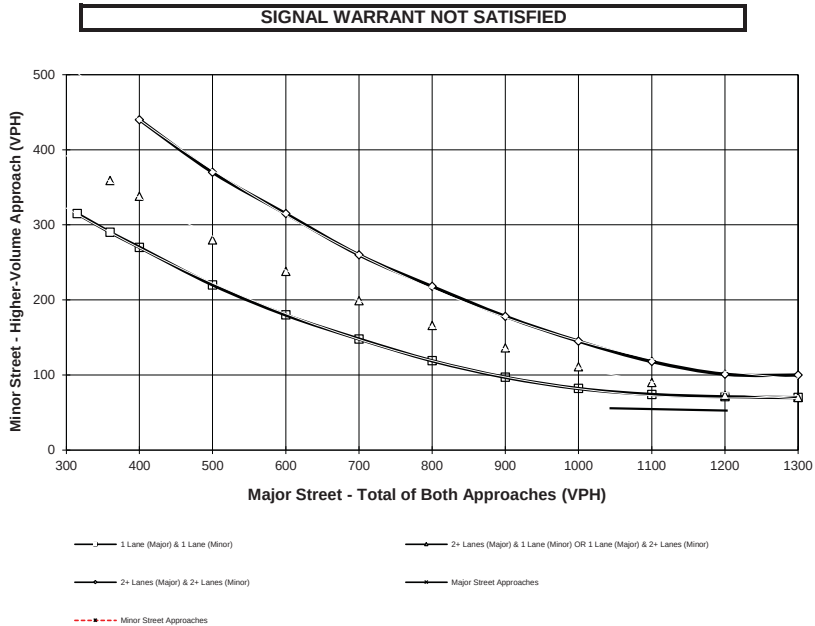
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING PM PEAK HOUR WARRANTS**

Major Street Name = **Two Mile Rd.**      Total of Both Approaches (VPH) = **246**  
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Desert Knoll Av.**      High Volume Approach (VPH) = **38**  
Number of Approach Lanes Minor Street = **1**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #4

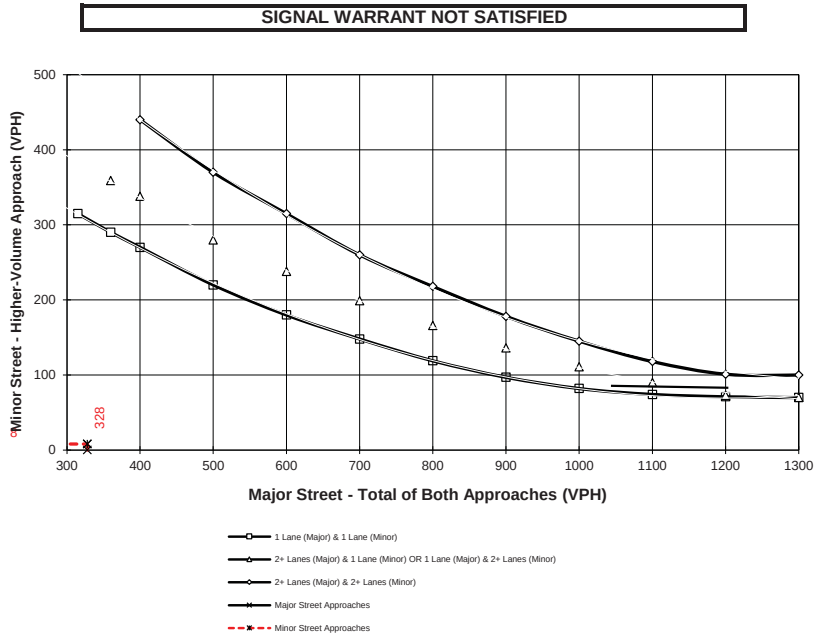
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING AM PEAK HOUR WARRANTS**

Major Street Name = **Two Mile Rd.**      Total of Both Approaches (VPH) = **328**  
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Marine Av.**      High Volume Approach (VPH) = **8**  
Number of Approach Lanes Minor Street = **1**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #5

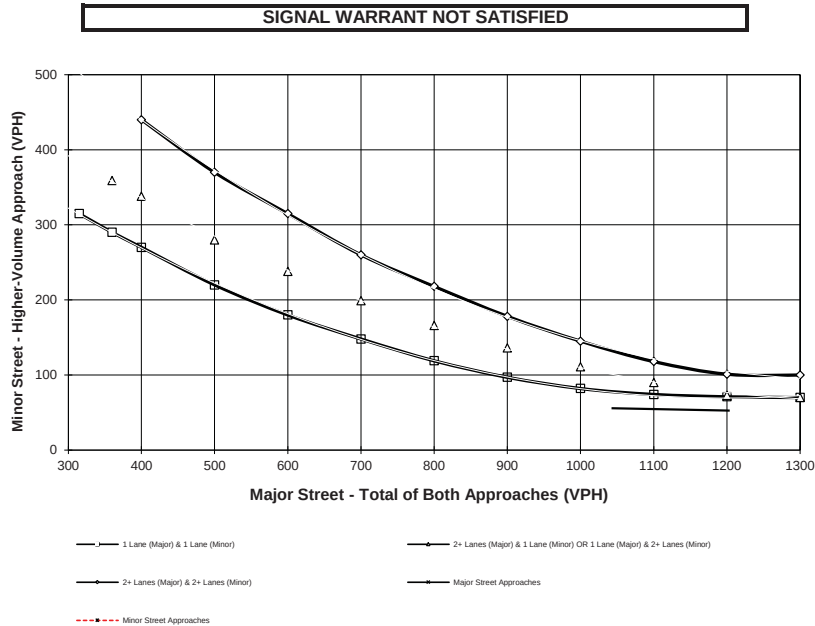
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EXISTING PM PEAK HOUR WARRANTS**

Major Street Name = **Two Mile Rd.**      Total of Both Approaches (VPH) = **194**  
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Marine Av.**      High Volume Approach (VPH) = **7**  
Number of Approach Lanes Minor Street = **1**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

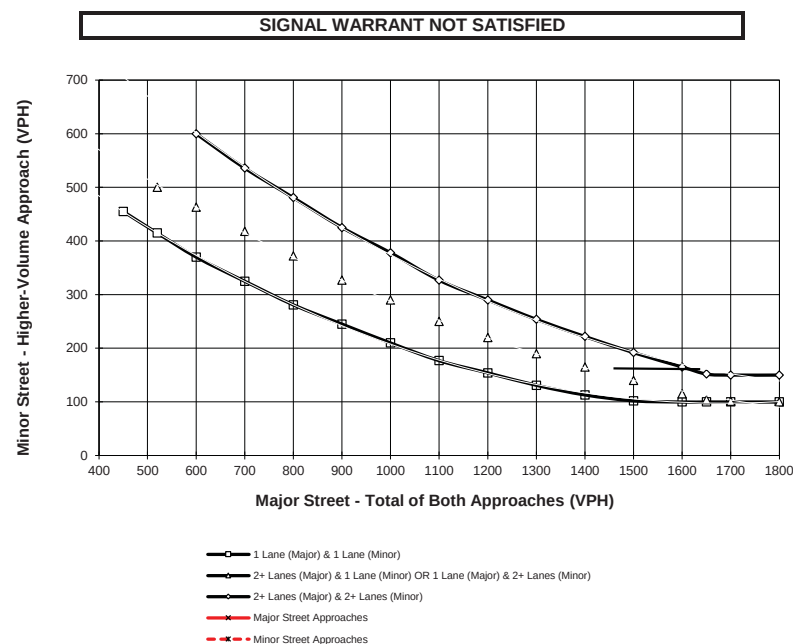
Intersection ID: #5

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

Traffic Conditions = Existing + Project AM PEAK HOUR WARRANTS

Major Street Name = **Samarkand Dr.** Total of Both Approaches (VPH) = **46**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Desert Knoll Av.** High Volume Approach (VPH) = **10**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

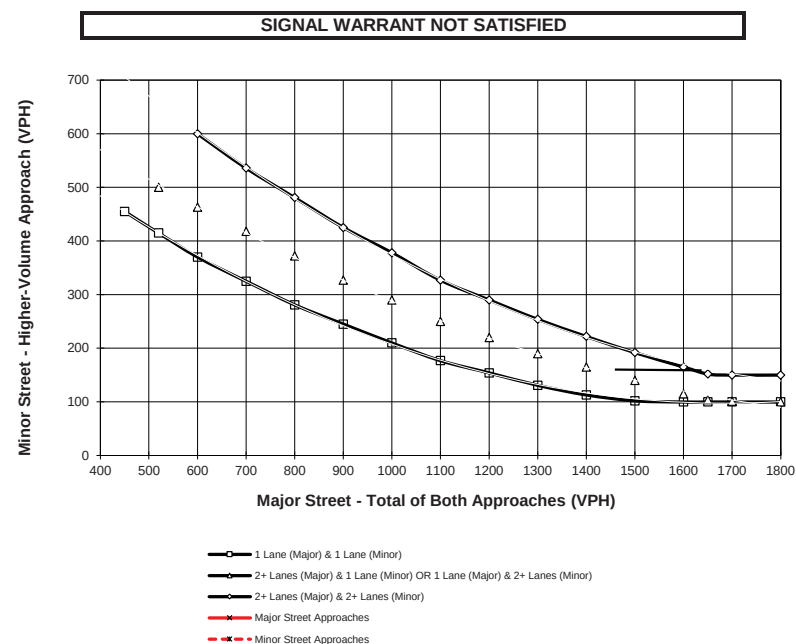
Intersection ID: #1

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

Traffic Conditions = Existing + Project PM PEAK HOUR WARRANTS

Major Street Name = **Samarkand Dr.** Total of Both Approaches (VPH) = **45**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Desert Knoll Av.** High Volume Approach (VPH) = **26**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

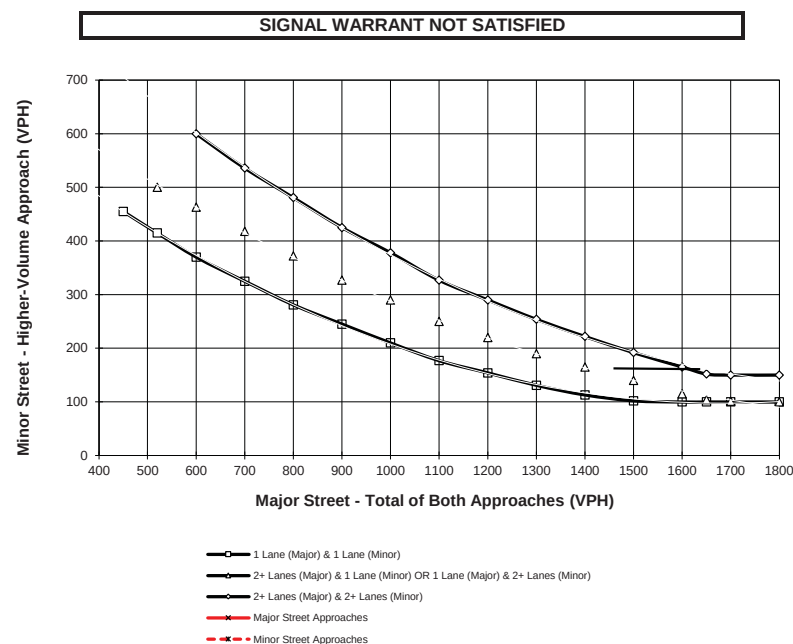
Intersection ID: #1

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

Traffic Conditions = Existing + Project PM PEAK HOUR WARRANTS

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **37**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Aztec Av.** High Volume Approach (VPH) = **13**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

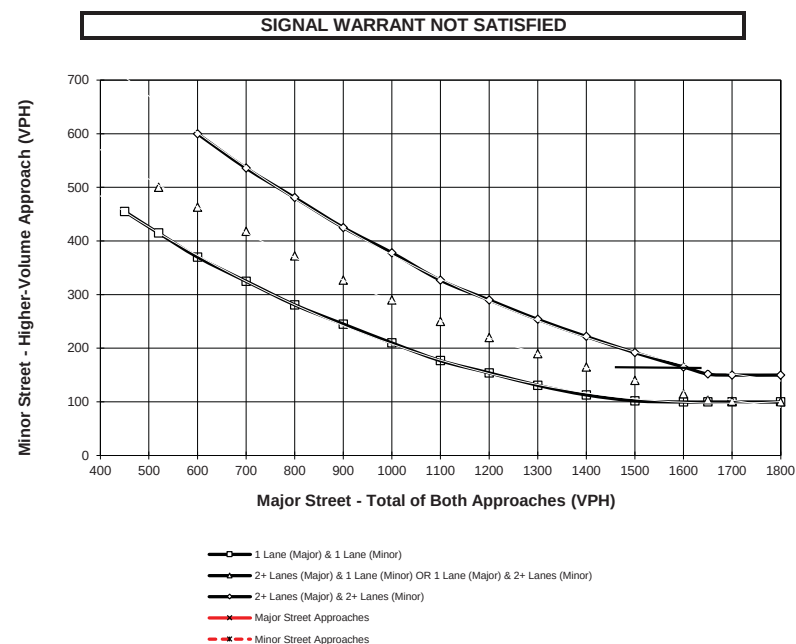
Intersection ID: #2

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

Traffic Conditions = Existing + Project AM PEAK HOUR WARRANTS

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **42**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Manana Dr.** High Volume Approach (VPH) = **28**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

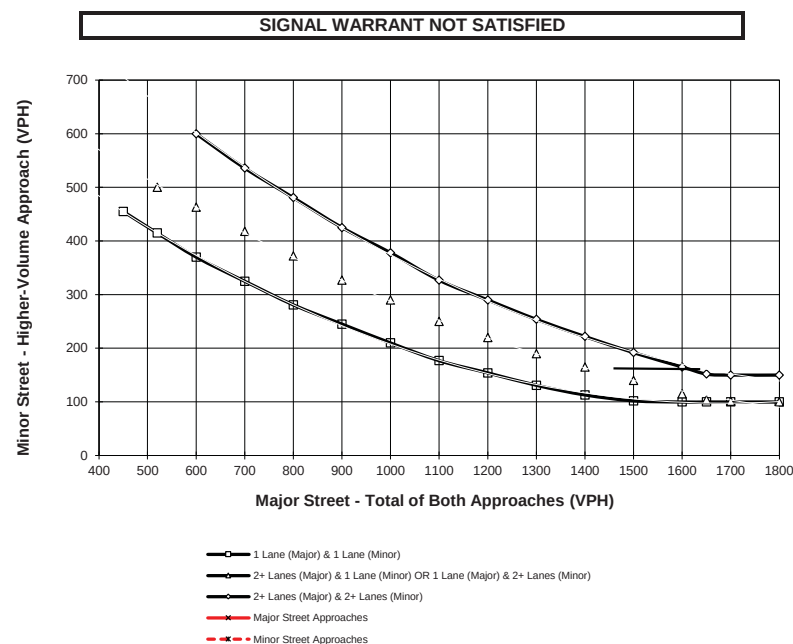
Intersection ID: #3

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

Traffic Conditions = **Existing + Project PM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **75**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Manana Dr.** High Volume Approach (VPH) = **22**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

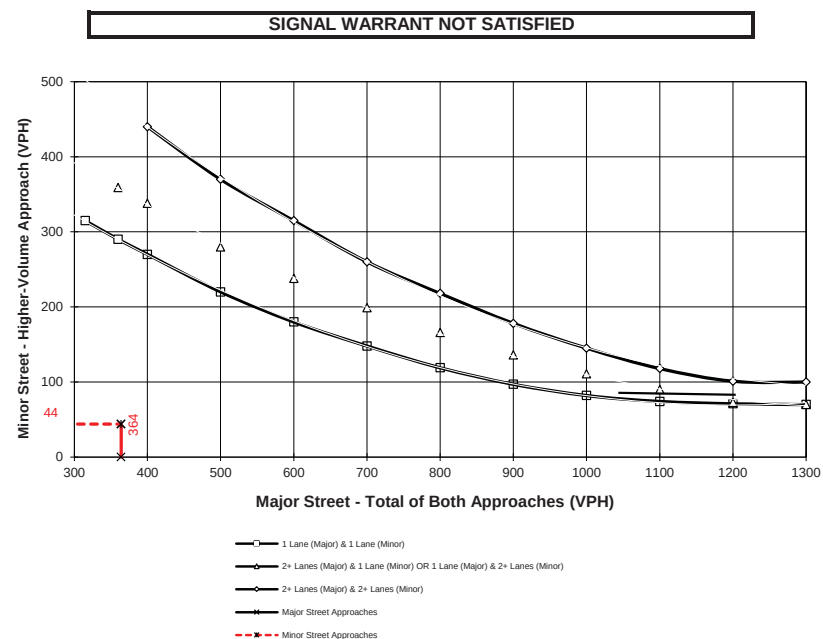
**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing + Project AM PEAK HOUR WARRANTS**

Major Street Name = **Two Mile Rd.** Total of Both Approaches (VPH) = **364**  
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Desert Knoll Av.** High Volume Approach (VPH) = **44**  
Number of Approach Lanes Minor Street = **1**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #4

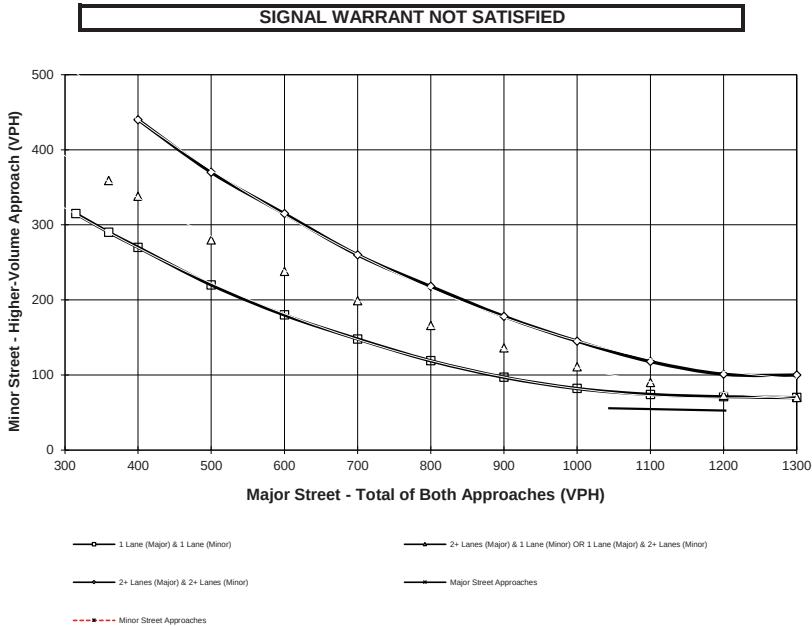
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = Existing + Project PM PEAK HOUR WARRANTS

Major Street Name = Two Mile Rd. Total of Both Approaches (VPH) = 278  
Number of Approach Lanes Major Street = 1

Minor Street Name = Desert Knoll Av. High Volume Approach (VPH) = 41  
Number of Approach Lanes Minor Street = 1



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #4

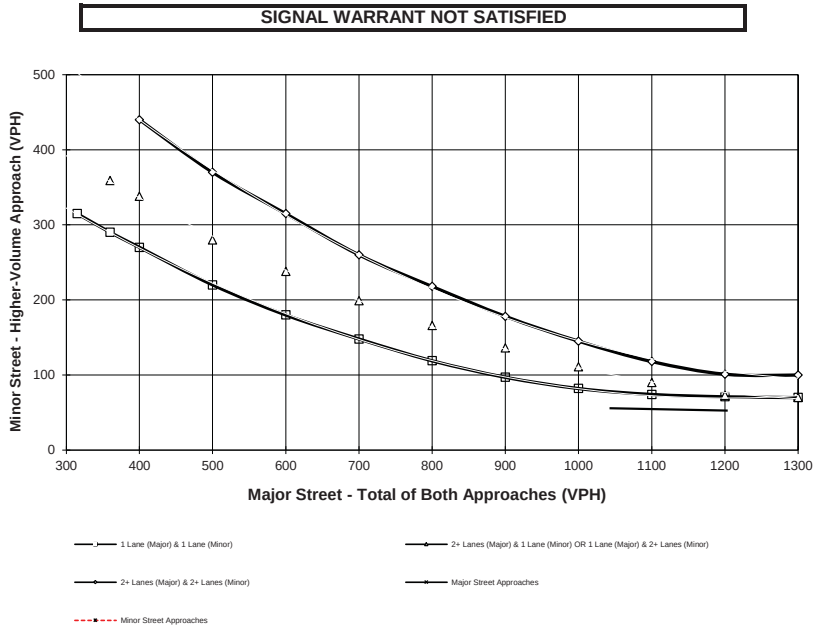
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = Existing + Project PM PEAK HOUR WARRANTS

Major Street Name = Two Mile Rd. Total of Both Approaches (VPH) = 202  
Number of Approach Lanes Major Street = 1

Minor Street Name = Marine Av. High Volume Approach (VPH) = 12  
Number of Approach Lanes Minor Street = 1



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

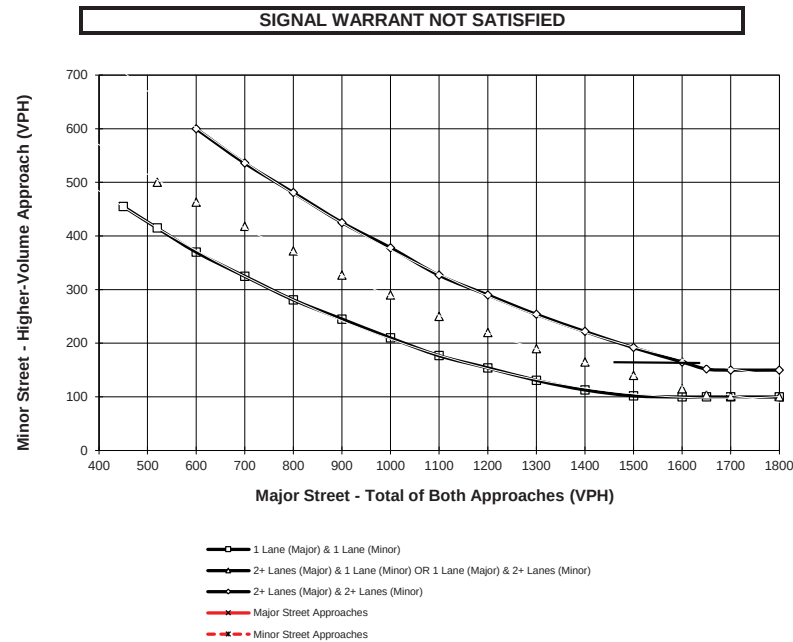
Intersection ID: #5

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

Traffic Conditions = **EAC (2027) AM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **8**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Aztec Av.** High Volume Approach (VPH) = **3**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

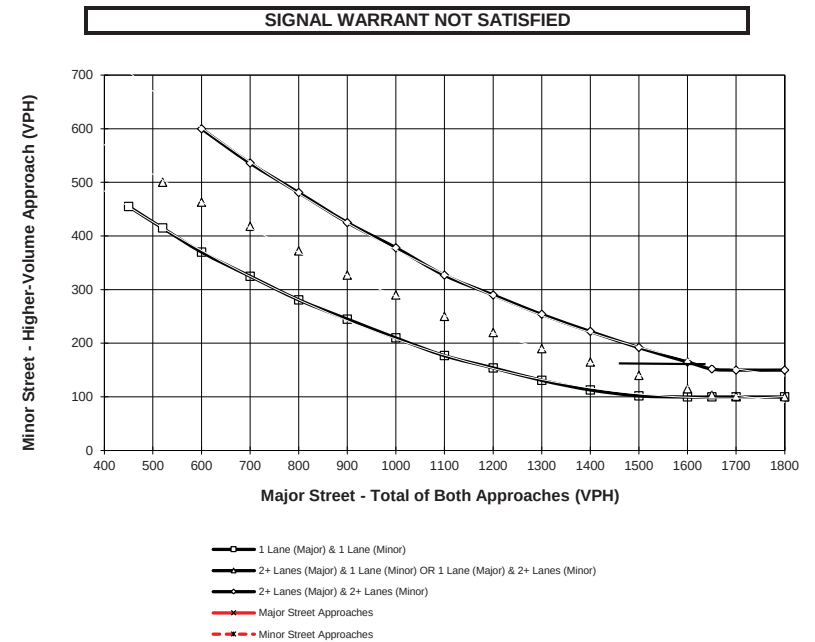
Intersection ID: #2

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

Traffic Conditions = **EAC (2027) PM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **16**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Aztec Av.** High Volume Approach (VPH) = **4**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

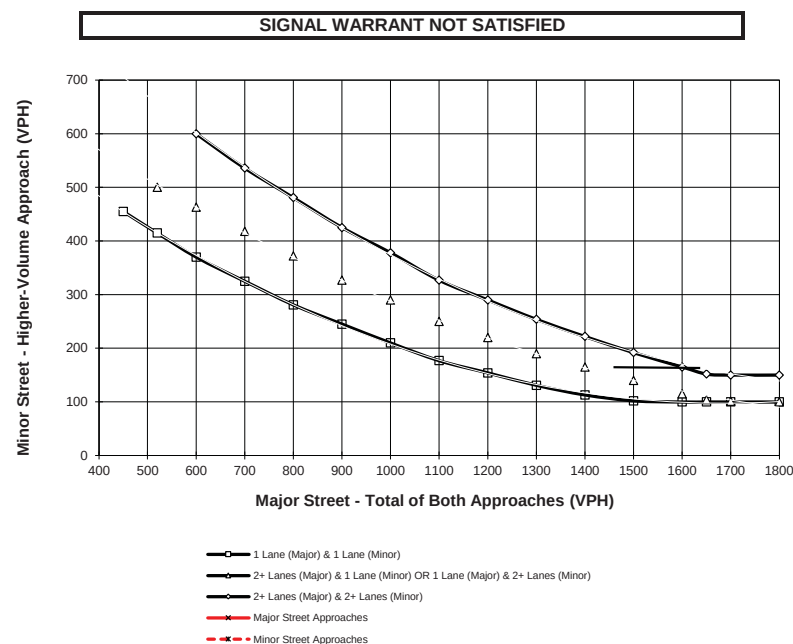
Intersection ID: #2

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

Traffic Conditions = **EAC (2027) AM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **24**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Manana Dr.** High Volume Approach (VPH) = **7**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

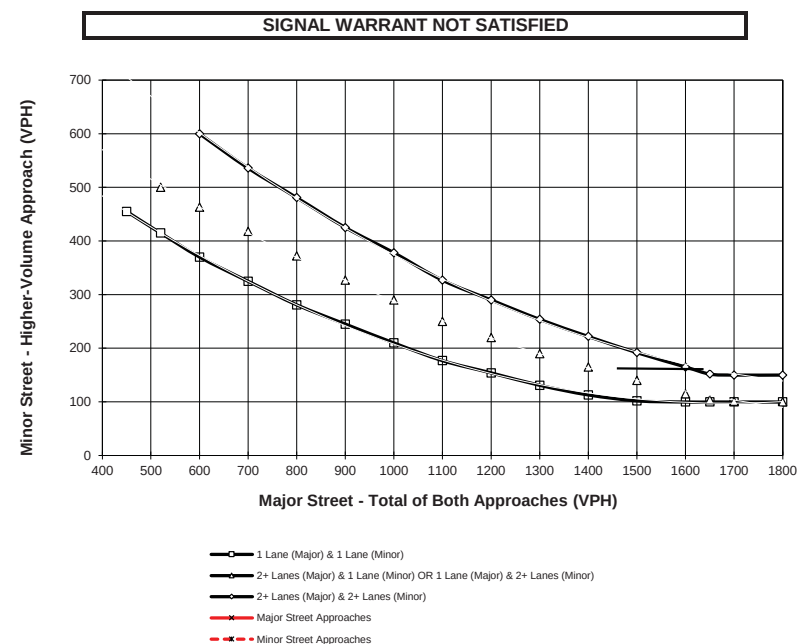
Intersection ID: #3

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

Traffic Conditions = **EAC (2027) PM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **40**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Manana Dr.** High Volume Approach (VPH) = **8**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

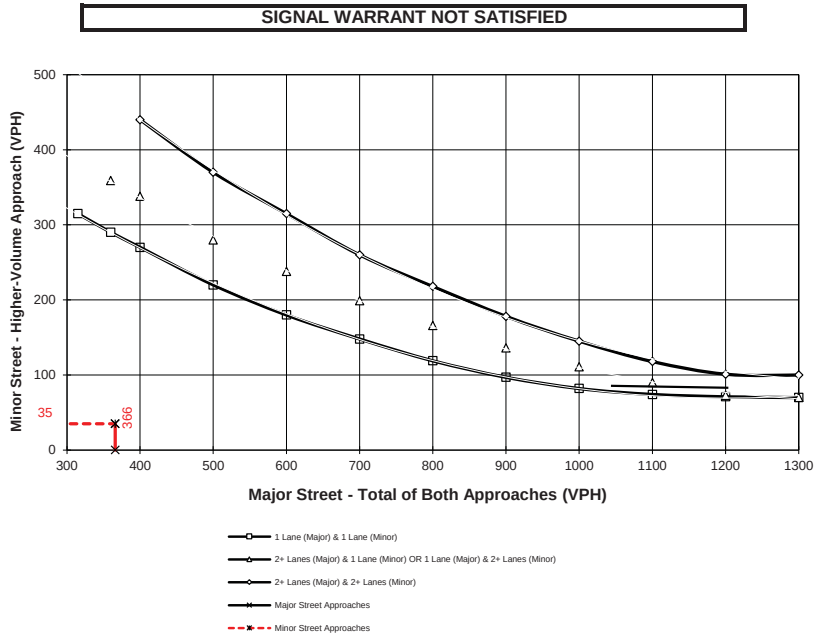
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = EAC (2027) AM PEAK HOUR WARRANTS

Major Street Name = Two Mile Rd. Total of Both Approaches (VPH) = 366  
Number of Approach Lanes Major Street = 1

Minor Street Name = Desert Knoll Av. High Volume Approach (VPH) = 35  
Number of Approach Lanes Minor Street = 1



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #4

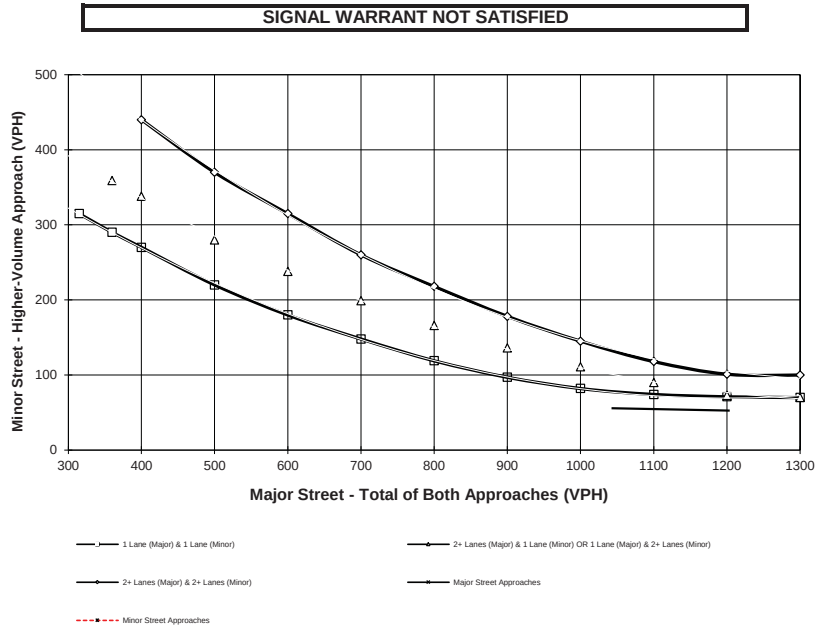
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = EAC (2027) PM PEAK HOUR WARRANTS

Major Street Name = Two Mile Rd. Total of Both Approaches (VPH) = 256  
Number of Approach Lanes Major Street = 1

Minor Street Name = Desert Knoll Av. High Volume Approach (VPH) = 39  
Number of Approach Lanes Minor Street = 1



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #4

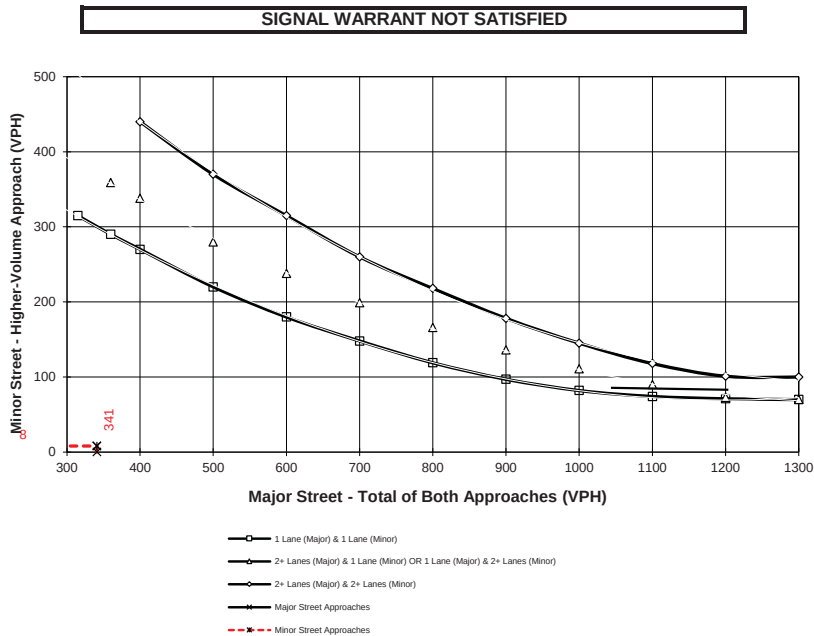
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = EAC (2027) AM PEAK HOUR WARRANTS

Major Street Name = Two Mile Rd. Total of Both Approaches (VPH) = 341  
Number of Approach Lanes Major Street = 1

Minor Street Name = Marine Av. High Volume Approach (VPH) = 8  
Number of Approach Lanes Minor Street = 1



