

APPENDIX B

**DRAFT TRAFFIC IMPACT
ANALYSIS**

Campo Verde Solar
County of Imperial (South of I-8 and East of Drew Road)
February 6, 2012

Draft Traffic Impact Analysis

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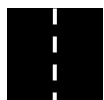
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1.0 Introduction

The purpose of this study is to determine and analyze traffic impacts for the proposed Campo Verde Solar Project. The project is a solar photovoltaic (PV) facility on approximately 1,990 acres of private lands that have been used for agriculture. The project is generally located south of I-8 and west of Drew Road in the vicinity of Diehl Road. The general location of the project is shown in **Figure 1**. A site plan is included in **Figure 2**.

This report describes the existing roadway network in the vicinity of the project site. It includes a review of the existing and proposed traffic activities for weekday peak AM and PM periods and daily traffic conditions. The format of this study includes the following chapters:

- 1.0 Introduction
- 2.0 Study Methodology
- 3.0 Existing (Year 2011) Conditions
- 4.0 Project Description
- 5.0 Existing (Year 2011) + Project Conditions
- 6.0 Year 2013 Conditions
- 7.0 Year 2013 + Project Conditions
- 8.0 Cumulative Projects (New Development)
- 9.0 Year 2013 + Project + Cumulative Conditions
- 10.0 Horizon Year 2050 + Project Operations
- 11.0 ITE Turn Lane Warrants
- 12.0 Calculated Impact and Recommended Mitigation
- 13.0 Conclusions and Recommendations
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Figure 1: Project Location

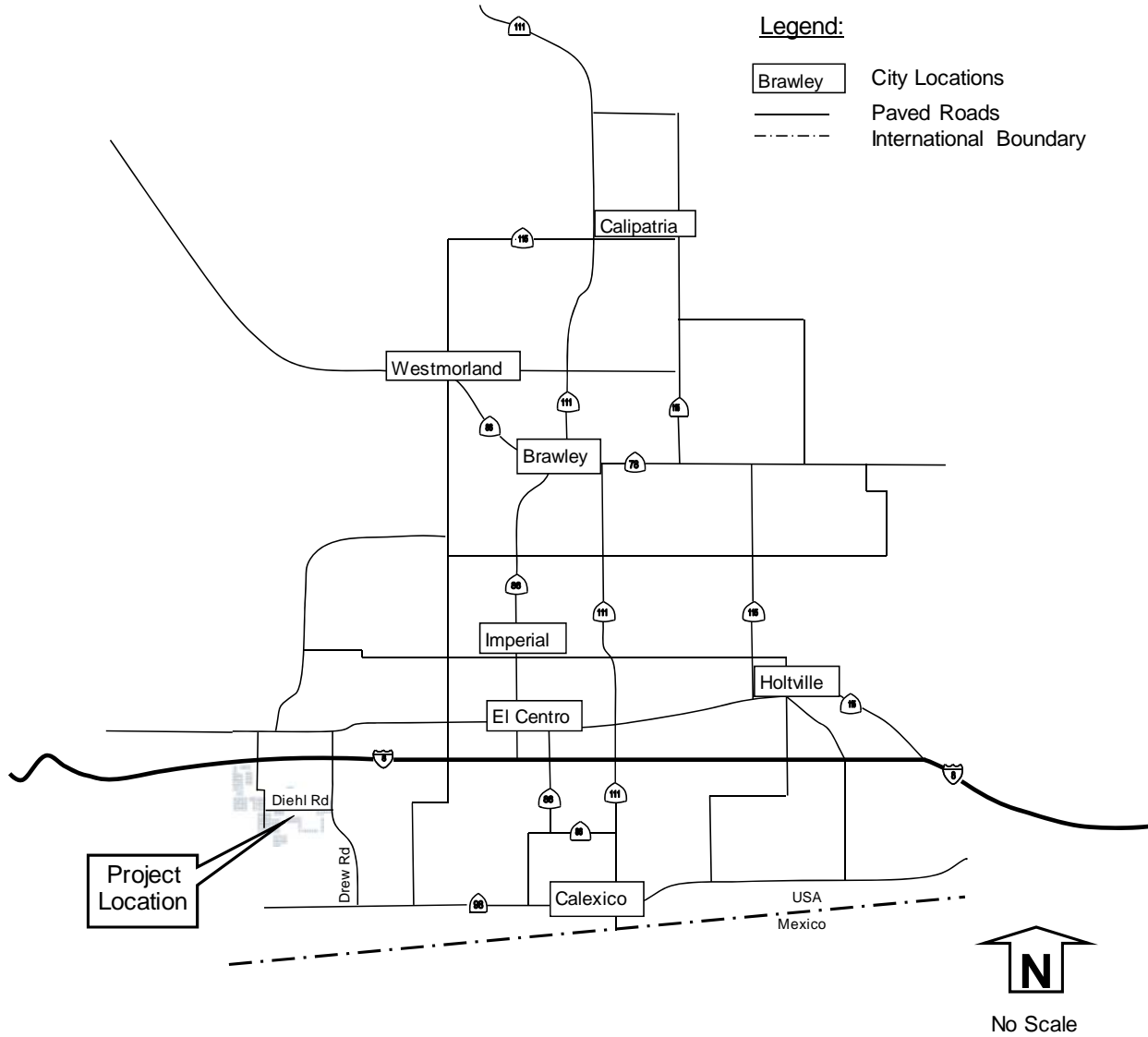
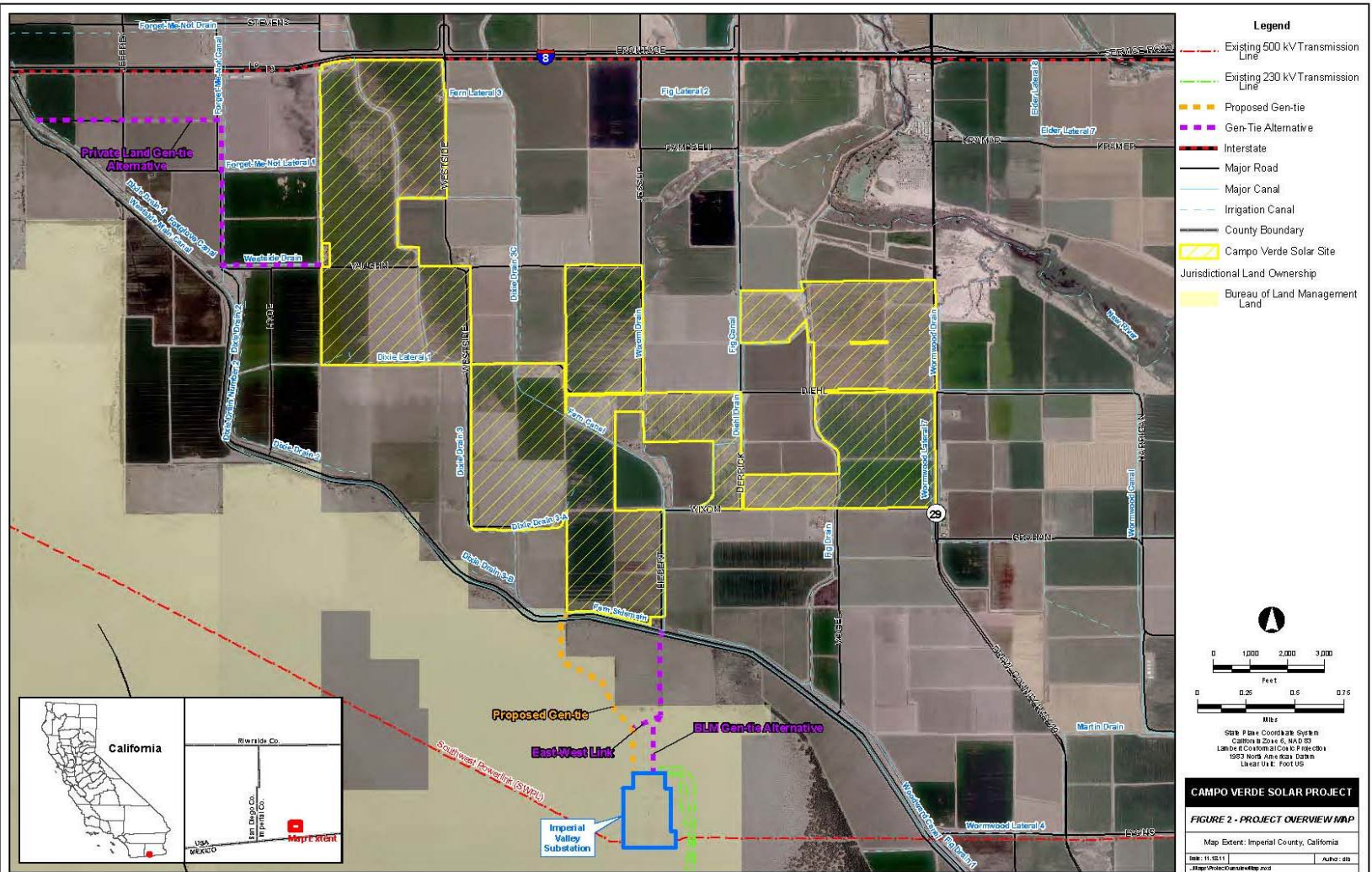


Figure 2: Site Plan



Source: ENValue LLC



LOS Engineering, Inc.
 Traffic and Transportation

2.0 Traffic Analysis Methodology and Significance Criteria

The parameters by which this traffic study was prepared included the determination of what intersections and roadways are to be analyzed, the scenarios to be analyzed and the methods required for analysis. The criteria for each of these parameters are included herein.

2.1 Study Area Criteria

The County of Imperial Department of Public Works *Traffic Study and Report Policy* dated March 12, 2007, revised June 29, 2007 and approved by the Board of Supervisors of the County of Imperial on August 7, 2007 states on page 14 “The study area for the project will be expected to encompass an adequate surrounding area to ensure that all impacts are identified to a sufficient extent that any mitigation measures, regardless of importance are shown, e.g. stop signs, yield signs, etc.” The project study area based on the extent of where in general 50 peak hour directional project trips will travel was confirmed by County staff as the current practice for determining the study area, which requires the analysis of following intersections:

- 1) Drew Road/Evan Hewes Hwy (un-signalized)
- 2) Drew Road/I-8 WB Ramps (un-signalized)
- 3) Drew Road/I-8 EB Ramps (un-signalized)
- 4) Drew Road/Diehl Road (un-signalized)
- 5) Drew Road/SR-98 (un-signalized)
- 6) Forrester Road/Evan Hewes Hwy (signalized)
- 7) Forrester Road/I-8 WB Ramps (un-signalized)
- 8) Forrester Road/I-8 EB Ramps (un-signalized)
- 9) Derrick Road/Diehl Road (un-signalized)
- 10) Westside Road/Evan Hewes Hwy (un-signalized)
- 11) Derrick Road/Evan Hewes Hwy (un-signalized)

The following existing roadway/highway segments were analyzed as part of this study:

- 1) Diehl Road from Derrick Road to Drew Road
- 2) Drew Road from Evan Hewes Hwy to I-8
- 3) Drew Road from I-8 to Diehl Road
- 4) Drew Road from Diehl Road to SR-98
- 5) Evan Hewes Hwy from Derrick Road to Drew Road
- 6) Evan Hewes Hwy from Drew Road to Forrester Road
- 7) Forrester Road from Evan Hewes Hwy to I-8

The following freeway segments were analyzed as part of this study:

- 1) I-8 from Dunaway Road to Drew Road
- 2) I-8 from Drew Road to Forrester Road

2.2 Scenario Criteria

The number of scenarios to be analyzed is based on the methodology outlined in the County of Imperial Department of Public Works *Traffic Study and Report Policy* dated March 12, 2007, revised June 29, 2007 and approved by the Board of Supervisors of the County of Imperial on August 7, 2007. Excerpts from the *Traffic Study and Report Policy* showing the scenario criteria are included in **Appendix A**. Based on the aforementioned methodology source, the following scenarios were analyzed:

- 1) Existing (Year 2011) Conditions
- 2) Existing (Year 2011) + Project Conditions
- 3) Year 2013 Conditions
- 4) Year 2013 + Project Conditions
- 5) Year 2013 + Project + Cumulative Conditions
- 6) Horizon Year 2050 + Project Conditions

2.3 Traffic Analysis Criteria

In the traffic analyses prepared for this study, the *2000 Highway Capacity Manual* (HCM) operations analysis using Level of Service (LOS) evaluation criteria were employed. The operating conditions of the study intersections are measured using the HCM LOS designations ranging from A through F. LOS A represents the best operating condition and LOS F denotes the worst operating condition. The individual LOS criteria for each roadway component are described below.

2.3.1 Intersections

The study intersections were analyzed using the **operational analysis** method outlined in the 2000 HCM. This process defines LOS in terms of **average control delay** (measured in seconds) per vehicle. Intersection LOS was calculated using the Synchro 7.0 (Trafficware Ltd., 2003-2007) computer software program. The HCM LOS for the range of delay by seconds for un-signalized and signalized intersections is described in **Table 1**.

TABLE 1: UN-SIGNALIZED AND SIGNALIZED INTERSECTION LEVEL OF SERVICE (HCM 2000)

| Level of Service | Un-Signalized | Signalized |
|------------------|---|---|
| | Average Control Delay (seconds/vehicle) | Average Control Delay (seconds/vehicle) |
| A | 0-10 | 0-10 |
| B | > 10-15 | > 10-20 |
| C | > 15-25 | > 20-35 |
| D | > 25-35 | > 35-55 |
| E | > 35-50 | > 55-80 |
| F | > 50 | > 80 |

Source: Highway Capacity Manual 2000.

As noted on page 5 of Caltrans' *Guide for the Preparation of Traffic Impact Studies*, December 2002, the accepted methodology by Caltrans for un-signalized intersections is the most current edition of the HCM (excerpt included in **Appendix B**). Therefore, all of the study interchanges with un-signalized intersections were analyzed using the most current edition of the HCM.

2.3.2 Roadway Segments

The roadway segments were analyzed based on the functional classification of the roadway using the Imperial County Standard Street Classification capacity lookup table (copy included in **Appendix C**). The roadway segment capacity and LOS standards used to analyze roadway segments are summarized in **Table 2**.

TABLE 2: ROADWAY SEGMENT DAILY CAPACITY AND LOS (IMPERIAL COUNTY)

| Circulation Element Road Classification | CROSS SECTION | LOS A | LOS B | LOS C | LOS D | LOS E |
|---|------------------|----------|----------|----------|----------|----------|
| Expressway | 154/210 | <30,000 | <42,000 | <60,000 | <70,000 | <80,000 |
| Prime Arterial | 106/136 | <22,200 | <37,000 | <44,600 | <50,000 | <57,000 |
| Minor Arterial | 82/102 | <14,800 | <24,700 | <29,600 | <33,400 | <37,000 |
| Major Collector (Collector) | 64/84 | <13,700 | <22,800 | <27,400 | <30,800 | <34,200 |
| Minor Collector (Local Collector) | 40/70 | <1,900 | <4,100 | <7,100 | <10,900 | <16,200 |
| Local County (Residential) | 40/60 | * | * | <1,500 | * | * |
| Local County (Residential Cul-de-Sac or Loop Street) | 40/60 | * | * | <200 | * | * |
| Major Industrial Collector – (Industrial) | 76/96 | <5,000 | <10,000 | <14,000 | <17,000 | <20,000 |
| Industrial Local | 44/64 | <2,500 | <5,000 | <7,000 | <8,500 | <10,000 |

Source: Imperial County Department of Planning & Development Services *Circulation and Scenic Highways Element* January 29, 2008. Notes: *Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

2.3.3 Freeway Segments

The freeway segments were analyzed based on a multilane highway LOS criteria using a Volume to Capacity (V/C) ratio as outlined in the 2000 HCM. The V/C ratio is the ratio of traffic over the roadway capacity that provides a measure of how much roadway capacity is being used. The accepted methodology by Caltrans for the analysis of freeway sections is to use the most current edition of the HCM as noted on page 5 of Caltrans' *Guide for the Preparation of Traffic Impact Studies*, December 2002. The freeway LOS operations are based on Caltrans' *Guide for the Preparation of Traffic Impact Studies* V/C ratios as summarized below in **Table 3**. Excerpts from Caltrans' *Guide for the Preparation of Traffic Impact Studies* are included in **Appendix D**.

TABLE 3: FREEWAY LEVEL OF SERVICE

| Measure of Effectiveness | LOS A | LOS B | LOS C | LOS D | LOS E |
|---------------------------|-------|-------|-------|-------|-------|
| Max Volume/Capacity Ratio | 0.30 | 0.50 | 0.71 | 0.89 | 1.00 |

Source: Caltrans' *Guide for the Preparation of Traffic Impact Studies*, December 2002.

2.4 Significance Criteria

The significance criteria for traffic impacts are based on the Imperial County Planning & Development Services Department level of service standard as outlined on page 55 of the *Circulation and Scenic Highways Element* dated January 29, 2008, which states "The County's goal for an acceptable traffic service standard on an ADT basis and during AM and PM peak



periods for all County-Maintained Roads shall be LOS C for all street segment links and intersections.” An excerpt from the *Circulation and Scenic Highways Element* is included in **Appendix E**. The current practice of determining direct or cumulative impacts is defined by the significance criteria outlined in **Table 4**, which was obtained from several EIRs for projects located in Imperial County. The criteria outlined in Table 4 were confirmed with County of Imperial Department of Public Works in April 2011. Copies of traffic significance criteria from other EIRs are included in **Appendix F**.

TABLE 4: SIGNIFICANCE CRITERIA

| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
|----------------------|---|--|-------------|
| Intersections | | | |
| LOS C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS D or worse | NA | Direct |
| LOS D | LOS D and adds 2.0 seconds or more of delay | LOS D or worse | Cumulative |
| LOS D | LOS E or F | NA | Direct |
| LOS E | LOS F | NA | Direct |
| LOS F | LOS F and delay increases by ≥ 10.0 seconds | LOS F | Direct |
| Any LOS | Project does not degrade LOS and adds < 2.0 seconds of delay | Any LOS | None |
| Any LOS | Project does not degrade LOS but adds 2.0 to 9.9 seconds of delay | LOS E or worse | Cumulative |
| Segments | | | |
| LOS C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS C or better and $v/c > 0.02$ | LOS D or worse | Cumulative |
| LOS C or better | LOS D or worse | NA | Direct (1) |
| LOS D | LOS D and $v/c > 0.02$ | LOS D or worse | Cumulative |
| LOS D | LOS E or F | NA | Direct |
| LOS E | LOS F | NA | Direct |
| LOS F | LOS F and v/c increases by > 0.09 | LOS F | Direct |
| Any LOS | LOS E or worse & $v/c 0.02$ to 0.09 | LOS E or worse | Cumulative |
| Any LOS | LOS E or worse and $v/c < 0.02$ | Any LOS | None |

Notes: LOS: Level of Service. (1) Exception: post-project segment operation is LOS D and intersections along segment are LOS D or better resulting in no significant impact. NA: Not Applicable.

2.5 Study Limitations

The findings and recommendations of this report were prepared in accordance with generally accepted professional traffic and transportation engineering principles and practice. No other warranty, express or implied is made.

3.0 Existing (Year 2011) Conditions

This section describes the study area street system, peak hour intersection volumes, daily roadway volumes, and existing LOS.

3.1 Existing Street System

The existing roadway system and classifications are described below. These are based on the Imperial County Planning & Development Services Department *Circulation and Scenic Highways Element*, January 29, 2008 – excerpts included in **Appendix G**.

Interstate 8 (I-8) between Dunaway Road and Imperial Avenue is constructed as a 4 lane divided freeway with 2 lanes in each direction.

Diehl Road between Westside Road and Drew Road has a year 2003 classification of MINOR COLLECTOR in the Imperial County *Circulation and Scenic Highways Element*. This roadway is currently constructed as a 2 lane un-divided roadway within approximately 20 feet of pavement. A posted speed limit was not observed on this segment.

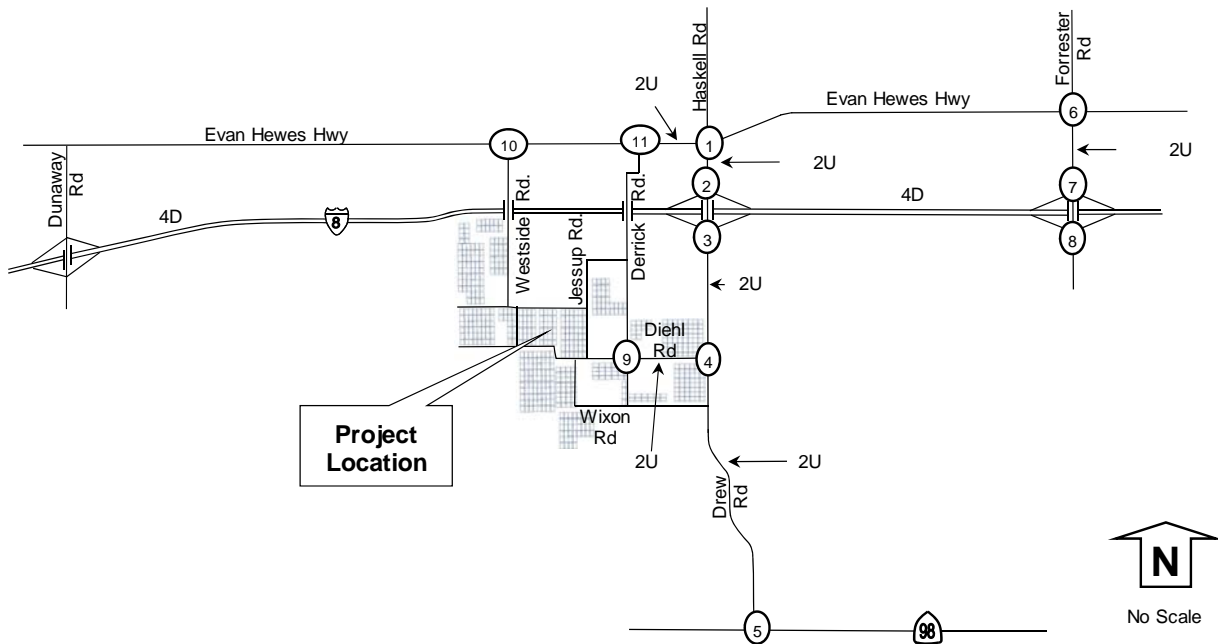
Drew Road (S29) between I-8 and SR-98 has a year 2003 classification of PRIME ARTERIAL in the Imperial County *Circulation and Scenic Highways Element*. This paved roadway is currently constructed as a 2 lane un-divided roadway.

Evan Hewes Highway between Westside Road and Forrester Road has a 2003 classification of PRIME ARTERIAL on the Imperial County *Circulation and Scenic Highways Element*. This roadway is currently constructed as a 2 lane un-divided roadway within approximately 24 feet of pavement. The posted speed limit is 40 MPH within the built-up areas of Seeley. A posted speed limit was not observed on Evan Hewes Highway outside of urbanized areas.

Forrester Road (S30) between I-8 and McCabe Road has a year 2003 classification of PRIME ARTERIAL in the Imperial County *Circulation and Scenic Highways Element*. This paved roadway is currently constructed as a 2 lane un-divided roadway.

The existing roadway conditions are shown in **Figure 3**.

Figure 3: Existing (Year 2011) Roadway Conditions



| | | |
|--|---|--|
| <p>Evan Hewes Hwy</p> <p>Drew Rd</p> | <p>I-8 WB Ramps</p> <p>Drew Rd</p> | <p>I-8 EB Ramps</p> <p>Drew Rd</p> |
| <p>Diehl Rd</p> <p>Drew Rd</p> | <p>SR-98</p> <p>Drew Rd</p> | <p>Evan Hewes Hwy</p> <p>Signal</p> <p>Forrester Rd</p> |
| <p>I-8 WB Ramps</p> <p>Forrester Rd</p> | <p>I-8 EB Ramps</p> <p>Forrester Rd</p> | <p>Diehl Rd</p> <p>Derrick Rd</p> |
| <p>Evan Hewes Hwy</p> <p>Westside Rd</p> | <p>Evan Hewes Hwy</p> <p>Derrick Rd</p> | <p>LEGEND</p> <ul style="list-style-type: none"> — Stop Sign ↑ Through Lane ↘ Right Turn Lane ↔ Combination Left-Through-Right Lane ↔ Combination Right-Through ↔ Combination Left-Right Lane ▽ Yield ↘ Left Turn Lane ↔ Combination Left-Through 4D Four Lane Divided Roadway 2U Two Lane Undivided Roadway |

3.2 Existing (Year 2011) Traffic Volumes and LOS Analyses

Existing AM and PM peak hour intersection volumes (with count dates) were collected for this study:

- 1) Drew Road/Evan Hewes Hwy (Wednesday 6/22/2011)
- 2) Drew Road/I-8 WB Ramps (Wednesday 6/22/2011)
- 3) Drew Road/I-8 EB Ramps (Wednesday 6/22/2011)
- 4) Drew Road/Diehl Road (Wednesday 6/22/2011)
- 5) Drew Road/SR-98 (Thursday 3/24/2011)
- 6) Forrester Road/Evan Hewes Hwy (Wednesday 6/22/2011)
- 7) Forrester Road/I-8 WB Ramps (Thursday 3/24/2011)
- 8) Forrester Road/I-8 EB Ramps (Thursday 3/24/2011)
- 9) Derrick Road/Diehl Road (Wednesday 6/22/2011)
- 10) Westside Road/Evan Hewes Hwy (5/22/2008 with a 2.8% annual growth factor applied to reach a year 2011 volume)
- 11) Derrick Road/Evan Hewes Hwy (Wednesday 6/22/2011)

Daily traffic volumes (with count dates) were obtained or collected for the following segments:

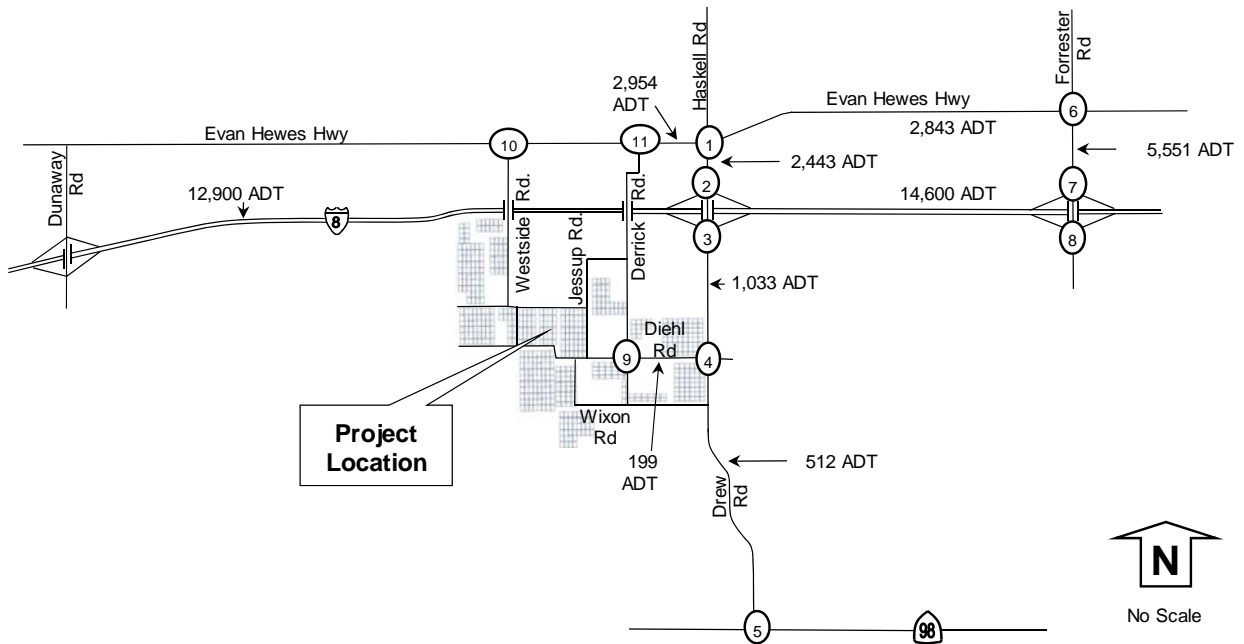
- 1) Diehl Road from Derrick Road to Drew Road (Wednesday 6/22/2011)
- 2) Drew Road from Evan Hewes Hwy to I-8 (Wednesday 6/22/2011)
- 3) Drew Road from I-8 to Diehl Road (Wednesday 6/22/2011)
- 4) Drew Road from Diehl Road to SR-98 (Wednesday 6/22/2011)
- 5) Evan Hewes Hwy from Derrick Road to Drew Road (Wednesday 6/22/2011)
- 6) Evan Hewes Hwy from Drew Road to Forrester Road (Wednesday 6/22/2011)
- 7) Forrester Road from Evan Hewes Hwy to I-8 (Wednesday 6/22/2011)

Daily freeway volumes (with count dates) were obtained for the following segments:

- 1) I-8 from Dunaway Road to Drew Road (Caltrans 2010 with a 2.8% annual growth factor applied to reach a year 2011 volume)
- 2) I-8 from Drew Road to Forrester Road (Caltrans 2010 with a 2.8% annual growth factor applied to reach a year 2011 volume)

Existing AM, PM, and daily volumes are shown on **Figures 4** with count data included in **Appendix H**. The weekday intersection, segment, and freeway LOS are shown in **Tables 5, 6, and 7** respectively. Intersections LOS calculations are included in **Appendix I**.

Figure 4: Existing (Year 2011) Volumes



| | | |
|--|---|--|
| <p>Evan Hewes Hwy</p> <p>10 (12) ← 18 (10) → 6 (14) ↓</p> <p>5 (8) ↑ 3 (19) ↓</p> <p>59 (114) → 96 (33) ←</p> <p>36 (92) ↓ 21 (13) ↑</p> <p>Drew Rd</p> <p>69 (42) ↑ 11 (19) ↓</p> <p>17 (10) ↓</p> <p>1</p> | <p>16 (6) ↓ 45 (84) ↓</p> <p>I-8 WB Ramps</p> <p>56 (37) ↑ 0 (0) ↓</p> <p>12 (14) ↓</p> <p>2</p> <p>Drew Rd</p> <p>7 (0) ↑ 23 (12) ↓</p> | <p>I-8 EB Ramps</p> <p>20 (33) ↓ 37 (59) ↓</p> <p>6 (7) ↑ 0 (0) ↓</p> <p>0 (5) ↓</p> <p>3</p> <p>Drew Rd</p> <p>27 (6) ↑ 27 (18) ↓</p> |
| <p>Diehl Rd</p> <p>6 (1) ↑ 11 (24) ↓ 0 (0) ↓</p> <p>3 (2) ↓ 1 (0) ↓</p> <p>0 (0) ↓ 0 (0) ↓</p> <p>6 (2) ↓ 0 (0) ↓</p> <p>Drew Rd</p> <p>3 (1) ↑ 26 (8) ↓</p> <p>0 (0) ↓</p> <p>4</p> | <p>SR-98</p> <p>2 (1) ↓ 0 (4) ↓</p> <p>1 (2) ↓ 3 (3) ↓</p> <p>27 (91) ↓ 51 (53) ↓</p> <p>5</p> <p>Drew Rd</p> | <p>Evan Hewes Hwy</p> <p>25 (15) ↓ 104 (128) ↓ 15 (20) ↓</p> <p>13 (38) ↓ 8 (13) ↓</p> <p>52 (175) → 106 (96) ←</p> <p>8 (15) ↓ 12 (24) ↓</p> <p>Forrester Rd</p> <p>13 (8) ↑ 95 (110) ↓ 15 (18) ↓</p> |
| <p>Forrester Rd</p> <p>56 (54) ↓ 110 (257) ↓</p> <p>I-8 WB Ramps</p> <p>200 (160) ↑ 0 (0) ↓</p> <p>15 (8) ↓</p> <p>4 (0) ↑ 74 (101) ↓</p> <p>0 (0) ↓</p> <p>7</p> | <p>I-8 EB Ramps</p> <p>33 (31) ↓ 91 (232) ↓</p> <p>40 (76) ↑ 0 (1) ↓</p> <p>0 (1) ↓ 3 (3) ↓</p> <p>8</p> <p>Forrester Rd</p> <p>35 (26) ↑ 5 (9) ↓</p> | <p>Diehl Rd</p> <p>0 (0) ↓ 1 (1) ↓ 3 (2) ↓</p> <p>0 (0) ↓ 7 (3) ↓</p> <p>0 (1) ↓ 1 (1) ↓</p> <p>8 (1) ↓ 0 (0) ↓</p> <p>9</p> <p>Derrick Rd</p> <p>1 (1) ↑ 0 (0) ↓</p> |
| <p>Evan Hewes Hwy</p> <p>50 (164) → 268 (17) ←</p> <p>3 (0) ↓ 3 (0) ↓</p> <p>1 (0) ↓ 3 (4) ↓</p> <p>10</p> | <p>Evan Hewes Hwy</p> <p>52 (190) → 142 (44) ←</p> <p>1 (0) ↓ 4 (4) ↓</p> <p>1 (0) ↓ 5 (4) ↓</p> <p>11</p> | <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z,ZZZ ADT volumes shown along segments</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> <p>() Represents 0 PM volume</p> |

TABLE 5: EXISTING (YEAR 2011) INTERSECTION LOS

| Intersection & (Control) ¹ | Movement | Peak Hour | Existing | |
|---|----------|-----------|--------------------|------------------|
| | | | Delay ² | LOS ³ |
| 1) Drew Road at Evan Hewes Hwy (U) | All | AM | 7.5 | A |
| | All | PM | 7.5 | A |
| 2) Drew Road at I-8 WB Ramp (U) | WB LT | AM | 8.7 | A |
| | WB LT | PM | 8.7 | A |
| 3) Drew Road at I-8 EB Ramp (U) | EB LT | AM | 10.0 | B |
| | EB LT | PM | 9.3 | A |
| 4) Drew Road at Diehl Road (U) | EB LTR | AM | 8.6 | A |
| | EB LTR | PM | 8.6 | A |
| 5) Drew Road at SR-98 (U) | SB LR | AM | 8.6 | A |
| | SB LR | PM | 9.2 | A |
| 6) Forrester Road at Evan Hewes Hwy (S) | All | AM | 16.8 | B |
| | All | PM | 22.9 | C |
| 7) Forrester Road at I-8 WB Ramp (U) | WB LT | AM | 9.8 | A |
| | WB LT | PM | 9.8 | A |
| 8) Forrester Road at I-8 EB Ramp (U) | EB LT | AM | 10.8 | B |
| | EB LT | PM | 16.9 | C |
| 9) Derrick Road at Diehl Road (U) | SB LTR | AM | 8.7 | A |
| | SB LTR | PM | 8.7 | A |
| 10) Westside Road at Evan Hewes Hwy (U) | NB LR | AM | 9.1 | A |
| | NB LR | PM | 9.2 | A |
| 11) Derrick Road at Evan Hewes Hwy (U) | NB LR | AM | 8.8 | A |
| | NB LR | PM | 9.3 | A |

Notes: 1) Intersection Control - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

3) LOS: Level of Service

TABLE 6: EXISTING (YEAR 2011) SEGMENT LOS

| Segment | Classification (as built) | Existing | | | | |
|-----------------------------|---------------------------|--------------|------------|----------------|------|-----|
| | | Daily Volume | # of lanes | LOS C Capacity | V/C | LOS |
| Diehl Road | | | | | | |
| Derrick Road to Drew Road | Minor Collector (2U) | 199 | 2 | 7,100 | 0.03 | A |
| Drew Road | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 2,443 | 2 | 7,100 | 0.34 | B |
| I-8 to Diehl Road | Prime Arterial (2U) | 1,033 | 2 | 7,100 | 0.15 | A |
| Diehl Road to SR-98 | Prime Arterial (2U) | 512 | 2 | 7,100 | 0.07 | A |
| Evan Hewes Highway | | | | | | |
| Derrick Road to Drew Road | Prime Arterial (2U) | 2,954 | 2 | 7,100 | 0.42 | B |
| Drew Road to Forrester Road | Prime Arterial (2U) | 2,843 | 2 | 7,100 | 0.40 | B |
| Forrester Road | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 5,551 | 2 | 7,100 | 0.78 | C |

Notes: Classification based on 1/29/08 Circulation and Scenic Highways Element. 2U= 2 lane undivided roadway. Daily volume is a 24 hour volume. LOS: Level of Service. LOS based on actual number of lanes currently constructed. V/C: Volume to Capacity ratio.



TABLE 7: EXISTING (YEAR 2011) FREEWAY LOS

| Freeway Segment | I-8 Dunaway Rd to Drew Rd | | | | I-8 Drew Rd to Forrester Rd | | | |
|----------------------------------|------------------------------|--------|--------|--------|--------------------------------|--------|--------|--------|
| | A M | | P M | | A M | | P M | |
| Year 2011 (Forecasted from 2010) | ADT 12,900 | | | | ADT 14,600 | | | |
| Peak Hour | A M | | P M | | A M | | P M | |
| Direction | EB | WB | EB | WB | EB | WB | EB | WB |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Capacity (1) | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| K Factor (2) | 0.1076 | 0.0963 | 0.0917 | 0.1517 | 0.1076 | 0.0963 | 0.0917 | 0.1517 |
| D Factor (3) | 0.2616 | 0.7384 | 0.4419 | 0.5581 | 0.2616 | 0.7384 | 0.4419 | 0.5581 |
| Truck Factor (4) | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 |
| Peak Hour Volume | 434 | 1,095 | 624 | 1,304 | 491 | 1,239 | 706 | 1,476 |
| Volume to Capacity | 0.092 | 0.233 | 0.133 | 0.277 | 0.104 | 0.264 | 0.150 | 0.314 |
| LOS | A | A | A | A | A | A | A | B |

Notes: (1) Capacity of 2,350 passenger cars per hour per lane (pcphpl) from CALTRANS' Guide for the Preparation of Traffic Impact Studies, December 2002. (2) Latest K factor (percentage of the AADT in both directions during the peak hour) from Caltrans (based on 2007 report). (3) Latest D factor (percentage of traffic in the peak direction during the peak hour) from Caltrans (based on 2007 report), which when multiplied by K and ADT will provide peak hour volume. (4) Latest truck factor from Caltrans (based on 2007 report).

Under existing year 2011 conditions, the study intersections and roadways were calculated to operate at LOS C or better.

4.0 Project Description

The project is a solar photovoltaic facility on approximately 1,990 acres of private lands that have been used for agriculture. The construction schedule is estimated between 12 and 24 months. The applicant anticipates construction to start in the second quarter of 2012 following a Conditional Use Permit (CUP) approval. A detailed project construction schedule is included in **Appendix J**.

4.1 Project Trip Generation

The project trip generation consists of a construction phase and operations phase. The construction phase will have the highest traffic intensity followed by an operations phase with significantly fewer vehicle trips. This section describes the construction and operations trip generation.

4.1.1 Construction Trip Generation

Construction of the project includes site preparation, foundation construction, erection of major equipment and structures, installation of electrical systems, control systems, and start-up/testing. These construction activities are expected to require approximately 12 to 24 months. According to the applicant, the construction workforce is expected to reach a peak during month number seven (7) anticipated to occur during the 1st quarter of 2013 with a peak of up to 325 daily vehicles for construction workers and 50 daily truck deliveries (details in Appendix J). The number of workers before and after the peak month will be less. Work is anticipated to start at 6am and conclude at 6 pm Monday through Friday. The peak construction traffic (during month number 7) is calculated at 950 ADT with 349 AM peak hour trips (337 inbound and 12 outbound) and 349 PM peak hour trips (12 inbound and 337 outbound) as shown in **Table 8**.

TABLE 8: PROJECT TRIP GENERATION SUMMARY

| Proposed Construction Related Traffic | Daily Vehicles | ADT with PCE ² | AM (6AM) | | PM (6PM) | |
|--|----------------|---------------------------|------------|-----------|-----------|------------|
| | | | IN | OUT | IN | OUT |
| Peak Construction Workers ¹ | 325 | 650 | 325 | 0 | 0 | 325 |
| Equipment Deliveries and Construction Trucks (with PCE) ² | 50 | 300 | 12 | 12 | 12 | 12 |
| Total Traffic During Peak Construction Period | 375 | 950 | 337 | 12 | 12 | 337 |

ADT: Average Daily Trips. 1) Number of construction workers and construction trucks provided by applicant. 2) Passenger Car Equivalent (PCE) factor of 3 applied to each truck, thus 50 daily trucks equals 300 ADT in one 1 day while peak hour has about 4 trucks x 3 PCE to equal 12 PCE peak hour trips.

4.1.2 Project Operations and Maintenance Trip Generation

During operations and maintenance, the project will primarily operate during daylight hours and will require (on average) less than 10 fulltime personnel for operations and maintenance. Operations personnel include employees running the facility, security, and any other work associated with the operations. Maintenance personnel include employees addressing maintenance on a daily basis. On average, the operations and maintenance trip generation is

estimated at about 20 ADT with approximately 10 AM and 10 PM peak hour trips.

During a typical year, the project will require up to 10 daily water trucks for panel washing over approximately 15 business days; however, the washing frequency is estimated from one to four times a year. During the washing period, the total project daily traffic may increase to 40 or 50 ADT over a 15 business day period.

Since the operations and maintenance traffic generation is significantly less than the construction, the higher and more conservative construction trip generation is used to determine potential project impacts. In other words, the construction phase was used for the traffic analysis because it is calculated to generate significantly higher traffic than the project operations and maintenance phase when the project is operational.

4.2 Construction Trip Distribution and Assignment

The applicant has indicated that the labor pool for the construction workforce is anticipated at approximately 60% from within Imperial County from a combination of existing residents and workers that will temporarily reside in the County, and approximately 40% from outside Imperial County. Local cities/residential communities within Imperial County are considered to include but are not limited to Calipatria, Westmorland, Brawley, Imperial, El Centro, Holtville, and Calexico. The distribution of the construction workforce by cities/communities was based on the concentration of populations per the Census 2010 from the U.S. Census Bureau. The percentage of local construction workforce by city/community and county is shown in **Table 9**.

TABLE 9: CONSTRUCTION WORKFORCE SOURCES BASED ON CENSUS 2010 POPULATIONS (60% LOCAL)

| LOCAL (60%) City/Community | 2010 Census Population | Percentage of Total | Percentage of Local Workforce (60% from within Imperial County) |
|---------------------------------------|-----------------------------------|--------------------------------|--|
| Calipatria | 7,705 | 6% | 3% |
| Westmorland | 2,225 | 2% | 1% |
| Brawley | 24,953 | 18% | 11% |
| Imperial | 14,758 | 11% | 6% |
| El Centro | 42,598 | 31% | 19% |
| Holtville | 5,939 | 4% | 3% |
| Calexico | 38,572 | 28% | 17% |
| Local Total | 136,750 | 100% | 60% |

Source: Population data from U.S. Census Bureau.

The percentage of non-local construction workforce by city/community and county were based on the population concentrations per the Census 2010 from the U.S. Census Bureau and proximity to population centers such as San Diego. The non-local workforce numbers are shown in **Table 10**.

TABLE 10: CONSTRUCTION WORKFORCE SOURCES BASED ON CENSUS 2010 POPULATIONS (40% NON-LOCAL)

| NON-LOCAL (40%) County | 2010 Census Population | Percentage of Census Total | Percentage of Non-Local Workforce (With emphasis on proximity to San Diego) |
|-----------------------------------|-----------------------------------|---------------------------------------|--|
| San Diego County | 3,095,313 | 56% | 30% |
| Riverside County | 2,189,641 | 40% | 9% |
| Yuma County (Arizona) | 195,751 | 4% | 1% |
| Non-Local Total | 5,480,705 | 100% | 40% |

Source: Population data from U.S. Census Bureau.

Based on the aforementioned Census information, the regional construction workforce distribution is shown in **Figure 5** with the study area distribution shown in **Figure 6**. The construction workforce trip assignment is shown in **Figure 7**.

The delivery of equipment is anticipated to arrive from outside of Imperial Valley with a majority arriving from Los Angeles and Riverside Counties, followed by San Diego County, and the possibility of some truck traffic from other locations. The project truck delivery distribution is shown in **Figure 8** with the truck delivery trip assignment shown in **Figure 9**.

The total project traffic that consists of the construction workforce and delivery of equipment is shown in **Figure 10**.

4.3 Alternative Access Routes

On April 5, 2010 an earthquake struck Imperial County and caused the closure of Drew Road south of I-8. In the event an alternative route is required to reach the project site, several route options exist. These alternative access routes are shown in **Figure 11**; however, this analysis is based on primary access from Drew Road.

