

# Appendix K

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## Traffic Impact Analysis

September 15, 2020

Mr. Brandon Humann  
RED Corydon, LLC  
38122 Stone Meadow Dr.  
Murrieta, CA 92562

**Subject: Corydon and Mission Trail C-Store Trip Generation Comparison (JN 0331-0001)**

Dear Mr. Humann:

Trames Solutions Inc. is pleased to submit this trip generation analysis for the proposed Corydon and Mission Trail C-Store project. The traffic study was previously approved by the City of Lake Elsinore (Lake Elsinore Mission Trails/Corydon C-Store Traffic Impact Study, August 12, 2020. Approved August 14, 2020). Since the proposed project has different land uses than what was analyzed in the traffic study, the City has requested a trip generation comparison between the previous and currently proposed land uses for the project. The site is located south of Corydon and west of Mission Trail in the City of Lake Elsinore.

## **PROJECT DESCRIPTION**

The Corydon and Mission Trail C-Store project will consist of a commercial project that includes a total of 38,395 sf of building area. Attachment A contains the site plan and anticipated uses. These uses (convenience store with gas pumps, fast food restaurant, tire store, small office condos, and retail) are summarized below:

### **Currently Proposed Land Uses**

Convenience store with 16 vehicle fueling positions  
2,300 sf of fast- food restaurant (w/ drive thru)  
5,200 sf tire store  
11,520 sf office use  
11,520 sf of auto care center  
Car wash with 120 linear feet of tunnel (LF)

The traffic study that was previously prepared and approved by the City that included the following uses:

### Previous Land Use Assumptions

Convenience store with 16 vehicle fueling positions  
5,298 sf of fast- food restaurant (w/ drive thru)  
11,520 sf office use  
11,520 sf of auto care center  
Car wash with 120 linear feet of tunnel (LF)

### ANALYSIS

Typically, traffic generated by residential developments can be determined based on the Institute of Transportation Engineers (ITE), Trip Generation handbook (10<sup>th</sup> edition). This publication contains trip rates based on studies conducted for a variety of uses.

Table 1 provides a summary of the daily, AM peak hour, and PM peak hour trip rates for currently proposed project. Based on the proposed uses, it is estimated that a total of 3,312 net trips will occur per day, with 292 net trip ends occurring during the AM Peak Hour, and 268 net trip ends occurring during the PM Peak Hour. Table 2 provides a summary of the trips.

As indicated previously, a traffic study was prepared that evaluated a slightly different land use assumption. The trip rates and summary from the study are presented in Tables 3 and 4, respectively. Based on the traffic study, it was determined that a total of 3,814 net trips will occur per day, with 334 net trip ends occurring during the AM Peak Hour, and 293 net trip ends occurring during the PM Peak Hour. The subsequent traffic impacts were analyzed based on these sets of assumptions.

## **CONCLUSIONS**

The proposed project is not expected to generate more trips than the amount analyzed in the approved traffic study. In fact, it is anticipated that the current project would generate 502 (502 = 3,814-3,312) fewer net trips per day, with 42 (42 = 334-292) fewer net trip ends during the AM Peak Hour, and 25 (25 = 293-268) fewer net trip ends during the PM Peak Hour. Since the proposed project would generate fewer trips than the previously analyzed land use assumptions, it is likely that the impacts would be equal or less than those analyzed in the traffic study.

If you have any questions, please contact me directly at (949) 244-2436.

Respectfully submitted,

Trames Solutions Inc.



Scott Sato, P.E.

Vice President

Attachment A – Site Plan



**TABLE 1  
CURRENT PROJECT TRIP GENERATION RATES<sup>1</sup>**

Land Use	ITE Code	Quantity <sup>2</sup>	Peak Hour Trip Rates						Daily
			AM			PM			
			IN	OUT	Total	IN	OUT	Total	
Super Convenience Mkt./Gas Station	960	16 VFP	14.04	14.04	28.08	11.48	11.48	22.96	230.52
Fast Food w/ Drive Thru	934	2.3 TSF	20.50	19.69	40.19	16.99	15.68	32.67	470.95
Tire Store	848	5.2 TSF	1.74	0.98	2.72	1.71	2.27	3.98	28.52
General Office Building	710	11.52 TSF	2.79	0.45	3.24	0.20	1.07	1.27	11.32
Automobile Care Center	942	11.52 TSF	1.49	0.76	2.25	1.49	1.62	3.11	31.10
Car Wash <sup>3</sup>	Data	120 LF	0.25	0.21	0.46	0.38	0.41	0.79	8.45

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

<sup>2</sup> VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LF = Linear Feet of Tunnel

<sup>3</sup> Source: Empirical driveway counts at the Fast Five Express, Murrieta, CA

**TABLE 2  
CURRENT PROJECT TRIP GENERATION SUMMARY**

Land Use	ITE Code	Quantity <sup>1</sup>	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
Super Convenience Mkt./Gas Station	960	16 VFP	225	225	450	184	184	368	3,688
- Pass-By Reduction (AM-63%, PM-66%)			-142	-142	-284	-121	-121	-242	-1,844
Fast Food w/ Drive Thru	934	2.3 TSF	47	45	92	39	36	75	1,083
- Pass-By Reduction (50%)			-23	-23	-45	-19	-19	-37	-542
Tire Store	848	5.2 TSF	9	5	14	9	12	21	148
General Office Building	710	11.52 TSF	32	5	37	2	12	14	130
Automobile Care Center	942	11.52 TSF	17	9	26	17	19	36	358
Car Wash	Data	120 LF	30	25	55	46	49	95	1,014
- Pass-By Reduction (AM-37%, PM-35%) <sup>2</sup>			-10	-10	-20	-16	-16	-32	-355
- Internal Interaction (10%)			-19	-14	-33	-14	-16	-30	-368
<b>TOTAL PROJECT TRIPS</b>			<b>351</b>	<b>309</b>	<b>660</b>	<b>288</b>	<b>300</b>	<b>588</b>	<b>6,273</b>
Pass-by Reduction Total			-175	-175	-349	-156	-156	-311	-2,741
Internal Interaction Total			-19	-14	-33	-14	-16	-30	-368
<b>TOTAL NET TRIPS (with Pass-By Reduction and Internal Interaction)</b>			<b>167</b>	<b>126</b>	<b>292</b>	<b>128</b>	<b>141</b>	<b>268</b>	<b>3,312</b>

<sup>1</sup> VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LF = Linear Feet of Tunnel

<sup>2</sup> Pass-by reduction percentages were based on surveys at Lightning Express Car Wash, 17111 Hawthorne Blvd., Lawndale, CA (see Appendix B)

**TABLE 3  
PREVIOUS PROJECT TRIP GENERATION RATES<sup>1</sup>**

Land Use	ITE Code	Quantity <sup>2</sup>	Peak Hour Trip Rates						Daily
			AM			PM			
			IN	OUT	Total	IN	OUT	Total	
Super Convenience Mkt./Gas Station	960	16 VFP	14.04	14.04	28.08	11.48	11.48	22.96	230.52
Fast Food w/ Drive Thru	934	5,298 TSF	20.50	19.69	40.19	16.99	15.68	32.67	470.95
General Office Building	710	11.52 TSF	2.79	0.45	3.24	0.20	1.07	1.27	11.32
Automobile Care Center	942	11.52 TSF	1.49	0.76	2.25	1.49	1.62	3.11	31.10
Car Wash <sup>3</sup>	Data	120 LF	0.25	0.21	0.46	0.38	0.41	0.79	8.45

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

<sup>2</sup> VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LF = Linear Feet of Tunnel

<sup>3</sup> Source: Empirical driveway counts at the Fast Five Express, Murrieta, CA

**TABLE 4  
PREVIOUS PROJECT TRIP GENERATION SUMMARY**

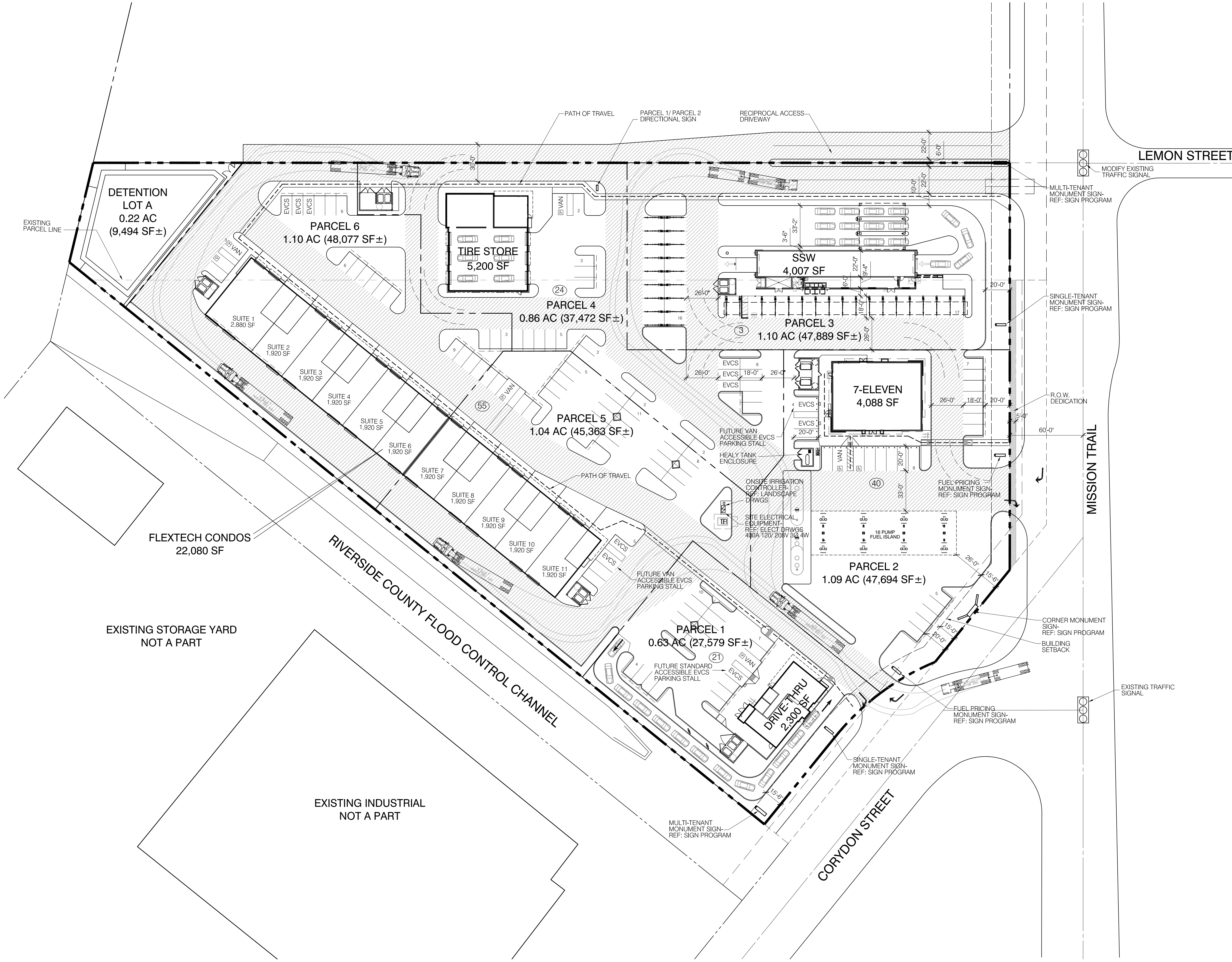
Land Use	ITE Code	Quantity <sup>1</sup>	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
Super Convenience Mkt./Gas Station	960	16 VFP	225	225	450	184	184	368	3,688
- Pass-By Reduction (AM-63%, PM-66%)			-142	-142	-284	-121	-121	-242	-1,844
Fast Food w/ Drive Thru	934	5,298 TSF	109	104	213	90	83	173	2,495
- Pass-By Reduction (50%)			-53	-53	-106	-43	-43	-86	-1,248
General Office Building	710	11.52 TSF	32	5	37	2	12	14	130
Automobile Care Center	942	11.52 TSF	17	9	26	17	19	36	358
Car Wash	Data	120 LF	30	25	55	46	49	95	1,014
- Pass-By Reduction (AM-37%, PM-35%) <sup>2</sup>			-10	-10	-20	-16	-16	-32	-355
- Internal Interaction (10%)			-21	-16	-37	-16	-17	-33	-424
<b>TOTAL PROJECT TRIPS</b>			<b>413</b>	<b>368</b>	<b>781</b>	<b>339</b>	<b>347</b>	<b>686</b>	<b>7,685</b>
Pass-by Reduction Total			-205	-205	-410	-180	-180	-360	-3,447
Internal Interaction Total			-21	-16	-37	-16	-17	-33	-424
<b>TOTAL NET TRIPS (with Pass-By Reduction and Internal Interaction)</b>			<b>187</b>	<b>147</b>	<b>334</b>	<b>143</b>	<b>150</b>	<b>293</b>	<b>3,814</b>