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #5

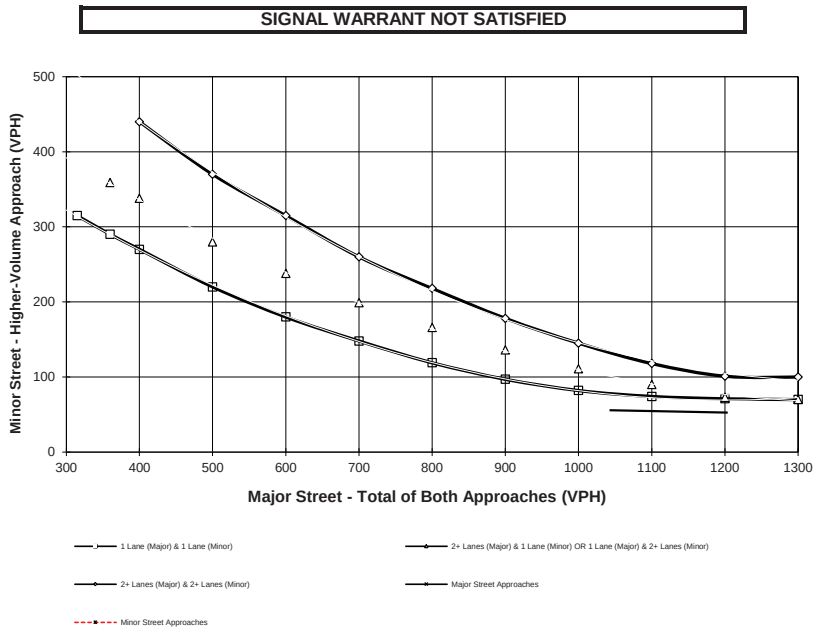
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = EAC (2027) PM PEAK HOUR WARRANTS

Major Street Name = Two Mile Rd. Total of Both Approaches (VPH) = 201  
Number of Approach Lanes Major Street = 1

Minor Street Name = Marine Av. High Volume Approach (VPH) = 7  
Number of Approach Lanes Minor Street = 1



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

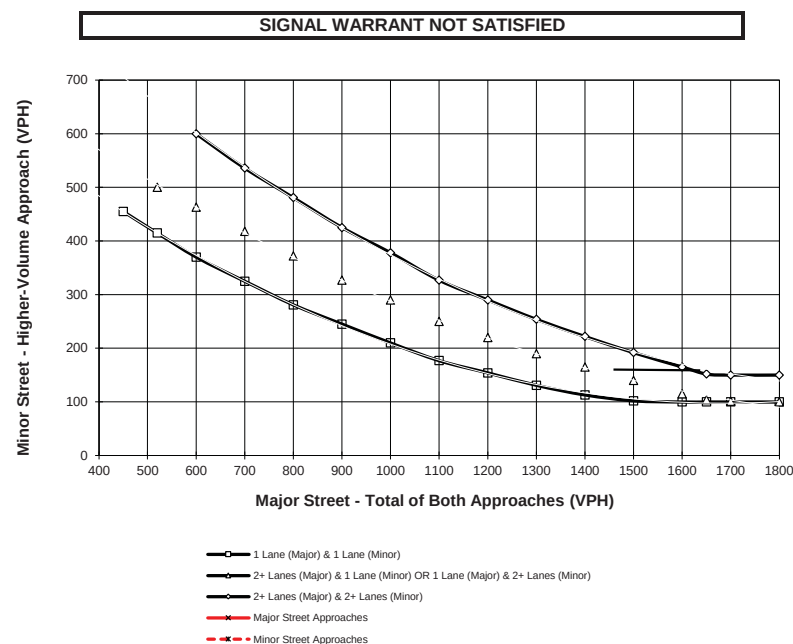
Intersection ID: #5

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

Traffic Conditions = **EAPC (2027) PM PEAK HOUR WARRANTS**

Major Street Name = **Samarkand Dr.** Total of Both Approaches (VPH) = **45**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Desert Knoll Av.** High Volume Approach (VPH) = **26**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

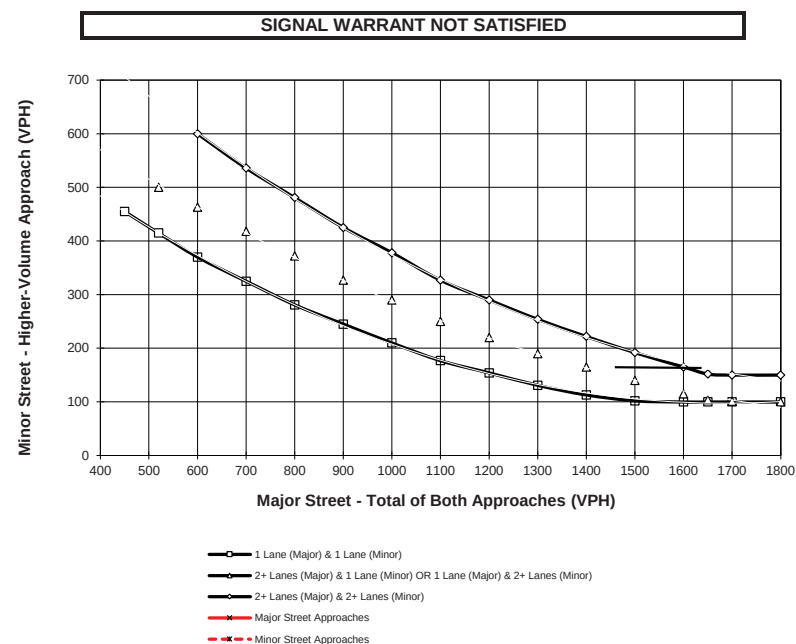
Intersection ID: #1

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

Traffic Conditions = **EAPC (2027) AM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **28**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Aztec Av.** High Volume Approach (VPH) = **7**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

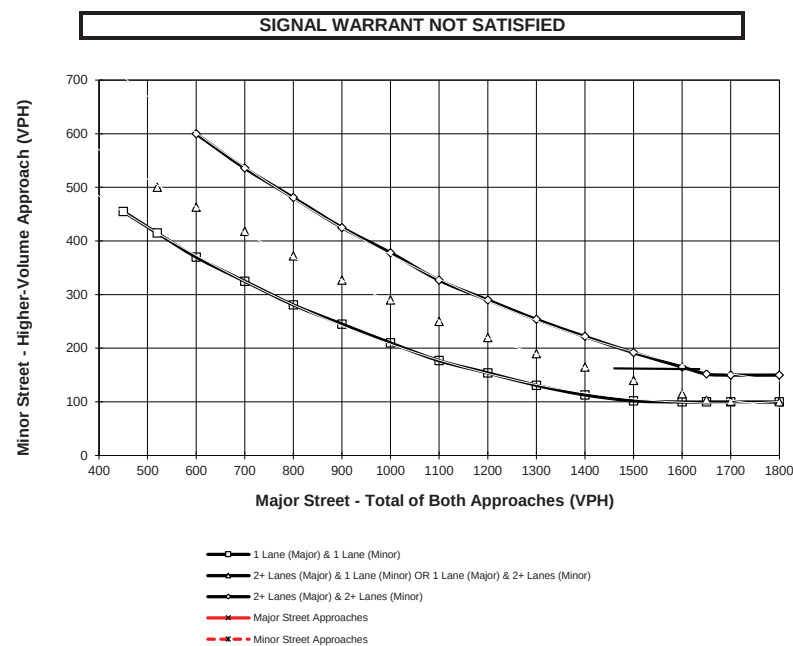
Intersection ID: #2

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

Traffic Conditions = **EAPC (2027) PM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **37**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Aztec Av.** High Volume Approach (VPH) = **13**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

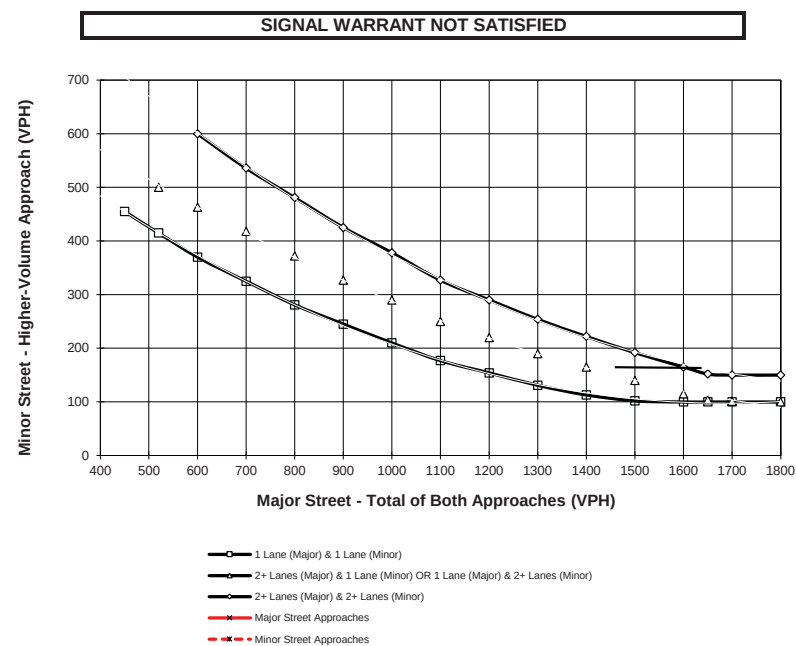
Intersection ID: #2

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

Traffic Conditions = **EAPC (2027) AM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **42**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Manana Dr.** High Volume Approach (VPH) = **28**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

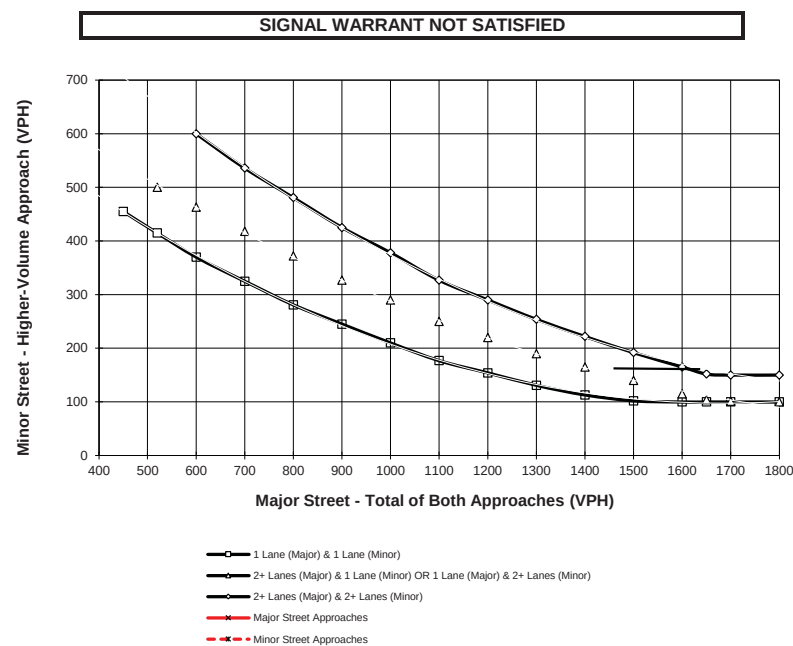
Intersection ID: #3

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

Traffic Conditions = **EAPC (2027) PM PEAK HOUR WARRANTS**

Major Street Name = **Desert Knoll Av.** Total of Both Approaches (VPH) = **77**  
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Manana Dr.** High Volume Approach (VPH) = **22**  
Number of Approach Lanes On Minor Street = **1**



\*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #3

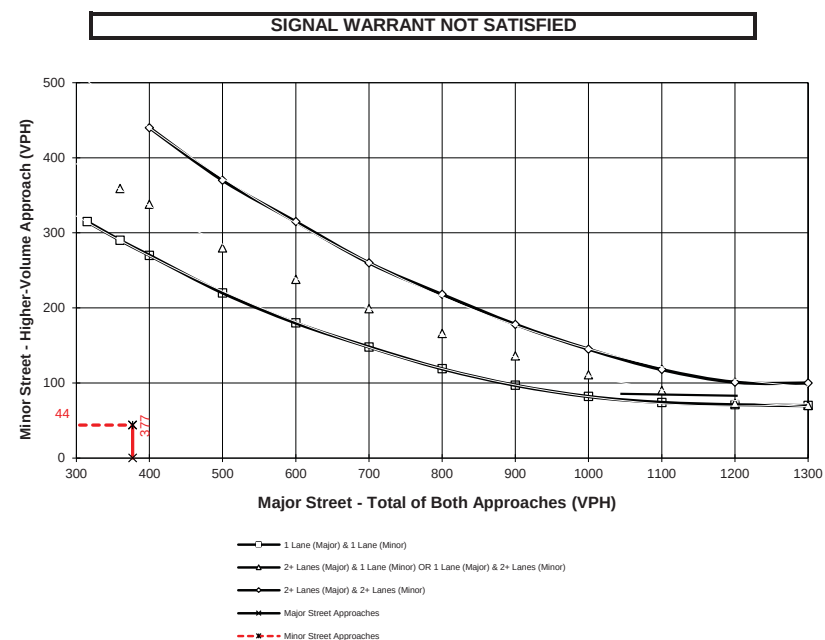
**Figure 4C-4. Warrant 3, Peak Hour (70% Factor)**

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC (2027) AM PEAK HOUR WARRANTS**

Major Street Name = **Two Mile Rd.** Total of Both Approaches (VPH) = **377**  
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Desert Knoll Av.** High Volume Approach (VPH) = **44**  
Number of Approach Lanes Minor Street = **1**



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #4

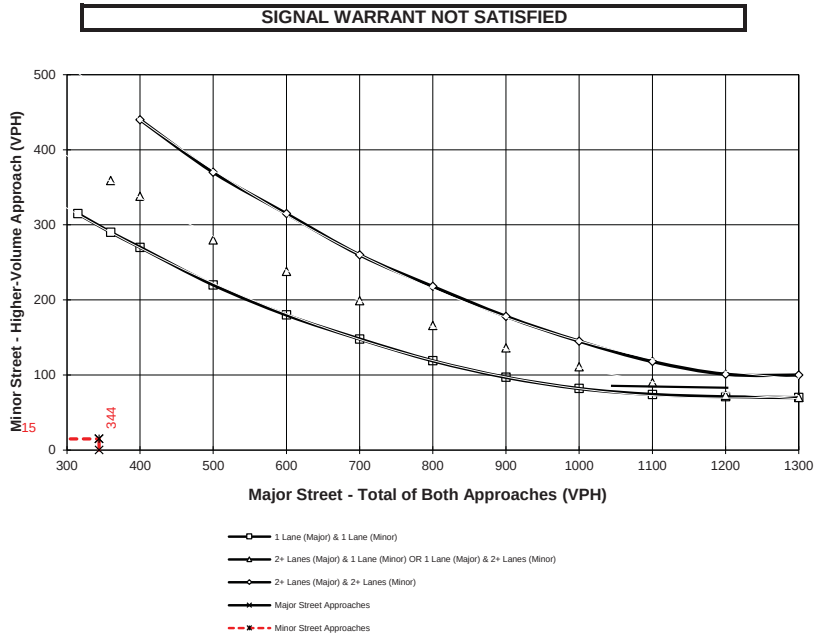
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = EAPC (2027) AM PEAK HOUR WARRANTS

Major Street Name = Two Mile Rd. Total of Both Approaches (VPH) = 344  
Number of Approach Lanes Major Street = 1

Minor Street Name = Marine Av. High Volume Approach (VPH) = 15  
Number of Approach Lanes Minor Street = 1



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #5

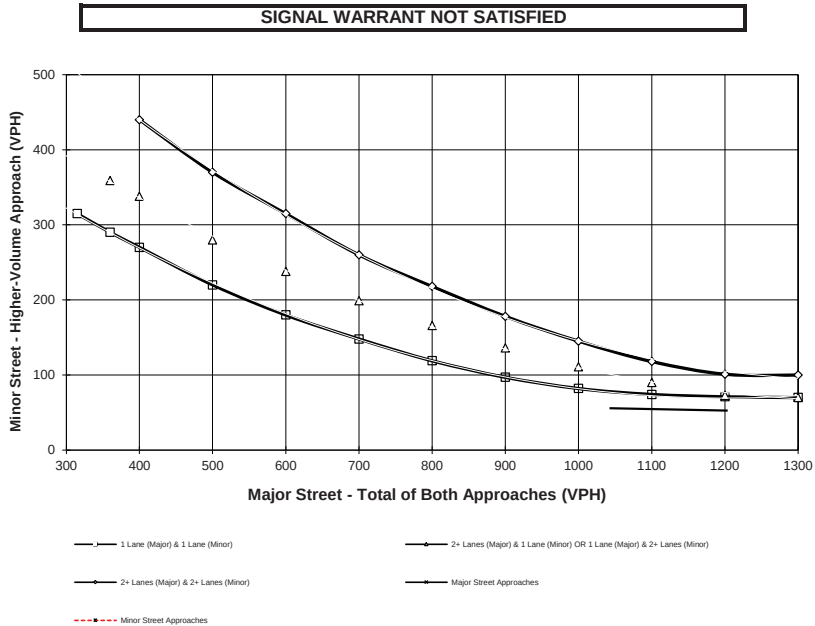
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = EAPC (2027) PM PEAK HOUR WARRANTS

Major Street Name = Two Mile Rd. Total of Both Approaches (VPH) = 209  
Number of Approach Lanes Major Street = 1

Minor Street Name = Marine Av. High Volume Approach (VPH) = 12  
Number of Approach Lanes Minor Street = 1



\*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Intersection ID: #5

**Figure 4C-103 (CA). Traffic Signal Warrants Worksheet  
(Average Traffic Estimate Form)**

| DIST                                                                            | CO                              | RTE  | PM | CALC | TRAFFIC CONDITIONS | 2027 w/ Project                               |
|---------------------------------------------------------------------------------|---------------------------------|------|----|------|--------------------|-----------------------------------------------|
| Jurisdiction:                                                                   | <u>City of Twentynine Palms</u> |      |    | CHK  | <u>JC</u>          | DATE <u>01/19/26</u>                          |
| Major Street:                                                                   | <u>Samarkand Dr.</u>            |      |    |      |                    | DATE                                          |
| Minor Street:                                                                   | <u>Desert Knoll Av.</u>         |      |    |      |                    | Critical Approach Speed (Major) <u>40</u> mph |
|                                                                                 |                                 |      |    |      |                    | Critical Approach Speed (Minor) <u>30</u> mph |
| Major Street Approach Lanes =                                                   | <u>1</u>                        | lane |    |      |                    | Minor Street Approach Lanes <u>1</u> lane     |
| Major Street Future ADT =                                                       | <u>332</u>                      | vpd  |    |      |                    | Minor Street Future ADT = <u>208</u> vpd      |
| Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... |                                 |      |    |      |                    | <input checked="" type="checkbox"/>           |
|                                                                                 |                                 |      |    |      |                    | or                                            |
| In built up area of isolated community of < 10,000 population .....             |                                 |      |    |      |                    | <input type="checkbox"/>                      |
|                                                                                 |                                 |      |    |      |                    | <b>RURAL (R)</b>                              |

(Based on Estimated Average Daily Traffic - See Note)

| URBAN                                                                            | RURAL                   | Minimum Requirements                                           |        |                                                                                 |       |
|----------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------|--------|---------------------------------------------------------------------------------|-------|
| CONDITION A - Minimum Vehicular Volume                                           | XX                      | ADT                                                            |        |                                                                                 |       |
| Satisfied                                                                        | Not Satisfied           | Vehicles Per Day on Major Street<br>(Total of Both Approaches) |        | Vehicles Per Day on Higher-Volume Minor Street Approach<br>(One Direction Only) |       |
| Major Street                                                                     | Minor Street            | Urban                                                          | Rural  | Urban                                                                           | Rural |
| 1 332                                                                            | 1 208                   | 8,000                                                          | 5,600  | 2,400                                                                           | 1,680 |
| 2 +                                                                              | 1                       | 9,600                                                          | 6,720  | 2,400                                                                           | 1,680 |
| 2 +                                                                              | 2 +                     | 9,600                                                          | 6,720  | 3,200                                                                           | 2,240 |
| 1                                                                                | 2 +                     | 8,000                                                          | 5,600  | 3,200                                                                           | 2,240 |
| CONDITION B - Interruption of Continuous Traffic                                 | XX                      | Vehicles Per Day on Major Street<br>(Total of Both Approaches) |        | Vehicles Per Day on Higher-Volume Minor Street Approach<br>(One Direction Only) |       |
| Satisfied                                                                        | Not Satisfied           | Urban                                                          | Rural  | Urban                                                                           | Rural |
| 1 332                                                                            | 1 208                   | 12,000                                                         | 8,400  | 1,200                                                                           | 850   |
| 2 +                                                                              | 1                       | 14,400                                                         | 10,080 | 1,200                                                                           | 850   |
| 2 +                                                                              | 2 +                     | 14,400                                                         | 10,080 | 1,600                                                                           | 1,120 |
| 1                                                                                | 2 +                     | 12,000                                                         | 8,400  | 1,600                                                                           | 1,120 |
| Combination of CONDITIONS A + B                                                  | XX                      | 2 CONDITIONS 80%                                               |        | 2 CONDITIONS 80%                                                                |       |
| Satisfied                                                                        | Not Satisfied           |                                                                |        |                                                                                 |       |
| No one condition satisfied, but following conditions fulfilled 80% of more ..... | <u>A</u> 6% <u>B</u> 4% |                                                                |        |                                                                                 |       |

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

**Figure 4C-103 (CA). Traffic Signal Warrants Worksheet  
(Average Traffic Estimate Form)**

| DIST                                                                            | CO                              | RTE  | PM | CALC | TRAFFIC CONDITIONS | 2027 w/ Project                               |
|---------------------------------------------------------------------------------|---------------------------------|------|----|------|--------------------|-----------------------------------------------|
| Jurisdiction:                                                                   | <u>City of Twentynine Palms</u> |      |    | CHK  | <u>JC</u>          | DATE <u>#SPILL!</u>                           |
| Major Street:                                                                   | <u>Utah Tr.</u>                 |      |    |      |                    | DATE                                          |
| Minor Street:                                                                   | <u>Samarkand Dr.</u>            |      |    |      |                    | Critical Approach Speed (Major) <u>45</u> mph |
|                                                                                 |                                 |      |    |      |                    | Critical Approach Speed (Minor) <u>30</u> mph |
| Major Street Approach Lanes =                                                   | <u>1</u>                        | lane |    |      |                    | Minor Street Approach Lanes <u>1</u> lane     |
| Major Street Future ADT =                                                       | <u>2,374</u>                    | vpd  |    |      |                    | Minor Street Future ADT = <u>187</u> vpd      |
| Speed limit or critical speed on major street traffic > 64 km/h (40 mph); ..... |                                 |      |    |      |                    | <input checked="" type="checkbox"/>           |
|                                                                                 |                                 |      |    |      |                    | or                                            |
| In built up area of isolated community of < 10,000 population .....             |                                 |      |    |      |                    | <input type="checkbox"/>                      |
|                                                                                 |                                 |      |    |      |                    | <b>RURAL (R)</b>                              |

(Based on Estimated Average Daily Traffic - See Note)

| URBAN                                                                            | RURAL                     | Minimum Requirements                                           |        |                                                                                 |       |
|----------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------|--------|---------------------------------------------------------------------------------|-------|
| CONDITION A - Minimum Vehicular Volume                                           | XX                        | ADT                                                            |        |                                                                                 |       |
| Satisfied                                                                        | Not Satisfied             | Vehicles Per Day on Major Street<br>(Total of Both Approaches) |        | Vehicles Per Day on Higher-Volume Minor Street Approach<br>(One Direction Only) |       |
| Major Street                                                                     | Minor Street              | Urban                                                          | Rural  | Urban                                                                           | Rural |
| 1 2,374                                                                          | 1 187                     | 8,000                                                          | 5,600  | 2,400                                                                           | 1,680 |
| 2 +                                                                              | 1                         | 9,600                                                          | 6,720  | 2,400                                                                           | 1,680 |
| 2 +                                                                              | 2 +                       | 9,600                                                          | 6,720  | 3,200                                                                           | 2,240 |
| 1                                                                                | 2 +                       | 8,000                                                          | 5,600  | 3,200                                                                           | 2,240 |
| CONDITION B - Interruption of Continuous Traffic                                 | XX                        | Vehicles Per Day on Major Street<br>(Total of Both Approaches) |        | Vehicles Per Day on Higher-Volume Minor Street Approach<br>(One Direction Only) |       |
| Satisfied                                                                        | Not Satisfied             | Urban                                                          | Rural  | Urban                                                                           | Rural |
| 1 2,374                                                                          | 1 187                     | 12,000                                                         | 8,400  | 1,200                                                                           | 850   |
| 2 +                                                                              | 1                         | 14,400                                                         | 10,080 | 1,200                                                                           | 850   |
| 2 +                                                                              | 2 +                       | 14,400                                                         | 10,080 | 1,600                                                                           | 1,120 |
| 1                                                                                | 2 +                       | 12,000                                                         | 8,400  | 1,600                                                                           | 1,120 |
| Combination of CONDITIONS A + B                                                  | XX                        | 2 CONDITIONS 80%                                               |        | 2 CONDITIONS 80%                                                                |       |
| Satisfied                                                                        | Not Satisfied             |                                                                |        |                                                                                 |       |
| No one condition satisfied, but following conditions fulfilled 80% of more ..... | <u>A</u> 11% <u>B</u> 22% |                                                                |        |                                                                                 |       |

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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**APPENDIX 5.1:**

**EXISTING PLUS PROJECT CONDITIONS**

**INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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## 1: Desert Knoll Av. &amp; Samarkand Dr.



| Lane Group              | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Configurations     |      |      |      |      |      |      |
| Traffic Volume (vph)    | 13   | 4    | 16   | 13   | 2    | 7    |
| Future Volume (vph)     | 13   | 4    | 16   | 13   | 2    | 7    |
| Ideal Flow (vphpl)      | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph)        | 30   |      |      | 30   | 30   |      |
| Link Distance (ft)      | 969  |      |      | 2636 | 437  |      |
| Travel Time (s)         | 22.0 |      |      | 59.9 | 9.9  |      |
| Peak Hour Factor        | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Shared Lane Traffic (%) |      |      |      |      |      |      |
| Sign Control            | Free |      |      | Free | Stop |      |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

## 1: Desert Knoll Av. &amp; Samarkand Dr.

| Intersection             |                                                                                   |      |                                                                                   |       |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 3.5                                                                               |      |                                                                                   |       |                                                                                   |      |
| Movement                 | EBT                                                                               | EBR  | WBL                                                                               | WBT   | NBL                                                                               | NBR  |
| Lane Configurations      |  |      |  |       |  |      |
| Traffic Vol, veh/h       | 13                                                                                | 4    | 16                                                                                | 13    | 2                                                                                 | 7    |
| Future Vol, veh/h        | 13                                                                                | 4    | 16                                                                                | 13    | 2                                                                                 | 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           | -                                                                                 | -    | -                                                                                 | -     | 0                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -                                                                                 | 0     | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -                                                                                 | 0     | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92                                                                                | 92    | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0                                                                                 | 0     | 0                                                                                 | 0    |
| Mvmt Flow                | 14                                                                                | 4    | 17                                                                                | 14    | 2                                                                                 | 8    |
|                          |                                                                                   |      |                                                                                   |       |                                                                                   |      |
| Major/Minor              | Major1                                                                            |      | Major2                                                                            |       | Minor1                                                                            |      |
| Conflicting Flow All     | 0                                                                                 | 0    | 18                                                                                | 0     | 65                                                                                | 16   |
| Stage 1                  | -                                                                                 | -    | -                                                                                 | -     | 16                                                                                | -    |
| Stage 2                  | -                                                                                 | -    | -                                                                                 | -     | 49                                                                                | -    |
| Critical Hdwy            | -                                                                                 | -    | 4.1                                                                               | -     | 6.4                                                                               | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -    | -                                                                                 | -     | 5.4                                                                               | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -    | -                                                                                 | -     | 5.4                                                                               | -    |
| Follow-up Hdwy           | -                                                                                 | -    | 2.2                                                                               | -     | 3.5                                                                               | 3.3  |
| Pot Cap-1 Maneuver       | -                                                                                 | -    | 1611                                                                              | -     | 945                                                                               | 1069 |
| Stage 1                  | -                                                                                 | -    | -                                                                                 | -     | 1012                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -                                                                                 | -     | 979                                                                               | -    |
| Platoon blocked, %       | -                                                                                 | -    |                                                                                   | -     |                                                                                   |      |
| Mov Cap-1 Maneuver       | -                                                                                 | -    | 1611                                                                              | -     | 935                                                                               | 1069 |
| Mov Cap-2 Maneuver       | -                                                                                 | -    | -                                                                                 | -     | 935                                                                               | -    |
| Stage 1                  | -                                                                                 | -    | -                                                                                 | -     | 1012                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -                                                                                 | -     | 968                                                                               | -    |
|                          |                                                                                   |      |                                                                                   |       |                                                                                   |      |
| Approach                 | EB                                                                                |      | WB                                                                                |       | NB                                                                                |      |
| HCM Ctrl Dly, s/v        | 0                                                                                 |      | 4                                                                                 |       | 8.51                                                                              |      |
| HCM LOS                  |                                                                                   |      |                                                                                   |       | A                                                                                 |      |
|                          |                                                                                   |      |                                                                                   |       |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBT  | EBR                                                                               | WBL   | WBT                                                                               |      |
| Capacity (veh/h)         | 1036                                                                              | -    | -                                                                                 | 993   | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.009                                                                             | -    | -                                                                                 | 0.011 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 8.5                                                                               | -    | -                                                                                 | 7.3   | 0                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -    | -                                                                                 | A     | A                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -    | -                                                                                 | 0     | -                                                                                 |      |

Lanes, Volumes, Timings  
 2: Desert Knoll Av. & Aztec Av.

Existing + Project AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 5                                                                                 | 2                                                                                 | 3                                                                                 | 5                                                                                 | 11                                                                                | 9                                                                                 |
| Future Volume (vph)         | 5                                                                                 | 2                                                                                 | 3                                                                                 | 5                                                                                 | 11                                                                                | 9                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 523                                                                               |                                                                                   |                                                                                   | 1360                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 11.9                                                                              |                                                                                   |                                                                                   | 30.9                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |        |        |       |        |      |      |
|--------------------------|--------|--------|-------|--------|------|------|
| Int Delay, s/veh         | 2.4    |        |       |        |      |      |
| Movement                 | EBL    | EBR    | NBL   | NBT    | SBT  | SBR  |
| Lane Configurations      | W      |        |       | W      | W    |      |
| Traffic Vol, veh/h       | 5      | 2      | 3     | 5      | 11   | 9    |
| Future Vol, veh/h        | 5      | 2      | 3     | 5      | 11   | 9    |
| Conflicting Peds, #/hr   | 0      | 0      | 0     | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free  | Free   | Free | Free |
| RT Channelized           | -      | None   | -     | None   | -    | None |
| Storage Length           | 0      | -      | -     | -      | -    | -    |
| Veh in Median Storage, # | 0      | -      | -     | 0      | 0    | -    |
| Grade, %                 | 0      | -      | -     | 0      | 0    | -    |
| Peak Hour Factor         | 56     | 56     | 56    | 56     | 56   | 56   |
| Heavy Vehicles, %        | 0      | 0      | 0     | 0      | 0    | 0    |
| Mvmt Flow                | 9      | 4      | 5     | 9      | 20   | 16   |
| Major/Minor              | Minor2 | Major1 |       | Major2 |      |      |
| Conflicting Flow All     | 47     | 28     | 36    | 0      | -    | 0    |
| Stage 1                  | 28     | -      | -     | -      | -    | -    |
| Stage 2                  | 20     | -      | -     | -      | -    | -    |
| Critical Hdwy            | 6.4    | 6.2    | 4.1   | -      | -    | -    |
| Critical Hdwy Stg 1      | 5.4    | -      | -     | -      | -    | -    |
| Critical Hdwy Stg 2      | 5.4    | -      | -     | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 3.3    | 2.2   | -      | -    | -    |
| Pot Cap-1 Maneuver       | 967    | 1053   | 1588  | -      | -    | -    |
| Stage 1                  | 1000   | -      | -     | -      | -    | -    |
| Stage 2                  | 1008   | -      | -     | -      | -    | -    |
| Platoon blocked, %       |        |        |       | -      | -    | -    |
| Mov Cap-1 Maneuver       | 964    | 1053   | 1588  | -      | -    | -    |
| Mov Cap-2 Maneuver       | 964    | -      | -     | -      | -    | -    |
| Stage 1                  | 997    | -      | -     | -      | -    | -    |
| Stage 2                  | 1008   | -      | -     | -      | -    | -    |
| Approach                 | EB     | NB     |       | SB     |      |      |
| HCM Ctrl Dly, s/v        | 8.69   | 2.73   |       | 0      |      |      |
| HCM LOS                  | A      |        |       |        |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1 | SBT    | SBR  |      |
| Capacity (veh/h)         | 675    | -      | 988   | -      | -    |      |
| HCM Lane V/C Ratio       | 0.003  | -      | 0.013 | -      | -    |      |
| HCM Ctrl Dly (s/v)       | 7.3    | 0      | 8.7   | -      | -    |      |
| HCM Lane LOS             | A      | A      | A     | -      | -    |      |
| HCM 95th %tile Q(veh)    | 0      | -      | 0     | -      | -    |      |

Lanes, Volumes, Timings  
 3: Desert Knoll Av. & Manana Dr.