Figure 5: Regional Construction Workforce Distribution

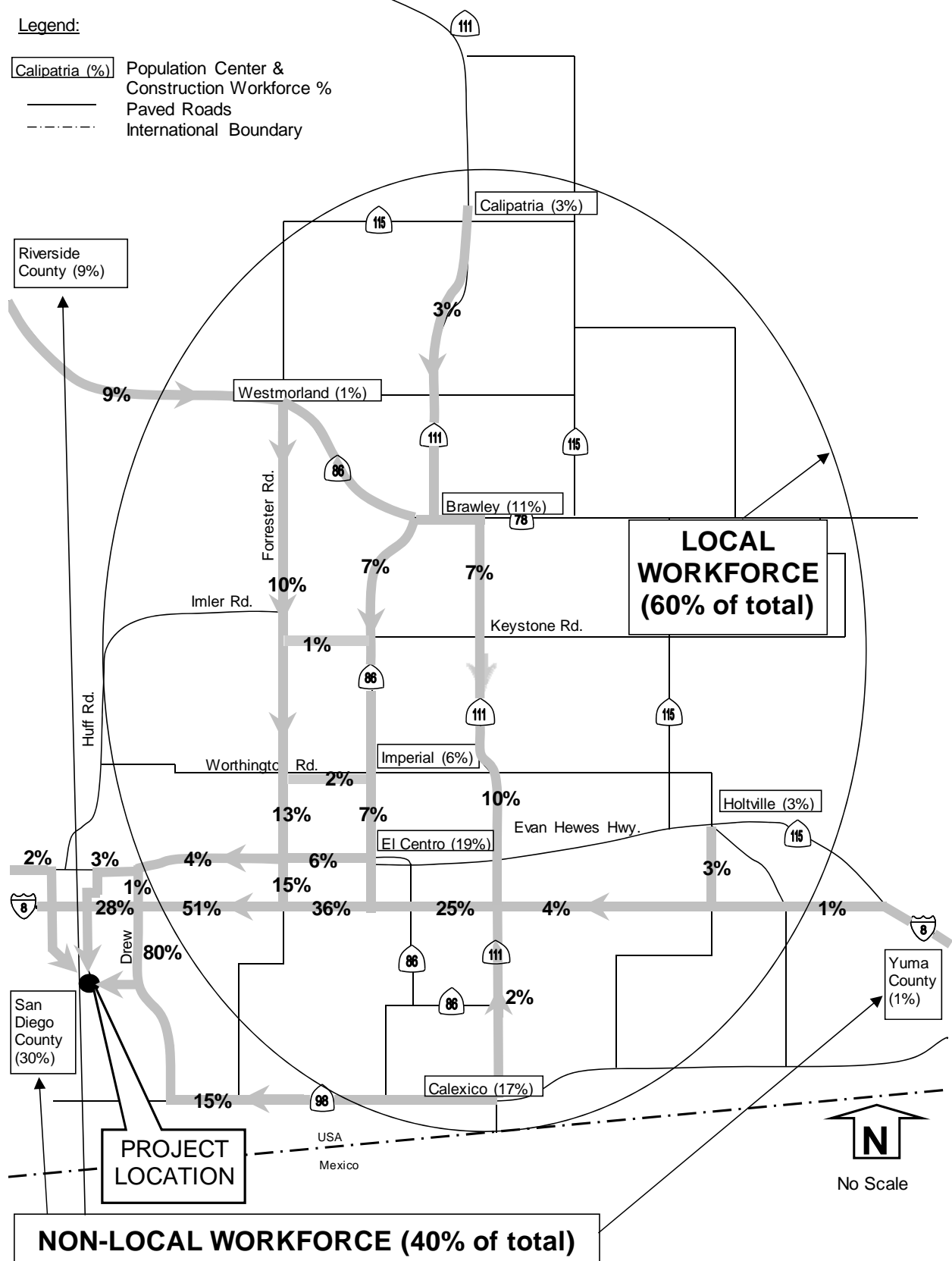
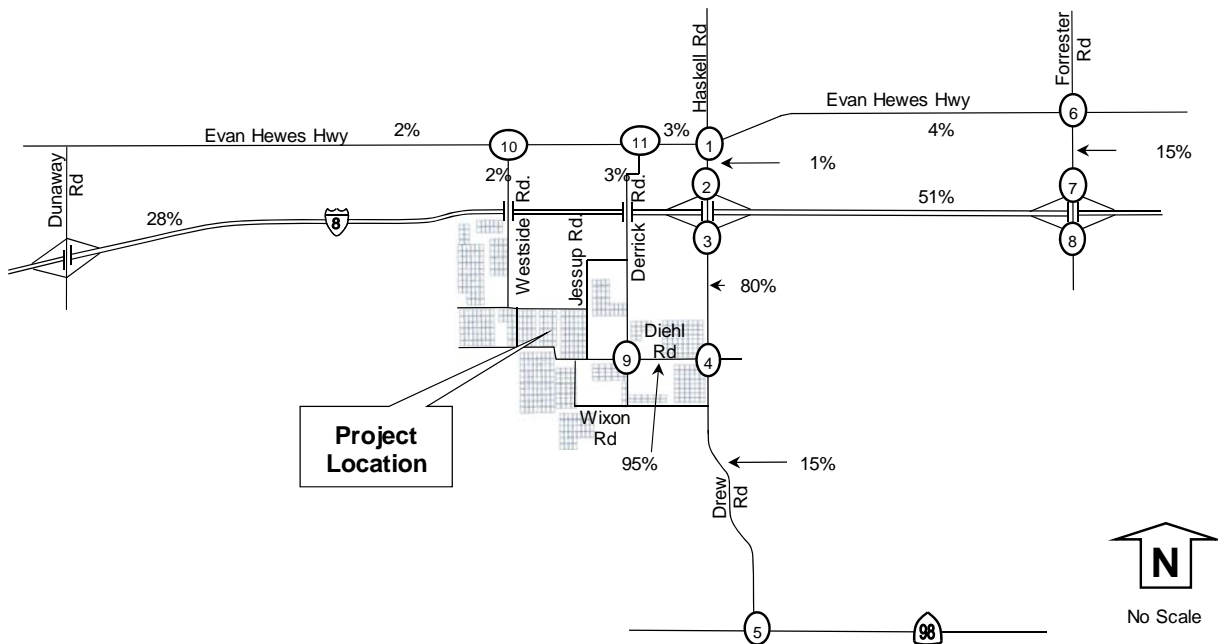
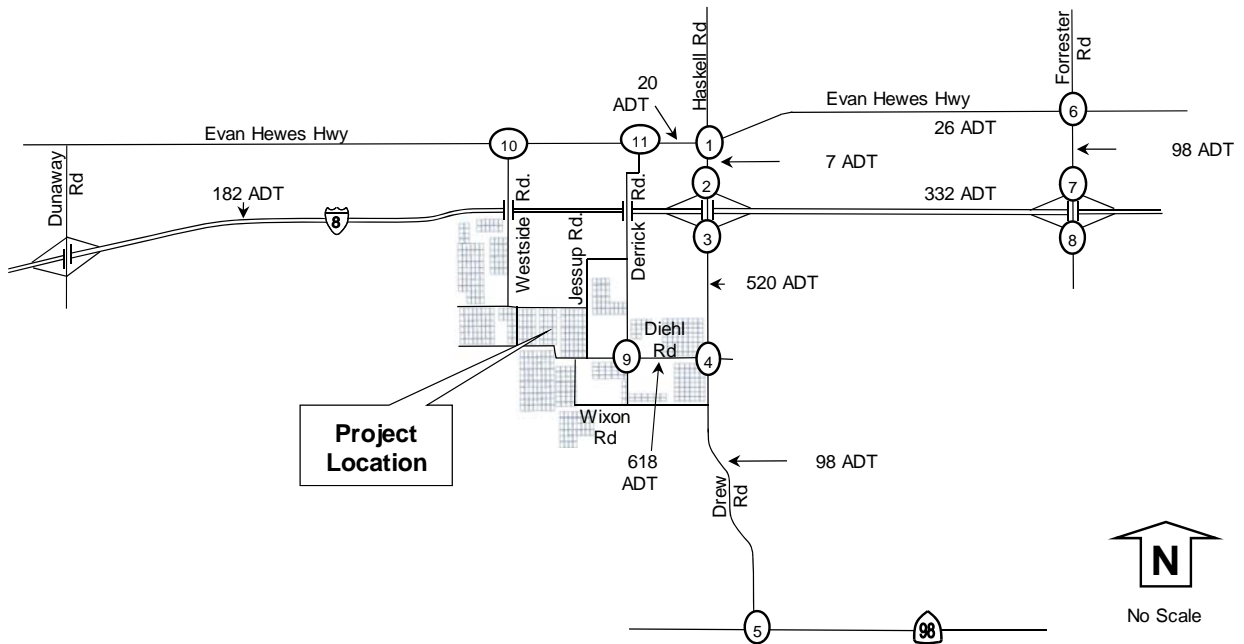


Figure 6: Local Construction Workforce Distribution



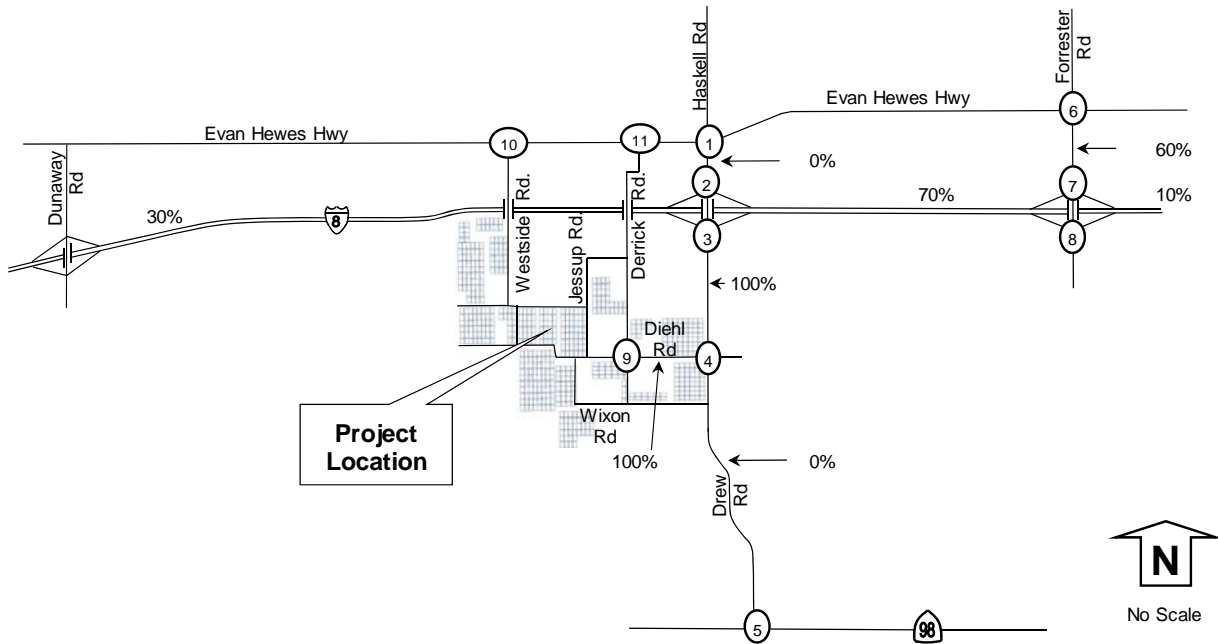
| | | |
|---|--|---|
| <p>Evan Hewes Hwy</p> <p>3% → 1 ← 3%</p> <p>Drew Rd</p> <p>↓ 1 ↑</p> <p>1% ← 1% →</p> | <p>I-8 WB Ramps</p> <p>1% ↓ 2 ↑</p> <p>Drew Rd</p> <p>28% → 1 ←</p> <p>51% ↓</p> | <p>I-8 EB Ramps</p> <p>52% ↓ 3 ↑</p> <p>Drew Rd</p> <p>28% → 29% ←</p> <p>51% ↓</p> |
| <p>Diehl Rd</p> <p>80% → 4 ←</p> <p>Drew Rd</p> <p>15% → 15% ←</p> <p>80% ↓</p> | <p>SR-98</p> <p>15% → 5 ←</p> <p>Drew Rd</p> <p>15% ↓</p> | <p>Evan Hewes Hwy</p> <p>1% → 6 ←</p> <p>For-res-ter Rd</p> <p>12% → 12% ←</p> <p>3% ↓ 3% ↑</p> |
| <p>I-8 WB Ramps</p> <p>15% ↓ 7 ↑</p> <p>For-res-ter Rd</p> <p>15% →</p> | <p>I-8 EB Ramps</p> <p>15% ↓ 8 ↑</p> <p>For-res-ter Rd</p> <p>15% →</p> | <p>Diehl Rd</p> <p>5% → 9 ←</p> <p>Derrick Rd</p> <p>5% → 5% ←</p> <p>50% ↓ 50% ↑</p> <p>5% → 5% ←</p> |
| <p>Evan Hewes Hwy</p> <p>2% → 10 ←</p> <p>West-side Rd</p> <p>2% →</p> | <p>Evan Hewes Hwy</p> <p>3% → 11 ←</p> <p>Derrick Rd</p> <p>3% →</p> | <p>LEGEND</p> <p>25% Project Distribution</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> |

Figure 7: Construction Workforce Traffic



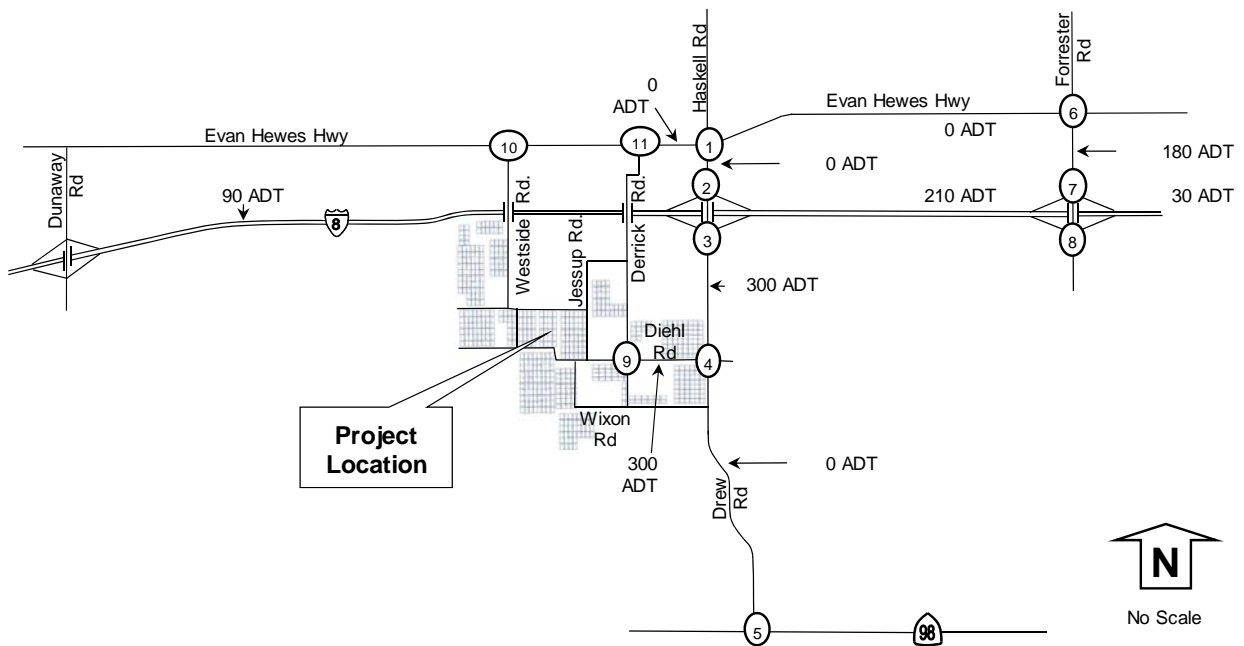
| | | |
|--|---|--|
| <p>Evan Hewes Hwy</p> <p>0 (10)</p> <p>Drew Rd</p> <p>1</p> <p>10 (3)</p> | <p>3 (0)</p> <p>I-8 WB Ramps</p> <p>2</p> <p>166 (0)</p> | <p>I-8 EB Ramps</p> <p>169 (0)</p> <p>3</p> <p>91 (0)</p> <p>Drew Rd</p> <p>0 (94)</p> <p>0 (166)</p> |
| <p>Diehl Rd</p> <p>0 (260)</p> <p>0 (49)</p> <p>Drew Rd</p> <p>49</p> <p>4</p> | <p>SR-98</p> <p>0 (49)</p> <p>49 (0)</p> <p>5</p> | <p>Evan Hewes Hwy</p> <p>3 (39)</p> <p>0 (0)</p> <p>0 (10)</p> <p>0 (39)</p> <p>0 (10)</p> <p>6</p> <p>10 (0)</p> <p>10 (0)</p> |
| <p>Forrester Rd</p> <p>0 (49)</p> <p>7</p> <p>I-8 WB Ramps</p> | <p>I-8 EB Ramps</p> <p>0 (49)</p> <p>8</p> <p>Forrester Rd</p> | <p>Diehl Rd</p> <p>20 (5)</p> <p>20 (5)</p> <p>20 (5)</p> <p>5 (20)</p> <p>5 (180)</p> <p>5 (20)</p> <p>5 (20)</p> <p>5 (20)</p> <p>9</p> <p>20 (5)</p> <p>180 (5)</p> <p>20 (5)</p> |
| <p>Evan Hewes Hwy</p> <p>7 (0)</p> <p>Westside Rd</p> <p>7</p> <p>10</p> | <p>Evan Hewes Hwy</p> <p>Derrick Rd</p> <p>10 (0)</p> <p>11</p> <p>0 (10)</p> | <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z,ZZZ ADT volumes shown along segments</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> <p>() Represents 0 PM volume</p> |

Figure 8: Truck Delivery Distribution



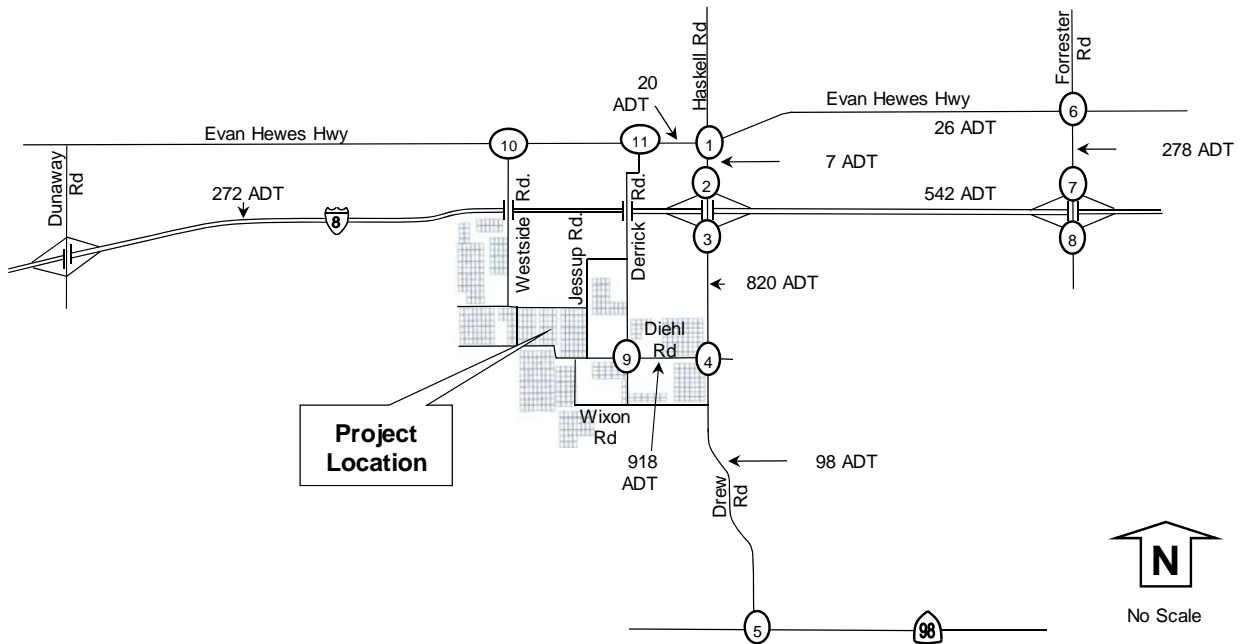
| | | |
|--|---|---|
| <p>Evan Hewes Hwy</p> <p>Drew Rd</p> <p>1</p> | <p>I-8 WB Ramps</p> <p>Drew Rd</p> <p>2</p> <p>30%</p> <p>70%</p> | <p>I-8 EB Ramps</p> <p>Drew Rd</p> <p>3</p> <p>30%</p> <p>70%</p> |
| <p>Diehl Rd</p> <p>Drew Rd</p> <p>4</p> <p>100%</p> <p>100%</p> | <p>SR-98</p> <p>Drew Rd</p> <p>5</p> | <p>Evan Hewes Hwy</p> <p>For-res-ter Rd</p> <p>6</p> <p>60%</p> <p>60%</p> |
| <p>For-res-ter Rd</p> <p>I-8 WB Ramps</p> <p>7</p> <p>60%</p> <p>60%</p> | <p>I-8 EB Ramps</p> <p>For-res-ter Rd</p> <p>8</p> <p>60%</p> | <p>Diehl Rd</p> <p>Der-rick Rd</p> <p>9</p> <p>50%</p> <p>50%</p> |
| <p>Evan Hewes Hwy</p> <p>West-side Rd</p> <p>10</p> | <p>Evan Hewes Hwy</p> <p>Der-rick Rd</p> <p>11</p> | <p>LEGEND</p> <p>25% Project Distribution</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> |

Figure 9: Truck Delivery Traffic



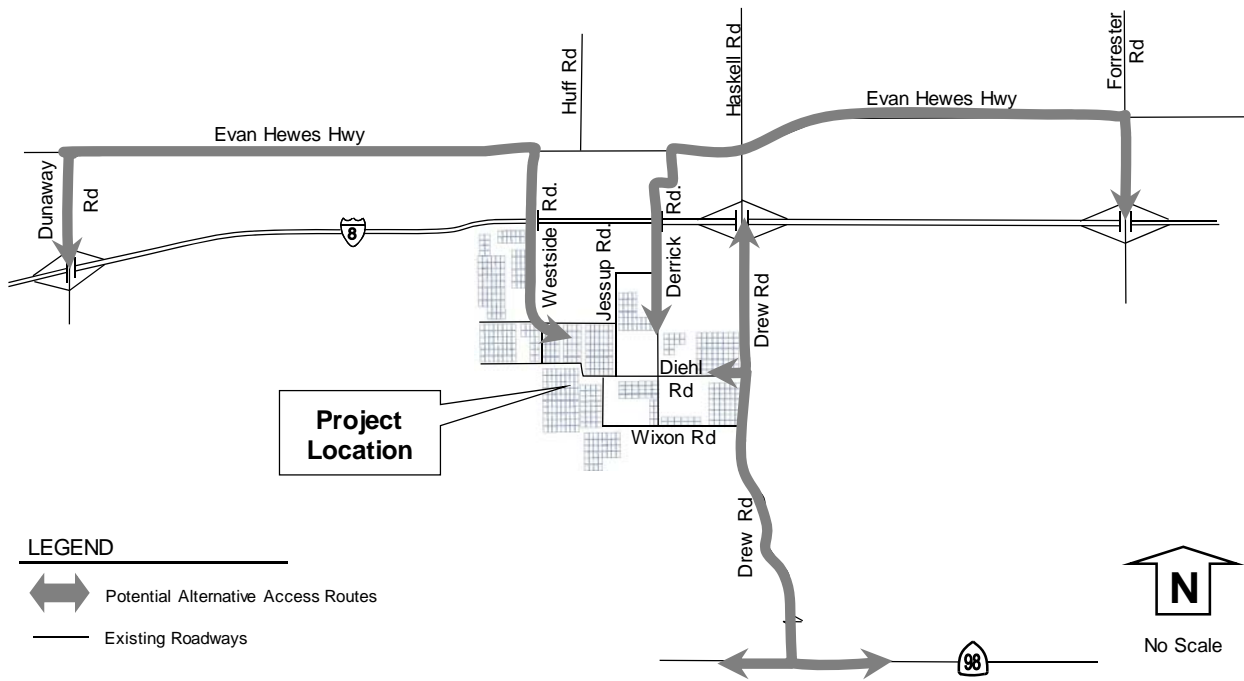
| | | |
|---|--|--|
| <p>Evan Hewes Hwy</p> <p>Drew Rd</p> <p>1</p> | <p>I-8 WB Ramps</p> <p>Drew Rd</p> <p>2</p> <p>8 (8)</p> | <p>I-8 EB Ramps</p> <p>Drew Rd</p> <p>3</p> <p>4 (4)</p> <p>8 (8)</p> |
| <p>Diehl Rd</p> <p>Drew Rd</p> <p>4</p> <p>12 (12)</p> | <p>SR-98</p> <p>Drew Rd</p> <p>5</p> | <p>Evan Hewes Hwy</p> <p>Forres-ter Rd</p> <p>6</p> <p>7 (7)</p> <p>7 (7)</p> |
| <p>Forres-ter Rd</p> <p>I-8 WB Ramps</p> <p>7 (7)</p> <p>7 (7)</p> <p>7</p> | <p>I-8 EB Ramps</p> <p>Forres-ter Rd</p> <p>8</p> <p>7 (7)</p> | <p>Diehl Rd</p> <p>Derrick Rd</p> <p>9</p> <p>6 (6)</p> <p>6 (6)</p> |
| <p>Evan Hewes Hwy</p> <p>West-side Rd</p> <p>10</p> | <p>Evan Hewes Hwy</p> <p>Derrick Rd</p> <p>11</p> | <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z,ZZZ ADT volumes shown along segments</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> <p>() Represents 0 PM volume</p> |

Figure 10: Total Project Traffic



| | | |
|--|--|--|
| <p>Evan Hewes Hwy</p> <p>0 (10)</p> <p>Drew Rd</p> <p>10 (3)</p> <p>0 (3)</p> <p>1</p> | <p>3 (0)</p> <p>I-8 WB Ramps</p> <p>174 (8)</p> <p>Drew Rd</p> <p>4 (95)</p> <p>0 (3)</p> <p>2</p> | <p>I-8 EB Ramps</p> <p>177 (8)</p> <p>95 (4)</p> <p>Drew Rd</p> <p>4 (98)</p> <p>8 (174)</p> <p>3</p> |
| <p>Diehl Rd</p> <p>12 (272)</p> <p>0 (49)</p> <p>Drew Rd</p> <p>49 (0)</p> <p>4</p> | <p>SR-98</p> <p>0 (49)</p> <p>49 (0)</p> <p>Drew Rd</p> <p>5</p> | <p>Evan Hewes Hwy</p> <p>3 (46)</p> <p>0 (3)</p> <p>0 (10)</p> <p>Forrester Rd</p> <p>7 (46)</p> <p>0 (10)</p> <p>6</p> |
| <p>56 (7)</p> <p>I-8 WB Ramps</p> <p>7 (56)</p> <p>Forrester Rd</p> <p>7 (56)</p> <p>7</p> | <p>I-8 EB Ramps</p> <p>7 (56)</p> <p>Forrester Rd</p> <p>7 (56)</p> <p>8</p> | <p>Diehl Rd</p> <p>20 (5)</p> <p>20 (5)</p> <p>20 (5)</p> <p>5 (20)</p> <p>11 (186)</p> <p>5 (20)</p> <p>Derrick Rd</p> <p>5 (20)</p> <p>5 (20)</p> <p>5 (20)</p> <p>9</p> |
| <p>Evan Hewes Hwy</p> <p>7 (0)</p> <p>West-side Rd</p> <p>7 (0)</p> <p>10</p> | <p>Evan Hewes Hwy</p> <p>Derrick Rd</p> <p>10 (0)</p> <p>0 (10)</p> <p>11</p> | <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z,ZZZ ADT volumes shown along segments</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> <p>() Represents 0 PM volume</p> |

Figure 11: Possible Alternative Access Routes



5.0 Existing (Year 2011) + Project Conditions

This section documents the addition of total project traffic onto existing conditions. Existing plus total project volumes are shown in **Figure 12**. Intersection, segment, and freeway LOS are shown in **Tables 11, 12 and 13**. Intersection LOS calculations are included in **Appendix K**.

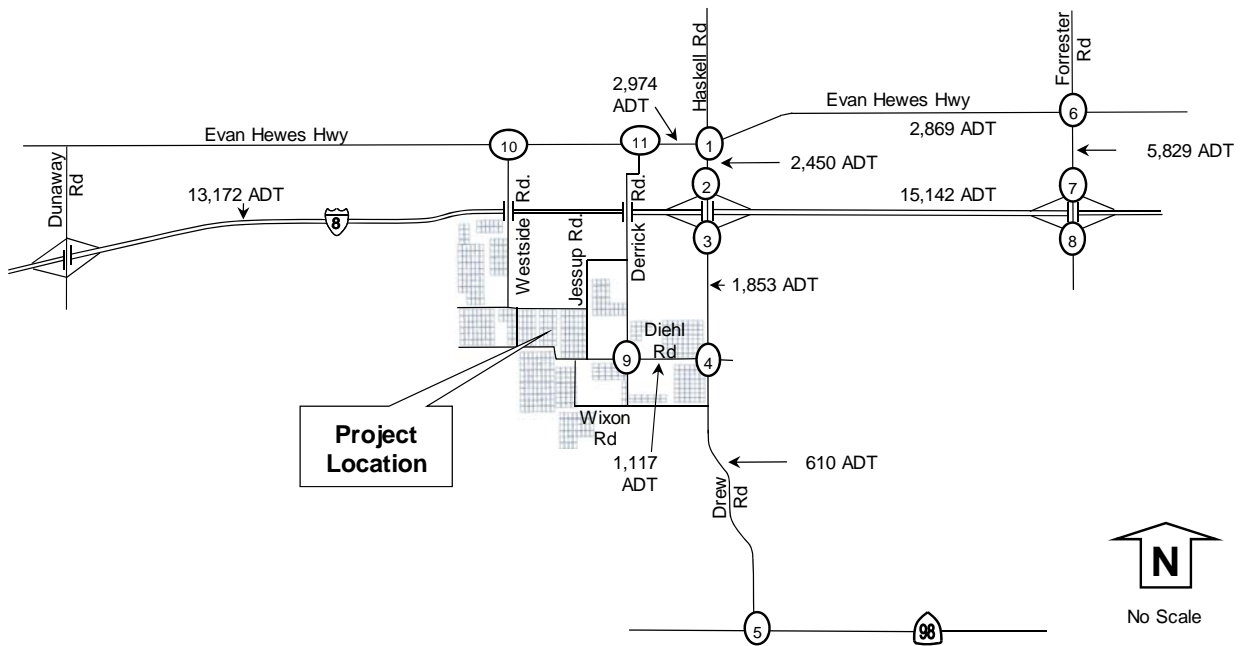
TABLE 11: EXISTING (YEAR 2011) + PROJECT INTERSECTION LOS

| Intersection & (Control) ¹ | Movement | Peak Hour | Existing | | Existing + Project | | | Sig ⁵ |
|---|----------|-----------|--------------------|------------------|--------------------|------------------|--------------------|------------------|
| | | | Delay ² | LOS ³ | Delay ² | LOS ³ | Delta ⁴ | |
| 1) Drew Road at Evan Hewes Hwy (U) | All | AM | 7.5 | A | 7.6 | A | 0.1 | No |
| | All | PM | 7.5 | A | 7.5 | A | 0.0 | No |
| 2) Drew Road at I-8 WB Ramp (U) | WB LT | AM | 8.7 | A | 10.0 | B | 1.3 | No |
| | WB LT | PM | 8.7 | A | 9.5 | A | 0.8 | No |
| 3) Drew Road at I-8 EB Ramp (U) | EB LT | AM | 10.0 | B | 10.0 | B | 0.0 | No |
| | EB LT | PM | 9.3 | A | 9.9 | A | 0.6 | No |
| 4) Drew Road at Diehl Road (U) | EB LTR | AM | 8.6 | A | 10.5 | B | 1.9 | No |
| | EB LTR | PM | 8.6 | A | 10.8 | B | 2.2 | No |
| 5) Drew Road at SR-98 (U) | SB LR | AM | 8.6 | A | 8.7 | A | 0.1 | No |
| | SB LR | PM | 9.2 | A | 9.7 | A | 0.5 | No |
| 6) Forrester Road at Evan Hewes Hwy (S) | All | AM | 16.8 | B | 17.5 | B | 0.7 | No |
| | All | PM | 22.9 | C | 23.0 | C | 0.1 | No |
| 7) Forrester Road at I-8 WB Ramp (U) | WB LT | AM | 9.8 | A | 9.8 | A | 0.0 | No |
| | WB LT | PM | 9.8 | A | 10.2 | B | 0.4 | No |
| 8) Forrester Road at I-8 EB Ramp (U) | EB LT | AM | 10.8 | B | 10.9 | B | 0.1 | No |
| | EB LT | PM | 16.9 | C | 20.0 | C | 3.1 | No |
| 9) Derrick Road at Diehl Road (U) | SB LTR | AM | 8.7 | A | 11.0 | B | 2.3 | No |
| | SB LTR | PM | 8.7 | A | 10.9 | B | 2.2 | No |
| 10) Westside Road at Evan Hewes Hwy (U) | NB LR | AM | 9.1 | A | 9.1 | A | 0.0 | No |
| | NB LR | PM | 9.2 | A | 9.5 | A | 0.3 | No |
| 11) Derrick Road at Evan Hewes Hwy (U) | NB LR | AM | 8.8 | A | 8.8 | A | 0.0 | No |
| | NB LR | PM | 9.3 | A | 9.4 | A | 0.1 | No |

Notes: 1) Intersection Control - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

3) LOS: Level of Service. 4) Delta is the increase in delay from project. 5) Significant Impact? (yes or no).

Figure 12: Existing (Year 2011) + Project Volumes



| | | | | | |
|---|--|--|---|--|---|
| <p>Evan Hewes Hwy</p> <p>10 (12) →</p> <p>5 (8) ↑</p> <p>59 (124) →</p> <p>36 (92) ↓</p> <p>Drew Rd</p> <p>69 (42) ↑</p> <p>11 (19) ↓</p> <p>17 (13) ↓</p> | <p>18 (10) ↓</p> <p>①</p> <p>106 (33) ←</p> <p>24 (13) ←</p> | <p>6 (14) ↓</p> <p>3 (19) ↓</p> | <p>16 (6) ↓</p> <p>48 (84) ↓</p> <p>I-8 WB Ramps</p> <p>56 (37) ↑</p> <p>0 (0) ←</p> <p>186 (22) ↓</p> | <p>I-8 EB Ramps</p> <p>6 (7) ↑</p> <p>0 (0) →</p> <p>95 (9) ↓</p> <p>Drew Rd</p> <p>31 (104) ↑</p> <p>35 (192) ↓</p> | <p>197 (41) ↓</p> <p>37 (59) ↓</p> <p>③</p> |
| <p>Diehl Rd</p> <p>278 (13) ↑</p> <p>11 (24) ↓</p> <p>0 (0) ↓</p> <p>1 (0) ↓</p> <p>0 (0) ↓</p> <p>6 (51) ↓</p> <p>Drew Rd</p> <p>52 (1) ↓</p> <p>26 (8) ↓</p> <p>0 (0) ↓</p> | <p>④</p> <p>1 (0) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> | <p>SR-98</p> <p>2 (1) ↓</p> <p>0 (53) ↓</p> <p>1 (2) ↓</p> <p>27 (91) ↓</p> <p>Drew Rd</p> <p>11 (95) ↓</p> <p>23 (15) ↓</p> | <p>I-8 WB Ramps</p> <p>52 (3) ↓</p> <p>51 (53) ↓</p> | <p>Evan Hewes Hwy</p> <p>28 (15) ↑</p> <p>150 (135) ↓</p> <p>15 (20) ↓</p> <p>13 (41) ↑</p> <p>52 (185) →</p> <p>8 (15) ↓</p> <p>Forrester Rd</p> <p>13 (8) ↑</p> <p>102 (156) ↑</p> <p>15 (28) ↓</p> | <p>⑥</p> <p>8 (13) ↓</p> <p>116 (96) ↓</p> <p>22 (24) ↓</p> |
| <p>Forrester Rd</p> <p>112 (61) ↓</p> <p>110 (257) ↓</p> <p>I-8 WB Ramps</p> <p>200 (160) ↑</p> <p>0 (0) ↓</p> <p>15 (8) ↓</p> <p>Forrester Rd</p> <p>4 (0) ↓</p> <p>81 (157) ↓</p> | <p>⑦</p> <p>47 (132) ↑</p> <p>0 (1) ↓</p> <p>3 (3) ↓</p> <p>Forrester Rd</p> <p>35 (26) ↑</p> <p>5 (9) ↓</p> | <p>I-8 EB Ramps</p> <p>33 (31) ↓</p> <p>91 (232) ↓</p> <p>⑧</p> | <p>Diehl Rd</p> <p>20 (5) ↓</p> <p>21 (6) ↓</p> <p>23 (7) ↓</p> <p>5 (20) ↑</p> <p>18 (189) →</p> <p>5 (21) ↓</p> <p>Derrick Rd</p> <p>6 (21) ↓</p> <p>5 (20) ↓</p> <p>5 (20) ↓</p> | <p>⑨</p> <p>21 (5) ↓</p> <p>194 (12) ↓</p> <p>20 (5) ↓</p> | |
| <p>Evan Hewes Hwy</p> <p>50 (164) →</p> <p>7 (0) ↓</p> <p>Westside Rd</p> <p>1 (7) ↓</p> <p>3 (4) ↓</p> | <p>⑩</p> <p>268 (17) ←</p> <p>3 (0) ←</p> | <p>Evan Hewes Hwy</p> <p>52 (190) →</p> <p>1 (0) ↓</p> <p>Derrick Rd</p> <p>1 (0) ↓</p> <p>5 (14) ↓</p> | <p>⑪</p> <p>142 (44) ←</p> <p>14 (4) ↓</p> | <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z.ZZZ ADT volumes shown along segments</p> <p>① Intersection Reference Number to LOS Tables</p> <p>— Existing Roads</p> <p>() Represents 0 PM volume</p> | |

TABLE 12: EXISTING (YEAR 2011) + PROJECT SEGMENT LOS

| Segment | Classification (as built) | Existing | | | | Project Daily Volume | Existing + Project | | | | | | |
|-----------------------------|------------------------------|-----------------|-------------------|-------|-----|----------------------------|--------------------|-------------------|-------|-----|------------------|-------------------|--|
| | | Daily Volume | LOS C Capacity | V/C | LOS | | Daily Volume | LOS C Capacity | V/C | LOS | Change in V/C | Direct Impact? | |
| Diehl Road | | | | | | | | | | | | | |
| Derrick Road to Drew Road | Minor Collector (2U) | 199 | 7,100 | 0.028 | A | 918 | 1,117 | 7,100 | 0.157 | A | 0.129 | No | |
| Drew Road | | | | | | | | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 2,443 | 7,100 | 0.344 | B | 7 | 2,450 | 7,100 | 0.345 | B | 0.001 | No | |
| I-8 to Diehl Road | Prime Arterial (2U) | 1,033 | 7,100 | 0.145 | A | 820 | 1,853 | 7,100 | 0.261 | A | 0.115 | No | |
| Diehl Road to SR-98 | Prime Arterial (2U) | 512 | 7,100 | 0.072 | A | 98 | 610 | 7,100 | 0.086 | A | 0.014 | No | |
| Evan Hewes Highway | | | | | | | | | | | | | |
| Derrick Road to Drew Road | Prime Arterial (2U) | 2,954 | 7,100 | 0.416 | B | 20 | 2,974 | 7,100 | 0.419 | B | 0.003 | No | |
| Drew Road to Forrester Road | Prime Arterial (2U) | 2,843 | 7,100 | 0.400 | B | 26 | 2,869 | 7,100 | 0.404 | B | 0.004 | No | |
| Forrester Road | | | | | | | | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 5,551 | 7,100 | 0.782 | C | 278 | 5,829 | 7,100 | 0.821 | C | 0.039 | No | |

Notes: Classification based on 1/29/08 Circulation and Scenic Highways Element. 2U= 2 lane undivided roadway. Daily volume is a 24 hour volume. LOS: Level of Service. LOS based on actual number of lanes currently constructed. V/C: Volume to Capacity ratio. Direct Impact? = identifies if a project impact is calculated (yes or no).

TABLE 13: EXISTING (YEAR 2011) + PROJECT FREEWAY LOS

| Freeway Segment | I-8 Dunaway Rd to Drew Rd | | | | I-8 Drew Rd to Forrester Rd | | | |
|----------------------------------|----------------------------------|--------|--------|--------|----------------------------------|--------|--------|--------|
| | Year 2011 (Forecasted from 2010) | | | | Year 2011 (Forecasted from 2010) | | | |
| ADT | 12,900 | | | | 14,600 | | | |
| Peak Hour | A M | | P M | | A M | | P M | |
| Direction | EB | WB | EB | WB | EB | WB | EB | WB |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Capacity (1) | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| K Factor (2) | 0.1076 | 0.0963 | 0.0917 | 0.1517 | 0.1076 | 0.0963 | 0.0917 | 0.1517 |
| D Factor (3) | 0.2616 | 0.7384 | 0.4419 | 0.5581 | 0.2616 | 0.7384 | 0.4419 | 0.5581 |
| Truck Factor (4) | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 |
| Peak Hour Volume | 434 | 1,095 | 624 | 1,304 | 491 | 1,239 | 706 | 1,476 |
| Volume to Capacity | 0.092 | 0.233 | 0.133 | 0.277 | 0.104 | 0.264 | 0.150 | 0.314 |
| LOS | A | A | A | A | A | A | A | B |
| Project Pk Hr Vol | 95 | 4 | 4 | 95 | 8 | 174 | 174 | 8 |
| Existing (2011) + Project | | | | | | | | |
| Peak Hour Volume | 529 | 1,099 | 628 | 1,399 | 499 | 1,413 | 880 | 1,484 |
| Volume to Capacity | 0.112 | 0.234 | 0.134 | 0.298 | 0.106 | 0.301 | 0.187 | 0.316 |
| LOS | A | A | A | A | A | B | A | B |
| Increase in V/C | 0.020 | 0.001 | 0.001 | 0.020 | 0.002 | 0.037 | 0.037 | 0.002 |
| Impact? | None | None | None | None | None | None | None | None |

Notes: (1) Capacity of 2,350 passenger cars per hour per lane (pcphpl) from CALTRANS' Guide for the Preparation of Traffic Impact Studies, December 2002. (2) Latest K factor (percentage of the AADT in both directions during the peak hour) from Caltrans (based on 2007 report). (3) Latest D factor (percentage of traffic in the peak direction during the peak hour) from Caltrans (based on 2007 report), which when multiplied by K and ADT will provide peak hour volume. (4) Latest truck factor from Caltrans (based on 2007 report).

Under existing year 2011 + project conditions, the study intersections and roadways were calculated to operate at LOS C or better. No direct project impacts were calculated with the addition of project traffic on top of existing traffic.

6.0 Year 2013 Conditions

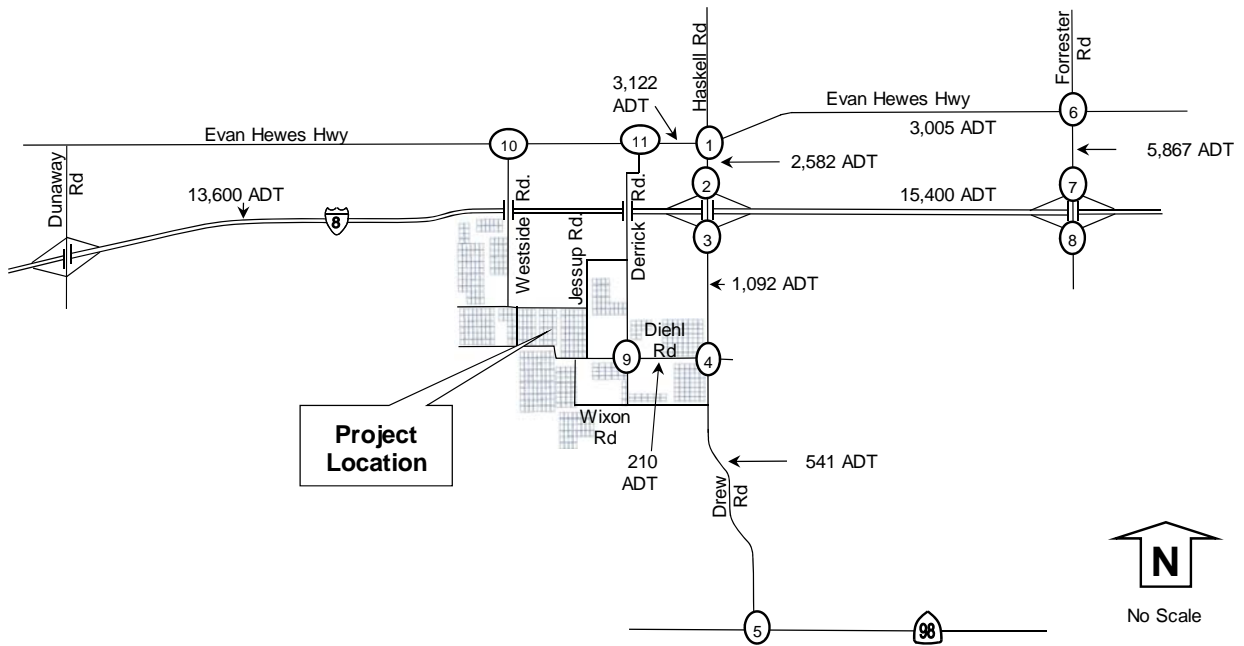
This section documents year 2013 conditions when the project is anticipated to be at the peak month of construction activities. The year 2013 background volumes are based on increasing the existing year 2011 volumes by an annual growth rate. Determination of the annual growth rate was based on guidelines defined in the County of Imperial Department of Public Works *Traffic Study and Report Policy* dated March 12, 2007, revised June 29, 2007 and approved by the Board of Supervisors of the County of Imperial on August 7, 2007. This document indicates that traffic projections should be based on demonstrated growth as detailed in the general plan. Four growth rate options were reviewed:

- 1) The Land Use Element of the general plan indicates that the Population Research Unit of the California Department of Finance (DOF) estimates the annual change in population. Using the DOF revised July 1, 2006 population estimate of 168,979 and the projected population of Imperial County in 2030 of 283,693, an annual growth rate of 2.2 percent is calculated.
- 2) The Housing Element section of the general plan has a 1980 population of 92,500. The 2000 Southern California Association of Governments [SCAG] population estimate of 148,980 for the year 2000. Based on this information, an annual growth rate of 2.4 percent is calculated.
- 3) The Southern California Association of Governments Community Development Division's 2004 *Regional Transportation Plan Socio-Economic Forecast Report*, dated June 2004, states that the population of Imperial County is projected to grow at an annual rate of 2.8 percent.
- 4) The U.S. Census Bureau population data from year 2000 to year 2010 for the local cities/residential communities within Imperial County as outlined previously in Table 9. The U.S. Census Bureau reported a population growth of 27,162 people over a 10 year period (population of 109,588 per the 2000 census and population of 136,750 per the 2010 census). Over this 10 year period, the annual growth rate was about 2.0%.

For the purpose of this traffic study, the more conservative growth rate of **2.8 percent** was selected for the annual population growth rate. The growth factor support data are included in **Appendix L**. Year 2013 volumes data was factored up from year 2011 data through the application of a 2.8% annual growth rate.

The construction peak background year 2013 volumes were calculated by increasing year 2011 volumes by 2.8% annually as shown in **Figure 13**. Intersection, segment, and freeway LOS are shown in **Tables 14, 15 and 16**. Intersection LOS calculations are included in **Appendix M**.