<sup>1</sup> VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LF = Linear Feet of Tunnel

<sup>2</sup> Pass-by reduction percentages were based on surveys at Lightning Express Car Wash, 17111 Hawthorne Blvd., Lawndale, CA (see Appendix B)

ATTACHMENT A  
SITE PLAN





**PARKING** EMC SEC. 17.148.030

REQUIRED PARKING:

PARKING STALL DIMENSIONS (U.N.O.): 9' X 18'  
MINIMUM AISLE WIDTH (90° PARKING): 26'

RETAIL (1/250): 17 STALLS  
DRIVE-THRU RESTAURANT: 1/45 SF CUSTOMER AREA (650 SF/45); 1/200 SF NONCUSTOMER AREA (1,650 SF/200); 15 STALLS  
TIRE STORE: 9 STALLS  
750 SF/250 OFFICE/SALES: 3 STALLS  
3/ SERVICE BAY: 18 STALLS  
FLEX-TECH CONDOS: 5,500 SF/250 OFFICE: 22 STALLS  
16,580 SF/500 STORAGE: 34 STALLS  
EXPRESS CARWASH (1/EMPLOYEE): 3 STALLS

PARKING REQUIRED: 121 STALLS  
TOTAL PARKING PROVIDED: 143 STALLS

**ACCESSIBLE PARKING**

2019 CBC TABLE 11B-208.2

TOTAL NUMBER OF PARKING SPACES PROVIDED	TOTAL NUMBER OF ACCESSIBLE SPACES
1-25	1
26-50	2
51-75	3
76-100	4
101-150	5
151-200	6
201-300	7
301-400	8
401-500	9
501-1,000	2 PERCENT OF TOTAL
1,001 AND OVER	20 PLUS 1/100 OVER 1,000

TOTAL PARKING PROVIDED: 143 STALLS  
TOTAL ACCESSIBLE SPACES REQUIRED: 5 STALLS  
VAN ACCESSIBLE REQ'D (SEC. 11B-208.2.4) 1 OF TOTAL REQ'D

ACCESSIBLE SPACES PROVIDED: 1 STALLS  
STANDARD STALL: 1 STALLS  
VAN ACCESSIBLE STALLS: 6 STALLS

TOTAL ACCESSIBLE SPACES PROVIDED: 7 STALLS

**CLEAN AIR VEHICLE PARKING**

2019 CAL GREEN TABLE 5.106.5.2

TOTAL NUMBER OF PARKING SPACES	TOTAL NUMBER OF PARKING SPACES
0-9	0
10-25	1
26-50	3
51-75	6
76-100	8
101-150	11
151-200	16
201 AND OVER	8 PERCENT OF TOTAL

TOTAL PARKING PROVIDED: 143 STALLS  
TOTAL CAV PARKING REQUIRED: 11 STALLS  
TOTAL CAV PARKING PROVIDED: \*\*11 STALLS

\*\* (CALGREEN 5.106.5.3.5: FUTURE EVCS SPACES QUALIFY AS DESIGNATED PARKING FOR CLEAN AIR VEHICLES)

**FUTURE ELECTRICAL VEHICLE CHARGING STATIONS**

2019 CAL GREEN TABLE 5.106.5.3.3

TOTAL NUMBER OF PARKING SPACES	TOTAL NUMBER OF EVCS SPACES
0-9	0
10-25	1
26-50	2
51-75	4
76-100	5
101-150	7
151-200	10
201 AND OVER	6 PERCENT OF TOTAL

2019 CBC TABLE 11B-228.3.2.1

TOTAL NUMBER OF EVCS AT A FACILITY	VAN ACCESSIBLE	STANDARD ACCESSIBLE	AMBULATORY
1-4	1	0	0
5-25	1	1	0
26-50	1	1	1
51-75	1	2	2
76-100	1	3	3
101-150	1	3	3
151-200	1	3	3
201 AND OVER	1 + 1/300 OVER 100	3 + 1/60 OVER 100	1 + 1/50 OVER 100

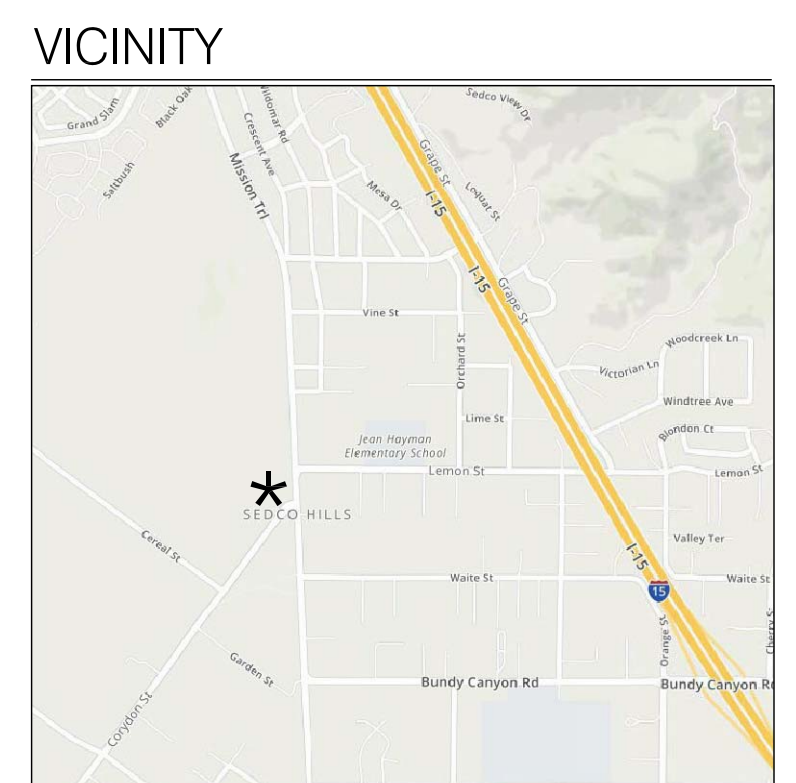
TOTAL PARKING PROVIDED: 143 STALLS  
FUTURE EVCS SPACES REQUIRED: 7 STALLS  
FUTURE ACCESSIBLE SPACES REQ'D (OF TOTAL): 1 STALL  
VAN ACCESSIBLE: 1 STALL  
STANDARD ACCESSIBLE: 1 STALL  
AMBULATORY: 0 STALLS

FUTURE EVCS SPACES PROVIDED: 7 STALLS  
FUTURE STANDARD EVCS SPACES: 7 STALLS  
FUTURE VAN ACCESSIBLE EVCS PROVIDED: 2 STALLS  
FUTURE STANDARD ACCESSIBLE EVCS PROVIDED: 1 STALL  
FUTURE AMBULATORY EVCS PROVIDED: 0 STALLS

TOTAL FUTURE EVCS SPACES PROVIDED: 11 STALLS

FUTURE EVCS NOTES:

- ALL CLEAN AIR VEHICLE PARKING SPACES SHALL BE PROVIDED WITH INFRASTRUCTURE FOR THE ADDITION OF FUTURE ELECTRIC VEHICLE CHARGING STATIONS.
- FUTURE ACCESSIBLE EVCS STALLS SHALL BE CONSTRUCTED TO MEET CURRENT ACCESSIBILITY STANDARDS ALONG ACCESSIBLE ROUTES OR HAVE THE ABILITY TO BE MODIFIED WITHOUT AFFECTING REQUIRED PARKING SPACE QUANTITIES.



**ZONING**

GENERAL PLAN: SPECIFIC PLAN  
ZONING: EAST LAKE SPECIFIC PLAN PLANNING AREA 2 ACTION SPORTS, TOURISM, COMMERCIAL & RECREATION MIXED US OVERLAY

BUILDING SETBACKS:  
FRONT: 15'  
SIDE (ADJ. TO PUBLIC RIGHT-OF-WAY): 15'  
SIDE (ADJ. TO INTERIOR LOT LINES): 0'  
REAR (ADJ. TO INTERIOR LOT LINES): 0'

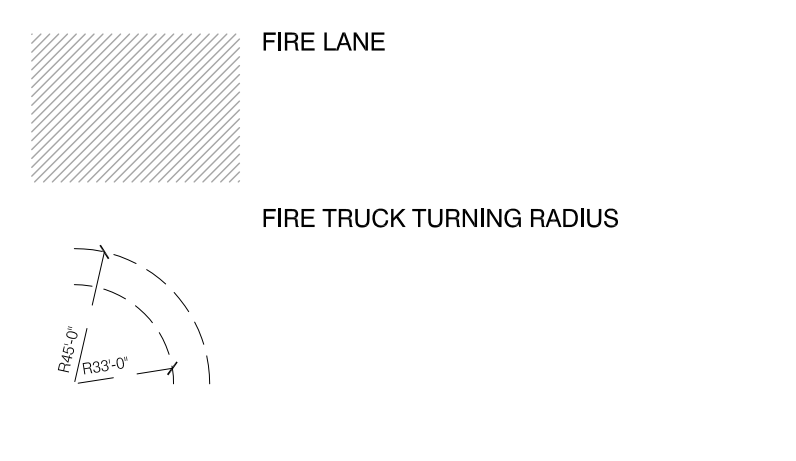
PARKING SETBACKS:  
FRONT: 25' AVG/ 20' MIN  
SIDE (ADJ. TO PUBLIC RIGHT-OF-WAY): 15'  
SIDE (ADJ. TO INTERIOR LOT LINES): 0'  
REAR (ADJ. TO INTERIOR LOT LINES): 0'

MAXIMUM BUILDING HEIGHT: 45'  
ARCHITECTURAL ELEMENTS: 65'  
MAXIMUM BUILDING COVERAGE: 45%  
MINIMUM LANDSCAPE COVERAGE: 15%

**PROJECT SUMMARY**

LAND AREA: 6.05 AC (263,663 SF ±)  
RETAIL: 4,088 SF  
DRIVE-THRU RESTAURANT: 2,300 SF  
TIRE STORE: 750 SF  
SALES: 4,450 SF (6 SERVICE BAYS)  
SERVICE: 5,500 SF  
FLEX-TECH: 16,580 SF  
OFFICE: 4,007 SF  
STORAGE: 38,395 SF  
EXPRESS CARWASH: 4,285 SF  
TOTAL BUILDING AREA: 16.2%  
FUELING CANOPY: 30'  
CARWASH PAY CANOPY: 15.5%  
BUILDING COVERAGE (F.A.R.): 15.5%  
MAXIMUM BUILDING HEIGHT: 40,826 SF (15.5%)  
ON-SITE LANDSCAPE AREA: 15.5%

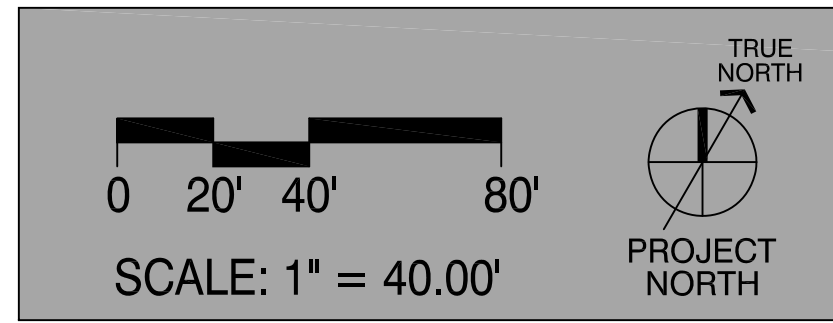
- LEGEND & SYMBOLS**
- VAN VAN ACCESSIBLE PARKING SPACE
  - CAV CLEAN AIR VEHICLE PARKING SPACE
  - EVCS FUTURE ELECTRICAL VEHICLE CHARGING PARKING SPACE
  - DDC DOUBLE DETECTOR CHECK VALVE- REF: CIVIL DRAWINGS
  - FDC FIRE DEPARTMENT CONNECTION- REF: CIVIL DRAWINGS
  - FH FIRE HYDRANT- REF: CIVIL DRAWINGS  
PROVIDE BLUE REFLECTOR @ CL DRIVEWAY PER FIRE DEPT REQUIREMENTS
  - GM GAS METER LOCATION- REF: PLUMBING & GAS UTILITY DRAWINGS
  - PIV POST INDICATOR VALVE- REF: CIVIL DRAWINGS
  - R RECYCLE DUMPSTER
  - T TRASH DUMPSTER
  - TR TRANSFORMER- REF ELECTRICAL UTILITY DRAWINGS
  - WM WATER METER- REF: CIVIL DRAWINGS
  - SS STOP SIGN- REF: DET. 9/ SD2.0
  - AP ACCESSIBLE PATH SIGN- REF DET. 8/ SD2.0
  - SE SITE ENTRANCE SIGN- REF DET. 7/ SD2.0



NOTE:  
BUILDING AREAS AND LAND COVERAGE ARE PRELIMINARY AND SUBJECT TO ADJUSTMENT. ANY PROPOSED DEVELOPMENT IS SUBJECT TO APPROVAL OF GOVERNMENT OR OTHER AGENCIES HAVING JURISDICTION. ALL DIMENSIONS AND SITE CONDITIONS ARE SUBJECT TO VERIFICATION.