Existing + Project AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations         |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)        | 26                                                                                | 2                                                                                 | 9                                                                                 | 12                                                                                | 3                                                                                 | 18                                                                                |
| Future Volume (vph)         | 26                                                                                | 2                                                                                 | 9                                                                                 | 12                                                                                | 3                                                                                 | 18                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)          | 401                                                                               |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 1360                                                                              |
| Travel Time (s)             | 9.1                                                                               |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                   | 30.9                                                                              |
| Peak Hour Factor            | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |           |       |        |      |      |
|--------------------------|-----------------------------------------------------------------------------------|-----------|-------|--------|------|------|
| Int Delay, s/veh         | 3.9                                                                               |           |       |        |      |      |
| Movement                 | WBL                                                                               | WBR       | NBT   | NBR    | SBL  | SBT  |
| Lane Configurations      |  |           |       |        |      |      |
| Traffic Vol, veh/h       | 26                                                                                | 2         | 9     | 12     | 3    | 18   |
| Future Vol, veh/h        | 26                                                                                | 2         | 9     | 12     | 3    | 18   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0         | 0     | 0      | 0    | 0    |
| Sign Control             | Stop                                                                              | Stop      | Free  | Free   | Free | Free |
| RT Channelized           | -                                                                                 | None      | -     | None   | -    | None |
| Storage Length           | 0                                                                                 | -         | -     | -      | -    | -    |
| Veh in Median Storage, # | 0                                                                                 | -         | 0     | -      | -    | 0    |
| Grade, %                 | 0                                                                                 | -         | 0     | -      | -    | 0    |
| Peak Hour Factor         | 58                                                                                | 58        | 58    | 58     | 58   | 58   |
| Heavy Vehicles, %        | 0                                                                                 | 0         | 0     | 0      | 0    | 0    |
| Mvmt Flow                | 45                                                                                | 3         | 16    | 21     | 5    | 31   |
|                          |                                                                                   |           |       |        |      |      |
| Major/Minor              | Minor1                                                                            | Major1    |       | Major2 |      |      |
| Conflicting Flow All     | 67                                                                                | 26        | 0     | 0      | 36   | 0    |
| Stage 1                  | 26                                                                                | -         | -     | -      | -    | -    |
| Stage 2                  | 41                                                                                | -         | -     | -      | -    | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2       | -     | -      | 4.1  | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -         | -     | -      | -    | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -         | -     | -      | -    | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3       | -     | -      | 2.2  | -    |
| Pot Cap-1 Maneuver       | 943                                                                               | 1056      | -     | -      | 1588 | -    |
| Stage 1                  | 1002                                                                              | -         | -     | -      | -    | -    |
| Stage 2                  | 986                                                                               | -         | -     | -      | -    | -    |
| Platoon blocked, %       |                                                                                   |           | -     | -      |      | -    |
| Mov Cap-1 Maneuver       | 940                                                                               | 1056      | -     | -      | 1588 | -    |
| Mov Cap-2 Maneuver       | 940                                                                               | -         | -     | -      | -    | -    |
| Stage 1                  | 1002                                                                              | -         | -     | -      | -    | -    |
| Stage 2                  | 983                                                                               | -         | -     | -      | -    | -    |
|                          |                                                                                   |           |       |        |      |      |
| Approach                 | WB                                                                                | NB        |       | SB     |      |      |
| HCM Ctrl Dly, s/v        | 9                                                                                 | 0         |       | 1.04   |      |      |
| HCM LOS                  | A                                                                                 |           |       |        |      |      |
|                          |                                                                                   |           |       |        |      |      |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBR WBLn1 | SBL   | SBT    |      |      |
| Capacity (veh/h)         | -                                                                                 | -         | 947   | 257    | -    |      |
| HCM Lane V/C Ratio       | -                                                                                 | -         | 0.051 | 0.003  | -    |      |
| HCM Ctrl Dly (s/v)       | -                                                                                 | -         | 9     | 7.3    | 0    |      |
| HCM Lane LOS             | -                                                                                 | -         | A     | A      | A    |      |
| HCM 95th %tile Q(veh)    | -                                                                                 | -         | 0.2   | 0      | -    |      |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |  |  |  |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)        | 16                                                                                | 151                                                                               | 25                                                                                | 8                                                                                 | 160                                                                               | 3                                                                                 | 29                                                                                | 1                                                                                  | 4                                                                                   | 5                                                                                   | 1                                                                                   | 38                                                                                  |
| Future Volume (vph)         | 16                                                                                | 151                                                                               | 25                                                                                | 8                                                                                 | 160                                                                               | 3                                                                                 | 29                                                                                | 1                                                                                  | 4                                                                                   | 5                                                                                   | 1                                                                                   | 38                                                                                  |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 80                                                                                |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 1358                                                                              |                                                                                   |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 932                                                                                |                                                                                     |                                                                                     | 646                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 20.6                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 21.2                                                                               |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |
| Peak Hour Factor            | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                               | 0.73                                                                                | 0.73                                                                                | 0.73                                                                                | 0.73                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

4: Desert Knoll Av. & Two Mile Rd.

| Intersection             |        |       |      |        |       |      |        |       |      |        |      |      |
|--------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|------|------|
| Int Delay, s/veh         | 2.5    |       |      |        |       |      |        |       |      |        |      |      |
| Movement                 | EBL    | EBT   | EBR  | WBL    | WBT   | WBR  | NBL    | NBT   | NBR  | SBL    | SBT  | SBR  |
| Lane Configurations      | ↰      | ↑     | ↱    |        | ↰     | ↱    |        | ↰     |      |        | ↱    |      |
| Traffic Vol, veh/h       | 16     | 151   | 25   | 8      | 160   | 3    | 29     | 1     | 4    | 5      | 1    | 38   |
| Future Vol, veh/h        | 16     | 151   | 25   | 8      | 160   | 3    | 29     | 1     | 4    | 5      | 1    | 38   |
| 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           | 80     | -     | 0    | -      | -     | 50   | -      | -     | -    | -      | -    | -    |
| Veh in Median Storage, # | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Grade, %                 | -      | 0     | -    | -      | 0     | -    | -      | 0     | -    | -      | 0    | -    |
| Peak Hour Factor         | 73     | 73    | 73   | 73     | 73    | 73   | 73     | 73    | 73   | 73     | 73   | 73   |
| Heavy Vehicles, %        | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0     | 0    | 0      | 0    | 0    |
| Mvmt Flow                | 22     | 207   | 34   | 11     | 219   | 4    | 40     | 1     | 5    | 7      | 1    | 52   |
| Major/Minor              | Major1 |       |      | Major2 |       |      | Minor1 |       |      | Minor2 |      |      |
| Conflicting Flow All     | 223    | 0     | 0    | 241    | 0     | 0    | 492    | 496   | 207  | 492    | 526  | 219  |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 251    | 251   | -    | 241    | 241  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 242    | 245   | -    | 251    | 285  | -    |
| Critical Hdwy            | 4.1    | -     | -    | 4.1    | -     | -    | 7.1    | 6.5   | 6.2  | 7.1    | 6.5  | 6.2  |
| Critical Hdwy Stg 1      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Critical Hdwy Stg 2      | -      | -     | -    | -      | -     | -    | 6.1    | 5.5   | -    | 6.1    | 5.5  | -    |
| Follow-up Hdwy           | 2.2    | -     | -    | 2.2    | -     | -    | 3.5    | 4     | 3.3  | 3.5    | 4    | 3.3  |
| Pot Cap-1 Maneuver       | 1357   | -     | -    | 1337   | -     | -    | 490    | 478   | 839  | 490    | 460  | 826  |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 758    | 703   | -    | 767    | 710  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 766    | 707   | -    | 757    | 679  | -    |
| Platoon blocked, %       | -      | -     | -    | -      | -     | -    | -      | -     | -    | -      | -    | -    |
| Mov Cap-1 Maneuver       | 1357   | -     | -    | 1337   | -     | -    | 446    | 466   | 839  | 473    | 448  | 826  |
| Mov Cap-2 Maneuver       | -      | -     | -    | -      | -     | -    | 446    | 466   | -    | 473    | 448  | -    |
| Stage 1                  | -      | -     | -    | -      | -     | -    | 746    | 692   | -    | 760    | 703  | -    |
| Stage 2                  | -      | -     | -    | -      | -     | -    | 710    | 700   | -    | 739    | 668  | -    |
| Approach                 | EB     |       |      | WB     |       |      | NB     |       |      | SB     |      |      |
| HCM Ctrl Dly, s/v        | 0.64   |       |      | 0.36   |       |      | 13.44  |       |      | 10.23  |      |      |
| HCM LOS                  |        |       |      |        |       |      | B      |       |      | B      |      |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL   | EBT  | EBR    | WBL   | WBT  | WBR    | SBLn1 |      |        |      |      |
| Capacity (veh/h)         | 473    | 1357  | -    | -      | 86    | -    | -      | 748   |      |        |      |      |
| HCM Lane V/C Ratio       | 0.099  | 0.016 | -    | -      | 0.008 | -    | -      | 0.081 |      |        |      |      |
| HCM Ctrl Dly (s/v)       | 13.4   | 7.7   | -    | -      | 7.7   | 0    | -      | 10.2  |      |        |      |      |
| HCM Lane LOS             | B      | A     | -    | -      | A     | A    | -      | B     |      |        |      |      |
| HCM 95th %tile Q(veh)    | 0.3    | 0     | -    | -      | 0     | -    | -      | 0.3   |      |        |      |      |

Lanes, Volumes, Timings  
5: Marine Av. & Two Mile Rd.

Existing + Project AM Peak Hour

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 2                                                                                 | 156                                                                               | 2                                                                                 | 1                                                                                 | 163                                                                               | 7                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 10                                                                                  | 1                                                                                   | 4                                                                                   |
| Future Volume (vph)         | 2                                                                                 | 156                                                                               | 2                                                                                 | 1                                                                                 | 163                                                                               | 7                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 10                                                                                  | 1                                                                                   | 4                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 404                                                                               |                                                                                   |                                                                                   | 287                                                                                |                                                                                     |                                                                                     | 353                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                                |                                                                                     |                                                                                     | 8.0                                                                                 |                                                                                     |
| Peak Hour Factor            | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                               | 0.71                                                                                | 0.71                                                                                | 0.71                                                                                | 0.71                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↰    |      |      | ↰    | ↰    |      | ↰    |      |      | ↰    |      |
| Traffic Vol, veh/h       | 2    | 156  | 2    | 1    | 163  | 7    | 1    | 1    | 2    | 10   | 1    | 4    |
| Future Vol, veh/h        | 2    | 156  | 2    | 1    | 163  | 7    | 1    | 1    | 2    | 10   | 1    | 4    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 50   | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 71   | 71   | 71   | 71   | 71   | 71   | 71   | 71   | 71   | 71   | 71   | 71   |
| Heavy Vehicles, %        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 3    | 220  | 3    | 1    | 230  | 10   | 1    | 1    | 3    | 14   | 1    | 6    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |     |     | Minor2 |     |     |
|----------------------|--------|---|---|--------|---|---|--------|-----|-----|--------|-----|-----|
| Conflicting Flow All | 239    | 0 | 0 | 223    | 0 | 0 | 460    | 469 | 221 | 458    | 461 | 230 |
| Stage 1              | -      | - | - | -      | - | - | 227    | 227 | -   | 232    | 232 | -   |
| Stage 2              | -      | - | - | -      | - | - | 233    | 242 | -   | 226    | 228 | -   |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.1    | 6.5 | 6.2 | 7.1    | 6.5 | 6.2 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4   | 3.3 | 3.5    | 4   | 3.3 |
| Pot Cap-1 Maneuver   | 1339   | - | - | 1358   | - | - | 515    | 495 | 824 | 516    | 501 | 815 |
| Stage 1              | -      | - | - | -      | - | - | 780    | 720 | -   | 775    | 716 | -   |
| Stage 2              | -      | - | - | -      | - | - | 774    | 709 | -   | 781    | 719 | -   |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -   | -   | -      | -   | -   |
| Mov Cap-1 Maneuver   | 1339   | - | - | 1358   | - | - | 508    | 493 | 824 | 511    | 499 | 815 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 508    | 493 | -   | 511    | 499 | -   |
| Stage 1              | -      | - | - | -      | - | - | 779    | 718 | -   | 774    | 715 | -   |
| Stage 2              | -      | - | - | -      | - | - | 767    | 708 | -   | 775    | 717 | -   |

| Approach          | EB  |  |  | WB   |  |  | NB    |  |  | SB   |  |  |
|-------------------|-----|--|--|------|--|--|-------|--|--|------|--|--|
| HCM Ctrl Dly, s/v | 0.1 |  |  | 0.04 |  |  | 10.83 |  |  | 11.6 |  |  |
| HCM LOS           |     |  |  |      |  |  | B     |  |  | B    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 623   | 1339  | -   | -   | 11    | -   | -   | 566   |
| HCM Lane V/C Ratio    | 0.009 | 0.002 | -   | -   | 0.001 | -   | -   | 0.037 |
| HCM Ctrl Dly (s/v)    | 10.8  | 7.7   | -   | -   | 7.7   | 0   | -   | 11.6  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -   | 0     | -   | -   | 0.1   |

Lanes, Volumes, Timings  
6: Adobe Rd. & Two Mile Rd.

Existing + Project AM Peak Hour

|                         |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group              | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 110                                                                               | 106                                                                               | 26                                                                                | 48                                                                                | 149                                                                               | 129                                                                               | 16                                                                                | 368                                                                                | 37                                                                                  | 10                                                                                  | 119                                                                                 | 72                                                                                  |
| Future Volume (vph)     | 110                                                                               | 106                                                                               | 26                                                                                | 48                                                                                | 149                                                                               | 129                                                                               | 16                                                                                | 368                                                                                | 37                                                                                  | 10                                                                                  | 119                                                                                 | 72                                                                                  |
| Ideal Flow (vphpl)      | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)     | 120                                                                               |                                                                                   | 120                                                                               | 90                                                                                |                                                                                   | 90                                                                                | 80                                                                                |                                                                                    | 50                                                                                  | 100                                                                                 |                                                                                     | 0                                                                                   |
| Storage Lanes           | 1                                                                                 |                                                                                   | 1                                                                                 | 1                                                                                 |                                                                                   | 2                                                                                 | 1                                                                                 |                                                                                    | 1                                                                                   | 1                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)       | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Right Turn on Red       |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                   | Yes                                                                               |                                                                                   |                                                                                    | Yes                                                                                 |                                                                                     |                                                                                     | Yes                                                                                 |
| Link Speed (mph)        |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 40                                                                                 |                                                                                     |                                                                                     | 55                                                                                  |                                                                                     |
| Link Distance (ft)      |                                                                                   | 632                                                                               |                                                                                   |                                                                                   | 1344                                                                              |                                                                                   |                                                                                   | 691                                                                                |                                                                                     |                                                                                     | 541                                                                                 |                                                                                     |
| Travel Time (s)         |                                                                                   | 9.6                                                                               |                                                                                   |                                                                                   | 20.4                                                                              |                                                                                   |                                                                                   | 11.8                                                                               |                                                                                     |                                                                                     | 6.7                                                                                 |                                                                                     |
| Peak Hour Factor        | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Shared Lane Traffic (%) |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Turn Type               | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                | Perm                                                                              | Prot                                                                              | NA                                                                                 | Perm                                                                                | Prot                                                                                | NA                                                                                  |                                                                                     |
| Protected Phases        | 7                                                                                 | 4                                                                                 |                                                                                   | 3                                                                                 | 8                                                                                 |                                                                                   | 5                                                                                 | 2                                                                                  |                                                                                     | 1                                                                                   | 6                                                                                   |                                                                                     |
| Permitted Phases        |                                                                                   |                                                                                   | 4                                                                                 |                                                                                   |                                                                                   | 8                                                                                 |                                                                                   |                                                                                    | 2                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Detector Phase          | 7                                                                                 | 4                                                                                 | 4                                                                                 | 3                                                                                 | 8                                                                                 | 8                                                                                 | 5                                                                                 | 2                                                                                  | 2                                                                                   | 1                                                                                   | 6                                                                                   |                                                                                     |
| Switch Phase            |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Minimum Initial (s)     | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                               | 5.0                                                                                | 5.0                                                                                 | 5.0                                                                                 | 5.0                                                                                 |                                                                                     |
| Minimum Split (s)       | 9.5                                                                               | 22.5                                                                              | 22.5                                                                              | 9.5                                                                               | 22.5                                                                              | 22.5                                                                              | 9.5                                                                               | 22.5                                                                               | 22.5                                                                                | 9.5                                                                                 | 22.5                                                                                |                                                                                     |
| Total Split (s)         | 27.0                                                                              | 35.0                                                                              | 35.0                                                                              | 18.0                                                                              | 26.0                                                                              | 26.0                                                                              | 13.0                                                                              | 36.0                                                                               | 36.0                                                                                | 11.0                                                                                | 34.0                                                                                |                                                                                     |
| Total Split (%)         | 27.0%                                                                             | 35.0%                                                                             | 35.0%                                                                             | 18.0%                                                                             | 26.0%                                                                             | 26.0%                                                                             | 13.0%                                                                             | 36.0%                                                                              | 36.0%                                                                               | 11.0%                                                                               | 34.0%                                                                               |                                                                                     |
| Maximum Green (s)       | 22.5                                                                              | 30.5                                                                              | 30.5                                                                              | 13.5                                                                              | 21.5                                                                              | 21.5                                                                              | 8.5                                                                               | 31.5                                                                               | 31.5                                                                                | 6.5                                                                                 | 29.5                                                                                |                                                                                     |
| Yellow Time (s)         | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                               | 3.5                                                                                | 3.5                                                                                 | 3.5                                                                                 | 3.5                                                                                 |                                                                                     |
| All-Red Time (s)        | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                               | 1.0                                                                                | 1.0                                                                                 | 1.0                                                                                 | 1.0                                                                                 |                                                                                     |
| Lost Time Adjust (s)    | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |                                                                                     |
| Total Lost Time (s)     | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                               | 4.5                                                                                | 4.5                                                                                 | 4.5                                                                                 | 4.5                                                                                 |                                                                                     |
| Lead/Lag                | Lag                                                                               | Lead                                                                              | Lead                                                                              | Lag                                                                               | Lead                                                                              | Lead                                                                              | Lead                                                                              | Lag                                                                                | Lag                                                                                 | Lead                                                                                | Lag                                                                                 |                                                                                     |
| Lead-Lag Optimize?      | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |                                                                                     |
| Vehicle Extension (s)   | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                               | 3.0                                                                                | 3.0                                                                                 | 3.0                                                                                 | 3.0                                                                                 |                                                                                     |
| Recall Mode             | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | None                                                                              | C-Max                                                                              | C-Max                                                                               | None                                                                                | C-Max                                                                               |                                                                                     |
| Walk Time (s)           |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                               | 7.0                                                                               |                                                                                   | 7.0                                                                                | 7.0                                                                                 |                                                                                     | 7.0                                                                                 |                                                                                     |
| Flash Don't Walk (s)    |                                                                                   | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                              | 11.0                                                                              |                                                                                   | 11.0                                                                               | 11.0                                                                                |                                                                                     | 11.0                                                                                |                                                                                     |
| Pedestrian Calls (#/hr) |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                 | 5                                                                                 |                                                                                   | 5                                                                                  | 5                                                                                   |                                                                                     | 5                                                                                   |                                                                                     |

Intersection Summary

Area Type: Other

Cycle Length: 100

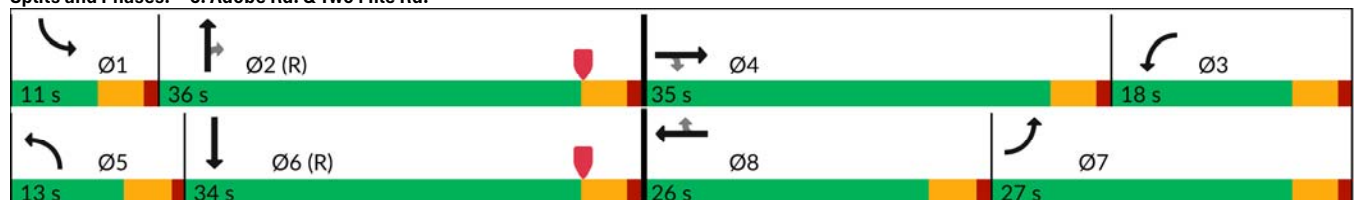
Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Adobe Rd. & Two Mile Rd.



HCM 7th Signalized Intersection Summary  
6: Adobe Rd. & Two Mile Rd.

Existing + Project AM Peak Hour

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 110                                                                               | 106                                                                               | 26                                                                                | 48                                                                                | 149                                                                               | 129                                                                               | 16                                                                                | 368                                                                                | 37                                                                                  | 10                                                                                  | 119                                                                                 | 72                                                                                  |
| Future Volume (veh/h)        | 110                                                                               | 106                                                                               | 26                                                                                | 48                                                                                | 149                                                                               | 129                                                                               | 16                                                                                | 368                                                                                | 37                                                                                  | 10                                                                                  | 119                                                                                 | 72                                                                                  |
| 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       | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Adj Flow Rate, veh/h         | 143                                                                               | 138                                                                               | 34                                                                                | 62                                                                                | 194                                                                               | 168                                                                               | 21                                                                                | 478                                                                                | 48                                                                                  | 13                                                                                  | 155                                                                                 | 94                                                                                  |
| Peak Hour Factor             | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 173                                                                               | 183                                                                               | 155                                                                               | 214                                                                               | 433                                                                               | 193                                                                               | 36                                                                                | 1954                                                                               | 872                                                                                 | 25                                                                                  | 1181                                                                                | 678                                                                                 |
| Arrive On Green              | 0.11                                                                              | 0.10                                                                              | 0.10                                                                              | 0.13                                                                              | 0.13                                                                              | 0.13                                                                              | 0.02                                                                              | 0.57                                                                               | 0.57                                                                                | 0.02                                                                                | 0.56                                                                                | 0.56                                                                                |
| Sat Flow, veh/h              | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                               | 1525                                                                                | 1619                                                                                | 2093                                                                                | 1201                                                                                |
| Grp Volume(v), veh/h         | 143                                                                               | 138                                                                               | 34                                                                                | 62                                                                                | 194                                                                               | 168                                                                               | 21                                                                                | 478                                                                                | 48                                                                                  | 13                                                                                  | 125                                                                                 | 124                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                               | 1525                                                                                | 1619                                                                                | 1710                                                                                | 1584                                                                                |
| Q Serve(g_s), s              | 8.7                                                                               | 7.5                                                                               | 1.8                                                                               | 3.5                                                                               | 5.3                                                                               | 9.5                                                                               | 1.3                                                                               | 7.0                                                                                | 0.7                                                                                 | 0.8                                                                                 | 3.4                                                                                 | 3.7                                                                                 |
| Cycle Q Clear(g_c), s        | 8.7                                                                               | 7.5                                                                               | 1.8                                                                               | 3.5                                                                               | 5.3                                                                               | 9.5                                                                               | 1.3                                                                               | 7.0                                                                                | 0.7                                                                                 | 0.8                                                                                 | 3.4                                                                                 | 3.7                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                    | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.76                                                                                |
| Lane Grp Cap(c), veh/h       | 173                                                                               | 183                                                                               | 155                                                                               | 214                                                                               | 433                                                                               | 193                                                                               | 36                                                                                | 1954                                                                               | 872                                                                                 | 25                                                                                  | 965                                                                                 | 894                                                                                 |
| V/C Ratio(X)                 | 0.83                                                                              | 0.76                                                                              | 0.22                                                                              | 0.29                                                                              | 0.45                                                                              | 0.87                                                                              | 0.59                                                                              | 0.24                                                                               | 0.06                                                                                | 0.53                                                                                | 0.13                                                                                | 0.14                                                                                |
| Avail Cap(c_a), veh/h        | 364                                                                               | 549                                                                               | 465                                                                               | 219                                                                               | 735                                                                               | 328                                                                               | 138                                                                               | 1954                                                                               | 872                                                                                 | 105                                                                                 | 965                                                                                 | 894                                                                                 |
| 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     | 43.7                                                                              | 43.7                                                                              | 31.6                                                                              | 39.2                                                                              | 40.4                                                                              | 33.2                                                                              | 48.4                                                                              | 10.7                                                                               | 2.2                                                                                 | 48.9                                                                                | 10.2                                                                                | 10.3                                                                                |
| Incr Delay (d2), s/veh       | 9.5                                                                               | 6.2                                                                               | 0.7                                                                               | 0.7                                                                               | 0.7                                                                               | 12.2                                                                              | 14.3                                                                              | 0.3                                                                                | 0.1                                                                                 | 16.6                                                                                | 0.3                                                                                 | 0.3                                                                                 |
| Initial Q Delay(d3), s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 3.8                                                                               | 3.5                                                                               | 0.8                                                                               | 1.4                                                                               | 2.2                                                                               | 4.0                                                                               | 0.6                                                                               | 2.5                                                                                | 0.4                                                                                 | 0.4                                                                                 | 1.2                                                                                 | 1.2                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 53.2                                                                              | 49.9                                                                              | 32.3                                                                              | 39.9                                                                              | 41.2                                                                              | 45.3                                                                              | 62.8                                                                              | 11.0                                                                               | 2.3                                                                                 | 65.5                                                                                | 10.5                                                                                | 10.6                                                                                |
| LnGrp LOS                    | D                                                                                 | D                                                                                 | C                                                                                 | D                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | B                                                                                  | A                                                                                   | E                                                                                   | B                                                                                   | B                                                                                   |
| Approach Vol, veh/h          | 315                                                                               |                                                                                   |                                                                                   | 424                                                                               |                                                                                   |                                                                                   | 547                                                                               |                                                                                    |                                                                                     | 262                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 49.5                                                                              |                                                                                   |                                                                                   | 42.6                                                                              |                                                                                   |                                                                                   | 12.2                                                                              |                                                                                    |                                                                                     | 13.3                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                    |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
|                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 6.0                                                                               | 61.6                                                                              | 17.7                                                                              | 14.6                                                                              | 6.7                                                                               | 60.9                                                                              | 15.2                                                                              | 17.2                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 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  | 6.5                                                                               | 31.5                                                                              | 13.5                                                                              | 30.5                                                                              | 8.5                                                                               | 29.5                                                                              | 22.5                                                                              | 21.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 2.8                                                                               | 9.0                                                                               | 5.5                                                                               | 9.5                                                                               | 3.3                                                                               | 5.7                                                                               | 10.7                                                                              | 11.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               | 3.1                                                                               | 0.1                                                                               | 0.7                                                                               | 0.0                                                                               | 1.2                                                                               | 0.3                                                                               | 1.1                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th Control Delay, s/veh | 28.3                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th LOS                  | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
7: Utah Tr. & Samarkand Dr.

Existing + Project AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 13                                                                                | 20                                                                                | 9                                                                                 | 127                                                                               | 92                                                                                | 7                                                                                 |
| Future Volume (vph)         | 13                                                                                | 20                                                                                | 9                                                                                 | 127                                                                               | 92                                                                                | 7                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 45                                                                                | 45                                                                                |                                                                                   |
| Link Distance (ft)          | 2636                                                                              |                                                                                   |                                                                                   | 564                                                                               | 668                                                                               |                                                                                   |
| Travel Time (s)             | 59.9                                                                              |                                                                                   |                                                                                   | 8.5                                                                               | 10.1                                                                              |                                                                                   |
| Peak Hour Factor            | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |       |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.4                                                                               |        |       |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR    | NBL   | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |        |       |  |  |      |
| Traffic Vol, veh/h       | 13                                                                                | 20     | 9     | 127                                                                               | 92                                                                                | 7    |
| Future Vol, veh/h        | 13                                                                                | 20     | 9     | 127                                                                               | 92                                                                                | 7    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Stop                                                                              | Stop   | Free  | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None   | -     | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92     | 92    | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 14                                                                                | 22     | 10    | 138                                                                               | 100                                                                               | 8    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Major/Minor              | Minor2                                                                            | Major1 |       | Major2                                                                            |                                                                                   |      |
| Conflicting Flow All     | 261                                                                               | 104    | 108   | 0                                                                                 | -                                                                                 | 0    |
| Stage 1                  | 104                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 158                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2    | 4.1   | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | 2.2   | -                                                                                 | -                                                                                 | -    |
| Pot Cap-1 Maneuver       | 732                                                                               | 956    | 1496  | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 925                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 876                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Platoon blocked, %       |                                                                                   |        |       | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | 727                                                                               | 956    | 1496  | -                                                                                 | -                                                                                 | -    |
| Mov Cap-2 Maneuver       | 727                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 919                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 876                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                | NB     |       | SB                                                                                |                                                                                   |      |
| HCM Ctrl Dly, s/v        | 9.42                                                                              | 0.49   |       | 0                                                                                 |                                                                                   |      |
| HCM LOS                  | A                                                                                 |        |       |                                                                                   |                                                                                   |      |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT    | EBLn1 | SBT                                                                               | SBR                                                                               |      |
| Capacity (veh/h)         | 1496                                                                              | -      | 850   | -                                                                                 | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.007                                                                             | -      | 0.042 | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 7.4                                                                               | -      | 9.4   | -                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -      | A     | -                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -      | 0.1   | -                                                                                 | -                                                                                 |      |

## 1: Desert Knoll Av. &amp; Samarkand Dr.



| Lane Group              | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Configurations     |      |      |      |      |      |      |
| Traffic Volume (vph)    | 14   | 4    | 12   | 15   | 8    | 18   |
| Future Volume (vph)     | 14   | 4    | 12   | 15   | 8    | 18   |
| Ideal Flow (vphpl)      | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph)        | 30   |      |      | 30   | 30   |      |
| Link Distance (ft)      | 969  |      |      | 2636 | 437  |      |
| Travel Time (s)         | 22.0 |      |      | 59.9 | 9.9  |      |
| Peak Hour Factor        | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Shared Lane Traffic (%) |      |      |      |      |      |      |
| Sign Control            | Free |      |      | Free | Stop |      |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

1: Desert Knoll Av. & Samarkand Dr.

| Intersection             |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 4.4                                                                               |      |        |                                                                                   |                                                                                   |      |
| Movement                 | EBT                                                                               | EBR  | WBL    | WBT                                                                               | NBL                                                                               | NBR  |
| Lane Configurations      |  |      |        |  |  |      |
| Traffic Vol, veh/h       | 14                                                                                | 4    | 12     | 15                                                                                | 8                                                                                 | 18   |
| Future Vol, veh/h        | 14                                                                                | 4    | 12     | 15                                                                                | 8                                                                                 | 18   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Free                                                                              | Free | Free   | Free                                                                              | Stop                                                                              | Stop |
| RT Channelized           | -                                                                                 | None | -      | None                                                                              | -                                                                                 | None |
| Storage Length           | -                                                                                 | -    | -      | -                                                                                 | 0                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92     | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 15                                                                                | 4    | 13     | 16                                                                                | 9                                                                                 | 20   |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Major/Minor              | Major1                                                                            |      | Major2 |                                                                                   | Minor1                                                                            |      |
| Conflicting Flow All     | 0                                                                                 | 0    | 20     | 0                                                                                 | 60                                                                                | 17   |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 17                                                                                | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 42                                                                                | -    |
| Critical Hdwy            | -                                                                                 | -    | 4.1    | -                                                                                 | 6.4                                                                               | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Follow-up Hdwy           | -                                                                                 | -    | 2.2    | -                                                                                 | 3.5                                                                               | 3.3  |
| Pot Cap-1 Maneuver       | -                                                                                 | -    | 1610   | -                                                                                 | 952                                                                               | 1067 |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1011                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 985                                                                               | -    |
| Platoon blocked, %       | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | -                                                                                 | -    | 1610   | -                                                                                 | 944                                                                               | 1067 |
| Mov Cap-2 Maneuver       | -                                                                                 | -    | -      | -                                                                                 | 944                                                                               | -    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1011                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 977                                                                               | -    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                |      | WB     |                                                                                   | NB                                                                                |      |
| HCM Ctrl Dly, s/v        | 0                                                                                 |      | 3.22   |                                                                                   | 8.61                                                                              |      |
| HCM LOS                  |                                                                                   |      |        |                                                                                   | A                                                                                 |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBT  | EBR    | WBL                                                                               | WBT                                                                               |      |
| Capacity (veh/h)         | 1026                                                                              | -    | -      | 800                                                                               | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.028                                                                             | -    | -      | 0.008                                                                             | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 8.6                                                                               | -    | -      | 7.3                                                                               | 0                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -    | -      | A                                                                                 | A                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0.1                                                                               | -    | -      | 0                                                                                 | -                                                                                 |      |

Lanes, Volumes, Timings  
 2: Desert Knoll Av. & Aztec Av.

Existing + Project PM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 10                                                                                | 3                                                                                 | 5                                                                                 | 16                                                                                | 9                                                                                 | 7                                                                                 |
| Future Volume (vph)         | 10                                                                                | 3                                                                                 | 5                                                                                 | 16                                                                                | 9                                                                                 | 7                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 523                                                                               |                                                                                   |                                                                                   | 1360                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 11.9                                                                              |                                                                                   |                                                                                   | 30.9                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |       |                                                                                   |      |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 3                                                                                 |        |       |                                                                                   |      |                                                                                   |
| Movement                 | EBL                                                                               | EBR    | NBL   | NBT                                                                               | SBT  | SBR                                                                               |
| Lane Configurations      |  |        |       |  |      |  |
| Traffic Vol, veh/h       | 10                                                                                | 3      | 5     | 16                                                                                | 9    | 7                                                                                 |
| Future Vol, veh/h        | 10                                                                                | 3      | 5     | 16                                                                                | 9    | 7                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0     | 0                                                                                 | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop   | Free  | Free                                                                              | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None   | -     | None                                                                              | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -      | -     | -                                                                                 | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -      | -     | 0                                                                                 | 0    | -                                                                                 |
| Grade, %                 | 0                                                                                 | -      | -     | 0                                                                                 | 0    | -                                                                                 |
| Peak Hour Factor         | 75                                                                                | 75     | 75    | 75                                                                                | 75   | 75                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0     | 0                                                                                 | 0    | 0                                                                                 |
| Mvmt Flow                | 13                                                                                | 4      | 7     | 21                                                                                | 12   | 9                                                                                 |
|                          |                                                                                   |        |       |                                                                                   |      |                                                                                   |
| Major/Minor              | Minor2                                                                            | Major1 |       | Major2                                                                            |      |                                                                                   |
| Conflicting Flow All     | 51                                                                                | 17     | 21    | 0                                                                                 | -    | 0                                                                                 |
| Stage 1                  | 17                                                                                | -      | -     | -                                                                                 | -    | -                                                                                 |
| Stage 2                  | 35                                                                                | -      | -     | -                                                                                 | -    | -                                                                                 |
| Critical Hdwy            | 6.4                                                                               | 6.2    | 4.1   | -                                                                                 | -    | -                                                                                 |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | 2.2   | -                                                                                 | -    | -                                                                                 |
| Pot Cap-1 Maneuver       | 962                                                                               | 1068   | 1608  | -                                                                                 | -    | -                                                                                 |
| Stage 1                  | 1011                                                                              | -      | -     | -                                                                                 | -    | -                                                                                 |
| Stage 2                  | 993                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
| Platoon blocked, %       |                                                                                   |        |       | -                                                                                 | -    | -                                                                                 |
| Mov Cap-1 Maneuver       | 958                                                                               | 1068   | 1608  | -                                                                                 | -    | -                                                                                 |
| Mov Cap-2 Maneuver       | 958                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
| Stage 1                  | 1007                                                                              | -      | -     | -                                                                                 | -    | -                                                                                 |
| Stage 2                  | 993                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
|                          |                                                                                   |        |       |                                                                                   |      |                                                                                   |
| Approach                 | EB                                                                                |        | NB    |                                                                                   | SB   |                                                                                   |
| HCM Ctrl Dly, s/v        | 8.73                                                                              |        | 1.73  |                                                                                   | 0    |                                                                                   |
| HCM LOS                  | A                                                                                 |        |       |                                                                                   |      |                                                                                   |
|                          |                                                                                   |        |       |                                                                                   |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT    | EBLn1 | SBT                                                                               | SBR  |                                                                                   |
| Capacity (veh/h)         | 429                                                                               | -      | 982   | -                                                                                 | -    |                                                                                   |
| HCM Lane V/C Ratio       | 0.004                                                                             | -      | 0.018 | -                                                                                 | -    |                                                                                   |
| HCM Ctrl Dly (s/v)       | 7.2                                                                               | 0      | 8.7   | -                                                                                 | -    |                                                                                   |
| HCM Lane LOS             | A                                                                                 | A      | A     | -                                                                                 | -    |                                                                                   |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -      | 0.1   | -                                                                                 | -    |                                                                                   |

Lanes, Volumes, Timings  
 3: Desert Knoll Av. & Manana Dr.