Figure 13: Year 2013 Volumes



| | | | |
|---|---|---|---|
| <p>Evan Hewes Hwy</p> <p>11 (13) ↓</p> <p>19 (11) ↓</p> <p>6 (15) ↓</p> <p>5 (8) →</p> <p>62 (120) →</p> <p>38 (97) ↓</p> <p>Drew Rd</p> <p>73 (44) ↓</p> <p>12 (20) ↓</p> <p>18 (11) ↓</p> <p>3 (20)</p> <p>101 (35)</p> <p>22 (14)</p> <p>17 (6) ↓</p> <p>48 (89) ↓</p> <p>I-8 WB Ramps</p> <p>59 (39) ↑</p> <p>0 (0) ←</p> <p>13 (15) ↓</p> <p>6 (7) ↑</p> <p>0 (0) →</p> <p>0 (5) ↓</p> <p>I-8 EB Ramps</p> <p>21 (35) ↓</p> <p>39 (62) ↓</p> <p>Drew Rd</p> <p>29 (6) ↓</p> <p>29 (19) ↓</p> | <p>Diehl Rd</p> <p>6 (1) ↓</p> <p>12 (25) ↓</p> <p>0 (0) ↓</p> <p>3 (2) ↑</p> <p>0 (0) ↓</p> <p>6 (2) ↓</p> <p>Drew Rd</p> <p>3 (1) ↓</p> <p>27 (8) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>1 (0)</p> <p>0 (0)</p> <p>0 (0)</p> <p>SR-98</p> <p>2 (1) ↓</p> <p>0 (4) ↓</p> <p>1 (2) ↓</p> <p>29 (96) →</p> <p>3 (3)</p> <p>54 (56)</p> <p>Evan Hewes Hwy</p> <p>26 (16) ↓</p> <p>110 (135) ↓</p> <p>16 (21) ↓</p> <p>14 (40) ↑</p> <p>55 (185) ↓</p> <p>8 (16) ↓</p> <p>Forrester Rd</p> <p>14 (8) ↓</p> <p>100 (116) ↓</p> <p>16 (19) ↓</p> | <p>I-8 WB Ramps</p> <p>211 (169) ↑</p> <p>0 (0) ←</p> <p>16 (8) ↓</p> <p>42 (80) ↑</p> <p>0 (1) →</p> <p>3 (3) ↓</p> <p>I-8 EB Ramps</p> <p>35 (33) ↓</p> <p>96 (245) ↓</p> <p>42 (80) ↑</p> <p>0 (1) →</p> <p>3 (3) ↓</p> <p>Forrester Rd</p> <p>37 (27) ↑</p> <p>5 (10) ↓</p> <p>Diehl Rd</p> <p>0 (0) ↓</p> <p>1 (1) ↓</p> <p>3 (2) ↓</p> <p>0 (0) ↓</p> <p>7 (3) ↓</p> <p>0 (1) ↓</p> <p>Derrick Rd</p> <p>1 (1) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>1 (0)</p> <p>8 (1)</p> <p>0 (0)</p> | <p>Evan Hewes Hwy</p> <p>53 (173) →</p> <p>0 (0) ↓</p> <p>1 (1) ↓</p> <p>3 (5) ↓</p> <p>284 (18)</p> <p>3 (0)</p> <p>Evan Hewes Hwy</p> <p>55 (201) →</p> <p>1 (0) ↓</p> <p>1 (1) ↓</p> <p>5 (4) ↓</p> <p>150 (47)</p> <p>4 (4)</p> |
| <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z,ZZZ ADT volumes shown along segments</p> <p># Intersection Reference Number to LOS Tables</p> <p>— Existing Roads</p> <p>() Represents 0 PM volume</p> | | | |

TABLE 14: YEAR 2013 INTERSECTION LOS

| Intersection & (Control) ¹ | Movement | Peak Hour | Year 2013 | |
|---|----------|-----------|--------------------|------------------|
| | | | Delay ² | LOS ³ |
| 1) Drew Road at Evan Hewes Hwy (U) | All | AM | 7.6 | A |
| | All | PM | 7.6 | A |
| 2) Drew Road at I-8 WB Ramp (U) | WB LT | AM | 8.7 | A |
| | WB LT | PM | 8.7 | A |
| 3) Drew Road at I-8 EB Ramp (U) | EB LT | AM | 10.1 | B |
| | EB LT | PM | 9.3 | A |
| 4) Drew Road at Diehl Road (U) | EB LTR | AM | 8.6 | A |
| | EB LTR | PM | 8.6 | A |
| 5) Drew Road at SR-98 (U) | SB LR | AM | 8.6 | A |
| | SB LR | PM | 9.3 | A |
| 6) Forrester Road at Evan Hewes Hwy (S) | All | AM | 17.7 | B |
| | All | PM | 23.8 | C |
| 7) Forrester Road at I-8 WB Ramp (U) | WB LT | AM | 9.9 | A |
| | WB LT | PM | 9.9 | A |
| 8) Forrester Road at I-8 EB Ramp (U) | EB LT | AM | 11.0 | B |
| | EB LT | PM | 18.0 | C |
| 9) Derrick Road at Diehl Road (U) | SB LTR | AM | 8.7 | A |
| | SB LTR | PM | 8.7 | A |
| 10) Westside Road at Evan Hewes Hwy (U) | NB LR | AM | 9.1 | A |
| | NB LR | PM | 9.2 | A |
| 11) Derrick Road at Evan Hewes Hwy (U) | NB LR | AM | 8.8 | A |
| | NB LR | PM | 9.4 | A |

Notes: 1) Intersection Control - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

3) LOS: Level of Service

TABLE 15: YEAR 2013 SEGMENT LOS

| Segment | Classification (as built) | Year 2013 | | | | |
|-----------------------------|---------------------------|--------------|------------|----------------|------|-----|
| | | Daily Volume | # of lanes | LOS C Capacity | V/C | LOS |
| Diehl Road | | | | | | |
| Derrick Road to Drew Road | Minor Collector (2U) | 210 | 2 | 7,100 | 0.03 | A |
| Drew Road | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 2,582 | 2 | 7,100 | 0.36 | B |
| I-8 to Diehl Road | Prime Arterial (2U) | 1,092 | 2 | 7,100 | 0.15 | A |
| Diehl Road to SR-98 | Prime Arterial (2U) | 541 | 2 | 7,100 | 0.08 | A |
| Evan Hewes Highway | | | | | | |
| Derrick Road to Drew Road | Prime Arterial (2U) | 3,122 | 2 | 7,100 | 0.44 | B |
| Drew Road to Forrester Road | Prime Arterial (2U) | 3,005 | 2 | 7,100 | 0.42 | B |
| Forrester Road | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 5,867 | 2 | 7,100 | 0.83 | C |

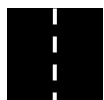
Notes: Classification based on 1/29/08 Circulation and Scenic Highways Element. 2U= 2 lane undivided roadway. Daily volume is a 24 hour volume. LOS: Level of Service. LOS based on actual number of lanes currently constructed. V/C: Volume to Capacity ratio.

TABLE 16: YEAR 2013 FREEWAY LOS

| Freeway Segment | I-8 Dunaway Rd to Drew Rd | | | | I-8 Drew Rd to Forrester Rd | | | |
|----------------------------------|------------------------------|--------|--------|--------|--------------------------------|--------|--------|--------|
| | A M | | P M | | A M | | P M | |
| Year 2013 (Forecasted from 2010) | ADT 13,600 | | | | ADT 15,400 | | | |
| Peak Hour | A M | | P M | | A M | | P M | |
| Direction | EB | WB | EB | WB | EB | WB | EB | WB |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Capacity (1) | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| K Factor (2) | 0.1076 | 0.0963 | 0.0917 | 0.1517 | 0.1076 | 0.0963 | 0.0917 | 0.1517 |
| D Factor (3) | 0.2616 | 0.7384 | 0.4419 | 0.5581 | 0.2616 | 0.7384 | 0.4419 | 0.5581 |
| Truck Factor (4) | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 |
| Peak Hour Volume | 457 | 1,155 | 658 | 1,375 | 518 | 1,307 | 745 | 1,557 |
| Volume to Capacity | 0.097 | 0.246 | 0.140 | 0.292 | 0.110 | 0.278 | 0.159 | 0.331 |
| LOS | A | A | A | A | A | A | A | B |

Notes: (1) Capacity of 2,350 passenger cars per hour per lane (pcphpl) from CALTRANS' Guide for the Preparation of Traffic Impact Studies, December 2002. (2) Latest K factor (percentage of the AADT in both directions during the peak hour) from Caltrans (based on 2007 report). (3) Latest D factor (percentage of traffic in the peak direction during the peak hour) from Caltrans (based on 2007 report), which when multiplied by K and ADT will provide peak hour volume. (4) Latest truck factor from Caltrans (based on 2007 report).

Under year 2013 conditions, the study intersections and roadways were calculated to operate at LOS C or better.



7.0 Year 2013 + Project Conditions

This section documents the addition of construction traffic onto year 2013 conditions for the anticipated construction peak (month 7). Year 2013 plus project traffic volumes are shown in **Figure 14**. Intersection, segment, and freeway LOS are shown in **Tables 17, 18 and 19**. Intersection LOS calculations are included in **Appendix N**.

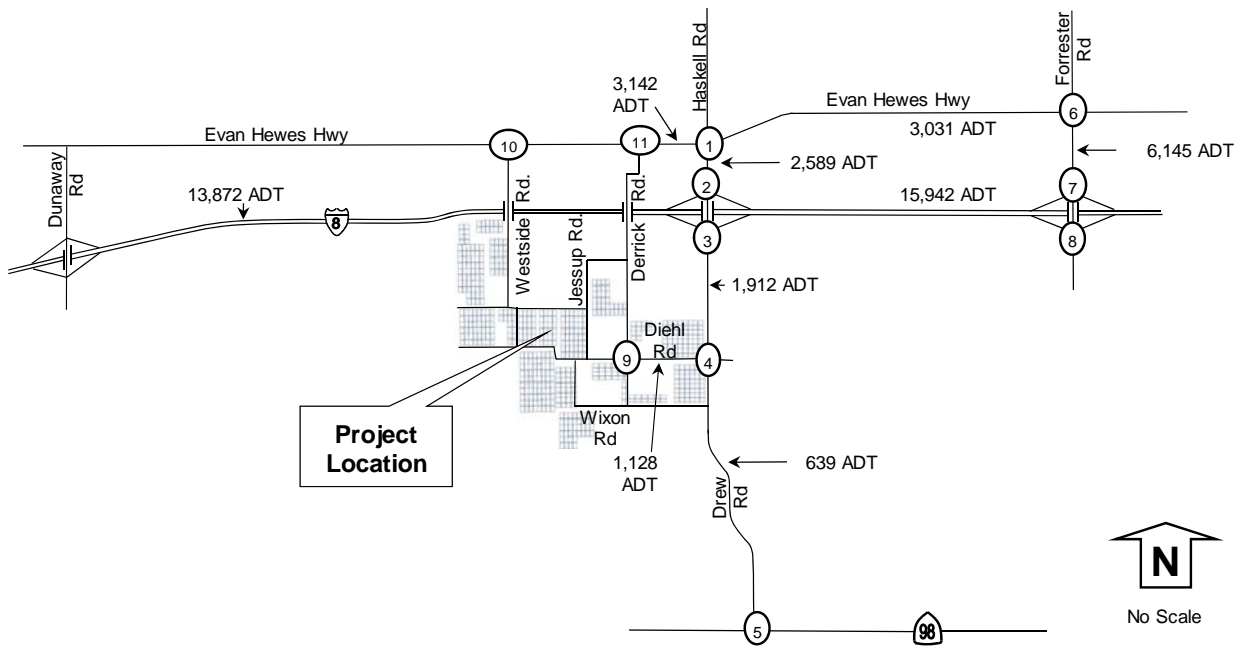
TABLE 17: YEAR 2013 WITHOUT AND WITH PROJECT INTERSECTION LOS

| Intersection & (Control) ¹ | Movement | Peak Hour | Year 2013 | | Year 2013 + Project | | | Sig ⁵ |
|---|----------|-----------|--------------------|------------------|---------------------|------------------|--------------------|------------------|
| | | | Delay ² | LOS ³ | Delay ² | LOS ³ | Delta ⁴ | |
| 1) Drew Road at Evan Hewes Hwy (U) | All | AM | 7.6 | A | 7.7 | A | 0.1 | No |
| | All | PM | 7.6 | A | 7.6 | A | 0.0 | No |
| 2) Drew Road at I-8 WB Ramp (U) | WB LT | AM | 8.7 | A | 10.1 | B | 1.4 | No |
| | WB LT | PM | 8.7 | A | 9.6 | A | 0.9 | No |
| 3) Drew Road at I-8 EB Ramp (U) | EB LT | AM | 10.1 | B | 10.1 | B | 0.0 | No |
| | EB LT | PM | 9.3 | A | 10.0 | A | 0.7 | No |
| 4) Drew Road at Diehl Road (U) | EB LTR | AM | 8.6 | A | 10.5 | B | 1.9 | No |
| | EB LTR | PM | 8.6 | A | 10.8 | B | 2.2 | No |
| 5) Drew Road at SR-98 (U) | SB LR | AM | 8.6 | A | 8.7 | A | 0.1 | No |
| | SB LR | PM | 9.3 | A | 9.7 | A | 0.4 | No |
| 6) Forrester Road at Evan Hewes Hwy (S) | All | AM | 17.7 | B | 17.9 | B | 0.2 | No |
| | All | PM | 23.8 | C | 23.9 | C | 0.1 | No |
| 7) Forrester Road at I-8 WB Ramp (U) | WB LT | AM | 9.9 | A | 9.9 | A | 0.0 | No |
| | WB LT | PM | 9.9 | A | 10.4 | B | 0.5 | No |
| 8) Forrester Road at I-8 EB Ramp (U) | EB LT | AM | 11.0 | B | 11.1 | B | 0.1 | No |
| | EB LT | PM | 18.0 | C | 21.8 | C | 3.8 | No |
| 9) Derrick Road at Diehl Road (U) | SB LTR | AM | 8.7 | A | 11.0 | B | 2.3 | No |
| | SB LTR | PM | 8.7 | A | 10.9 | B | 2.2 | No |
| 10) Westside Road at Evan Hewes Hwy (U) | NB LR | AM | 9.1 | A | 9.2 | A | 0.1 | No |
| | NB LR | PM | 9.2 | A | 9.5 | A | 0.3 | No |
| 11) Derrick Road at Evan Hewes Hwy (U) | NB LR | AM | 8.8 | A | 8.8 | A | 0.0 | No |
| | NB LR | PM | 9.4 | A | 9.5 | A | 0.1 | No |

Notes: 1) Intersection Control - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

3) LOS: Level of Service. 4) Delta is the increase in delay from project. 5) Significant Impact? (yes or no).

Figure 14: Year 2013 + Project Volumes



| | | | |
|---|---|---|---|
| <p>Evan Hewes Hwy</p> <p>11 (13) ↑</p> <p>19 (11) ↓</p> <p>6 (15) ↓</p> <p>5 (8) ↑</p> <p>62 (130) →</p> <p>38 (97) ↓</p> <p>Drew Rd</p> <p>73 (44) ↑</p> <p>12 (20) ↓</p> <p>18 (14) ↓</p> <p>116 (272) ↓</p> <p>115 (64) ↓</p> <p>Forrester Rd</p> <p>4 (0) ↑</p> <p>85 (163) ↑</p> <p>Evan Hewes Hwy</p> <p>53 (173) →</p> <p>7 (0) ↓</p> <p>Westside Rd</p> <p>1 (7) ↓</p> <p>3 (5) ↓</p> | <p>17 (6) ↓</p> <p>51 (89) ↓</p> <p>I-8 WB Ramps</p> <p>59 (39) ↑</p> <p>0 (0) ↓</p> <p>187 (23) ↓</p> <p>Drew Rd</p> <p>11 (95) ↑</p> <p>24 (16) ↓</p> <p>SR-98</p> <p>2 (1) ↓</p> <p>0 (53) ↓</p> <p>1 (2) ↑</p> <p>29 (96) →</p> <p>Drew Rd</p> <p>52 (3) ↑</p> <p>54 (56) ↓</p> <p>I-8 EB Ramps</p> <p>35 (33) ↓</p> <p>96 (245) ↓</p> <p>49 (136) ↑</p> <p>0 (1) ↓</p> <p>3 (3) ↓</p> <p>Forrester Rd</p> <p>37 (27) ↑</p> <p>5 (10) ↓</p> <p>Forrester Rd</p> <p>20 (5) ↓</p> <p>21 (6) ↓</p> <p>23 (7) ↓</p> <p>Diehl Rd</p> <p>5 (20) ↑</p> <p>18 (189) →</p> <p>5 (21) ↓</p> <p>Derrick Rd</p> <p>6 (21) ↓</p> <p>5 (20) ↓</p> <p>5 (20) ↓</p> | <p>I-8 WB Ramps</p> <p>198 (43) ↓</p> <p>39 (62) ↓</p> <p>I-8 EB Ramps</p> <p>6 (7) ↑</p> <p>0 (0) ↓</p> <p>95 (9) ↓</p> <p>Drew Rd</p> <p>33 (104) ↑</p> <p>37 (193) ↓</p> <p>Evan Hewes Hwy</p> <p>29 (16) ↓</p> <p>156 (142) ↓</p> <p>16 (21) ↓</p> <p>14 (43) ↑</p> <p>55 (195) →</p> <p>8 (16) ↓</p> <p>Forrester Rd</p> <p>14 (8) ↓</p> <p>107 (162) ↑</p> <p>16 (29) ↓</p> <p>Diehl Rd</p> <p>20 (5) ↓</p> <p>21 (6) ↓</p> <p>23 (7) ↓</p> <p>5 (20) ↑</p> <p>18 (189) →</p> <p>5 (21) ↓</p> <p>Derrick Rd</p> <p>6 (21) ↓</p> <p>5 (20) ↓</p> <p>5 (20) ↓</p> <p>Evan Hewes Hwy</p> <p>55 (201) →</p> <p>1 (0) ↓</p> <p>Derrick Rd</p> <p>1 (0) ↓</p> <p>5 (14) ↓</p> | <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z.ZZZ ADT volumes shown along segments</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> <p>() Represents 0 PM volume</p> |
|---|---|---|---|

TABLE 18: YEAR 2013 WITHOUT AND WITH PROJECT SEGMENT LOS

| Segment | Classification (as built) | Year 2013 | | | | Project Daily Volume | Year 2013 + Project | | | | | | |
|-----------------------------|------------------------------|-----------------|-------------------|-------|-----|----------------------------|---------------------|-------------------|-------|-----|------------------|-------------------|--|
| | | Daily Volume | LOS C Capacity | V/C | LOS | | Daily Volume | LOS C Capacity | V/C | LOS | Change in V/C | Direct Impact? | |
| Diehl Road | | | | | | | | | | | | | |
| Derrick Road to Drew Road | Minor Collector (2U) | 210 | 7,100 | 0.030 | A | 918 | 1,128 | 7,100 | 0.159 | A | 0.129 | No | |
| Drew Road | | | | | | | | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 2,582 | 7,100 | 0.364 | B | 7 | 2,589 | 7,100 | 0.365 | B | 0.001 | No | |
| I-8 to Diehl Road | Prime Arterial (2U) | 1,092 | 7,100 | 0.154 | A | 820 | 1,912 | 7,100 | 0.269 | B | 0.115 | No | |
| Diehl Road to SR-98 | Prime Arterial (2U) | 541 | 7,100 | 0.076 | A | 98 | 639 | 7,100 | 0.090 | A | 0.014 | No | |
| Evan Hewes Highway | | | | | | | | | | | | | |
| Derrick Road to Drew Road | Prime Arterial (2U) | 3,122 | 7,100 | 0.440 | B | 20 | 3,142 | 7,100 | 0.443 | B | 0.003 | No | |
| Drew Road to Forrester Road | Prime Arterial (2U) | 3,005 | 7,100 | 0.423 | B | 26 | 3,031 | 7,100 | 0.427 | B | 0.004 | No | |
| Forrester Road | | | | | | | | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 5,867 | 7,100 | 0.826 | C | 278 | 6,145 | 7,100 | 0.866 | C | 0.039 | No | |

Notes: Classification based on 1/29/08 Circulation and Scenic Highways Element. 2U= 2 lane undivided roadway. Daily volume is a 24 hour volume. LOS: Level of Service. LOS based on actual number of lanes currently constructed. V/C: Volume to Capacity ratio. Direct Impact? = identifies if a project impact is calculated (yes or no).

TABLE 19: YEAR 2013 WITHOUT AND WITH PROJECT FREEWAY LOS

| Freeway Segment | I-8 Dunaway Rd to Drew Rd | | | | I-8 Drew Rd to Forrester Rd | | | |
|--------------------|----------------------------------|--------|---------------------|--------|----------------------------------|--------|---------------------|--------|
| | Year 2013 (Forecasted from 2010) | | Year 2013 + Project | | Year 2013 (Forecasted from 2010) | | Year 2013 + Project | |
| ADT | 13,600 | | | | 15,400 | | | |
| Peak Hour | A M | | P M | | A M | | P M | |
| Direction | EB | WB | EB | WB | EB | WB | EB | WB |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Capacity (1) | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| K Factor (2) | 0.1076 | 0.0963 | 0.0917 | 0.1517 | 0.1076 | 0.0963 | 0.0917 | 0.1517 |
| D Factor (3) | 0.2616 | 0.7384 | 0.4419 | 0.5581 | 0.2616 | 0.7384 | 0.4419 | 0.5581 |
| Truck Factor (4) | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 |
| Peak Hour Volume | 457 | 1,155 | 658 | 1,375 | 518 | 1,307 | 745 | 1,557 |
| Volume to Capacity | 0.097 | 0.246 | 0.140 | 0.292 | 0.110 | 0.278 | 0.159 | 0.331 |
| LOS | A | A | A | A | A | A | A | B |
| Project Pk Hr Vol | 95 | 4 | 4 | 95 | 8 | 174 | 174 | 8 |
| Peak Hour Volume | 552 | 1,159 | 662 | 1,470 | 526 | 1,481 | 919 | 1,565 |
| Volume to Capacity | 0.117 | 0.247 | 0.141 | 0.313 | 0.112 | 0.315 | 0.196 | 0.333 |
| LOS | A | A | A | B | A | B | A | B |
| Increase in V/C | 0.020 | 0.001 | 0.001 | 0.020 | 0.002 | 0.037 | 0.037 | 0.002 |
| Impact? | None | None | None | None | None | None | None | None |

Notes: (1) Capacity of 2,350 passenger cars per hour per lane (pcphpl) from CALTRANS' Guide for the Preparation of Traffic Impact Studies, December 2002. (2) Latest K factor (percentage of the AADT in both directions during the peak hour) from Caltrans (based on 2007 report). (3) Latest D factor (percentage of traffic in the peak direction during the peak hour) from Caltrans (based on 2007 report), which when multiplied by K and ADT will provide peak hour volume. (4) Latest truck factor from Caltrans (based on 2007 report).

Under year 2013 + project conditions, the study intersections and roadways were calculated to operate at LOS C or better. No impacts were calculated.

8.0 Cumulative Projects (New Development)

Information on cumulative projects (new development) was obtained from the County of Imperial and confirmed with County of Imperial planning staff to be current as of November 2011. The cumulative list also includes projects within the jurisdiction of the Bureau of Land Management (BLM). Most of the cumulative projects have completed technical studies including traffic generation information; however, several do not because they are in their initial stages. For the projects that do not have detailed traffic generation information, an estimate was calculated based on traffic generation information for similar projects. Traffic generation calculations and copies of the individual cumulative project descriptions, locations, traffic generation, and assignments are included in **Appendix O**. The combined Imperial County and BLM cumulative projects (new development) are included below:

- 1) *“S” Line Upgrade 230-kV Transmission Line Project* – a power line project of approximately 18 miles extending from approximately 10 miles southwest of the City of El Centro near Libert Road and Wixom Road along I-8 and SR-86. The construction and delivery traffic associated with a transmission line moves along the project corridor as work progresses; therefore, an estimate of 240 ADT with 45 AM peak hour trips and 45 PM peak hour trips is for the segment or work area under construction.
- 2) *Imperial Valley Solar Project (Formerly SES Solar Two)* – an electric generating facility capable of producing approximately 750 megawatts of electricity on approximately 6,500 acres generally located west of Dunaway Road and north of I-8. The construction phase of the project is calculated to generate 1,736 ADT with 772 AM peak hour trips and 772 PM peak hour trips.
- 3) *Sunrise 500-kV Line IV West Solar Farm Interconnection to Imperial Valley Substation* – a power line project extending from Imperial Valley to Penasquitos in the City of San Diego. The construction and delivery traffic associated with a transmission line moves along the project corridor as work progresses; therefore, an estimate of 240 ADT with 45 AM peak hour trips and 45 PM peak hour trips is for the segment or work area under construction.
- 4) *SDG&E Photovoltaic Solar Field* – a photovoltaic solar facility capable of producing approximately 14 megawatts of electricity on approximately 100 acres located adjacent to the SDG&E Imperial Valley Substation. The construction phase of the project is calculated to generate approximately 40 ADT with 15 AM peak hour trips and 15 PM peak hour trips.
- 5) *SDG&E Geotechnical Investigation* – an exploratory analysis to determine the quality and compaction of the soil around the SDG&E Imperial Valley substation. Limited construction traffic is anticipated to last no longer than one week in September 2011; therefore, this specific cumulative traffic was not added to the cumulative aggregate. This project is listed to be consistent with the list of projects identified when the cumulative list was confirmed with County of Imperial planning staff to be current as of November 2011.
- 6) *North Gila to Imperial Valley #2* - a power line project of approximately 75 miles extending from the SDG&E Imperial Valley substation to Yuma County, Arizona. The construction and delivery traffic associated with a transmission line moves along the project corridor as work progresses; therefore, an estimate of 240 ADT with 45 AM peak hour trips and 45 PM peak hour trips is for the segment or work area under construction.

- 7) *Dixieland Connection to Imperial Irrigation District Transmission System* – a power line project connecting the Imperial Irrigation District’s “S” line from the Imperial Irrigation District substation to the Imperial Valley substation. The construction and delivery traffic associated with a transmission line moves along the project corridor as work progresses; therefore, an estimate of 240 ADT with 45 AM peak hour trips and 45 PM peak hour trips is for the segment or work area under construction.
- 8) *Solar Reserve Imperial Valley* – a 100 megawatt solar power tower generally located approximately 35 miles east of the Imperial Valley substation. The construction phase of the project is calculated to generate approximately 283 ADT with 110 AM peak hour trips and 112 PM peak hour trips.
- 9) *Linda Vista* – A mixed use project of 182 single family homes and a 6 acre commercial lot generally located on the west side of Clark Road between I-8 and McCabe Road. The traffic generation for this cumulative project is calculated at 7,175 ADT with 252 AM and 676 PM peak hour trips.
- 10) *County Center II Expansion* – a mixed use project of a commercial center, expansion of the Imperial County Office of Education, a Joint-Use Teacher Training and Conference Center, Judicial Center, County Park, Jail expansion, County Administrative Complex, Public Works Administration, and a County Administrative Complex located on the southwest corner of McCabe Road and Clark Road. The total project is calculated to generate 24,069 ADT with 2,581 AM peak hour trips and 2,242 PM peak hour trips.
- 11) *Imperial Solar Energy Center West* – a photovoltaic solar facility capable of producing approximately 250 megawatts of electricity on approximately 1,130 acres generally located east of Dunaway Road and located both north and south of I-8. The construction phase of the project is calculated to generate 750 ADT with 306 AM peak hour trips and 315 PM peak hour trips.
- 12) *Imperial Solar Energy Center South* – a photovoltaic solar facility capable of producing approximately 200 megawatts of electricity on approximately 950 acres generally located south of SR-98 and east of Drew Road. The construction phase of the project is calculated to generate 680 ADT with 271 AM peak hour trips and 280 PM peak hour trips.
- 13) *Mount Signal Solar Farm I* – a photovoltaic solar facility capable of producing approximately 200 megawatts of electricity on approximately 1,375 acres generally located south of SR-98 between Pulliam Road and Ferrell Road. The construction phase of the project is calculated to generate 522 ADT with 162 AM peak hour trips and 162 PM peak hour trips.
- 14) *Centinela* - a photovoltaic solar facility capable of producing approximately 275 megawatts of electricity generally located in the vicinity of SR-98 and Drew Road. The construction phase is calculated to generate 1,260 daily trips with 414 AM peak hour trips and 414 PM peak hour trips.
- 15) *Mayflower Solar Farm Project* - a photovoltaic solar facility capable of producing approximately 50 megawatts of electricity on approximately 482 acres generally located 5.5 miles southeast of the town of Calipatria. The construction phase is calculated to generate 142 daily trips with 56 AM peak hour trips and 57 PM peak hour trips.
- 16) *Arkansas* - a photovoltaic solar facility capable of producing approximately 50 megawatts of electricity on approximately 481 acres generally located 2.5 miles east of the town of

Calipatria. The construction phase is calculated to generate 142 daily trips with 56 AM peak hour trips and 57 PM peak hour trips.

- 17) *Sonora* - a photovoltaic solar facility capable of producing approximately 50 megawatts of electricity on approximately 488 acres generally located 4.5 miles northeast of the town of Calipatria. The construction phase is calculated to generate 142 daily trips with 56 AM peak hour trips and 57 PM peak hour trips.
- 18) *Alhambra* - a photovoltaic solar facility capable of producing approximately 50 megawatts of electricity on approximately 482 acres generally located 3.5 miles south of the town of Calipatria. The construction phase is calculated to generate 142 daily trips with 56 AM peak hour trips and 57 PM peak hour trips.
- 19) *Acorn Greenworks* - a photovoltaic solar facility capable of producing approximately 150 megawatts of electricity on approximately 693 acres generally located 10 miles southwest of the City of El Centro. The construction phase is calculated to generate 425 daily trips with 166 AM peak hour trips and 169 PM peak hour trips.
- 20) *Calexico I-A* - a photovoltaic solar facility capable of producing approximately 100 megawatts of electricity on approximately 666 acres generally located 6 miles west of the City of Calexico. The construction phase is calculated to generate 283 daily trips with 110 AM peak hour trips and 112 PM peak hour trips.
- 21) *Calexico I-B* - a photovoltaic solar facility capable of producing approximately 100 megawatts of electricity on approximately 666 acres generally located 6 miles west of the City of Calexico. The construction phase is calculated to generate 283 daily trips with 110 AM peak hour trips and 112 PM peak hour trips.
- 22) *Calexico II-A* - a photovoltaic solar facility capable of producing approximately 100 megawatts of electricity on approximately 733 acres generally located 6 miles west of the City of Calexico. The construction phase is calculated to generate 283 daily trips with 110 AM peak hour trips and 112 PM peak hour trips.
- 23) *Calexico II-B* - a photovoltaic solar facility capable of producing approximately 100 megawatts of electricity on approximately 732 acres generally located 6 miles west of the City of Calexico. The construction phase is calculated to generate 283 daily trips with 110 AM peak hour trips and 112 PM peak hour trips.
- 24) *Silverleaf Solar Energy* – a photovoltaic solar facility capable of producing approximately 160 megawatts of electricity generally located west of Drew Road and south of I-8 (adjacent to the proposed Campo Verde project). According to the County of Imperial staff, the Silverleaf project is estimated to start construction approximately one year after the proposed Campo Verde project. This means the Silverleaf peak construction will occur in 2014, which is one year after the proposed Campo Verde construction peak of early 2013. Since the construction peaks do not coincide, the Silverleaf project is noted as a cumulative project, but the Silverleaf construction peak traffic is not added to the cumulative peak construction traffic volumes.

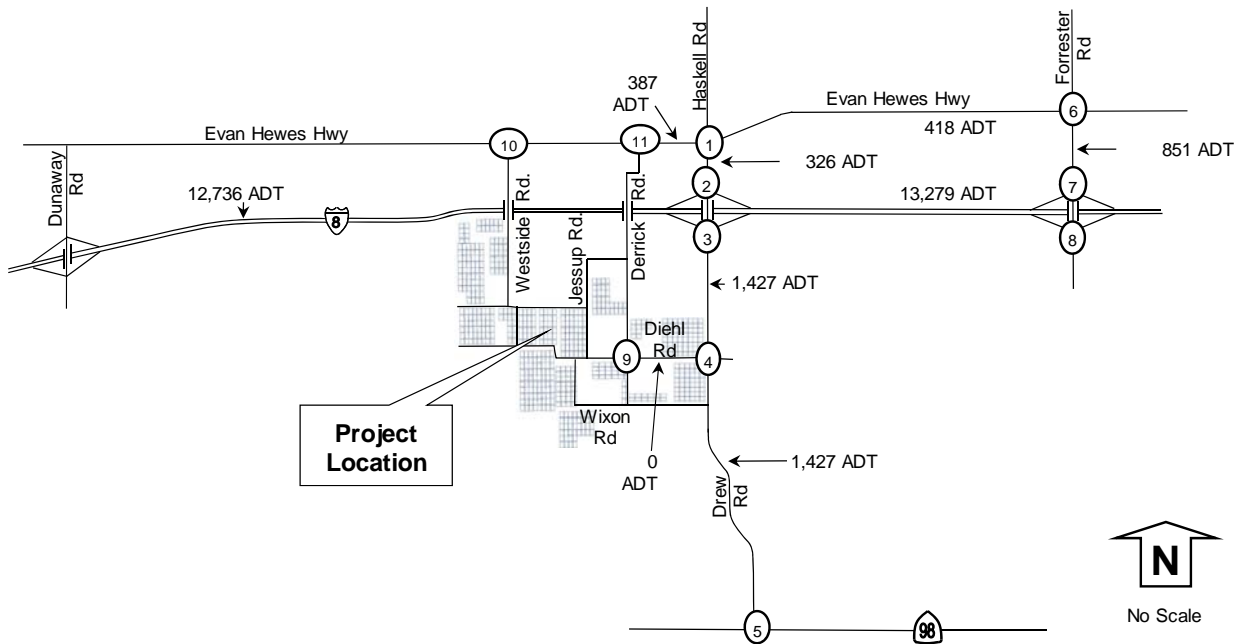
All of the cumulative projects listed above (with the exception of Silverleaf as noted above) were assumed to be generating construction traffic during the construction phase of the Campo Verde project while in reality some of the cumulative projects are only now initiating the environmental review process (i.e. Silverleaf) and thus may start to add construction traffic after the completion

of the Campo Verde project. Furthermore, most if not all of the cumulative solar projects will have a peak construction period that may or may not coincide with the Campo Verde peak construction period; however, again being conservative all of the peak cumulative construction volumes were used in the cumulative analysis even though there is a good chance that all construction peaks will not coincide.

The cumulative project (new development) volumes are shown in **Figure 15**.



Figure 15: Cumulative Project (New Development) Volumes



| | | | | | |
|---|---|--|--|--|--|
| <p>Evan Hewes Hwy</p> <p>0 (0) ↑</p> <p>1 (153) →</p> <p>7 (2) ↓</p> <p>Drew Rd</p> <p>2 (7) ↑</p> | <p>5 (0) ↓</p> <p>1 (1) ↑</p> <p>0 (0) ↓</p> <p>140 (1) ↓</p> <p>72 (5) ↓</p> | <p>30 (1) ↓</p> <p>54 (6) ↓</p> <p>I-8 WB Ramps</p> <p>0 (0) ↑</p> <p>0 (0) ↓</p> <p>216 (32) ↓</p> | <p>I-8 EB Ramps</p> <p>270 (38) ↓</p> <p>0 (0) ↓</p> <p>1 (30) ↑</p> <p>0 (0) ↓</p> <p>68 (34) ↓</p> | <p>Drew Rd</p> <p>33 (68) ↑</p> <p>6 (84) ↑</p> | <p>Drew Rd</p> <p>38 (122) ↑</p> <p>29 (216) ↑</p> |
| <p>Diehl Rd</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>Drew Rd</p> <p>0 (0) ↓</p> | <p>338 (72) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>67 (338) ↓</p> | <p>SR-98</p> <p>0 (9) ↓</p> <p>9 (4) ↓</p> <p>76 (4) ↓</p> <p>Drew Rd</p> <p>0 (0) ↓</p> | <p>103 (28) ↓</p> <p>26 (104) ↓</p> <p>2 (76) ↓</p> <p>5 (5) ↓</p> | <p>Evan Hewes Hwy</p> <p>35 (0) ↓</p> <p>126 (32) ↓</p> <p>0 (35) ↓</p> <p>3 (128) ↓</p> <p>0 (0) ↓</p> | <p>Forrester Rd</p> <p>0 (0) ↓</p> <p>21 (173) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> |
| <p>Forrester Rd</p> <p>45 (2) ↓</p> <p>157 (35) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>188 (12) ↓</p> <p>30 (1) ↓</p> <p>23 (160) ↓</p> | <p>I-8 WB Ramps</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> | <p>I-8 EB Ramps</p> <p>345 (47) ↓</p> <p>0 (0) ↓</p> <p>1 (45) ↓</p> <p>0 (0) ↓</p> <p>1 (30) ↓</p> <p>53 (160) ↓</p> <p>9 (188) ↓</p> | <p>Diehl Rd</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> | <p>Forrester Rd</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> | <p>Derrick Rd</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> |
| <p>Evan Hewes Hwy</p> <p>8 (155) →</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>Westside Rd</p> <p>0 (0) ↓</p> | <p>10 (8) ↓</p> <p>142 (8) ↓</p> <p>0 (0) ↓</p> | <p>Evan Hewes Hwy</p> <p>8 (155) →</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>Derrick Rd</p> <p>0 (0) ↓</p> | <p>11 (8) ↓</p> <p>142 (8) ↓</p> <p>0 (0) ↓</p> | <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z,ZZZ ADT volumes shown along segments</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> <p>() Represents 0 PM volume</p> | |

9.0 Year 2013 + Project + Cumulative

This scenario documents the anticipated project construction traffic added onto year 2013 volumes. Year 2013 plus project volumes are shown in **Figure 16**. Intersection, segment, and freeway LOS are shown in **Tables 20, 21 and 22**. Intersection LOS calculations are included in **Appendix P**.

TABLE 20: YEAR 2013 + PROJECT + CUMULATIVE INTERSECTION LOS

| Intersection & (Control) ¹ | Movement | Peak Hour | Year 2013 | | Year 2013 + Project | | | Year 2013 + Project + Cumulative | | |
|---|----------|-----------|--------------------|------------------|---------------------|------------------|--------------------|----------------------------------|------------------|--------------------------|
| | | | Delay ² | LOS ³ | Delay ² | LOS ³ | Delta ⁴ | Delay ² | LOS ³ | Impact Type ⁵ |
| 1) Drew Road at Evan Hewes Hwy (U) | All | AM | 7.6 | A | 7.7 | A | 0.1 | 8.9 | A | None |
| | All | PM | 7.6 | A | 7.6 | A | 0.0 | 8.9 | A | None |
| 2) Drew Road at I-8 WB Ramp (U) | WB LT | AM | 8.7 | A | 10.1 | B | 1.4 | 19.3 | C | None |
| | WB LT | PM | 8.7 | A | 9.6 | A | 0.9 | 13.0 | B | None |
| 3) Drew Road at I-8 EB Ramp (U) | EB LT | AM | 10.1 | B | 10.1 | B | 0.0 | 14.3 | B | None |
| | EB LT | PM | 9.3 | A | 10.0 | A | 0.7 | 12.7 | B | None |
| 4) Drew Road at Diehl Road (U) | EB LTR | AM | 8.6 | A | 10.5 | B | 1.9 | 15.8 | C | None |
| | EB LTR | PM | 8.6 | A | 10.8 | B | 2.2 | 24.6 | C | None |
| 5) Drew Road at SR-98 (U) | SB LR | AM | 8.6 | A | 8.7 | A | 0.1 | 10.7 | B | None |
| | SB LR | PM | 9.3 | A | 9.7 | A | 0.4 | 11.1 | B | None |
| 6) Forrester Road at Evan Hewes Hwy (S) | All | AM | 17.7 | B | 17.9 | B | 0.2 | 27.3 | C | None |
| | All | PM | 23.8 | C | 23.9 | C | 0.1 | 37.1 | D | None |
| 7) Forrester Road at I-8 WB Ramp (U) | WB LT | AM | 9.9 | A | 9.9 | A | 0.0 | 15.0 | B | None |
| | WB LT | PM | 9.9 | A | 10.4 | B | 0.5 | 12.5 | B | None |
| 8) Forrester Road at I-8 EB Ramp (U) | EB LT | AM | 11.0 | B | 11.1 | B | 0.1 | 17.9 | C | None |
| | EB LT | PM | 18.0 | C | 21.8 | C | 3.8 | 104.7 | F | Cumulative |
| 9) Derrick Road at Diehl Road (U) | SB LTR | AM | 8.7 | A | 11.0 | B | 2.3 | 11.0 | B | None |
| | SB LTR | PM | 8.7 | A | 10.9 | B | 2.2 | 10.9 | B | None |
| 10) Westside Road at Evan Hewes Hwy (U) | NB LR | AM | 9.1 | A | 9.2 | A | 0.1 | 9.5 | A | None |
| | NB LR | PM | 9.2 | A | 9.5 | A | 0.3 | 10.7 | B | None |
| 11) Derrick Road at Evan Hewes Hwy (U) | NB LR | AM | 8.8 | A | 8.8 | A | 0.0 | 9.1 | A | None |
| | NB LR | PM | 9.4 | A | 9.5 | A | 0.1 | 10.6 | B | None |

Notes: 1) Intersection Control - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

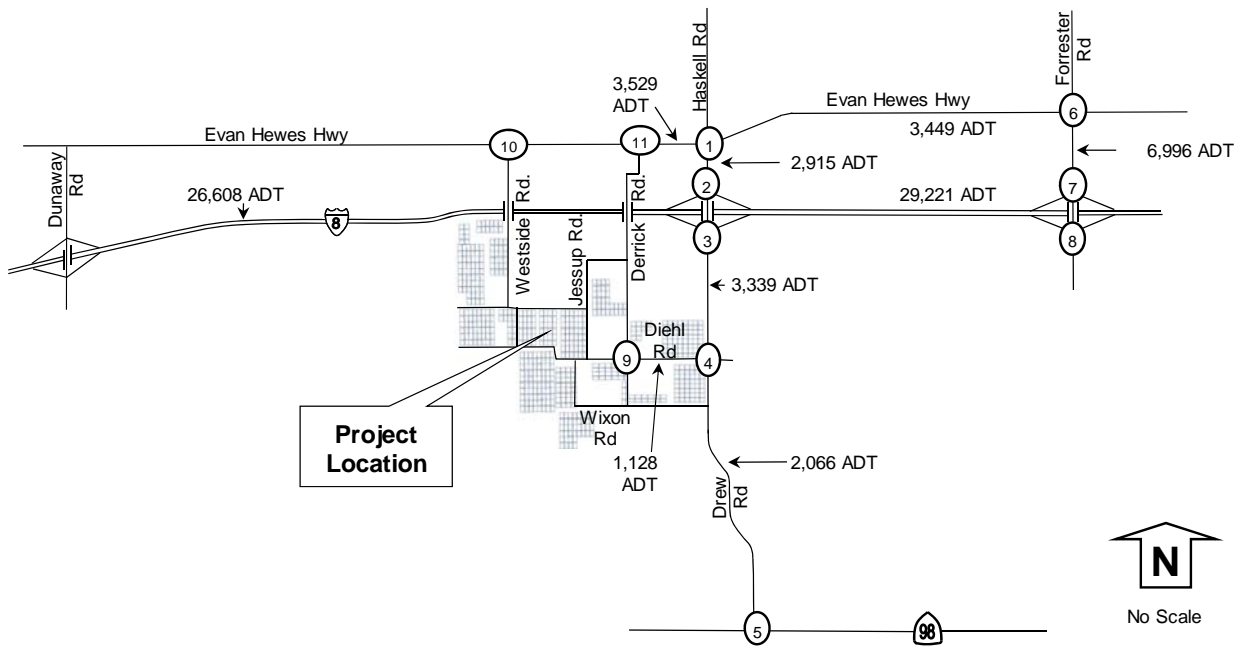
3) LOS: Level of Service. 4) Delta is the increase in delay from project. 5) Impact type (none, direct, or cumulative).

TABLE 21: YEAR 2013 + PROJECT + CUMULATIVE SEGMENT LOS

| Segment | Classification (as built) | LOS C Capacity | Year 2013 | | | Year 2013 + Project | | | Cumulative Daily Volumes | Year 2013 + Proj. + Cumulative | | | |
|-----------------------------|---------------------------|----------------|--------------|-------|-----|---------------------|-------|-----|--------------------------|--------------------------------|-------|-----|-------------|
| | | | Daily Volume | V/C | LOS | Daily Volume | V/C | LOS | | Daily Volume | V/C | LOS | Impact Type |
| Diehl Road | | | | | | | | | | | | | |
| Derrick Road to Drew Road | Minor Collector (2U) | 7,100 | 210 | 0.030 | A | 1,128 | 0.159 | A | 0 | 1,128 | 0.159 | A | None |
| Drew Road | | | | | | | | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 7,100 | 2,582 | 0.364 | B | 2,589 | 0.365 | B | 326 | 2,915 | 0.411 | B | None |
| I-8 to Diehl Road | Prime Arterial (2U) | 7,100 | 1,092 | 0.154 | A | 1,912 | 0.269 | B | 1427 | 3,339 | 0.470 | B | None |
| Diehl Road to SR-98 | Prime Arterial (2U) | 7,100 | 541 | 0.076 | A | 639 | 0.090 | A | 1427 | 2,066 | 0.291 | B | None |
| Evan Hewes Highway | | | | | | | | | | | | | |
| Derrick Road to Drew Road | Prime Arterial (2U) | 7,100 | 3,122 | 0.440 | B | 3,142 | 0.443 | B | 387 | 3,529 | 0.497 | B | None |
| Drew Road to Forrester Road | Prime Arterial (2U) | 7,100 | 3,005 | 0.423 | B | 3,031 | 0.427 | B | 418 | 3,449 | 0.486 | B | None |
| Forrester Road | | | | | | | | | | | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (2U) | 7,100 | 5,867 | 0.826 | C | 6,145 | 0.866 | C | 851 | 6,996 | 0.985 | C | None |

Notes: Classification based on 1/29/08 Circulation and Scenic Highways Element. 2U= 2 lane undivided roadway. Daily volume is a 24 hour volume. LOS: Level of Service. LOS based on actual number of lanes currently constructed. V/C: Volume to Capacity ratio. Impact Type (none, cumulative, or direct).