**PRELIMINARY SITE PLAN SCHEME Kv6**

CORYDON GATEWAY LAKE ELSINORE, CA  
GKPA PROJECT # 19114.01  
24 JUNE 2020



**CORYDON GATEWAY**  
LAKE ELSINORE, CALIFORNIA

**RED CORYDON, LLC**  
25425 JEFFERSON AVENUE, SUITE 101  
MURRIETA, CA 92562  
951.643.4711

**GK PIERCE ARCHITECTS**  
3 OVERTURE  
ALISO VIEJO, CA 92656  
T 949.344.2710  
F 949.344.2720  
©GK PIERCE ARCHITECTS, INC. 2020



# LAKE ELSINORE MISSION TRAILS/CORYDON C-STORE TRAFFIC IMPACT ANALYSIS

CITY OF LAKE ELSINORE, CALIFORNIA

AUGUST 12, 2020 (REVISED)

JUNE 29, 2020 (REVISED)

JANUARY 20, 2020

Prepared for:

RED Corydon, LLC  
38122 Stone Meadow Dr.  
Murrieta, CA 92562

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Prepared by:



Scott Sato, P.E.  
4225 Oceanside Blvd., #354H  
Oceanside, CA 92056  
(760) 291-1400

**TRAMES SOLUTIONS INC.**

(0331-0001-02)

Approved  
Nicholas Lowe, PE  
8/14/2020



# TABLE OF CONTENTS

---

<u>SECTION</u>	<u>PAGE</u>
<b>1.0 INTRODUCTION AND SUMMARY .....</b>	<b>1</b>
A. Purpose of the TIA and Study Objectives	
B. Site Location and Study Area	
C. Development Project Identification	
1. Project Size and Description	
2. Existing Land Use	
3. Proposed Land Use	
4. Site Plan of Proposed Project	
5. Proposed Project Opening Year	
6. Proposed Project Phasing	
<b>2.0 TRAFFIC ANALYSIS METHODOLOGIES .....</b>	<b>7</b>
A. Level of Service Definition	
B. Level of Service Criteria	
C. Intersection Operations Analysis Methodology	
D. Roadway Segment Analysis Methodology	
E. Traffic Signal Warrant Analysis	
<b>3.0 AREA CONDITIONS .....</b>	<b>11</b>
A. Study Area and Intersections	
B. Area Roadway System	
C. Existing (2019) Traffic Volumes	
D. Existing (2019) Delay and Level of Service	
E. Transit Service	
<b>4.0 PROJECTED FUTURE TRAFFIC .....</b>	<b>19</b>
A. Project Traffic	
1. Ambient Growth Rate	
2. Project Trip Generation	
3. Project Trip Distribution and Assignment	
4. Other Trip Generation Factors	
5. Project Peak Hour Turning Movement Traffic	
B. Cumulative Traffic (Background)	
1. Method of Projection	
2. Other Approved or Proposed Development Projects	
3. Other Approved Project Trip Generation	
4. Total Background Peak Hour Turning Movement Volumes	

# TABLE OF CONTENTS (Continued)

---

<u>SECTION</u>	<u>PAGE</u>
<b>5.0 TRAFFIC ANALYSIS .....</b>	<b>31</b>
A. Existing Plus Project (EP) Conditions	
B. Existing Plus Ambient Plus Project (EAP) (2021) Conditions	
C. Existing Plus Ambient Plus Project Plus Cumulative (EAPC) (2021) Conditions	
<b>6.0 FINDINGS AND RECOMMENDATIONS .....</b>	<b>39</b>
A. Traffic Impacts and Level of Service Analysis	
1. Existing (2019) Conditions	
2. Existing Plus Project (EP) Conditions	
3. Existing Plus Ambient Plus Project (EAP) (2021) Conditions	
4. Existing Plus Ambient Plus Project Plus Cumulative (EAPC) (2021) Conditions	
B. Funding Mechanism	
C. Circulation Recommendations	



# LIST OF FIGURES

---

<u>FIGURE</u>	<u>PAGE</u>
1-A Study Area.....	3
1-B Site Plan .....	5
3-A Existing Traffic Controls and Intersection Geometrics .....	12
3-B Lake Elsinore General Plan Circulation Element and Street Classification Cross-Sections .....	13
3-C Wildomar General Plan Circulation Element and Street Classification Cross-Sections .....	14
3-D Existing (2019) Traffic Volumes.....	15
4-A Project Trip Distribution.....	22
4-B Project Only and Project Pass-By Traffic Volumes.....	23
4-C Cumulative Development Projects Location Map .....	25
4-D Cumulative Developments Only Traffic Volumes.....	27
4-E Existing Plus Project Traffic Volumes.....	28
4-F Existing Plus Ambient Plus Project (2021) Traffic Volumes .....	29
4-G Existing Plus Ambient Plus Project Plus Cumulative (2021) Traffic Volumes.....	30

# LIST OF TABLES

---

<u>TABLE</u>	<u>PAGE</u>
3-1 Intersection Analysis for Existing (2019) Conditions .....	17
3-2 Roadway Segment Analysis for Existing (2019) Conditions.....	18
4-1 Project Trip Generation Rates .....	20
4-2 Project Trip Generation Summary .....	20
4-3 Cumulative Development Trip Generation Summary .....	26
5-1 Intersection Analysis for Existing Plus Project Conditions .....	32
5-2 Roadway Segment Analysis for Existing Plus Project Conditions .....	34
5-3 Intersection Analysis for Existing Plus Ambient Plus Project (2021) Conditions.....	35
5-4 Roadway Segment Analysis for Existing Plus Ambient Plus Project (2021) Conditions.....	36
5-5 Intersection Analysis for Existing Plus Ambient Plus Project Plus Cumulative (2021) Conditions .....	37
5-6 Roadway Segment Analysis for Existing Plus Ambient Plus Project Plus Cumulative (2021) Conditions .....	38
6-1 Intersection Analysis Summary .....	40

# LIST OF APPENDICES

---

Scoping Agreement .....	A
Traffic Count Worksheets and Pass-By Survey Sheets .....	B
Existing (2019) Intersection Analysis Calculation Worksheets .....	C
Existing Plus Project Intersection Analysis Calculation Worksheets .....	D
Existing Plus Ambient Plus Project (2021) Intersection Analysis Calculation Worksheets .....	E
Existing Plus Ambient Plus Project Plus Cumulative (2021) Intersection Analysis Calculation Worksheets .....	F

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# LAKE ELSINORE MISSION TRAILS/CORYDON C-STORE TRAFFIC IMPACT ANALYSIS

## CITY OF LAKE ELSINORE, CALIFORNIA

### 1.0 INTRODUCTION AND SUMMARY

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#### A. Purpose of the TIA and Study Objectives

The purpose of this traffic impact analysis (TIA) is to evaluate the potential traffic impacts of the proposed Lake Elsinore Mission Trails/Corydon C-Store development. The project is to be developed with a convenience store with 16 vehicle fueling positions (vfp), 5,298 square feet (sf) of fast-food restaurant (w/ drive thru), 11,520 sf office use, 11,520 sf of auto care center, and a car wash with 120 linear feet of tunnel (LF). The project is located north of Corydon Street and west of Mission Trail the City of Lake Elsinore.

Study objectives include the following:

**Existing (2019) Traffic.** Existing traffic will be counted to determine current conditions. This constitutes the environmental setting for a CEQA analysis at the time that the hearing body reviews the project. Traffic count data shall be new or recent. In some cases, data up to one year old may be acceptable with the approval of the City of Lake Elsinore Engineering Department. Any exception to this must be requested prior to the approval of the scoping agreement. A copy of the approved scoping agreement is included in Appendix "A".

**Existing (2019) Plus Project Traffic.** Traffic generated by the proposed project will be added to existing traffic counts to identify and analyze impacts on the circulation system.

**Existing + Ambient + Project (EAP 2021).** Traffic conditions prior to the time that the proposed development is completed will be estimated by increasing the existing traffic counts by an appropriate growth rate (2%), projected to the year that the project is estimated to be completed. This will be the basis for determining near-term with project-conditions without cumulative project impacts.

**Existing + Ambient + Project + Cumulative (EAPC 2021).** Traffic generated by the proposed project shall be identified and added to the EAP traffic conditions. This scenario will be analyzed, and a determination made if improvements funded through an approved funding mechanism (TUMF, DIF, CFD, RBBD etc.) can accommodate the cumulative traffic at the target Level of Service (LOS) identified in the General Plan. If the "funded" improvements can provide the target LOS, payment into the fee program will be considered as cumulative mitigation through the conditions of approval. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF facilities) should be identified as such.

B. Site Location and Study Area

The project site is generally located north of Corydon Street and west of Mission Trail in the City of Lake Elsinore. Figure 1-A illustrates the site location and the traffic analysis study area.

In general, the study area is based on the projects' trip generation and distribution assumptions. Intersections where the project is likely to add 50 or more peak hour trips have been included for analysis purposes.

<b>STUDY INTERSECTIONS</b>	
1.	Corydon St. (NS) / Palomar St. (EW)
2.	Mission Tr. (NS) / Lemon St. – Driveway 1 (EW)
3.	Mission Tr. (NS) / Corydon St. (EW)
4.	Mission Tr. (NS) / Bundy Canyon. Rd. (EW)
5.	Mission Tr. (NS) / Canyon Dr. (EW)
6.	Mission Tr. (NS) / Hidden Tr. (EW)
7.	Mission Tr. (NS) / Driveway 2 (EW)
8.	Driveway 3 (NS) / Corydon St. (EW)

C. Development Project Identification

1. Project Size and Description

The Lake Elsinore Mission Trails/Corydon C-Store Site is proposed to be developed with a convenience store with 16 vfp, 5,298 sf of fast- food restaurant (w/ drive thru), 11,520 sf office use, 11,520 sf of auto care center, and a car wash with 120 linear feet of tunnel (LF). The project is located north of Corydon Street and west of Mission Trail the City of Lake Elsinore.

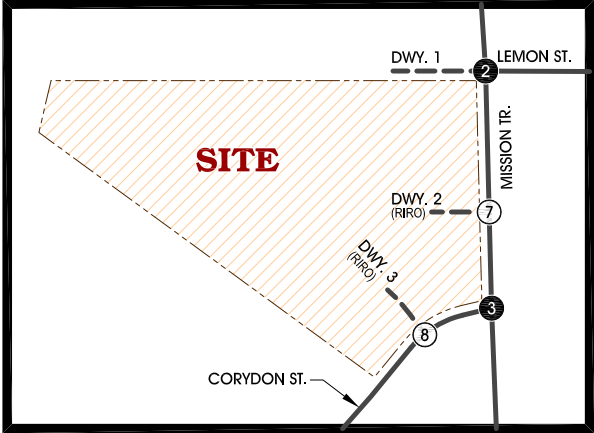
2. Existing Land Use

The project site is currently occupied by a fortune teller and does not generate a substantial amount of vehicular traffic. Adjacent uses include the following:

- North –Vacant
- South – Vacant/Commercial
- East – Commercial
- West – Commercial