Existing + Project PM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations         |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)        | 20                                                                                | 2                                                                                 | 28                                                                                | 25                                                                                | 1                                                                                 | 21                                                                                |
| Future Volume (vph)         | 20                                                                                | 2                                                                                 | 28                                                                                | 25                                                                                | 1                                                                                 | 21                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)          | 401                                                                               |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 1360                                                                              |
| Travel Time (s)             | 9.1                                                                               |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                   | 30.9                                                                              |
| Peak Hour Factor            | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |        |           |        |       |      |      |
|--------------------------|--------|-----------|--------|-------|------|------|
| Int Delay, s/veh         | 2.1    |           |        |       |      |      |
| Movement                 | WBL    | WBR       | NBT    | NBR   | SBL  | SBT  |
| Lane Configurations      | W      | W         | T      | T     | T    | T    |
| Traffic Vol, veh/h       | 20     | 2         | 28     | 25    | 1    | 21   |
| Future Vol, veh/h        | 20     | 2         | 28     | 25    | 1    | 21   |
| Conflicting Peds, #/hr   | 0      | 0         | 0      | 0     | 0    | 0    |
| Sign Control             | Stop   | Stop      | Free   | Free  | Free | Free |
| RT Channelized           | -      | None      | -      | None  | -    | None |
| Storage Length           | 0      | -         | -      | -     | -    | -    |
| Veh in Median Storage, # | 0      | -         | 0      | -     | -    | 0    |
| Grade, %                 | 0      | -         | 0      | -     | -    | 0    |
| Peak Hour Factor         | 77     | 77        | 77     | 77    | 77   | 77   |
| Heavy Vehicles, %        | 0      | 0         | 0      | 0     | 0    | 0    |
| Mvmt Flow                | 26     | 3         | 36     | 32    | 1    | 27   |
| Major/Minor              | Minor1 | Major1    | Major2 |       |      |      |
| Conflicting Flow All     | 82     | 53        | 0      | 0     | 69   | 0    |
| Stage 1                  | 53     | -         | -      | -     | -    | -    |
| Stage 2                  | 30     | -         | -      | -     | -    | -    |
| Critical Hdwy            | 6.4    | 6.2       | -      | -     | 4.1  | -    |
| Critical Hdwy Stg 1      | 5.4    | -         | -      | -     | -    | -    |
| Critical Hdwy Stg 2      | 5.4    | -         | -      | -     | -    | -    |
| Follow-up Hdwy           | 3.5    | 3.3       | -      | -     | 2.2  | -    |
| Pot Cap-1 Maneuver       | 924    | 1021      | -      | -     | 1545 | -    |
| Stage 1                  | 975    | -         | -      | -     | -    | -    |
| Stage 2                  | 998    | -         | -      | -     | -    | -    |
| Platoon blocked, %       |        |           | -      | -     | -    | -    |
| Mov Cap-1 Maneuver       | 924    | 1021      | -      | -     | 1545 | -    |
| Mov Cap-2 Maneuver       | 924    | -         | -      | -     | -    | -    |
| Stage 1                  | 975    | -         | -      | -     | -    | -    |
| Stage 2                  | 997    | -         | -      | -     | -    | -    |
| Approach                 | WB     | NB        |        | SB    |      |      |
| HCM Ctrl Dly, s/v        | 8.99   | 0         |        | 0.33  |      |      |
| HCM LOS                  | A      |           |        |       |      |      |
| Minor Lane/Major Mvmt    | NBT    | NBR WBLn1 | SBL    | SBT   |      |      |
| Capacity (veh/h)         | -      | -         | 932    | 82    | -    |      |
| HCM Lane V/C Ratio       | -      | -         | 0.031  | 0.001 | -    |      |
| HCM Ctrl Dly (s/v)       | -      | -         | 9      | 7.3   | 0    |      |
| HCM Lane LOS             | -      | -         | A      | A     | A    |      |
| HCM 95th %tile Q(veh)    | -      | -         | 0.1    | 0     | -    |      |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |  |  |  |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)        | 45                                                                                | 79                                                                                | 55                                                                                | 2                                                                                 | 90                                                                                | 7                                                                                 | 34                                                                                | 1                                                                                  | 3                                                                                   | 8                                                                                   | 5                                                                                   | 28                                                                                  |
| Future Volume (vph)         | 45                                                                                | 79                                                                                | 55                                                                                | 2                                                                                 | 90                                                                                | 7                                                                                 | 34                                                                                | 1                                                                                  | 3                                                                                   | 8                                                                                   | 5                                                                                   | 28                                                                                  |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 80                                                                                |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 1358                                                                              |                                                                                   |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 932                                                                                |                                                                                     |                                                                                     | 646                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 20.6                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 21.2                                                                               |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |
| 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                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

| 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       | 45                                                                                | 79                                                                                | 55                                                                                | 2      | 90                                                                                | 7                                                                                 | 34     | 1                                                                                 | 3    | 8      | 5                                                                                   | 28   |
| Future Vol, veh/h        | 45                                                                                | 79                                                                                | 55                                                                                | 2      | 90                                                                                | 7                                                                                 | 34     | 1                                                                                 | 3    | 8      | 5                                                                                   | 28   |
| 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           | 80                                                                                | -                                                                                 | 0                                                                                 | -      | -                                                                                 | 50                                                                                | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 89                                                                                | 89                                                                                | 89                                                                                | 89     | 89                                                                                | 89                                                                                | 89     | 89                                                                                | 89   | 89     | 89                                                                                  | 89   |
| Heavy Vehicles, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0      | 0                                                                                 | 0                                                                                 | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 51                                                                                | 89                                                                                | 62                                                                                | 2      | 101                                                                               | 8                                                                                 | 38     | 1                                                                                 | 3    | 9      | 6                                                                                   | 31   |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1                                                                            |                                                                                   |                                                                                   | Major2 |                                                                                   |                                                                                   | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 109                                                                               | 0                                                                                 | 0                                                                                 | 151    | 0                                                                                 | 0                                                                                 | 298    | 303                                                                               | 89   | 296    | 357                                                                                 | 101  |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 190    | 190                                                                               | -    | 106    | 106                                                                                 | -    |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 108    | 113                                                                               | -    | 190    | 252                                                                                 | -    |
| Critical Hdwy            | 4.1                                                                               | -                                                                                 | -                                                                                 | 4.1    | -                                                                                 | -                                                                                 | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2                                                                               | -                                                                                 | -                                                                                 | 2.2    | -                                                                                 | -                                                                                 | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1494                                                                              | -                                                                                 | -                                                                                 | 1443   | -                                                                                 | -                                                                                 | 658    | 613                                                                               | 975  | 660    | 572                                                                                 | 960  |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 817    | 747                                                                               | -    | 905    | 812                                                                                 | -    |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 902    | 805                                                                               | -    | 816    | 702                                                                                 | -    |
| Platoon blocked, %       | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 1494                                                                              | -                                                                                 | -                                                                                 | 1443   | -                                                                                 | -                                                                                 | 608    | 591                                                                               | 975  | 633    | 552                                                                                 | 960  |
| Mov Cap-2 Maneuver       | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 608    | 591                                                                               | -    | 633    | 552                                                                                 | -    |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 789    | 722                                                                               | -    | 903    | 810                                                                                 | -    |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 865    | 804                                                                               | -    | 784    | 679                                                                                 | -    |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB                                                                                |                                                                                   |                                                                                   | WB     |                                                                                   |                                                                                   | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 1.88                                                                              |                                                                                   |                                                                                   | 0.15   |                                                                                   |                                                                                   | 11.17  |                                                                                   |      | 9.74   |                                                                                     |      |
| HCM LOS                  |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   | B      |                                                                                   |      | A      |                                                                                     |      |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBL                                                                               | EBT                                                                               | EBR    | WBL                                                                               | WBT                                                                               | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 626                                                                               | 1494                                                                              | -                                                                                 | -      | 39                                                                                | -                                                                                 | -      | 806                                                                               |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.068                                                                             | 0.034                                                                             | -                                                                                 | -      | 0.002                                                                             | -                                                                                 | -      | 0.057                                                                             |      |        |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 11.2                                                                              | 7.5                                                                               | -                                                                                 | -      | 7.5                                                                               | 0                                                                                 | -      | 9.7                                                                               |      |        |                                                                                     |      |
| HCM Lane LOS             | B                                                                                 | A                                                                                 | -                                                                                 | -      | A                                                                                 | A                                                                                 | -      | A                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0.2                                                                               | 0.1                                                                               | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0.2                                                                               |      |        |                                                                                     |      |

Lanes, Volumes, Timings  
5: Marine Av. & Two Mile Rd.

Existing + Project PM Peak Hour

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 9                                                                                 | 86                                                                                | 1                                                                                 | 1                                                                                 | 90                                                                                | 15                                                                                | 5                                                                                 | 1                                                                                  | 1                                                                                   | 6                                                                                   | 1                                                                                   | 5                                                                                   |
| Future Volume (vph)         | 9                                                                                 | 86                                                                                | 1                                                                                 | 1                                                                                 | 90                                                                                | 15                                                                                | 5                                                                                 | 1                                                                                  | 1                                                                                   | 6                                                                                   | 1                                                                                   | 5                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 404                                                                               |                                                                                   |                                                                                   | 287                                                                                |                                                                                     |                                                                                     | 353                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                                |                                                                                     |                                                                                     | 8.0                                                                                 |                                                                                     |
| Peak Hour Factor            | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                               | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.2  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↰    |      |      | ↱    | ↱    |      | ↰    |      | ↰    | ↰    |      |
| Traffic Vol, veh/h       | 9    | 86   | 1    | 1    | 90   | 15   | 5    | 1    | 1    | 6    | 1    | 5    |
| Future Vol, veh/h        | 9    | 86   | 1    | 1    | 90   | 15   | 5    | 1    | 1    | 6    | 1    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 50   | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   |
| Heavy Vehicles, %        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 10   | 92   | 1    | 1    | 97   | 16   | 5    | 1    | 1    | 6    | 1    | 5    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |     |     | Minor2 |     |     |
|----------------------|--------|---|---|--------|---|---|--------|-----|-----|--------|-----|-----|
| Conflicting Flow All | 113    | 0 | 0 | 94     | 0 | 0 | 212    | 227 | 93  | 211    | 212 | 97  |
| Stage 1              | -      | - | - | -      | - | - | 112    | 112 | -   | 99     | 99  | -   |
| Stage 2              | -      | - | - | -      | - | - | 99     | 115 | -   | 112    | 113 | -   |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.1    | 6.5 | 6.2 | 7.1    | 6.5 | 6.2 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4   | 3.3 | 3.5    | 4   | 3.3 |
| Pot Cap-1 Maneuver   | 1489   | - | - | 1513   | - | - | 749    | 676 | 970 | 750    | 689 | 965 |
| Stage 1              | -      | - | - | -      | - | - | 898    | 806 | -   | 912    | 817 | -   |
| Stage 2              | -      | - | - | -      | - | - | 912    | 804 | -   | 898    | 806 | -   |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -   | -   | -      | -   | -   |
| Mov Cap-1 Maneuver   | 1489   | - | - | 1513   | - | - | 738    | 670 | 970 | 742    | 684 | 965 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 738    | 670 | -   | 742    | 684 | -   |
| Stage 1              | -      | - | - | -      | - | - | 891    | 801 | -   | 912    | 816 | -   |
| Stage 2              | -      | - | - | -      | - | - | 905    | 804 | -   | 889    | 800 | -   |

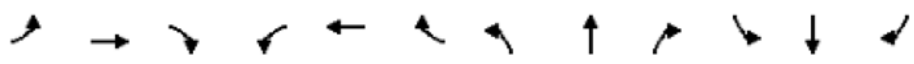
| Approach          | EB  |  |  | WB   |  |  | NB   |  |  | SB   |  |  |
|-------------------|-----|--|--|------|--|--|------|--|--|------|--|--|
| HCM Ctrl Dly, s/v | 0.7 |  |  | 0.07 |  |  | 9.83 |  |  | 9.49 |  |  |
| HCM LOS           |     |  |  |      |  |  | A    |  |  | A    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 753   | 1489  | -   | -   | 20    | -   | -   | 815   |
| HCM Lane V/C Ratio    | 0.01  | 0.006 | -   | -   | 0.001 | -   | -   | 0.016 |
| HCM Ctrl Dly (s/v)    | 9.8   | 7.4   | -   | -   | 7.4   | 0   | -   | 9.5   |
| HCM Lane LOS          | A     | A     | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -   | 0     | -   | -   | 0     |

Lanes, Volumes, Timings  
6: Adobe Rd. & Two Mile Rd.

Existing + Project PM Peak Hour

|                         |  |       |       |       |       |       |       |       |       |       |       |      |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
| Lane Configurations     |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Traffic Volume (vph)    | 90                                                                                 | 94    | 66    | 54    | 118   | 49    | 62    | 204   | 62    | 104   | 465   | 182  |
| Future Volume (vph)     | 90                                                                                 | 94    | 66    | 54    | 118   | 49    | 62    | 204   | 62    | 104   | 465   | 182  |
| Ideal Flow (vphpl)      | 1700                                                                               | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800 |
| Storage Length (ft)     | 120                                                                                |       | 120   | 90    |       | 90    | 80    |       | 50    | 100   |       | 0    |
| Storage Lanes           | 1                                                                                  |       | 1     | 1     |       | 2     | 1     |       | 1     | 1     |       | 0    |
| Taper Length (ft)       | 90                                                                                 |       |       | 90    |       |       | 90    |       |       | 90    |       |      |
| Right Turn on Red       |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes  |
| Link Speed (mph)        |                                                                                    | 45    |       |       | 45    |       |       | 40    |       |       | 55    |      |
| Link Distance (ft)      |                                                                                    | 632   |       |       | 1344  |       |       | 691   |       |       | 541   |      |
| Travel Time (s)         |                                                                                    | 9.6   |       |       | 20.4  |       |       | 11.8  |       |       | 6.7   |      |
| Peak Hour Factor        | 0.94                                                                               | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94 |
| Shared Lane Traffic (%) |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |      |
| Protected Phases        | 7                                                                                  | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases        |                                                                                    |       | 4     |       |       | 8     |       |       | 2     |       |       |      |
| Detector Phase          | 7                                                                                  | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |      |
| Switch Phase            |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)     | 5.0                                                                                | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |      |
| Minimum Split (s)       | 9.5                                                                                | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  |      |
| Total Split (s)         | 20.0                                                                               | 27.0  | 27.0  | 16.0  | 23.0  | 23.0  | 16.0  | 36.0  | 36.0  | 21.0  | 41.0  |      |
| Total Split (%)         | 20.0%                                                                              | 27.0% | 27.0% | 16.0% | 23.0% | 23.0% | 16.0% | 36.0% | 36.0% | 21.0% | 41.0% |      |
| Maximum Green (s)       | 15.5                                                                               | 22.5  | 22.5  | 11.5  | 18.5  | 18.5  | 11.5  | 31.5  | 31.5  | 16.5  | 36.5  |      |
| Yellow Time (s)         | 3.5                                                                                | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |      |
| All-Red Time (s)        | 1.0                                                                                | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.5                                                                                | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |      |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Recall Mode             | None                                                                               | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |      |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      |
| Flash Don't Walk (s)    |                                                                                    | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  |      |
| Pedestrian Calls (#/hr) |                                                                                    | 5     | 5     |       | 5     | 5     |       | 5     | 5     |       | 5     |      |

Intersection Summary

Area Type: Other

Cycle Length: 100

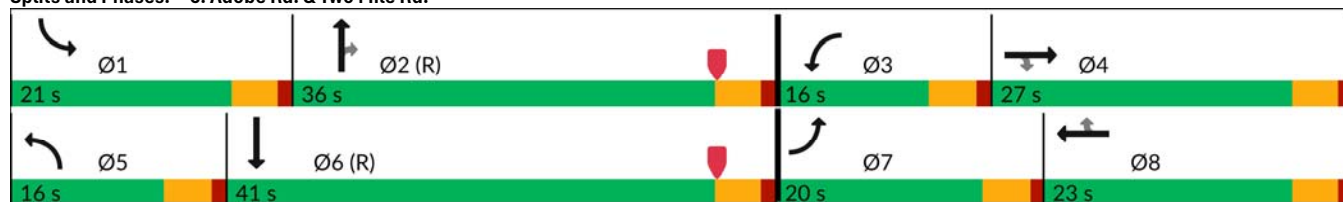
Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Adobe Rd. & Two Mile Rd.



HCM 7th Signalized Intersection Summary  
6: Adobe Rd. & Two Mile Rd.

Existing + Project PM Peak Hour

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 90                                                                                | 94                                                                                | 66                                                                                | 54                                                                                | 118                                                                               | 49                                                                                | 62                                                                                | 204                                                                                | 62                                                                                  | 104                                                                                 | 465                                                                                 | 182                                                                                 |
| Future Volume (veh/h)        | 90                                                                                | 94                                                                                | 66                                                                                | 54                                                                                | 118                                                                               | 49                                                                                | 62                                                                                | 204                                                                                | 62                                                                                  | 104                                                                                 | 465                                                                                 | 182                                                                                 |
| 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       | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Adj Flow Rate, veh/h         | 96                                                                                | 100                                                                               | 70                                                                                | 57                                                                                | 126                                                                               | 52                                                                                | 66                                                                                | 217                                                                                | 66                                                                                  | 111                                                                                 | 495                                                                                 | 194                                                                                 |
| Peak Hour Factor             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 120                                                                               | 165                                                                               | 140                                                                               | 71                                                                                | 212                                                                               | 94                                                                                | 83                                                                                | 2051                                                                               | 915                                                                                 | 137                                                                                 | 1522                                                                                | 593                                                                                 |
| Arrive On Green              | 0.07                                                                              | 0.09                                                                              | 0.09                                                                              | 0.04                                                                              | 0.06                                                                              | 0.06                                                                              | 0.05                                                                              | 0.60                                                                               | 0.60                                                                                | 0.08                                                                                | 0.63                                                                                | 0.63                                                                                |
| Sat Flow, veh/h              | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                               | 1525                                                                                | 1619                                                                                | 2404                                                                                | 937                                                                                 |
| Grp Volume(v), veh/h         | 96                                                                                | 100                                                                               | 70                                                                                | 57                                                                                | 126                                                                               | 52                                                                                | 66                                                                                | 217                                                                                | 66                                                                                  | 111                                                                                 | 351                                                                                 | 338                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                               | 1525                                                                                | 1619                                                                                | 1710                                                                                | 1631                                                                                |
| Q Serve(g_s), s              | 5.8                                                                               | 5.3                                                                               | 4.4                                                                               | 3.5                                                                               | 3.6                                                                               | 3.3                                                                               | 4.0                                                                               | 2.7                                                                                | 1.8                                                                                 | 6.7                                                                                 | 9.5                                                                                 | 9.6                                                                                 |
| Cycle Q Clear(g_c), s        | 5.8                                                                               | 5.3                                                                               | 4.4                                                                               | 3.5                                                                               | 3.6                                                                               | 3.3                                                                               | 4.0                                                                               | 2.7                                                                                | 1.8                                                                                 | 6.7                                                                                 | 9.5                                                                                 | 9.6                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                    | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.57                                                                                |
| Lane Grp Cap(c), veh/h       | 120                                                                               | 165                                                                               | 140                                                                               | 71                                                                                | 212                                                                               | 94                                                                                | 83                                                                                | 2051                                                                               | 915                                                                                 | 137                                                                                 | 1083                                                                                | 1033                                                                                |
| V/C Ratio(X)                 | 0.80                                                                              | 0.60                                                                              | 0.50                                                                              | 0.80                                                                              | 0.60                                                                              | 0.55                                                                              | 0.80                                                                              | 0.11                                                                               | 0.07                                                                                | 0.81                                                                                | 0.32                                                                                | 0.33                                                                                |
| Avail Cap(c_a), veh/h        | 251                                                                               | 405                                                                               | 343                                                                               | 186                                                                               | 633                                                                               | 282                                                                               | 186                                                                               | 2051                                                                               | 915                                                                                 | 267                                                                                 | 1083                                                                                | 1033                                                                                |
| 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     | 45.6                                                                              | 43.7                                                                              | 43.2                                                                              | 47.4                                                                              | 45.7                                                                              | 45.6                                                                              | 46.9                                                                              | 8.6                                                                                | 8.4                                                                                 | 45.0                                                                                | 8.5                                                                                 | 8.5                                                                                 |
| Incr Delay (d2), s/veh       | 11.7                                                                              | 3.5                                                                               | 2.7                                                                               | 18.3                                                                              | 2.7                                                                               | 4.9                                                                               | 15.8                                                                              | 0.1                                                                                | 0.2                                                                                 | 10.8                                                                                | 0.8                                                                                 | 0.8                                                                                 |
| Initial Q Delay(d3), s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 2.7                                                                               | 2.5                                                                               | 1.7                                                                               | 1.7                                                                               | 1.6                                                                               | 1.3                                                                               | 1.9                                                                               | 0.9                                                                                | 0.6                                                                                 | 3.0                                                                                 | 3.0                                                                                 | 2.9                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 57.2                                                                              | 47.2                                                                              | 46.0                                                                              | 65.7                                                                              | 48.4                                                                              | 50.5                                                                              | 62.8                                                                              | 8.7                                                                                | 8.5                                                                                 | 55.8                                                                                | 9.3                                                                                 | 9.3                                                                                 |
| LnGrp LOS                    | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | A                                                                                  | A                                                                                   | E                                                                                   | A                                                                                   | A                                                                                   |
| Approach Vol, veh/h          | 266                                                                               |                                                                                   |                                                                                   | 235                                                                               |                                                                                   |                                                                                   | 349                                                                               |                                                                                    |                                                                                     | 800                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 50.5                                                                              |                                                                                   |                                                                                   | 53.0                                                                              |                                                                                   |                                                                                   | 18.9                                                                              |                                                                                    |                                                                                     | 15.7                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                    |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 13.0                                                                              | 64.5                                                                              | 8.9                                                                               | 13.7                                                                              | 9.6                                                                               | 67.8                                                                              | 11.9                                                                              | 10.7                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 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  | 16.5                                                                              | 31.5                                                                              | 11.5                                                                              | 22.5                                                                              | 11.5                                                                              | 36.5                                                                              | 15.5                                                                              | 18.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 8.7                                                                               | 4.7                                                                               | 5.5                                                                               | 7.3                                                                               | 6.0                                                                               | 11.6                                                                              | 7.8                                                                               | 5.6                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.1                                                                               | 1.5                                                                               | 0.0                                                                               | 0.5                                                                               | 0.0                                                                               | 3.8                                                                               | 0.1                                                                               | 0.6                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th Control Delay, s/veh | 27.3                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th LOS                  | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |  |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 9                                                                                 | 14                                                                                | 22                                                                                | 59                                                                                | 100                                                                               | 14                                                                                |
| Future Volume (vph)         | 9                                                                                 | 14                                                                                | 22                                                                                | 59                                                                                | 100                                                                               | 14                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 2636                                                                              |                                                                                   |                                                                                   | 564                                                                               | 668                                                                               |                                                                                   |
| Travel Time (s)             | 59.9                                                                              |                                                                                   |                                                                                   | 12.8                                                                              | 15.2                                                                              |                                                                                   |
| Peak Hour Factor            | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 1.7    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | W      |        |        | U    | U    |      |
| Traffic Vol, veh/h       | 9      | 14     | 22     | 59   | 100  | 14   |
| Future Vol, veh/h        | 9      | 14     | 22     | 59   | 100  | 14   |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | -      | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 92     | 92     | 92     | 92   | 92   | 92   |
| Heavy Vehicles, %        | 0      | 0      | 0      | 0    | 0    | 0    |
| Mvmt Flow                | 10     | 15     | 24     | 64   | 109  | 15   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 228    | 116    | 124    | 0    | -    | 0    |
| Stage 1                  | 116    | -      | -      | -    | -    | -    |
| Stage 2                  | 112    | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.4    | 6.2    | 4.1    | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.4    | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.4    | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.5    | 3.3    | 2.2    | -    | -    | -    |
| Pot Cap-1 Maneuver       | 764    | 941    | 1475   | -    | -    | -    |
| Stage 1                  | 914    | -      | -      | -    | -    | -    |
| Stage 2                  | 918    | -      | -      | -    | -    | -    |
| Platoon blocked, %       |        |        |        | -    | -    | -    |
| Mov Cap-1 Maneuver       | 752    | 941    | 1475   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 752    | -      | -      | -    | -    | -    |
| Stage 1                  | 898    | -      | -      | -    | -    | -    |
| Stage 2                  | 918    | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     |        | SB   |      |      |
| HCM Ctrl Dly, s/v        | 9.33   | 2.03   |        | 0    |      |      |
| HCM LOS                  | A      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 1475   | -      | 857    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.016  | -      | 0.029  | -    | -    |      |
| HCM Ctrl Dly (s/v)       | 7.5    | -      | 9.3    | -    | -    |      |
| HCM Lane LOS             | A      | -      | A      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0      | -      | 0.1    | -    | -    |      |

## **APPENDIX 6.1:**

### **CUMULATIVE (2027) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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## 1: Desert Knoll Av. &amp; Samarkand Dr.

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 0                                                                                 | 4                                                                                 | 0                                                                                 | 0                                                                                 | 2                                                                                 | 0                                                                                 |
| Future Volume (vph)         | 0                                                                                 | 4                                                                                 | 0                                                                                 | 0                                                                                 | 2                                                                                 | 0                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 969                                                                               |                                                                                   |                                                                                   | 1252                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 22.0                                                                              |                                                                                   |                                                                                   | 28.5                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              | Stop                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

## 1: Desert Knoll Av. &amp; Samarkand Dr.

| Intersection             |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.4                                                                               |      |        |                                                                                   |                                                                                   |      |
| Movement                 | EBT                                                                               | EBR  | WBL    | WBT                                                                               | NBL                                                                               | NBR  |
| Lane Configurations      |  |      |        |  |  |      |
| Traffic Vol, veh/h       | 0                                                                                 | 4    | 0      | 0                                                                                 | 2                                                                                 | 0    |
| Future Vol, veh/h        | 0                                                                                 | 4    | 0      | 0                                                                                 | 2                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Free                                                                              | Free | Free   | Free                                                                              | Stop                                                                              | Stop |
| RT Channelized           | -                                                                                 | None | -      | None                                                                              | -                                                                                 | None |
| Storage Length           | -                                                                                 | -    | -      | -                                                                                 | 0                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92     | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 0                                                                                 | 4    | 0      | 0                                                                                 | 2                                                                                 | 0    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Major/Minor              | Major1                                                                            |      | Major2 |                                                                                   | Minor1                                                                            |      |
| Conflicting Flow All     | 0                                                                                 | 0    | 4      | 0                                                                                 | 3                                                                                 | 2    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 2                                                                                 | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1                                                                                 | -    |
| Critical Hdwy            | -                                                                                 | -    | 4.1    | -                                                                                 | 6.4                                                                               | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Follow-up Hdwy           | -                                                                                 | -    | 2.2    | -                                                                                 | 3.5                                                                               | 3.3  |
| Pot Cap-1 Maneuver       | -                                                                                 | -    | 1630   | -                                                                                 | 1024                                                                              | 1088 |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1026                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1027                                                                              | -    |
| Platoon blocked, %       | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | -                                                                                 | -    | 1630   | -                                                                                 | 1024                                                                              | 1088 |
| Mov Cap-2 Maneuver       | -                                                                                 | -    | -      | -                                                                                 | 1024                                                                              | -    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1026                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1027                                                                              | -    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                |      | WB     |                                                                                   | NB                                                                                |      |
| HCM Ctrl Dly, s/v        | 0                                                                                 |      | 0      |                                                                                   | 8.52                                                                              |      |
| HCM LOS                  |                                                                                   |      |        |                                                                                   | A                                                                                 |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBT  | EBR    | WBL                                                                               | WBT                                                                               |      |
| Capacity (veh/h)         | 1024                                                                              | -    | -      | 1630                                                                              | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.002                                                                             | -    | -      | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 8.5                                                                               | -    | -      | 0                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -    | -      | A                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -    | -      | 0                                                                                 | -                                                                                 |      |

Lanes, Volumes, Timings  
 2: Desert Knoll Av. & Aztec Av.

Cumulative (2027) w/o Project AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 1                                                                                 | 2                                                                                 | 3                                                                                 | 1                                                                                 | 3                                                                                 | 1                                                                                 |
| Future Volume (vph)         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 1                                                                                 | 3                                                                                 | 1                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 523                                                                               |                                                                                   |                                                                                   | 1360                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 11.9                                                                              |                                                                                   |                                                                                   | 30.9                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |       |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 4.3                                                                               |        |       |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR    | NBL   | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |        |       |  |  |      |
| Traffic Vol, veh/h       | 1                                                                                 | 2      | 3     | 1                                                                                 | 3                                                                                 | 1    |
| Future Vol, veh/h        | 1                                                                                 | 2      | 3     | 1                                                                                 | 3                                                                                 | 1    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Stop                                                                              | Stop   | Free  | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None   | -     | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 56                                                                                | 56     | 56    | 56                                                                                | 56                                                                                | 56   |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 2                                                                                 | 4      | 5     | 2                                                                                 | 5                                                                                 | 2    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Major/Minor              | Minor2                                                                            | Major1 |       | Major2                                                                            |                                                                                   |      |
| Conflicting Flow All     | 19                                                                                | 6      | 7     | 0                                                                                 | -                                                                                 | 0    |
| Stage 1                  | 6                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 13                                                                                | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2    | 4.1   | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | 2.2   | -                                                                                 | -                                                                                 | -    |
| Pot Cap-1 Maneuver       | 1004                                                                              | 1082   | 1627  | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 1022                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 1016                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Platoon blocked, %       |                                                                                   |        |       | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | 1001                                                                              | 1082   | 1627  | -                                                                                 | -                                                                                 | -    |
| Mov Cap-2 Maneuver       | 1001                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 1019                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 1016                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                | NB     |       | SB                                                                                |                                                                                   |      |
| HCM Ctrl Dly, s/v        | 8.43                                                                              | 5.42   |       | 0                                                                                 |                                                                                   |      |
| HCM LOS                  | A                                                                                 |        |       |                                                                                   |                                                                                   |      |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT    | EBLn1 | SBT                                                                               | SBR                                                                               |      |
| Capacity (veh/h)         | 1350                                                                              | -      | 1054  | -                                                                                 | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.003                                                                             | -      | 0.005 | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 7.2                                                                               | 0      | 8.4   | -                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | A      | A     | -                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -      | 0     | -                                                                                 | -                                                                                 |      |

Lanes, Volumes, Timings  
 3: Desert Knoll Av. & Manana Dr.