Figure 16: Year 2013 + Project + Cumulative Volumes



| | | | |
|---|---|--|---|
| <p>Evan Hewes Hwy</p> <p>11 (13) →</p> <p>24 (11) ↓</p> <p>6 (15) ↘</p> <p>5 (8) ↗</p> <p>63 (283) →</p> <p>45 (99) ↓</p> <p>Drew Rd</p> <p>75 (51) ↗</p> <p>12 (25) ↓</p> <p>22 (73) ↘</p> <p>10</p> <p>11</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>9</p> <p>26,608 ADT</p> <p>3,529 ADT</p> <p>2,915 ADT</p> <p>3,339 ADT</p> <p>1,128 ADT</p> <p>2,066 ADT</p> <p>3,449 ADT</p> <p>29,221 ADT</p> <p>6,996 ADT</p> | <p>47 (7) ↗</p> <p>105 (95) ↓</p> <p>I-8 WB Ramps</p> <p>59 (39) ↗</p> <p>0 (0) →</p> <p>403 (55) ↓</p> <p>Drew Rd</p> <p>44 (163) ↗</p> <p>30 (100) ↓</p> <p>468 (81) ↓</p> <p>39 (62) ↘</p> <p>7 (37) ↗</p> <p>0 (0) →</p> <p>163 (43) ↓</p> <p>Drew Rd</p> <p>71 (226) ↗</p> <p>66 (409) ↘</p> | <p>278 (13) ↗</p> <p>350 (97) ↓</p> <p>0 (0) ↘</p> <p>1 (0) ↗</p> <p>0 (0) →</p> <p>0 (0) ↓</p> <p>Drew Rd</p> <p>52 (1) ↗</p> <p>94 (346) ↓</p> <p>0 (0) ↘</p> <p>47</p> <p>105</p> <p>I-8 WB Ramps</p> <p>59</p> <p>0</p> <p>403</p> <p>Drew Rd</p> <p>44</p> <p>30</p> <p>468</p> <p>39</p> <p>7</p> <p>0</p> <p>163</p> <p>Drew Rd</p> <p>71</p> <p>66</p> | <p>160 (66) ↗</p> <p>273 (307) ↓</p> <p>I-8 WB Ramps</p> <p>211 (169) ↗</p> <p>0 (0) →</p> <p>204 (20) ↓</p> <p>For-res-ter Rd</p> <p>34 (1) ↗</p> <p>108 (323) ↓</p> <p>0 (0) ↘</p> <p>50</p> <p>0</p> <p>4</p> <p>For-res-ter Rd</p> <p>90 (187) ↗</p> <p>14 (198) ↓</p> <p>380 (80) ↓</p> <p>96 (245) ↘</p> <p>64 (16) ↗</p> <p>282 (174) ↓</p> <p>16 (21) ↘</p> <p>8 (14) ↗</p> <p>250 (104) →</p> <p>23 (25) ↓</p> <p>Evan Hewes Hwy</p> <p>64 (16) ↗</p> <p>282 (174) ↓</p> <p>16 (21) ↘</p> <p>14 (78) ↗</p> <p>58 (323) →</p> <p>8 (16) ↓</p> <p>For-res-ter Rd</p> <p>14 (8) ↗</p> <p>128 (335) ↓</p> <p>16 (29) ↘</p> |
| <p>15 (274) ↗</p> <p>0 (0) →</p> <p>6 (51) ↓</p> <p>Drew Rd</p> <p>52 (1) ↗</p> <p>94 (346) ↓</p> <p>0 (0) ↘</p> <p>10</p> <p>105</p> <p>I-8 EB Ramps</p> <p>78 (107) ↗</p> <p>56 (132) ↓</p> <p>64</p> <p>282</p> <p>16</p> <p>8</p> <p>250</p> <p>23</p> <p>Evan Hewes Hwy</p> <p>64</p> <p>282</p> <p>16</p> <p>14</p> <p>58</p> <p>8</p> <p>For-res-ter Rd</p> <p>14</p> <p>128</p> <p>16</p> | <p>61 (328) →</p> <p>7 (0) ↓</p> <p>West-side Rd</p> <p>1 (7) ↘</p> <p>3 (5) ↘</p> <p>426 (26) ↗</p> <p>3 (0) ↘</p> <p>10</p> <p>63</p> <p>1</p> <p>Derrick Rd</p> <p>1 (0) ↘</p> <p>5 (14) ↘</p> <p>292 (55) ↗</p> <p>14 (4) ↘</p> <p>11</p> | <p>20 (5) ↗</p> <p>18 (189) →</p> <p>5 (21) ↓</p> <p>Diehl Rd</p> <p>20 (5) ↗</p> <p>21 (6) ↓</p> <p>23 (7) ↘</p> <p>5 (20) ↗</p> <p>18 (189) →</p> <p>5 (21) ↓</p> <p>For-res-ter Rd</p> <p>6 (21) ↗</p> <p>5 (20) ↓</p> <p>5 (20) ↘</p> <p>20</p> <p>21</p> <p>23</p> <p>5</p> <p>18</p> <p>5</p> <p>For-res-ter Rd</p> <p>6</p> <p>5</p> <p>5</p> | <p>Evan Hewes Hwy</p> <p>61 (328) →</p> <p>7 (0) ↓</p> <p>West-side Rd</p> <p>1 (7) ↘</p> <p>3 (5) ↘</p> <p>426 (26) ↗</p> <p>3 (0) ↘</p> <p>10</p> <p>63</p> <p>1</p> <p>Derrick Rd</p> <p>1 (0) ↘</p> <p>5 (14) ↘</p> <p>292 (55) ↗</p> <p>14 (4) ↘</p> <p>11</p> |
| <p>LEGEND</p> <p>XX AM peak hour volumes at intersections</p> <p>(YY) PM peak hour volumes at intersections</p> <p>Z,ZZZ ADT volumes shown along segments</p> <p># Intersection Reference Number to LOS Tables</p> <p>Existing Roads</p> <p>() Represents 0 PM volume</p> | | | |

TABLE 22: YEAR 2013 + PROJECT + CUMULATIVE FREEWAY LOS

| Freeway Segment | I-8 Dunaway Rd to Drew Rd | | | | I-8 Drew Rd to Forrester Rd | | | |
|---|------------------------------|--------|--------|--------|--------------------------------|--------|--------|--------|
| | A M | | P M | | A M | | P M | |
| <u>Year 2013 (Forecasted from 2010)</u> | ADT 13,600 | | | | ADT 15,400 | | | |
| Peak Hour | A M | | P M | | A M | | P M | |
| Direction | EB | WB | EB | WB | EB | WB | EB | WB |
| Number of Lanes | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Capacity (1) | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 | 4,700 |
| K Factor (2) | 0.1076 | 0.0963 | 0.0917 | 0.1517 | 0.1076 | 0.0963 | 0.0917 | 0.1517 |
| D Factor (3) | 0.2616 | 0.7384 | 0.4419 | 0.5581 | 0.2616 | 0.7384 | 0.4419 | 0.5581 |
| Truck Factor (4) | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 | 0.8376 |
| Peak Hour Volume | 457 | 1,155 | 658 | 1,375 | 518 | 1,307 | 745 | 1,557 |
| Volume to Capacity | 0.097 | 0.246 | 0.140 | 0.292 | 0.110 | 0.278 | 0.159 | 0.331 |
| LOS | A | A | A | A | A | A | A | B |
| <u>Project Pk Hr Vol</u> | 95 | 4 | 4 | 95 | 8 | 174 | 174 | 8 |
| <u>Year 2013 + Project</u> | | | | | | | | |
| Peak Hour Volume | 552 | 1,159 | 662 | 1,470 | 526 | 1,481 | 919 | 1,565 |
| Volume to Capacity | 0.117 | 0.247 | 0.141 | 0.313 | 0.112 | 0.315 | 0.196 | 0.333 |
| LOS | A | A | A | B | A | B | A | B |
| Increase in V/C | 0.020 | 0.001 | 0.001 | 0.020 | 0.002 | 0.037 | 0.037 | 0.002 |
| Impact? | None | None | None | None | None | None | None | None |
| <u>Cumulative Pk Hr Vol</u> | 231 | 804 | 828 | 238 | 191 | 957 | 980 | 201 |
| <u>Year 2013 + Cumulative + Project</u> | | | | | | | | |
| Peak Hour Volume | 783 | 1,963 | 1,490 | 1,708 | 717 | 2,438 | 1,899 | 1,766 |
| Volume to Capacity | 0.167 | 0.418 | 0.317 | 0.363 | 0.152 | 0.519 | 0.404 | 0.376 |
| LOS | A | B | B | B | A | C | B | B |
| Increase in V/C | 0.020 | 0.001 | 0.001 | 0.020 | 0.002 | 0.037 | 0.037 | 0.002 |
| Impact? | None | None | None | None | None | None | None | None |

Notes: (1) Capacity of 2,350 passenger cars per hour per lane (pcphpl) from CALTRANS' Guide for the Preparation of Traffic Impact Studies, December 2002. (2) Latest K factor (percentage of the AADT in both directions during the peak hour) from Caltrans (based on 2007 report). (3) Latest D factor (percentage of traffic in the peak direction during the peak hour) from Caltrans (based on 2007 report), which when multiplied by K and ADT will provide peak hour volume. (4) Latest truck factor from Caltrans (based on 2007 report). Impact? = Direct, Cumulative, or None.

Under year 2013 + project + cumulative conditions, the study roadways were calculated to operate at LOS C or better, except for the:

- 1) Intersection of Forrester Road at Evan Hewes Hwy (LOS D PM), and
- 2) Intersection of Forrester Road at I-8 EB Ramp (LOS F PM).

Based on the County of Imperial significance criteria, the project is calculated to have a potential cumulative impact at the intersection of Forrester Road and I-8 EB Ramp. This potential cumulative impact may not materialize if the other cumulative projects do not occur within the same timeframe. If all identified cumulative projects occur concurrently, the identified cumulative impact would be mitigated to an insignificant level by the implementation of the fair share contribution toward a mitigation measure identified in Section 12.

10.0 Horizon Year 2050 + Project Conditions

Horizon Year 2050 street segment information was obtained from the *Imperial County Circulation Element Update*, January 2008. An excerpt from the Circulation element is included in Appendix G. The horizon year 2050 + project segment information is shown in **Table 23**.

TABLE 23: HORIZON YEAR 2050 SEGMENT OPERATIONS

| Segment | Year 2050 Recommended Classification (# of lanes) | Year 2050 ADT Volume | 2050 LOS |
|----------------------------------|---|----------------------|--------------|
| <u>Diehl Road</u> | | | |
| Derrick Road to Drew Road | Minor Collector (2) | Not Reported | Not Reported |
| <u>Drew Road</u> | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (6-divided) | Not Reported | Not Reported |
| I-8 to Diehl Road | Prime Arterial (6-divided) | Not Reported | Not Reported |
| Diehl Road to SR-98 | Prime Arterial (6-divided) | Not Reported | Not Reported |
| <u>Evan Hewes Highway</u> | | | |
| Derrick Road to Drew Road | Prime Arterial (6-divided) | Not Reported | Not Reported |
| Drew Road to Forrester Road | Prime Arterial (6-divided) | Not Reported | Not Reported |
| <u>Forrester Road</u> | | | |
| Evan Hewes Highway to I-8 | Prime Arterial (6-divided) | Not Reported | Not Reported |

Notes: Classification based on 1/29/08 Circulation and Scenic Highways Element. 2 = 2 lane roadway. Daily volume is a 24 hour volume. LOS: Level of Service.

Under horizon year 2050 + project conditions, segments volumes and LOS were not reported as documented in Appendix G.



11.0 ITE Turn Lane Warrants

The Institute of Transportation Engineers (ITE) turn lane warrants were reviewed for applicability at the intersection of Drew Road at Diehl Road due to the concentration of project traffic. The ITE warrants are silent for application on temporary construction traffic; therefore, traffic from the operational phase was used in the warrant analysis. At the intersection of Drew Road and Diehl Road the ITE southbound right turn lane warrant was NOT satisfied and the ITE northbound left turn lane warrant was NOT satisfied; therefore, the construction of additional lanes are not recommended at this intersection (ITE warrants included in **Appendix Q**).

Due to the temporary nature of the project construction traffic, temporary warning signs identifying construction truck traffic per the Manual on Uniform Traffic Control Devices (MUTCD) may be required by the County.



12.0 Cumulative Impact and Recommended Mitigation

The project is calculated to have one (1) potential cumulative impact at the intersections of Forrester Road and the I-8 EB Ramp. The calculated cumulative impact is from the accumulative of new development traffic. If a majority of the proposed new developments do not materialize, then the cumulatively impacted intersection may continue to operate at acceptable levels of service and would not require mitigation. Normally, the recommended mitigation for cumulative impacts is a fair share contribution based on the Caltrans fair share formula for future intersection improvements. However, it should be noted that:

- 1) The fair share participation is based on the project's temporary construction traffic that is significantly higher than the project's traffic after completion of construction. At the intersection of Forrester Road/I-8 EB Ramps, the construction traffic fair share responsibility is 6.2% and 0.5% when based on permanent operation employees.
- 2) The project fair share responsibility should be validated at month 7 and yearly during the entire construction period. If the intersection of Forrester Road/I-8 EB Ramp is calculated to operate at an unacceptable LOS during the validation period, then the applicant shall pay the fair share amount based on project construction traffic. If the intersection of Forrester Road/I-8 EB Ramp is calculated to operate at acceptable LOS, then the applicant should not be required to pay the fair share amount because the intersection would be documented to operate at acceptable LOS.

It is recommended that the applicant enter into an agreement with the County to fulfill the California Environmental Quality Act (CEQA) cumulative mitigation requirement, but not be obligated to pay a fair share should the cumulatively impacted intersection never reach failing conditions during the project's temporary construction period.

The cumulatively impacted intersection with recommended mitigation measure of signalization is calculated to reduce the impact to below a level of significance as shown below in **Table 24**. LOS and fair share calculations are included in **Appendix R**.

TABLE 24: IMPACT SUMMARY AND MITIGATION

| Cumulative Impact Location | Peak Hour | Without Mitigation | | | Recommended Mitigation | WITH Mitigation | | | Fair Share % Construction Traffic | Fair Share % Operations Traffic |
|--------------------------------|-----------|--------------------|------------------|---------------------|------------------------|--------------------|------------------|---------------------|-----------------------------------|---------------------------------|
| | | 2013 + P + C | | | | 2013 + P + C | | | | |
| | | Delay ¹ | LOS ² | Impact ³ | | Delay ¹ | LOS ² | Impact ³ | | |
| 8) Forrester Rd at I-8 EB Ramp | AM PM | 17.9 104.7 | C F | None Cumulative | Install Traffic Signal | 12.1 20.2 | B C | None None | 6.2% | 0.5% |

Notes: 1) Delay - HCM Average Control Delay in seconds. 2) LOS: Level of Service. 3) Impact type (None, cumulative, or direct).

13.0 Conclusions and Recommendations

The project is a solar photovoltaic facility on approximately 1,990 acres of private lands that have been used for agriculture. Construction is anticipated to start in the second quarter of 2012 with a construction schedule estimated between 12 and 24 months.

The project trip generation consists of a construction phase and operations phase. The construction phase will have the highest traffic intensity followed by an operations phase with significantly fewer vehicle trips. Therefore, the higher and more conservative construction based trip generation was used to determine potential project impacts. The construction workforce is expected to reach a peak during month number seven anticipated to occur during the 1st quarter of 2013 with a peak of up to 325 daily vehicles for construction workers and 50 daily truck deliveries. The peak construction traffic (during month number 7) is calculated at 950 ADT with 349 AM peak hour trips and 349 PM peak hour trips. During the operations phase after all construction has been completed, less than 10 fulltime personnel are anticipated for operations and maintenance creating about 20 ADT with approximately 10 AM and 10 PM peak hour trips.. During operations, the project will also require up to 10 daily water trucks for panel washing over approximately 15 business days; however, the washing frequency is estimated from one to four times a year. During the washing period, the total project daily traffic may increase to 40 or 50 ADT over a 15 business day period.

Information on cumulative projects (new development) was obtained from the County of Imperial and confirmed by County of Imperial planning staff to be current as of November 2011. The cumulative list also includes projects within the jurisdiction of the BLM. Twenty four cumulative projects were identified that would potentially add traffic to the study area roadways.

Six scenarios were analyzed, that accounted for existing, project construction, cumulative projects, and horizon year conditions. Operational findings by scenario are summarized below:

- 1) Under existing year 2011 conditions, the study intersections and roadways were calculated to operate at LOS C or better.
- 2) Under existing year 2011 + project conditions, the study intersections and roadways were calculated to operate at LOS C or better. No direct project impacts were calculated due to the addition of project traffic on top of existing traffic.
- 3) Under year 2013 conditions, the study intersections and roadways were calculated to operate at LOS C or better.
- 4) Under year 2013 + project conditions, the study intersections and roadways were calculated to operate at LOS C or better. No direct project impacts were calculated due to the addition of project traffic on top of existing traffic.
- 5) Under year 2013 + project + cumulative conditions, the study roadways were calculated to operate at LOS C or better, except for:
 - a) Intersection of Forrester Road at Evan Hewes Hwy (LOS D PM), and
 - b) Intersection of Forrester Road at I-8 EB Ramp (LOS F PM).Based on the County of Imperial significance criteria, the project is calculated to have one potential cumulative impact to the intersection of Forrester Road at I-8 EB Ramp. This potential cumulative impact may not materialize if the other cumulative projects do

not occur within the same timeframe. If all identified cumulative projects occur concurrently, the identified cumulative impact would be mitigated to an insignificant level by the implementation of a fair share contribution.

- 6) Under horizon year 2050 + project conditions, segments volumes and LOS were not reported in the *Imperial County Circulation Element Update*, January 2008.

The Campo Verde Solar Project was analyzed for potential traffic impacts. No direct traffic impacts were calculated due to the addition of the project traffic onto the study area roadways and one (1) potential cumulative impact was calculated at the intersection of Forrester Road and the I-8 EB Ramp. The potential cumulative impact is from the accumulative of new development traffic. If a majority of the proposed new developments do not materialize, then the cumulatively impacted intersection may continue to operate at acceptable levels of service and would not require mitigation. Normally, the recommended mitigation for cumulative impacts is a fair share contribution based on the Caltrans fair share formula for future intersection improvements. However, it should be noted that:

- 1) The fair share participation is based on the project's temporary construction traffic that is significantly higher than the project's traffic after completion of construction. At the intersection of Forrester Road/I-8 EB Ramps, the construction traffic fair share responsibility is 6.2% and 0.5% when based on permanent operation employees.
- 2) The project fair share responsibility should be validated at month 7 and yearly during the entire construction period. If the intersection of Forrester Road/I-8 EB Ramp is calculated to operate at an unacceptable LOS during the validation period, then the applicant shall pay the fair share amount based on project construction traffic. If the intersection of Forrester Road/I-8 EB Ramp is calculated to operate at acceptable LOS, then the applicant should not be required to pay the fair share amount because the intersection would be documented to operate at acceptable LOS.

It is recommended that the applicant enter into an agreement with the County to fulfill the California Environmental Quality Act (CEQA) cumulative mitigation requirement, but not be obligated to pay a fair share should the cumulatively impacted intersection never reach failing conditions during the project's temporary construction period.

ITE turn lane warrants were reviewed for applicability at the intersection of Drew Road at Diehl Road due to the concentration of project traffic. The ITE warrants are silent for application on temporary construction traffic; therefore, traffic from the operational phase was used in the warrant analysis. At the intersection of Drew Road and Diehl Road the ITE southbound right turn lane warrant was NOT satisfied and the ITE northbound left turn lane warrant was NOT satisfied; therefore, the construction of additional lanes are not recommended at this intersection. Due to the temporary nature of the project construction traffic, temporary warning signs identifying construction truck traffic per the MUTCD may be required by the County.

14.0 References

Caltrans. December 2002. *Guide for the Preparation of Traffic Impact Studies*.

County of Imperial Department of Public Works. Dated March 12, 2007, revised June 29, 2007 and approved by the Board of Supervisors of the County of Imperial on August 7, 2007. *Traffic Study and Report Policy*.

Institute of Transportation Engineers, 1999. *Traffic Engineering Handbook, Fifth Edition*.

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Transportation Research Board National Research Council Washington, D.C. 2000. *Highway Capacity Manual 2000*. CD ROM.



Appendix A

Excerpts from Imperial County's Traffic Study and Report Policy

COUNTY OF IMPERIAL

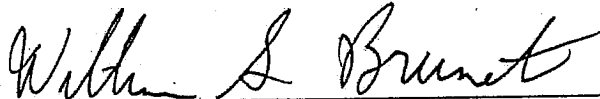
DEPARTMENT OF PUBLIC WORKS

TRAFFIC STUDY AND REPORT POLICY

Date: March, 12, 2007

Revised June 29, 2007

APPROVALS:



WILLIAM S. BRUNET, P. E.
DIRECTOR OF PUBLIC WORKS
ROAD COMMISSIONER



JURG HEUBERGER
PLANNING DIRECTOR

necessary to develop a traffic report that determines whether the traffic study general criteria have been met.

In the case of significant development, it may be necessary to hold one or more scope of work meetings which would be attended by a ICPDS staff, the County Traffic Engineer or other County Advisory Staff, the individual who will be responsible for preparing the traffic study report and the Traffic and/or Civil Engineer responsible for the report and its recommendations. The individual preparing the traffic study should be familiar with the project site and the local conditions which may affect any final conclusions and recommendations.

Listed below are the basic criteria that will be used to make the determination for providing a complete traffic study as a part of the project review process. The criteria are not a complete or exhaustive list, but they are intended to define when such a report is to be prepared and to indicate the necessary components of the study report to be submitted.

1. General Criteria

- a. Any project that adds more than 8% of the total existing vehicle trips on the adjacent road system at full build-out of the project.
- b. Any project that generates more than 400 daily residential trip ends, 800 commercial or industrial trip ends or 200 peak hour trip ends, as determined by the average trip rates contained in the ITE Trip Generation Informational Report or the **Imperial County local exceptions in Section 2.**
- c. Any project that has the potential to degrade an existing road section, an existing signalized intersection, or an existing unsignalized intersection to below the existing level of service or to cause it to be lower than a level of service (LOS)

unit, unless it is for urban infill development, within one half mile of major retail and commercial developmentt.

- b. Existing traffic on the adjacent road system and projected traffic on the adjacent road system, projected for a minimum of five (5) years, to project build-out, or both, depending on the project and the area; larger projects or high traffic generation may require future year build-out, currently Year 2030. Future CMP TIA reports would require additional traffic projection information.
- c. Traffic projections on the adjacent road system for both the project and "normal background growth" (demonstrated growth, as detailed in the general plan, or as agreed upon with County staff). Normally, traffic will be projected to Year 2030 or later for an updated future year condition.
- d. Traffic projections shall include the additional impact of undeveloped land or new development within an area surrounding the proposed development site (project) as agreed to by the County Director of Public Works, the County Planning Director and advisory staff.
- e. Projected impacts on intersections adjacent to or within the defined impact area of the project, using intersection capacity analysis - Highway Capacity Manual Operations Delay Method. Right turn-on-red volumes and changes in signal timing can be incorporated in a signalized intersection analysis, but any signal timing changes must be specifically identified in the study recommendations with additional cautions or impact conclusions identified if the timing changes are not

- m. Traffic counts, calculations, other basic information, and supporting data shall be included in an Appendix to the report or provided as a separate Technical Appendix. All actual traffic count data will be provided to the County in a useful summary form, digital and paper format, as specified by the County.

3. Analysis Methodology

The build-up method of traffic analysis will be followed, showing:

- a. Existing traffic;
- b. Existing traffic and normal background growth (rate and time to be agreed to by County staff);
- c. Existing traffic and normal background growth (see C. 3. b. above) and project build-out traffic;
- d. Existing traffic and normal background growth (see C. 3. b. above) and new development traffic (see C. 3. b. above);
- e. Existing traffic and 5 year normal background growth (see b. above) and new development (see b. above) and project build out, if longer than 5 years to build out of project.

If the study period to build-out is longer than 5 years, the future projection time period appropriate for a new development will be determined by the County staff. Significant projects may require a future projection time period of 20 years or General Plan build out. The future year is currently year 2030 as of the date of adopting this Policy. State Highway traffic projections will usually be carried to the year 2030 or to Caltrans current policy and procedures.

Appendix B

Excerpts from Caltrans' Guide for the Preparation of Traffic Impact Studies



GUIDE FOR THE PREPARATION

OF

TRAFFIC IMPACT STUDIES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

December 2002

D. Travel Forecasting (Transportation Modeling)

The local or regional traffic model should reflect the most current land use and planned improvements (i.e., where programming or funding is secured). When a general plan build-out model is not available, the closest forecast model year to build-out should be used. If a traffic model is not available, historical growth rates and current trends can be used to project future traffic volumes. The TIS should clearly describe any changes made in the model to accommodate the analysis of a proposed project.

V. TRAFFIC IMPACT ANALYSIS METHODOLOGIES

Typically, the traffic analysis methodologies for the facility types indicated below are used by Caltrans and will be accepted without prior consultation. When a State highway has saturated flows, the use of a micro-simulation model is encouraged for the analysis (please note however, the micro-simulation model must be calibrated and validated for reliable results). Other analysis methods may be accepted, however, consultation between the lead agency, Caltrans and those preparing the TIS is recommended to agree on the data necessary for the analysis.

- A. Freeway Segments – Highway Capacity Manual (HCM)*, operational analysis
- B. Weaving Areas – Caltrans Highway Design Manual (HDM)
- C. Ramps and Ramp Junctions – HCM*, operational analysis or Caltrans HDM, Caltrans Ramp Metering Guidelines (most recent edition)
- D. Multi-Lane Highways – HCM*, operational analysis
- E. Two-lane Highways – HCM*, operational analysis
- F. Signalized Intersections⁸ – HCM*, Highway Capacity Software**, operational analysis, TRAFFIXTM**, Synchro**, see footnote 8
- G. Unsignalized Intersections – HCM*, operational analysis, Caltrans Traffic Manual for signal warrants if a signal is being considered
- H. Transit – HCM*, operational analysis
- I. Pedestrians – HCM*
- J. Bicycles – HCM*
- K. Caltrans Criteria/Warrants – Caltrans Traffic Manual (stop signs, traffic signals, freeway lighting, conventional highway lighting, school crossings)
- L. Channelization – Caltrans guidelines for Reconstruction of Intersections, August 1985, Ichiro Fukutome

*The most current edition of the Highway Capacity Manual, Transportation Research Board, National Research Council, should be used.

**NOTE: Caltrans does not officially advocate the use of any special software. However, consistency with the HCM is advocated in most but not all cases. The Caltrans local development review units utilize the software mentioned above. If different software or analytical techniques are used for the TIS then consultation between the lead agency, Caltrans and those preparing the TIS is recommended. Results that are significantly different than those produced with the analytical techniques above should be challenged.

⁸ The procedures in the Highway Capacity Manual "do not explicitly address operations of closely spaced signalized intersections. Under such conditions, several unique characteristics must be considered, including spill-back potential from the downstream intersection to the upstream intersection, effects of downstream queues on upstream saturation flow rate, and unusual platoon dispersion or compression between intersections. An example of such closely spaced operations is signalized ramp terminals at urban interchanges. Queue interactions between closely spaced intersections may seriously distort the procedures in" the HCM.

Appendix C

Excerpts from Imperial County's Circulation and Scenic Highways Element

**CIRCULATION AND
SCENIC HIGHWAYS ELEMENT**

**Prepared by:
Imperial County Planning & Development Services Department
801 Main Street
El Centro, CA 92243**

in collaboration with the

**Imperial County Public Works Department
155 South 11th Street
El Centro, CA 92243**

**WILLIAM S. BRUNET, P.E.
Director of Public Works**

**JURG HEUBERGER, AICP
Planning & Development Services Director**

**Approved by:
Board of Supervisors
January 29, 2008**

**TABLE 5
IMPERIAL COUNTY STANDARD STREET CLASSIFICATION
AVERAGE DAILY VEHICLE TRIPS**

| Road | | Level of Service (LOS) | | | | |
|---|-----------|------------------------|--------|--------|--------|--------|
| Class | X-Section | A | B | C | D | E |
| Expressway | 154/210 | 30,000 | 42,000 | 60,000 | 70,000 | 80,000 |
| Prime Arterial | 106/136 | 22,200 | 37,000 | 44,600 | 50,000 | 57,000 |
| Minor Arterial | 82/102 | 14,800 | 24,700 | 29,600 | 33,400 | 37,000 |
| Major Collector (Collector) | 64/84 | 13,700 | 22,800 | 27,400 | 30,800 | 34,200 |
| Minor Collector (Local Collector) | 40/70 | 1,900 | 4,100 | 7,100 | 10,900 | 16,200 |
| Local County (Residential) | 40/60 | * | * | <1,500 | * | * |
| Local County (Residential Cul-de-Sac or Loop Street) | 40/60 | * | * | <200 | * | * |
| Major Industrial Collector – (Industrial) | 76/96 | 5,000 | 10,000 | 14,000 | 17,000 | 20,000 |
| Industrial Local | 44/64 | 2,500 | 5,000 | 7,000 | 8,500 | 10,000 |
| * Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors. | | | | | | |

Table 5 was originally developed for the County of San Diego by the San Diego County Department of Public Works in 1985 and compares ADT to levels of service (LOS) for various roadway classifications. Proposed functional classifications were then inserted into this table and right-of-way widths adjusted to match County of Imperial standards.

Transition Areas

The Circulation and Scenic Highways Element is the graphical reference guide which shows the present and planned street system, along with the classification of those streets. It is important to note that where there is a change from one classification to another along a certain street, the transition will occur in mid-block areas to preclude non-continuing lanes and intersections. The design criteria (design, speed, curve radii, etc.) for the higher classification shall generally take precedence through the transition area.

Appendix D

Excerpts from Caltrans' Guide for the Preparation of Traffic Impact Studies



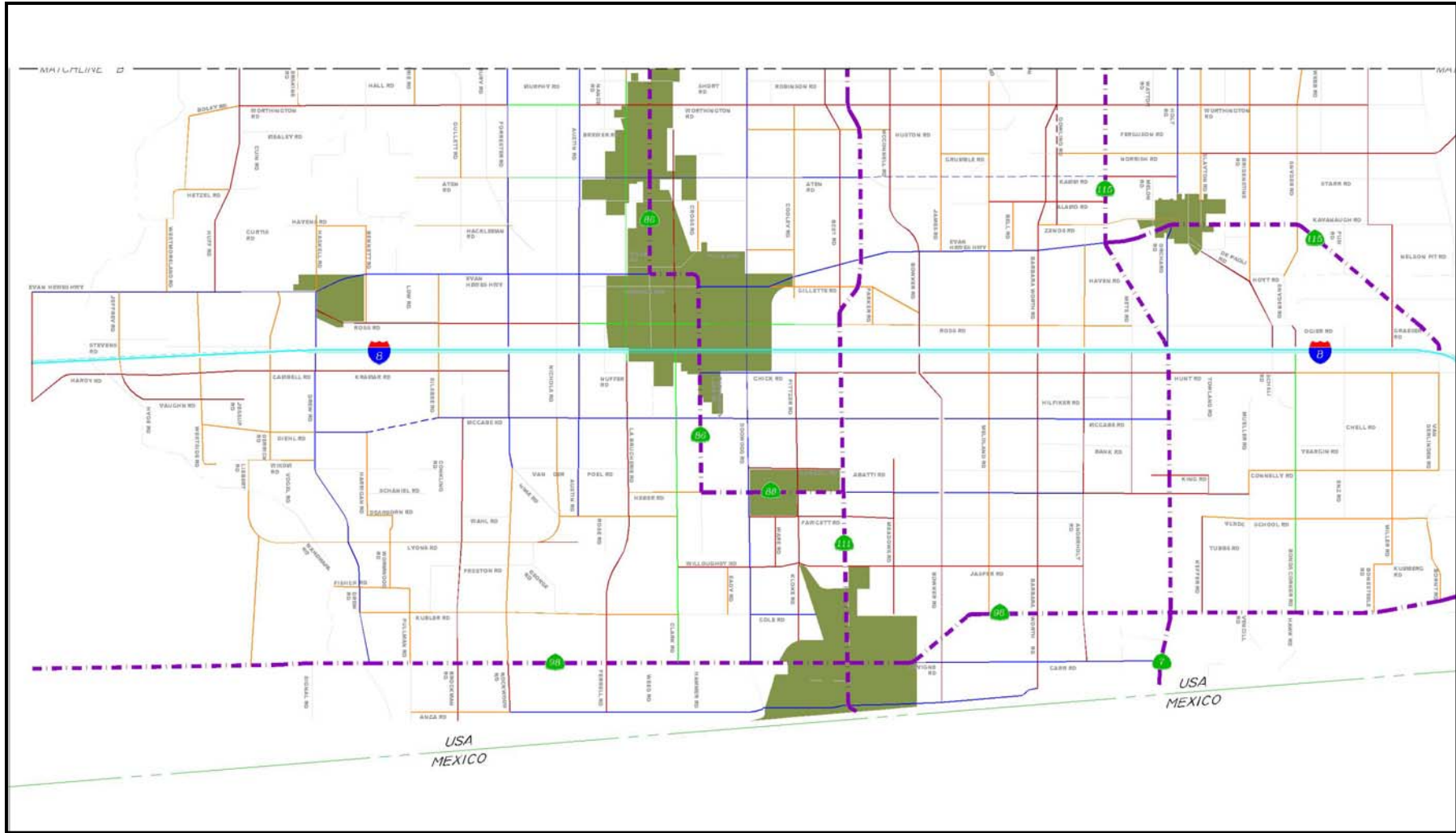
GUIDE FOR THE PREPARATION

OF

TRAFFIC IMPACT STUDIES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

December 2002



LEGEND

- Interstate (0-Lanes)
- - - State Highway/Expressway (6-Lanes divided)
- Prime Arterial (6-Lanes divided)
- Minor Arterial (4-Lanes divided)
- Major Collector-Collector (4-Lanes)
- - - Minor Collector-Local Collector (2-Lanes)
- - - Proposed Future Alignment
- Cities & Towns

DISCLAIMER: Every reasonable effort has been made to ensure the accuracy of this map. However, by accepting this material, you agree that Imperial County assumes no liability of any kind arising from the use of this map. THIS MAP IS PROVIDED WITHOUT WARRANTY OF ANY KIND, either expressed or implied, including but not limited to time, money or goodwill arising from the use, operation or modification of this map.

Imperial County Circulation Element Plan

Southern Section

(SHEET 4 of 4)

Figure 1c



Transition between LOS "C" and LOS "D" Criteria (Reference Highway Capacity Manual)

BASIC FREEWAY SEGMENTS @ 65 mi/hr

| LOS | Maximum Density (pc/mi/ln) | Minimum Speed (mph) | Maximum v/c | Maximum Service Flow Rate (pc/hr/ln) |
|-----|----------------------------|---------------------|-------------|--------------------------------------|
| A | 11 | 65.0 | 0.30 | 710 |
| B | 18 | 65.0 | 0.50 | 1170 |
| C | 26 | 64.6 | 0.71 | 1680 |
| D | 35 | 59.7 | 0.89 | 2090 |
| E | 45 | 52.2 | 1.00 | 2350 |

SIGNALIZED INTERSECTIONS and RAMP TERMINALS

| LOS | Control Delay per Vehicle (sec/veh) |
|-----|-------------------------------------|
| A | ≤ 10 |
| B | > 10 - 20 |
| C | > 20 - 35 |
| D | > 35 - 55 |
| E | > 55 - 80 |
| F | > 80 |

MULTI-LANE HIGHWAYS @ 55 mi/hr

| LOS | Maximum Density (pc/mi/ln) | Minimum Speed (mph) | Maximum v/c | Maximum Service Flow Rate (pc/hr/ln) |
|-----|----------------------------|---------------------|-------------|--------------------------------------|
| A | 11 | 55.0 | 0.29 | 600 |
| B | 18 | 55.0 | 0.47 | 990 |
| C | 26 | 54.9 | 0.68 | 1430 |
| D | 35 | 52.9 | 0.88 | 1850 |
| E | 41 | 51.2 | 1.00 | 2100 |

..... Dotted line represents the transition between LOS "C" and LOS "D"

Appendix E

Excerpts from Imperial County's Circulation and Scenic Highways Element

**CIRCULATION AND
SCENIC HIGHWAYS ELEMENT**

**Prepared by:
Imperial County Planning & Development Services Department
801 Main Street
El Centro, CA 92243**

in collaboration with the

**Imperial County Public Works Department
155 South 11th Street
El Centro, CA 92243**

**WILLIAM S. BRUNET, P.E.
Director of Public Works**

**JURG HEUBERGER, AICP
Planning & Development Services Director**

**Approved by:
Board of Supervisors
January 29, 2008**

The County Director of Public Works shall review these transition areas and provide guidance in achieving this policy.

c. New or enlarged Roads:

Local Roads

The County shall require all new developments to provide for local roads to serve the direct access needs of abutting property. These streets should be designed with a discontinuous pattern to discourage through traffic. They generally should not intersect with arterial street classifications. Typical design features include two travel lanes with parking on both sides of the street. Local roads include loop streets and cul-de-sacs.

Regional Roads (Roads beyond the actual development project)

The County shall require that all new developments participate in the improvement of regional roads that may be impacted by the proposed development. The extent to which a project impacts regional roads is generally determined by a traffic study. In some cases however the County may have predetermined improvement requirements for certain road segments or road intersections. The new developments will be required to either make certain regional improvements or in the alternative contribute a “fair share” towards the cost of such improvements.

d. Level of Service Standards

As the County continues to grow, transportation demand management and systems management will be necessary to preserve and increase available roadway “capacity”. Level of Service (LOS) standards are used to assess the performance of a street or highway system and the capacity of a roadway.

An important goal when planning the transportation system is to maintain acceptable levels of service along the federal and state highways and the local roadway network. To accomplish this, the California Department of Transportation (Caltrans), Imperial County and local agencies adopt minimum levels of service to determine future infrastructure needs.

Imperial County must provide and maintain a highway system with adequate capacity and acceptable levels of service to accommodate projected travel demands associated with the projected population growth within the Land Use Element. This can be accomplished by establishing minimum service levels for the designated street and conventional state highway system. Strategies that result in improvements to the transportation system, coupled with local job creation, will allow County residents to have access to a wide range of job opportunities within reasonable commute times.

The County's goal for an acceptable traffic service standard on an ADT basis and during AM and PM peak periods for all County-Maintained Roads shall be LOS C for all street segment links and intersections. These service values are defined by the 1985 or 2000 edition of the *Highway Capacity Manual* or any subsequent edition thereof. This policy shall acknowledge that the aforementioned level of service standards may not be obtainable on some existing facilities where abutting development precludes acquisition of additional right-of-way needed for changes in facility classification.

In order to achieve the level of service goals in the previous policy, the County shall develop and institute a long-range funding program in which new land development shall bear the major burden of the associated costs and improvement requirements.

e. Design Standards

The County shall adopt design standards for all streets in accordance with their functional classifications and recognized design guidelines. In developing these standards, the County shall consider the design standards of Caltrans and the American Association of State and Highway Transportation Officials (AASHTO). All streets within the County shall be designed in accordance with the adopted County of Imperial Design Standards. Typical cross sections and design criteria for the various street classifications are shown as an attachment to this document.

f. Private Streets

The County may permit construction of private streets within individual development projects (gated community). providing the following are addressed:

- They are designed geometrically and structurally to meet County standards.
- Only project occupants are served (gated community).
- Emergency vehicle access requirements are satisfied.
- The streets do not provide a direct through route between public streets.
- The Homeowners Associations and/or property owners provide an acceptable program for financing regular street maintenance.
- If the private street is permitted with a waiver of any of the above standards, any future requests to make the private street a public street shall require that all adjacent property owners provide and pay for all improvements and right of way required to bring the street to current public street or road standards. This includes road width, right of way widths and structural section. In no circumstance shall the County pay for any costs to upgrade a private street to public street standards if the above-mentioned requirements were waived at the request of the original developer or subdivider.

Appendix F

Traffic Impact Significance Criteria from Imperial area EIRs

4.6.2 Impact Significance Criteria

Significance Criteria

The significance criteria summarized in Table 4.6-2 by Linscott, Law and Greenspan Engineers is based upon the City of El Centro and the County of Imperial's goal for intersections and roadway segments to operate at LOS C or better. In general, a degradation in LOS from LOS C or better to LOS D or worse is considered a significant direct impact. A cumulative impact can occur if the intersection or segment LOS is already operating below City/County standards and the project increases the delay by more than 2 seconds or the v/c ratio by more than 0.02.

| Table 4.6-2 Significance Criteria | | | |
|--|--|---|---------------------|
| INTERSECTIONS | | | |
| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
| LOS ¹ C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS D or worse | - | Direct |
| LOS D | LOS E or F | - | Direct |
| LOS E | LOS F | - | Direct |
| Any LOS | Project does not degrade LOS and adds > 2.0 seconds of delay | LOS E or worse | Cumulative |
| Any LOS | Project does not degrade LOS and adds < 2.0 seconds of delay | Any LOS | None |
| SEGMENTS | | | |
| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
| LOS C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS D or worse | - | Direct ² |
| LOS D | LOS E or F | - | Direct |
| LOS E | LOS F | - | Direct |
| Any LOS | LOS E or worse and v/c ³ > 0.02 | LOS E or worse | Cumulative |
| Any LOS | LOS E or worse and v/c ³ < 0.02 | Any LOS | None |

Source: Linscott, Law & Greenspan, Engineers (July 2004)

Notes:

1. LOS: Level of Service
2. Exception: post-project segment operation is D and intersections along segment are D or better, no significant impact.
3. V/C: Volume to Capacity Ratio

In addition the project would have a significant impact if:

- It would substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

5.0 SIGNIFICANCE CRITERIA

**TABLE 5.1
SIGNIFICANCE CRITERIA**

| Intersections | | | |
|-----------------|---|--|---------------------|
| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
| LOS C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS C or better and project adds < 2.0 seconds of delay | LOS D or worse | None |
| LOS C or better | LOS C or better and project adds > 2.0 seconds of delay | LOS D or worse | Cumulative |
| LOS C or better | LOS D or worse | LOS D or worse | Direct |
| LOS D | LOS D and project adds < 2.0 seconds of delay | LOS D or worse | None |
| LOS D | LOS D and project adds > 2.0 seconds of delay | LOS D or worse | Cumulative |
| LOS D | LOS E or F | LOS E or F | Direct |
| LOS E | LOS E and project adds < 2.0 seconds of delay | LOS E or F | None |
| LOS E | LOS E and project adds > 2.0 seconds of delay | LOS E or F | Cumulative |
| LOS E | LOS F | LOS F | Direct |
| LOS F | Project add < 2.0 seconds of delay | LOS F | None |
| LOS F | Project adds 2.0 to 9.9 seconds of delay | LOS F | Cumulative |
| LOS F | Project adds 10.0 or more seconds of delay | LOS F | Direct |
| Segments | | | |
| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
| LOS C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS or better and project increases V/C by < 0.02 | LOS D or worse | None |
| LOS C or better | LOS C or better and project increase V/C by >0.02 | LOS D or worse | Cumulative |
| LOS C or better | LOS D or worse | LOS D or worse | Direct ¹ |
| LOS D | LOS D and project increases V/C by < 0.02 | LOS D or worse | None |
| LOS D | LOS D and project increases V/C by > 0.02 | LOS D or worse | Cumulative |
| LOS D | LOS E or F | LOS E or F | Direct |
| LOS E | LOS E and project increases V/C by < 0.02 | LOS E or F | None |
| LOS E | LOS E and project increases V/C by > 0.02 | LOS E or F | Cumulative |
| LOS E | LOS F | LOS F | Direct |
| LOS F | Project increases V/C by < 0.02 | LOS F | None |
| LOS F | Project increases V/C by > 0.02 and < 0.09 | LOS F | Cumulative |
| LOS F | Project increases V/C by > 0.09 | LOS F | Direct |

Notes: LOS = Level of Service; V/C = Volume to Capacity Ratio; ¹ Exception: If Existing + Project segment operation is LOS D and intersections along segment are LOS D or better, then there is no significant impact.

In addition to the above listed projects, the Lerno/Verhaegen project was recently submitted and is currently starting the CEQA process. This project is listed for information purposes but cannot be analyzed in cumulative terms. The following is a brief description based on the limited information available for this project.

Lerno-Verhaegen Specific Plan is proposed to be a mixed-use development of 2,708 dwelling units. The project consists of 680 acres on the west side of the City of El Centro. The project includes a zone change, Tentative Map, an amendment of the City’s General Plan and an annexation.

Individual traffic assignments were completed for each cumulative project. Figure 2-7 depicts the total cumulative project traffic volumes in the area. Figure 2-8 shows the existing + project + cumulative projects traffic volumes for the vicinity. Appendix D of this Mitigated Negative Declaration contains the individual cumulative project traffic assignments.

Significance Criteria

The significance criteria summarized in Table 2-7 by Linscott, Law and Greenspan, engineers is based upon the County of Imperial’s goal for intersections and roadway segments to operate at LOS C or better. Intersections or segments operating at LOS D, E or F are unacceptable and therefore constitute a significant impact.

| Table 2-7 – Significance Criteria | | | |
|--|--|---|---------------------|
| INTERSECTIONS | | | |
| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
| LOS ¹ C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS D or worse | - | Direct |
| LOS D | LOS E or F | - | Direct |
| LOS E | LOS F | - | Direct |
| Any LOS | Project does not degrade LOS and adds > 2.0 seconds of delay | LOS E or worse | Cumulative |
| Any LOS | Project does not degrade LOS and adds < 2.0 seconds of delay | Any LOS | None |
| SEGMENTS | | | |
| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
| LOS C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS D or worse | - | Direct ² |
| LOS D | LOS E or F | - | Direct |
| LOS E | LOS F | - | Direct |
| Any LOS | LOS E or worse and v/c ³ > 0.02 | LOS E or worse | Cumulative |
| Any LOS | LOS E or worse and v/c ³ < 0.02 | Any LOS | None |

Source: LL&G, July 2004.