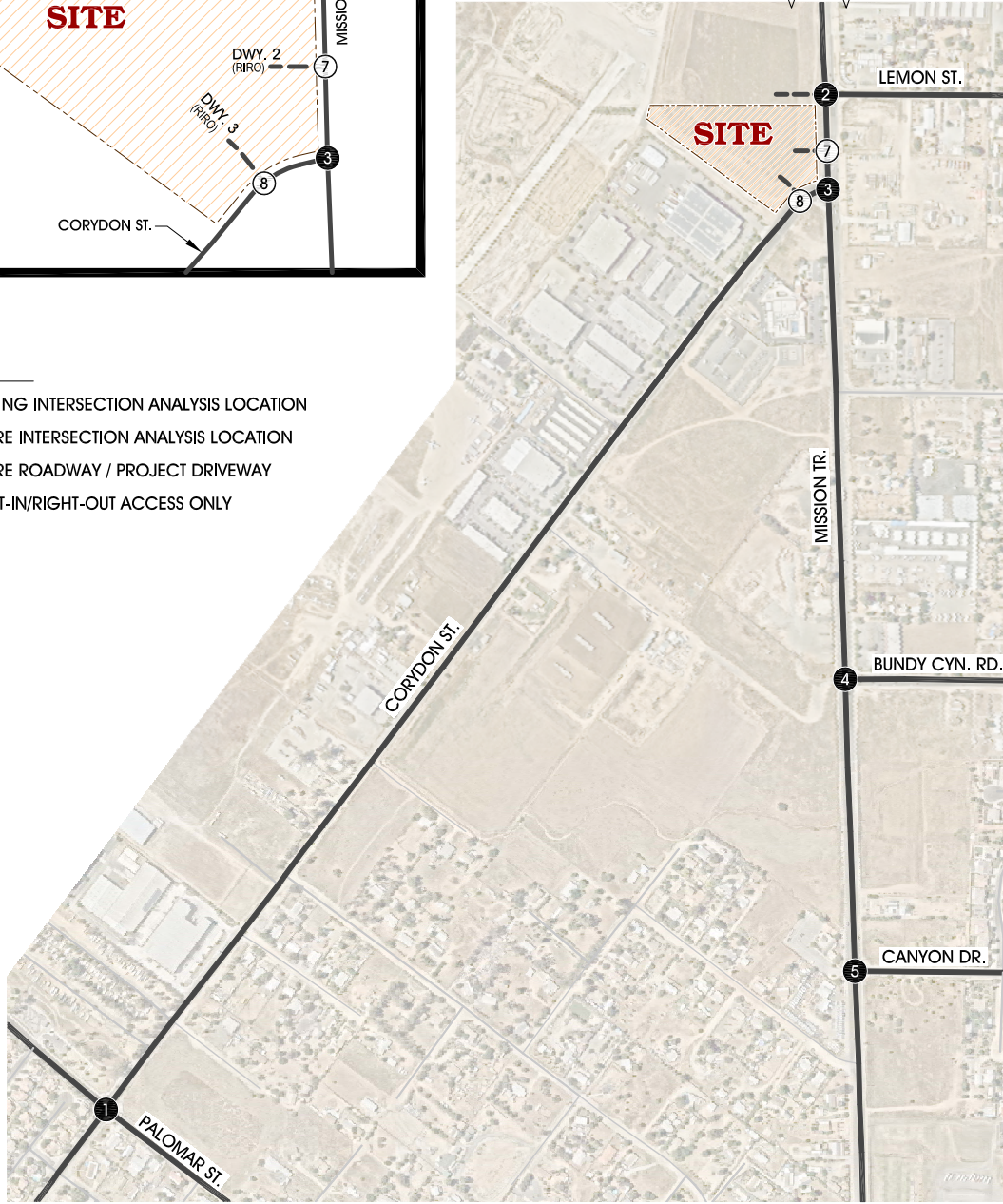
# FIGURE 1-A STUDY AREA

**ON-SITE AREA**



**LEGEND:**

- ⑥ = EXISTING INTERSECTION ANALYSIS LOCATION
- ② = FUTURE INTERSECTION ANALYSIS LOCATION
- = FUTURE ROADWAY / PROJECT DRIVEWAY
- (RIRO) = RIGHT-IN/RIGHT-OUT ACCESS ONLY



3. Proposed Land Use

The project will consist of a convenience store with 16 vehicle fueling positions, fast-food restaurant (w/ drive thru), office, auto care center, and a car wash.

4. Site Plan of Proposed Project

Figure 1-B illustrates the project site plan. The project site will have two driveways on Mission Trail and one on Corydon Street. Two of the Project Driveways (Mission Trail/ Driveway 2 and Driveway 3/Corydon Street) will be restricted to right-in/right-out access only.

5. Proposed Project Opening Year

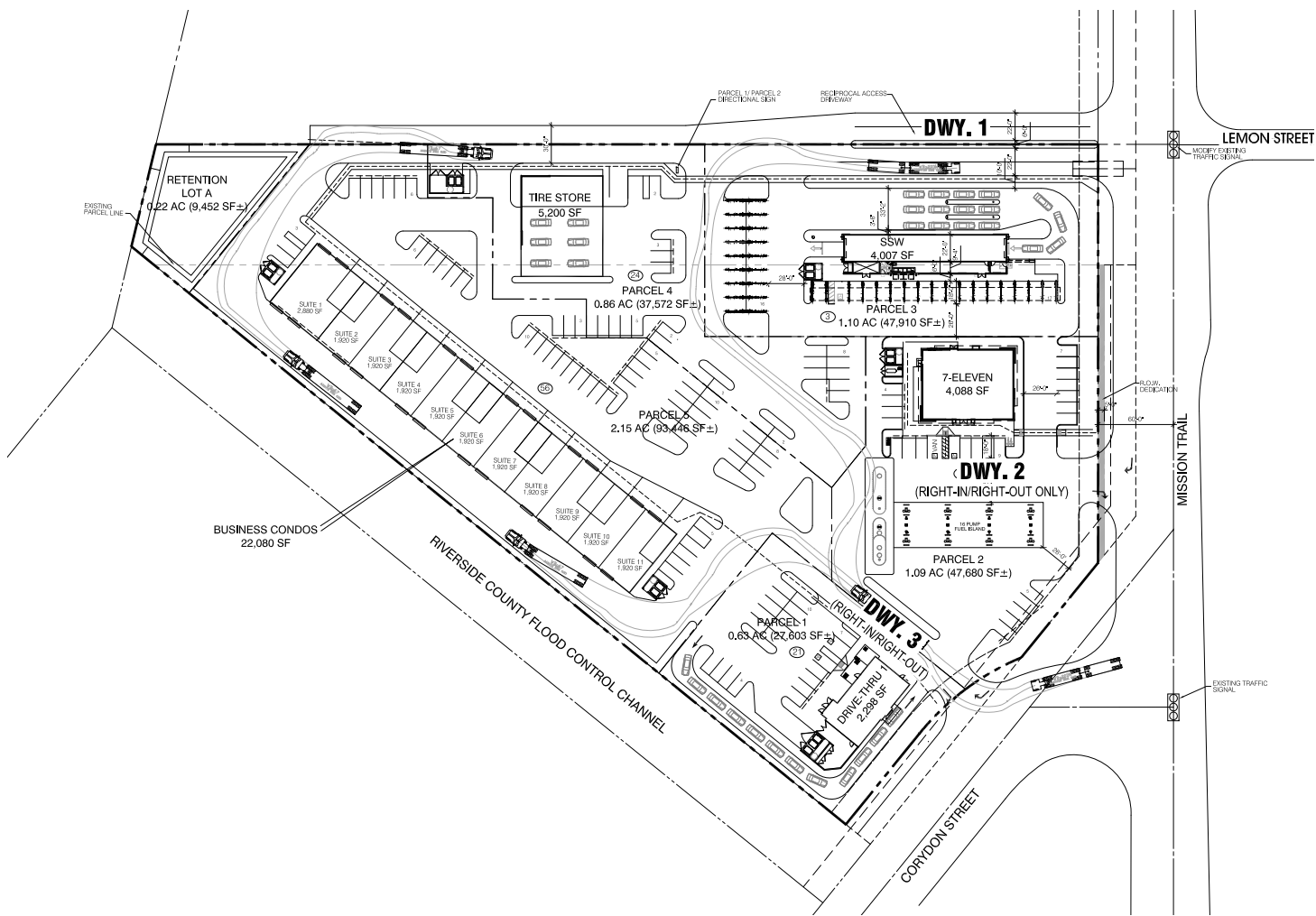
The proposed project is anticipated to be completed in 2021. Future traffic analysis has been based upon a 2% annual background (ambient) growth along with traffic generated by other future developments in the surrounding area.

6. Proposed Project Phasing

The project is expected to be completed in a single phase. Therefore, traffic recommendations included in this report have not been separated into different development phases.



# FIGURE 1-B SITE PLAN



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## 2.0 TRAFFIC ANALYSIS METHODOLOGIES

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

### A. Level of Service Definition

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

- LOS "A": Completely free-flow conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway and by driver preferences. Maneuverability within the traffic stream is good. Minor disruptions to flow are easily absorbed without a change in travel speed.
- LOS "B": Free flow conditions, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS "A", but drivers have slightly less freedom to maneuver. Minor disruptions are still easily absorbed, although local deterioration in LOS will be more obvious.
- LOS "C": The influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles. Minor disruptions can cause serious local deterioration in service, and queues will form behind any significant traffic disruption.
- LOS "D": The ability to maneuver is restricted due to traffic congestion. Travel speed is reduced by the increasing volume. Only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
- LOS "E": Operations at or near capacity, an unstable level. Vehicles are operating with the minimum spacing for maintaining uniform flow.
- LOS "F": Forced or breakdown flow. It occurs either when vehicles arrive at a rate greater than the rate at which they are discharged or when the forecast demand exceeds the computed capacity of a planned facility. Although operations at these points – and on sections immediately downstream – appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

## B. Level of Service Criteria

The City of Lake Elsinore has established Level of Service (LOS) “D” as the maximum allowable threshold for the intersection operations. Therefore, LOS “E” or “F” is considered unacceptable and requires improvements measures. For roadway segments, LOS PEC ( $v/c = 1.0$  to  $1.24$ ) or better is deemed acceptable.

## C. Intersection Operations Analysis Methodology

The City of Lake Elsinore requires the use of the Transportation Research Board - Highway Capacity Manual, 6<sup>th</sup> Edition (HCM6). The HCM defines level of service as a qualitative measure, which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate Level of Service (LOS) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

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

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

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

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

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

Levels of service at the study area intersections have been evaluated using the following HCM intersection analysis program: Synchro 10.0.

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

D. Roadway Segment Analysis Methodology

Roadway Segment analysis has been evaluated based on the Link Volume Capacities/Level of Service for the City of Lake Elsinore Roadways. Roadway segment analysis has been assessed based on average daily traffic (ADT) volumes shown in this report for each analysis scenario. City of Lake Elsinore daily level of service criteria are as follows:

LEVEL OF SERVICE	INDICATES	V/C RATIO
A	Acceptable	0.00 to 0.80
AC	Approaching Capacity	0.81 to 1.00
PEC	Potentially Exceeds Capacity	1.00 to 1.24
D	Deficient	> 1.24

Roadway segment analysis is suitable for planning purposes and not a precise measure of capacity. The ultimate capacity of a roadway is based upon several factors such as the relationships between peak hour and daily traffic volumes, intersection spacing, configuration, and control features, vehicle mix, and pedestrian/bicycle traffic. Furthermore, where the roadway segment analysis indicates a deficiency (LOS "PEC" or worse; v/c >

1.00) a review of the more detailed peak hour intersection analysis is typically undertaken. The intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, roadway segment widening is typically recommended if the peak hour intersection analysis indicates the need for additional through lanes.

### 3.0 AREA CONDITIONS

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A. Study Area and Intersections

In general, the study area is based on the projects' trip generation and distribution assumptions. Intersections where the project is likely to add 50 or more peak hour trips have been included for analysis purposes.

STUDY INTERSECTIONS	
1.	Corydon St. (NS) / Palomar St. (EW)
2.	Mission Tr. (NS) / Lemon St. – Driveway 1 (EW)
3.	Mission Tr. (NS) / Corydon St. (EW)
4.	Mission Tr. (NS) / Bundy Canyon. Rd. (EW)
5.	Mission Tr. (NS) / Canyon Dr. (EW)
6.	Mission Tr. (NS) / Hidden Tr. (EW)
7.	Mission Tr. (NS) / Driveway 2 (EW)
8.	Driveway 3 (NS) / Corydon St. (EW)

B. Area Roadway System

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

The City of Lake Elsinore Circulation Element and Roadway Cross-Sections are depicted on Figure 3-B.

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

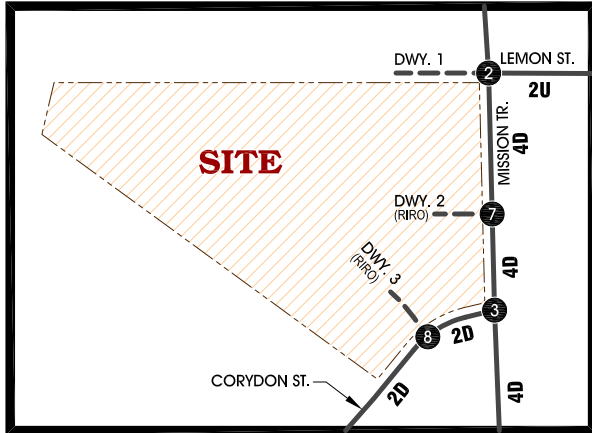
C. Existing (2019) Traffic Volumes

Existing intersection level of service calculations are based upon manual AM and PM peak hour turning movement counts made for Trames Solutions, Inc. in April 2019. The AM peak hour is the highest consecutive hour between 7 AM and 9 AM. Similarly, the PM peak hour is the highest consecutive hour between 4 PM and 6 PM.