Cumulative (2027) w/o Project AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations         |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)        | 5                                                                                 | 2                                                                                 | 6                                                                                 | 4                                                                                 | 3                                                                                 | 11                                                                                |
| Future Volume (vph)         | 5                                                                                 | 2                                                                                 | 6                                                                                 | 4                                                                                 | 3                                                                                 | 11                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)          | 401                                                                               |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 1360                                                                              |
| Travel Time (s)             | 9.1                                                                               |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                   | 30.9                                                                              |
| Peak Hour Factor            | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |                                                                                   |        |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 2.7                                                                               |        |                                                                                   |        |                                                                                   |      |
| Movement                 | WBL                                                                               | WBR    | NBT                                                                               | NBR    | SBL                                                                               | SBT  |
| Lane Configurations      |  |        |  |        |  |      |
| Traffic Vol, veh/h       | 5                                                                                 | 2      | 6                                                                                 | 4      | 3                                                                                 | 11   |
| Future Vol, veh/h        | 5                                                                                 | 2      | 6                                                                                 | 4      | 3                                                                                 | 11   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0                                                                                 | 0      | 0                                                                                 | 0    |
| Sign Control             | Stop                                                                              | Stop   | Free                                                                              | Free   | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None   | -                                                                                 | None   | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -      | -                                                                                 | -      | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -      | 0                                                                                 | -      | -                                                                                 | 0    |
| Grade, %                 | 0                                                                                 | -      | 0                                                                                 | -      | -                                                                                 | 0    |
| Peak Hour Factor         | 58                                                                                | 58     | 58                                                                                | 58     | 58                                                                                | 58   |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0                                                                                 | 0      | 0                                                                                 | 0    |
| Mvmt Flow                | 9                                                                                 | 3      | 10                                                                                | 7      | 5                                                                                 | 19   |
|                          |                                                                                   |        |                                                                                   |        |                                                                                   |      |
| Major/Minor              | Minor1                                                                            | Major1 |                                                                                   | Major2 |                                                                                   |      |
| Conflicting Flow All     | 43                                                                                | 14     | 0                                                                                 | 0      | 17                                                                                | 0    |
| Stage 1                  | 14                                                                                | -      | -                                                                                 | -      | -                                                                                 | -    |
| Stage 2                  | 29                                                                                | -      | -                                                                                 | -      | -                                                                                 | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2    | -                                                                                 | -      | 4.1                                                                               | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -                                                                                 | -      | -                                                                                 | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -                                                                                 | -      | -                                                                                 | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | -                                                                                 | -      | 2.2                                                                               | -    |
| Pot Cap-1 Maneuver       | 973                                                                               | 1072   | -                                                                                 | -      | 1613                                                                              | -    |
| Stage 1                  | 1014                                                                              | -      | -                                                                                 | -      | -                                                                                 | -    |
| Stage 2                  | 998                                                                               | -      | -                                                                                 | -      | -                                                                                 | -    |
| Platoon blocked, %       |                                                                                   |        | -                                                                                 | -      |                                                                                   | -    |
| Mov Cap-1 Maneuver       | 970                                                                               | 1072   | -                                                                                 | -      | 1613                                                                              | -    |
| Mov Cap-2 Maneuver       | 970                                                                               | -      | -                                                                                 | -      | -                                                                                 | -    |
| Stage 1                  | 1014                                                                              | -      | -                                                                                 | -      | -                                                                                 | -    |
| Stage 2                  | 995                                                                               | -      | -                                                                                 | -      | -                                                                                 | -    |
|                          |                                                                                   |        |                                                                                   |        |                                                                                   |      |
| Approach                 | WB                                                                                | NB     |                                                                                   | SB     |                                                                                   |      |
| HCM Ctrl Dly, s/v        | 8.66                                                                              | 0      |                                                                                   | 1.55   |                                                                                   |      |
| HCM LOS                  | A                                                                                 |        |                                                                                   |        |                                                                                   |      |
|                          |                                                                                   |        |                                                                                   |        |                                                                                   |      |
| Minor Lane/Major Mvmt    |                                                                                   | NBT    | NBR WBLn1                                                                         | SBL    | SBT                                                                               |      |
| Capacity (veh/h)         |                                                                                   | -      | -                                                                                 | 997    | 386                                                                               | -    |
| HCM Lane V/C Ratio       |                                                                                   | -      | -                                                                                 | 0.012  | 0.003                                                                             | -    |
| HCM Ctrl Dly (s/v)       |                                                                                   | -      | -                                                                                 | 8.7    | 7.2                                                                               | 0    |
| HCM Lane LOS             |                                                                                   | -      | -                                                                                 | A      | A                                                                                 | A    |
| HCM 95th %tile Q(veh)    |                                                                                   | -      | -                                                                                 | 0      | 0                                                                                 | -    |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |  |  |  |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)        | 6                                                                                 | 157                                                                               | 26                                                                                | 8                                                                                 | 166                                                                               | 3                                                                                 | 30                                                                                | 1                                                                                  | 4                                                                                   | 5                                                                                   | 1                                                                                   | 10                                                                                  |
| Future Volume (vph)         | 6                                                                                 | 157                                                                               | 26                                                                                | 8                                                                                 | 166                                                                               | 3                                                                                 | 30                                                                                | 1                                                                                  | 4                                                                                   | 5                                                                                   | 1                                                                                   | 10                                                                                  |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 80                                                                                |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 1358                                                                              |                                                                                   |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 932                                                                                |                                                                                     |                                                                                     | 646                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 20.6                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 21.2                                                                               |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |
| Peak Hour Factor            | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                               | 0.73                                                                                | 0.73                                                                                | 0.73                                                                                | 0.73                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

| 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       | 6                                                                                 | 157                                                                               | 26                                                                                | 8    | 166                                                                               | 3                                                                                 | 30   | 1                                                                                 | 4                                                                                 | 5                                                                                 | 1                                                                                 | 10                                                                                |
| Future Vol, veh/h        | 6                                                                                 | 157                                                                               | 26                                                                                | 8    | 166                                                                               | 3                                                                                 | 30   | 1                                                                                 | 4                                                                                 | 5                                                                                 | 1                                                                                 | 10                                                                                |
| 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           | 80                                                                                | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 50                                                                                | -    | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 | -                                                                                 |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -                                                                                 | 0                                                                                 | -                                                                                 |
| Peak Hour Factor         | 73                                                                                | 73                                                                                | 73                                                                                | 73   | 73                                                                                | 73                                                                                | 73   | 73                                                                                | 73                                                                                | 73                                                                                | 73                                                                                | 73                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 |
| Mvmt Flow                | 8                                                                                 | 215                                                                               | 36                                                                                | 11   | 227                                                                               | 4                                                                                 | 41   | 1                                                                                 | 5                                                                                 | 7                                                                                 | 1                                                                                 | 14                                                                                |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |     |     | Minor2 |     |     |
|----------------------|--------|---|---|--------|---|---|--------|-----|-----|--------|-----|-----|
| Conflicting Flow All | 232    | 0 | 0 | 251    | 0 | 0 | 482    | 485 | 215 | 482    | 516 | 227 |
| Stage 1              | -      | - | - | -      | - | - | 232    | 232 | -   | 249    | 249 | -   |
| Stage 2              | -      | - | - | -      | - | - | 250    | 253 | -   | 232    | 267 | -   |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.1    | 6.5 | 6.2 | 7.1    | 6.5 | 6.2 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4   | 3.3 | 3.5    | 4   | 3.3 |
| Pot Cap-1 Maneuver   | 1348   | - | - | 1327   | - | - | 498    | 485 | 830 | 498    | 466 | 817 |
| Stage 1              | -      | - | - | -      | - | - | 776    | 717 | -   | 759    | 704 | -   |
| Stage 2              | -      | - | - | -      | - | - | 759    | 701 | -   | 775    | 692 | -   |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -   | -   | -      | -   | -   |
| Mov Cap-1 Maneuver   | 1348   | - | - | 1327   | - | - | 481    | 477 | 830 | 486    | 458 | 817 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 481    | 477 | -   | 486    | 458 | -   |
| Stage 1              | -      | - | - | -      | - | - | 771    | 712 | -   | 752    | 697 | -   |
| Stage 2              | -      | - | - | -      | - | - | 737    | 694 | -   | 764    | 687 | -   |

| Approach          | EB   | WB   | NB    | SB    |
|-------------------|------|------|-------|-------|
| HCM Ctrl Dly, s/v | 0.24 | 0.35 | 12.87 | 10.75 |
| HCM LOS           |      |      | B     | B     |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 505   | 1348  | -   | -   | 83    | -   | -   | 647   |
| HCM Lane V/C Ratio    | 0.095 | 0.006 | -   | -   | 0.008 | -   | -   | 0.034 |
| HCM Ctrl Dly (s/v)    | 12.9  | 7.7   | -   | -   | 7.7   | 0   | -   | 10.8  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0.3   | 0     | -   | -   | 0     | -   | -   | 0.1   |

Lanes, Volumes, Timings  
5: Marine Av. & Two Mile Rd.

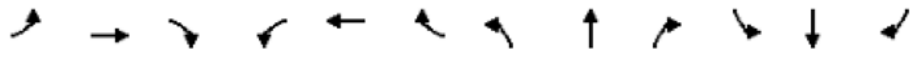
Cumulative (2027) w/o Project AM Peak Hour

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 2                                                                                 | 162                                                                               | 2                                                                                 | 1                                                                                 | 170                                                                               | 4                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 3                                                                                   | 1                                                                                   | 4                                                                                   |
| Future Volume (vph)         | 2                                                                                 | 162                                                                               | 2                                                                                 | 1                                                                                 | 170                                                                               | 4                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 3                                                                                   | 1                                                                                   | 4                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 404                                                                               |                                                                                   |                                                                                   | 287                                                                                |                                                                                     |                                                                                     | 353                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                                |                                                                                     |                                                                                     | 8.0                                                                                 |                                                                                     |
| Peak Hour Factor            | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                               | 0.71                                                                                | 0.71                                                                                | 0.71                                                                                | 0.71                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection             |        |                                                                                   |      |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 0.4    |                                                                                   |      |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR  | WBL    | WBT                                                                               | WBR                                                                               | NBL    | NBT                                                                               | NBR  | SBL    | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |      |        |  |  |        |  |      |        |  |      |
| Traffic Vol, veh/h       | 2      | 162                                                                               | 2    | 1      | 170                                                                               | 4                                                                                 | 1      | 1                                                                                 | 2    | 3      | 1                                                                                   | 4    |
| Future Vol, veh/h        | 2      | 162                                                                               | 2    | 1      | 170                                                                               | 4                                                                                 | 1      | 1                                                                                 | 2    | 3      | 1                                                                                   | 4    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Sign Control             | Free   | Free                                                                              | Free | Free   | Free                                                                              | Free                                                                              | Stop   | Stop                                                                              | Stop | Stop   | Stop                                                                                | Stop |
| RT Channelized           | -      | -                                                                                 | None | -      | -                                                                                 | None                                                                              | -      | -                                                                                 | None | -      | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -    | -      | -                                                                                 | 50                                                                                | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -    | -      | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -    | -      | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 71     | 71                                                                                | 71   | 71     | 71                                                                                | 71                                                                                | 71     | 71                                                                                | 71   | 71     | 71                                                                                  | 71   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 3      | 228                                                                               | 3    | 1      | 239                                                                               | 6                                                                                 | 1      | 1                                                                                 | 3    | 4      | 1                                                                                   | 6    |
|                          |        |                                                                                   |      |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1 |                                                                                   |      | Major2 |                                                                                   |                                                                                   | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 245    | 0                                                                                 | 0    | 231    | 0                                                                                 | 0                                                                                 | 478    | 483                                                                               | 230  | 477    | 479                                                                                 | 239  |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 235    | 235                                                                               | -    | 242    | 242                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 243    | 248                                                                               | -    | 235    | 237                                                                                 | -    |
| Critical Hdwy            | 4.1    | -                                                                                 | -    | 4.1    | -                                                                                 | -                                                                                 | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2    | -                                                                                 | -    | 2.2    | -                                                                                 | -                                                                                 | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1333   | -                                                                                 | -    | 1349   | -                                                                                 | -                                                                                 | 501    | 486                                                                               | 815  | 502    | 489                                                                                 | 804  |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 772    | 714                                                                               | -    | 766    | 709                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 765    | 705                                                                               | -    | 773    | 713                                                                                 | -    |
| Platoon blocked, %       | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Mov Cap-1 Maneuver       | 1333   | -                                                                                 | -    | 1349   | -                                                                                 | -                                                                                 | 494    | 484                                                                               | 815  | 497    | 487                                                                                 | 804  |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 494    | 484                                                                               | -    | 497    | 487                                                                                 | -    |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 771    | 712                                                                               | -    | 765    | 708                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | 757    | 704                                                                               | -    | 767    | 711                                                                                 | -    |
|                          |        |                                                                                   |      |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB     |                                                                                   |      | WB     |                                                                                   |                                                                                   | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 0.09   |                                                                                   |      | 0.04   |                                                                                   |                                                                                   | 10.94  |                                                                                   |      | 10.99  |                                                                                     |      |
| HCM LOS                  |        |                                                                                   |      |        |                                                                                   |                                                                                   | B      |                                                                                   |      | B      |                                                                                     |      |
|                          |        |                                                                                   |      |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL                                                                               | EBT  | EBR    | WBL                                                                               | WBT                                                                               | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 611    | 1333                                                                              | -    | -      | 11                                                                                | -                                                                                 | -      | 612                                                                               |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.009  | 0.002                                                                             | -    | -      | 0.001                                                                             | -                                                                                 | -      | 0.018                                                                             |      |        |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 10.9   | 7.7                                                                               | -    | -      | 7.7                                                                               | 0                                                                                 | -      | 11                                                                                |      |        |                                                                                     |      |
| HCM Lane LOS             | B      | A                                                                                 | -    | -      | A                                                                                 | A                                                                                 | -      | B                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | 0                                                                                 | -    | -      | 0                                                                                 | -                                                                                 | -      | 0.1                                                                               |      |        |                                                                                     |      |

Lanes, Volumes, Timings  
6: Adobe Rd. & Two Mile Rd.

Cumulative (2027) w/o Project AM Peak Hour

|                         |  |       |       |       |       |       |       |       |       |       |       |      |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
| Lane Configurations     |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Traffic Volume (vph)    | 114                                                                                | 107   | 33    | 31    | 148   | 130   | 22    | 403   | 31    | 9     | 149   | 75   |
| Future Volume (vph)     | 114                                                                                | 107   | 33    | 31    | 148   | 130   | 22    | 403   | 31    | 9     | 149   | 75   |
| Ideal Flow (vphpl)      | 1700                                                                               | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800 |
| Storage Length (ft)     | 120                                                                                |       | 120   | 90    |       | 90    | 80    |       | 50    | 100   |       | 0    |
| Storage Lanes           | 1                                                                                  |       | 1     | 1     |       | 2     | 1     |       | 1     | 1     |       | 0    |
| Taper Length (ft)       | 90                                                                                 |       |       | 90    |       |       | 90    |       |       | 90    |       |      |
| Right Turn on Red       |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes  |
| Link Speed (mph)        |                                                                                    | 45    |       |       | 45    |       |       | 40    |       |       | 55    |      |
| Link Distance (ft)      |                                                                                    | 632   |       |       | 1344  |       |       | 691   |       |       | 541   |      |
| Travel Time (s)         |                                                                                    | 9.6   |       |       | 20.4  |       |       | 11.8  |       |       | 6.7   |      |
| Peak Hour Factor        | 0.77                                                                               | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77 |
| Shared Lane Traffic (%) |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |      |
| Protected Phases        | 7                                                                                  | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases        |                                                                                    |       | 4     |       |       | 8     |       |       | 2     |       |       |      |
| Detector Phase          | 7                                                                                  | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |      |
| Switch Phase            |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)     | 5.0                                                                                | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |      |
| Minimum Split (s)       | 9.5                                                                                | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  |      |
| Total Split (s)         | 27.0                                                                               | 39.0  | 39.0  | 14.0  | 26.0  | 26.0  | 13.0  | 36.0  | 36.0  | 11.0  | 34.0  |      |
| Total Split (%)         | 27.0%                                                                              | 39.0% | 39.0% | 14.0% | 26.0% | 26.0% | 13.0% | 36.0% | 36.0% | 11.0% | 34.0% |      |
| Maximum Green (s)       | 22.5                                                                               | 34.5  | 34.5  | 9.5   | 21.5  | 21.5  | 8.5   | 31.5  | 31.5  | 6.5   | 29.5  |      |
| Yellow Time (s)         | 3.5                                                                                | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |      |
| All-Red Time (s)        | 1.0                                                                                | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.5                                                                                | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |      |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Recall Mode             | None                                                                               | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |      |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      |
| Flash Don't Walk (s)    |                                                                                    | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  |      |
| Pedestrian Calls (#/hr) |                                                                                    | 5     | 5     |       | 5     | 5     |       | 5     | 5     |       | 5     |      |

Intersection Summary

Area Type: Other

Cycle Length: 100

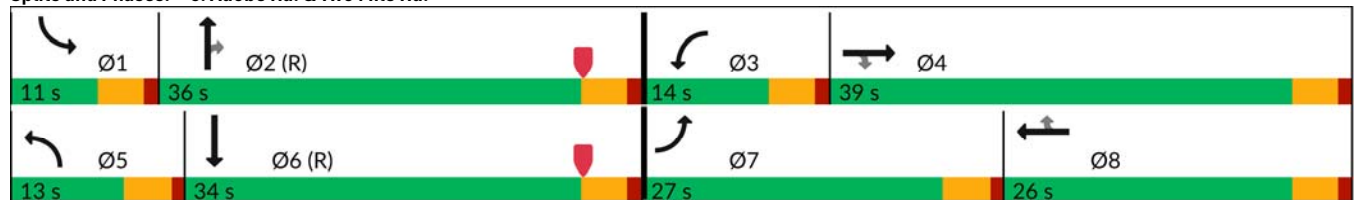
Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Adobe Rd. & Two Mile Rd.



HCM 7th Signalized Intersection Summary  
6: Adobe Rd. & Two Mile Rd.

Cumulative (2027) w/o Project AM Peak Hour

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 114                                                                               | 107                                                                               | 33                                                                                | 31                                                                                | 148                                                                               | 130                                                                               | 22                                                                                | 403                                                                                | 31                                                                                  | 9                                                                                   | 149                                                                                 | 75                                                                                  |
| Future Volume (veh/h)        | 114                                                                               | 107                                                                               | 33                                                                                | 31                                                                                | 148                                                                               | 130                                                                               | 22                                                                                | 403                                                                                | 31                                                                                  | 9                                                                                   | 149                                                                                 | 75                                                                                  |
| 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       | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Adj Flow Rate, veh/h         | 148                                                                               | 139                                                                               | 43                                                                                | 40                                                                                | 192                                                                               | 169                                                                               | 29                                                                                | 523                                                                                | 40                                                                                  | 12                                                                                  | 194                                                                                 | 97                                                                                  |
| Peak Hour Factor             | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 179                                                                               | 386                                                                               | 328                                                                               | 54                                                                                | 472                                                                               | 210                                                                               | 45                                                                                | 1907                                                                               | 851                                                                                 | 23                                                                                  | 1219                                                                                | 585                                                                                 |
| Arrive On Green              | 0.11                                                                              | 0.21                                                                              | 0.21                                                                              | 0.03                                                                              | 0.14                                                                              | 0.14                                                                              | 0.03                                                                              | 0.56                                                                               | 0.56                                                                                | 0.01                                                                                | 0.54                                                                                | 0.54                                                                                |
| Sat Flow, veh/h              | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                               | 1525                                                                                | 1619                                                                                | 2241                                                                                | 1075                                                                                |
| Grp Volume(v), veh/h         | 148                                                                               | 139                                                                               | 43                                                                                | 40                                                                                | 192                                                                               | 169                                                                               | 29                                                                                | 523                                                                                | 40                                                                                  | 12                                                                                  | 146                                                                                 | 145                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                               | 1525                                                                                | 1619                                                                                | 1710                                                                                | 1606                                                                                |
| Q Serve(g_s), s              | 9.0                                                                               | 6.6                                                                               | 2.3                                                                               | 2.4                                                                               | 5.1                                                                               | 10.7                                                                              | 1.8                                                                               | 8.0                                                                                | 1.2                                                                                 | 0.7                                                                                 | 4.3                                                                                 | 4.5                                                                                 |
| Cycle Q Clear(g_c), s        | 9.0                                                                               | 6.6                                                                               | 2.3                                                                               | 2.4                                                                               | 5.1                                                                               | 10.7                                                                              | 1.8                                                                               | 8.0                                                                                | 1.2                                                                                 | 0.7                                                                                 | 4.3                                                                                 | 4.5                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                    | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.67                                                                                |
| Lane Grp Cap(c), veh/h       | 179                                                                               | 386                                                                               | 328                                                                               | 54                                                                                | 472                                                                               | 210                                                                               | 45                                                                                | 1907                                                                               | 851                                                                                 | 23                                                                                  | 930                                                                                 | 874                                                                                 |
| V/C Ratio(X)                 | 0.83                                                                              | 0.36                                                                              | 0.13                                                                              | 0.74                                                                              | 0.41                                                                              | 0.80                                                                              | 0.65                                                                              | 0.27                                                                               | 0.05                                                                                | 0.52                                                                                | 0.16                                                                                | 0.17                                                                                |
| Avail Cap(c_a), veh/h        | 364                                                                               | 621                                                                               | 526                                                                               | 154                                                                               | 735                                                                               | 328                                                                               | 138                                                                               | 1907                                                                               | 851                                                                                 | 105                                                                                 | 930                                                                                 | 874                                                                                 |
| 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     | 43.6                                                                              | 33.4                                                                              | 31.7                                                                              | 47.9                                                                              | 39.4                                                                              | 41.8                                                                              | 48.1                                                                              | 11.6                                                                               | 10.1                                                                                | 49.0                                                                                | 11.4                                                                                | 11.4                                                                                |
| Incr Delay (d2), s/veh       | 9.4                                                                               | 0.6                                                                               | 0.2                                                                               | 17.5                                                                              | 0.6                                                                               | 7.7                                                                               | 14.6                                                                              | 0.4                                                                                | 0.1                                                                                 | 17.2                                                                                | 0.4                                                                                 | 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     | 3.9                                                                               | 2.8                                                                               | 0.8                                                                               | 1.2                                                                               | 2.1                                                                               | 4.3                                                                               | 0.9                                                                               | 2.9                                                                                | 0.4                                                                                 | 0.4                                                                                 | 1.5                                                                                 | 1.5                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 53.0                                                                              | 34.0                                                                              | 31.9                                                                              | 65.3                                                                              | 39.9                                                                              | 49.5                                                                              | 62.7                                                                              | 11.9                                                                               | 10.2                                                                                | 66.2                                                                                | 11.7                                                                                | 11.8                                                                                |
| LnGrp LOS                    | D                                                                                 | C                                                                                 | C                                                                                 | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | B                                                                                  | B                                                                                   | E                                                                                   | B                                                                                   | B                                                                                   |
| Approach Vol, veh/h          | 330                                                                               |                                                                                   |                                                                                   | 401                                                                               |                                                                                   |                                                                                   | 592                                                                               |                                                                                    |                                                                                     | 303                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 42.2                                                                              |                                                                                   |                                                                                   | 46.5                                                                              |                                                                                   |                                                                                   | 14.3                                                                              |                                                                                    |                                                                                     | 13.9                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                    |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 5.9                                                                               | 60.3                                                                              | 7.9                                                                               | 26.0                                                                              | 7.3                                                                               | 58.9                                                                              | 15.5                                                                              | 18.3                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 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  | 6.5                                                                               | 31.5                                                                              | 9.5                                                                               | 34.5                                                                              | 8.5                                                                               | 29.5                                                                              | 22.5                                                                              | 21.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 2.7                                                                               | 10.0                                                                              | 4.4                                                                               | 8.6                                                                               | 3.8                                                                               | 6.5                                                                               | 11.0                                                                              | 12.7                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               | 3.4                                                                               | 0.0                                                                               | 0.8                                                                               | 0.0                                                                               | 1.4                                                                               | 0.3                                                                               | 1.1                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th Control Delay, s/veh | 27.8                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th LOS                  | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## 1: Desert Knoll Av. &amp; Samarkand Dr.

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | NBL                                                                               | NBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 0                                                                                 | 4                                                                                 | 0                                                                                 | 0                                                                                 | 8                                                                                 | 0                                                                                 |
| Future Volume (vph)         | 0                                                                                 | 4                                                                                 | 0                                                                                 | 0                                                                                 | 8                                                                                 | 0                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 969                                                                               |                                                                                   |                                                                                   | 1269                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 22.0                                                                              |                                                                                   |                                                                                   | 28.8                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              | Stop                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

## 1: Desert Knoll Av. &amp; Samarkand Dr.

| Intersection             |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 5.3                                                                               |      |        |                                                                                   |                                                                                   |      |
| Movement                 | EBT                                                                               | EBR  | WBL    | WBT                                                                               | NBL                                                                               | NBR  |
| Lane Configurations      |  |      |        |  |  |      |
| Traffic Vol, veh/h       | 0                                                                                 | 4    | 0      | 0                                                                                 | 8                                                                                 | 0    |
| Future Vol, veh/h        | 0                                                                                 | 4    | 0      | 0                                                                                 | 8                                                                                 | 0    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Free                                                                              | Free | Free   | Free                                                                              | Stop                                                                              | Stop |
| RT Channelized           | -                                                                                 | None | -      | None                                                                              | -                                                                                 | None |
| Storage Length           | -                                                                                 | -    | -      | -                                                                                 | 0                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92     | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 0                                                                                 | 4    | 0      | 0                                                                                 | 9                                                                                 | 0    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Major/Minor              | Major1                                                                            |      | Major2 |                                                                                   | Minor1                                                                            |      |
| Conflicting Flow All     | 0                                                                                 | 0    | 4      | 0                                                                                 | 3                                                                                 | 2    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 2                                                                                 | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1                                                                                 | -    |
| Critical Hdwy            | -                                                                                 | -    | 4.1    | -                                                                                 | 6.4                                                                               | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Follow-up Hdwy           | -                                                                                 | -    | 2.2    | -                                                                                 | 3.5                                                                               | 3.3  |
| Pot Cap-1 Maneuver       | -                                                                                 | -    | 1630   | -                                                                                 | 1024                                                                              | 1088 |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1026                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1027                                                                              | -    |
| Platoon blocked, %       | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | -                                                                                 | -    | 1630   | -                                                                                 | 1024                                                                              | 1088 |
| Mov Cap-2 Maneuver       | -                                                                                 | -    | -      | -                                                                                 | 1024                                                                              | -    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1026                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 1027                                                                              | -    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                |      | WB     |                                                                                   | NB                                                                                |      |
| HCM Ctrl Dly, s/v        | 0                                                                                 |      | 0      |                                                                                   | 8.54                                                                              |      |
| HCM LOS                  |                                                                                   |      |        |                                                                                   | A                                                                                 |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBT  | EBR    | WBL                                                                               | WBT                                                                               |      |
| Capacity (veh/h)         | 1024                                                                              | -    | -      | 1630                                                                              | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.008                                                                             | -    | -      | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 8.5                                                                               | -    | -      | 0                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -    | -      | A                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -    | -      | 0                                                                                 | -                                                                                 |      |

Lanes, Volumes, Timings  
 2: Desert Knoll Av. & Aztec Av.

Cumulative (2027) w/o Project PM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 1                                                                                 | 3                                                                                 | 5                                                                                 | 7                                                                                 | 3                                                                                 | 1                                                                                 |
| Future Volume (vph)         | 1                                                                                 | 3                                                                                 | 5                                                                                 | 7                                                                                 | 3                                                                                 | 1                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 523                                                                               |                                                                                   |                                                                                   | 1360                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 11.9                                                                              |                                                                                   |                                                                                   | 30.9                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |       |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 3.5                                                                               |        |       |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR    | NBL   | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |        |       |  |  |      |
| Traffic Vol, veh/h       | 1                                                                                 | 3      | 5     | 7                                                                                 | 3                                                                                 | 1    |
| Future Vol, veh/h        | 1                                                                                 | 3      | 5     | 7                                                                                 | 3                                                                                 | 1    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Stop                                                                              | Stop   | Free  | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None   | -     | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 75                                                                                | 75     | 75    | 75                                                                                | 75                                                                                | 75   |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 1                                                                                 | 4      | 7     | 9                                                                                 | 4                                                                                 | 1    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Major/Minor              | Minor2                                                                            | Major1 |       | Major2                                                                            |                                                                                   |      |
| Conflicting Flow All     | 27                                                                                | 5      | 5     | 0                                                                                 | -                                                                                 | 0    |
| Stage 1                  | 5                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 23                                                                                | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2    | 4.1   | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | 2.2   | -                                                                                 | -                                                                                 | -    |
| Pot Cap-1 Maneuver       | 993                                                                               | 1084   | 1629  | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 1024                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 1005                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Platoon blocked, %       |                                                                                   |        |       | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | 989                                                                               | 1084   | 1629  | -                                                                                 | -                                                                                 | -    |
| Mov Cap-2 Maneuver       | 989                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 1020                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 1005                                                                              | -      | -     | -                                                                                 | -                                                                                 | -    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                | NB     |       | SB                                                                                |                                                                                   |      |
| HCM Ctrl Dly, s/v        | 8.42                                                                              | 3.01   |       | 0                                                                                 |                                                                                   |      |
| HCM LOS                  | A                                                                                 |        |       |                                                                                   |                                                                                   |      |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT    | EBLn1 | SBT                                                                               | SBR                                                                               |      |
| Capacity (veh/h)         | 750                                                                               | -      | 1059  | -                                                                                 | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.004                                                                             | -      | 0.005 | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 7.2                                                                               | 0      | 8.4   | -                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | A      | A     | -                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -      | 0     | -                                                                                 | -                                                                                 |      |

## 3: Desert Knoll Av. &amp; Manana Dr.

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations         |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)        | 6                                                                                 | 2                                                                                 | 21                                                                                | 1                                                                                 | 1                                                                                 | 17                                                                                |
| Future Volume (vph)         | 6                                                                                 | 2                                                                                 | 21                                                                                | 1                                                                                 | 1                                                                                 | 17                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)          | 401                                                                               |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 1360                                                                              |
| Travel Time (s)             | 9.1                                                                               |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                   | 30.9                                                                              |
| Peak Hour Factor            | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |           |                                                                                   |        |      |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 1.6                                                                               |           |                                                                                   |        |      |                                                                                   |
| Movement                 | WBL                                                                               | WBR       | NBT                                                                               | NBR    | SBL  | SBT                                                                               |
| Lane Configurations      |  |           |  |        |      |  |
| Traffic Vol, veh/h       | 6                                                                                 | 2         | 21                                                                                | 1      | 1    | 17                                                                                |
| Future Vol, veh/h        | 6                                                                                 | 2         | 21                                                                                | 1      | 1    | 17                                                                                |
| Conflicting Peds, #/hr   | 0                                                                                 | 0         | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop      | Free                                                                              | Free   | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None      | -                                                                                 | None   | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -         | -                                                                                 | -      | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -         | 0                                                                                 | -      | -    | 0                                                                                 |
| Grade, %                 | 0                                                                                 | -         | 0                                                                                 | -      | -    | 0                                                                                 |
| Peak Hour Factor         | 77                                                                                | 77        | 77                                                                                | 77     | 77   | 77                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0         | 0                                                                                 | 0      | 0    | 0                                                                                 |
| Mvmt Flow                | 8                                                                                 | 3         | 27                                                                                | 1      | 1    | 22                                                                                |
|                          |                                                                                   |           |                                                                                   |        |      |                                                                                   |
| Major/Minor              | Minor1                                                                            | Major1    |                                                                                   | Major2 |      |                                                                                   |
| Conflicting Flow All     | 53                                                                                | 28        | 0                                                                                 | 0      | 29   | 0                                                                                 |
| Stage 1                  | 28                                                                                | -         | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                  | 25                                                                                | -         | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy            | 6.4                                                                               | 6.2       | -                                                                                 | -      | 4.1  | -                                                                                 |
| Critical Hdwy Stg 1      | 5.4                                                                               | -         | -                                                                                 | -      | -    | -                                                                                 |
| Critical Hdwy Stg 2      | 5.4                                                                               | -         | -                                                                                 | -      | -    | -                                                                                 |
| Follow-up Hdwy           | 3.5                                                                               | 3.3       | -                                                                                 | -      | 2.2  | -                                                                                 |
| Pot Cap-1 Maneuver       | 961                                                                               | 1053      | -                                                                                 | -      | 1598 | -                                                                                 |
| Stage 1                  | 1000                                                                              | -         | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                  | 1003                                                                              | -         | -                                                                                 | -      | -    | -                                                                                 |
| Platoon blocked, %       |                                                                                   |           | -                                                                                 | -      | -    | -                                                                                 |
| Mov Cap-1 Maneuver       | 960                                                                               | 1053      | -                                                                                 | -      | 1598 | -                                                                                 |
| Mov Cap-2 Maneuver       | 960                                                                               | -         | -                                                                                 | -      | -    | -                                                                                 |
| Stage 1                  | 1000                                                                              | -         | -                                                                                 | -      | -    | -                                                                                 |
| Stage 2                  | 1002                                                                              | -         | -                                                                                 | -      | -    | -                                                                                 |
|                          |                                                                                   |           |                                                                                   |        |      |                                                                                   |
| Approach                 | WB                                                                                | NB        |                                                                                   | SB     |      |                                                                                   |
| HCM Ctrl Dly, s/v        | 8.71                                                                              | 0         |                                                                                   | 0.4    |      |                                                                                   |
| HCM LOS                  | A                                                                                 |           |                                                                                   |        |      |                                                                                   |
|                          |                                                                                   |           |                                                                                   |        |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBR WBLn1 | SBL                                                                               | SBT    |      |                                                                                   |
| Capacity (veh/h)         | -                                                                                 | -         | 982                                                                               | 100    | -    |                                                                                   |
| HCM Lane V/C Ratio       | -                                                                                 | -         | 0.011                                                                             | 0.001  | -    |                                                                                   |
| HCM Ctrl Dly (s/v)       | -                                                                                 | -         | 8.7                                                                               | 7.3    | 0    |                                                                                   |
| HCM Lane LOS             | -                                                                                 | -         | A                                                                                 | A      | A    |                                                                                   |
| HCM 95th %tile Q(veh)    | -                                                                                 | -         | 0                                                                                 | 0      | -    |                                                                                   |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |  |  |  |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)        | 14                                                                                | 82                                                                                | 57                                                                                | 2                                                                                 | 94                                                                                | 7                                                                                 | 35                                                                                | 1                                                                                  | 3                                                                                   | 8                                                                                   | 5                                                                                   | 9                                                                                   |
| Future Volume (vph)         | 14                                                                                | 82                                                                                | 57                                                                                | 2                                                                                 | 94                                                                                | 7                                                                                 | 35                                                                                | 1                                                                                  | 3                                                                                   | 8                                                                                   | 5                                                                                   | 9                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 80                                                                                |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 1358                                                                              |                                                                                   |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 932                                                                                |                                                                                     |                                                                                     | 646                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 20.6                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 21.2                                                                               |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |
| 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                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

| Intersection             |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Int Delay, s/veh         | 2.3                                                                               |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |                                                                                     |
| Movement                 | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL    | WBT                                                                               | WBR                                                                               | NBL    | NBT                                                                               | NBR  | SBL    | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations      |  |  |  |        |  |  |        |  |      |        |  |  |
| Traffic Vol, veh/h       | 14                                                                                | 82                                                                                | 57                                                                                | 2      | 94                                                                                | 7                                                                                 | 35     | 1                                                                                 | 3    | 8      | 5                                                                                   | 9                                                                                   |
| Future Vol, veh/h        | 14                                                                                | 82                                                                                | 57                                                                                | 2      | 94                                                                                | 7                                                                                 | 35     | 1                                                                                 | 3    | 8      | 5                                                                                   | 9                                                                                   |
| 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           | 80                                                                                | -                                                                                 | 0                                                                                 | -      | -                                                                                 | 50                                                                                | -      | -                                                                                 | -    | -      | -                                                                                   | -                                                                                   |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -    | -      | 0                                                                                   | -                                                                                   |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -    | -      | 0                                                                                   | -                                                                                   |
| Peak Hour Factor         | 89                                                                                | 89                                                                                | 89                                                                                | 89     | 89                                                                                | 89                                                                                | 89     | 89                                                                                | 89   | 89     | 89                                                                                  | 89                                                                                  |
| Heavy Vehicles, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0      | 0                                                                                 | 0                                                                                 | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0                                                                                   |
| Mvmt Flow                | 16                                                                                | 92                                                                                | 64                                                                                | 2      | 106                                                                               | 8                                                                                 | 39     | 1                                                                                 | 3    | 9      | 6                                                                                   | 10                                                                                  |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |                                                                                     |
| Major/Minor              | Major1                                                                            |                                                                                   |                                                                                   | Major2 |                                                                                   |                                                                                   | Minor1 |                                                                                   |      | Minor2 |                                                                                     |                                                                                     |
| Conflicting Flow All     | 113                                                                               | 0                                                                                 | 0                                                                                 | 156    | 0                                                                                 | 0                                                                                 | 237    | 242                                                                               | 92   | 234    | 298                                                                                 | 106                                                                                 |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 124    | 124                                                                               | -    | 110    | 110                                                                                 | -                                                                                   |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 113    | 118                                                                               | -    | 124    | 188                                                                                 | -                                                                                   |
| Critical Hdwy            | 4.1                                                                               | -                                                                                 | -                                                                                 | 4.1    | -                                                                                 | -                                                                                 | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2                                                                                 |
| Critical Hdwy Stg 1      | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -                                                                                   |
| Critical Hdwy Stg 2      | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -                                                                                   |
| Follow-up Hdwy           | 2.2                                                                               | -                                                                                 | -                                                                                 | 2.2    | -                                                                                 | -                                                                                 | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3                                                                                 |
| Pot Cap-1 Maneuver       | 1488                                                                              | -                                                                                 | -                                                                                 | 1436   | -                                                                                 | -                                                                                 | 722    | 663                                                                               | 971  | 725    | 617                                                                                 | 954                                                                                 |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 885    | 797                                                                               | -    | 900    | 808                                                                                 | -                                                                                   |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 897    | 802                                                                               | -    | 885    | 749                                                                                 | -                                                                                   |
| Platoon blocked, %       | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | -      | -                                                                                 | -    | -      | -                                                                                   | -                                                                                   |
| Mov Cap-1 Maneuver       | 1488                                                                              | -                                                                                 | -                                                                                 | 1436   | -                                                                                 | -                                                                                 | 699    | 655                                                                               | 971  | 712    | 610                                                                                 | 954                                                                                 |
| Mov Cap-2 Maneuver       | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 699    | 655                                                                               | -    | 712    | 610                                                                                 | -                                                                                   |
| Stage 1                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 876    | 789                                                                               | -    | 898    | 807                                                                                 | -                                                                                   |
| Stage 2                  | -                                                                                 | -                                                                                 | -                                                                                 | -      | -                                                                                 | -                                                                                 | 880    | 801                                                                               | -    | 871    | 741                                                                                 | -                                                                                   |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |                                                                                     |
| Approach                 | EB                                                                                |                                                                                   |                                                                                   | WB     |                                                                                   |                                                                                   | NB     |                                                                                   |      | SB     |                                                                                     |                                                                                     |
| HCM Ctrl Dly, s/v        | 0.68                                                                              |                                                                                   |                                                                                   | 0.15   |                                                                                   |                                                                                   | 10.38  |                                                                                   |      | 9.88   |                                                                                     |                                                                                     |
| HCM LOS                  |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   | B      |                                                                                   |      | A      |                                                                                     |                                                                                     |
|                          |                                                                                   |                                                                                   |                                                                                   |        |                                                                                   |                                                                                   |        |                                                                                   |      |        |                                                                                     |                                                                                     |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBL                                                                               | EBT                                                                               | EBR    | WBL                                                                               | WBT                                                                               | WBR    | SBLn1                                                                             |      |        |                                                                                     |                                                                                     |
| Capacity (veh/h)         | 713                                                                               | 1488                                                                              | -                                                                                 | -      | 38                                                                                | -                                                                                 | -      | 762                                                                               |      |        |                                                                                     |                                                                                     |
| HCM Lane V/C Ratio       | 0.061                                                                             | 0.011                                                                             | -                                                                                 | -      | 0.002                                                                             | -                                                                                 | -      | 0.032                                                                             |      |        |                                                                                     |                                                                                     |
| HCM Ctrl Dly (s/v)       | 10.4                                                                              | 7.4                                                                               | -                                                                                 | -      | 7.5                                                                               | 0                                                                                 | -      | 9.9                                                                               |      |        |                                                                                     |                                                                                     |
| HCM Lane LOS             | B                                                                                 | A                                                                                 | -                                                                                 | -      | A                                                                                 | A                                                                                 | -      | A                                                                                 |      |        |                                                                                     |                                                                                     |
| HCM 95th %tile Q(veh)    | 0.2                                                                               | 0                                                                                 | -                                                                                 | -      | 0                                                                                 | -                                                                                 | -      | 0.1                                                                               |      |        |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
5: Marine Av. & Two Mile Rd.