Notes:

1. LOS: Level of Service
2. Exception: post-project segment operation is D and intersections along segment are D or better, no significant impact.
3. V/C: Volume to Capacity Ratio

**TABLE 5-1
SIGNIFICANCE CRITERIA**

| INTERSECTIONS | | | |
|------------------------------|---|---|--------------------|
| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
| LOS ^a C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS D or worse | — | Direct |
| LOS D | LOS D and adds 2.0 seconds or more of delay | LOS D or worse | Cumulative |
| LOS D | LOS E or F | — | Direct |
| LOS E | LOS F | — | Direct |
| LOS F | LOS F and delay increases by ≥ 10.0 seconds | LOS F | Direct |
| Any LOS | Project does not degrade LOS and adds 2.0 to 9.9 seconds of delay | LOS E or worse | Cumulative |
| Any LOS | Project does not degrade LOS and adds < 2.0 seconds of delay | Any LOS | None |
| SEGMENTS | | | |
| Existing | Existing + Project | Existing + Project + Cumulative Projects | Impact Type |
| LOS C or better | LOS C or better | LOS C or better | None |
| LOS C or better | LOS C or better and $v/c^b > 0.02$ | LOS D or worse | Cumulative |
| LOS C or better | LOS D or worse | — | Direct |
| LOS D | LOS D and $v/c > 0.02$ | LOS D or worse | Cumulative |
| LOS D | LOS E or F | — | Direct |
| LOS E | LOS F | — | Direct |
| LOS F | LOS F and v/c increases by > 0.09 | LOS F | Direct |
| Any LOS | LOS E or worse and $v/c 0.02$ to 0.09 | LOS E or worse | Cumulative |
| Any LOS | LOS E or worse and $v/c < 0.02$ | Any LOS | None |

Source: Linscott, Law & Greenspan, Engineers

Footnotes:

- a. Level of Service
- b. Volume to Capacity Ratio

Appendix G

Excerpts from Imperial County Circulation Element

**CIRCULATION AND
SCENIC HIGHWAYS ELEMENT**

**Prepared by:
Imperial County Planning & Development Services Department
801 Main Street
El Centro, CA 92243**

in collaboration with the

**Imperial County Public Works Department
155 South 11th Street
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**WILLIAM S. BRUNET, P.E.
Director of Public Works**

**JURG HEUBERGER, AICP
Planning & Development Services Director**

**Approved by:
Board of Supervisors
January 29, 2008**

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|-----------------------------------|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| Alamo Road | | | | | | | | |
| Meloland/SR-115 | Major Collector | | | | | | Major Collector (4) | |
| Albright Road | | | | | | | | |
| SR-111/SR-115 | Minor Collector | | | | | | Minor Collector (2) | |
| SR-115/Butters | Major Collector | | | | | | Major Collector (4) | |
| Anderholt Road | | | | | | | | |
| Evan Hewes (S-80)/Hunt | Minor Collector | | | | | | Minor Collector (2) | |
| Hunt/Carr | Major Collector | | | | | | Major Collector (4) | |
| Andre Road | | | | | | | | |
| Forrester/End | Minor Collector | | | | | | Minor Collector (2) | |
| Anza Road | | | | | | | | |
| Pulliam/Rockwood | Local | | | | | | Minor Collector (2) | |
| Rockwood/Calexico | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| Calexico/Barbara Worth | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| Aten Road | | | | | | | | |
| End/Forrester | Minor Collector | | | | | | Minor Collector (2) | |
| Forrester/Austin | Minor Arterial | | | | | | Minor Arterial (6-divided) | |
| East Imperial City Limits/Dogwood | Prime Arterial | 7,300 | 8,450 | 39,000 | 1.13 | 44,500 | Prime Arterial (6-divided) | C |
| Dogwood/SR-111 | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| Proposed/SR-111/River | None | | | | | | Prime Arterial (6-divided) | |
| Austin Road | | | | | | | | |
| McCabe/Wahl | Local | | | | | | Prime Arterial (6-divided) | |
| Proposed Wahl/SR-98 | None | | | | | | Prime Arterial (6-divided) | |
| Evan Hewes Hwy/McCabe | Major Collector | | | | | | Prime Arterial (6-divided) | |
| Aten/Evan Hewes Hwy | Minor Arterial | | | | | | Prime Arterial (6-divided) | |
| Keystone/Aten | Major Collector | | | | | | Prime Arterial (6-divided) | |
| SR-86/Keystone | Minor Collector | | | | | | Prime Arterial (6-divided) | |
| Bannister Road | | | | | | | | |
| SR-86/Brandt | Major Collector | | | | | | Major Collector (4) | |
| Barbara Worth Road | | | | | | | | |
| Zenos/Evan Hewes (S-80) | Minor Collector | | | | | | Major Collector (4) | |
| Evan Hewes Hwy/Anza | Major Collector | | | | | | Major Collector (4) | |
| Baughman Road | | | | | | | | |
| Garvey/Lack | Minor Collector | | | | | | Minor Collector (2) | |
| Lack/SR-86 | Major Collector | | | | | | Major Collector (4) | |
| Bell Road | | | | | | | | |
| Alamo/Evan Hewes Hwy | Minor Collector | | | | | | Minor Collector (2) | |
| Bennett Road | | | | | | | | |
| Havens/Ross | Minor Collector | | | | | | Minor Collector (2) | |
| Best Road | | | | | | | | |
| Rutherford/Brawley | Minor Arterial | | | | | | Minor Arterial (4) | |
| Blair Road | | | | | | | | |
| Pound/Sinclair | Minor Collector | | | | | | Minor Collector (2) | |
| Peterson/Lindsey | Major Collector | | | | | | Major Collector (4) | |
| Lindsey/SR-115 | Major Collector | | | | | | Major Collector (4) | |
| SR-115/Yocum | Local | | | | | | Major Collector (4) | |
| Blais Road | | | | | | | | |
| Wieman/Forrester | Minor Collector | | | | | | Minor Collector | |
| Boarts Road (S26) | | | | | | | | |
| Westmorland/Kalin | Major Collector | | | | | | Major Collector (4) | |
| Boley Road | | | | | | | | |
| Westmorland/Huff | Minor Collector | | | | | | Minor Collector (2) | |
| Bonds Corner Road | | | | | | | | |
| Holtville/I-8 | Major Collector | | | | | | Major Collector (4) | |
| I-8/SR-98 | Minor Arterial | | | | | | Minor Arterial (4) | |
| Bonesteale Road | | | | | | | | |
| Kumberg/SR-98 | Minor Collector | | | | | | Minor Collector (2) | |
| Bornt Road | | | | | | | | |
| Verde School/SR-98 | Minor Collector | | | | | | Minor Collector (2) | |
| Bowker Road | | | | | | | | |
| Evan Hewes Hwy/I-8 | Major Collector | | | | | | Major Collector (4) | |
| I-8/SR-98 | Minor Arterial | | | | | | Expressway (6) | |
| SR-98/Anza | None | | | | | | Minor Arterial (4) | |

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES (continued)**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|---|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| Bowles Road | | | | | | | | |
| Riley/Lyerly | Minor Collector | | | | | | Minor Collector (2) | |
| Boyd Road | | | | | | | | |
| Wiest/SR-78 | Local | | | | | | Minor Collector (2) | |
| SR-115/Highline | Local | | | | | | Minor Collector (2) | |
| Highline/End | Minor Collector | | | | | | Minor Collector (2) | |
| Brandt Road | | | | | | | | |
| Sinclair/Lindsey | Local | | | | | | Minor Collector (2) | |
| Lindsey/Eddins | Minor Collector | | | | | | Minor Collector (2) | |
| Eddins/Webster | Minor Collector | | | | | | Minor Collector (2) | |
| Bridenstein Road | | | | | | | | |
| Proposed SR-78/Hartshorn | | | | | | | Minor Collector (2) | |
| Hartshorn/Bonds Corner | Minor Collector | | | | | | Minor Collector (2) | |
| Brockman Road (S30) | | | | | | | | |
| McCabe/SR-98 | Major Collector | | | | | | Major Collector (4) | |
| Butters Road (S32) | | | | | | | | |
| Gonder/SR-78 | Prime Arterial | | | | | | Prime Arterial (6) | A |
| Bowles/Albright | Local | | | | | | Major Collector (4) | |
| Albright/SR-78 | Major Collector | | | | | | Major Collector (4) | |
| Cady Road | | | | | | | | |
| Pellett/SR-86 | Major Collector | | | | | | Major Collector (4) | |
| Cambell Road | | | | | | | | |
| Jessup/Derrick | Major Collector | | | | | | Major Collector (4) | |
| Derrick/Drew | Major Collector | | | | | | Major Collector (4) | |
| Carey Road | | | | | | | | |
| SR-86/Dogwood | Minor Collector | | | | | | Minor Collector (2) | |
| Carr Road | | | | | | | | |
| Barbara Worth/SR-7 | Major Collector | | | | | | Minor Arterial (4) | |
| Carter Road | | | | | | | | |
| Kalin/Forrester | Minor Collector | | | | | | Major Collector (4) | |
| Casey Road | | | | | | | | |
| Dickerman/SR-78 | Minor Collector | | | | | | Minor Collector (2) | |
| SR-78/Worthington | Minor Collector | | | | | | Major Collector (4) | |
| Proposed Worthington/Norrish | None | | | | | | Major Collector (4) | |
| Chick Road | | | | | | | | |
| El Centro/Pitzer | Prime Arterial | | | | | | Prime Arterial (6) | |
| Pitzer/Barbara Worth | Major Collector | | | | | | Major Collector (4) | |
| Clark Road | | | | | | | | |
| El Centro/SR-98 | Minor Arterial | | | | | | Minor Arterial (4) | |
| North El Centro City Limits/Worthington | Major Collector | 2,100 | 2,430 | 12,550 | 1.64 | 21,000 | Major Collector (4) | B |
| Worthington/Larsen | Minor Collector | 800 | 930 | 6,220 | 1.64 | 10,500 | Major Collector (4) | A |
| Cole Road | | | | | | | | |
| Dogwood/Calexico | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| East Calexico City Limits/SR-98 | Minor Arterial | 9,700 | 11,230 | 18,340 | 1.64 | 30,500 | Prime Arterial (6-divided) | B |
| Connelly Road | | | | | | | | |
| Vencill/Van Der Linden | Minor Collector | | | | | | Minor Collector (2) | |
| Cooley Road | | | | | | | | |
| Worthington/Gillett | Minor Collector | | | | | | Minor Collector (2) | |
| Corn Road | | | | | | | | |
| Bowles/Eddins | Minor Collector | | | | | | Minor Collector (2) | |
| Correll Road | | | | | | | | |
| Dogwood/SR 111 | Minor Arterial | | | | | | Minor Arterial (4) | |
| Cross Road | | | | | | | | |
| Imperial (City)/Villa | Minor Collector | | | | | | Minor Collector (2) | |
| Davis Road | | | | | | | | |
| Gillespie/Schrimp | Major Collector | | | | | | Major Collector (4) | |
| Proposed Schrimp/Sinclair | Major Collector | | | | | | Major Collector (4) | |
| Dearborn Road | | | | | | | | |
| Harrigan/Wormwood | Minor Collector | | | | | | Minor Collector (2) | |
| Derrick Road | | | | | | | | |
| Evan Hewes Hwy/Wixom | Minor Collector | | | | | | Minor Collector (2) | |
| Dickerman Road | | | | | | | | |
| SR-115/Butters | Minor Collector | | | | | | Minor Collector (2) | |

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES (continued)**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|---------------------------------------|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| Diehl Road | | | | | | | | |
| Westside/Drew | Minor Collector | | | | | | Minor Collector (2) | |
| Drew/Harrigan | Major Collector | | | | | | Prime Arterial (6) | |
| Proposed Harrigan/Silsbee | Major Collector | | | | | | Prime Arterial (6) | |
| Dietrich Road | | | | | | | | |
| Rutherford/Shank | Minor Collector | | | | | | Major Collector (4) | |
| Proposed Shank/SR-78 | None | | | | | | Major Collector (4) | |
| Doetsch Road | | | | | | | | |
| Elder/SR-86 | Minor Collector | | | | | | Minor Collector (2) | |
| Dogwood Road (S31)* | | | | | | | | |
| Proposed Lindsey/Hovley | None | | | | | | Prime Arterial (6-divided) | |
| Brawley/SR-98 | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| Dowden Road | | | | | | | | |
| Proposed Forrester/Gentry | None | | | | | | Local Collector (2) | |
| Gentry/Kershaw | None | | | | | | Prime Arterial (6) | |
| Kershaw/Butters | Minor Collector | | | | | | Prime Arterial (6) | |
| Drew Road (S29) | | | | | | | | |
| Evan Hewes/SR-98 | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| Dunaway Road | | | | | | | | |
| I-8/Evan Hewes Hwy | Major Collector | 900 | 1,040 | 2,756 | 1.64 | 4,500 | Major Collector (4) | A |
| Eady Road | | | | | | | | |
| Willoughby/Cole | Minor Collector | | | | | | Minor Collector (2) | |
| Eddins Road (S30) | | | | | | | | |
| Gentry/SR-111(Calipatria City Limits) | Major Collector | | | | | | Major Collector (4) | |
| Edgar Road | | | | | | | | |
| Pierle/Forrester | Minor Collector | | | | | | Minor Collector (2) | |
| Elder Road | | | | | | | | |
| Doetsch/Cady | Minor Collector | | | | | | Minor Collector (2) | |
| English Road | | | | | | | | |
| Sinclair/Wilkins | Minor Collector | | | | | | Minor Collector (2) | |
| Erskine Road | | | | | | | | |
| Wheeler/Payne | Minor Collector | | | | | | Minor Collector | |
| Evan Hewes Hwy (S80) | | | | | | | | |
| Imperial Hwy/El Centro | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| El Centro/SR-115 | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| SR-115/End | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| Fawcett Road | | | | | | | | |
| Dogwood/Meadows | Minor Collector | | | | | | Major Collector (4) | |
| Ferrell Road | | | | | | | | |
| Kubler/SR-98 | Major Collector | | | | | | Major Collector (4) | |
| SR-98/Anza | Minor Collector | | | | | | Minor Collector (2) | |
| Fifield Road | | | | | | | | |
| SR-78/Streiby | Minor Collector | | | | | | Minor Collector (2) | |
| Fisher Road | | | | | | | | |
| Drew/Pulliam | Minor Collector | | | | | | Minor Collector (2) | |
| Flett Road | | | | | | | | |
| Wilkinson/Wirt | Minor Collector | | | | | | Minor Collector (2) | |
| Forrester Road (S30) | | | | | | | | |
| Proposed Sinclair/Walker | None | | | | | | Prime Arterial (6-divided) | |
| Walker/Westmorland | Major Collector | | | | | | Prime Arterial (6-divided) | |
| Westmorland/McCabe | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| McCabe/Hime | Minor Collector | | | | | | Prime Arterial (6-divided) | |
| Proposed Hime/River | Minor Collector | | | | | | Prime Arterial (6-divided) | |
| North Westmorland City Limits/Gentry | Major Collector | 1,200 | 1,390 | 9,000 | 1.64 | 15,000 | Prime Arterial (6-divided) | A |
| Foulds Road | | | | | | | | |
| Pellet/Lack | Minor Collector | | | | | | Minor Collector (2) | |
| Fredericks Road | | | | | | | | |
| Loveland/SR-111 | Minor Collector | | | | | | Minor Collector (2) | |
| Frontage Road | | | | | | | | |
| Ross/Brawley (City) | Major Collector | | | | | | Major Collector (4) | |
| Garst Road | | | | | | | | |
| Sinclair/McDonald | Minor Collector | | | | | | Minor Collector (2) | |
| Garvey Road | | | | | | | | |
| Baughman/Andre | Minor Collector | | | | | | Minor Collector (2) | |

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES (continued)**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|----------------------------------|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| Gentry Road | | | | | | | | |
| Sinclair/Walker | Major Collector | | | | | | Major Collector (4) | |
| Gillespie Road | | | | | | | | |
| Davis/Wilkins | Minor Collector | | | | | | Minor Collector (2) | |
| Gillett Road | | | | | | | | |
| Cooley/Bowker | Minor Collector | | | | | | Minor Collector (2) | |
| Gonder Road | | | | | | | | |
| Proposed New River/SR-115 | None | | | | | | Major Collector (4) | |
| SR-115/Butters | Local | | | | | | Minor Collector (2) | |
| Butters/Green | Minor Collector | | | | | | Minor Collector (2) | |
| Green/Highline | Major Collector | | | | | | Major Collector (4) | |
| Gowling Road | | | | | | | | |
| Norrish/Zenos | Minor Collector | | | | | | Major Collector (4) | |
| Green Road | | | | | | | | |
| SR-78/Gonder | Major Collector | | | | | | Major Collector (4) | |
| Griffin Road | | | | | | | | |
| Wiest/SR-115 | Minor Collector | | | | | | Minor Collector (2) | |
| Grumbles Road | | | | | | | | |
| James/Meloland | Minor Collector | | | | | | Minor Collector (2) | |
| Gullett Road | | | | | | | | |
| Worthington/Aten | Minor Collector | | | | | | Minor Collector (2) | |
| Gutherie Road | | | | | | | | |
| Wiener/Worthington | Minor Collector | | | | | | Minor Collector (2) | |
| Proposed Worthington/Hackleman | Minor Collector | | | | | | Minor Collector (2) | |
| Hackleman Road | | | | | | | | |
| Low/Forrester | Minor Collector | | | | | | Minor Collector (2) | |
| Hardy Road | | | | | | | | |
| Dunaway/Jeffrey | Major Collector | | | | | | Major Collector (4) | |
| Jeffrey/Hyde | Major Collector | | | | | | Major Collector (4) | |
| Hyde/Jessup | Major Collector | | | | | | Major Collector (4) | |
| Harrigan Road | | | | | | | | |
| Diehl/Dearborn | Minor Collector | | | | | | Minor Collector (2) | |
| Harris Road | | | | | | | | |
| Austin/SR-86 | Local | | | | | | Major Collector (4) | |
| SR-86/McConnel | Major Collector | | | | | | Major Collector (4) | |
| McConnell/Highline | Minor Collector | | | | | | Major Collector (4) | |
| Hart Road | | | | | | | | |
| Wiest/SR-115 | Minor Collector | | | | | | Minor Collector (2) | |
| Hartshorn Road | | | | | | | | |
| Bridenstein/Proposed Bridenstein | Minor Collector | | | | | | Minor Collector | |
| Haskell Road | | | | | | | | |
| Evan Hewes Hwy/End | Minor Collector | | | | | | Minor Collector (2) | |
| Hastain Road | | | | | | | | |
| Taecker/SR-78 | Minor Collector | | | | | | Minor Collector (2) | |
| Young/Dickerman | Minor Collector | | | | | | Minor Collector (2) | |
| Havens Road | | | | | | | | |
| Haskell/Bennett | Minor Collector | | | | | | Minor Collector (2) | |
| Hetzel Road | | | | | | | | |
| Westmorland/Huff | Minor Collector | | | | | | Minor Collector (2) | |
| Heber Road | | | | | | | | |
| La Brucherie/SR-86 | Local | | | | | | Minor Collector (2) | |
| SR-111/Anderholt | Minor Arterial | N/A | 2,040 | 16,700 | 1.64 | 27,500 | Prime Arterial (6-divided) | B |
| Anderholt/Keffer | Major Collector | | | | | | Major Collector (4) | |
| Keffer/Vencill | Minor Collector | | | | | | Major Collector (4) | |
| Highline Road (S33) | | | | | | | | |
| Proposed SR-78/Gonder | None | | | | | | Major Collector (4) | |
| Gonder/Kavanaugh | Major Collector | | | | | | Major Collector (4) | |
| Proposed Kavanaugh/I-8 | None | | | | | | Major Collector (4) | |
| Holt Road (S32) | | | | | | | | |
| Gonder/Holtville city limits | Prime Arterial | | | | | | Prime Arterial (6-divided) | |
| Hoskins Road | | | | | | | | |
| SR-86/Steiner | Minor Collector | | | | | | Minor Collector | |
| Hovley Road | | | | | | | | |
| Rutherford/Brawley | Major Collector | | | | | | Major Collector (4) | |

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES (continued)**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|-------------------------------|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| Huff Road | | | | | | | | |
| Imler/Evan Hewes Hwy | Major Collector | | | | | | Major Collector (4) | |
| Hunt Road | | | | | | | | |
| Barbara Worth/Bonds Corner | Major Collector | | | | | | Major Collector (4) | |
| Bonds Corner/Van Der Linden | Minor Collector | | | | | | Minor Collector (2) | |
| Huston Road | | | | | | | | |
| Dogwood/McConnell | Minor Collector | | | | | | Minor Collector (2) | |
| Imler Road | | | | | | | | |
| Huff/Forrester | Major Collector | | | | | | Major Collector (4) | |
| International Road | | | | | | | | |
| Noffsinger/Pound | Minor Collector | | | | | | Minor Collector (2) | |
| Irvine Road | | | | | | | | |
| Shank/End | Minor Collector | | | | | | Minor Collector (2) | |
| James Road | | | | | | | | |
| Ralph/Evan Hewes Hwy | Minor Collector | | | | | | Minor Collector (2) | |
| Jasper Road | | | | | | | | |
| Calexico/Anderholt | Major Collector | | | | | | Expressway (6) | |
| Proposed Anderholt/ SR-7 | None | | | | | | Expressway (6) | |
| Jeffery Road | | | | | | | | |
| Evan Hewes Hwy/Hardy | Minor Collector | | | | | | Minor Collector (2) | |
| Kaiser Road | | | | | | | | |
| Wirt/Albright | Minor Collector | | | | | | Minor Collector (2) | |
| Kalin (S26) | | | | | | | | |
| Sinclair/SR-78/86 | Major Collector | | | | | | Major Collector (4) | |
| SR-78/86/Webster | Minor Collector | | | | | | Minor Collector (4) | |
| Kamm Road | | | | | | | | |
| River/SR-115 | Local | | | | | | Prime Arterial (6) | |
| SR-115/Holt | Minor Collector | | | | | | Major Collector (4) | |
| Keffer Road | | | | | | | | |
| SR-98/King | Major Collector | | | | | | Major Collector (4) | |
| Kershaw Road | | | | | | | | |
| Yocum/Rutherford | Minor Collector | | | | | | Minor Collector (2) | |
| Keystone Road (S27) | | | | | | | | |
| Forrester/SR-111 | Prime Arterial | | | | | | Expressway (6) | |
| SR-111/Highline | Major Collector | | | | | | Expressway (6) | |
| King Road | | | | | | | | |
| Orchard/Keffer | Major Collector | | | | | | Major Collector (4) | |
| Kloke Road | | | | | | | | |
| Willoughby/Calexico | Major Collector | | | | | | Major Collector (4) | |
| Kramar Road | | | | | | | | |
| Drew/Forrester | Major Collector | | | | | | Major Collector (4) | |
| Kubler Road | | | | | | | | |
| Drew/Clark | Minor Collector | | | | | | Minor Collector (2) | |
| Kumberg Road | | | | | | | | |
| Bonesteel/Miller | Minor Collector | | | | | | Minor Collector (2) | |
| La Brucherie Road | | | | | | | | |
| El Centro city limits/Kubler | Major Collector | | | | | | Major Collector (4) | |
| Larsen/Murphy | Minor Collector | | | | | | Minor Collector (2) | |
| Murphy/Imperial city limits | Minor Collector | | | | | | Minor Collector (2) | |
| Lack Road | | | | | | | | |
| Lindsey/Blais | Minor Collector | | | | | | Minor Collector (2) | |
| Larsen Road | | | | | | | | |
| Forrester/SR-86 | Major Collector | | | | | | Major Collector (4) | |
| SR-86/Clark | Minor Collector | | | | | | Minor Collector (2) | |
| Lavigne Road | | | | | | | | |
| SR-98/Bowker | Prime Arterial | | | | | | Prime Arterial (6) | |
| Proposed Bowker/Barbara Worth | Prime Arterial | | | | | | Prime Arterial (6) | |
| Liebert Road | | | | | | | | |
| Wixom/Rd 8018 | Minor Collector | | | | | | Minor Collector (2) | |
| Proposed Road 8018/SR-98 | Minor Collector | | | | | | Minor Collector (2) | |
| Lindsey Road | | | | | | | | |
| Lack/Wiest | Minor Collector | | | | | | Minor Collector (2) | |
| Loveland Road | | | | | | | | |
| Fredericks/Monte | Minor Collector | | | | | | Minor Collector (2) | |
| Low Road | | | | | | | | |
| Hackleman/Evan Hewes Hwy | Minor Collector | | | | | | Minor Collector (2) | |

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES (continued)**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|---------------------------------|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| Lyerly Road | | | | | | | | |
| Bowles/Eddins | Minor Collector | | | | | | Minor Collector (2) | |
| Lyons Road | | | | | | | | |
| Drew/Nichols | Minor Collector | | | | | | Major Collector (4) | |
| Proposed Nichols/La Brucherie | None | | | | | | Major Collector (4) | |
| Main ST (Niland) | | | | | | | | |
| SR-111/Blair | Major Collector | | | | | | Major Collector (4) | |
| Martin Road | | | | | | | | |
| Baughman/7th | Minor Collector | | | | | | Minor Collector (2) | |
| 7th/Bannister | Local | | | | | | Minor Collector (2) | |
| Mead Road | | | | | | | | |
| Dogwood/McConnell | Minor Collector | | | | | | Minor Collector (2) | |
| Meadows Road | | | | | | | | |
| Heber/Calexico (City) | Major Collector | | | | | | Major Collector (4) | |
| Meloland Road | | | | | | | | |
| Worthington/Correll | Minor Collector | | | | | | Minor Collector (2) | |
| Proposed Correll/SR-98 | Minor Collector | | | | | | Minor Collector (2) | |
| McCabe Road | | | | | | | | |
| Silsbee/La Brucherie | Major Collector | | | | | | Prime Arterial (6-divided) | |
| La Brucherie/SR-111 | Minor Arterial | N/A | 200 | 17,270 | 1.64 | 28,500 | Prime Arterial (6-divided) | B |
| SR-111/SR-7 | Major Collector | | | | | | Prime Arterial (6-divided) | |
| McConnell Road | | | | | | | | |
| SR-78/Evan Hewes Hwy | Major Collector | | | | | | Major Collector (4) | |
| McDonald Road | | | | | | | | |
| Garst/SR-111 | Minor Collector | | | | | | Minor Collector (2) | |
| SR-111 TO Rd 8041 | Minor Collector | | | | | | Minor Collector (2) | |
| McKim Road | | | | | | | | |
| Harris/Ralph | Minor Collector | | | | | | Minor Collector (2) | |
| Miller Road (S33) | | | | | | | | |
| I-8/Kumberg | Minor Collector | | | | | | Minor Collector (2) | |
| I-8/SR-115 | Major Collector | 200 | 230 | 5,250 | 1.64 | 9,000 | Major Collector (4) | A |
| SR-115/Kavanaugh | Major Collector | 100 | 120 | 5,300 | 1.64 | 9,000 | Major Collector (4) | A |
| Monte Road | | | | | | | | |
| Pellet/Loveland | Minor Collector | | | | | | Minor Collector (2) | |
| Neckel Road | | | | | | | | |
| Austin/Clark | Minor Collector | | | | | | Minor Collector (2) | |
| Nichols Road | | | | | | | | |
| McCabe/Lyons | Minor Collector | | | | | | Minor Collector (2) | |
| Noffsinger Road | | | | | | | | |
| SR-111/McDonald | Minor Collector | | | | | | Minor Collector (2) | |
| Norrish Road | | | | | | | | |
| Gowling/Holt | Minor Collector | | | | | | Minor Collector (2) | |
| Holt/Highline | Local | | | | | | Major Collector (4) | |
| Highline/End | Major Collector | | | | | | Major Collector (4) | |
| Orchard Road (S32)/ SR 7 | | | | | | | | |
| King/McCabe | Major Collector | 700 | 810 | 50,740 | 1.13 | 57,500 | Expressway (6) | C |
| McCabe/I-8 | Major Collector | 900 | 1,040 | 49,000 | 1.13 | 56,000 | Expressway (6) | C |
| Holtville/I-8 | Minor Arterial | | | | | | Prime Arterial (6-divided) | |
| I-8/Connelly | Major Collector | | | | | | Major Collector (4) | |
| Orr Road | | | | | | | | |
| Baughman/SR-86 | Minor Collector | | | | | | Minor Collector (2) | |
| Park Road | | | | | | | | |
| Proposed Dowden/Williams | None | | | | | | Major Collector (4) | |
| Williams/Rutherford | Minor Collector | | | | | | Major Collector (4) | |
| Proposed Rutherford/Dietrich | None | | | | | | Major Collector (4) | |
| Parker Road | | | | | | | | |
| Ross/Gilllett | Minor Collector | | | | | | Minor Collector (2) | |
| Payne Road | | | | | | | | |
| Huff/Erskine | Minor Collector | | | | | | Minor Collector (2) | |
| Pellet Road | | | | | | | | |
| Foulds/Monte | Minor Collector | | | | | | Minor Collector (2) | |
| Proposed Monte/Imler | Minor Collector | | | | | | Minor Collector (2) | |
| Pickett Road | | | | | | | | |
| Hastain/Butters | Minor Collector | | | | | | Minor Collector (2) | |

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES (continued)**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|-------------------------------|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| Pierle Road | | | | | | | | |
| Edgar/Wheeler | Minor Collector | | | | | | Minor Collector (2) | |
| Pitzer Road | | | | | | | | |
| Proposed Jasper/Willoughby | None | | | | | | Major Collector (4) | |
| Chick/SR-86 | Major Collector | | | | | | Major Collector (4) | |
| SR-86/Jasper | Minor Collector | | | | | | Major Collector (4) | |
| Pound Road | | | | | | | | |
| Davis/International | Major Collector | | | | | | Major Collector (4) | |
| International/Noffsinger | Minor Collector | | | | | | Minor Collector (2) | |
| Pulliam Road | | | | | | | | |
| Fisher/ SR-98 | Minor Collector | | | | | | Minor Collector (2) | |
| Ralph Road | | | | | | | | |
| Imperial (City)/Dogwood | Major Collector | | | | | | Major Collector (4) | |
| Dogwood/Mckim | Minor Collector | | | | | | Minor Collector (2) | |
| Riley Road | | | | | | | | |
| Bowles/Eddins | Minor Collector | | | | | | Minor Collector | |
| Rockwood Road | | | | | | | | |
| Proposed River/Lyons | Minor Collector | | | | | | Prime Arterial (6) | |
| Lyons SR-98 | Minor Collector | | | | | | Prime Arterial (6) | |
| SR-98/Anza | Major Collector | | | | | | Major Collector | |
| Ross Road | | | | | | | | |
| Drew/Bennett | Major Collector | 1,500 | 1,740 | 2,310 | 1.64 | 4,000 | Major Collector (4) | A |
| Drew/Austin | Major Collector | | | | | | Major Collector (4) | |
| El Centro/SR-111 | Minor Arterial | | | | | | Minor Arterial (4) | |
| SR-111/Mets | Local | N/A | 560 | 2,120 | 1.64 | 3,500 | Minor Collector (2) | B |
| Ruegger Road | | | | | | | | |
| Kalin/SR-111 | Minor Collector | | | | | | Minor Collector (2) | |
| Rutherford Road (S26) | | | | | | | | |
| Proposed Banister/Kalin | | | | | | | Major Collector (4) | |
| Kalin/Butters | Major Collector | | | | | | Major Collector (4) | |
| Butters/Irvine | Minor Collector | | | | | | Minor Collector (2) | |
| Schartz Road | | | | | | | | |
| Proposed SR-86/Dogwood | None | | | | | | Major Collector (4) | |
| Dogwood/McConnell | Minor Collector | | | | | | Major Collector (4) | |
| Proposed McConnell/River | None | | | | | | Major Collector (4) | |
| Seybert Road | | | | | | | | |
| Taecker/SR-78 | Minor Collector | | | | | | Minor Collector | |
| Shank Road | | | | | | | | |
| Best/SR-115 | Minor Arterial | | | | | | Minor Arterial (4) | |
| SR-115/Irvine | Minor Collector | | | | | | Minor Collector (2) | |
| Silsbee Road | | | | | | | | |
| Evan Hewes Hwy/McCabe | Minor Collector | | | | | | Minor Collector (2) | |
| Sinclair Road | | | | | | | | |
| Gentry/SR-111 | Major Collector | | | | | | Prime Arterial (6-divided) | |
| SR-111/Weist | Minor Collector | | | | | | Minor Collector (2) | |
| Slayton Road | | | | | | | | |
| Worthington/Holtville (City) | Minor Collector | | | | | | Minor Collector (2) | |
| Snyder Road | | | | | | | | |
| Worthington/Bonds Corner Road | Minor Collector | | | | | | Minor Collector (2) | |
| Stahl Road | | | | | | | | |
| McConnell/End | Minor Collector | | | | | | Minor Collector (2) | |
| Streiby Road | | | | | | | | |
| Fifield/Wiest | Minor Collector | | | | | | Minor Collector (2) | |
| Taecker Road | | | | | | | | |
| Seybert/Hastain | Minor Collector | | | | | | Minor Collector (2) | |
| Titworth Road | | | | | | | | |
| Butters/End | Minor Collector | | | | | | Minor Collector (2) | |
| Townsend Road | | | | | | | | |
| SR-115/Holt | Minor Collector | | | | | | Minor Collector (2) | |
| Vail Road | | | | | | | | |
| Lack/Kalin | Minor Collector | | | | | | Minor Collector (2) | |
| Van Der Linden | | | | | | | | |
| Hunt/Connelly | Minor Collector | | | | | | Minor Collector (2) | |
| Vencill Road | | | | | | | | |
| Connelly/Heber | Minor Collector | | | | | | Minor Collector (2) | |

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES (continued)**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|--|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| Verde School Road | | | | | | | | |
| Keffer/Bornt | Minor Collector | | | | | | Minor Collector (2) | |
| Villa Road | | | | | | | | |
| Dogwood/Cooley | Minor Collector | | | | | | Minor Collector (2) | |
| Wahl Road | | | | | | | | |
| Nichols/Clark | Minor Collector | | | | | | Minor Collector (2) | |
| Walker Road | | | | | | | | |
| Gentry/End | Major Collector | | | | | | Major Collector (4) | |
| Gentry/Brandt | Minor Collector | | | | | | Minor Collector (2) | |
| Ware Road | | | | | | | | |
| Fawcett/Willoughby | Major Collector | | | | | | Major Collector (4) | |
| Weaver Road | | | | | | | | |
| Kalin/SR-86 | Minor Collector | | | | | | Minor Collector (2) | |
| Webster Road | | | | | | | | |
| Kalin/Brandt | Minor Collector | | | | | | Minor Collector (2) | |
| Westmorland Road | | | | | | | | |
| Boley/Evan Hewes Hwy | Minor Collector | | | | | | Minor Collector (2) | |
| Westside Road | | | | | | | | |
| Evan Hewes Hwy/End | Minor Collector | | | | | | Minor Collector (2) | |
| Wheeler Road | | | | | | | | |
| Erskine/Pierle | Minor Collector | | | | | | Minor Collector (2) | |
| Wieman Road | | | | | | | | |
| Steiner/Cady | Minor Collector | | | | | | Minor Collector (2) | |
| Wienert Road | | | | | | | | |
| Guthrie/Forrester | Minor Collector | | | | | | Minor Collector (2) | |
| Wiest Road | | | | | | | | |
| SR-78/Griffin | Minor Collector | | | | | | Minor Collector (2) | |
| Griffin/Boyd | Local | | | | | | Minor Collector (2) | |
| McDonald/SR-115 | Minor Collector | | | | | | Minor Collector (2) | |
| Wilkins Road | | | | | | | | |
| English/Cuff | Minor Collector | | | | | | Minor Collector (2) | |
| Wilkinson Road | | | | | | | | |
| Brandt/SR-111 | Minor Collector | | | | | | Minor Collector (2) | |
| Wiest/Flett | Minor Collector | | | | | | Minor Collector (2) | |
| Willoughby Road | | | | | | | | |
| Proposed La Brucherie/Clark | none | | | | | | Major Collector (4) | |
| Clark/Dogwood | Minor Collector | | | | | | Major Collector (4) | |
| Dogwood/Kloke | Major Collector | | | | | | Major Collector (4) | |
| Wirt Road | | | | | | | | |
| Wiest/Kaiser | Minor Collector | | | | | | Minor Collector (2) | |
| Wixom Road | | | | | | | | |
| Liebert/Drew | Minor Collector | | | | | | Minor Collector (2) | |
| Wormwood Road | | | | | | | | |
| Dearborn/Fisher | Minor Collector | | | | | | Minor Collector (2) | |
| Worthington Road (S28) | | | | | | | | |
| Huff/Highline | Major Collector | | | | | | Major Collector (4) | |
| Yocum Road | | | | | | | | |
| Proposed Dogwood/Lyerly | none | | | | | | Major Collector (2) | |
| Lyerly/Kershaw | Minor Collector | | | | | | Major Collector (4) | |
| Kershaw/Blair | Local | | | | | | Major Collector (4) | |
| Young Road | | | | | | | | |
| SR-111/Blair | Minor Collector | | | | | | Minor Collector (2) | |
| Zenos Road | | | | | | | | |
| Barbara Worth/Holtville (City) | Minor Collector | | | | | | Minor Collector (2) | |
| State Route 78 | | | | | | | | |
| S.D.-Imperial County Line/Junction SR-86 | State Hwy | N/A | 920 | 8,104 | 1.64 | 13,500 | Collector (4) | A |
| SR-111/SR-115N | State Hwy | N/A | 3,950 | 10,592 | 1.64 | 17,500 | Collector (4) | B |
| SR-115N/SR-115S | State Hwy | N/A | 3,100 | 13,447 | 1.64 | 22,500 | Collector (4) | B |
| 115S/Glamis | State Hwy | N/A | 1,950 | 7,340 | 1.64 | 12,500 | Collector (4) | A |
| Glamis/Olgilby | State Hwy | N/A | 1,850 | 4,909 | 1.64 | 8,500 | Collector (4) | A |
| Olgilby/Palo Verde, Fourth | State Hwy | N/A | 2,000 | 5,307 | 1.64 | 9,000 | Collector (4) | A |
| Palo Verde, Fourth/Imperial County Line | State Hwy | N/A | 2,000 | 5,307 | 1.64 | 9,000 | Collector (4) | A |

**TABLE 3
IMPERIAL COUNTY PROJECTED STREET SEGMENT CONFIGURATIONS AND
VOLUMES (continued)**

| Segment Location | 2003 Classification | Year 2002 ADT Volume ^a | Year 2005 ADT Volume ^a | Year 2025 ADT Volume ^c | 25 Year Total Growth Factor ^d | Year 2050 ADT Volume | Year 2050 Recommended Classification (# of Lanes) | 2050 LOS ^e |
|---|---------------------|-----------------------------------|-----------------------------------|-----------------------------------|--|----------------------|---|-----------------------|
| State Route 86 | | | | | | | | |
| Imperial County Line/Desert Shores | State Hwy | N/A | 12,900 | 21,138 | 1.28 | 27,500 | Minor Arterial (4) | C |
| Desert Shores/Brawley Ave. | State Hwy | N/A | 12,400 | 20,319 | 1.28 | 26,500 | Collector (4) | C |
| Brawley Ave./S. Marina | State Hwy | N/A | 13,400 | 21,957 | 1.28 | 28,500 | Minor Arterial (4) | C |
| S. Marina/Air Park | State Hwy | N/A | 12,100 | 19,827 | 1.64 | 33,000 | Prime Arterial (6-divided) | B |
| Air Park/SR-78 West | State Hwy | N/A | 10,800 | 17,697 | 1.64 | 29,500 | Minor Arterial (4) | C |
| SR-78 West/Lack | State Hwy | N/A | 10,800 | 17,890 | 1.64 | 29,500 | Minor Arterial (4) | C |
| Lack/West Westmorland City Limits | State Hwy | N/A | 10,200 | 19,650 | 1.64 | 32,500 | Prime Arterial (6-divided) | B |
| E Westmorland C. Limits/W Brawley C. Limits | State Hwy | N/A | 14,000 | 19,440 | 1.64 | 32,000 | Prime Arterial (6-divided) | B |
| South Brawley City Limits/Legion | State Hwy | N/A | 21,400 | 28,300 | 1.13 | 32,500 | Prime Arterial (6-divided) | B |
| Legion/Keystone | State Hwy | N/A | 19,100 | 27,940 | 1.13 | 32,000 | Prime Arterial (6-divided) | B |
| Keystone/Imperial Ave. | State Hwy | N/A | 14,700 | 27,980 | 1.13 | 32,000 | Prime Arterial (6-divided) | B |
| I-8/McCabe | State Hwy | N/A | 21,500 | 24,890 | 1.28 | 32,000 | Prime Arterial (6-divided) | B |
| McCabe/Heber | State Hwy | N/A | 7,100 | 26,100 | 1.28 | 33,500 | Prime Arterial (6-divided) | B |
| Heber/Dogwood | State Hwy | N/A | 7,500 | 26,100 | 1.28 | 33,500 | Prime Arterial (6-divided) | B |
| Dogwood/SR-111 | State Hwy | N/A | 5,200 | 26,000 | 1.28 | 33,500 | Prime Arterial (6-divided) | B |
| South Imperial City Limits/North El Centro City Limits | State Hwy | N/A | 6,500 | 27,980 | 1.13 | 32,000 | Prime Arterial (6-divided) | B |
| State Route 98 | | | | | | | | |
| Imperial Hwy/Drew | State Hwy | N/A | 2,300 | 1,730 | 1.64 | 3,000 | Local Collector (2) | B |
| Drew/Clark | State Hwy | N/A | 3,800 | 5,350 | 1.64 | 9,000 | Collector (4) | A |
| Clark/Dogwood | State Hwy | N/A | 4,550 | 8,800 | 1.64 | 14,500 | Collector (4) | B |
| Dogwood/West Calexico City Limits | State Hwy | N/A | 9,800 | 24,180 | 1.64 | 31,500 | Prime Arterial (6-divided) | B |
| East Calexico City Limits/Barbara Worth | State Hwy | N/A | 24,400 | 26,000 | 1.64 | 33,500 | Prime Arterial (6-divided) | B |
| Barbara Worth/Bonds Corner | State Hwy | N/A | 16,300 | 26,000 | 1.64 | 33,500 | Prime Arterial (6-divided) | B |
| Bonds Corner/E. Highline Canal | State Hwy | N/A | 4,500 | 770 | 1.64 | 1,500 | Local Collector (2) | A |
| E. Highline Canal/I-8 | State Hwy | N/A | 2,200 | 250 | 1.64 | 500 | Local Collector (2) | A |
| State Route 111 | | | | | | | | |
| North Calexico City Limits | State Hwy | N/A | 50,000 | 97,570 | 1.13 | 111,000 | Freeway (8) | C |
| Heber/McCabe | State Hwy | N/A | 33,500 | 98,650 | 1.13 | 112,000 | Freeway (8) | C |
| McCabe/I-8 | State Hwy | N/A | 37,000 | 90,830 | 1.13 | 103,000 | Freeway (8) | C |
| I-8/Evan Hewes Hwy | State Hwy | N/A | 16,300 | 52,980 | 1.13 | 60,500 | Expressway (6) | D |
| Evan Hewes/Aten | State Hwy | N/A | 14,100 | 60,200 | 1.13 | 68,500 | Expressway (6) | D |
| Aten/Worthington | State Hwy | N/A | 11,300 | 58,160 | 1.13 | 66,000 | Expressway (6) | D |
| Worthington/Keystone | State Hwy | N/A | 10,600 | 58,710 | 1.13 | 67,000 | Expressway (6) | D |
| Keystone/E. Junction 78 | State Hwy | N/A | 9,300 | 57,590 | 1.13 | 65,500 | Expressway (6) | D |
| North Brawley City Limits/Rutherford | State Hwy | N/A | 9,500 | 18,510 | 1.64 | 30,500 | Prime Arterial (6-divided) | B |
| Rutherford/South Calipatria City Limits | State Hwy | N/A | 6,600 | 18,560 | 1.64 | 30,500 | Prime Arterial (6-divided) | B |
| North Calipatria City Limits/Sinclair | State Hwy | N/A | 5,700 | 15,640 | 1.64 | 26,000 | Minor Arterial (4) | C |
| Sinclair/Niland Ave | State Hwy | N/A | 5,100 | 13,532 | 1.64 | 22,500 | Collector (4) | B |
| Niland Ave/English | State Hwy | N/A | 3,700 | 9,817 | 1.64 | 16,500 | Collector (4) | B |
| English/Bombay Beach | State Hwy | N/A | 2,300 | 6,103 | 1.64 | 10,500 | Collector (4) | A |
| Bombay Beach/Imperial-Riverside County line | State Hwy | N/A | 1,900 | 5,041 | 1.64 | 8,500 | Collector (4) | A |
| State Route 115 | | | | | | | | |
| Junction I-8/East Holtville City Limits | State Hwy | N/A | 1,850 | 4,140 | 1.64 | 7,000 | Local Collector (2) | C |
| West Holtville City Limits/West Junction Evan Hewes Hwy | State Hwy | N/A | 6,600 | 8,320 | 1.64 | 14,000 | Collector (4) | B |
| West Junction Evan Hewes Hwy/SR-78 | State Hwy | N/A | 2,850 | 27,870 | 1.13 | 32,000 | Prime Arterial (6-divided) | B |
| SR-78/Rutherford | State Hwy | N/A | 990 | 13,450 | 1.64 | 22,500 | Minor Arterial (4) | B |
| Rutherford/Wirt | State Hwy | N/A | 1,650 | 9,720 | 1.64 | 16,000 | Collector (4) | B |
| Wirt/East Calipatria City Limits | State Hwy | N/A | 1,150 | 9,240 | 1.64 | 15,500 | Collector (4) | B |
| State Route 186 | | | | | | | | |
| I-8/International Border | State Hwy | N/A | | | | | State Hwy | |

Notes:

- * See Table 1 regarding additional right-of-way for transit facility with roadway.
- a. Volume from Imperial County Circulation and Scenic Highways Element Manual (Dec. 2003).
- b. Volume from Caltrans, Imperial County, or Linscott Law & Greenspan, Engineers counts.
- c. Volumes from Caltrans CalxGP+ Model and adjusted higher in some cases.
- d. A 0.5%, 1.0%, or 2.0% annual growth rate was applied to the Year 2025 volumes to obtain Year 2050 volumes.
- e. Capacity based on the Imperial County Classification Table (depending on the Year 2050 volume amount).