Existing (2019) AM and PM peak hour intersection turning movement volumes are shown on Figure 3-D. Traffic counts were conducted in September 18, 2019 (Wednesday) and October 2, 2019 (Wednesday). The traffic count worksheets are included in Appendix "B".

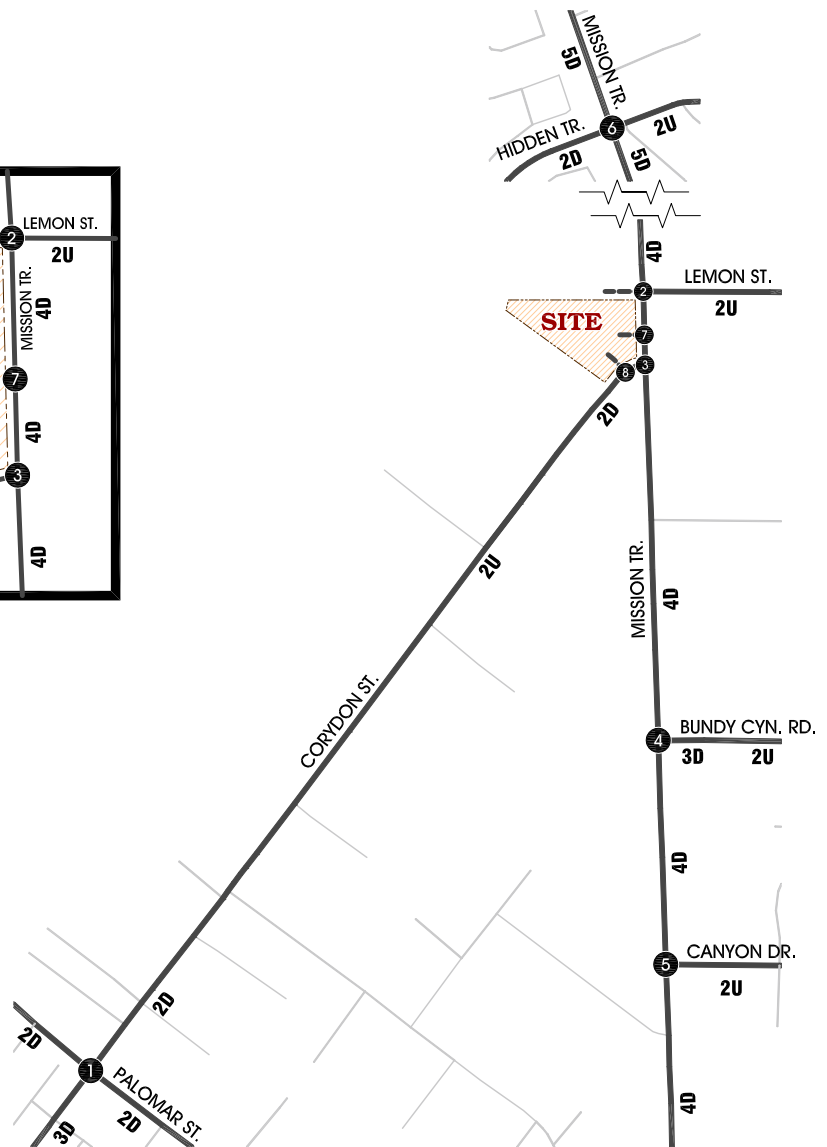
# FIGURE 3-A EXISTING TRAFFIC CONTROLS AND INTERSECTION GEOMETRICS

## ON-SITE AREA



## LEGEND:

- 8 = INTERSECTION ID
- = TRAFFIC SIGNAL
- = STOP SIGN
- 4** = NUMBER OF LANES
- D** = DIVIDED
- U** = UNDIVIDED
- - - = FUTURE ROADWAY / PROJECT DRIVEWAY
- OVL** = RIGHT TURN OVERLAP PHASE



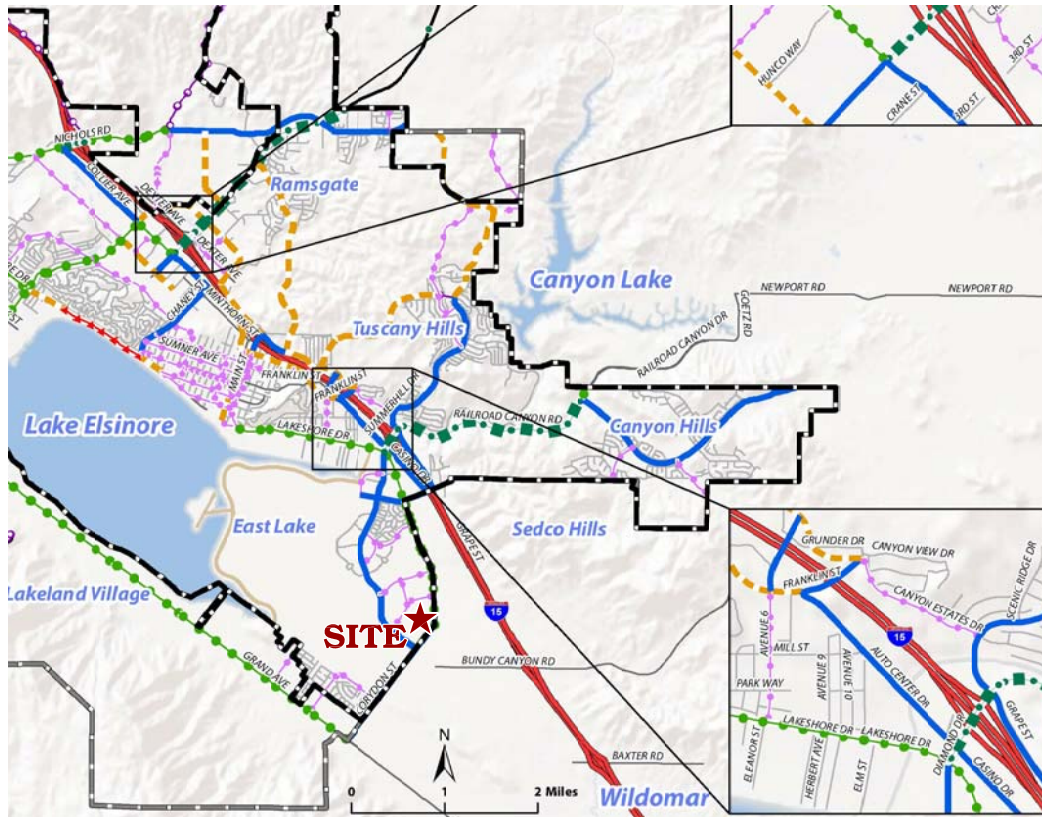
1. Corydon St. (NS) / Palomar St. (EW)	2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)	3. Mission Tr. (NS) / Corydon St. (EW)	4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)
5. Mission Tr. (NS) / Canyon Dr. (EW)	6. Mission Tr. (NS) / Hidden Tr. (EW)	7. Mission Tr. (NS) / Dwy. 2 (EW)	8. Dwy. 3 (NS) / Corydon St. (EW)
		FUTURE INTERSECTION	FUTURE INTERSECTION



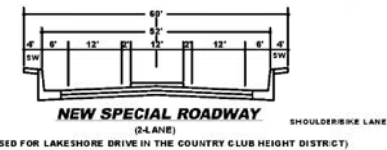
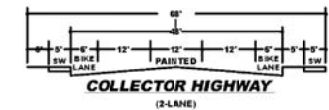
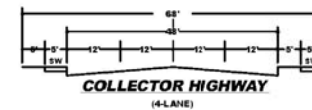
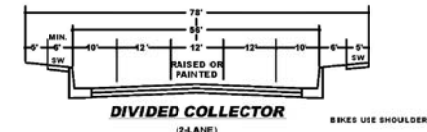
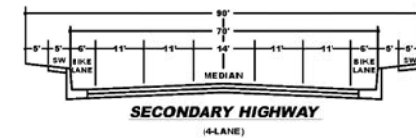
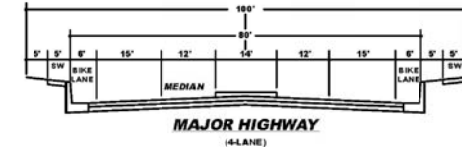
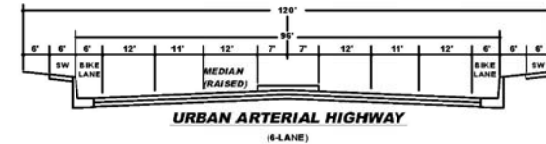
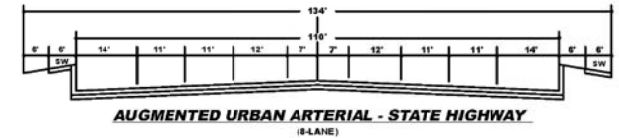


# FIGURE 3-B CITY OF LAKE ELSINORE GENERAL PLAN CIRCULATION ELEMENT AND RECOMMENDED ROADWAY CROSS-SECTIONS

CIRCULATION MAP



TYPICAL STREET SECTIONS



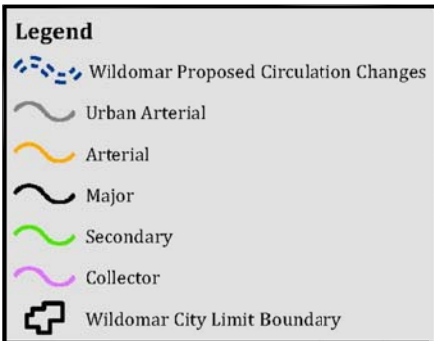
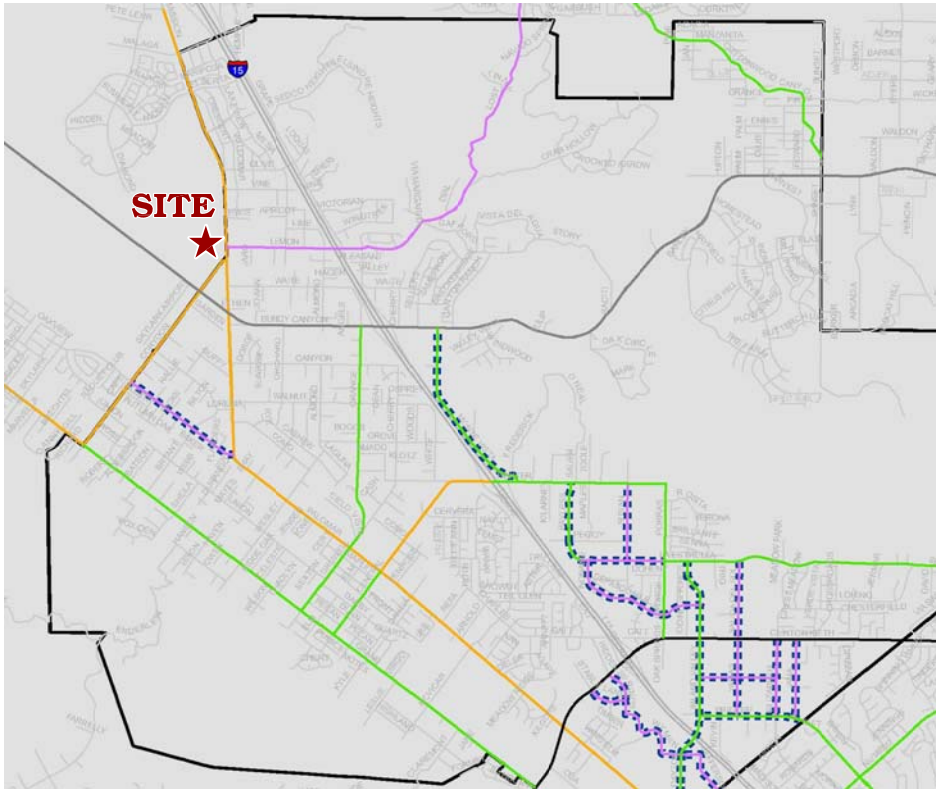
\* BIKE LANES ARE NOT MANDATORY UNLESS SHOWN ON THE BIKEWAY CIRCULATION ELEMENT PLAN  
PRECISE SIDEWALK LOCATION SUBJECT TO CITY ENGINEER APPROVAL  
NOTE: CHECK THE DISTRICT PLAN OF YOUR AREA FOR ANY REQUIRED SPECIAL ROADWAY CROSS-SECTION,  
ESPECIALLY THE LAKE EDGE AND COUNTRY CLUB HEIGHTS DISTRICT PLANS.  
STRIPPING OF COLLECTOR HIGHWAY AS DIRECTED BY CITY ENGINEER.