Cumulative (2027) w/o Project PM Peak Hour

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 9                                                                                 | 89                                                                                | 1                                                                                 | 1                                                                                 | 94                                                                                | 7                                                                                 | 5                                                                                 | 1                                                                                  | 1                                                                                   | 1                                                                                   | 1                                                                                   | 5                                                                                   |
| Future Volume (vph)         | 9                                                                                 | 89                                                                                | 1                                                                                 | 1                                                                                 | 94                                                                                | 7                                                                                 | 5                                                                                 | 1                                                                                  | 1                                                                                   | 1                                                                                   | 1                                                                                   | 5                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 404                                                                               |                                                                                   |                                                                                   | 287                                                                                |                                                                                     |                                                                                     | 353                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                                |                                                                                     |                                                                                     | 8.0                                                                                 |                                                                                     |
| Peak Hour Factor            | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                               | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1    |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      |      | ↔    |      |      | ↔    | ↔    |      | ↔    |      | ↔    |      |      |
| Traffic Vol, veh/h       | 9    | 89   | 1    | 1    | 94   | 7    | 5    | 1    | 1    | 1    | 1    | 5    |
| Future Vol, veh/h        | 9    | 89   | 1    | 1    | 94   | 7    | 5    | 1    | 1    | 1    | 1    | 5    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | 50   | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   | 93   |
| Heavy Vehicles, %        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 10   | 96   | 1    | 1    | 101  | 8    | 5    | 1    | 1    | 1    | 1    | 5    |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |     |     | Minor2 |     |     |
|----------------------|--------|---|---|--------|---|---|--------|-----|-----|--------|-----|-----|
| Conflicting Flow All | 109    | 0 | 0 | 97     | 0 | 0 | 219    | 226 | 96  | 219    | 219 | 101 |
| Stage 1              | -      | - | - | -      | - | - | 116    | 116 | -   | 103    | 103 | -   |
| Stage 2              | -      | - | - | -      | - | - | 104    | 111 | -   | 116    | 116 | -   |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.1    | 6.5 | 6.2 | 7.1    | 6.5 | 6.2 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4   | 3.3 | 3.5    | 4   | 3.3 |
| Pot Cap-1 Maneuver   | 1494   | - | - | 1509   | - | - | 741    | 676 | 966 | 742    | 682 | 960 |
| Stage 1              | -      | - | - | -      | - | - | 894    | 804 | -   | 908    | 814 | -   |
| Stage 2              | -      | - | - | -      | - | - | 907    | 808 | -   | 894    | 803 | -   |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -   | -   | -      | -   | -   |
| Mov Cap-1 Maneuver   | 1494   | - | - | 1509   | - | - | 730    | 671 | 966 | 734    | 677 | 960 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 730    | 671 | -   | 734    | 677 | -   |
| Stage 1              | -      | - | - | -      | - | - | 888    | 798 | -   | 907    | 813 | -   |
| Stage 2              | -      | - | - | -      | - | - | 900    | 807 | -   | 886    | 798 | -   |

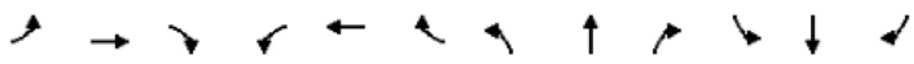
| Approach          | EB   |  |  | WB   |  |  | NB   |  |  | SB   |  |  |
|-------------------|------|--|--|------|--|--|------|--|--|------|--|--|
| HCM Ctrl Dly, s/v | 0.67 |  |  | 0.07 |  |  | 9.87 |  |  | 9.18 |  |  |
| HCM LOS           |      |  |  |      |  |  | A    |  |  | A    |  |  |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 747   | 1494  | -   | -   | 19    | -   | -   | 870   |
| HCM Lane V/C Ratio    | 0.01  | 0.006 | -   | -   | 0.001 | -   | -   | 0.009 |
| HCM Ctrl Dly (s/v)    | 9.9   | 7.4   | -   | -   | 7.4   | 0   | -   | 9.2   |
| HCM Lane LOS          | A     | A     | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0     | 0     | -   | -   | 0     | -   | -   | 0     |

Lanes, Volumes, Timings  
6: Adobe Rd. & Two Mile Rd.

Cumulative (2027) w/o Project PM Peak Hour

|                         |  |       |       |       |       |       |       |       |       |       |       |      |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
| Lane Configurations     |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Traffic Volume (vph)    | 94                                                                                 | 89    | 76    | 44    | 118   | 49    | 72    | 239   | 44    | 104   | 513   | 189  |
| Future Volume (vph)     | 94                                                                                 | 89    | 76    | 44    | 118   | 49    | 72    | 239   | 44    | 104   | 513   | 189  |
| Ideal Flow (vphpl)      | 1700                                                                               | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800 |
| Storage Length (ft)     | 120                                                                                |       | 120   | 90    |       | 90    | 80    |       | 50    | 100   |       | 0    |
| Storage Lanes           | 1                                                                                  |       | 1     | 1     |       | 2     | 1     |       | 1     | 1     |       | 0    |
| Taper Length (ft)       | 90                                                                                 |       |       | 90    |       |       | 90    |       |       | 90    |       |      |
| Right Turn on Red       |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes  |
| Link Speed (mph)        |                                                                                    | 45    |       |       | 45    |       |       | 40    |       |       | 55    |      |
| Link Distance (ft)      |                                                                                    | 632   |       |       | 1344  |       |       | 691   |       |       | 541   |      |
| Travel Time (s)         |                                                                                    | 9.6   |       |       | 20.4  |       |       | 11.8  |       |       | 6.7   |      |
| Peak Hour Factor        | 0.94                                                                               | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94 |
| Shared Lane Traffic (%) |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |      |
| Protected Phases        | 7                                                                                  | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases        |                                                                                    |       | 4     |       |       | 8     |       |       | 2     |       |       |      |
| Detector Phase          | 7                                                                                  | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |      |
| Switch Phase            |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)     | 5.0                                                                                | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |      |
| Minimum Split (s)       | 9.5                                                                                | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  |      |
| Total Split (s)         | 19.0                                                                               | 29.0  | 29.0  | 13.0  | 23.0  | 23.0  | 17.0  | 38.0  | 38.0  | 20.0  | 41.0  |      |
| Total Split (%)         | 19.0%                                                                              | 29.0% | 29.0% | 13.0% | 23.0% | 23.0% | 17.0% | 38.0% | 38.0% | 20.0% | 41.0% |      |
| Maximum Green (s)       | 14.5                                                                               | 24.5  | 24.5  | 8.5   | 18.5  | 18.5  | 12.5  | 33.5  | 33.5  | 15.5  | 36.5  |      |
| Yellow Time (s)         | 3.5                                                                                | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |      |
| All-Red Time (s)        | 1.0                                                                                | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.5                                                                                | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |      |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Recall Mode             | None                                                                               | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |      |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      |
| Flash Don't Walk (s)    |                                                                                    | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  |      |
| Pedestrian Calls (#/hr) |                                                                                    | 5     | 5     |       | 5     | 5     |       | 5     | 5     |       | 5     |      |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Adobe Rd. & Two Mile Rd.



HCM 7th Signalized Intersection Summary  
6: Adobe Rd. & Two Mile Rd.

Cumulative (2027) w/o Project PM Peak Hour

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 94                                                                                | 89                                                                                | 76                                                                                | 44                                                                                | 118                                                                               | 49                                                                                | 72                                                                                | 239                                                                                | 44                                                                                  | 104                                                                                 | 513                                                                                 | 189                                                                                 |
| Future Volume (veh/h)        | 94                                                                                | 89                                                                                | 76                                                                                | 44                                                                                | 118                                                                               | 49                                                                                | 72                                                                                | 239                                                                                | 44                                                                                  | 104                                                                                 | 513                                                                                 | 189                                                                                 |
| 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       | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Adj Flow Rate, veh/h         | 100                                                                               | 95                                                                                | 81                                                                                | 47                                                                                | 126                                                                               | 52                                                                                | 77                                                                                | 254                                                                                | 47                                                                                  | 111                                                                                 | 546                                                                                 | 201                                                                                 |
| Peak Hour Factor             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 124                                                                               | 184                                                                               | 156                                                                               | 59                                                                                | 212                                                                               | 94                                                                                | 97                                                                                | 2042                                                                               | 911                                                                                 | 137                                                                                 | 1523                                                                                | 559                                                                                 |
| Arrive On Green              | 0.08                                                                              | 0.10                                                                              | 0.10                                                                              | 0.04                                                                              | 0.06                                                                              | 0.06                                                                              | 0.06                                                                              | 0.60                                                                               | 0.60                                                                                | 0.08                                                                                | 0.62                                                                                | 0.62                                                                                |
| Sat Flow, veh/h              | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                               | 1525                                                                                | 1619                                                                                | 2450                                                                                | 899                                                                                 |
| Grp Volume(v), veh/h         | 100                                                                               | 95                                                                                | 81                                                                                | 47                                                                                | 126                                                                               | 52                                                                                | 77                                                                                | 254                                                                                | 47                                                                                  | 111                                                                                 | 381                                                                                 | 366                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                               | 1525                                                                                | 1619                                                                                | 1710                                                                                | 1638                                                                                |
| Q Serve(g_s), s              | 6.1                                                                               | 5.0                                                                               | 5.0                                                                               | 2.9                                                                               | 3.6                                                                               | 3.3                                                                               | 4.7                                                                               | 3.2                                                                                | 1.3                                                                                 | 6.7                                                                                 | 10.8                                                                                | 10.9                                                                                |
| Cycle Q Clear(g_c), s        | 6.1                                                                               | 5.0                                                                               | 5.0                                                                               | 2.9                                                                               | 3.6                                                                               | 3.3                                                                               | 4.7                                                                               | 3.2                                                                                | 1.3                                                                                 | 6.7                                                                                 | 10.8                                                                                | 10.9                                                                                |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                    | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.55                                                                                |
| Lane Grp Cap(c), veh/h       | 124                                                                               | 184                                                                               | 156                                                                               | 59                                                                                | 212                                                                               | 94                                                                                | 97                                                                                | 2042                                                                               | 911                                                                                 | 137                                                                                 | 1063                                                                                | 1019                                                                                |
| V/C Ratio(X)                 | 0.81                                                                              | 0.52                                                                              | 0.52                                                                              | 0.80                                                                              | 0.60                                                                              | 0.55                                                                              | 0.80                                                                              | 0.12                                                                               | 0.05                                                                                | 0.81                                                                                | 0.36                                                                                | 0.36                                                                                |
| Avail Cap(c_a), veh/h        | 235                                                                               | 441                                                                               | 374                                                                               | 138                                                                               | 633                                                                               | 282                                                                               | 202                                                                               | 2042                                                                               | 911                                                                                 | 251                                                                                 | 1063                                                                                | 1019                                                                                |
| 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     | 45.4                                                                              | 42.6                                                                              | 42.6                                                                              | 47.8                                                                              | 45.7                                                                              | 45.6                                                                              | 46.4                                                                              | 8.8                                                                                | 8.4                                                                                 | 45.0                                                                                | 9.2                                                                                 | 9.2                                                                                 |
| Incr Delay (d2), s/veh       | 11.5                                                                              | 2.2                                                                               | 2.7                                                                               | 21.0                                                                              | 2.7                                                                               | 4.9                                                                               | 13.8                                                                              | 0.1                                                                                | 0.1                                                                                 | 10.8                                                                                | 0.9                                                                                 | 1.0                                                                                 |
| Initial Q Delay(d3), s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 2.8                                                                               | 2.3                                                                               | 1.9                                                                               | 1.5                                                                               | 1.6                                                                               | 1.3                                                                               | 2.2                                                                               | 1.1                                                                                | 0.4                                                                                 | 3.0                                                                                 | 3.5                                                                                 | 3.3                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 56.9                                                                              | 44.8                                                                              | 45.2                                                                              | 68.8                                                                              | 48.4                                                                              | 50.5                                                                              | 60.2                                                                              | 8.9                                                                                | 8.5                                                                                 | 55.8                                                                                | 10.1                                                                                | 10.2                                                                                |
| LnGrp LOS                    | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | A                                                                                  | A                                                                                   | E                                                                                   | B                                                                                   | B                                                                                   |
| Approach Vol, veh/h          | 276                                                                               |                                                                                   |                                                                                   | 225                                                                               |                                                                                   |                                                                                   | 378                                                                               |                                                                                    |                                                                                     | 858                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 49.3                                                                              |                                                                                   |                                                                                   | 53.1                                                                              |                                                                                   |                                                                                   | 19.3                                                                              |                                                                                    |                                                                                     | 16.1                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                    |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 12.9                                                                              | 64.2                                                                              | 8.1                                                                               | 14.7                                                                              | 10.5                                                                              | 66.7                                                                              | 12.2                                                                              | 10.7                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 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  | 15.5                                                                              | 33.5                                                                              | 8.5                                                                               | 24.5                                                                              | 12.5                                                                              | 36.5                                                                              | 14.5                                                                              | 18.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 8.7                                                                               | 5.2                                                                               | 4.9                                                                               | 7.0                                                                               | 6.7                                                                               | 12.9                                                                              | 8.1                                                                               | 5.6                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.1                                                                               | 1.7                                                                               | 0.0                                                                               | 0.6                                                                               | 0.1                                                                               | 4.1                                                                               | 0.1                                                                               | 0.6                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th Control Delay, s/veh | 26.9                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th LOS                  | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## **APPENDIX 6.2:**

### **CUMULATIVE (2027) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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## 1: Desert Knoll Av. &amp; Samarkand Dr.



| Lane Group              | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Configurations     |      |      |      |      |      |      |
| Traffic Volume (vph)    | 13   | 4    | 16   | 13   | 2    | 8    |
| Future Volume (vph)     | 13   | 4    | 16   | 13   | 2    | 8    |
| Ideal Flow (vphpl)      | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph)        | 30   |      |      | 30   | 30   |      |
| Link Distance (ft)      | 969  |      |      | 2636 | 437  |      |
| Travel Time (s)         | 22.0 |      |      | 59.9 | 9.9  |      |
| Peak Hour Factor        | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Shared Lane Traffic (%) |      |      |      |      |      |      |
| Sign Control            | Free |      |      | Free | Stop |      |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

## 1: Desert Knoll Av. &amp; Samarkand Dr.

| Intersection             |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 3.6                                                                               |      |        |                                                                                   |                                                                                   |      |
| Movement                 | EBT                                                                               | EBR  | WBL    | WBT                                                                               | NBL                                                                               | NBR  |
| Lane Configurations      |  |      |        |  |  |      |
| Traffic Vol, veh/h       | 13                                                                                | 4    | 16     | 13                                                                                | 2                                                                                 | 8    |
| Future Vol, veh/h        | 13                                                                                | 4    | 16     | 13                                                                                | 2                                                                                 | 8    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Free                                                                              | Free | Free   | Free                                                                              | Stop                                                                              | Stop |
| RT Channelized           | -                                                                                 | None | -      | None                                                                              | -                                                                                 | None |
| Storage Length           | -                                                                                 | -    | -      | -                                                                                 | 0                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -    | -      | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92   | 92     | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0    | 0      | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 14                                                                                | 4    | 17     | 14                                                                                | 2                                                                                 | 9    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Major/Minor              | Major1                                                                            |      | Major2 |                                                                                   | Minor1                                                                            |      |
| Conflicting Flow All     | 0                                                                                 | 0    | 18     | 0                                                                                 | 65                                                                                | 16   |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 16                                                                                | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 49                                                                                | -    |
| Critical Hdwy            | -                                                                                 | -    | 4.1    | -                                                                                 | 6.4                                                                               | 6.2  |
| Critical Hdwy Stg 1      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Critical Hdwy Stg 2      | -                                                                                 | -    | -      | -                                                                                 | 5.4                                                                               | -    |
| Follow-up Hdwy           | -                                                                                 | -    | 2.2    | -                                                                                 | 3.5                                                                               | 3.3  |
| Pot Cap-1 Maneuver       | -                                                                                 | -    | 1611   | -                                                                                 | 945                                                                               | 1069 |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1012                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 979                                                                               | -    |
| Platoon blocked, %       | -                                                                                 | -    | -      | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | -                                                                                 | -    | 1611   | -                                                                                 | 935                                                                               | 1069 |
| Mov Cap-2 Maneuver       | -                                                                                 | -    | -      | -                                                                                 | 935                                                                               | -    |
| Stage 1                  | -                                                                                 | -    | -      | -                                                                                 | 1012                                                                              | -    |
| Stage 2                  | -                                                                                 | -    | -      | -                                                                                 | 968                                                                               | -    |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                |      | WB     |                                                                                   | NB                                                                                |      |
| HCM Ctrl Dly, s/v        | 0                                                                                 |      | 4      |                                                                                   | 8.5                                                                               |      |
| HCM LOS                  |                                                                                   |      |        |                                                                                   | A                                                                                 |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
|                          |                                                                                   |      |        |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBT  | EBR    | WBL                                                                               | WBT                                                                               |      |
| Capacity (veh/h)         | 1039                                                                              | -    | -      | 993                                                                               | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.01                                                                              | -    | -      | 0.011                                                                             | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 8.5                                                                               | -    | -      | 7.3                                                                               | 0                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -    | -      | A                                                                                 | A                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -    | -      | 0                                                                                 | -                                                                                 |      |

Lanes, Volumes, Timings  
 2: Desert Knoll Av. & Aztec Av.

Cumulative (2027) w/ Project AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 5                                                                                 | 2                                                                                 | 3                                                                                 | 5                                                                                 | 11                                                                                | 9                                                                                 |
| Future Volume (vph)         | 5                                                                                 | 2                                                                                 | 3                                                                                 | 5                                                                                 | 11                                                                                | 9                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 523                                                                               |                                                                                   |                                                                                   | 1360                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 11.9                                                                              |                                                                                   |                                                                                   | 30.9                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              | 0.56                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |        |        |        |      |      |      |
|--------------------------|--------|--------|--------|------|------|------|
| Int Delay, s/veh         | 2.4    |        |        |      |      |      |
| Movement                 | EBL    | EBR    | NBL    | NBT  | SBT  | SBR  |
| Lane Configurations      | W      |        |        | W    | W    |      |
| Traffic Vol, veh/h       | 5      | 2      | 3      | 5    | 11   | 9    |
| Future Vol, veh/h        | 5      | 2      | 3      | 5    | 11   | 9    |
| Conflicting Peds, #/hr   | 0      | 0      | 0      | 0    | 0    | 0    |
| Sign Control             | Stop   | Stop   | Free   | Free | Free | Free |
| RT Channelized           | -      | None   | -      | None | -    | None |
| Storage Length           | 0      | -      | -      | -    | -    | -    |
| Veh in Median Storage, # | 0      | -      | -      | 0    | 0    | -    |
| Grade, %                 | 0      | -      | -      | 0    | 0    | -    |
| Peak Hour Factor         | 56     | 56     | 56     | 56   | 56   | 56   |
| Heavy Vehicles, %        | 0      | 0      | 0      | 0    | 0    | 0    |
| Mvmt Flow                | 9      | 4      | 5      | 9    | 20   | 16   |
| Major/Minor              | Minor2 | Major1 | Major2 |      |      |      |
| Conflicting Flow All     | 47     | 28     | 36     | 0    | -    | 0    |
| Stage 1                  | 28     | -      | -      | -    | -    | -    |
| Stage 2                  | 20     | -      | -      | -    | -    | -    |
| Critical Hdwy            | 6.4    | 6.2    | 4.1    | -    | -    | -    |
| Critical Hdwy Stg 1      | 5.4    | -      | -      | -    | -    | -    |
| Critical Hdwy Stg 2      | 5.4    | -      | -      | -    | -    | -    |
| Follow-up Hdwy           | 3.5    | 3.3    | 2.2    | -    | -    | -    |
| Pot Cap-1 Maneuver       | 967    | 1053   | 1588   | -    | -    | -    |
| Stage 1                  | 1000   | -      | -      | -    | -    | -    |
| Stage 2                  | 1008   | -      | -      | -    | -    | -    |
| Platoon blocked, %       |        |        |        | -    | -    | -    |
| Mov Cap-1 Maneuver       | 964    | 1053   | 1588   | -    | -    | -    |
| Mov Cap-2 Maneuver       | 964    | -      | -      | -    | -    | -    |
| Stage 1                  | 997    | -      | -      | -    | -    | -    |
| Stage 2                  | 1008   | -      | -      | -    | -    | -    |
| Approach                 | EB     | NB     |        | SB   |      |      |
| HCM Ctrl Dly, s/v        | 8.69   | 2.73   |        | 0    |      |      |
| HCM LOS                  | A      |        |        |      |      |      |
| Minor Lane/Major Mvmt    | NBL    | NBT    | EBLn1  | SBT  | SBR  |      |
| Capacity (veh/h)         | 675    | -      | 988    | -    | -    |      |
| HCM Lane V/C Ratio       | 0.003  | -      | 0.013  | -    | -    |      |
| HCM Ctrl Dly (s/v)       | 7.3    | 0      | 8.7    | -    | -    |      |
| HCM Lane LOS             | A      | A      | A      | -    | -    |      |
| HCM 95th %tile Q(veh)    | 0      | -      | 0      | -    | -    |      |

## 3: Desert Knoll Av. &amp; Manana Dr.

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations         |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)        | 26                                                                                | 2                                                                                 | 9                                                                                 | 12                                                                                | 3                                                                                 | 18                                                                                |
| Future Volume (vph)         | 26                                                                                | 2                                                                                 | 9                                                                                 | 12                                                                                | 3                                                                                 | 18                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)          | 401                                                                               |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 1360                                                                              |
| Travel Time (s)             | 9.1                                                                               |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                   | 30.9                                                                              |
| Peak Hour Factor            | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              | 0.58                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |           |       |        |      |      |
|--------------------------|-----------------------------------------------------------------------------------|-----------|-------|--------|------|------|
| Int Delay, s/veh         | 3.9                                                                               |           |       |        |      |      |
| Movement                 | WBL                                                                               | WBR       | NBT   | NBR    | SBL  | SBT  |
| Lane Configurations      |  |           |       |        |      |      |
| Traffic Vol, veh/h       | 26                                                                                | 2         | 9     | 12     | 3    | 18   |
| Future Vol, veh/h        | 26                                                                                | 2         | 9     | 12     | 3    | 18   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0         | 0     | 0      | 0    | 0    |
| Sign Control             | Stop                                                                              | Stop      | Free  | Free   | Free | Free |
| RT Channelized           | -                                                                                 | None      | -     | None   | -    | None |
| Storage Length           | 0                                                                                 | -         | -     | -      | -    | -    |
| Veh in Median Storage, # | 0                                                                                 | -         | 0     | -      | -    | 0    |
| Grade, %                 | 0                                                                                 | -         | 0     | -      | -    | 0    |
| Peak Hour Factor         | 58                                                                                | 58        | 58    | 58     | 58   | 58   |
| Heavy Vehicles, %        | 0                                                                                 | 0         | 0     | 0      | 0    | 0    |
| Mvmt Flow                | 45                                                                                | 3         | 16    | 21     | 5    | 31   |
|                          |                                                                                   |           |       |        |      |      |
| Major/Minor              | Minor1                                                                            | Major1    |       | Major2 |      |      |
| Conflicting Flow All     | 67                                                                                | 26        | 0     | 0      | 36   | 0    |
| Stage 1                  | 26                                                                                | -         | -     | -      | -    | -    |
| Stage 2                  | 41                                                                                | -         | -     | -      | -    | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2       | -     | -      | 4.1  | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -         | -     | -      | -    | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -         | -     | -      | -    | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3       | -     | -      | 2.2  | -    |
| Pot Cap-1 Maneuver       | 943                                                                               | 1056      | -     | -      | 1588 | -    |
| Stage 1                  | 1002                                                                              | -         | -     | -      | -    | -    |
| Stage 2                  | 986                                                                               | -         | -     | -      | -    | -    |
| Platoon blocked, %       |                                                                                   |           | -     | -      |      | -    |
| Mov Cap-1 Maneuver       | 940                                                                               | 1056      | -     | -      | 1588 | -    |
| Mov Cap-2 Maneuver       | 940                                                                               | -         | -     | -      | -    | -    |
| Stage 1                  | 1002                                                                              | -         | -     | -      | -    | -    |
| Stage 2                  | 983                                                                               | -         | -     | -      | -    | -    |
|                          |                                                                                   |           |       |        |      |      |
| Approach                 | WB                                                                                | NB        |       | SB     |      |      |
| HCM Ctrl Dly, s/v        | 9                                                                                 | 0         |       | 1.04   |      |      |
| HCM LOS                  | A                                                                                 |           |       |        |      |      |
|                          |                                                                                   |           |       |        |      |      |
| Minor Lane/Major Mvmt    | NBT                                                                               | NBR WBLn1 | SBL   | SBT    |      |      |
| Capacity (veh/h)         | -                                                                                 | -         | 947   | 257    | -    |      |
| HCM Lane V/C Ratio       | -                                                                                 | -         | 0.051 | 0.003  | -    |      |
| HCM Ctrl Dly (s/v)       | -                                                                                 | -         | 9     | 7.3    | 0    |      |
| HCM Lane LOS             | -                                                                                 | -         | A     | A      | A    |      |
| HCM 95th %tile Q(veh)    | -                                                                                 | -         | 0.2   | 0      | -    |      |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |  |  |  |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)        | 17                                                                                | 157                                                                               | 26                                                                                | 8                                                                                 | 166                                                                               | 3                                                                                 | 30                                                                                | 1                                                                                  | 4                                                                                   | 5                                                                                   | 1                                                                                   | 38                                                                                  |
| Future Volume (vph)         | 17                                                                                | 157                                                                               | 26                                                                                | 8                                                                                 | 166                                                                               | 3                                                                                 | 30                                                                                | 1                                                                                  | 4                                                                                   | 5                                                                                   | 1                                                                                   | 38                                                                                  |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 80                                                                                |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 1358                                                                              |                                                                                   |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 932                                                                                |                                                                                     |                                                                                     | 646                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 20.6                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 21.2                                                                               |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |
| Peak Hour Factor            | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                              | 0.73                                                                               | 0.73                                                                                | 0.73                                                                                | 0.73                                                                                | 0.73                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

4: Desert Knoll Av. & Two Mile Rd.

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.5  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
| Lane Configurations      | ↰    | ↑    | ↱    |      | ↰    | ↱    |      | ↰    | ↱    |      | ↰    | ↱    |
| Traffic Vol, veh/h       | 17   | 157  | 26   | 8    | 166  | 3    | 30   | 1    | 4    | 5    | 1    | 38   |
| Future Vol, veh/h        | 17   | 157  | 26   | 8    | 166  | 3    | 30   | 1    | 4    | 5    | 1    | 38   |
| 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           | 80   | -    | 0    | -    | -    | 50   | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   | 73   |
| Heavy Vehicles, %        | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Mvmt Flow                | 23   | 215  | 36   | 11   | 227  | 4    | 41   | 1    | 5    | 7    | 1    | 52   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |     |     | Minor2 |     |     |
|----------------------|--------|---|---|--------|---|---|--------|-----|-----|--------|-----|-----|
| Conflicting Flow All | 232    | 0 | 0 | 251    | 0 | 0 | 512    | 515 | 215 | 512    | 547 | 227 |
| Stage 1              | -      | - | - | -      | - | - | 262    | 262 | -   | 249    | 249 | -   |
| Stage 2              | -      | - | - | -      | - | - | 250    | 253 | -   | 262    | 297 | -   |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.1    | 6.5 | 6.2 | 7.1    | 6.5 | 6.2 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4   | 3.3 | 3.5    | 4   | 3.3 |
| Pot Cap-1 Maneuver   | 1348   | - | - | 1327   | - | - | 476    | 466 | 830 | 476    | 448 | 817 |
| Stage 1              | -      | - | - | -      | - | - | 748    | 695 | -   | 759    | 704 | -   |
| Stage 2              | -      | - | - | -      | - | - | 759    | 701 | -   | 747    | 671 | -   |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -   | -   | -      | -   | -   |
| Mov Cap-1 Maneuver   | 1348   | - | - | 1327   | - | - | 432    | 454 | 830 | 459    | 436 | 817 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 432    | 454 | -   | 459    | 436 | -   |
| Stage 1              | -      | - | - | -      | - | - | 735    | 683 | -   | 752    | 697 | -   |
| Stage 2              | -      | - | - | -      | - | - | 702    | 694 | -   | 728    | 659 | -   |

| Approach          | EB   | WB   | NB    | SB    |
|-------------------|------|------|-------|-------|
| HCM Ctrl Dly, s/v | 0.66 | 0.35 | 13.77 | 10.32 |
| HCM LOS           |      |      | B     | B     |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 458   | 1348  | -   | -   | 83    | -   | -   | 737   |
| HCM Lane V/C Ratio    | 0.105 | 0.017 | -   | -   | 0.008 | -   | -   | 0.082 |
| HCM Ctrl Dly (s/v)    | 13.8  | 7.7   | -   | -   | 7.7   | 0   | -   | 10.3  |
| HCM Lane LOS          | B     | A     | -   | -   | A     | A   | -   | B     |
| HCM 95th %tile Q(veh) | 0.3   | 0.1   | -   | -   | 0     | -   | -   | 0.3   |

Lanes, Volumes, Timings  
5: Marine Av. & Two Mile Rd.