Appendix H

Count Data

DIEHL BTN DERRICK & DREW

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | | |
|-----------|----|----|----|----|-----------|----|----|----|----|----|----|----|----|
| 00:00 | | | 0 | 0 | 12:00 | | | 2 | 3 | | | | |
| 00:15 | | | 0 | 0 | 12:15 | | | 1 | 4 | | | | |
| 00:30 | | | 0 | 1 | 12:30 | | | 0 | 3 | | | | |
| 00:45 | | | 1 | 1 | 0 | 1 | 2 | 0 | 3 | 13 | 16 | | |
| 01:00 | | | 1 | 0 | 13:00 | | | 6 | 2 | | | | |
| 01:15 | | | 0 | 0 | 13:15 | | | 0 | 2 | | | | |
| 01:30 | | | 0 | 0 | 13:30 | | | 2 | 0 | | | | |
| 01:45 | | | 1 | 2 | 0 | 0 | 2 | 0 | 8 | 0 | 4 | 12 | |
| 02:00 | | | 0 | 0 | 14:00 | | | 0 | 0 | | | | |
| 02:15 | | | 0 | 1 | 14:15 | | | 2 | 0 | | | | |
| 02:30 | | | 0 | 0 | 14:30 | | | 0 | 0 | | | | |
| 02:45 | | | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 1 | 1 | 5 | |
| 03:00 | | | 0 | 0 | 15:00 | | | 0 | 2 | | | | |
| 03:15 | | | 1 | 0 | 15:15 | | | 2 | 0 | | | | |
| 03:30 | | | 0 | 1 | 15:30 | | | 2 | 0 | | | | |
| 03:45 | | | 1 | 2 | 0 | 1 | 3 | 1 | 5 | 2 | 4 | 9 | |
| 04:00 | | | 0 | 0 | 16:00 | | | 1 | 0 | | | | |
| 04:15 | | | 0 | 0 | 16:15 | | | 2 | 0 | | | | |
| 04:30 | | | 0 | 0 | 16:30 | | | 2 | 1 | | | | |
| 04:45 | | | 0 | 0 | 0 | 1 | 1 | 0 | 5 | 1 | 2 | 7 | |
| 05:00 | | | 1 | 1 | 17:00 | | | 0 | 0 | | | | |
| 05:15 | | | 1 | 0 | 17:15 | | | 2 | 1 | | | | |
| 05:30 | | | 0 | 1 | 17:30 | | | 0 | 0 | | | | |
| 05:45 | | | 0 | 2 | 0 | 2 | 4 | 2 | 4 | 0 | 1 | 5 | |
| 06:00 | | | 1 | 2 | 18:00 | | | 3 | 1 | | | | |
| 06:15 | | | 0 | 2 | 18:15 | | | 2 | 6 | | | | |
| 06:30 | | | 1 | 0 | 18:30 | | | 0 | 2 | | | | |
| 06:45 | | | 2 | 4 | 0 | 5 | 9 | 2 | 7 | 1 | 10 | 17 | |
| 07:00 | | | 2 | 2 | 19:00 | | | 0 | 0 | | | | |
| 07:15 | | | 5 | 3 | 19:15 | | | 2 | 4 | | | | |
| 07:30 | | | 4 | 2 | 19:30 | | | 0 | 0 | | | | |
| 07:45 | | | 2 | 13 | 0 | 2 | 9 | 22 | 1 | 3 | 1 | 5 | 8 |
| 08:00 | | | 0 | 2 | 20:00 | | | 0 | 0 | | | | |
| 08:15 | | | 0 | 3 | 20:15 | | | 1 | 1 | | | | |
| 08:30 | | | 6 | 3 | 20:30 | | | 0 | 0 | | | | |
| 08:45 | | | 4 | 10 | 0 | 1 | 9 | 19 | 0 | 1 | 0 | 1 | 2 |
| 09:00 | | | 1 | 1 | 21:00 | | | 5 | 3 | | | | |
| 09:15 | | | 1 | 3 | 21:15 | | | 0 | 1 | | | | |
| 09:30 | | | 3 | 1 | 21:30 | | | 2 | 0 | | | | |
| 09:45 | | | 4 | 9 | 0 | 1 | 6 | 15 | 0 | 7 | 1 | 5 | 12 |
| 10:00 | | | 0 | 2 | 22:00 | | | 0 | 1 | | | | |
| 10:15 | | | 0 | 0 | 22:15 | | | 0 | 0 | | | | |
| 10:30 | | | 0 | 0 | 22:30 | | | 0 | 0 | | | | |
| 10:45 | | | 2 | 2 | 0 | 2 | 4 | 4 | 1 | 1 | 1 | 2 | 3 |
| 11:00 | | | 1 | 2 | 23:00 | | | 0 | 1 | | | | |
| 11:15 | | | 1 | 0 | 23:15 | | | 0 | 0 | | | | |
| 11:30 | | | 5 | 1 | 23:30 | | | 0 | 0 | | | | |
| 11:45 | | | 3 | 10 | 0 | 2 | 5 | 15 | 1 | 1 | 0 | 1 | 2 |

| | | | | | | | | | | |
|-------------------|--|--|----|----|------------|--|--|----|----|-----------|
| Total Vol. | | | 55 | 46 | 101 | | | 49 | 49 | 98 |
|-------------------|--|--|----|----|------------|--|--|----|----|-----------|

| | | Daily Totals | | | | |
|--|--|---------------------|----|-----|----|------------|
| | | NB | SB | EB | WB | Combined |
| | | | | 104 | 95 | 199 |

| | AM | | | PM | | |
|------------------|-----------|-------|--------------|-----------|-------|--------------|
| Split % | 54.5% | 45.5% | 50.8% | 50.0% | 50.0% | 49.2% |
| Peak Hour | 06:45 | 06:45 | 06:45 | 12:45 | 12:00 | 12:15 |
| Volume | 13 | 12 | 25 | 8 | 13 | 19 |
| P.H.F. | 0.65 | 0.60 | 0.78 | 0.33 | 0.81 | 0.59 |

DREW BTN EVAN HEWES & I-8

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | |
|-----------|----|-----|----|-----|-----------|-------|----|----|----|-----|-----|
| 00:00 | 4 | 3 | | | 12:00 | 13 | 18 | | | | |
| 00:15 | 2 | 4 | | | 12:15 | 20 | 16 | | | | |
| 00:30 | 2 | 1 | | | 12:30 | 13 | 19 | | | | |
| 00:45 | 4 | 12 | 4 | 12 | 24 | 12:45 | 18 | 64 | 30 | 83 | 147 |
| 01:00 | 2 | 2 | | | 13:00 | 10 | 33 | | | | |
| 01:15 | 1 | 6 | | | 13:15 | 13 | 24 | | | | |
| 01:30 | 6 | 1 | | | 13:30 | 35 | 20 | | | | |
| 01:45 | 2 | 11 | 1 | 10 | 21 | 13:45 | 29 | 87 | 10 | 87 | 174 |
| 02:00 | 3 | 0 | | | 14:00 | 19 | 13 | | | | |
| 02:15 | 0 | 1 | | | 14:15 | 14 | 41 | | | | |
| 02:30 | 2 | 1 | | | 14:30 | 16 | 38 | | | | |
| 02:45 | 0 | 5 | 4 | 6 | 11 | 14:45 | 13 | 62 | 19 | 111 | 173 |
| 03:00 | 3 | 0 | | | 15:00 | 14 | 10 | | | | |
| 03:15 | 2 | 3 | | | 15:15 | 17 | 30 | | | | |
| 03:30 | 3 | 3 | | | 15:30 | 18 | 24 | | | | |
| 03:45 | 4 | 12 | 5 | 11 | 23 | 15:45 | 15 | 64 | 19 | 83 | 147 |
| 04:00 | 8 | 2 | | | 16:00 | 11 | 35 | | | | |
| 04:15 | 5 | 1 | | | 16:15 | 12 | 20 | | | | |
| 04:30 | 1 | 6 | | | 16:30 | 15 | 22 | | | | |
| 04:45 | 4 | 18 | 6 | 15 | 33 | 16:45 | 12 | 50 | 16 | 93 | 143 |
| 05:00 | 11 | 3 | | | 17:00 | 18 | 21 | | | | |
| 05:15 | 6 | 8 | | | 17:15 | 11 | 15 | | | | |
| 05:30 | 31 | 12 | | | 17:30 | 15 | 12 | | | | |
| 05:45 | 18 | 66 | 15 | 38 | 104 | 17:45 | 9 | 53 | 9 | 57 | 110 |
| 06:00 | 10 | 10 | | | 18:00 | 7 | 8 | | | | |
| 06:15 | 15 | 8 | | | 18:15 | 9 | 9 | | | | |
| 06:30 | 20 | 9 | | | 18:30 | 9 | 27 | | | | |
| 06:45 | 28 | 73 | 18 | 45 | 118 | 18:45 | 5 | 30 | 14 | 58 | 88 |
| 07:00 | 21 | 15 | | | 19:00 | 7 | 14 | | | | |
| 07:15 | 26 | 22 | | | 19:15 | 14 | 3 | | | | |
| 07:30 | 25 | 33 | | | 19:30 | 10 | 5 | | | | |
| 07:45 | 39 | 111 | 36 | 106 | 217 | 19:45 | 10 | 41 | 9 | 31 | 72 |
| 08:00 | 29 | 36 | | | 20:00 | 11 | 7 | | | | |
| 08:15 | 23 | 13 | | | 20:15 | 5 | 11 | | | | |
| 08:30 | 7 | 19 | | | 20:30 | 16 | 4 | | | | |
| 08:45 | 23 | 82 | 24 | 92 | 174 | 20:45 | 5 | 37 | 7 | 29 | 66 |
| 09:00 | 13 | 22 | | | 21:00 | 9 | 5 | | | | |
| 09:15 | 12 | 26 | | | 21:15 | 8 | 3 | | | | |
| 09:30 | 19 | 21 | | | 21:30 | 14 | 2 | | | | |
| 09:45 | 10 | 54 | 19 | 88 | 142 | 21:45 | 14 | 45 | 5 | 15 | 60 |
| 10:00 | 8 | 28 | | | 22:00 | 12 | 12 | | | | |
| 10:15 | 18 | 17 | | | 22:15 | 8 | 31 | | | | |
| 10:30 | 9 | 11 | | | 22:30 | 6 | 14 | | | | |
| 10:45 | 15 | 50 | 27 | 83 | 133 | 22:45 | 6 | 32 | 1 | 58 | 90 |
| 11:00 | 12 | 26 | | | 23:00 | 8 | 1 | | | | |
| 11:15 | 13 | 19 | | | 23:15 | 3 | 5 | | | | |
| 11:30 | 11 | 27 | | | 23:30 | 2 | 1 | | | | |
| 11:45 | 13 | 49 | 17 | 89 | 138 | 23:45 | 9 | 22 | 6 | 13 | 35 |

| | | | | | | | | | | |
|-------------------|-----|-----|--|--|-------------|------|------|---------------------|----|-----------------|
| Total Vol. | 543 | 595 | | | 1138 | 587 | 718 | | | 1305 |
| | | | | | | | | Daily Totals | | |
| | | | | | | NB | SB | EB | WB | Combined |
| | | | | | | 1130 | 1313 | | | 2443 |

| | AM | | | | PM | | | |
|------------------|-------|-------|--------------|--|-------|-------|--|--------------|
| Split % | 47.7% | 52.3% | 46.6% | | 45.0% | 55.0% | | 53.4% |
| Peak Hour | 07:15 | 07:15 | 07:15 | | 13:30 | 14:00 | | 12:45 |
| Volume | 119 | 127 | 246 | | 97 | 111 | | 183 |
| P.H.F. | 0.76 | 0.88 | 0.82 | | 0.73 | 0.68 | | 0.83 |

DREW BTN DIEHL & KUBLER

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | |
|-----------|----|----|----|----|-----------|-------|----|----|----|----|----|
| 00:00 | 0 | 2 | | | 12:00 | 2 | 1 | | | | |
| 00:15 | 0 | 1 | | | 12:15 | 8 | 8 | | | | |
| 00:30 | 1 | 0 | | | 12:30 | 5 | 0 | | | | |
| 00:45 | 1 | 2 | 2 | 5 | 7 | 12:45 | 3 | 18 | 2 | 11 | 29 |
| 01:00 | 0 | 1 | | | 13:00 | 6 | 6 | | | | |
| 01:15 | 2 | 1 | | | 13:15 | 1 | 1 | | | | |
| 01:30 | 0 | 0 | | | 13:30 | 10 | 2 | | | | |
| 01:45 | 0 | 2 | 0 | 2 | 4 | 13:45 | 2 | 19 | 2 | 11 | 30 |
| 02:00 | 0 | 1 | | | 14:00 | 6 | 4 | | | | |
| 02:15 | 1 | 0 | | | 14:15 | 5 | 3 | | | | |
| 02:30 | 3 | 0 | | | 14:30 | 3 | 5 | | | | |
| 02:45 | 1 | 5 | 2 | 3 | 8 | 14:45 | 2 | 16 | 7 | 19 | 35 |
| 03:00 | 0 | 0 | | | 15:00 | 3 | 4 | | | | |
| 03:15 | 0 | 0 | | | 15:15 | 5 | 4 | | | | |
| 03:30 | 0 | 1 | | | 15:30 | 2 | 2 | | | | |
| 03:45 | 1 | 1 | 1 | 2 | 3 | 15:45 | 6 | 16 | 4 | 14 | 30 |
| 04:00 | 0 | 1 | | | 16:00 | 2 | 7 | | | | |
| 04:15 | 1 | 1 | | | 16:15 | 1 | 1 | | | | |
| 04:30 | 1 | 0 | | | 16:30 | 0 | 10 | | | | |
| 04:45 | 1 | 3 | 2 | 4 | 7 | 16:45 | 5 | 8 | 8 | 26 | 34 |
| 05:00 | 1 | 2 | | | 17:00 | 2 | 1 | | | | |
| 05:15 | 3 | 13 | | | 17:15 | 2 | 8 | | | | |
| 05:30 | 4 | 3 | | | 17:30 | 2 | 1 | | | | |
| 05:45 | 2 | 10 | 2 | 20 | 30 | 17:45 | 1 | 7 | 2 | 12 | 19 |
| 06:00 | 5 | 4 | | | 18:00 | 1 | 4 | | | | |
| 06:15 | 3 | 3 | | | 18:15 | 5 | 3 | | | | |
| 06:30 | 9 | 2 | | | 18:30 | 2 | 3 | | | | |
| 06:45 | 6 | 23 | 2 | 11 | 34 | 18:45 | 4 | 12 | 4 | 14 | 26 |
| 07:00 | 9 | 1 | | | 19:00 | 1 | 3 | | | | |
| 07:15 | 10 | 6 | | | 19:15 | 0 | 0 | | | | |
| 07:30 | 8 | 5 | | | 19:30 | 3 | 1 | | | | |
| 07:45 | 6 | 33 | 10 | 22 | 55 | 19:45 | 1 | 5 | 2 | 6 | 11 |
| 08:00 | 3 | 5 | | | 20:00 | 0 | 1 | | | | |
| 08:15 | 3 | 1 | | | 20:15 | 0 | 2 | | | | |
| 08:30 | 4 | 7 | | | 20:30 | 1 | 1 | | | | |
| 08:45 | 1 | 11 | 10 | 23 | 34 | 20:45 | 0 | 1 | 0 | 4 | 5 |
| 09:00 | 6 | 6 | | | 21:00 | 0 | 2 | | | | |
| 09:15 | 7 | 2 | | | 21:15 | 2 | 1 | | | | |
| 09:30 | 3 | 3 | | | 21:30 | 0 | 0 | | | | |
| 09:45 | 2 | 18 | 2 | 13 | 31 | 21:45 | 0 | 2 | 1 | 4 | 6 |
| 10:00 | 1 | 7 | | | 22:00 | 0 | 0 | | | | |
| 10:15 | 5 | 4 | | | 22:15 | 3 | 1 | | | | |
| 10:30 | 1 | 3 | | | 22:30 | 0 | 0 | | | | |
| 10:45 | 5 | 12 | 4 | 18 | 30 | 22:45 | 0 | 3 | 0 | 1 | 4 |
| 11:00 | 2 | 5 | | | 23:00 | 1 | 1 | | | | |
| 11:15 | 4 | 1 | | | 23:15 | 0 | 0 | | | | |
| 11:30 | 7 | 7 | | | 23:30 | 0 | 0 | | | | |
| 11:45 | 8 | 21 | 3 | 16 | 37 | 23:45 | 0 | 1 | 1 | 2 | 3 |

| | | | | | | | | | | |
|-------------------|-------|-------|--|--|--------------|-------|-------|---------------------|----|-----------------|
| Total Vol. | 141 | 139 | | | 280 | 108 | 124 | | | 232 |
| | | | | | | | | Daily Totals | | |
| | | | | | | NB | SB | EB | WB | Combined |
| | | | | | | 249 | 263 | | | 512 |
| Split % | 50.4% | 49.6% | | | 54.7% | 46.6% | 53.4% | | | 45.3% |
| Peak Hour | 06:30 | 07:15 | | | 07:00 | 13:30 | 16:30 | | | 12:15 |
| Volume | 34 | 26 | | | 55 | 23 | 27 | | | 38 |
| P.H.F. | 0.85 | 0.65 | | | 0.86 | 0.60 | 0.68 | | | 0.59 |

EVAN HEWES BTN DERRICK & DREW

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | |
|-----------|----|----|----|-----|-----------|-----|-----|----|-----|----|----|-----|
| 00:00 | | | 0 | 1 | 12:00 | | | 19 | 22 | | | |
| 00:15 | | | 1 | 0 | 12:15 | | | 22 | 26 | | | |
| 00:30 | | | 0 | 0 | 12:30 | | | 26 | 20 | | | |
| 00:45 | | | 0 | 1 | 0 | 1 | 2 | 31 | 98 | 18 | 86 | 184 |
| 01:00 | | | 2 | 0 | 13:00 | | | 22 | 12 | | | |
| 01:15 | | | 1 | 2 | 13:15 | | | 35 | 15 | | | |
| 01:30 | | | 0 | 1 | 13:30 | | | 31 | 11 | | | |
| 01:45 | | | 0 | 3 | 0 | 3 | 6 | 25 | 113 | 19 | 57 | 170 |
| 02:00 | | | 0 | 0 | 14:00 | | | 28 | 16 | | | |
| 02:15 | | | 2 | 0 | 14:15 | | | 22 | 14 | | | |
| 02:30 | | | 1 | 2 | 14:30 | | | 26 | 10 | | | |
| 02:45 | | | 0 | 3 | 1 | 3 | 6 | 31 | 107 | 11 | 51 | 158 |
| 03:00 | | | 0 | 0 | 15:00 | | | 33 | 9 | | | |
| 03:15 | | | 0 | 2 | 15:15 | | | 26 | 15 | | | |
| 03:30 | | | 0 | 1 | 15:30 | | | 32 | 12 | | | |
| 03:45 | | | 0 | 0 | 3 | 6 | 6 | 42 | 133 | 16 | 52 | 185 |
| 04:00 | | | 2 | 4 | 16:00 | | | 80 | 18 | | | |
| 04:15 | | | 1 | 5 | 16:15 | | | 55 | 25 | | | |
| 04:30 | | | 0 | 9 | 16:30 | | | 62 | 20 | | | |
| 04:45 | | | 2 | 5 | 11 | 29 | 34 | 40 | 237 | 28 | 91 | 328 |
| 05:00 | | | 3 | 20 | 17:00 | | | 31 | 22 | | | |
| 05:15 | | | 7 | 18 | 17:15 | | | 33 | 16 | | | |
| 05:30 | | | 15 | 70 | 17:30 | | | 26 | 12 | | | |
| 05:45 | | | 12 | 37 | 41 | 149 | 186 | 20 | 110 | 10 | 60 | 170 |
| 06:00 | | | 20 | 35 | 18:00 | | | 15 | 9 | | | |
| 06:15 | | | 10 | 31 | 18:15 | | | 16 | 13 | | | |
| 06:30 | | | 28 | 44 | 18:30 | | | 20 | 11 | | | |
| 06:45 | | | 31 | 89 | 36 | 146 | 235 | 11 | 62 | 10 | 43 | 105 |
| 07:00 | | | 20 | 35 | 19:00 | | | 15 | 9 | | | |
| 07:15 | | | 22 | 20 | 19:15 | | | 12 | 12 | | | |
| 07:30 | | | 19 | 44 | 19:30 | | | 11 | 6 | | | |
| 07:45 | | | 22 | 83 | 55 | 154 | 237 | 12 | 50 | 7 | 34 | 84 |
| 08:00 | | | 26 | 30 | 20:00 | | | 9 | 9 | | | |
| 08:15 | | | 31 | 33 | 20:15 | | | 8 | 8 | | | |
| 08:30 | | | 33 | 18 | 20:30 | | | 2 | 12 | | | |
| 08:45 | | | 35 | 125 | 20 | 101 | 226 | 5 | 24 | 7 | 36 | 60 |
| 09:00 | | | 20 | 16 | 21:00 | | | 3 | 6 | | | |
| 09:15 | | | 26 | 11 | 21:15 | | | 4 | 15 | | | |
| 09:30 | | | 28 | 15 | 21:30 | | | 6 | 11 | | | |
| 09:45 | | | 21 | 95 | 20 | 62 | 157 | 7 | 20 | 9 | 41 | 61 |
| 10:00 | | | 15 | 22 | 22:00 | | | 17 | 10 | | | |
| 10:15 | | | 12 | 18 | 22:15 | | | 11 | 7 | | | |
| 10:30 | | | 18 | 11 | 22:30 | | | 18 | 6 | | | |
| 10:45 | | | 22 | 67 | 15 | 66 | 133 | 3 | 49 | 2 | 25 | 74 |
| 11:00 | | | 20 | 10 | 23:00 | | | 5 | 3 | | | |
| 11:15 | | | 19 | 16 | 23:15 | | | 2 | 1 | | | |
| 11:30 | | | 10 | 22 | 23:30 | | | 5 | 2 | | | |
| 11:45 | | | 16 | 65 | 10 | 58 | 123 | 3 | 15 | 3 | 9 | 24 |

| | | | | | | | | | | |
|-------------------|--|--|-----|-----|------|--|--|------|-----|------|
| Total Vol. | | | 573 | 778 | 1351 | | | 1018 | 585 | 1603 |
|-------------------|--|--|-----|-----|------|--|--|------|-----|------|

| | AM | | | PM | | |
|------------------|-------|-------|--------------|-------|-------|--------------|
| | NB | SB | Combined | NB | SB | Combined |
| Split % | 42.4% | 57.6% | 45.7% | 63.5% | 36.5% | 54.3% |
| Peak Hour | 08:00 | 05:30 | 07:30 | 15:45 | 16:15 | 16:00 |
| Volume | 125 | 177 | 260 | 239 | 95 | 328 |
| P.H.F. | 0.89 | 0.63 | 0.84 | 0.75 | 0.85 | 0.84 |

EVAN HEWES BTN DREW & FORRESTER

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | |
|-----------|----|----|----|-----|-----------|-----|-----|----|-----|----|-----|-----|
| 00:00 | | | 1 | 3 | 12:00 | | | 22 | 26 | | | |
| 00:15 | | | 1 | 3 | 12:15 | | | 27 | 22 | | | |
| 00:30 | | | 2 | 0 | 12:30 | | | 29 | 15 | | | |
| 00:45 | | | 2 | 6 | 2 | 8 | 14 | 21 | 99 | 31 | 94 | 193 |
| 01:00 | | | 1 | 2 | 13:00 | | | 33 | 18 | | | |
| 01:15 | | | 4 | 0 | 13:15 | | | 32 | 31 | | | |
| 01:30 | | | 3 | 2 | 13:30 | | | 19 | 32 | | | |
| 01:45 | | | 1 | 9 | 0 | 4 | 13 | 20 | 104 | 26 | 107 | 211 |
| 02:00 | | | 2 | 0 | 14:00 | | | 29 | 17 | | | |
| 02:15 | | | 0 | 0 | 14:15 | | | 37 | 18 | | | |
| 02:30 | | | 0 | 0 | 14:30 | | | 46 | 19 | | | |
| 02:45 | | | 0 | 2 | 0 | 0 | 2 | 40 | 152 | 22 | 76 | 228 |
| 03:00 | | | 2 | 0 | 15:00 | | | 35 | 14 | | | |
| 03:15 | | | 3 | 2 | 15:15 | | | 35 | 12 | | | |
| 03:30 | | | 0 | 3 | 15:30 | | | 32 | 23 | | | |
| 03:45 | | | 2 | 7 | 4 | 9 | 16 | 41 | 143 | 23 | 72 | 215 |
| 04:00 | | | 0 | 5 | 16:00 | | | 40 | 19 | | | |
| 04:15 | | | 2 | 3 | 16:15 | | | 39 | 12 | | | |
| 04:30 | | | 0 | 6 | 16:30 | | | 33 | 15 | | | |
| 04:45 | | | 5 | 7 | 9 | 23 | 30 | 46 | 158 | 21 | 67 | 225 |
| 05:00 | | | 5 | 9 | 17:00 | | | 26 | 12 | | | |
| 05:15 | | | 3 | 12 | 17:15 | | | 33 | 16 | | | |
| 05:30 | | | 4 | 17 | 17:30 | | | 19 | 11 | | | |
| 05:45 | | | 6 | 18 | 42 | 80 | 98 | 12 | 90 | 11 | 50 | 140 |
| 06:00 | | | 10 | 27 | 18:00 | | | 5 | 12 | | | |
| 06:15 | | | 7 | 17 | 18:15 | | | 10 | 15 | | | |
| 06:30 | | | 11 | 17 | 18:30 | | | 9 | 13 | | | |
| 06:45 | | | 20 | 48 | 20 | 81 | 129 | 11 | 35 | 15 | 55 | 90 |
| 07:00 | | | 29 | 21 | 19:00 | | | 14 | 10 | | | |
| 07:15 | | | 31 | 34 | 19:15 | | | 12 | 10 | | | |
| 07:30 | | | 30 | 49 | 19:30 | | | 13 | 14 | | | |
| 07:45 | | | 19 | 109 | 57 | 161 | 270 | 12 | 51 | 7 | 41 | 92 |
| 08:00 | | | 16 | 38 | 20:00 | | | 10 | 6 | | | |
| 08:15 | | | 21 | 17 | 20:15 | | | 9 | 3 | | | |
| 08:30 | | | 23 | 12 | 20:30 | | | 10 | 5 | | | |
| 08:45 | | | 25 | 85 | 19 | 86 | 171 | 11 | 40 | 10 | 24 | 64 |
| 09:00 | | | 28 | 17 | 21:00 | | | 10 | 7 | | | |
| 09:15 | | | 29 | 20 | 21:15 | | | 4 | 7 | | | |
| 09:30 | | | 23 | 22 | 21:30 | | | 5 | 12 | | | |
| 09:45 | | | 18 | 98 | 18 | 77 | 175 | 9 | 28 | 15 | 41 | 69 |
| 10:00 | | | 16 | 17 | 22:00 | | | 16 | 9 | | | |
| 10:15 | | | 12 | 13 | 22:15 | | | 25 | 6 | | | |
| 10:30 | | | 26 | 12 | 22:30 | | | 12 | 2 | | | |
| 10:45 | | | 30 | 84 | 22 | 64 | 148 | 4 | 57 | 4 | 21 | 78 |
| 11:00 | | | 25 | 27 | 23:00 | | | 3 | 3 | | | |
| 11:15 | | | 17 | 22 | 23:15 | | | 3 | 4 | | | |
| 11:30 | | | 17 | 15 | 23:30 | | | 2 | 3 | | | |
| 11:45 | | | 12 | 71 | 10 | 74 | 145 | 7 | 15 | 2 | 12 | 27 |

| | | | | | | | | | | |
|-------------------|--|--|-----|-----|------|--|--|-----|-----|------|
| Total Vol. | | | 544 | 667 | 1211 | | | 972 | 660 | 1632 |
|-------------------|--|--|-----|-----|------|--|--|-----|-----|------|

| Split % | AM | | | PM | | |
|------------------|-------|-------|----------|-------|-------|----------|
| | NB | SB | Combined | NB | SB | Combined |
| | 44.9% | 55.1% | 42.6% | 59.6% | 40.4% | 57.4% |
| Peak Hour | 06:45 | 07:15 | 07:15 | 14:15 | 12:45 | 14:15 |
| Volume | 110 | 178 | 274 | 158 | 112 | 231 |
| P.H.F. | 0.89 | 0.78 | 0.87 | 0.86 | 0.88 | 0.89 |

CALTRANS 2010 AADT

| Dist | Route | CO | | Postmile | Description | Back Peak Hour | Back Peak Month | Back AADT | Ahead Peak Hour | Ahead Peak Month | Ahead AADT |
|-------------|--------------|-----------|---|-----------------|--------------------|-------------------------------|--------------------------------|----------------------|--------------------------------|---------------------------------|-----------------------|
| 11 | 8 | IMP | R | 23.48 | DUNAWAY RD | 1,800 | 14,200 | 12,100 | 1,800 | 13,200 | 12,200 |
| 11 | 8 | IMP | R | 29.933 | DREW RD | 1,800 | 13,200 | 12,200 | 2,000 | 15,100 | 13,800 |
| 11 | 8 | IMP | R | 33.991 | FORRESTER RD | 2,000 | 15,100 | 13,800 | 2,150 | 19,000 | 17,000 |

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
6/22/11
WEDNESDAY

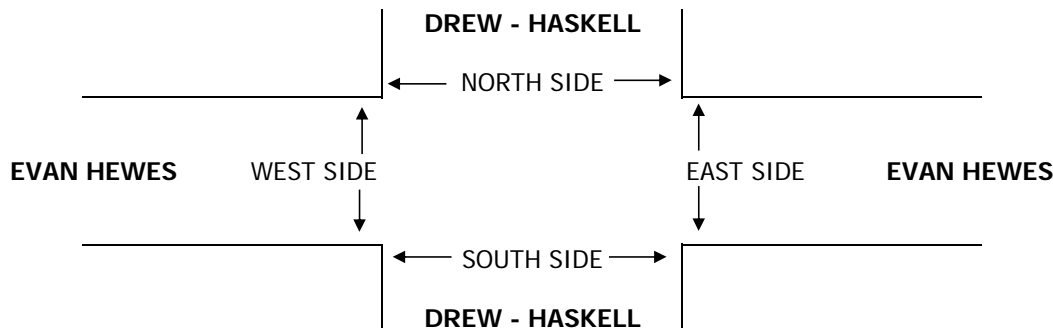
LOCATION:
NORTH & SOUTH: **IMPERIAL**
EAST & WEST: **DREW - HASKELL**
EVAN HEWES

PROJECT #: CA11-0624-02
LOCATION #: 2
CONTROL: 4 WAY STOP

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | S | E ▶ |
| | OTHER | | ▼ | |
| | OTHER | | | |

| LANES: | NORTHBOUND DREW - HASKELL | | | SOUTHBOUND DREW - HASKELL | | | EASTBOUND EVAN HEWES | | | WESTBOUND EVAN HEWES | | | TOTAL |
|--------|------------------------------|----|----|------------------------------|----|----|-------------------------|----|----|-------------------------|----|----|-------|
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | |

| | | | | | | | | | | | | | | |
|----------------|------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|
| AM | 5:30 AM | 34 | 2 | 0 | 1 | 5 | 1 | 0 | 6 | 5 | 3 | 37 | 2 | 96 |
| | 5:45 AM | 17 | 1 | 0 | 3 | 1 | 0 | 1 | 4 | 6 | 2 | 20 | 1 | 56 |
| | 6:00 AM | 12 | 1 | 0 | 0 | 1 | 1 | 1 | 6 | 11 | 0 | 17 | 0 | 50 |
| | 6:15 AM | 20 | 1 | 4 | 3 | 3 | 0 | 0 | 6 | 3 | 1 | 16 | 0 | 57 |
| | 6:30 AM | 17 | 1 | 2 | 2 | 3 | 1 | 1 | 16 | 8 | 1 | 23 | 0 | 75 |
| | 6:45 AM | 18 | 2 | 7 | 0 | 4 | 1 | 1 | 17 | 10 | 3 | 18 | 1 | 82 |
| | 7:00 AM | 10 | 5 | 7 | 1 | 3 | 2 | 2 | 13 | 8 | 7 | 18 | 1 | 77 |
| | 7:15 AM | 24 | 3 | 1 | 3 | 8 | 6 | 1 | 13 | 10 | 10 | 37 | 1 | 117 |
| | VOLUMES | 152 | 16 | 21 | 13 | 28 | 12 | 7 | 81 | 61 | 27 | 186 | 6 | 610 |
| | APPROACH % | 80% | 8% | 11% | 25% | 53% | 23% | 5% | 54% | 41% | 12% | 85% | 3% | |
| APP/DEPART | 189 | / | 29 | 53 | / | 116 | 149 | / | 115 | 219 | / | 350 | 0 | |
| BEGIN PEAK HR | 6:30 AM | | | | | | | | | | | | | |
| VOLUMES | 69 | 11 | 17 | 6 | 18 | 10 | 5 | 59 | 36 | 21 | 96 | 3 | 351 | |
| APPROACH % | 71% | 11% | 18% | 18% | 53% | 29% | 5% | 59% | 36% | 18% | 80% | 3% | | |
| PEAK HR FACTOR | 0.866 | | | 0.500 | | | 0.893 | | | 0.625 | | | 0.750 | |
| APP/DEPART | 97 | / | 19 | 34 | / | 75 | 100 | / | 82 | 120 | / | 175 | 0 | |
| PM | 4:00 PM | 10 | 5 | 2 | 2 | 4 | 2 | 5 | 37 | 32 | 4 | 3 | 6 | 112 |
| | 4:15 PM | 10 | 2 | 1 | 6 | 3 | 1 | 0 | 25 | 14 | 4 | 11 | 3 | 80 |
| | 4:30 PM | 10 | 7 | 4 | 2 | 2 | 5 | 2 | 30 | 24 | 2 | 10 | 3 | 101 |
| | 4:45 PM | 12 | 5 | 3 | 4 | 1 | 4 | 1 | 22 | 22 | 3 | 9 | 7 | 93 |
| | 5:00 PM | 13 | 9 | 1 | 2 | 2 | 0 | 1 | 16 | 11 | 6 | 7 | 5 | 73 |
| | 5:15 PM | 9 | 7 | 1 | 2 | 3 | 1 | 2 | 12 | 19 | 4 | 8 | 6 | 74 |
| | 5:30 PM | 2 | 4 | 3 | 0 | 3 | 3 | 2 | 10 | 8 | 3 | 4 | 7 | 49 |
| | 5:45 PM | 1 | 6 | 1 | 2 | 0 | 0 | 2 | 6 | 6 | 0 | 13 | 3 | 40 |
| | VOLUMES | 67 | 45 | 16 | 20 | 18 | 16 | 15 | 158 | 136 | 26 | 65 | 40 | 622 |
| | APPROACH % | 52% | 35% | 13% | 37% | 33% | 30% | 5% | 51% | 44% | 20% | 50% | 31% | |
| APP/DEPART | 128 | / | 100 | 54 | / | 180 | 309 | / | 194 | 131 | / | 148 | 0 | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | |
| VOLUMES | 42 | 19 | 10 | 14 | 10 | 12 | 8 | 114 | 92 | 13 | 33 | 19 | 386 | |
| APPROACH % | 59% | 27% | 14% | 39% | 28% | 33% | 4% | 53% | 43% | 20% | 51% | 29% | | |
| PEAK HR FACTOR | 0.845 | | | 0.900 | | | 0.723 | | | 0.855 | | | 0.862 | |
| APP/DEPART | 71 | / | 46 | 36 | / | 115 | 214 | / | 138 | 65 | / | 87 | 0 | |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
6/22/11
WEDNESDAY

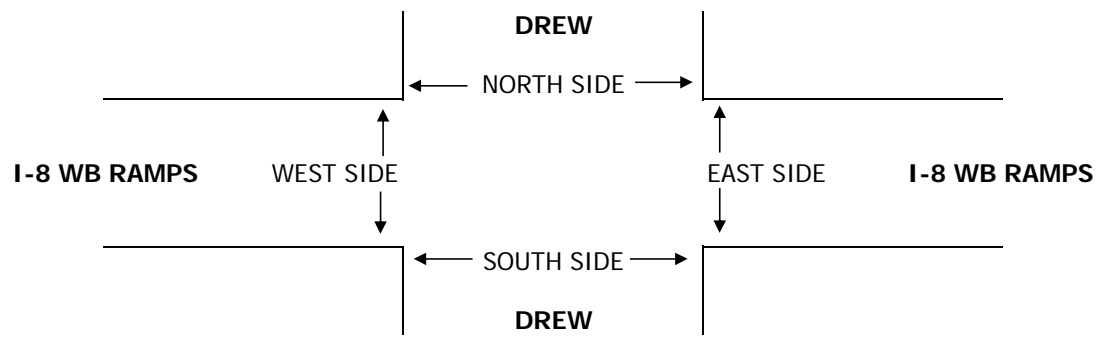
LOCATION: IMPERIAL
NORTH & SOUTH: DREW
EAST & WEST: I-8 WB RAMPS

PROJECT #: CA11-0624-02
LOCATION #: 4
CONTROL: 1 WAY STOP WB

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | | E ▶ |
| | OTHER | | S | |
| | OTHER | | ▼ | |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|------------|----|----|------------|----|----|--------------|----|----|--------------|----|-----|-------|
| | DREW | | | DREW | | | I-8 WB RAMPS | | | I-8 WB RAMPS | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | 1 | 1 | X | X | 1 | 0 | X | X | X | 0.5 | 0 | 0.5 | |

| | | | | | | | | | | | | | | |
|----------------|------------|------|------|-------|-----|-----|-------|----|----|-------|-----|-----|-------|-----|
| AM | 5:30 AM | 1 | 2 | | | 10 | 0 | | | | 3 | 0 | 27 | 43 |
| | 5:45 AM | 1 | 2 | | | 12 | 1 | | | | 8 | 0 | 13 | 37 |
| | 6:00 AM | 2 | 1 | | | 7 | 0 | | | | 7 | 0 | 10 | 27 |
| | 6:15 AM | 0 | 6 | | | 8 | 1 | | | | 1 | 0 | 11 | 27 |
| | 6:30 AM | 0 | 4 | | | 9 | 0 | | | | 4 | 0 | 12 | 29 |
| | 6:45 AM | 1 | 11 | | | 14 | 1 | | | | 2 | 0 | 14 | 43 |
| | 7:00 AM | 0 | 8 | | | 9 | 7 | | | | 3 | 0 | 10 | 37 |
| | 7:15 AM | 6 | 0 | | | 13 | 8 | | | | 3 | 0 | 20 | 50 |
| | VOLUMES | 11 | 34 | 0 | 0 | 82 | 18 | 0 | 0 | 0 | 31 | 0 | 117 | 293 |
| | APPROACH % | 24% | 76% | 0% | 0% | 82% | 18% | 0% | 0% | 0% | 21% | 0% | 79% | |
| APP/DEPART | 45 | / | 151 | 100 | / | 113 | 0 | / | 0 | 148 | / | 29 | 0 | |
| BEGIN PEAK HR | 6:30 AM | | | | | | | | | | | | | |
| VOLUMES | 7 | 23 | 0 | 0 | 45 | 16 | 0 | 0 | 0 | 12 | 0 | 56 | 159 | |
| APPROACH % | 23% | 77% | 0% | 0% | 74% | 26% | 0% | 0% | 0% | 18% | 0% | 82% | | |
| PEAK HR FACTOR | 0.625 | | | 0.726 | | | 0.000 | | | 0.739 | | | 0.795 | |
| APP/DEPART | 30 | / | 79 | 61 | / | 57 | 0 | / | 0 | 68 | / | 23 | 0 | |
| PM | 4:00 PM | 0 | 2 | | | 33 | 1 | | | | 2 | 0 | 8 | 46 |
| | 4:15 PM | 0 | 3 | | | 16 | 2 | | | | 5 | 0 | 7 | 33 |
| | 4:30 PM | 0 | 3 | | | 16 | 2 | | | | 4 | 0 | 12 | 37 |
| | 4:45 PM | 0 | 4 | | | 19 | 1 | | | | 3 | 0 | 10 | 37 |
| | 5:00 PM | 0 | 6 | | | 18 | 0 | | | | 5 | 0 | 9 | 38 |
| | 5:15 PM | 0 | 3 | | | 14 | 0 | | | | 6 | 0 | 7 | 30 |
| | 5:30 PM | 0 | 5 | | | 11 | 2 | | | | 4 | 0 | 8 | 30 |
| | 5:45 PM | 0 | 5 | | | 7 | 0 | | | | 7 | 0 | 3 | 22 |
| | VOLUMES | 0 | 31 | 0 | 0 | 134 | 8 | 0 | 0 | 0 | 36 | 0 | 64 | 273 |
| | APPROACH % | 0% | 100% | 0% | 0% | 94% | 6% | 0% | 0% | 0% | 36% | 0% | 64% | |
| APP/DEPART | 31 | / | 95 | 142 | / | 170 | 0 | / | 0 | 100 | / | 8 | 0 | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | |
| VOLUMES | 0 | 12 | 0 | 0 | 84 | 6 | 0 | 0 | 0 | 14 | 0 | 37 | 153 | |
| APPROACH % | 0% | 100% | 0% | 0% | 93% | 7% | 0% | 0% | 0% | 27% | 0% | 73% | | |
| PEAK HR FACTOR | 0.750 | | | 0.662 | | | 0.000 | | | 0.797 | | | 0.832 | |
| APP/DEPART | 12 | / | 49 | 90 | / | 98 | 0 | / | 0 | 51 | / | 6 | 0 | |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
6/22/11
WEDNESDAY

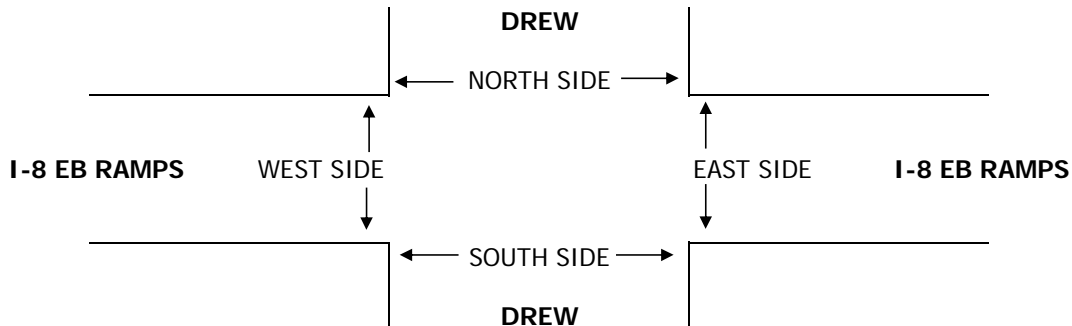
LOCATION:
NORTH & SOUTH: **IMPERIAL**
EAST & WEST: **DREW**
I-8 EB RAMPS

PROJECT #: CA11-0624-02
LOCATION #: 5
CONTROL: 1 WAY STOP EB

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | S | E ▶ |
| | OTHER | | ▼ | |
| | OTHER | | | |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|------------|----|----|------------|----|----|--------------|----|-----|--------------|----|----|-------|
| | DREW | | | DREW | | | I-8 EB RAMPS | | | I-8 EB RAMPS | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | X | 1 | 0 | 0 | 1 | X | 0.5 | 0 | 0.5 | X | X | X | |

| | | | | | | | | | | | | | | |
|----------------|------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|----|----|-------|-----|
| AM | 5:30 AM | | 3 | 4 | 6 | 11 | | 0 | 0 | 0 | | | | 24 |
| | 5:45 AM | | 3 | 3 | 6 | 9 | | 0 | 0 | 0 | | | | 21 |
| | 6:00 AM | | 2 | 5 | 9 | 5 | | 1 | 0 | 0 | | | | 22 |
| | 6:15 AM | | 2 | 3 | 9 | 3 | | 4 | 0 | 1 | | | | 22 |
| | 6:30 AM | | 3 | 8 | 7 | 6 | | 1 | 0 | 0 | | | | 25 |
| | 6:45 AM | | 11 | 6 | 11 | 3 | | 1 | 0 | 0 | | | | 32 |
| | 7:00 AM | | 5 | 5 | 9 | 7 | | 3 | 0 | 0 | | | | 29 |
| | 7:15 AM | | 8 | 8 | 10 | 4 | | 1 | 0 | 0 | | | | 31 |
| | VOLUMES | 0 | 37 | 42 | 67 | 48 | 0 | 11 | 0 | 1 | 0 | 0 | 0 | 206 |
| | APPROACH % | 0% | 47% | 53% | 58% | 42% | 0% | 92% | 0% | 8% | 0% | 0% | 0% | |
| APP/DEPART | 79 | / | 48 | 115 | / | 49 | 12 | / | 109 | 0 | / | 0 | 0 | |
| BEGIN PEAK HR | 6:30 AM | | | | | | | | | | | | | |
| VOLUMES | 0 | 27 | 27 | 37 | 20 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 117 | |
| APPROACH % | 0% | 50% | 50% | 65% | 35% | 0% | 100% | 0% | 0% | 0% | 0% | 0% | | |
| PEAK HR FACTOR | 0.794 | | | 0.891 | | | 0.500 | | | 0.000 | | | 0.914 | |
| APP/DEPART | 54 | / | 33 | 57 | / | 20 | 6 | / | 64 | 0 | / | 0 | 0 | |
| PM | 4:00 PM | | 2 | 3 | 22 | 9 | | 1 | 0 | 1 | | | | 38 |
| | 4:15 PM | | 1 | 8 | 10 | 9 | | 1 | 0 | 2 | | | | 31 |
| | 4:30 PM | | 2 | 6 | 14 | 6 | | 2 | 0 | 2 | | | | 32 |
| | 4:45 PM | | 1 | 1 | 13 | 9 | | 3 | 0 | 0 | | | | 27 |
| | 5:00 PM | | 1 | 0 | 11 | 12 | | 4 | 0 | 1 | | | | 29 |
| | 5:15 PM | | 2 | 3 | 8 | 10 | | 5 | 0 | 0 | | | | 28 |
| | 5:30 PM | | 1 | 0 | 9 | 9 | | 1 | 0 | 0 | | | | 20 |
| | 5:45 PM | | 3 | 6 | 4 | 7 | | 2 | 0 | 0 | | | | 22 |
| | VOLUMES | 0 | 13 | 27 | 91 | 71 | 0 | 19 | 0 | 6 | 0 | 0 | 0 | 227 |
| | APPROACH % | 0% | 33% | 68% | 56% | 44% | 0% | 76% | 0% | 24% | 0% | 0% | 0% | |
| APP/DEPART | 40 | / | 32 | 162 | / | 77 | 25 | / | 118 | 0 | / | 0 | 0 | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | |
| VOLUMES | 0 | 6 | 18 | 59 | 33 | 0 | 7 | 0 | 5 | 0 | 0 | 0 | 128 | |
| APPROACH % | 0% | 25% | 75% | 64% | 36% | 0% | 58% | 0% | 42% | 0% | 0% | 0% | | |
| PEAK HR FACTOR | 0.667 | | | 0.742 | | | 0.750 | | | 0.000 | | | 0.842 | |
| APP/DEPART | 24 | / | 13 | 92 | / | 38 | 12 | / | 77 | 0 | / | 0 | 0 | |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
6/22/11
WEDNESDAY