SOURCE: CITY OF LAKE ELSINORE GENERAL PLAN

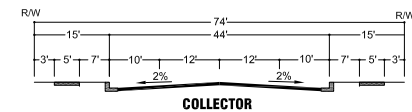
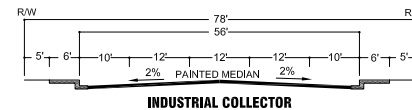
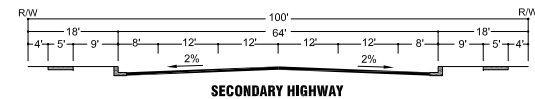
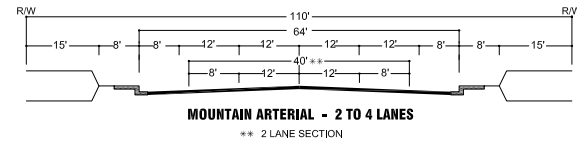
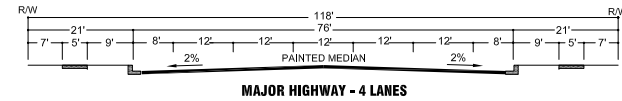
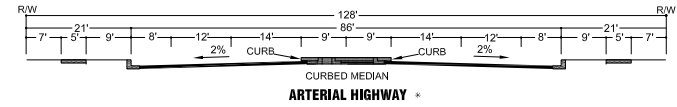
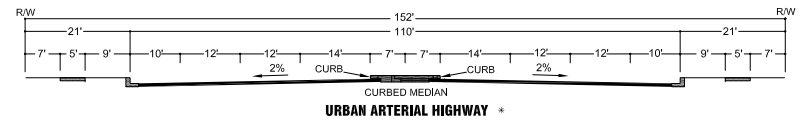
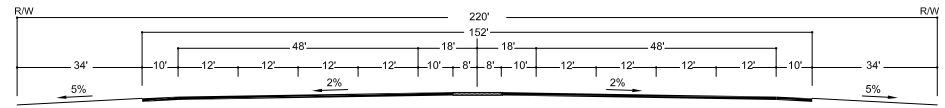
- Sphere Influence
- City Boundary
- Roadway Classifications**
- Augmented Urban Arterial (8-Lanes)
- Urban Arterial (6-Lanes / 120' R.O.W)
- Major (4-Lanes / 100' R.O.W)
- Secondary (4-Lanes / 90' R.O.W)
- Collector (2-Lanes / 68' R.O.W)
- Divided Collector (2-Lanes With Potential Augmented Intersections)
- New Special Roadway

# FIGURE 3-C CITY OF WILDOMAR GENERAL PLAN CIRCULATION ELEMENT AND ROADWAY CROSS-SECTIONS

CIRCULATION MAP



ROADWAY CROSS-SECTIONS



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

SOURCE: CITY OF WILDOMAR

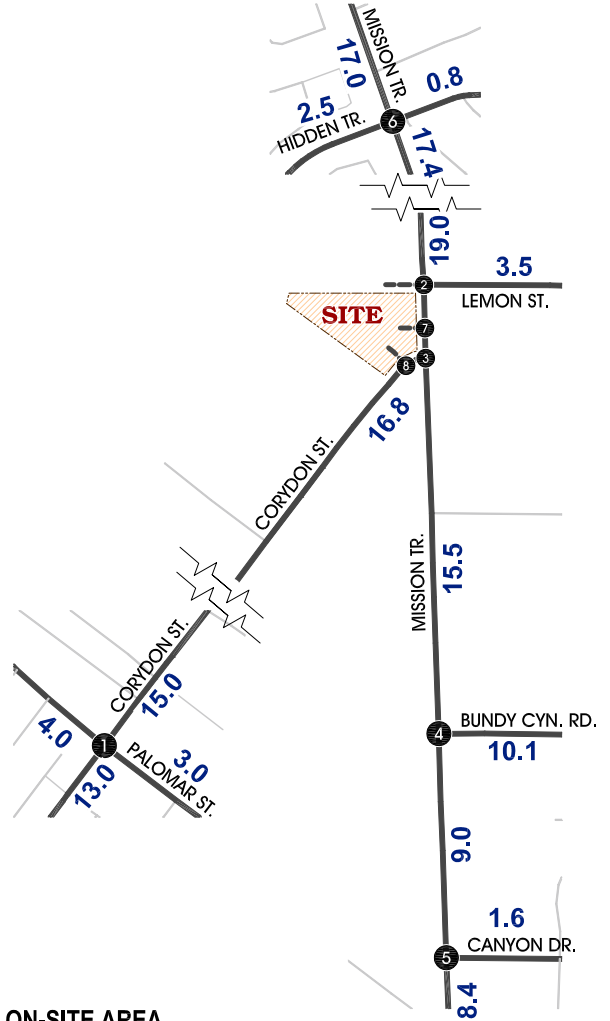
# FIGURE 3-D EXISTING TRAFFIC VOLUMES

## AM PEAK HOUR

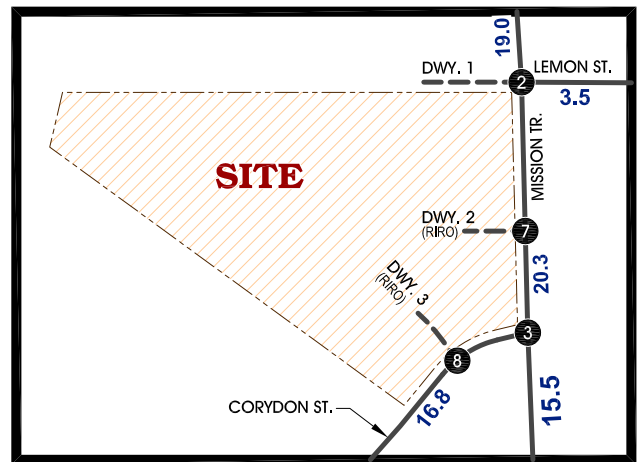
1. Corydon St. (NS) / Palomar St. (EW)	2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)	3. Mission Tr. (NS) / Corydon St. (EW)
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)	5. Mission Tr. (NS) / Canyon Dr. (EW)	6. Mission Tr. (NS) / Hidden Tr. (EW)
7. Mission Tr. (NS) / Dwy. 2 (EW)	8. Dwy. 3 (NS) / Corydon St. (EW)	
FUTURE INTERSECTION	FUTURE INTERSECTION	

## PM PEAK HOUR

1. Corydon St. (NS) / Palomar St. (EW)	2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)	3. Mission Tr. (NS) / Corydon St. (EW)
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)	5. Mission Tr. (NS) / Canyon Dr. (EW)	6. Mission Tr. (NS) / Hidden Tr. (EW)
7. Mission Tr. (NS) / Dwy. 2 (EW)	8. Dwy. 3 (NS) / Corydon St. (EW)	
FUTURE INTERSECTION	FUTURE INTERSECTION	



## ON-SITE AREA



### LEGEND:

- = INTERSECTION ID
- 10.0** = VEHICLES PER DAY (1000's)



Existing average daily traffic (ADT) volumes are also shown on Figure 3-D. The following formula is used to estimate the ADT volumes shown on Figure 3-D, where count data is unavailable:

$$\text{PM Peak Hour Link Volume (Approach + Exit)} \times 12 = \text{ADT Leg Volume}$$

The roadway segments of Mission Trail, south of Corydon and Corydon, west of Mission Trail have been evaluated.

D. Existing (2019) Delay and Level of Service

The results of the existing conditions intersection analysis are summarized in Table 3-1. The existing condition operations analysis worksheets are provided in Appendix "C". The study area intersections are currently operating at an acceptable level of service (LOS "D" or better) during the peak hours with existing geometry and traffic controls.

Table 3-2 provides a summary of the Existing conditions roadway segment capacity analysis. As shown on Table 3-2, the roadway segments

of Main Street, north of Flint Street is approaching LOS "E" capacity thresholds and the roadway segment of Main Street, south of Flint Street potentially exceeds "LOS" E capacity thresholds with existing geometry.

E. Transit Service

RTA bus route 8 provides service to the roadways within the study area.

**TABLE 3-1  
INTERSECTION ANALYSIS FOR  
EXISTING (2019) CONDITIONS**

ID	Intersection	Traffic Control <sup>1</sup>	Intersection Approach Lanes <sup>2</sup>												Delay <sup>3</sup> (secs.)		Level of Service <sup>3</sup>	
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
			L	T	R	L	T	R	L	T	R	L	T	R				
1	Corydon St. / Palomar St.	TS	1	1	1	1	1	1	1	1	1	1	1	0	18.0	15.0	B	B
2	Mission Tr. / Lemon St. - Dwy. 1	TS	0	2	1	1	2	0	0	0	0	0	1!	0	6.3	8.9	A	A
3	Mission Tr. / Corydon St.	TS	1	2	0	0	2	1	2	0	2	0	0	0	28.0	30.2	C	C
4	Mission Tr. / Bundy Cyn. Rd.	TS	1	2	0	2	2	0	0	0	0	1	0	1>	18.4	22.4	B	C
5	Mission Tr. / Canyon Dr.	TS	1	2	0	1	2	0	0	1!	0	0	1!	0	21.4	11.1	C	B
6	Mission Tr. / Hidden Tr.	TS	1	2	0	1	2	1	1	1	0	1	1	0	15.3	11.7	B	B
7	Mission Tr. / Dwy. 2	-	<i>Future Intersection</i>														-	-
8	Dwy. 3 / Corydon St.	-	<i>Future Intersection</i>														-	-

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

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

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; > = Right Turn Overlap Phase

<sup>3</sup> Delay and level of service calculated using the following analysis software: Synchro 10 Software

**TABLE 3-2**  
**ROADWAY SEGMENT ANALYSIS FOR**  
**EXISTING CONDITIONS**

Roadway	Segment Limits	General Plan Roadway Classification	Through Travel Lanes <sup>1</sup>	Roadway Capacity and LOS Criteria <sup>2</sup> (Maximum 2-Way ADT)	Existing Conditions		
				LOS E	ADT <sup>3</sup>	V/C <sup>3,4</sup>	LOS <sup>4</sup>
Corydon St.	west of Mission Tr.	Major	2	17,100 <sup>5</sup>	16,776	0.98	AC
Mission Tr.	south of Corydon St.	Arterial	4	35,932 <sup>6</sup>	15,504	0.43	A

<sup>1</sup> 1 = Existing number of through lanes

<sup>2</sup> Source: City of Lake Elsinore Daily Traffic Volume Capacity Values

<sup>3</sup> V/C = ADT / LOS E Roadway Capacity

<sup>4</sup> LOS A (Acceptable) = 0 to 0.80 v/c; LOS AC (Approaching Capacity) = 0.81 to 1.00 v/c; LOS PEC (Potentially Exceeds Capacity) = 1.01 to 1.24; LOS D (Deficient) = >1.24

<sup>5</sup> LOS capacity estimated based on a 4-Lane Major Roadway(LOS E = 34,100)

<sup>6</sup> LOS capacity estimated based on a 6-Lane Urban Arterial Roadway(LOS E = 53,900)

## 4.0 PROJECTED FUTURE TRAFFIC

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

### A. Project Traffic

#### 1. Ambient Growth Rate

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

A 2% ambient growth rate per year (total of 4% for 2 years) has been used in this study to account for traffic not attributed to the project or other planned developments within the study area.

#### 2. Project Trip Generation

Trip generation represents the amount of traffic which is attracted and produced by a development. The trip generation for the project is based upon the specific land use which has been planned for this development. In the City of Lake Elsinore, trip generation rates are typically based upon data collected by the Institute of Transportation Engineers (ITE).

Table 4-1 also includes the trip rates for the project use based on the surveys included in the ITE Trip Generation Manual.

The daily and peak hour trip generations for the proposed project are shown on Table 4-2. The proposed development is projected to generate a total of approximately 7,685 trip-ends per day with 781 vehicles per hour during the AM peak hour and 686 vehicles per hour during the PM peak hour. However, since the project is anticipated to be comprised of pass-by trips (trips that are already on the roadway that pass-by site on their way to a primary destination), a reduction in the total trip generation has been assumed. Therefore, Table 4-2 indicates that the project is expected to generate a total of 3,814 new trip ends per day with 334 trip ends in the AM peak hour and 293 trip ends in the PM peak hour.