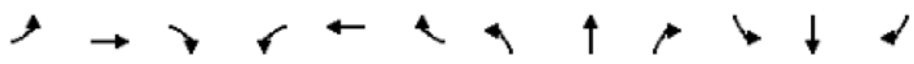
Cumulative (2027) w/ Project AM Peak Hour

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 2                                                                                 | 162                                                                               | 2                                                                                 | 1                                                                                 | 170                                                                               | 7                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 10                                                                                  | 1                                                                                   | 4                                                                                   |
| Future Volume (vph)         | 2                                                                                 | 162                                                                               | 2                                                                                 | 1                                                                                 | 170                                                                               | 7                                                                                 | 1                                                                                 | 1                                                                                  | 2                                                                                   | 10                                                                                  | 1                                                                                   | 4                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 404                                                                               |                                                                                   |                                                                                   | 287                                                                                |                                                                                     |                                                                                     | 353                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                                |                                                                                     |                                                                                     | 8.0                                                                                 |                                                                                     |
| Peak Hour Factor            | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                              | 0.71                                                                               | 0.71                                                                                | 0.71                                                                                | 0.71                                                                                | 0.71                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection             |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-----------------------------------------------------------------------------------|------|--------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 0.7    |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR  | WBL    | WBT                                                                               | WBR  | NBL    | NBT                                                                               | NBR  | SBL    | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |      |        |  |      |        |  |      |        |  |      |
| Traffic Vol, veh/h       | 2      | 162                                                                               | 2    | 1      | 170                                                                               | 7    | 1      | 1                                                                                 | 2    | 10     | 1                                                                                   | 4    |
| Future Vol, veh/h        | 2      | 162                                                                               | 2    | 1      | 170                                                                               | 7    | 1      | 1                                                                                 | 2    | 10     | 1                                                                                   | 4    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Sign Control             | Free   | Free                                                                              | Free | Free   | Free                                                                              | Free | Stop   | Stop                                                                              | Stop | Stop   | Stop                                                                                | Stop |
| RT Channelized           | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                 | None | -      | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -    | -      | -                                                                                 | 50   | -      | -                                                                                 | -    | -      | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0                                                                                   | -    |
| Peak Hour Factor         | 71     | 71                                                                                | 71   | 71     | 71                                                                                | 71   | 71     | 71                                                                                | 71   | 71     | 71                                                                                  | 71   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                 | 0    | 0      | 0                                                                                   | 0    |
| Mvmt Flow                | 3      | 228                                                                               | 3    | 1      | 239                                                                               | 10   | 1      | 1                                                                                 | 3    | 14     | 1                                                                                   | 6    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Major/Minor              | Major1 |                                                                                   |      | Major2 |                                                                                   |      | Minor1 |                                                                                   |      | Minor2 |                                                                                     |      |
| Conflicting Flow All     | 249    | 0                                                                                 | 0    | 231    | 0                                                                                 | 0    | 478    | 487                                                                               | 230  | 477    | 479                                                                                 | 239  |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 235    | 235                                                                               | -    | 242    | 242                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 243    | 252                                                                               | -    | 235    | 237                                                                                 | -    |
| Critical Hdwy            | 4.1    | -                                                                                 | -    | 4.1    | -                                                                                 | -    | 7.1    | 6.5                                                                               | 6.2  | 7.1    | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 6.1    | 5.5                                                                               | -    | 6.1    | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2    | -                                                                                 | -    | 2.2    | -                                                                                 | -    | 3.5    | 4                                                                                 | 3.3  | 3.5    | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1328   | -                                                                                 | -    | 1349   | -                                                                                 | -    | 501    | 484                                                                               | 815  | 502    | 489                                                                                 | 804  |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 772    | 714                                                                               | -    | 766    | 709                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 765    | 702                                                                               | -    | 773    | 713                                                                                 | -    |
| Platoon blocked, %       |        | -                                                                                 | -    |        | -                                                                                 | -    |        |                                                                                   |      |        |                                                                                     |      |
| Mov Cap-1 Maneuver       | 1328   | -                                                                                 | -    | 1349   | -                                                                                 | -    | 494    | 482                                                                               | 815  | 497    | 487                                                                                 | 804  |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 494    | 482                                                                               | -    | 497    | 487                                                                                 | -    |
| Stage 1                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 771    | 712                                                                               | -    | 765    | 708                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -    | -      | -                                                                                 | -    | 757    | 701                                                                               | -    | 767    | 711                                                                                 | -    |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Approach                 | EB     |                                                                                   |      | WB     |                                                                                   |      | NB     |                                                                                   |      | SB     |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 0.09   |                                                                                   |      | 0.04   |                                                                                   |      | 10.95  |                                                                                   |      | 11.77  |                                                                                     |      |
| HCM LOS                  |        |                                                                                   |      |        |                                                                                   |      | B      |                                                                                   |      | B      |                                                                                     |      |
|                          |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                   |      |        |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL                                                                               | EBT  | EBR    | WBL                                                                               | WBT  | WBR    | SBLn1                                                                             |      |        |                                                                                     |      |
| Capacity (veh/h)         | 610    | 1328                                                                              | -    | -      | 11                                                                                | -    | -      | 552                                                                               |      |        |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.009  | 0.002                                                                             | -    | -      | 0.001                                                                             | -    | -      | 0.038                                                                             |      |        |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 11     | 7.7                                                                               | -    | -      | 7.7                                                                               | 0    | -      | 11.8                                                                              |      |        |                                                                                     |      |
| HCM Lane LOS             | B      | A                                                                                 | -    | -      | A                                                                                 | A    | -      | B                                                                                 |      |        |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | 0                                                                                 | -    | -      | 0                                                                                 | -    | -      | 0.1                                                                               |      |        |                                                                                     |      |

Lanes, Volumes, Timings  
6: Adobe Rd. & Two Mile Rd.

Cumulative (2027) w/ Project AM Peak Hour

|                         |  |       |       |       |       |       |       |       |       |       |       |      |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
| Lane Configurations     |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Traffic Volume (vph)    | 114                                                                                | 110   | 33    | 49    | 155   | 134   | 22    | 403   | 38    | 10    | 149   | 75   |
| Future Volume (vph)     | 114                                                                                | 110   | 33    | 49    | 155   | 134   | 22    | 403   | 38    | 10    | 149   | 75   |
| Ideal Flow (vphpl)      | 1700                                                                               | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800 |
| Storage Length (ft)     | 120                                                                                |       | 120   | 90    |       | 90    | 80    |       | 50    | 100   |       | 0    |
| Storage Lanes           | 1                                                                                  |       | 1     | 1     |       | 2     | 1     |       | 1     | 1     |       | 0    |
| Taper Length (ft)       | 90                                                                                 |       |       | 90    |       |       | 90    |       |       | 90    |       |      |
| Right Turn on Red       |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes  |
| Link Speed (mph)        |                                                                                    | 45    |       |       | 45    |       |       | 40    |       |       | 55    |      |
| Link Distance (ft)      |                                                                                    | 632   |       |       | 1344  |       |       | 691   |       |       | 541   |      |
| Travel Time (s)         |                                                                                    | 9.6   |       |       | 20.4  |       |       | 11.8  |       |       | 6.7   |      |
| Peak Hour Factor        | 0.77                                                                               | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77  | 0.77 |
| Shared Lane Traffic (%) |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |      |
| Protected Phases        | 7                                                                                  | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases        |                                                                                    |       | 4     |       |       | 8     |       |       | 2     |       |       |      |
| Detector Phase          | 7                                                                                  | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |      |
| Switch Phase            |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)     | 5.0                                                                                | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |      |
| Minimum Split (s)       | 9.5                                                                                | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  |      |
| Total Split (s)         | 27.0                                                                               | 35.0  | 35.0  | 18.0  | 26.0  | 26.0  | 13.0  | 36.0  | 36.0  | 11.0  | 34.0  |      |
| Total Split (%)         | 27.0%                                                                              | 35.0% | 35.0% | 18.0% | 26.0% | 26.0% | 13.0% | 36.0% | 36.0% | 11.0% | 34.0% |      |
| Maximum Green (s)       | 22.5                                                                               | 30.5  | 30.5  | 13.5  | 21.5  | 21.5  | 8.5   | 31.5  | 31.5  | 6.5   | 29.5  |      |
| Yellow Time (s)         | 3.5                                                                                | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |      |
| All-Red Time (s)        | 1.0                                                                                | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.5                                                                                | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |      |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Recall Mode             | None                                                                               | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |      |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      |
| Flash Don't Walk (s)    |                                                                                    | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  |      |
| Pedestrian Calls (#/hr) |                                                                                    | 5     | 5     |       | 5     | 5     |       | 5     | 5     |       | 5     |      |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Adobe Rd. & Two Mile Rd.



HCM 7th Signalized Intersection Summary  
6: Adobe Rd. & Two Mile Rd.

Cumulative (2027) w/ Project AM Peak Hour

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 114                                                                               | 110                                                                               | 33                                                                                | 49                                                                                | 155                                                                               | 134                                                                               | 22                                                                                | 403                                                                                | 38                                                                                  | 10                                                                                  | 149                                                                                 | 75                                                                                  |
| Future Volume (veh/h)        | 114                                                                               | 110                                                                               | 33                                                                                | 49                                                                                | 155                                                                               | 134                                                                               | 22                                                                                | 403                                                                                | 38                                                                                  | 10                                                                                  | 149                                                                                 | 75                                                                                  |
| 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       | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Adj Flow Rate, veh/h         | 148                                                                               | 143                                                                               | 43                                                                                | 64                                                                                | 201                                                                               | 174                                                                               | 29                                                                                | 523                                                                                | 49                                                                                  | 13                                                                                  | 194                                                                                 | 97                                                                                  |
| Peak Hour Factor             | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                               | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                | 0.77                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 179                                                                               | 364                                                                               | 308                                                                               | 80                                                                                | 484                                                                               | 216                                                                               | 45                                                                                | 1892                                                                               | 844                                                                                 | 25                                                                                  | 1212                                                                                | 581                                                                                 |
| Arrive On Green              | 0.11                                                                              | 0.20                                                                              | 0.20                                                                              | 0.05                                                                              | 0.14                                                                              | 0.14                                                                              | 0.03                                                                              | 0.55                                                                               | 0.55                                                                                | 0.02                                                                                | 0.54                                                                                | 0.54                                                                                |
| Sat Flow, veh/h              | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                               | 1525                                                                                | 1619                                                                                | 2241                                                                                | 1075                                                                                |
| Grp Volume(v), veh/h         | 148                                                                               | 143                                                                               | 43                                                                                | 64                                                                                | 201                                                                               | 174                                                                               | 29                                                                                | 523                                                                                | 49                                                                                  | 13                                                                                  | 146                                                                                 | 145                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                               | 1525                                                                                | 1619                                                                                | 1710                                                                                | 1606                                                                                |
| Q Serve(g_s), s              | 9.0                                                                               | 6.9                                                                               | 2.3                                                                               | 3.9                                                                               | 5.4                                                                               | 11.1                                                                              | 1.8                                                                               | 8.1                                                                                | 1.5                                                                                 | 0.8                                                                                 | 4.3                                                                                 | 4.6                                                                                 |
| Cycle Q Clear(g_c), s        | 9.0                                                                               | 6.9                                                                               | 2.3                                                                               | 3.9                                                                               | 5.4                                                                               | 11.1                                                                              | 1.8                                                                               | 8.1                                                                                | 1.5                                                                                 | 0.8                                                                                 | 4.3                                                                                 | 4.6                                                                                 |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                    | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.67                                                                                |
| Lane Grp Cap(c), veh/h       | 179                                                                               | 364                                                                               | 308                                                                               | 80                                                                                | 484                                                                               | 216                                                                               | 45                                                                                | 1892                                                                               | 844                                                                                 | 25                                                                                  | 925                                                                                 | 869                                                                                 |
| V/C Ratio(X)                 | 0.83                                                                              | 0.39                                                                              | 0.14                                                                              | 0.80                                                                              | 0.42                                                                              | 0.81                                                                              | 0.65                                                                              | 0.28                                                                               | 0.06                                                                                | 0.53                                                                                | 0.16                                                                                | 0.17                                                                                |
| Avail Cap(c_a), veh/h        | 364                                                                               | 549                                                                               | 465                                                                               | 219                                                                               | 735                                                                               | 328                                                                               | 138                                                                               | 1892                                                                               | 844                                                                                 | 105                                                                                 | 925                                                                                 | 869                                                                                 |
| 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     | 43.6                                                                              | 34.6                                                                              | 32.8                                                                              | 47.0                                                                              | 39.2                                                                              | 41.6                                                                              | 48.1                                                                              | 11.8                                                                               | 10.3                                                                                | 48.9                                                                                | 11.5                                                                                | 11.6                                                                                |
| Incr Delay (d2), s/veh       | 9.4                                                                               | 0.7                                                                               | 0.2                                                                               | 16.2                                                                              | 0.6                                                                               | 8.4                                                                               | 14.6                                                                              | 0.4                                                                                | 0.1                                                                                 | 16.6                                                                                | 0.4                                                                                 | 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     | 3.9                                                                               | 3.0                                                                               | 0.8                                                                               | 1.9                                                                               | 2.2                                                                               | 4.5                                                                               | 0.9                                                                               | 2.9                                                                                | 0.5                                                                                 | 0.4                                                                                 | 1.5                                                                                 | 1.5                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 53.0                                                                              | 35.3                                                                              | 33.0                                                                              | 63.2                                                                              | 39.7                                                                              | 50.0                                                                              | 62.7                                                                              | 12.1                                                                               | 10.4                                                                                | 65.5                                                                                | 11.9                                                                                | 12.0                                                                                |
| LnGrp LOS                    | D                                                                                 | D                                                                                 | C                                                                                 | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | B                                                                                  | B                                                                                   | E                                                                                   | B                                                                                   | B                                                                                   |
| Approach Vol, veh/h          | 334                                                                               |                                                                                   |                                                                                   | 439                                                                               |                                                                                   |                                                                                   | 601                                                                               |                                                                                    |                                                                                     | 304                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 42.8                                                                              |                                                                                   |                                                                                   | 47.2                                                                              |                                                                                   |                                                                                   | 14.5                                                                              |                                                                                    |                                                                                     | 14.2                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                    |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 6.0                                                                               | 59.8                                                                              | 9.5                                                                               | 24.7                                                                              | 7.3                                                                               | 58.6                                                                              | 15.5                                                                              | 18.6                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 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  | 6.5                                                                               | 31.5                                                                              | 13.5                                                                              | 30.5                                                                              | 8.5                                                                               | 29.5                                                                              | 22.5                                                                              | 21.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 2.8                                                                               | 10.1                                                                              | 5.9                                                                               | 8.9                                                                               | 3.8                                                                               | 6.6                                                                               | 11.0                                                                              | 13.1                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.0                                                                               | 3.4                                                                               | 0.1                                                                               | 0.8                                                                               | 0.0                                                                               | 1.4                                                                               | 0.3                                                                               | 1.1                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th Control Delay, s/veh | 28.6                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th LOS                  | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

Lanes, Volumes, Timings  
7: Utah Tr. & Samarkand Dr.

Cumulative (2027) w/ Project AM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 13                                                                                | 20                                                                                | 9                                                                                 | 137                                                                               | 102                                                                               | 7                                                                                 |
| Future Volume (vph)         | 13                                                                                | 20                                                                                | 9                                                                                 | 137                                                                               | 102                                                                               | 7                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 2636                                                                              |                                                                                   |                                                                                   | 564                                                                               | 668                                                                               |                                                                                   |
| Travel Time (s)             | 59.9                                                                              |                                                                                   |                                                                                   | 12.8                                                                              | 15.2                                                                              |                                                                                   |
| Peak Hour Factor            | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |       |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.3                                                                               |        |       |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR    | NBL   | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |        |       |  |  |      |
| Traffic Vol, veh/h       | 13                                                                                | 20     | 9     | 137                                                                               | 102                                                                               | 7    |
| Future Vol, veh/h        | 13                                                                                | 20     | 9     | 137                                                                               | 102                                                                               | 7    |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Stop                                                                              | Stop   | Free  | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None   | -     | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92     | 92    | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 14                                                                                | 22     | 10    | 149                                                                               | 111                                                                               | 8    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Major/Minor              | Minor2                                                                            | Major1 |       | Major2                                                                            |                                                                                   |      |
| Conflicting Flow All     | 283                                                                               | 115    | 118   | 0                                                                                 | -                                                                                 | 0    |
| Stage 1                  | 115                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 168                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2    | 4.1   | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | 2.2   | -                                                                                 | -                                                                                 | -    |
| Pot Cap-1 Maneuver       | 711                                                                               | 943    | 1482  | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 915                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 866                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Platoon blocked, %       |                                                                                   |        |       | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | 706                                                                               | 943    | 1482  | -                                                                                 | -                                                                                 | -    |
| Mov Cap-2 Maneuver       | 706                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 909                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 866                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                | NB     |       | SB                                                                                |                                                                                   |      |
| HCM Ctrl Dly, s/v        | 9.52                                                                              | 0.46   |       | 0                                                                                 |                                                                                   |      |
| HCM LOS                  | A                                                                                 |        |       |                                                                                   |                                                                                   |      |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT    | EBLn1 | SBT                                                                               | SBR                                                                               |      |
| Capacity (veh/h)         | 1482                                                                              | -      | 833   | -                                                                                 | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.007                                                                             | -      | 0.043 | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 7.4                                                                               | -      | 9.5   | -                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -      | A     | -                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -      | 0.1   | -                                                                                 | -                                                                                 |      |

## 1: Desert Knoll Av. &amp; Samarkand Dr.



| Lane Group              | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
|-------------------------|------|------|------|------|------|------|
| Lane Configurations     |      |      |      |      |      |      |
| Traffic Volume (vph)    | 14   | 4    | 12   | 15   | 8    | 18   |
| Future Volume (vph)     | 14   | 4    | 12   | 15   | 8    | 18   |
| Ideal Flow (vphpl)      | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph)        | 30   |      |      | 30   | 30   |      |
| Link Distance (ft)      | 969  |      |      | 2636 | 437  |      |
| Travel Time (s)         | 22.0 |      |      | 59.9 | 9.9  |      |
| Peak Hour Factor        | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Shared Lane Traffic (%) |      |      |      |      |      |      |
| Sign Control            | Free |      |      | Free | Stop |      |

## Intersection Summary

Area Type: Other

Control Type: Unsignalized

## 1: Desert Knoll Av. &amp; Samarkand Dr.

| Intersection             |                                                                                   |        |      |                                                                                   |                                                                                   |                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Int Delay, s/veh         | 4.4                                                                               |        |      |                                                                                   |                                                                                   |                                                                                     |
| Movement                 | EBT                                                                               | EBR    | WBL  | WBT                                                                               | NBL                                                                               | NBR                                                                                 |
| Lane Configurations      |  |        |      |  |  |  |
| Traffic Vol, veh/h       | 14                                                                                | 4      | 12   | 15                                                                                | 8                                                                                 | 18                                                                                  |
| Future Vol, veh/h        | 14                                                                                | 4      | 12   | 15                                                                                | 8                                                                                 | 18                                                                                  |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                   |
| Sign Control             | Free                                                                              | Free   | Free | Free                                                                              | Stop                                                                              | Stop                                                                                |
| RT Channelized           | -                                                                                 | None   | -    | None                                                                              | -                                                                                 | None                                                                                |
| Storage Length           | -                                                                                 | -      | -    | -                                                                                 | 0                                                                                 | -                                                                                   |
| Veh in Median Storage, # | 0                                                                                 | -      | -    | 0                                                                                 | 0                                                                                 | -                                                                                   |
| Grade, %                 | 0                                                                                 | -      | -    | 0                                                                                 | 0                                                                                 | -                                                                                   |
| Peak Hour Factor         | 92                                                                                | 92     | 92   | 92                                                                                | 92                                                                                | 92                                                                                  |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0    | 0                                                                                 | 0                                                                                 | 0                                                                                   |
| Mvmt Flow                | 15                                                                                | 4      | 13   | 16                                                                                | 9                                                                                 | 20                                                                                  |
|                          |                                                                                   |        |      |                                                                                   |                                                                                   |                                                                                     |
| Major/Minor              | Major1                                                                            | Major2 |      | Minor1                                                                            |                                                                                   |                                                                                     |
| Conflicting Flow All     | 0                                                                                 | 0      | 20   | 0                                                                                 | 60                                                                                | 17                                                                                  |
| Stage 1                  | -                                                                                 | -      | -    | -                                                                                 | 17                                                                                | -                                                                                   |
| Stage 2                  | -                                                                                 | -      | -    | -                                                                                 | 42                                                                                | -                                                                                   |
| Critical Hdwy            | -                                                                                 | -      | 4.1  | -                                                                                 | 6.4                                                                               | 6.2                                                                                 |
| Critical Hdwy Stg 1      | -                                                                                 | -      | -    | -                                                                                 | 5.4                                                                               | -                                                                                   |
| Critical Hdwy Stg 2      | -                                                                                 | -      | -    | -                                                                                 | 5.4                                                                               | -                                                                                   |
| Follow-up Hdwy           | -                                                                                 | -      | 2.2  | -                                                                                 | 3.5                                                                               | 3.3                                                                                 |
| Pot Cap-1 Maneuver       | -                                                                                 | -      | 1610 | -                                                                                 | 952                                                                               | 1067                                                                                |
| Stage 1                  | -                                                                                 | -      | -    | -                                                                                 | 1011                                                                              | -                                                                                   |
| Stage 2                  | -                                                                                 | -      | -    | -                                                                                 | 985                                                                               | -                                                                                   |
| Platoon blocked, %       | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | -                                                                                   |
| Mov Cap-1 Maneuver       | -                                                                                 | -      | 1610 | -                                                                                 | 944                                                                               | 1067                                                                                |
| Mov Cap-2 Maneuver       | -                                                                                 | -      | -    | -                                                                                 | 944                                                                               | -                                                                                   |
| Stage 1                  | -                                                                                 | -      | -    | -                                                                                 | 1011                                                                              | -                                                                                   |
| Stage 2                  | -                                                                                 | -      | -    | -                                                                                 | 977                                                                               | -                                                                                   |
|                          |                                                                                   |        |      |                                                                                   |                                                                                   |                                                                                     |
|                          |                                                                                   |        |      |                                                                                   |                                                                                   |                                                                                     |
| Approach                 | EB                                                                                | WB     |      | NB                                                                                |                                                                                   |                                                                                     |
| HCM Ctrl Dly, s/v        | 0                                                                                 | 3.22   |      | 8.61                                                                              |                                                                                   |                                                                                     |
| HCM LOS                  | A                                                                                 |        |      |                                                                                   |                                                                                   |                                                                                     |
|                          |                                                                                   |        |      |                                                                                   |                                                                                   |                                                                                     |
|                          |                                                                                   |        |      |                                                                                   |                                                                                   |                                                                                     |
| Minor Lane/Major Mvmt    | NBLn1                                                                             | EBT    | EBR  | WBL                                                                               | WBT                                                                               |                                                                                     |
| Capacity (veh/h)         | 1026                                                                              | -      | -    | 800                                                                               | -                                                                                 |                                                                                     |
| HCM Lane V/C Ratio       | 0.028                                                                             | -      | -    | 0.008                                                                             | -                                                                                 |                                                                                     |
| HCM Ctrl Dly (s/v)       | 8.6                                                                               | -      | -    | 7.3                                                                               | 0                                                                                 |                                                                                     |
| HCM Lane LOS             | A                                                                                 | -      | -    | A                                                                                 | A                                                                                 |                                                                                     |
| HCM 95th %tile Q(veh)    | 0.1                                                                               | -      | -    | 0                                                                                 | -                                                                                 |                                                                                     |

Lanes, Volumes, Timings  
 2: Desert Knoll Av. & Aztec Av.

Cumulative (2027) w/ Project PM Peak Hour

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |                                                                                   |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 10                                                                                | 3                                                                                 | 5                                                                                 | 16                                                                                | 9                                                                                 | 7                                                                                 |
| Future Volume (vph)         | 10                                                                                | 3                                                                                 | 5                                                                                 | 16                                                                                | 9                                                                                 | 7                                                                                 |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                | 30                                                                                |                                                                                   |
| Link Distance (ft)          | 523                                                                               |                                                                                   |                                                                                   | 1360                                                                              | 437                                                                               |                                                                                   |
| Travel Time (s)             | 11.9                                                                              |                                                                                   |                                                                                   | 30.9                                                                              | 9.9                                                                               |                                                                                   |
| Peak Hour Factor            | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              | 0.75                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |       |                                                                                   |      |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|
| Int Delay, s/veh         | 3                                                                                 |        |       |                                                                                   |      |                                                                                   |
| Movement                 | EBL                                                                               | EBR    | NBL   | NBT                                                                               | SBT  | SBR                                                                               |
| Lane Configurations      |  |        |       |  |      |  |
| Traffic Vol, veh/h       | 10                                                                                | 3      | 5     | 16                                                                                | 9    | 7                                                                                 |
| Future Vol, veh/h        | 10                                                                                | 3      | 5     | 16                                                                                | 9    | 7                                                                                 |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0     | 0                                                                                 | 0    | 0                                                                                 |
| Sign Control             | Stop                                                                              | Stop   | Free  | Free                                                                              | Free | Free                                                                              |
| RT Channelized           | -                                                                                 | None   | -     | None                                                                              | -    | None                                                                              |
| Storage Length           | 0                                                                                 | -      | -     | -                                                                                 | -    | -                                                                                 |
| Veh in Median Storage, # | 0                                                                                 | -      | -     | 0                                                                                 | 0    | -                                                                                 |
| Grade, %                 | 0                                                                                 | -      | -     | 0                                                                                 | 0    | -                                                                                 |
| Peak Hour Factor         | 75                                                                                | 75     | 75    | 75                                                                                | 75   | 75                                                                                |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0     | 0                                                                                 | 0    | 0                                                                                 |
| Mvmt Flow                | 13                                                                                | 4      | 7     | 21                                                                                | 12   | 9                                                                                 |
|                          |                                                                                   |        |       |                                                                                   |      |                                                                                   |
| Major/Minor              | Minor2                                                                            | Major1 |       | Major2                                                                            |      |                                                                                   |
| Conflicting Flow All     | 51                                                                                | 17     | 21    | 0                                                                                 | -    | 0                                                                                 |
| Stage 1                  | 17                                                                                | -      | -     | -                                                                                 | -    | -                                                                                 |
| Stage 2                  | 35                                                                                | -      | -     | -                                                                                 | -    | -                                                                                 |
| Critical Hdwy            | 6.4                                                                               | 6.2    | 4.1   | -                                                                                 | -    | -                                                                                 |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | 2.2   | -                                                                                 | -    | -                                                                                 |
| Pot Cap-1 Maneuver       | 962                                                                               | 1068   | 1608  | -                                                                                 | -    | -                                                                                 |
| Stage 1                  | 1011                                                                              | -      | -     | -                                                                                 | -    | -                                                                                 |
| Stage 2                  | 993                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
| Platoon blocked, %       |                                                                                   |        |       | -                                                                                 | -    | -                                                                                 |
| Mov Cap-1 Maneuver       | 958                                                                               | 1068   | 1608  | -                                                                                 | -    | -                                                                                 |
| Mov Cap-2 Maneuver       | 958                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
| Stage 1                  | 1007                                                                              | -      | -     | -                                                                                 | -    | -                                                                                 |
| Stage 2                  | 993                                                                               | -      | -     | -                                                                                 | -    | -                                                                                 |
|                          |                                                                                   |        |       |                                                                                   |      |                                                                                   |
| Approach                 | EB                                                                                | NB     |       | SB                                                                                |      |                                                                                   |
| HCM Ctrl Dly, s/v        | 8.73                                                                              | 1.73   |       | 0                                                                                 |      |                                                                                   |
| HCM LOS                  | A                                                                                 |        |       |                                                                                   |      |                                                                                   |
|                          |                                                                                   |        |       |                                                                                   |      |                                                                                   |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT    | EBLn1 | SBT                                                                               | SBR  |                                                                                   |
| Capacity (veh/h)         | 429                                                                               | -      | 982   | -                                                                                 | -    |                                                                                   |
| HCM Lane V/C Ratio       | 0.004                                                                             | -      | 0.018 | -                                                                                 | -    |                                                                                   |
| HCM Ctrl Dly (s/v)       | 7.2                                                                               | 0      | 8.7   | -                                                                                 | -    |                                                                                   |
| HCM Lane LOS             | A                                                                                 | A      | A     | -                                                                                 | -    |                                                                                   |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -      | 0.1   | -                                                                                 | -    |                                                                                   |

## 3: Desert Knoll Av. &amp; Manana Dr.

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | WBL                                                                               | WBR                                                                               | NBT                                                                               | NBR                                                                               | SBL                                                                               | SBT                                                                               |
| Lane Configurations         |  |                                                                                   |  |                                                                                   |                                                                                   |  |
| Traffic Volume (vph)        | 20                                                                                | 2                                                                                 | 29                                                                                | 25                                                                                | 1                                                                                 | 22                                                                                |
| Future Volume (vph)         | 20                                                                                | 2                                                                                 | 29                                                                                | 25                                                                                | 1                                                                                 | 22                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   | 30                                                                                |                                                                                   |                                                                                   | 30                                                                                |
| Link Distance (ft)          | 401                                                                               |                                                                                   | 646                                                                               |                                                                                   |                                                                                   | 1360                                                                              |
| Travel Time (s)             | 9.1                                                                               |                                                                                   | 14.7                                                                              |                                                                                   |                                                                                   | 30.9                                                                              |
| Peak Hour Factor            | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              | 0.77                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |        |           |       |        |      |      |
|--------------------------|--------|-----------|-------|--------|------|------|
| Int Delay, s/veh         | 2.1    |           |       |        |      |      |
| Movement                 | WBL    | WBR       | NBT   | NBR    | SBL  | SBT  |
| Lane Configurations      | FF     |           | FF    |        |      | FF   |
| Traffic Vol, veh/h       | 20     | 2         | 29    | 25     | 1    | 22   |
| Future Vol, veh/h        | 20     | 2         | 29    | 25     | 1    | 22   |
| Conflicting Peds, #/hr   | 0      | 0         | 0     | 0      | 0    | 0    |
| Sign Control             | Stop   | Stop      | Free  | Free   | Free | Free |
| RT Channelized           | -      | None      | -     | None   | -    | None |
| Storage Length           | 0      | -         | -     | -      | -    | -    |
| Veh in Median Storage, # | 0      | -         | 0     | -      | -    | 0    |
| Grade, %                 | 0      | -         | 0     | -      | -    | 0    |
| Peak Hour Factor         | 77     | 77        | 77    | 77     | 77   | 77   |
| Heavy Vehicles, %        | 0      | 0         | 0     | 0      | 0    | 0    |
| Mvmt Flow                | 26     | 3         | 38    | 32     | 1    | 29   |
|                          |        |           |       |        |      |      |
| Major/Minor              | Minor1 | Major1    |       | Major2 |      |      |
| Conflicting Flow All     | 85     | 54        | 0     | 0      | 70   | 0    |
| Stage 1                  | 54     | -         | -     | -      | -    | -    |
| Stage 2                  | 31     | -         | -     | -      | -    | -    |
| Critical Hdwy            | 6.4    | 6.2       | -     | -      | 4.1  | -    |
| Critical Hdwy Stg 1      | 5.4    | -         | -     | -      | -    | -    |
| Critical Hdwy Stg 2      | 5.4    | -         | -     | -      | -    | -    |
| Follow-up Hdwy           | 3.5    | 3.3       | -     | -      | 2.2  | -    |
| Pot Cap-1 Maneuver       | 921    | 1019      | -     | -      | 1543 | -    |
| Stage 1                  | 974    | -         | -     | -      | -    | -    |
| Stage 2                  | 997    | -         | -     | -      | -    | -    |
| Platoon blocked, %       |        |           | -     | -      | -    | -    |
| Mov Cap-1 Maneuver       | 920    | 1019      | -     | -      | 1543 | -    |
| Mov Cap-2 Maneuver       | 920    | -         | -     | -      | -    | -    |
| Stage 1                  | 974    | -         | -     | -      | -    | -    |
| Stage 2                  | 996    | -         | -     | -      | -    | -    |
|                          |        |           |       |        |      |      |
|                          |        |           |       |        |      |      |
| Approach                 | WB     | NB        |       | SB     |      |      |
| HCM Ctrl Dly, s/v        | 9      | 0         |       | 0.32   |      |      |
| HCM LOS                  | A      |           |       |        |      |      |
|                          |        |           |       |        |      |      |
|                          |        |           |       |        |      |      |
| Minor Lane/Major Mvmt    | NBT    | NBR WBLn1 | SBL   | SBT    |      |      |
| Capacity (veh/h)         | -      | -         | 929   | 78     | -    |      |
| HCM Lane V/C Ratio       | -      | -         | 0.031 | 0.001  | -    |      |
| HCM Ctrl Dly (s/v)       | -      | -         | 9     | 7.3    | 0    |      |
| HCM Lane LOS             | -      | -         | A     | A      | A    |      |
| HCM 95th %tile Q(veh)    | -      | -         | 0.1   | 0      | -    |      |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |  |  |  |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |  |
| Traffic Volume (vph)        | 46                                                                                | 82                                                                                | 57                                                                                | 2                                                                                 | 94                                                                                | 7                                                                                 | 35                                                                                | 1                                                                                  | 3                                                                                   | 8                                                                                   | 5                                                                                   | 28                                                                                  |
| Future Volume (vph)         | 46                                                                                | 82                                                                                | 57                                                                                | 2                                                                                 | 94                                                                                | 7                                                                                 | 35                                                                                | 1                                                                                  | 3                                                                                   | 8                                                                                   | 5                                                                                   | 28                                                                                  |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 80                                                                                |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 1                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 1358                                                                              |                                                                                   |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 932                                                                                |                                                                                     |                                                                                     | 646                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 20.6                                                                              |                                                                                   |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 21.2                                                                               |                                                                                     |                                                                                     | 14.7                                                                                |                                                                                     |
| 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                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

## 4: Desert Knoll Av. &amp; Two Mile Rd.

| 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       | 46                                                                                | 82                                                                                | 57                                                                                | 2    | 94                                                                                | 7                                                                                 | 35   | 1                                                                                 | 3    | 8                                                                                 | 5                                                                                  | 28   |
| Future Vol, veh/h        | 46                                                                                | 82                                                                                | 57                                                                                | 2    | 94                                                                                | 7                                                                                 | 35   | 1                                                                                 | 3    | 8                                                                                 | 5                                                                                  | 28   |
| 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           | 80                                                                                | -                                                                                 | 0                                                                                 | -    | -                                                                                 | 50                                                                                | -    | -                                                                                 | -    | -                                                                                 | -                                                                                  | -    |
| Veh in Median Storage, # | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -                                                                                 | 0                                                                                  | -    |
| Grade, %                 | -                                                                                 | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -    | -                                                                                 | 0                                                                                  | -    |
| Peak Hour Factor         | 89                                                                                | 89                                                                                | 89                                                                                | 89   | 89                                                                                | 89                                                                                | 89   | 89                                                                                | 89   | 89                                                                                | 89                                                                                 | 89   |
| Heavy Vehicles, %        | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0    | 0                                                                                 | 0                                                                                  | 0    |
| Mvmt Flow                | 52                                                                                | 92                                                                                | 64                                                                                | 2    | 106                                                                               | 8                                                                                 | 39   | 1                                                                                 | 3    | 9                                                                                 | 6                                                                                  | 31   |

| Major/Minor          | Major1 |   |   | Major2 |   |   | Minor1 |     |     | Minor2 |     |     |
|----------------------|--------|---|---|--------|---|---|--------|-----|-----|--------|-----|-----|
| Conflicting Flow All | 113    | 0 | 0 | 156    | 0 | 0 | 308    | 313 | 92  | 306    | 370 | 106 |
| Stage 1              | -      | - | - | -      | - | - | 196    | 196 | -   | 110    | 110 | -   |
| Stage 2              | -      | - | - | -      | - | - | 113    | 118 | -   | 196    | 260 | -   |
| Critical Hdwy        | 4.1    | - | - | 4.1    | - | - | 7.1    | 6.5 | 6.2 | 7.1    | 6.5 | 6.2 |
| Critical Hdwy Stg 1  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Critical Hdwy Stg 2  | -      | - | - | -      | - | - | 6.1    | 5.5 | -   | 6.1    | 5.5 | -   |
| Follow-up Hdwy       | 2.2    | - | - | 2.2    | - | - | 3.5    | 4   | 3.3 | 3.5    | 4   | 3.3 |
| Pot Cap-1 Maneuver   | 1488   | - | - | 1436   | - | - | 648    | 605 | 971 | 650    | 563 | 954 |
| Stage 1              | -      | - | - | -      | - | - | 811    | 743 | -   | 900    | 808 | -   |
| Stage 2              | -      | - | - | -      | - | - | 897    | 802 | -   | 810    | 697 | -   |
| Platoon blocked, %   | -      | - | - | -      | - | - | -      | -   | -   | -      | -   | -   |
| Mov Cap-1 Maneuver   | 1488   | - | - | 1436   | - | - | 598    | 583 | 971 | 623    | 543 | 954 |
| Mov Cap-2 Maneuver   | -      | - | - | -      | - | - | 598    | 583 | -   | 623    | 543 | -   |
| Stage 1              | -      | - | - | -      | - | - | 783    | 717 | -   | 898    | 807 | -   |
| Stage 2              | -      | - | - | -      | - | - | 860    | 801 | -   | 778    | 673 | -   |

| Approach          | EB   | WB   | NB   | SB   |
|-------------------|------|------|------|------|
| HCM Ctrl Dly, s/v | 1.87 | 0.15 | 11.3 | 9.79 |
| HCM LOS           |      |      | B    | A    |

| Minor Lane/Major Mvmt | NBLn1 | EBL   | EBT | EBR | WBL   | WBT | WBR | SBLn1 |
|-----------------------|-------|-------|-----|-----|-------|-----|-----|-------|
| Capacity (veh/h)      | 616   | 1488  | -   | -   | 38    | -   | -   | 798   |
| HCM Lane V/C Ratio    | 0.071 | 0.035 | -   | -   | 0.002 | -   | -   | 0.058 |
| HCM Ctrl Dly (s/v)    | 11.3  | 7.5   | -   | -   | 7.5   | 0   | -   | 9.8   |
| HCM Lane LOS          | B     | A     | -   | -   | A     | A   | -   | A     |
| HCM 95th %tile Q(veh) | 0.2   | 0.1   | -   | -   | 0     | -   | -   | 0.2   |

Lanes, Volumes, Timings  
5: Marine Av. & Two Mile Rd.