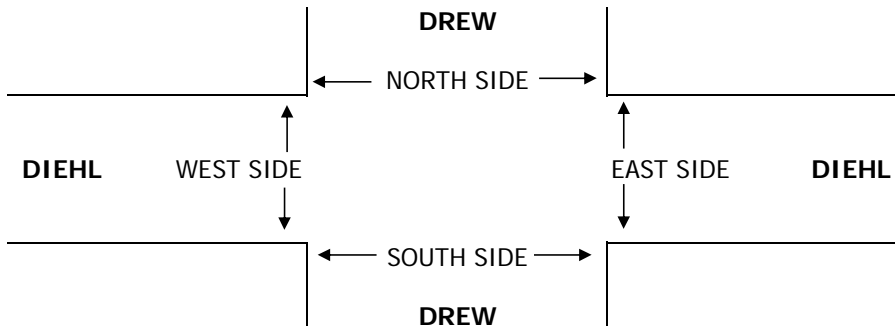
LOCATION:
NORTH & SOUTH: **IMPERIAL**
EAST & WEST: **DREW**
DIEHL

PROJECT #: CA11-0624-02
LOCATION #: 6
CONTROL: 2 WAY STOP EW

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | S | E ▶ |
| | OTHER | | ▼ | |
| | OTHER | | | |

| | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
| | DREW | | | DREW | | | DIEHL | | | DIEHL | | | |
| LANES: | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | |

| | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|----------------|------------|-----|----|------------|-----|-----|-----------|----|-----|-----------|----|------|-------|
| | DREW | | | DREW | | | DIEHL | | | DIEHL | | | |
| LANES: | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| AM | | | | | | | | | | | | | |
| 5:30 AM | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 5:45 AM | 0 | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 6:00 AM | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 6 |
| 6:15 AM | 3 | 5 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| 6:30 AM | 0 | 6 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 10 |
| 6:45 AM | 1 | 7 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 14 |
| 7:00 AM | 0 | 8 | 0 | 0 | 3 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 15 |
| 7:15 AM | 2 | 5 | 0 | 0 | 4 | 1 | 1 | 0 | 3 | 0 | 0 | 1 | 17 |
| VOLUMES | 8 | 38 | 0 | 0 | 21 | 6 | 3 | 0 | 7 | 0 | 0 | 1 | 84 |
| APPROACH % | 17% | 83% | 0% | 0% | 78% | 22% | 30% | 0% | 70% | 0% | 0% | 100% | |
| APP/DEPART | 46 | / | 42 | 27 | / | 28 | 10 | / | 0 | 1 | / | 14 | 0 |
| BEGIN PEAK HR | 6:30 AM | | | | | | | | | | | | |
| VOLUMES | 3 | 26 | 0 | 0 | 11 | 6 | 3 | 0 | 6 | 0 | 0 | 1 | 56 |
| APPROACH % | 10% | 90% | 0% | 0% | 65% | 35% | 33% | 0% | 67% | 0% | 0% | 100% | |
| PEAK HR FACTOR | 0.906 | | | 0.850 | | | 0.563 | | | 0.250 | | | 0.824 |
| APP/DEPART | 29 | / | 30 | 17 | / | 17 | 9 | / | 0 | 1 | / | 9 | 0 |
| PM | | | | | | | | | | | | | |
| 4:00 PM | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4:15 PM | 0 | 0 | 0 | 0 | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 10 |
| 4:30 PM | 1 | 4 | 0 | 0 | 8 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 15 |
| 4:45 PM | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:00 PM | 0 | 2 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 10 |
| 5:15 PM | 0 | 2 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| 5:30 PM | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5:45 PM | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 5 |
| VOLUMES | 1 | 13 | 0 | 0 | 31 | 2 | 5 | 0 | 4 | 0 | 0 | 0 | 56 |
| APPROACH % | 7% | 93% | 0% | 0% | 94% | 6% | 56% | 0% | 44% | 0% | 0% | 0% | |
| APP/DEPART | 14 | / | 18 | 33 | / | 35 | 9 | / | 0 | 0 | / | 3 | 0 |
| BEGIN PEAK HR | 4:15 PM | | | | | | | | | | | | |
| VOLUMES | 1 | 8 | 0 | 0 | 24 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 38 |
| APPROACH % | 11% | 89% | 0% | 0% | 96% | 4% | 50% | 0% | 50% | 0% | 0% | 0% | |
| PEAK HR FACTOR | 0.450 | | | 0.694 | | | 0.500 | | | 0.000 | | | 0.633 |
| APP/DEPART | 9 | / | 10 | 25 | / | 26 | 4 | / | 0 | 0 | / | 2 | 0 |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
3/24/11
THURSDAY

LOCATION:
NORTH & SOUTH: **EL CENTRO**
DREW
EAST & WEST: **SR-98**

PROJECT #: CA11-0325-03
LOCATION #: 3
CONTROL: 1 WAY STOP SB

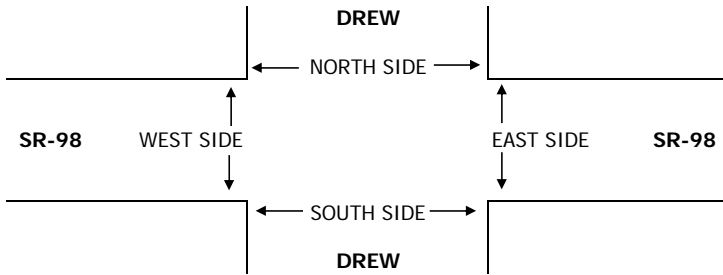
NOTES:

| | | |
|-------|-----|-----|
| AM | ◀ W | ▲ N |
| PM | | |
| MD | S | ▶ E |
| OTHER | | |
| OTHER | | ▼ |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
| | DREW | | | DREW | | | SR-98 | | | SR-98 | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |

| U-TURNS | | | | |
|---------|----|----|----|-----|
| NB | SB | EB | WB | TTL |

| | | | | | | | | | | | | | | | | | | | |
|-----------------------|-------------------|----|----|-------|-----|------|-------|-----|-----|-------|-----|-----|-------|-----|--|--|--|---|---|
| AM | 6:00 AM | | | 0 | | 0 | 0 | 5 | | | 10 | 2 | 17 | | | | | 0 | |
| | 6:15 AM | | | 0 | | 1 | 1 | 1 | | | 5 | 1 | 9 | | | | | 0 | |
| | 6:30 AM | | | 0 | | 1 | 0 | 6 | | | 12 | 0 | 19 | | | | | 0 | |
| | 6:45 AM | | | 0 | | 0 | 0 | 5 | | | 17 | 1 | 23 | | | | | 0 | |
| | 7:00 AM | | | 0 | | 0 | 1 | 8 | | | 13 | 1 | 23 | | | | | 0 | |
| | 7:15 AM | | | 0 | | 1 | 0 | 8 | | | 9 | 1 | 19 | | | | | 0 | |
| | 7:30 AM | | | 0 | | 0 | 1 | 3 | | | 11 | 1 | 16 | | | | | 0 | |
| | 7:45 AM | | | 0 | | 0 | 3 | 10 | | | 3 | 0 | 16 | | | | | 0 | |
| | VOLUMES | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 46 | 0 | 0 | 80 | 7 | 142 | | | | | 0 |
| | APPROACH % | 0% | 0% | 0% | 0% | 0% | 100% | 12% | 88% | 0% | 0% | 92% | 8% | | | | | | 0 |
| APP/DEPART | 0 | / | 13 | 3 | / | 0 | 52 | / | 46 | 87 | / | 83 | 0 | | | | | 0 | |
| BEGIN PEAK HR | 6:30 AM | | | | | | | | | | | | | | | | | | |
| VOLUMES | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 27 | 0 | 0 | 51 | 3 | 84 | | | | | 0 | |
| APPROACH % | 0% | 0% | 0% | 0% | 0% | 100% | 4% | 96% | 0% | 0% | 94% | 6% | | | | | | 0 | |
| PEAK HR FACTOR | 0.000 | | | 0.500 | | | 0.778 | | | 0.750 | | | 0.913 | | | | | 0 | |
| APP/DEPART | 0 | / | 4 | 2 | / | 0 | 28 | / | 27 | 54 | / | 53 | 0 | | | | | 0 | |
| PM | 4:00 PM | | | 1 | | 0 | 2 | 13 | | | 8 | 2 | 26 | | | | | 0 | |
| | 4:15 PM | | | 2 | | 0 | 0 | 21 | | | 10 | 1 | 34 | | | | | 0 | |
| | 4:30 PM | | | 2 | | 0 | 2 | 28 | | | 10 | 2 | 44 | | | | | 0 | |
| | 4:45 PM | | | 1 | | 0 | 0 | 24 | | | 14 | 0 | 39 | | | | | 0 | |
| | 5:00 PM | | | 1 | | 1 | 0 | 16 | | | 17 | 1 | 36 | | | | | 0 | |
| | 5:15 PM | | | 0 | | 0 | 0 | 23 | | | 12 | 0 | 35 | | | | | 0 | |
| | 5:30 PM | | | 1 | | 0 | 0 | 10 | | | 11 | 0 | 22 | | | | | 0 | |
| | 5:45 PM | | | 0 | | 0 | 0 | 13 | | | 9 | 0 | 22 | | | | | 0 | |
| | VOLUMES | 0 | 0 | 0 | 8 | 0 | 1 | 4 | 148 | 0 | 0 | 91 | 6 | 258 | | | | | 0 |
| | APPROACH % | 0% | 0% | 0% | 89% | 0% | 11% | 3% | 97% | 0% | 0% | 94% | 6% | | | | | | 0 |
| APP/DEPART | 0 | / | 10 | 9 | / | 0 | 152 | / | 156 | 97 | / | 92 | 0 | | | | | 0 | |
| BEGIN PEAK HR | 4:30 PM | | | | | | | | | | | | | | | | | | |
| VOLUMES | 0 | 0 | 0 | 4 | 0 | 1 | 2 | 91 | 0 | 0 | 53 | 3 | 154 | | | | | 0 | |
| APPROACH % | 0% | 0% | 0% | 80% | 0% | 20% | 2% | 98% | 0% | 0% | 95% | 5% | | | | | | 0 | |
| PEAK HR FACTOR | 0.000 | | | 0.625 | | | 0.775 | | | 0.778 | | | 0.875 | | | | | 0 | |
| APP/DEPART | 0 | / | 5 | 5 | / | 0 | 93 | / | 95 | 56 | / | 54 | 0 | | | | | 0 | |



| | | PEDESTRIAN CROSSINGS | | | | |
|--|--|----------------------|--------|--------|--------|-------|
| | | N SIDE | S SIDE | E SIDE | W SIDE | TOTAL |

| | | | | | | | |
|--------------|--------------|---------|---|---|---|---|---|
| AM | 6:00 AM | | | | | 0 | |
| | 6:15 AM | | | | | 0 | |
| | 6:30 AM | | | | | 0 | |
| | 6:45 AM | | | | | 0 | |
| | 7:00 AM | | | | | 0 | |
| | 7:15 AM | | | | | 0 | |
| | 7:30 AM | | | | | 0 | |
| | 7:45 AM | | | | | 0 | |
| | TOTAL | | 0 | 0 | 0 | 0 | 0 |
| | PM | 4:00 PM | | | | | 0 |
| 4:15 PM | | | | | | 0 | |
| 4:30 PM | | | | | | 0 | |
| 4:45 PM | | | | | | 0 | |
| 5:00 PM | | | | | | 0 | |
| 5:15 PM | | | | | | 0 | |
| 5:30 PM | | | | | | 0 | |
| 5:45 PM | | | | | | 0 | |
| TOTAL | | | 0 | 0 | 0 | 0 | 0 |

| | | PEDESTRIAN ACTIVATIONS | | | | |
|--|--|------------------------|--------|--------|--------|-------|
| | | N SIDE | S SIDE | E SIDE | W SIDE | TOTAL |

| | | BICYCLE CROSSINGS | | | | |
|--|--|-------------------|----|----|----|-------|
| | | NS | SS | ES | WS | TOTAL |

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
6/22/11
WEDNESDAY

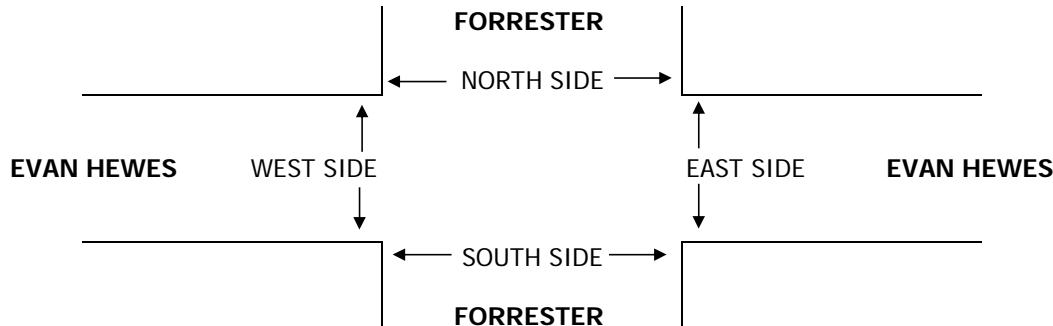
LOCATION:
NORTH & SOUTH: **IMPERIAL FORRESTER**
EAST & WEST: **EVAN HEWES**

PROJECT #: CA11-0624-02
LOCATION #: 3
CONTROL: SIGNAL

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | S | E ▶ |
| | OTHER | | ▼ | |
| | OTHER | | | |

| | NORTHBOUND FORRESTER | | | SOUTHBOUND FORRESTER | | | EASTBOUND EVAN HEWES | | | WESTBOUND EVAN HEWES | | | TOTAL |
|--|-------------------------|----|----|-------------------------|----|----|-------------------------|----|----|-------------------------|----|----|-------|
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | LANES: | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | |

| | | | | | | | | | | | | | | |
|----------------|------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-------|
| AM | 5:30 AM | 5 | 23 | 3 | 2 | 19 | 13 | 4 | 16 | 2 | 2 | 20 | 6 | 115 |
| | 5:45 AM | 4 | 19 | 2 | 2 | 24 | 8 | 3 | 7 | 0 | 2 | 19 | 4 | 94 |
| | 6:00 AM | 2 | 19 | 2 | 2 | 22 | 8 | 2 | 11 | 2 | 4 | 10 | 3 | 87 |
| | 6:15 AM | 0 | 8 | 1 | 2 | 20 | 7 | 4 | 11 | 0 | 4 | 20 | 1 | 78 |
| | 6:30 AM | 6 | 24 | 3 | 3 | 22 | 6 | 2 | 9 | 1 | 5 | 29 | 0 | 110 |
| | 6:45 AM | 2 | 20 | 5 | 6 | 27 | 3 | 2 | 14 | 1 | 3 | 20 | 3 | 106 |
| | 7:00 AM | 4 | 27 | 4 | 2 | 30 | 9 | 5 | 10 | 1 | 1 | 31 | 3 | 127 |
| | 7:15 AM | 1 | 24 | 3 | 4 | 25 | 7 | 4 | 19 | 5 | 3 | 26 | 2 | 123 |
| | VOLUMES | 24 | 164 | 23 | 23 | 189 | 61 | 26 | 97 | 12 | 24 | 175 | 22 | 840 |
| | APPROACH % | 11% | 78% | 11% | 8% | 69% | 22% | 19% | 72% | 9% | 11% | 79% | 10% | |
| APP/DEPART | 211 | / | 212 | 273 | / | 225 | 135 | / | 143 | 221 | / | 260 | 0 | |
| BEGIN PEAK HR | 6:30 AM | | | | | | | | | | | | | |
| VOLUMES | 13 | 95 | 15 | 15 | 104 | 25 | 13 | 52 | 8 | 12 | 106 | 8 | 466 | |
| APPROACH % | 11% | 77% | 12% | 10% | 72% | 17% | 18% | 71% | 11% | 10% | 84% | 6% | | |
| PEAK HR FACTOR | 0.879 | | | 0.878 | | | 0.652 | | | 0.900 | | | 0.917 | |
| APP/DEPART | 123 | / | 116 | 144 | / | 124 | 73 | / | 82 | 126 | / | 144 | 0 | |
| PM | 4:00 PM | 1 | 27 | 4 | 6 | 26 | 4 | 8 | 50 | 5 | 8 | 24 | 6 | 169 |
| | 4:15 PM | 1 | 23 | 8 | 4 | 42 | 2 | 6 | 36 | 6 | 7 | 27 | 4 | 166 |
| | 4:30 PM | 4 | 30 | 3 | 3 | 29 | 5 | 14 | 49 | 2 | 4 | 25 | 2 | 170 |
| | 4:45 PM | 2 | 30 | 3 | 7 | 31 | 4 | 10 | 40 | 2 | 5 | 20 | 1 | 155 |
| | 5:00 PM | 2 | 33 | 4 | 3 | 33 | 4 | 3 | 29 | 1 | 5 | 21 | 4 | 142 |
| | 5:15 PM | 5 | 25 | 8 | 2 | 36 | 3 | 2 | 29 | 4 | 6 | 15 | 3 | 138 |
| | 5:30 PM | 1 | 28 | 5 | 5 | 33 | 3 | 4 | 15 | 2 | 1 | 28 | 5 | 130 |
| | 5:45 PM | 5 | 24 | 8 | 2 | 21 | 6 | 9 | 15 | 6 | 3 | 29 | 4 | 132 |
| | VOLUMES | 21 | 220 | 43 | 32 | 251 | 31 | 56 | 263 | 28 | 39 | 189 | 29 | 1,202 |
| | APPROACH % | 7% | 77% | 15% | 10% | 80% | 10% | 16% | 76% | 8% | 15% | 74% | 11% | |
| APP/DEPART | 284 | / | 305 | 314 | / | 318 | 347 | / | 338 | 257 | / | 241 | 0 | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | |
| VOLUMES | 8 | 110 | 18 | 20 | 128 | 15 | 38 | 175 | 15 | 24 | 96 | 13 | 660 | |
| APPROACH % | 6% | 81% | 13% | 12% | 79% | 9% | 17% | 77% | 7% | 18% | 72% | 10% | | |
| PEAK HR FACTOR | 0.919 | | | 0.849 | | | 0.877 | | | 0.875 | | | 0.971 | |
| APP/DEPART | 136 | / | 161 | 163 | / | 167 | 228 | / | 213 | 133 | / | 119 | 0 | |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
3/24/11
THURSDAY

LOCATION:
NORTH & SOUTH: **EL CENTRO FORRESTER**
EAST & WEST: **I-8 WB RAMPS**

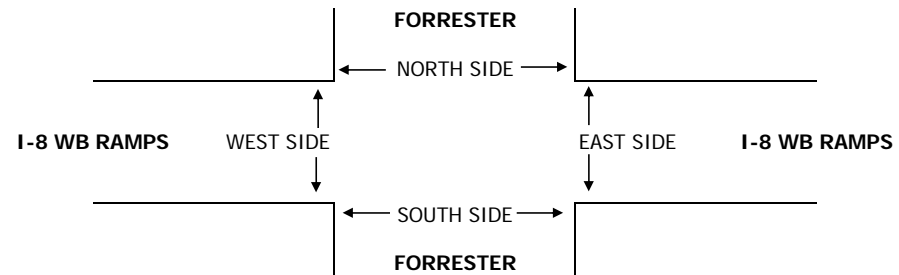
PROJECT #: CA11-0325-03
LOCATION #: 4
CONTROL: 1 WAY STOP WB

| | | | | |
|--------|-------|-----|-----|-----|
| NOTES: | AM | | ▲ N | |
| | PM | ◀ W | S | ▶ E |
| | MD | | ▼ | |
| | OTHER | | | |

| LANES: | NORTHBOUND FORRESTER | | | SOUTHBOUND FORRESTER | | | EASTBOUND I-8 WB RAMPS | | | WESTBOUND I-8 WB RAMPS | | | TOTAL |
|--------|-------------------------|---------|---------|-------------------------|---------|---------|---------------------------|---------|---------|---------------------------|-----------|---------|-------|
| | NL 0 | NT 1 | NR 0 | SL 0 | ST 1 | SR 0 | EL X | ET X | ER X | WL 0.5 | WT 0.5 | WR 1 | |

| U-TURNS | | | | |
|---------|---------|---------|---------|-----|
| NB X | SB X | EB X | WB X | TTL |

| | | | | | | | | | | | | | | | | | | | |
|----------------|------------|------|-----|-------|-----|-----|-------|----|----|-------|----|-----|-------|-------|---|---|---|---|---|
| AM | 6:00 AM | 0 | 4 | | | 13 | 8 | | | | 5 | 0 | 44 | 74 | | | | | 0 |
| | 6:15 AM | 0 | 3 | | | 26 | 8 | | | | 6 | 0 | 51 | 94 | | | | | 0 |
| | 6:30 AM | 0 | 9 | | | 25 | 9 | | | | 3 | 0 | 66 | 112 | | | | | 0 |
| | 6:45 AM | 1 | 14 | | | 26 | 10 | | | | 4 | 0 | 48 | 103 | | | | | 0 |
| | 7:00 AM | 0 | 14 | | | 15 | 11 | | | | 1 | 0 | 44 | 85 | | | | | 0 |
| | 7:15 AM | 0 | 24 | | | 34 | 13 | | | | 3 | 0 | 50 | 124 | | | | | 0 |
| | 7:30 AM | 2 | 19 | | | 27 | 23 | | | | 1 | 0 | 55 | 127 | | | | | 0 |
| | 7:45 AM | 2 | 17 | | | 34 | 9 | | | | 10 | 0 | 51 | 123 | | | | | 0 |
| | VOLUMES | 5 | 104 | 0 | 0 | 200 | 91 | 0 | 0 | 0 | 33 | 0 | 409 | 842 | 0 | 0 | 0 | 0 | 0 |
| | APPROACH % | 5% | 95% | 0% | 0% | 69% | 31% | 0% | 0% | 0% | 7% | 0% | 93% | | | | | | |
| APP/DEPART | 109 | / | 513 | 291 | / | 233 | 0 | / | 0 | 442 | / | 96 | 0 | | | | | | |
| BEGIN PEAK HR | 7:00 AM | | | | | | | | | | | | | | | | | | |
| VOLUMES | 4 | 74 | 0 | 0 | 110 | 56 | 0 | 0 | 0 | 15 | 0 | 200 | 459 | | | | | | |
| APPROACH % | 5% | 95% | 0% | 0% | 66% | 34% | 0% | 0% | 0% | 7% | 0% | 93% | | | | | | | |
| PEAK HR FACTOR | 0.813 | | | 0.830 | | | 0.000 | | | 0.881 | | | 0.904 | | | | | | |
| APP/DEPART | 78 | / | 274 | 166 | / | 125 | 0 | / | 0 | 215 | / | 60 | 0 | | | | | | |
| PM | 4:00 PM | 0 | 31 | | | 68 | 16 | | | | 2 | 0 | 38 | 155 | | | | | 0 |
| | 4:15 PM | 0 | 29 | | | 71 | 11 | | | | 2 | 0 | 32 | 145 | | | | | 0 |
| | 4:30 PM | 0 | 11 | | | 67 | 16 | | | | 3 | 0 | 48 | 145 | | | | | 0 |
| | 4:45 PM | 0 | 30 | | | 51 | 11 | | | | 1 | 0 | 42 | 135 | | | | | 0 |
| | 5:00 PM | 1 | 32 | | | 54 | 8 | | | | 3 | 0 | 33 | 131 | | | | | 0 |
| | 5:15 PM | 5 | 21 | | | 48 | 9 | | | | 3 | 0 | 31 | 117 | | | | | 0 |
| | 5:30 PM | 1 | 13 | | | 31 | 10 | | | | 2 | 0 | 28 | 85 | | | | | 0 |
| | 5:45 PM | 1 | 10 | | | 42 | 13 | | | | 4 | 0 | 26 | 96 | | | | | 0 |
| | VOLUMES | 8 | 177 | 0 | 0 | 432 | 94 | 0 | 0 | 0 | 20 | 0 | 278 | 1,009 | 0 | 0 | 0 | 0 | 0 |
| | APPROACH % | 4% | 96% | 0% | 0% | 82% | 18% | 0% | 0% | 0% | 7% | 0% | 93% | | | | | | |
| APP/DEPART | 185 | / | 455 | 526 | / | 452 | 0 | / | 0 | 298 | / | 102 | 0 | | | | | | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | | | | | | |
| VOLUMES | 0 | 101 | 0 | 0 | 257 | 54 | 0 | 0 | 0 | 8 | 0 | 160 | 580 | | | | | | |
| APPROACH % | 0% | 100% | 0% | 0% | 83% | 17% | 0% | 0% | 0% | 5% | 0% | 95% | | | | | | | |
| PEAK HR FACTOR | 0.815 | | | 0.926 | | | 0.000 | | | 0.824 | | | 0.935 | | | | | | |
| APP/DEPART | 101 | / | 261 | 311 | / | 265 | 0 | / | 0 | 168 | / | 54 | 0 | | | | | | |



| | | | | | |
|-----------|---------|---|---|---|---|
| AM | 6:00 AM | | | | 0 |
| | 6:15 AM | | | | 0 |
| | 6:30 AM | | | | 0 |
| | 6:45 AM | | | | 0 |
| | 7:00 AM | | | | 0 |
| | 7:15 AM | | | | 0 |
| | 7:30 AM | | | | 0 |
| | 7:45 AM | | | | 0 |
| TOTAL | 0 | 0 | 0 | 0 | |
| PM | 4:00 PM | | | | 0 |
| | 4:15 PM | | | | 0 |
| | 4:30 PM | | | | 0 |
| | 4:45 PM | | | | 0 |
| | 5:00 PM | | | | 0 |
| | 5:15 PM | | | | 0 |
| | 5:30 PM | | | | 0 |
| | 5:45 PM | | | | 0 |
| TOTAL | 0 | 0 | 0 | 0 | |

| PEDESTRIAN CROSSINGS | | | | |
|----------------------|--------|--------|--------|-------|
| N SIDE | S SIDE | E SIDE | W SIDE | TOTAL |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| 0 | 0 | 0 | 0 | 0 |

| PEDESTRIAN ACTIVATIONS | | | | |
|------------------------|--------|--------|--------|-------|
| N SIDE | S SIDE | E SIDE | W SIDE | TOTAL |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| 0 | 0 | 0 | 0 | 0 |

| BICYCLE CROSSINGS | | | | |
|-------------------|----|----|----|-------|
| NS | SS | ES | WS | TOTAL |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| | | | | 0 |
| 0 | 0 | 0 | 0 | 0 |

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
3/24/11
THURSDAY

LOCATION:
NORTH & SOUTH: **EL CENTRO FORRESTER**
EAST & WEST: **I-8 EB RAMPS**

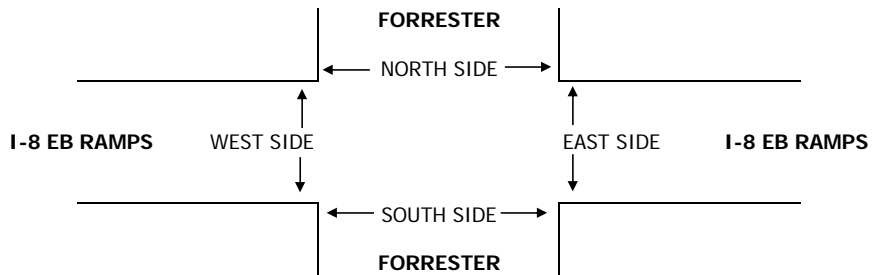
PROJECT #: CA11-0325-03
LOCATION #: 5
CONTROL: 1 WAY STOP EB

| | | | |
|--------|----------------------------------|------------|------------|
| NOTES: | AM PM MD OTHER OTHER | ◀ W E ▶ | ▲ N S ▼ |
|--------|----------------------------------|------------|------------|

| LANES: | NORTHBOUND FORRESTER | | | SOUTHBOUND FORRESTER | | | EASTBOUND I-8 EB RAMPS | | | WESTBOUND I-8 EB RAMPS | | | TOTAL |
|--------|-------------------------|---------|---------|-------------------------|---------|---------|---------------------------|-----------|---------|---------------------------|---------|---------|-------|
| | NL X | NT 1 | NR 0 | SL 0 | ST 1 | SR X | EL 0.5 | ET 0.5 | ER 1 | WL X | WT X | WR X | |

| U-TURNS | | | | |
|---------|---------|---------|---------|-----|
| NB X | SB X | EB X | WB X | TTL |

| | | | | | | | | | | | | | | | | | | | |
|----------------|------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|----|----|-------|-----|---|---|---|---|---|
| AM | 6:00 AM | | 4 | 2 | 12 | 5 | | 2 | 0 | 0 | | | | 25 | | | | | 0 |
| | 6:15 AM | | 0 | 3 | 20 | 13 | | 3 | 0 | 1 | | | | 40 | | | | | 0 |
| | 6:30 AM | | 4 | 2 | 22 | 6 | | 4 | 0 | 2 | | | | 40 | | | | | 0 |
| | 6:45 AM | | 6 | 3 | 18 | 11 | | 10 | 0 | 0 | | | | 48 | | | | | 0 |
| | 7:00 AM | | 7 | 2 | 13 | 3 | | 7 | 0 | 0 | | | | 32 | | | | | 0 |
| | 7:15 AM | | 8 | 1 | 25 | 11 | | 15 | 0 | 1 | | | | 61 | | | | | 0 |
| | 7:30 AM | | 11 | 0 | 25 | 3 | | 9 | 0 | 1 | | | | 49 | | | | | 0 |
| | 7:45 AM | | 9 | 2 | 28 | 16 | | 9 | 0 | 1 | | | | 65 | | | | | 0 |
| | VOLUMES | 0 | 49 | 15 | 163 | 68 | 0 | 59 | 0 | 6 | 0 | 0 | 0 | 360 | 0 | 0 | 0 | 0 | 0 |
| | APPROACH % | 0% | 77% | 23% | 71% | 29% | 0% | 91% | 0% | 9% | 0% | 0% | 0% | | | | | | |
| APP/DEPART | 64 | / | 108 | 231 | / | 74 | 65 | / | 178 | 0 | / | 0 | 0 | | | | | | |
| BEGIN PEAK HR | 7:00 AM | | | | | | | | | | | | | | | | | | |
| VOLUMES | 0 | 35 | 5 | 91 | 33 | 0 | 40 | 0 | 3 | 0 | 0 | 0 | 207 | | | | | | |
| APPROACH % | 0% | 88% | 13% | 73% | 27% | 0% | 93% | 0% | 7% | 0% | 0% | 0% | | | | | | | |
| PEAK HR FACTOR | 0.909 | | | 0.705 | | | 0.672 | | | 0.000 | | | 0.796 | | | | | | |
| APP/DEPART | 40 | / | 75 | 124 | / | 36 | 43 | / | 96 | 0 | / | 0 | 0 | | | | | | |
| PM | 4:00 PM | | 10 | 2 | 62 | 1 | | 22 | 1 | 2 | | | 100 | | | | | 0 | |
| | 4:15 PM | | 8 | 3 | 64 | 12 | | 21 | 0 | 0 | | | 108 | | | | | 0 | |
| | 4:30 PM | | 2 | 3 | 63 | 8 | | 10 | 0 | 1 | | | 87 | | | | | 0 | |
| | 4:45 PM | | 6 | 1 | 43 | 10 | | 23 | 0 | 0 | | | 83 | | | | | 0 | |
| | 5:00 PM | | 10 | 1 | 50 | 7 | | 25 | 0 | 1 | | | 94 | | | | | 0 | |
| | 5:15 PM | | 8 | 0 | 46 | 9 | | 14 | 0 | 0 | | | 77 | | | | | 0 | |
| | 5:30 PM | | 4 | 3 | 27 | 5 | | 12 | 0 | 0 | | | 51 | | | | | 0 | |
| | 5:45 PM | | 4 | 0 | 38 | 6 | | 8 | 0 | 0 | | | 56 | | | | | 0 | |
| | VOLUMES | 0 | 52 | 13 | 393 | 58 | 0 | 135 | 1 | 4 | 0 | 0 | 0 | 656 | 0 | 0 | 0 | 0 | 0 |
| | APPROACH % | 0% | 80% | 20% | 87% | 13% | 0% | 96% | 1% | 3% | 0% | 0% | 0% | | | | | | |
| APP/DEPART | 65 | / | 187 | 451 | / | 62 | 140 | / | 407 | 0 | / | 0 | 0 | | | | | | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | | | | | | |
| VOLUMES | 0 | 26 | 9 | 232 | 31 | 0 | 76 | 1 | 3 | 0 | 0 | 0 | 378 | | | | | | |
| APPROACH % | 0% | 74% | 26% | 88% | 12% | 0% | 95% | 1% | 4% | 0% | 0% | 0% | | | | | | | |
| PEAK HR FACTOR | 0.729 | | | 0.865 | | | 0.800 | | | 0.000 | | | 0.875 | | | | | | |
| APP/DEPART | 35 | / | 102 | 263 | / | 34 | 80 | / | 242 | 0 | / | 0 | 0 | | | | | | |



| | PEDESTRIAN CROSSINGS | | | | |
|--|----------------------|--------|--------|--------|-------|
| | N SIDE | S SIDE | E SIDE | W SIDE | TOTAL |

| | | | | | | |
|-----------|-----------|---------|---|---|---|---|
| AM | 6:00 AM | | | | 0 | |
| | 6:15 AM | | | | 0 | |
| | 6:30 AM | | | | 0 | |
| | 6:45 AM | | | | 0 | |
| | 7:00 AM | | | | 0 | |
| | 7:15 AM | | | | 0 | |
| | 7:30 AM | | | | 0 | |
| | 7:45 AM | | | | 0 | |
| | TOTAL | 0 | 0 | 0 | 0 | 0 |
| | PM | 4:00 PM | | | | 0 |
| 4:15 PM | | | | | 0 | |
| 4:30 PM | | | | | 0 | |
| 4:45 PM | | | | | 0 | |
| 5:00 PM | | | | | 0 | |
| 5:15 PM | | | | | 0 | |
| 5:30 PM | | | | | 0 | |
| 5:45 PM | | | | | 0 | |
| TOTAL | 0 | 0 | 0 | 0 | 0 | |

| | PEDESTRIAN ACTIVATIONS | | | | |
|--|------------------------|--------|--------|--------|-------|
| | N SIDE | S SIDE | E SIDE | W SIDE | TOTAL |

| | BICYCLE CROSSINGS | | | | |
|--|-------------------|----|----|----|-------|
| | NS | SS | ES | WS | TOTAL |

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
6/22/11
WEDNESDAY

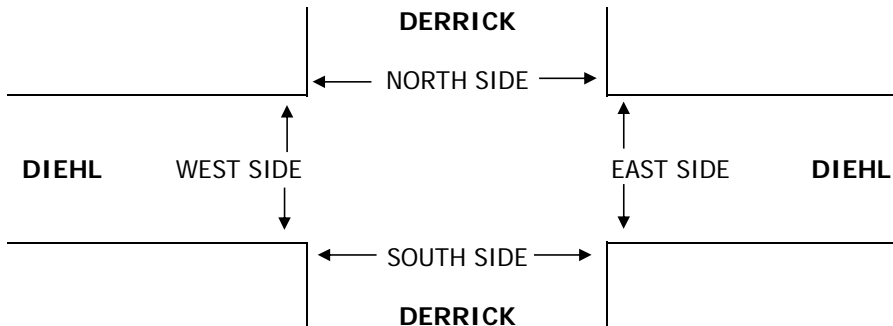
LOCATION:
NORTH & SOUTH: IMPERIAL
EAST & WEST: DERRICK
DIEHL

PROJECT #: CA11-0624-02
LOCATION #: 7
CONTROL: 2 WAY STOP NS

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | S | E ▶ |
| | OTHER | | ▼ | |
| | OTHER | | | |

| LANES: | NORTHBOUND DERRICK | | | SOUTHBOUND DERRICK | | | EASTBOUND DIEHL | | | WESTBOUND DIEHL | | | TOTAL |
|--------|-----------------------|----|----|-----------------------|----|----|--------------------|----|----|--------------------|----|----|-------|
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | |

| AM | | | | | | | | | | | | | | |
|----|----------------|---------|----|-------|-----|-------|----|-------|------|-------|----|------|-----|-------|
| | Time | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | TOTAL |
| | 5:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | 5:45 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 6:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| | 6:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 1 | 5 |
| | 6:30 AM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 |
| | 6:45 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 8 |
| | 7:00 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 4 |
| | 7:15 AM | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 1 | 6 |
| | VOLUMES | 1 | 0 | 0 | 3 | 2 | 0 | 1 | 7 | 0 | 0 | 13 | 2 | 29 |
| | APPROACH % | 100% | 0% | 0% | 60% | 40% | 0% | 13% | 88% | 0% | 0% | 87% | 13% | |
| | APP/DEPART | 1 | / | 3 | 5 | / | 2 | 8 | / | 10 | 15 | / | 14 | 0 |
| | BEGIN PEAK HR | 6:30 AM | | | | | | | | | | | | |
| | VOLUMES | 1 | 0 | 0 | 3 | 1 | 0 | 0 | 7 | 0 | 0 | 8 | 1 | 21 |
| | APPROACH % | 100% | 0% | 0% | 75% | 25% | 0% | 0% | 100% | 0% | 0% | 89% | 11% | |
| | PEAK HR FACTOR | 0.250 | | 0.500 | | 0.583 | | 0.563 | | 0.656 | | | | 0.656 |
| | APP/DEPART | 1 | / | 1 | 4 | / | 1 | 7 | / | 10 | 9 | / | 9 | 0 |
| | 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 4:15 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| | 4:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 4 |
| | 4:45 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | 5:00 PM | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| | 5:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| | 5:30 PM | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| | 5:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 3 |
| | VOLUMES | 2 | 0 | 1 | 2 | 2 | 0 | 0 | 5 | 1 | 0 | 3 | 0 | 16 |
| | APPROACH % | 67% | 0% | 33% | 50% | 50% | 0% | 0% | 83% | 17% | 0% | 100% | 0% | |
| | APP/DEPART | 3 | / | 0 | 4 | / | 3 | 6 | / | 8 | 3 | / | 5 | 0 |
| | BEGIN PEAK HR | 5:00 PM | | | | | | | | | | | | |
| | VOLUMES | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 9 |
| | APPROACH % | 100% | 0% | 0% | 67% | 33% | 0% | 0% | 75% | 25% | 0% | 100% | 0% | |
| | PEAK HR FACTOR | 0.250 | | 0.750 | | 0.500 | | 0.125 | | 0.563 | | | | 0.563 |
| | APP/DEPART | 1 | / | 0 | 3 | / | 2 | 4 | / | 5 | 1 | / | 2 | 0 |



LOS Engineering, Inc.

5114 Sea Mist Ct, San Diego, CA 92121

Counted by: LOS Emp. #01
 Location: Westside Rd & Evan Hewes Hwy

Start Date: 05/22/2008
 File Name: 804-1-1

| Start Time | Westside Rd Northbound | | | | Southbound | | | | Evan Hewes Hwy Eastbound | | | | Evan Hewes Hwy Westbound | | | | Vehicle |
|--------------------|------------------------|------|-------|-----|------------|------|-------|-----|--------------------------|-------|-------|-----|--------------------------|------|-------|-----|----------------|
| | Left | Thru | Right | Ped | Left | Thru | Right | Ped | Left | Thru | Right | Ped | Left | Thru | Right | Ped | Interval Total |
| 7:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 1 | 23 | 0 | 0 | 38 |
| 7:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 0 | 2 | 53 | 0 | 0 | 69 |
| 7:30 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 75 | 0 | 0 | 87 |
| 7:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 96 | 0 | 0 | 106 |
| Total | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 3 | 247 | 0 | 0 | 300 |
| 8:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 31 | 0 | 0 | 35 |
| 8:15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 30 | 0 | 0 | 37 |
| 8:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 8 | 0 | 0 | 17 |
| 8:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 21 | 0 | 0 | 34 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 90 | 0 | 0 | 123 |
| Grand Total | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 0 | 0 | 3 | 337 | 0 | 0 | 423 |
| Approach% | 25.0 | 0.0 | 75.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 100.0 | 0.0 | - | 0.9 | 99.1 | 0.0 | - | |
| Total% | 0.2 | 0.0 | 0.7 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 18.7 | 0.0 | - | 0.7 | 79.7 | 0.0 | - | |

Peak hour analysis for the period 07:00 to 07:45

| | | | | | | | | | | | | | | | | | |
|-----------|------|-----|------|---|-----|-----|-----|---|-----|-------|-----|---|-----|------|-----|---|-----|
| Volume | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 0 | 0 | 3 | 247 | 0 | 0 | 300 |
| Approach% | 25.0 | 0.0 | 75.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 100.0 | 0.0 | - | 1.2 | 98.8 | 0.0 | - | |
| Total% | 0.3 | 0.0 | 1.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 15.3 | 0.0 | - | 1.0 | 82.3 | 0.0 | - | |

LOS Engineering, Inc.

5114 Sea Mist Ct, San Diego, CA 92121

Counted by: LOS Emp. #01
 Location: Westside Rd & Evan Hewes Hwy

Start Date: 05/21/2008
 File Name: 804-1-2

| Start Time | Westside Rd Northbound | | | | Southbound | | | | Evan Hewes Hwy Eastbound | | | | Evan Hewes Hwy Westbound | | | | Vehicle |
|--------------------|------------------------|------|-------|-----|------------|------|-------|-----|--------------------------|-------|-------|-----|--------------------------|-------|-------|-----|----------------|
| | Left | Thru | Right | Ped | Left | Thru | Right | Ped | Left | Thru | Right | Ped | Left | Thru | Right | Ped | Interval Total |
| 16:00 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 4 | 0 | 0 | 38 |
| 16:15 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 3 | 0 | 0 | 34 |
| 16:30 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 0 | 0 | 0 | 8 | 0 | 0 | 76 |
| 16:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 1 | 0 | 0 | 23 |
| Total | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 151 | 0 | 0 | 0 | 16 | 0 | 0 | 171 |
| 17:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 4 | 0 | 0 | 25 |
| 17:15 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 6 | 0 | 0 | 28 |
| 17:30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 9 | 0 | 0 | 16 |
| 17:45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 3 | 0 | 0 | 13 |
| Total | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 59 | 0 | 0 | 0 | 22 | 0 | 0 | 82 |
| Grand Total | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 210 | 0 | 0 | 0 | 38 | 0 | 0 | 253 |
| Approach% | 0.0 | 0.0 | 100.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 100.0 | 0.0 | - | 0.0 | 100.0 | 0.0 | - | |
| Total% | 0.0 | 0.0 | 2.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 83.0 | 0.0 | - | 0.0 | 15.0 | 0.0 | - | |

Peak hour analysis for the period 16:00 to 16:45

| | | | | | | | | | | | | | | | | | |
|-----------|-----|-----|-------|---|-----|-----|-----|---|-----|-------|-----|---|-----|-------|-----|---|-----|
| Volume | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 151 | 0 | 0 | 0 | 16 | 0 | 0 | 171 |
| Approach% | 0.0 | 0.0 | 100.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 100.0 | 0.0 | - | 0.0 | 100.0 | 0.0 | - | |
| Total% | 0.0 | 0.0 | 2.3 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 88.3 | 0.0 | - | 0.0 | 9.4 | 0.0 | - | |

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

DATE:
6/22/11
WEDNESDAY

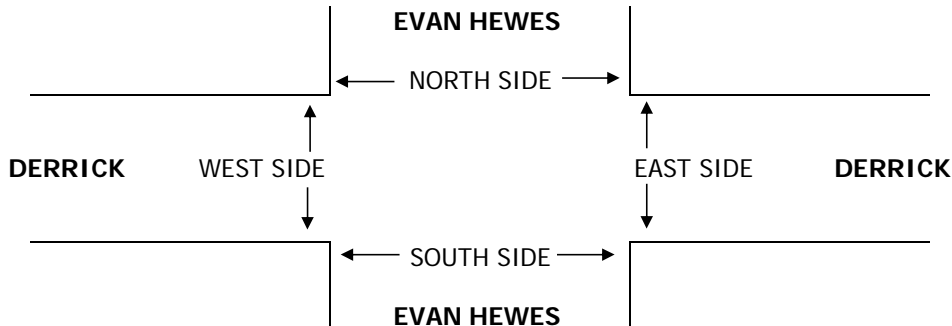
LOCATION:
NORTH & SOUTH: **IMPERIAL**
EAST & WEST: **EVAN HEWES**
DERRICK

PROJECT #: CA11-0624-02
LOCATION #: 1
CONTROL: 1 WAY STOP NB

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | S | E ▶ |
| | OTHER | | ▼ | |
| | OTHER | | | |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|------------|----|-----|------------|----|----|-----------|----|----|-----------|----|----|-------|
| | EVAN HEWES | | | EVAN HEWES | | | DERRICK | | | DERRICK | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | 0.5 | X | 0.5 | X | X | X | X | 1 | 0 | 0 | 1 | X | |

| | | | | | | | | | | | | | | |
|----------------|------------|-----|------|-------|----|----|-------|------|------|-------|-----|-----|-------|-----|
| AM | 5:30 AM | 0 | | 0 | | | | 5 | 0 | 1 | 71 | | 77 | |
| | 5:45 AM | 0 | | 1 | | | | 8 | 0 | 2 | 34 | | 45 | |
| | 6:00 AM | 0 | | 0 | | | | 16 | 2 | 2 | 27 | | 47 | |
| | 6:15 AM | 0 | | 0 | | | | 7 | 0 | 0 | 25 | | 32 | |
| | 6:30 AM | 1 | | 2 | | | | 7 | 1 | 1 | 39 | | 51 | |
| | 6:45 AM | 0 | | 1 | | | | 19 | 0 | 1 | 24 | | 45 | |
| | 7:00 AM | 0 | | 0 | | | | 12 | 0 | 0 | 30 | | 42 | |
| | 7:15 AM | 0 | | 2 | | | | 14 | 0 | 2 | 49 | | 67 | |
| | VOLUMES | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 88 | 3 | 9 | 299 | 0 | 406 |
| | APPROACH % | 14% | 0% | 86% | 0% | 0% | 0% | 0% | 97% | 3% | 3% | 97% | 0% | |
| APP/DEPART | 7 | / | 0 | 0 | / | 12 | 91 | / | 94 | 308 | / | 300 | 0 | |
| BEGIN PEAK HR | 6:30 AM | | | | | | | | | | | | | |
| VOLUMES | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 52 | 1 | 4 | 142 | 0 | 205 | |
| APPROACH % | 17% | 0% | 83% | 0% | 0% | 0% | 0% | 98% | 2% | 3% | 97% | 0% | | |
| PEAK HR FACTOR | 0.500 | | | 0.000 | | | 0.697 | | | 0.716 | | | 0.765 | |
| APP/DEPART | 6 | / | 0 | 0 | / | 5 | 53 | / | 57 | 146 | / | 143 | 0 | |
| PM | 4:00 PM | 0 | | 2 | | | | 71 | 0 | 1 | 4 | | 78 | |
| | 4:15 PM | 0 | | 1 | | | | 33 | 0 | 2 | 12 | | 48 | |
| | 4:30 PM | 0 | | 1 | | | | 56 | 0 | 1 | 19 | | 77 | |
| | 4:45 PM | 0 | | 0 | | | | 30 | 0 | 0 | 9 | | 39 | |
| | 5:00 PM | 1 | | 0 | | | | 26 | 0 | 1 | 4 | | 32 | |
| | 5:15 PM | 0 | | 1 | | | | 17 | 0 | 0 | 7 | | 25 | |
| | 5:30 PM | 0 | | 1 | | | | 15 | 0 | 1 | 0 | | 17 | |
| | 5:45 PM | 0 | | 0 | | | | 6 | 0 | 2 | 2 | | 10 | |
| | VOLUMES | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 254 | 0 | 8 | 57 | 0 | 326 |
| | APPROACH % | 14% | 0% | 86% | 0% | 0% | 0% | 0% | 100% | 0% | 12% | 88% | 0% | |
| APP/DEPART | 7 | / | 0 | 0 | / | 8 | 254 | / | 260 | 65 | / | 58 | 0 | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | |
| VOLUMES | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 190 | 0 | 4 | 44 | 0 | 242 | |
| APPROACH % | 0% | 0% | 100% | 0% | 0% | 0% | 0% | 100% | 0% | 8% | 92% | 0% | | |
| PEAK HR FACTOR | 0.500 | | | 0.000 | | | 0.669 | | | 0.600 | | | 0.776 | |
| APP/DEPART | 4 | / | 0 | 0 | / | 4 | 190 | / | 194 | 48 | / | 44 | 0 | |



PEAK HOUR VOLUME DATA

Peak hour volume data consists of hourly volume relationships and data location. The hourly volumes are expressed as a percentage of the Annual Average Daily Traffic (AADT). The percentages are shown for both the AM and the PM peak periods.