**TABLE 4-1  
PROJECT TRIP GENERATION RATES<sup>1</sup>**

Land Use	ITE Code	Quantity <sup>2</sup>	Peak Hour Trip Rates						Daily
			AM			PM			
			IN	OUT	Total	IN	OUT	Total	
Super Convenience Mkt./Gas Station	960	16 VFP	14.04	14.04	28.08	11.48	11.48	22.96	230.52
Fast Food w/ Drive Thru	934	5.298 TSF	20.50	19.69	40.19	16.99	15.68	32.67	470.95
General Office Building	710	11.52 TSF	2.79	0.45	3.24	0.20	1.07	1.27	11.32
Automobile Care Center	942	11.52 TSF	1.49	0.76	2.25	1.49	1.62	3.11	31.10
Car Wash <sup>3</sup>	Data	120 LF	0.25	0.21	0.46	0.38	0.41	0.79	8.45

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

<sup>2</sup> VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LF = Linear Feet of Tunnel

<sup>3</sup> Source: Empirical driveway counts at the Fast Five Express, Murrieta, CA

**TABLE 4-2  
PROJECT TRIP GENERATION SUMMARY**

Land Use	ITE Code	Quantity <sup>1</sup>	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
Super Convenience Mkt./Gas Station	960	16 VFP	225	225	450	184	184	368	3,688
- Pass-By Reduction (AM-63%, PM-66%)			-142	-142	-284	-121	-121	-242	-1,844
Fast Food w/ Drive Thru	934	5.298 TSF	109	104	213	90	83	173	2,495
- Pass-By Reduction (50%)			-53	-53	-106	-43	-43	-86	-1,248
General Office Building	710	11.52 TSF	32	5	37	2	12	14	130
Automobile Care Center	942	11.52 TSF	17	9	26	17	19	36	358
Car Wash	Data	120 LF	30	25	55	46	49	95	1,014
- Pass-By Reduction (AM-37%, PM-35%) <sup>2</sup>			-10	-10	-20	-16	-16	-32	-355
- Internal Interaction (10%)			-21	-16	-37	-16	-17	-33	-424
<b>TOTAL PROJECT TRIPS</b>			<b>413</b>	<b>368</b>	<b>781</b>	<b>339</b>	<b>347</b>	<b>686</b>	<b>7,685</b>
Pass-by Reduction Total			-205	-205	-410	-180	-180	-360	-3,447
Internal Interaction Total			-21	-16	-37	-16	-17	-33	-424
<b>TOTAL NET TRIPS (with Pass-By Reduction and Internal Interaction)</b>			<b>187</b>	<b>147</b>	<b>334</b>	<b>143</b>	<b>150</b>	<b>293</b>	<b>3,814</b>

<sup>1</sup> VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LF = Linear Feet of Tunnel

<sup>2</sup> Pass-by reduction percentages were based on surveys at Lightning Express Car Wash, 17111 Hawthorne Blvd., Lawndale, CA (see Appendix B)



### 3. Project Trip Distribution and Assignment

Trip distribution represents the directional orientation of traffic to and from the project site. The project's trip distribution patterns are based on the proximity of the specific uses to the surrounding trip attractors (employment bases, residential development, etc.), and the regional freeway interchanges. The trip distribution pattern for the project is illustrated on Figure 4-A.

### 4. Other Trip Generation Factors

The project land use is comprised of primary, pass-by and internal traffic. Primary traffic refers to trips that are intending to go to the project as their primary destination. Pass-by traffic consists of vehicles that stop at the site on their way to a primary destination. Internal traffic consists of trips that are already at the site that go to the project. In order to evaluate a conservative, "worst case" condition, internal traffic trips were not included in the analysis.

Pass-by reductions have been applied to the project trip generation to account for traffic that is already on the road but chooses to stop at the site on their way to a primary destination. The reductions rates are based on the surveys conducted by ITE for this specific use.

### 5. Project Peak Hour Turning Movement Traffic

The assignment of traffic from the site to the adjoining roadway system has been based upon the site's trip generation, trip distribution, proposed arterial highway and local street systems, which would be in place by the time of initial occupancy of the site. Based on the identified project traffic generation and distribution, Project peak hour intersection traffic volumes and average daily traffic volumes are shown on Figure 4-B.

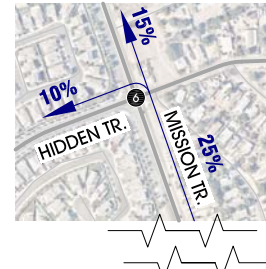
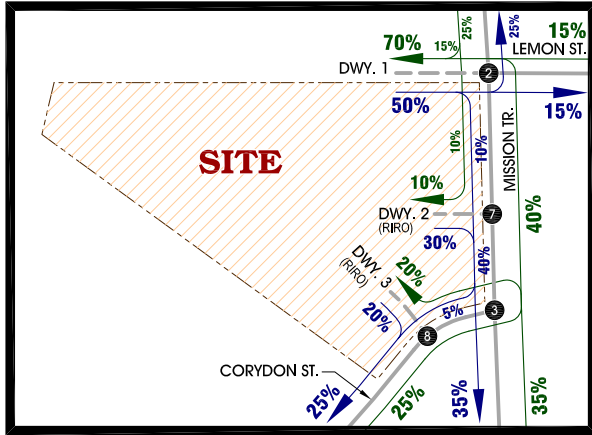
## B. Cumulative Traffic (Background)

### 1. Method of Projection

To assess existing plus project (E+P), existing plus ambient growth plus project (EAP 2021) traffic conditions, project traffic is combined with existing traffic, and area-wide growth. Developments which are being processed concurrently in the study area have been provided by the City of Lake Elsinore and City of Wildomar staff.

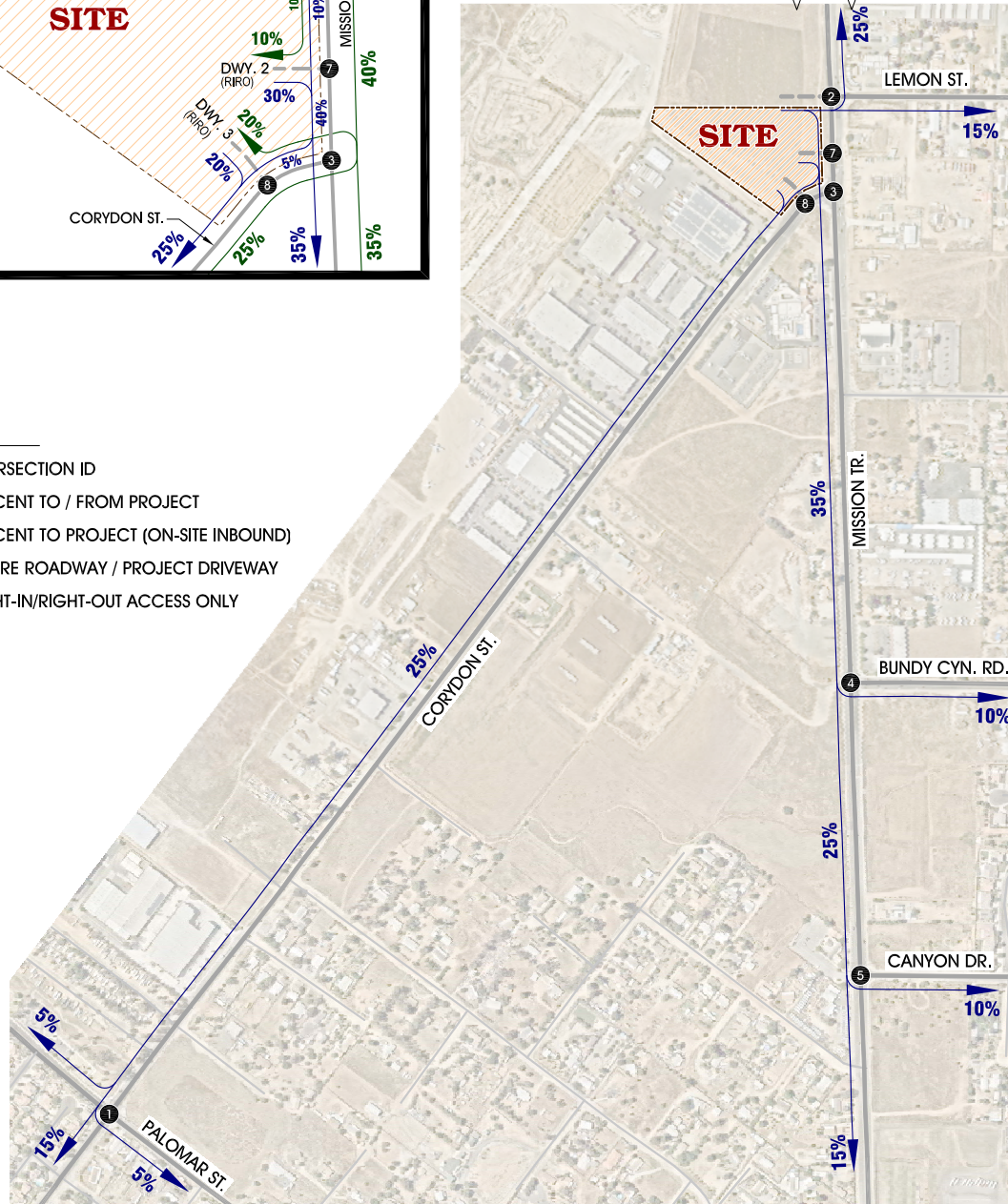
# FIGURE 4-A PROJECT TRIP DISTRIBUTION

## ON-SITE DISTRIBUTION



## LEGEND:

- 8 = INTERSECTION ID
- 10%** = PERCENT TO / FROM PROJECT
- 10%** = PERCENT TO PROJECT (ON-SITE INBOUND)
- = FUTURE ROADWAY / PROJECT DRIVEWAY
- (RIRO) = RIGHT-IN/RIGHT-OUT ACCESS ONLY



# FIGURE 4-B PROJECT ONLY AND PROJECT PASS-BY TRAFFIC VOLUMES

## AM PEAK HOUR PROJECT ONLY

1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)		4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)	
↖7 ↗22 ↘7	↖0 ↗0 ↘0	↖28 ↗19 ↘0	↖0 ↗0 ↘0	↖7 ↗52 ↘0	↖37 ↗15 ↘0	↖19 ↗0 ↘0	
↖9 ↗0 ↘0	↖0 ↗29 ↘0	↖37 ↗22 ↘15	↖75 ↗0 ↘0	↖47 ↗0 ↘0	↖37 ↗28 ↘0	↖47 ↗0 ↘0	
5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)		7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)	
↖0 ↗22 ↘15	↖0 ↗0 ↘0	↖0 ↗28 ↘0	↖0 ↗0 ↘0	↖19 ↗15 ↘0	↖44 ↗0 ↘0	↖29 ↗37 ↘7	
↖0 ↗0 ↘0	↖0 ↗28 ↘0	↖15 ↗22 ↘0	↖15 ↗22 ↘0	↖75 ↗0 ↘0	↖47 ↗0 ↘0		

## AM PEAK HOUR PASS-BY ONLY

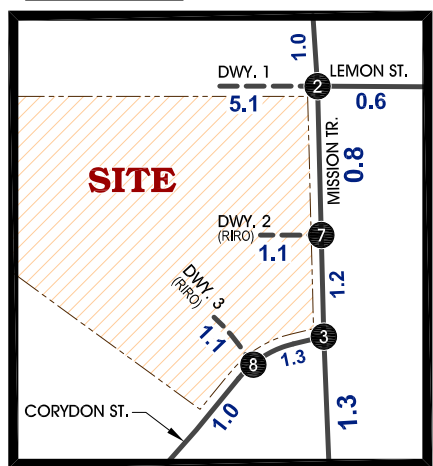
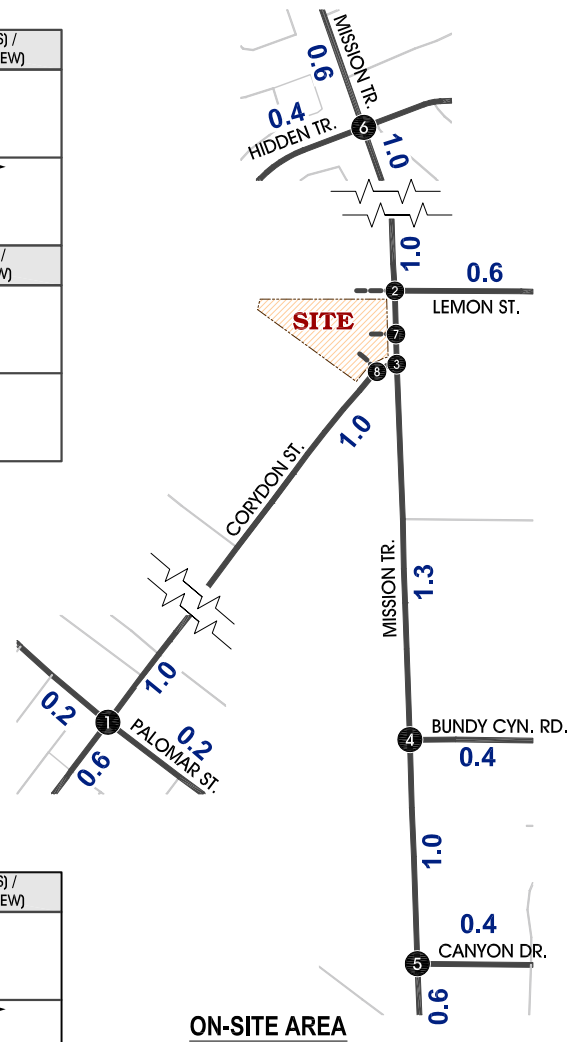
2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)		7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)	
↖31 ↗31 ↘0	↖16 ↗30 ↘14	↖0 ↗0 ↘0	↖0 ↗0 ↘0	↖21 ↗21 ↘0	↖21 ↗0 ↘0	↖0 ↗41 ↘0	
↖139 ↗0 ↘45	↖82 ↗123 ↘0	↖0 ↗0 ↘0	↖41 ↗41 ↘0	↖21 ↗0 ↘0	↖41 ↗0 ↘0	↖0 ↗0 ↘0	