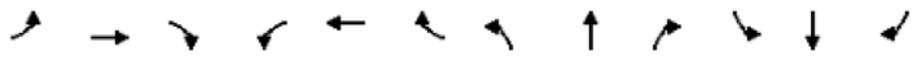
Cumulative (2027) w/ Project PM Peak Hour

|                             |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations         |                                                                                   |  |                                                                                   |                                                                                   |  |  |                                                                                   |  |                                                                                     |                                                                                     |  |                                                                                     |
| Traffic Volume (vph)        | 9                                                                                 | 89                                                                                | 1                                                                                 | 1                                                                                 | 94                                                                                | 15                                                                                | 5                                                                                 | 1                                                                                  | 1                                                                                   | 6                                                                                   | 1                                                                                   | 5                                                                                   |
| Future Volume (vph)         | 9                                                                                 | 89                                                                                | 1                                                                                 | 1                                                                                 | 94                                                                                | 15                                                                                | 5                                                                                 | 1                                                                                  | 1                                                                                   | 6                                                                                   | 1                                                                                   | 5                                                                                   |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                               | 1800                                                                                | 1800                                                                                | 1800                                                                                | 1800                                                                                |
| Storage Length (ft)         | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 50                                                                                | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Storage Lanes               | 0                                                                                 |                                                                                   | 0                                                                                 | 0                                                                                 |                                                                                   | 1                                                                                 | 0                                                                                 |                                                                                    | 0                                                                                   | 0                                                                                   |                                                                                     | 0                                                                                   |
| Taper Length (ft)           | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                   |                                                                                   | 90                                                                                |                                                                                    |                                                                                     | 90                                                                                  |                                                                                     |                                                                                     |
| Link Speed (mph)            |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 45                                                                                |                                                                                   |                                                                                   | 30                                                                                 |                                                                                     |                                                                                     | 30                                                                                  |                                                                                     |
| Link Distance (ft)          |                                                                                   | 610                                                                               |                                                                                   |                                                                                   | 404                                                                               |                                                                                   |                                                                                   | 287                                                                                |                                                                                     |                                                                                     | 353                                                                                 |                                                                                     |
| Travel Time (s)             |                                                                                   | 9.2                                                                               |                                                                                   |                                                                                   | 6.1                                                                               |                                                                                   |                                                                                   | 6.5                                                                                |                                                                                     |                                                                                     | 8.0                                                                                 |                                                                                     |
| Peak Hour Factor            | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                              | 0.93                                                                               | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                | 0.93                                                                                |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Sign Control                |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Free                                                                              |                                                                                   |                                                                                   | Stop                                                                               |                                                                                     |                                                                                     | Stop                                                                                |                                                                                     |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Intersection             |        |                                                                                   |        |      |                                                                                   |                                                                                   |      |                                                                                   |        |      |                                                                                     |      |
|--------------------------|--------|-----------------------------------------------------------------------------------|--------|------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------|--------|------|-------------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.1    |                                                                                   |        |      |                                                                                   |                                                                                   |      |                                                                                   |        |      |                                                                                     |      |
| Movement                 | EBL    | EBT                                                                               | EBR    | WBL  | WBT                                                                               | WBR                                                                               | NBL  | NBT                                                                               | NBR    | SBL  | SBT                                                                                 | SBR  |
| Lane Configurations      |        |  |        |      |  |  |      |  |        |      |  |      |
| Traffic Vol, veh/h       | 9      | 89                                                                                | 1      | 1    | 94                                                                                | 15                                                                                | 5    | 1                                                                                 | 1      | 6    | 1                                                                                   | 5    |
| Future Vol, veh/h        | 9      | 89                                                                                | 1      | 1    | 94                                                                                | 15                                                                                | 5    | 1                                                                                 | 1      | 6    | 1                                                                                   | 5    |
| Conflicting Peds, #/hr   | 0      | 0                                                                                 | 0      | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0      | 0    | 0                                                                                   | 0    |
| Sign Control             | Free   | Free                                                                              | Free   | Free | Free                                                                              | Free                                                                              | Stop | Stop                                                                              | Stop   | Stop | Stop                                                                                | Stop |
| RT Channelized           | -      | -                                                                                 | None   | -    | -                                                                                 | None                                                                              | -    | -                                                                                 | None   | -    | -                                                                                   | None |
| Storage Length           | -      | -                                                                                 | -      | -    | -                                                                                 | 50                                                                                | -    | -                                                                                 | -      | -    | -                                                                                   | -    |
| Veh in Median Storage, # | -      | 0                                                                                 | -      | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -      | -    | 0                                                                                   | -    |
| Grade, %                 | -      | 0                                                                                 | -      | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 | -      | -    | 0                                                                                   | -    |
| Peak Hour Factor         | 93     | 93                                                                                | 93     | 93   | 93                                                                                | 93                                                                                | 93   | 93                                                                                | 93     | 93   | 93                                                                                  | 93   |
| Heavy Vehicles, %        | 0      | 0                                                                                 | 0      | 0    | 0                                                                                 | 0                                                                                 | 0    | 0                                                                                 | 0      | 0    | 0                                                                                   | 0    |
| Mvmt Flow                | 10     | 96                                                                                | 1      | 1    | 101                                                                               | 16                                                                                | 5    | 1                                                                                 | 1      | 6    | 1                                                                                   | 5    |
|                          |        |                                                                                   |        |      |                                                                                   |                                                                                   |      |                                                                                   |        |      |                                                                                     |      |
| Major/Minor              | Major1 |                                                                                   | Major2 |      |                                                                                   | Minor1                                                                            |      |                                                                                   | Minor2 |      |                                                                                     |      |
| Conflicting Flow All     | 117    | 0                                                                                 | 0      | 97   | 0                                                                                 | 0                                                                                 | 219  | 235                                                                               | 96     | 219  | 219                                                                                 | 101  |
| Stage 1                  | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 116  | 116                                                                               | -      | 103  | 103                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 104  | 119                                                                               | -      | 116  | 116                                                                                 | -    |
| Critical Hdwy            | 4.1    | -                                                                                 | -      | 4.1  | -                                                                                 | -                                                                                 | 7.1  | 6.5                                                                               | 6.2    | 7.1  | 6.5                                                                                 | 6.2  |
| Critical Hdwy Stg 1      | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 6.1  | 5.5                                                                               | -      | 6.1  | 5.5                                                                                 | -    |
| Critical Hdwy Stg 2      | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 6.1  | 5.5                                                                               | -      | 6.1  | 5.5                                                                                 | -    |
| Follow-up Hdwy           | 2.2    | -                                                                                 | -      | 2.2  | -                                                                                 | -                                                                                 | 3.5  | 4                                                                                 | 3.3    | 3.5  | 4                                                                                   | 3.3  |
| Pot Cap-1 Maneuver       | 1484   | -                                                                                 | -      | 1509 | -                                                                                 | -                                                                                 | 741  | 669                                                                               | 966    | 742  | 682                                                                                 | 960  |
| Stage 1                  | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 894  | 804                                                                               | -      | 908  | 814                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 907  | 801                                                                               | -      | 894  | 803                                                                                 | -    |
| Platoon blocked, %       |        | -                                                                                 | -      |      | -                                                                                 | -                                                                                 |      |                                                                                   |        |      |                                                                                     |      |
| Mov Cap-1 Maneuver       | 1484   | -                                                                                 | -      | 1509 | -                                                                                 | -                                                                                 | 730  | 664                                                                               | 966    | 734  | 677                                                                                 | 960  |
| Mov Cap-2 Maneuver       | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 730  | 664                                                                               | -      | 734  | 677                                                                                 | -    |
| Stage 1                  | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 888  | 798                                                                               | -      | 907  | 813                                                                                 | -    |
| Stage 2                  | -      | -                                                                                 | -      | -    | -                                                                                 | -                                                                                 | 900  | 800                                                                               | -      | 886  | 798                                                                                 | -    |
|                          |        |                                                                                   |        |      |                                                                                   |                                                                                   |      |                                                                                   |        |      |                                                                                     |      |
| Approach                 | EB     |                                                                                   | WB     |      |                                                                                   | NB                                                                                |      |                                                                                   | SB     |      |                                                                                     |      |
| HCM Ctrl Dly, s/v        | 0.68   |                                                                                   | 0.07   |      |                                                                                   | 9.88                                                                              |      |                                                                                   | 9.53   |      |                                                                                     |      |
| HCM LOS                  |        |                                                                                   |        |      |                                                                                   | A                                                                                 |      |                                                                                   | A      |      |                                                                                     |      |
|                          |        |                                                                                   |        |      |                                                                                   |                                                                                   |      |                                                                                   |        |      |                                                                                     |      |
| Minor Lane/Major Mvmt    | NBLn1  | EBL                                                                               | EBT    | EBR  | WBL                                                                               | WBT                                                                               | WBR  | SBLn1                                                                             |        |      |                                                                                     |      |
| Capacity (veh/h)         | 745    | 1484                                                                              | -      | -    | 19                                                                                | -                                                                                 | -    | 807                                                                               |        |      |                                                                                     |      |
| HCM Lane V/C Ratio       | 0.01   | 0.007                                                                             | -      | -    | 0.001                                                                             | -                                                                                 | -    | 0.016                                                                             |        |      |                                                                                     |      |
| HCM Ctrl Dly (s/v)       | 9.9    | 7.4                                                                               | -      | -    | 7.4                                                                               | 0                                                                                 | -    | 9.5                                                                               |        |      |                                                                                     |      |
| HCM Lane LOS             | A      | A                                                                                 | -      | -    | A                                                                                 | A                                                                                 | -    | A                                                                                 |        |      |                                                                                     |      |
| HCM 95th %tile Q(veh)    | 0      | 0                                                                                 | -      | -    | 0                                                                                 | -                                                                                 | -    | 0                                                                                 |        |      |                                                                                     |      |

Lanes, Volumes, Timings  
6: Adobe Rd. & Two Mile Rd.

Cumulative (2027) w/ Project PM Peak Hour

|                         |  |       |       |       |       |       |       |       |       |       |       |      |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| Lane Group              | EBL                                                                                | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
| Lane Configurations     |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Traffic Volume (vph)    | 94                                                                                 | 97    | 76    | 56    | 123   | 51    | 72    | 239   | 64    | 108   | 513   | 189  |
| Future Volume (vph)     | 94                                                                                 | 97    | 76    | 56    | 123   | 51    | 72    | 239   | 64    | 108   | 513   | 189  |
| Ideal Flow (vphpl)      | 1700                                                                               | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800  | 1700  | 1800  | 1800 |
| Storage Length (ft)     | 120                                                                                |       | 120   | 90    |       | 90    | 80    |       | 50    | 100   |       | 0    |
| Storage Lanes           | 1                                                                                  |       | 1     | 1     |       | 2     | 1     |       | 1     | 1     |       | 0    |
| Taper Length (ft)       | 90                                                                                 |       |       | 90    |       |       | 90    |       |       | 90    |       |      |
| Right Turn on Red       |                                                                                    |       | Yes   |       |       | Yes   |       |       | Yes   |       |       | Yes  |
| Link Speed (mph)        |                                                                                    | 45    |       |       | 45    |       |       | 40    |       |       | 55    |      |
| Link Distance (ft)      |                                                                                    | 632   |       |       | 1344  |       |       | 691   |       |       | 541   |      |
| Travel Time (s)         |                                                                                    | 9.6   |       |       | 20.4  |       |       | 11.8  |       |       | 6.7   |      |
| Peak Hour Factor        | 0.94                                                                               | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94  | 0.94 |
| Shared Lane Traffic (%) |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Turn Type               | Prot                                                                               | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    | Perm  | Prot  | NA    |      |
| Protected Phases        | 7                                                                                  | 4     |       | 3     | 8     |       | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases        |                                                                                    |       | 4     |       |       | 8     |       |       | 2     |       |       |      |
| Detector Phase          | 7                                                                                  | 4     | 4     | 3     | 8     | 8     | 5     | 2     | 2     | 1     | 6     |      |
| Switch Phase            |                                                                                    |       |       |       |       |       |       |       |       |       |       |      |
| Minimum Initial (s)     | 5.0                                                                                | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   | 5.0   |      |
| Minimum Split (s)       | 9.5                                                                                | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  | 22.5  | 9.5   | 22.5  |      |
| Total Split (s)         | 19.0                                                                               | 27.0  | 27.0  | 15.0  | 23.0  | 23.0  | 17.0  | 38.0  | 38.0  | 20.0  | 41.0  |      |
| Total Split (%)         | 19.0%                                                                              | 27.0% | 27.0% | 15.0% | 23.0% | 23.0% | 17.0% | 38.0% | 38.0% | 20.0% | 41.0% |      |
| Maximum Green (s)       | 14.5                                                                               | 22.5  | 22.5  | 10.5  | 18.5  | 18.5  | 12.5  | 33.5  | 33.5  | 15.5  | 36.5  |      |
| Yellow Time (s)         | 3.5                                                                                | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   | 3.5   |      |
| All-Red Time (s)        | 1.0                                                                                | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |
| Lost Time Adjust (s)    | 0.0                                                                                | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Lost Time (s)     | 4.5                                                                                | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |
| Lead/Lag                | Lead                                                                               | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      | Yes                                                                                | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |      |
| Vehicle Extension (s)   | 3.0                                                                                | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |      |
| Recall Mode             | None                                                                               | None  | None  | None  | None  | None  | None  | C-Max | C-Max | None  | C-Max |      |
| Walk Time (s)           |                                                                                    | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   | 7.0   |       | 7.0   |      |
| Flash Don't Walk (s)    |                                                                                    | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  | 11.0  |       | 11.0  |      |
| Pedestrian Calls (#/hr) |                                                                                    | 5     | 5     |       | 5     | 5     |       | 5     | 5     |       | 5     |      |

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 6: Adobe Rd. & Two Mile Rd.



HCM 7th Signalized Intersection Summary  
6: Adobe Rd. & Two Mile Rd.

Cumulative (2027) w/ Project PM Peak Hour

|                              |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Movement                     | EBL                                                                               | EBT                                                                               | EBR                                                                               | WBL                                                                               | WBT                                                                               | WBR                                                                               | NBL                                                                               | NBT                                                                                | NBR                                                                                 | SBL                                                                                 | SBT                                                                                 | SBR                                                                                 |
| Lane Configurations          |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h)       | 94                                                                                | 97                                                                                | 76                                                                                | 56                                                                                | 123                                                                               | 51                                                                                | 72                                                                                | 239                                                                                | 64                                                                                  | 108                                                                                 | 513                                                                                 | 189                                                                                 |
| Future Volume (veh/h)        | 94                                                                                | 97                                                                                | 76                                                                                | 56                                                                                | 123                                                                               | 51                                                                                | 72                                                                                | 239                                                                                | 64                                                                                  | 108                                                                                 | 513                                                                                 | 189                                                                                 |
| 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       | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                              | 1800                                                                              | 1700                                                                              | 1800                                                                               | 1800                                                                                | 1700                                                                                | 1800                                                                                | 1800                                                                                |
| Adj Flow Rate, veh/h         | 100                                                                               | 103                                                                               | 81                                                                                | 60                                                                                | 131                                                                               | 54                                                                                | 77                                                                                | 254                                                                                | 68                                                                                  | 115                                                                                 | 546                                                                                 | 201                                                                                 |
| Peak Hour Factor             | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                              | 0.94                                                                               | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                | 0.94                                                                                |
| Percent Heavy Veh, %         | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                 | 0                                                                                  | 0                                                                                   | 0                                                                                   | 0                                                                                   | 0                                                                                   |
| Cap, veh/h                   | 124                                                                               | 169                                                                               | 143                                                                               | 75                                                                                | 217                                                                               | 97                                                                                | 97                                                                                | 2026                                                                               | 904                                                                                 | 141                                                                                 | 1519                                                                                | 557                                                                                 |
| Arrive On Green              | 0.08                                                                              | 0.09                                                                              | 0.09                                                                              | 0.05                                                                              | 0.06                                                                              | 0.06                                                                              | 0.06                                                                              | 0.59                                                                               | 0.59                                                                                | 0.09                                                                                | 0.62                                                                                | 0.62                                                                                |
| Sat Flow, veh/h              | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                              | 1525                                                                              | 1619                                                                              | 3420                                                                               | 1525                                                                                | 1619                                                                                | 2450                                                                                | 899                                                                                 |
| Grp Volume(v), veh/h         | 100                                                                               | 103                                                                               | 81                                                                                | 60                                                                                | 131                                                                               | 54                                                                                | 77                                                                                | 254                                                                                | 68                                                                                  | 115                                                                                 | 381                                                                                 | 366                                                                                 |
| Grp Sat Flow(s),veh/h/ln     | 1619                                                                              | 1800                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                              | 1525                                                                              | 1619                                                                              | 1710                                                                               | 1525                                                                                | 1619                                                                                | 1710                                                                                | 1638                                                                                |
| Q Serve(g_s), s              | 6.1                                                                               | 5.5                                                                               | 5.1                                                                               | 3.7                                                                               | 3.7                                                                               | 3.4                                                                               | 4.7                                                                               | 3.3                                                                                | 1.9                                                                                 | 7.0                                                                                 | 10.9                                                                                | 10.9                                                                                |
| Cycle Q Clear(g_c), s        | 6.1                                                                               | 5.5                                                                               | 5.1                                                                               | 3.7                                                                               | 3.7                                                                               | 3.4                                                                               | 4.7                                                                               | 3.3                                                                                | 1.9                                                                                 | 7.0                                                                                 | 10.9                                                                                | 10.9                                                                                |
| Prop In Lane                 | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                   | 1.00                                                                              | 1.00                                                                              |                                                                                    | 1.00                                                                                | 1.00                                                                                |                                                                                     | 0.55                                                                                |
| Lane Grp Cap(c), veh/h       | 124                                                                               | 169                                                                               | 143                                                                               | 75                                                                                | 217                                                                               | 97                                                                                | 97                                                                                | 2026                                                                               | 904                                                                                 | 141                                                                                 | 1060                                                                                | 1016                                                                                |
| V/C Ratio(X)                 | 0.81                                                                              | 0.61                                                                              | 0.57                                                                              | 0.80                                                                              | 0.60                                                                              | 0.56                                                                              | 0.80                                                                              | 0.13                                                                               | 0.08                                                                                | 0.81                                                                                | 0.36                                                                                | 0.36                                                                                |
| Avail Cap(c_a), veh/h        | 235                                                                               | 405                                                                               | 343                                                                               | 170                                                                               | 633                                                                               | 282                                                                               | 202                                                                               | 2026                                                                               | 904                                                                                 | 251                                                                                 | 1060                                                                                | 1016                                                                                |
| 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     | 45.4                                                                              | 43.5                                                                              | 43.3                                                                              | 47.2                                                                              | 45.6                                                                              | 45.5                                                                              | 46.4                                                                              | 9.0                                                                                | 8.7                                                                                 | 44.8                                                                                | 9.3                                                                                 | 9.3                                                                                 |
| Incr Delay (d2), s/veh       | 11.5                                                                              | 3.5                                                                               | 3.5                                                                               | 17.5                                                                              | 2.7                                                                               | 4.9                                                                               | 13.8                                                                              | 0.1                                                                                | 0.2                                                                                 | 10.7                                                                                | 0.9                                                                                 | 1.0                                                                                 |
| Initial Q Delay(d3), s/veh   | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                               | 0.0                                                                                | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 | 0.0                                                                                 |
| %ile BackOfQ(50%),veh/ln     | 2.8                                                                               | 2.5                                                                               | 2.0                                                                               | 1.8                                                                               | 1.6                                                                               | 1.4                                                                               | 2.2                                                                               | 1.1                                                                                | 0.6                                                                                 | 3.1                                                                                 | 3.5                                                                                 | 3.4                                                                                 |
| Unsig. Movement Delay, s/veh |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| LnGrp Delay(d), s/veh        | 56.9                                                                              | 47.0                                                                              | 46.8                                                                              | 64.7                                                                              | 48.3                                                                              | 50.4                                                                              | 60.2                                                                              | 9.1                                                                                | 8.9                                                                                 | 55.5                                                                                | 10.2                                                                                | 10.3                                                                                |
| LnGrp LOS                    | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | D                                                                                 | D                                                                                 | E                                                                                 | A                                                                                  | A                                                                                   | E                                                                                   | B                                                                                   | B                                                                                   |
| Approach Vol, veh/h          | 284                                                                               |                                                                                   |                                                                                   | 245                                                                               |                                                                                   |                                                                                   | 399                                                                               |                                                                                    |                                                                                     | 862                                                                                 |                                                                                     |                                                                                     |
| Approach Delay, s/veh        | 50.5                                                                              |                                                                                   |                                                                                   | 52.8                                                                              |                                                                                   |                                                                                   | 18.9                                                                              |                                                                                    |                                                                                     | 16.3                                                                                |                                                                                     |                                                                                     |
| Approach LOS                 | D                                                                                 |                                                                                   |                                                                                   | D                                                                                 |                                                                                   |                                                                                   | B                                                                                 |                                                                                    |                                                                                     | B                                                                                   |                                                                                     |                                                                                     |
|                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Timer - Assigned Phs         | 1                                                                                 | 2                                                                                 | 3                                                                                 | 4                                                                                 | 5                                                                                 | 6                                                                                 | 7                                                                                 | 8                                                                                  |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Phs Duration (G+Y+Rc), s     | 13.2                                                                              | 63.8                                                                              | 9.1                                                                               | 13.9                                                                              | 10.5                                                                              | 66.5                                                                              | 12.2                                                                              | 10.9                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 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  | 15.5                                                                              | 33.5                                                                              | 10.5                                                                              | 22.5                                                                              | 12.5                                                                              | 36.5                                                                              | 14.5                                                                              | 18.5                                                                               |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Max Q Clear Time (g_c+I1), s | 9.0                                                                               | 5.3                                                                               | 5.7                                                                               | 7.5                                                                               | 6.7                                                                               | 12.9                                                                              | 8.1                                                                               | 5.7                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Green Ext Time (p_c), s      | 0.1                                                                               | 1.7                                                                               | 0.0                                                                               | 0.6                                                                               | 0.1                                                                               | 4.1                                                                               | 0.1                                                                               | 0.6                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| Intersection Summary         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th Control Delay, s/veh | 27.3                                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| HCM 7th LOS                  | C                                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

|                             |  |  |  |  |  |  |
|-----------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Lane Group                  | EBL                                                                               | EBR                                                                               | NBL                                                                               | NBT                                                                               | SBT                                                                               | SBR                                                                               |
| Lane Configurations         |  |  |                                                                                   |  |  |                                                                                   |
| Traffic Volume (vph)        | 9                                                                                 | 14                                                                                | 22                                                                                | 68                                                                                | 111                                                                               | 14                                                                                |
| Future Volume (vph)         | 9                                                                                 | 14                                                                                | 22                                                                                | 68                                                                                | 111                                                                               | 14                                                                                |
| Ideal Flow (vphpl)          | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              | 1800                                                                              |
| Link Speed (mph)            | 30                                                                                |                                                                                   |                                                                                   | 45                                                                                | 45                                                                                |                                                                                   |
| Link Distance (ft)          | 2636                                                                              |                                                                                   |                                                                                   | 564                                                                               | 668                                                                               |                                                                                   |
| Travel Time (s)             | 59.9                                                                              |                                                                                   |                                                                                   | 8.5                                                                               | 10.1                                                                              |                                                                                   |
| Peak Hour Factor            | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              |
| Shared Lane Traffic (%)     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Sign Control                | Stop                                                                              |                                                                                   |                                                                                   | Free                                                                              | Free                                                                              |                                                                                   |
| <b>Intersection Summary</b> |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Area Type:                  | Other                                                                             |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |
| Control Type:               | Unsignalized                                                                      |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |

| Intersection             |                                                                                   |        |       |                                                                                   |                                                                                   |      |
|--------------------------|-----------------------------------------------------------------------------------|--------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|
| Int Delay, s/veh         | 1.6                                                                               |        |       |                                                                                   |                                                                                   |      |
| Movement                 | EBL                                                                               | EBR    | NBL   | NBT                                                                               | SBT                                                                               | SBR  |
| Lane Configurations      |  |        |       |  |  |      |
| Traffic Vol, veh/h       | 9                                                                                 | 14     | 22    | 68                                                                                | 111                                                                               | 14   |
| Future Vol, veh/h        | 9                                                                                 | 14     | 22    | 68                                                                                | 111                                                                               | 14   |
| Conflicting Peds, #/hr   | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Sign Control             | Stop                                                                              | Stop   | Free  | Free                                                                              | Free                                                                              | Free |
| RT Channelized           | -                                                                                 | None   | -     | None                                                                              | -                                                                                 | None |
| Storage Length           | 0                                                                                 | -      | -     | -                                                                                 | -                                                                                 | -    |
| Veh in Median Storage, # | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Grade, %                 | 0                                                                                 | -      | -     | 0                                                                                 | 0                                                                                 | -    |
| Peak Hour Factor         | 92                                                                                | 92     | 92    | 92                                                                                | 92                                                                                | 92   |
| Heavy Vehicles, %        | 0                                                                                 | 0      | 0     | 0                                                                                 | 0                                                                                 | 0    |
| Mvmt Flow                | 10                                                                                | 15     | 24    | 74                                                                                | 121                                                                               | 15   |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Major/Minor              | Minor2                                                                            | Major1 |       | Major2                                                                            |                                                                                   |      |
| Conflicting Flow All     | 250                                                                               | 128    | 136   | 0                                                                                 | -                                                                                 | 0    |
| Stage 1                  | 128                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 122                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy            | 6.4                                                                               | 6.2    | 4.1   | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 1      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Critical Hdwy Stg 2      | 5.4                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Follow-up Hdwy           | 3.5                                                                               | 3.3    | 2.2   | -                                                                                 | -                                                                                 | -    |
| Pot Cap-1 Maneuver       | 743                                                                               | 927    | 1461  | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 903                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 909                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Platoon blocked, %       |                                                                                   |        |       | -                                                                                 | -                                                                                 | -    |
| Mov Cap-1 Maneuver       | 730                                                                               | 927    | 1461  | -                                                                                 | -                                                                                 | -    |
| Mov Cap-2 Maneuver       | 730                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 1                  | 887                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
| Stage 2                  | 909                                                                               | -      | -     | -                                                                                 | -                                                                                 | -    |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Approach                 | EB                                                                                | NB     |       | SB                                                                                |                                                                                   |      |
| HCM Ctrl Dly, s/v        | 9.42                                                                              | 1.83   |       | 0                                                                                 |                                                                                   |      |
| HCM LOS                  | A                                                                                 |        |       |                                                                                   |                                                                                   |      |
|                          |                                                                                   |        |       |                                                                                   |                                                                                   |      |
| Minor Lane/Major Mvmt    | NBL                                                                               | NBT    | EBLn1 | SBT                                                                               | SBR                                                                               |      |
| Capacity (veh/h)         | 1461                                                                              | -      | 839   | -                                                                                 | -                                                                                 |      |
| HCM Lane V/C Ratio       | 0.016                                                                             | -      | 0.03  | -                                                                                 | -                                                                                 |      |
| HCM Ctrl Dly (s/v)       | 7.5                                                                               | -      | 9.4   | -                                                                                 | -                                                                                 |      |
| HCM Lane LOS             | A                                                                                 | -      | A     | -                                                                                 | -                                                                                 |      |
| HCM 95th %tile Q(veh)    | 0                                                                                 | -      | 0.1   | -                                                                                 | -                                                                                 |      |

## **APPENDIX 6.3:**

### **CUMULATIVE (2027) WITH PROJECT CONDITIONS QUEUEING ANALYSIS WORKSHEETS**

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## Intersection: 1: Desert Knoll Av. &amp; Samarkand Dr.

| Movement              | NB  |
|-----------------------|-----|
| Directions Served     | LR  |
| Maximum Queue (ft)    | 18  |
| Average Queue (ft)    | 7   |
| 95th Queue (ft)       | 29  |
| Link Distance (ft)    | 375 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Intersection: 3: Desert Knoll Av. &amp; Manana Dr.

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | LR  |
| Maximum Queue (ft)    | 35  |
| Average Queue (ft)    | 30  |
| 95th Queue (ft)       | 43  |
| Link Distance (ft)    | 372 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Intersection: 5: Marine Av. &amp; Two Mile Rd.

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 10  | 18  | 22  |
| Average Queue (ft)    | 2   | 4   | 9   |
| 95th Queue (ft)       | 14  | 20  | 27  |
| Link Distance (ft)    | 552 | 258 | 311 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

## Queuing and Blocking Report

Cumulative (2027) w/ Project AM Peak Hour

Intersection: 7: Utah Tr. & Samarkand Dr.

|                       |      |
|-----------------------|------|
| Movement              | EB   |
| Directions Served     | LR   |
| Maximum Queue (ft)    | 35   |
| Average Queue (ft)    | 23   |
| 95th Queue (ft)       | 46   |
| Link Distance (ft)    | 2586 |
| Upstream Blk Time (%) |      |
| Queuing Penalty (veh) |      |
| Storage Bay Dist (ft) |      |
| Storage Blk Time (%)  |      |
| Queuing Penalty (veh) |      |

## Zone Summary

Zone wide Queuing Penalty: 0

## Intersection: 1: Desert Knoll Av. &amp; Samarkand Dr.

| Movement              | NB  |
|-----------------------|-----|
| Directions Served     | LR  |
| Maximum Queue (ft)    | 25  |
| Average Queue (ft)    | 16  |
| 95th Queue (ft)       | 41  |
| Link Distance (ft)    | 375 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Intersection: 3: Desert Knoll Av. &amp; Manana Dr.

| Movement              | WB  |
|-----------------------|-----|
| Directions Served     | LR  |
| Maximum Queue (ft)    | 31  |
| Average Queue (ft)    | 17  |
| 95th Queue (ft)       | 42  |
| Link Distance (ft)    | 372 |
| Upstream Blk Time (%) |     |
| Queuing Penalty (veh) |     |
| Storage Bay Dist (ft) |     |
| Storage Blk Time (%)  |     |
| Queuing Penalty (veh) |     |

## Intersection: 5: Marine Av. &amp; Two Mile Rd.

| Movement              | EB  | NB  | SB  |
|-----------------------|-----|-----|-----|
| Directions Served     | LTR | LTR | LTR |
| Maximum Queue (ft)    | 5   | 6   | 18  |
| Average Queue (ft)    | 1   | 1   | 7   |
| 95th Queue (ft)       | 10  | 11  | 24  |
| Link Distance (ft)    | 552 | 258 | 311 |
| Upstream Blk Time (%) |     |     |     |
| Queuing Penalty (veh) |     |     |     |
| Storage Bay Dist (ft) |     |     |     |
| Storage Blk Time (%)  |     |     |     |
| Queuing Penalty (veh) |     |     |     |

## Queuing and Blocking Report

Cumulative (2027) w/ Project PM Peak Hour

Intersection: 7: Utah Tr. & Samarkand Dr.

| Movement              | EB   | NB  |
|-----------------------|------|-----|
| Directions Served     | LR   | LT  |
| Maximum Queue (ft)    | 31   | 10  |
| Average Queue (ft)    | 11   | 2   |
| 95th Queue (ft)       | 35   | 14  |
| Link Distance (ft)    | 2586 | 542 |
| Upstream Blk Time (%) |      |     |
| Queuing Penalty (veh) |      |     |
| Storage Bay Dist (ft) |      |     |
| Storage Blk Time (%)  |      |     |
| Queuing Penalty (veh) |      |     |

## Zone Summary

Zone wide Queuing Penalty: 0