The principle data described here are the K factor, the D factor and their product (KD). The K factor is the percentage of AADT during the peak hour for both directions of travel. The D factor is the percentage of the peak hour travel in the peak direction. KD multiplied with the AADT gives the one way peak period directional flow rate or the design hourly volume (DHV). The design hourly volume is used for either Operational Analysis or Design Analysis. Refer to the 2000 Highway Capacity Manual for more details.

Following is a glossary of terms used in this listing of peak hour volume data:

| | |
|---------|--|
| Dir | Indicates direction of travel for peak volume |
| AADT | Annual Average Daily Traffic in vehicles per day (vpd). |
| AM Peak | Represents the morning peak period for traffic analysis |
| CS | Control Station Number, Caltrans identification number for monitoring site. |
| CO | County abbreviation used by Caltrans |
| D | D factor. The percentage of traffic in the peak direction during the peak hour. Values in this book are derived by dividing the measured PHV by the sum of both directions of travel during the peak hour. |
| DAY | Day of week for the peak volume. |
| DDHV | The directional design hour volume, in vehicles per hour (vph) $DDHV = AADT \times K \times D$. See equation (8-1) on page 8-11 of the 2000 Highway Capacity Manual. |
| DI | Caltrans has twelve transportation districts statewide. This abbreviation identifies the district in which the count station is located. |
| HR | The ending time for the peak hour volume listed. The volume observed from 1 to 2 would be recorded as 2. |

| | |
|---------|--|
| K | The percentage of the AADT in both directions during the peak hour. Values in this table are derived by dividing the measured 2-way PHV by the AADT. |
| KD | The product of K and D. The percentage of AADT in the peak direction during the peak hour. Values in this table are derived by dividing the measured 1-way PHV by the AADT. |
| LEG | For traffic counting purposes, a highway intersection or interchange is assigned two legs according to increasing postmiles (route direction) and with a postmile reference at the center of the intersection or interchange. The volume of traffic on each leg is denoted by an A, B or O. A = ahead leg, B = back leg, and O – traffic volume being same for both back and ahead legs. |
| MNTH | The month that the peak volume occurred. |
| PHV | Peak Hour Volume in the peak direction. A one way volume in vehicles per hour (vph) as used here. The PHV is analogous to the DDHV as used for design purposes. |
| PM | The Post Mile is the mileage measured from the county line, or from the beginning of a route. Each postmile along a route in a county is a unique location on the state highway system. |
| PM Peak | Represents the afternoon peak period for traffic analysis. |
| PRE | The postmile may have a prefix like R, T, L, M, etc. When a length of highway is changed due to construction or realignment, new postmile values are assigned. To distinguish the new values from the old, an alpha code is prefixed to the new postmile. |
| RTE | The state highway route number |
| YR | The year when the count was made. Traffic counting is on a 3-year cycle. |

CALTRANS TRAFFIC VOLUMES
 LATEST TRAFFIC YEAR SELECTED
 PEAK HOUR VOLUME DATA

| DI | RTE | CO | PRE | | | | | | AM PEAK | | | | | PM PEAK | | | | | | | | | |
|----|-----|-----|-----|-------|-----|-----|----|-----|---------|-------|-------|-------|-------|---------|-----|-----|-------|-------|-------|------|-----|------|-----|
| | | | | PM | CS | LEG | YR | Dir | 1 WAY | % | % | % | 1 WAY | % | % | % | | | | | | | |
| | | | | | | | | PHV | K | D | KD | HR | DAY | MNTH | Dir | PHV | K | D | KD | HR | DAY | MNTH | |
| 11 | 008 | SD | L | 1.213 | 958 | A | 08 | E | 4637 | 7.47 | 61.45 | 4.59 | 7 | TUE | FEB | W | 4604 | 8.33 | 54.73 | 4.56 | 17 | FRI | AUG |
| 11 | 008 | SD | | .946 | 804 | A | 08 | W | 8170 | 7.41 | 57.07 | 4.23 | 7 | THU | SEP | E | 8446 | 8.02 | 54.48 | 4.37 | 16 | TUE | MAR |
| 11 | 008 | SD | | 5.638 | 953 | B | 08 | W | 11617 | 7.43 | 64.73 | 4.81 | 7 | TUE | APR | E | 10959 | 7.96 | 56.96 | 4.53 | 15 | THU | DEC |
| 11 | 008 | SD | | 8.336 | 807 | B | 08 | W | 11072 | 8.06 | 60.93 | 4.91 | 7 | THU | NOV | E | 10737 | 8.02 | 59.36 | 4.76 | 15 | WED | OCT |
| 11 | 008 | SD | | 8.336 | 808 | A | 08 | W | 10170 | 7.6 | 67.39 | 5.12 | 7 | THU | MAY | E | 9780 | 7.99 | 61.61 | 4.92 | 16 | FRI | JAN |
| 11 | 008 | SD | | 11.76 | 810 | B | 08 | W | 8307 | 6.82 | 63.17 | 4.31 | 7 | THU | JAN | E | 9011 | 8.24 | 56.73 | 4.67 | 16 | WED | FEB |
| 11 | 008 | SD | | 14.59 | 806 | B | 07 | W | 8456 | 6.87 | 59.41 | 4.08 | 7 | THU | OCT | E | 9132 | 8.15 | 54.13 | 4.41 | 15 | THU | DEC |
| 11 | 008 | SD | R | 18.73 | 824 | B | 08 | W | 4555 | 7.07 | 69.67 | 4.93 | 7 | TUE | OCT | E | 4273 | 8.06 | 57.38 | 4.62 | 15 | TUE | NOV |
| 11 | 008 | SD | R | 20.04 | 888 | B | 08 | W | 3944 | 7.07 | 69.41 | 4.9 | 7 | TUE | MAR | E | 3787 | 8.05 | 58.53 | 4.71 | 17 | FRI | APR |
| 11 | 008 | SD | R | 23.64 | 979 | O | 08 | W | 2444 | 7.79 | 55.9 | 4.35 | 12 | FRI | DEC | W | 2926 | 8.57 | 60.81 | 5.21 | 17 | WED | NOV |
| 11 | 008 | SD | R | 37.83 | 811 | A | 08 | E | 1143 | 8.94 | 64.36 | 5.76 | 10 | FRI | NOV | W | 1404 | 11.46 | 61.69 | 7.07 | 15 | WED | DEC |
| 11 | 008 | SD | R | 51.98 | 621 | B | 08 | E | 999 | 11.26 | 56.73 | 6.39 | 11 | THU | NOV | W | 1284 | 12.29 | 66.81 | 8.21 | 14 | MON | FEB |
| 11 | 008 | SD | R | 65.90 | 981 | A | 08 | E | 1001 | 12.07 | 59.55 | 7.19 | 10 | WED | DEC | E | 1189 | 14.5 | 58.86 | 8.53 | 16 | SUN | JUL |
| 11 | 008 | IMP | R | 10.29 | 993 | B | 08 | W | 984 | 11.35 | 61.85 | 7.02 | 11 | MON | FEB | W | 1180 | 12.22 | 68.89 | 8.42 | 15 | TUE | JAN |
| 11 | 008 | IMP | R | 10.29 | 994 | A | 08 | E | 914 | 14.57 | 51.55 | 7.51 | 12 | MON | MAY | W | 1079 | 12.69 | 69.84 | 8.87 | 15 | TUE | JAN |
| 11 | 008 | IMP | R | 23.48 | 624 | A | 08 | W | 872 | 9.63 | 73.84 | 7.11 | 9 | FRI | JUL | W | 1038 | 15.17 | 55.81 | 8.46 | 15 | MON | MAY |
| 11 | 008 | IMP | R | 36.97 | 982 | B | 08 | E | 1034 | 10.76 | 53 | 5.7 | 12 | SAT | DEC | W | 1215 | 10.94 | 61.24 | 6.7 | 15 | SAT | NOV |
| 11 | 008 | IMP | R | 40.94 | 638 | B | 08 | W | 1401 | 8.35 | 53.37 | 4.46 | 12 | MON | MAY | E | 1805 | 9.17 | 62.63 | 5.74 | 18 | FRI | MAY |
| 11 | 008 | IMP | R | 53.50 | 964 | A | 08 | E | 909 | 12.78 | 61.21 | 7.82 | 10 | SAT | DEC | W | 1018 | 15.25 | 57.42 | 8.76 | 13 | SAT | NOV |
| 11 | 008 | IMP | R | 96.55 | 995 | B | 08 | E | 1276 | 12.1 | 54.39 | 6.58 | 12 | FRI | FEB | E | 1300 | 10.71 | 62.65 | 6.71 | 13 | MON | SEP |
| 11 | 008 | IMP | R | 96.99 | 988 | B | 08 | E | 1097 | 11.54 | 56.58 | 6.53 | 12 | MON | JAN | E | 1173 | 11.9 | 58.71 | 6.98 | 15 | MON | FEB |
| 05 | 009 | SCR | | .63 | 681 | A | 08 | S | 380 | 8.29 | 91.79 | 7.61 | 8 | TUE | DEC | S | 390 | 8.27 | 94.43 | 7.81 | 17 | MON | DEC |
| 05 | 009 | SCR | | 8.11 | 430 | B | 08 | S | 1364 | 8.35 | 78.89 | 6.58 | 7 | THU | MAR | N | 1250 | 9.09 | 66.38 | 6.03 | 17 | TUE | DEC |
| 05 | 009 | SCR | | 13.04 | 169 | B | 08 | N | 731 | 9.14 | 64.92 | 5.93 | 10 | WED | DEC | N | 643 | 8.85 | 58.99 | 5.22 | 17 | MON | DEC |
| 05 | 009 | SCR | | 27.09 | 49 | B | 08 | N | 294 | 12.23 | 97.35 | 11.91 | 7 | MON | JUN | S | 233 | 11.06 | 85.35 | 9.44 | 17 | WED | SEP |
| 04 | 009 | SCL | | 7.09 | 170 | A | 07 | S | 456 | 10.67 | 61.13 | 6.52 | 11 | SAT | JUL | N | 537 | 9.69 | 79.2 | 7.68 | 22 | SAT | JUL |
| 04 | 009 | SCL | | 11.45 | 171 | B | 07 | N | 1613 | 7.59 | 60.8 | 4.62 | 8 | WED | OCT | N | 1841 | 8.84 | 59.64 | 5.27 | 15 | TUE | JAN |
| 07 | 010 | LA | | 18.41 | 456 | B | 08 | W | 819 | 11.39 | 93.81 | 10.69 | 9 | FRI | DEC | E | 580 | 9.9 | 76.42 | 7.57 | 15 | FRI | JUL |
| 07 | 010 | LA | | 19.71 | 783 | O | 08 | W | 868 | 11.22 | 92.34 | 10.36 | 9 | THU | OCT | E | 569 | 8.93 | 76.07 | 6.79 | 17 | THU | NOV |
| 07 | 010 | LA | | 24.31 | 785 | A | 08 | W | 1498 | 6.78 | 86.74 | 5.88 | 9 | WED | MAR | E | 1523 | 8.2 | 72.98 | 5.98 | 15 | WED | MAR |
| 07 | 010 | LA | R | 3.89 | 402 | B | 06 | W | 7499 | 7.61 | 52.15 | 3.97 | 7 | WED | SEP | E | 6834 | 6.82 | 53.07 | 3.62 | 14 | WED | MAY |
| 07 | 010 | LA | | 24.32 | 721 | A | 08 | E | 7451 | 6.26 | 53.18 | 3.33 | 12 | SAT | SEP | E | 7695 | 6.01 | 57.18 | 3.43 | 16 | TUE | AUG |
| 07 | 010 | LA | | 30.3 | 429 | A | 08 | W | 7633 | 6.41 | 55.24 | 3.54 | 10 | SAT | MAR | E | 7707 | 6.31 | 56.63 | 3.57 | 14 | WED | MAR |

2007

Annual Average Daily Truck Traffic
on the
California State Highway System

Compiled by
Traffic Data Branch
Division of Traffic Operations

State of California
Business, Transportation and Housing Agency
Department of Transportation

Prepared in cooperation with the
U.S. Department of Transportation
Federal Highway Administration

SEPTEMBER 2008

| RTE | DIST | CNTY | POST MILE | L E G DESCRIPTION | VEHICLE | TRUCK | TRUCK | TRUCK | | | | % TRUCK | | | | EAL | YEAR |
|-----|------|------|-----------|--------------------------|---------------|---------------|--------------|---------|-----|------|-------|---------|------|------|-------|-----------------|-------------|
| | | | | | AADT TOTAL | AADT TOTAL | % TOT VEH | By Axle | | AADT | TOTAL | By Axle | | AADT | TOTAL | 2-WAY (1000) | VER/ EST |
| | | | | | | | | 2 | 3 | 4 | 5+ | 2 | 3 | 4 | 5+ | | |
| 00 | 11 | IMP | R10.01 | A JCT. RTE. 98 | 12200 | 1696 | 13.9 | 607 | 78 | 39 | 972 | 35.8 | 4.6 | 2.3 | 57.3 | 369 | 05E |
| 00 | 11 | IMP | R23.48 | A DUNAWAY ROAD | 12300 | 1931 | 15.7 | 583 | 90 | 39 | 1219 | 30.18 | 4.68 | 2.03 | 63.12 | 455 | 08V |
| 00 | 11 | IMP | R29.933 | B DREW ROAD | 12300 | 1998 | 16.24 | 592 | 93 | 37 | 1277 | 29.63 | 4.63 | 1.85 | 63.89 | 475 | 05E |
| 00 | 11 | IMP | R37.972 | B JCT. RTE. 86 | 32500 | 3478 | 10.7 | 1120 | 191 | 77 | 2090 | 32.2 | 5.5 | 2.2 | 60.1 | 789 | 05E |
| 00 | 11 | IMP | R37.972 | A JCT. RTE. 86 | 34500 | 3509 | 10.17 | 1131 | 192 | 77 | 2109 | 32.24 | 5.46 | 2.19 | 60.11 | 796 | 05E |
| 00 | 11 | IMP | R40.944 | B JCT. RTE. 111 | 31500 | 2844 | 9.03 | 684 | 178 | 52 | 1930 | 24.04 | 6.27 | 1.83 | 67.85 | 714 | 08V |
| 00 | 11 | IMP | R40.944 | A JCT. RTE. 111 | 14600 | 3358 | 23 | 860 | 222 | 87 | 2189 | 25.6 | 6.6 | 2.6 | 65.2 | 819 | 00E |
| 00 | 11 | IMP | R53.497 | B JCT. RTE. 115 NORTH | 11000 | 3300 | 30 | 845 | 218 | 86 | 2152 | 25.6 | 6.6 | 2.6 | 65.2 | 805 | 00E |
| 00 | 11 | IMP | R53.497 | A JCT. RTE. 115 NORTH | 11600 | 3074 | 26.5 | 787 | 203 | 80 | 2004 | 25.6 | 6.6 | 2.6 | 65.2 | 749 | 00E |
| 00 | 11 | IMP | R65.752 | B EAST JCT. RTE. 98 WEST | 11600 | 3074 | 26.5 | 787 | 203 | 80 | 2004 | 25.6 | 6.6 | 2.6 | 65.2 | 749 | 00E |
| 00 | 11 | IMP | R65.752 | A EAST JCT. RTE. 98 WEST | 14000 | 3360 | 24 | 860 | 222 | 87 | 2191 | 25.6 | 6.6 | 2.6 | 65.2 | 819 | 00E |
| 00 | 11 | IMP | R96.546 | B 4TH AVENUE | 19400 | 1505 | 7.76 | 279 | 110 | 78 | 1038 | 18.51 | 7.31 | 5.21 | 68.96 | 389 | 06V |
| 00 | 11 | IMP | R96.986 | B ARIZONA STATE LINE | 16800 | 3259 | 19.4 | 834 | 215 | 85 | 2125 | 25.6 | 6.6 | 2.6 | 65.2 | 795 | 00E |

Campo Verde Solar Project Traffic Impact Study Appendix

Appendix I

Existing Intersection LOS Calculations

AM Existing
1: Evan Hewes & Drew Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|-------------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Sign Control | Stop | | | Stop | | | Stop | | | Stop | | |
| Volume (vph) | 5 | 59 | 36 | 21 | 96 | 3 | 69 | 11 | 17 | 6 | 18 | 10 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 5 | 64 | 39 | 23 | 104 | 3 | 75 | 12 | 18 | 7 | 20 | 11 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 | | | | | | |
| Volume Total (vph) | 38 | 71 | 75 | 55 | 105 | 37 | | | | | | |
| Volume Left (vph) | 5 | 0 | 23 | 0 | 75 | 7 | | | | | | |
| Volume Right (vph) | 0 | 39 | 0 | 3 | 18 | 11 | | | | | | |
| Hadj (s) | 0.11 | -0.35 | 0.19 | -0.01 | 0.07 | -0.11 | | | | | | |
| Departure Headway (s) | 5.1 | 4.6 | 5.1 | 4.9 | 4.6 | 4.5 | | | | | | |
| Degree Utilization, x | 0.05 | 0.09 | 0.11 | 0.08 | 0.13 | 0.05 | | | | | | |
| Capacity (veh/h) | 686 | 747 | 673 | 701 | 747 | 749 | | | | | | |
| Control Delay (s) | 7.2 | 6.9 | 7.5 | 7.1 | 8.3 | 7.7 | | | | | | |
| Approach Delay (s) | 7.0 | | 7.4 | | 8.3 | 7.7 | | | | | | |
| Approach LOS | A | | A | | A | A | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Delay | | | 7.5 | | | | | | | | | |
| HCM Level of Service | | | A | | | | | | | | | |
| Intersection Capacity Utilization | | | 26.6% | | ICU Level of Service | | A | | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

AM Existing
2: I-8 WB Ramp & Drew Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↔ | ↔ | | ↔ | | | | ↔ |
| Volume (veh/h) | 0 | 0 | 0 | 12 | 0 | 56 | 7 | 23 | 0 | 0 | 45 | 16 |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 13 | 0 | 61 | 8 | 25 | 0 | 0 | 49 | 17 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | 2 | | | | | |
| Median type | | | | | | | None | | | None | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 128 | 98 | 58 | 98 | 107 | 25 | 66 | | | | 25 | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 128 | 98 | 58 | 98 | 107 | 25 | 66 | | | | 25 | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | | 4.1 | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | | 2.2 | |
| p0 queue free % | 100 | 100 | 100 | 99 | 100 | 94 | 100 | | | | 100 | |
| cM capacity (veh/h) | 793 | 788 | 1009 | 881 | 780 | 1051 | 1535 | | | | 1589 | |
| Direction, Lane # | WB 1 | NB 1 | SB 1 | | | | | | | | | |
| Volume Total | 74 | 33 | 66 | | | | | | | | | |
| Volume Left | 13 | 8 | 0 | | | | | | | | | |
| Volume Right | 61 | 0 | 17 | | | | | | | | | |
| cSH | 1276 | 1535 | 1700 | | | | | | | | | |
| Volume to Capacity | 0.06 | 0.00 | 0.04 | | | | | | | | | |
| Queue Length 95th (ft) | 5 | 0 | 0 | | | | | | | | | |
| Control Delay (s) | 8.7 | 1.7 | 0.0 | | | | | | | | | |
| Lane LOS | A | A | | | | | | | | | | |
| Approach Delay (s) | 8.7 | 1.7 | 0.0 | | | | | | | | | |
| Approach LOS | A | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 4.1 | | | | | | | | | |
| Intersection Capacity Utilization | | | 17.3% | | ICU Level of Service | | A | | | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

AM Existing
3: I-8 EB Ramp & Drew Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | ↕ | | | | | ↕ | | | ↕ | | |
| Volume (veh/h) | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 27 | 37 | 20 | 0 | |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Hourly flow rate (vph) | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 29 | 40 | 22 | 0 | |
| Pedestrians | | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | | |
| Right turn flare (veh) | 2 | | | | | | | | | | | | |
| Median type | | | | | | | None | | | None | | | |
| Median storage (veh) | | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | | |
| vC, conflicting volume | 146 | 161 | 22 | 146 | 146 | 44 | 22 | | | | | | 59 |
| vC1, stage 1 conf vol | | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | | |
| vCu, unblocked vol | 146 | 161 | 22 | 146 | 146 | 44 | 22 | | | | | | 59 |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | | | | 4.1 |
| tC, 2 stage (s) | | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | | | | 2.2 |
| p0 queue free % | 99 | 100 | 100 | 100 | 100 | 100 | 100 | | | | | | 97 |
| cM capacity (veh/h) | 806 | 712 | 1055 | 806 | 726 | 1026 | 1594 | | | | | | 1545 |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | | | | | | | | |
| Volume Total | 7 | 59 | 62 | | | | | | | | | | |
| Volume Left | 7 | 0 | 40 | | | | | | | | | | |
| Volume Right | 0 | 29 | 0 | | | | | | | | | | |
| cSH | 721 | 1700 | 1545 | | | | | | | | | | |
| Volume to Capacity | 0.01 | 0.03 | 0.03 | | | | | | | | | | |
| Queue Length 95th (ft) | 1 | 0 | 2 | | | | | | | | | | |
| Control Delay (s) | 10.0 | 0.0 | 4.9 | | | | | | | | | | |
| Lane LOS | B | | A | | | | | | | | | | |
| Approach Delay (s) | 10.0 | 0.0 | 4.9 | | | | | | | | | | |
| Approach LOS | B | | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | |
| Average Delay | 2.9 | | | | | | | | | | | | |
| Intersection Capacity Utilization | 19.8% | | | ICU Level of Service | | | A | | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | | | |

AM Existing
4: Diehl Rd & Drew Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | | |
| Volume (veh/h) | 3 | 0 | 6 | 0 | 0 | 1 | 3 | 26 | 0 | 0 | 11 | 6 | |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Hourly flow rate (vph) | 3 | 0 | 7 | 0 | 0 | 1 | 3 | 28 | 0 | 0 | 12 | 7 | |
| Pedestrians | | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | | |
| Median type | | | | | | | None | | | None | | | |
| Median storage (veh) | | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | | |
| vC, conflicting volume | 51 | 50 | 15 | 57 | 53 | 28 | 18 | | | | | | 28 |
| vC1, stage 1 conf vol | | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | | |
| vCu, unblocked vol | 51 | 50 | 15 | 57 | 53 | 28 | 18 | | | | | | 28 |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | | | | 4.1 |
| tC, 2 stage (s) | | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | | | | 2.2 |
| p0 queue free % | 100 | 100 | 99 | 100 | 100 | 100 | 100 | | | | | | 100 |
| cM capacity (veh/h) | 946 | 840 | 1064 | 933 | 836 | 1047 | 1598 | | | | | | 1585 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | | |
| Volume Total | 10 | 1 | 32 | 18 | | | | | | | | | |
| Volume Left | 3 | 0 | 3 | 0 | | | | | | | | | |
| Volume Right | 7 | 1 | 0 | 7 | | | | | | | | | |
| cSH | 1022 | 1047 | 1598 | 1585 | | | | | | | | | |
| Volume to Capacity | 0.01 | 0.00 | 0.00 | 0.00 | | | | | | | | | |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | | | | | | | | | |
| Control Delay (s) | 8.6 | 8.4 | 0.8 | 0.0 | | | | | | | | | |
| Lane LOS | A | A | A | | | | | | | | | | |
| Approach Delay (s) | 8.6 | 8.4 | 0.8 | 0.0 | | | | | | | | | |
| Approach LOS | A | A | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | |
| Average Delay | 1.9 | | | | | | | | | | | | |
| Intersection Capacity Utilization | 13.9% | | | | ICU Level of Service | | | | A | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | | | |

AM Existing
5: SR-98 & Drew Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | | ↖ | ↗ | | ↙ | ↘ |
| Volume (veh/h) | 1 | 27 | 51 | 3 | 0 | 2 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 1 | 29 | 55 | 3 | 0 | 2 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 59 | | | | 89 | 57 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 59 | | | | 89 | 57 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 100 | | | | 100 | 100 |
| cM capacity (veh/h) | 1545 | | | | 911 | 1009 |
| Direction, Lane # | EB 1 | WB 1 | SB 1 | | | |
| Volume Total | 30 | 59 | 2 | | | |
| Volume Left | 1 | 0 | 0 | | | |
| Volume Right | 0 | 3 | 2 | | | |
| cSH | 1545 | 1700 | 1009 | | | |
| Volume to Capacity | 0.00 | 0.03 | 0.00 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.3 | 0.0 | 8.6 | | | |
| Lane LOS | A | | A | | | |
| Approach Delay (s) | 0.3 | 0.0 | 8.6 | | | |
| Approach LOS | | | A | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.3 | | | |
| Intersection Capacity Utilization | | | 13.3% | ICU Level of Service | A | |
| Analysis Period (min) | | | 15 | | | |

AM Existing
6: Evan Hewes & Forrester Road

HCM Signalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------|-------|-------|----------------------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | ↖ | ↗ | | ↖ | ↗ | | | ↕ | | ↖ | ↗ | ↘ |
| Volume (vph) | 13 | 52 | 8 | 12 | 106 | 8 | 13 | 95 | 15 | 15 | 104 | 25 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | 1.00 | 0.98 | | 1.00 | 0.99 | | | 0.98 | | | 0.98 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.99 | | | 0.99 | |
| Satd. Flow (prot) | 1770 | 1825 | | 1770 | 1842 | | | 1823 | | | 1810 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | | 0.99 | | | 0.99 | |
| Satd. Flow (perm) | 1770 | 1825 | | 1770 | 1842 | | | 1823 | | | 1810 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 14 | 57 | 9 | 13 | 115 | 9 | 14 | 103 | 16 | 16 | 113 | 27 |
| RTOR Reduction (vph) | 0 | 5 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 0 | 7 | 0 |
| Lane Group Flow (vph) | 14 | 61 | 0 | 13 | 122 | 0 | 0 | 129 | 0 | 0 | 149 | 0 |
| Turn Type | Split | | | Split | | | Split | | | Split | | |
| Protected Phases | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 4.1 | 4.1 | | 7.2 | 7.2 | | | 7.4 | | | 8.0 | |
| Effective Green, g (s) | 4.1 | 4.1 | | 7.2 | 7.2 | | | 7.4 | | | 8.0 | |
| Actuated g/C Ratio | 0.10 | 0.10 | | 0.17 | 0.17 | | | 0.17 | | | 0.19 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | | 4.0 | | | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | 170 | 175 | | 298 | 311 | | | 316 | | | 339 | |
| v/s Ratio Prot | 0.01 | c0.03 | | 0.01 | c0.07 | | | c0.07 | | | c0.08 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.08 | 0.35 | | 0.04 | 0.39 | | | 0.41 | | | 0.44 | |
| Uniform Delay, d1 | 17.6 | 18.0 | | 14.9 | 15.8 | | | 15.7 | | | 15.4 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | 0.2 | 1.2 | | 0.1 | 0.8 | | | 0.9 | | | 0.9 | |
| Delay (s) | 17.8 | 19.2 | | 14.9 | 16.6 | | | 16.6 | | | 16.3 | |
| Level of Service | B | B | | B | B | | | B | | | B | |
| Approach Delay (s) | 19.0 | | | 16.5 | | | 16.6 | | | 16.3 | | |
| Approach LOS | B | | | B | | | B | | | B | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM Average Control Delay | | | 16.8 | HCM Level of Service | | | | | | | | B |
| HCM Volume to Capacity ratio | | | 0.40 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 42.7 | Sum of lost time (s) | | | | | | | | 16.0 |
| Intersection Capacity Utilization | | | 24.4% | ICU Level of Service | | | | | | | | A |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

AM Existing

7: I-8 WB Ramp & Forrester Road

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | ↔ | ↔ | | ↔ | | | ↔ | | |
| Volume (veh/h) | 0 | 0 | 0 | 15 | 0 | 200 | 4 | 74 | 0 | 0 | 110 | 56 | |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Hourly flow rate (vph) | 0 | 0 | 0 | 16 | 0 | 217 | 4 | 80 | 0 | 0 | 120 | 61 | |
| Pedestrians | | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | | |
| Median type | | | | | | | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | | |
| vC, conflicting volume | 348 | 239 | 150 | 239 | 270 | 80 | 180 | | | | | | 80 |
| vC1, stage 1 conf vol | | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | | |
| vCu, unblocked vol | 348 | 239 | 150 | 239 | 270 | 80 | 180 | | | | | | 80 |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | | | | 4.1 |
| tC, 2 stage (s) | | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | | | | 2.2 |
| p0 queue free % | 100 | 100 | 100 | 98 | 100 | 78 | 100 | | | | | | 100 |
| cM capacity (veh/h) | 471 | 660 | 896 | 713 | 635 | 980 | 1395 | | | | | | 1517 |
| Direction, Lane # | WB 1 | NB 1 | SB 1 | | | | | | | | | | |
| Volume Total | 234 | 85 | 180 | | | | | | | | | | |
| Volume Left | 16 | 4 | 0 | | | | | | | | | | |
| Volume Right | 217 | 0 | 61 | | | | | | | | | | |
| cSH | 1053 | 1395 | 1700 | | | | | | | | | | |
| Volume to Capacity | 0.22 | 0.00 | 0.11 | | | | | | | | | | |
| Queue Length 95th (ft) | 21 | 0 | 0 | | | | | | | | | | |
| Control Delay (s) | 9.8 | 0.4 | 0.0 | | | | | | | | | | |
| Lane LOS | A | A | | | | | | | | | | | |
| Approach Delay (s) | 9.8 | 0.4 | 0.0 | | | | | | | | | | |
| Approach LOS | A | | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | |
| Average Delay | 4.6 | | | | | | | | | | | | |
| Intersection Capacity Utilization | 23.2% | | | ICU Level of Service | | | A | | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | | | |

AM Existing

8: I-8 EB Ramp & Forrester Road

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | ↔ | | | | | ↔ | | | ↔ | ↔ | |
| Volume (veh/h) | 40 | 0 | 3 | 0 | 0 | 0 | 0 | 35 | 5 | 91 | 33 | 0 | |
| Sign Control | Stop | | | Stop | | | Free | | | Free | | | |
| Grade | 0% | | | 0% | | | 0% | | | 0% | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Hourly flow rate (vph) | 43 | 0 | 3 | 0 | 0 | 0 | 0 | 38 | 5 | 99 | 36 | 0 | |
| Pedestrians | | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | | |
| Median type | | | | | | | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | | |
| vC, conflicting volume | 274 | 277 | 36 | 276 | 274 | 41 | 36 | | | | | | 43 |
| vC1, stage 1 conf vol | | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | | |
| vCu, unblocked vol | 274 | 277 | 36 | 276 | 274 | 41 | 36 | | | | | | 43 |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | | | | 4.1 |
| tC, 2 stage (s) | | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | | | | 2.2 |
| p0 queue free % | 93 | 100 | 100 | 100 | 100 | 100 | 100 | | | | | | 94 |
| cM capacity (veh/h) | 645 | 591 | 1037 | 642 | 593 | 1030 | 1575 | | | | | | 1565 |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | | | | | | | | |
| Volume Total | 47 | 43 | 135 | | | | | | | | | | |
| Volume Left | 43 | 0 | 99 | | | | | | | | | | |
| Volume Right | 3 | 5 | 0 | | | | | | | | | | |
| cSH | 694 | 1700 | 1565 | | | | | | | | | | |
| Volume to Capacity | 0.07 | 0.03 | 0.06 | | | | | | | | | | |
| Queue Length 95th (ft) | 5 | 0 | 5 | | | | | | | | | | |
| Control Delay (s) | 10.8 | 0.0 | 5.6 | | | | | | | | | | |
| Lane LOS | B | | A | | | | | | | | | | |
| Approach Delay (s) | 10.8 | 0.0 | 5.6 | | | | | | | | | | |
| Approach LOS | B | | | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | |
| Average Delay | 5.6 | | | | | | | | | | | | |
| Intersection Capacity Utilization | 23.4% | | | ICU Level of Service | | | A | | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | | | |

AM Existing
9: Diehl Rd & Derrick Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Volume (veh/h) | 0 | 7 | 0 | 0 | 8 | 1 | 1 | 0 | 0 | 3 | 1 | 0 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 8 | 0 | 0 | 9 | 1 | 1 | 0 | 0 | 3 | 1 | 0 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 10 | | | 8 | | | 17 | 17 | 8 | 17 | 17 | 9 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 10 | | | 8 | | | 17 | 17 | 8 | 17 | 17 | 9 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 100 | 100 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1610 | | | 1613 | | | 996 | 877 | 1075 | 998 | 877 | 1072 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total | 8 | 10 | 1 | 4 | | | | | | | | |
| Volume Left | 0 | 0 | 1 | 3 | | | | | | | | |
| Volume Right | 0 | 1 | 0 | 0 | | | | | | | | |
| cSH | 1610 | 1613 | 996 | 965 | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | | | | | | | | |
| Control Delay (s) | 0.0 | 0.0 | 8.6 | 8.7 | | | | | | | | |
| Lane LOS | | | A | A | | | | | | | | |
| Approach Delay (s) | 0.0 | 0.0 | 8.6 | 8.7 | | | | | | | | |
| Approach LOS | | | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Average Delay | | | 2.1 | | | | | | | | | |
| Intersection Capacity Utilization | | | 13.3% | | ICU Level of Service | | | | A | | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |

AM Existing
10: Evan Hewes & Westside Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|-----------------------------------|------|------|-------|------|----------------------|------|
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Volume (veh/h) | 50 | 0 | 3 | 268 | 1 | 3 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 54 | 0 | 3 | 291 | 1 | 3 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | | None | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | | 54 | 352 | 54 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | | 54 | 352 | 54 |
| tC, single (s) | | | | 4.1 | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | | 2.2 | 3.5 | 3.3 |
| p0 queue free % | | | | 100 | 100 | 100 |
| cM capacity (veh/h) | | | | 1551 | 644 | 1013 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | | | |
| Volume Total | 54 | 295 | 4 | | | |
| Volume Left | 0 | 3 | 1 | | | |
| Volume Right | 0 | 0 | 3 | | | |
| cSH | 1700 | 1551 | 886 | | | |
| Volume to Capacity | 0.03 | 0.00 | 0.00 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.0 | 0.1 | 9.1 | | | |
| Lane LOS | | | A | | | |
| Approach Delay (s) | 0.0 | 0.1 | 9.1 | | | |
| Approach LOS | | | A | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.2 | | | |
| Intersection Capacity Utilization | | | 26.5% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |

AM Existing

11: Evan Hewes & Derrick Rd

HCM Unsignalized Intersection Capacity Analysis

| | → | ↘ | ↙ | ← | ↖ | ↗ |
|-----------------------------------|-------------|-------------|-------------|------|----------------------|------|
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Volume (veh/h) | 52 | 1 | 4 | 142 | 1 | 5 |
| Sign Control | Free | | | Free | Stop | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 57 | 1 | 4 | 154 | 1 | 5 |
| Pedestrians | | | | | | |
| Lane Width (ft) | | | | | | |
| Walking Speed (ft/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | None | | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | 790 | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | | | 58 | | 220 | 57 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | | | 58 | | 220 | 57 |
| tC, single (s) | | | 4.1 | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | | | 2.2 | | 3.5 | 3.3 |
| p0 queue free % | | | 100 | | 100 | 99 |
| cM capacity (veh/h) | | | 1547 | | 766 | 1009 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | | | |
| Volume Total | 58 | 159 | 7 | | | |
| Volume Left | 0 | 4 | 1 | | | |
| Volume Right | 1 | 0 | 5 | | | |
| cSH | 1700 | 1547 | 958 | | | |
| Volume to Capacity | 0.03 | 0.00 | 0.01 | | | |
| Queue Length 95th (ft) | 0 | 0 | 1 | | | |
| Control Delay (s) | 0.0 | 0.2 | 8.8 | | | |
| Lane LOS | | A | A | | | |
| Approach Delay (s) | 0.0 | 0.2 | 8.8 | | | |
| Approach LOS | | | A | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.4 | | | |
| Intersection Capacity Utilization | | | 20.7% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |

PM Existing
1: Evan Hewes & Drew Rd

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 8 | 114 | 92 | 13 | 33 | 19 | 42 | 19 | 10 | 14 | 10 | 12 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 9 | 124 | 100 | 14 | 36 | 21 | 46 | 21 | 11 | 15 | 11 | 13 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|-----------------------|------|-------|------|-------|------|-------|
| Volume Total (vph) | 71 | 162 | 32 | 39 | 77 | 39 |
| Volume Left (vph) | 9 | 0 | 14 | 0 | 46 | 15 |
| Volume Right (vph) | 0 | 100 | 0 | 21 | 11 | 13 |
| Hadj (s) | 0.10 | -0.40 | 0.25 | -0.34 | 0.07 | -0.09 |
| Departure Headway (s) | 4.9 | 4.5 | 5.2 | 4.6 | 4.7 | 4.6 |
| Degree Utilization, x | 0.10 | 0.20 | 0.05 | 0.05 | 0.10 | 0.05 |
| Capacity (veh/h) | 710 | 784 | 659 | 744 | 724 | 730 |
| Control Delay (s) | 7.3 | 7.4 | 7.3 | 6.7 | 8.2 | 7.8 |
| Approach Delay (s) | 7.3 | | 7.0 | | 8.2 | 7.8 |
| Approach LOS | A | | A | | A | A |

| Intersection Summary | | | | | | |
|-----------------------------------|--|-------|-----|----------------------|--|---|
| Delay | | | 7.5 | | | |
| HCM Level of Service | | | A | | | |
| Intersection Capacity Utilization | | 24.2% | | ICU Level of Service | | A |
| Analysis Period (min) | | 15 | | | | |

PM Existing
2: I-8 WB Ramp & Drew Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 14 | 0 | 37 | 0 | 12 | 0 | 0 | 84 | 6 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 15 | 0 | 40 | 0 | 13 | 0 | 0 | 91 | 7 |

| | | | | | | | | | | | | |
|------------------------|-----|-----|-----|-----|-----|------|------|------|--|--|------|--|
| Pedestrians | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | 2 | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage (veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 128 | 108 | 95 | 108 | 111 | 13 | 98 | | | | 13 | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 128 | 108 | 95 | 108 | 111 | 13 | 98 | | | | 13 | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | | 4.1 | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | | 2.2 | |
| p0 queue free % | 100 | 100 | 100 | 98 | 100 | 96 | 100 | | | | 100 | |
| cM capacity (veh/h) | 814 | 782 | 962 | 871 | 779 | 1067 | 1495 | | | | 1605 | |

| Direction, Lane # | WB 1 | NB 1 | SB 1 |
|------------------------|------|------|------|
| Volume Total | 55 | 13 | 98 |
| Volume Left | 15 | 0 | 0 |
| Volume Right | 40 | 0 | 7 |
| cSH | 1471 | 1495 | 1700 |
| Volume to Capacity | 0.04 | 0.00 | 0.06 |
| Queue Length 95th (ft) | 3 | 0 | 0 |
| Control Delay (s) | 8.7 | 0.0 | 0.0 |
| Lane LOS | A | | |
| Approach Delay (s) | 8.7 | 0.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|-----------------------------------|--|-------|----------------------|
| Average Delay | | | 2.9 |
| Intersection Capacity Utilization | | 14.8% | ICU Level of Service |
| Analysis Period (min) | | 15 | |

PM Existing
3: I-8 EB Ramp & Drew Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|-------|------|----------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | | |
| Volume (veh/h) | 7 | 0 | 5 | 0 | 0 | 0 | 0 | 6 | 18 | 59 | 33 | 0 | |
| Sign Control | Stop | | Stop | | Free | | Free | | Free | | Free | | |
| Grade | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Hourly flow rate (vph) | 8 | 0 | 5 | 0 | 0 | 0 | 0 | 7 | 20 | 64 | 36 | 0 | |
| Pedestrians | | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | | |
| Right turn flare (veh) | 2 | | | | | | | | | | | | |
| Median type | | | | | | | None | | None | | | | |
| Median storage (veh) | | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | | |
| vC, conflicting volume | 180 | 190 | 36 | 183 | 180 | 16 | 36 | | | | | | 26 |
| vC1, stage 1 conf vol | | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | | |
| vCu, unblocked vol | 180 | 190 | 36 | 183 | 180 | 16 | 36 | | | | | | 26 |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | | | | 4.1 |
| tC, 2 stage (s) | | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | | | | 2.2 |
| p0 queue free % | 99 | 100 | 99 | 100 | 100 | 100 | 100 | | | | | | 96 |
| cM capacity (veh/h) | 757 | 676 | 1037 | 750 | 685 | 1063 | 1575 | | | | | | 1588 |
| Direction, Lane # | | | | | | | | | | | | | |
| Volume Total | 13 | 26 | 100 | | | | | | | | | | |
| Volume Left | 8 | 0 | 64 | | | | | | | | | | |
| Volume Right | 5 | 20 | 0 | | | | | | | | | | |
| cSH | 1298 | 1700 | 1588 | | | | | | | | | | |
| Volume to Capacity | 0.01 | 0.02 | 0.04 | | | | | | | | | | |
| Queue Length 95th (ft) | 1 | 0 | 3 | | | | | | | | | | |
| Control Delay (s) | 9.3 | 0.0 | 4.8 | | | | | | | | | | |
| Lane LOS | A | A | A | | | | | | | | | | |
| Approach Delay (s) | 9.3 | 0.0 | 4.8 | | | | | | | | | | |
| Approach LOS | A | A | A | | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | |
| Average Delay | 4.3 | | | | | | | | | | | | |
| Intersection Capacity Utilization | 21.7% | | ICU Level of Service | | A | | | | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | | | |

PM Existing
4: Diehl Rd & Drew Rd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
|-----------------------------------|-------|------|----------------------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | | | | | | | | | | | | |
| Volume (veh/h) | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 8 | 0 | 0 | 24 | 1 | |
| Sign Control | Stop | | Stop | | Free | | Free | | Free | | Free | | |
| Grade | 0% | | 0% | | 0% | | 0% | | 0% | | 0% | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Hourly flow rate (vph) | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 9 | 0 | 0 | 26 | 1 | |
| Pedestrians | | | | | | | | | | | | | |
| Lane Width (ft) | | | | | | | | | | | | | |
| Walking Speed (ft/s) | | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | | |
| Median type | | | | | | | None | | None | | | | |
| Median storage (veh) | | | | | | | | | | | | | |
| Upstream signal (ft) | | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | | |
| vC, conflicting volume | 38 | 38 | 27 | 40 | 38 | 9 | 27 | | | | | | 9 |
| vC1, stage 1 conf vol | | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | | |
| vCu, unblocked vol | 38 | 38 | 27 | 40 | 38 | 9 | 27 | | | | | | 9 |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | | | | 4.1 |
| tC, 2 stage (s) | | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | | | | 2.2 |
| p0 queue free % | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | | | | | 100 |
| cM capacity (veh/h) | 967 | 854 | 1049 | 962 | 854 | 1073 | 1587 | | | | | | 1611 |
| Direction, Lane # | | | | | | | | | | | | | |
| Volume Total | 4 | 0 | 10 | 27 | | | | | | | | | |
| Volume Left | 2 | 0 | 1 | 0 | | | | | | | | | |
| Volume Right | 2 | 0 | 0 | 1 | | | | | | | | | |
| cSH | 1006 | 1700 | 1587 | 1611 | | | | | | | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | | | | | | | | | |
| Control Delay (s) | 8.6 | 0.0 | 0.8 | 0.0 | | | | | | | | | |
| Lane LOS | A | A | A | A | | | | | | | | | |
| Approach Delay (s) | 8.6 | 0.0 | 0.8 | 0.0 | | | | | | | | | |
| Approach LOS | A | A | A | A | | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | | |
| Average Delay | 1.1 | | | | | | | | | | | | |
| Intersection Capacity Utilization | 13.3% | | ICU Level of Service | | A | | | | | | | | |
| Analysis Period (min) | 15 | | | | | | | | | | | | |