## PM PEAK HOUR

1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)		4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)	
↖8 ↗23 ↘8	↖0 ↗0 ↘0	↖21 ↗14 ↘0	↖0 ↗0 ↘0	↖8 ↗53 ↘0	↖38 ↗15 ↘0	↖14 ↗0 ↘0	
↖7 ↗0 ↘0	↖0 ↗22 ↘0	↖38 ↗23 ↘15	↖57 ↗0 ↘0	↖36 ↗0 ↘0	↖29 ↗21 ↘0	↖36 ↗0 ↘0	
5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)		7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)	
↖0 ↗23 ↘15	↖0 ↗0 ↘0	↖0 ↗21 ↘0	↖0 ↗0 ↘0	↖14 ↗15 ↘0	↖45 ↗0 ↘0	↖29 ↗30 ↘8	
↖0 ↗0 ↘0	↖0 ↗21 ↘0	↖15 ↗23 ↘0	↖15 ↗23 ↘0	↖57 ↗0 ↘0	↖36 ↗0 ↘0		

## PM PEAK HOUR PASS-BY ONLY

2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)		7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)	
↖27 ↗27 ↘0	↖14 ↗27 ↘13	↖0 ↗0 ↘0	↖0 ↗0 ↘0	↖18 ↗18 ↘0	↖18 ↗0 ↘0	↖0 ↗36 ↘0	
↖122 ↗0 ↘40	↖72 ↗108 ↘0	↖0 ↗0 ↘0	↖36 ↗36 ↘0	↖18 ↗0 ↘0	↖36 ↗0 ↘0	↖0 ↗0 ↘0	



### LEGEND:

- 8 = INTERSECTION ID
- 10.0** = VEHICLES PER DAY (1000's)



2. Other Approved or Proposed Development Projects

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

3. Other Approved Projects Trip Generation

Table 4-3 presents the cumulative development land uses and trip generation summary. As presented in Table 4-3 Cumulative developments are projected to generate a total of approximately 62,453 trip-ends per day with 2,759 vehicle trips per hour during the AM peak hour and 5,893 vehicle trips per hour during the PM peak hour.

4. Total Background Peak Hour Turning Movement Volumes

Cumulative development only AM and PM peak hour intersection turning movement volumes and Average Daily Traffic (ADT) volumes are shown on Figure 4-D.

Existing plus Project (E+P) AM and PM peak hour intersection turning movement volumes and ADT volumes are shown on Figure 4-E.

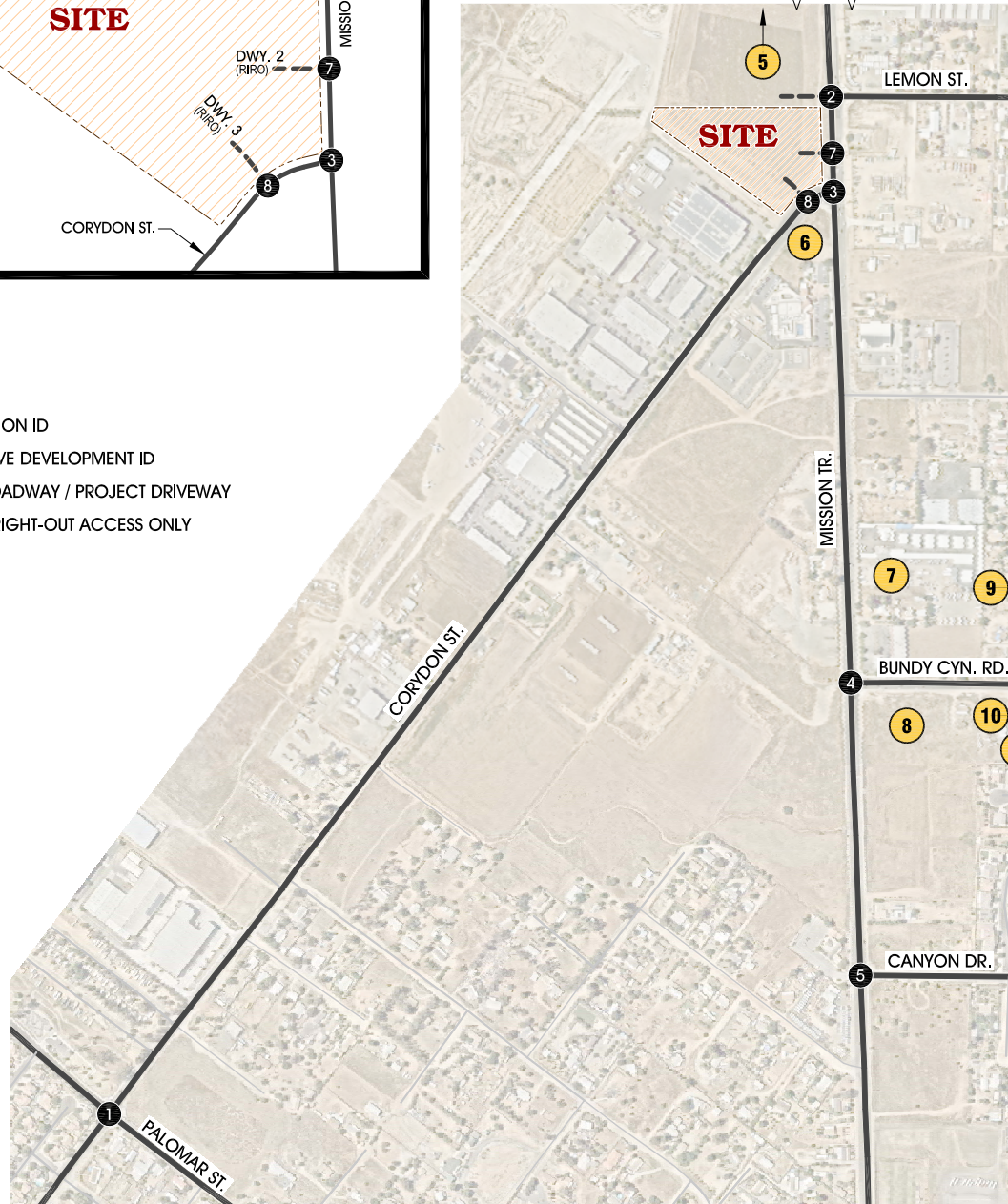
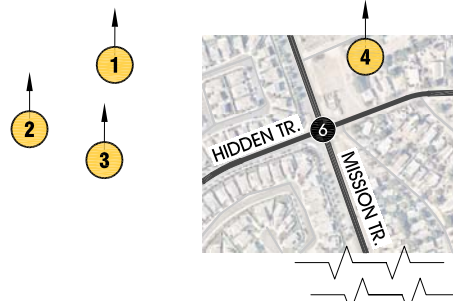
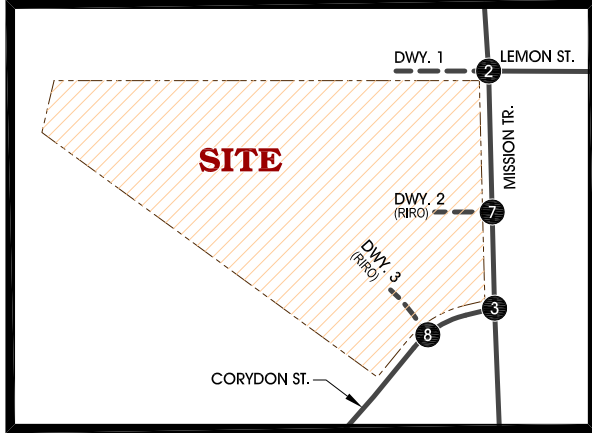
Existing plus Ambient plus Project (EAP) (2021) AM and PM peak hour intersection turning movement volumes and ADT volumes are shown on Figure 4-F.

Existing plus Ambient plus Project plus Cumulative (EAPC) (2021) AM and PM peak hour intersection turning movement volumes and ADT volumes are shown on Figure 4-G.



# FIGURE 4-C CUMULATIVE DEVELOPMENT PROJECTS LOCATION MAP

## ON-SITE AREA



### LEGEND:

- 8 = INTERSECTION ID
- 14 = CUMULATIVE DEVELOPMENT ID
- = FUTURE ROADWAY / PROJECT DRIVEWAY
- (RIRO) = RIGHT-IN/RIGHT-OUT ACCESS ONLY



**TABLE 4-3  
CUMULATIVE DEVELOPMENTS TRIP GENERATION SUMMARY**

MAP ID	PROJECT NAME	LAND USE	QUANTITY <sup>1</sup>	PEAK HOUR						DAILY
				AM			PM			
				IN	OUT	TOTAL	IN	OUT	TOTAL	
<b>City of Lake Elsinore</b>										
1	TAG Property	Automobile Sales (New)	50 TSF	69	25	94	49	73	122	1,392
2	LE Sports Complex <sup>4</sup>	Soccer Complex	525 TSF	NOM	NOM	NOM	137	53	190	1,568
3	Diamond Specific Plan <sup>6</sup>	Multifamily Housing (Low-Rise)	114 DU	9	35	44	39	21	60	719
		Hotel	150 RM	42	29	71	47	44	91	1,254
		Office	425 TSF	366	60	426	72	378	450	4,318
		Shopping Center	472 TSF	241	146	387	821	892	1,713	17,270
	Subtotal			658	270	928	979	1,335	2,314	23,561
4	Artisan Alley	Multifamily Housing (Low-Rise)	95 DU	8	29	37	32	17	49	599
5	The Colony <sup>6</sup>	Multifamily Housing (Low-Rise)	40 DU	3	12	15	14	7	21	252
	TAG Property <sup>2,6</sup>	Single Fam. Detached	459 DU	87	257	344	285	170	455	4,333
		Multifamily Housing (Low-Rise)	62 DU	5	19	24	21	11	32	391
	John Laing Homes (Phase 2) <sup>6</sup>	Single Fam. Detached	49 DU	9	27	36	30	18	48	463
		Multifamily Housing (Low-Rise)	276 DU	22	86	108	94	50	144	1,742
	Shopping Center	117 TSF	130	80	210	293	317	610	6,689	
	Subtotal			256	481	737	737	573	1,310	13,870
<b>City of Lake Elsinore Cumulative Subtotal</b>				<b>991</b>	<b>805</b>	<b>1,796</b>	<b>1,934</b>	<b>2,051</b>	<b>3,985</b>	<b>40,990</b>
<b>City of Wildomar</b>										
6	Triangle (The Point Commercial)	Car Wash (3,524 TSF)	100 LF	25	21	46	38	41	79	845
		Shopping Center	2.79 TSF	2	1	3	5	6	11	105
	Subtotal			27	22	49	43	47	90	950
7	Store America Self Storage	Self-Storage	588 UNITS	6	6	12	6	6	12	106
8	Wildomar Shooting Academy <sup>5</sup>	Shooting Range	34.702 TSF	NOM	NOM	NOM	38	42	80	290
9	Subway	Fast Food w/o Drive Thru	10.5 TSF	158	105	263	149	149	298	3,635
10	Bundy Canyon Plaza	Shopping Center	36.99 TSF	105	65	170	125	135	260	3,057
11	Retail Building	Shopping Center	194 TSF	153	95	248	427	462	889	9,434
12	Village at Monte Vista	Single Fam. Detached	80 DU	15	45	60	50	30	80	755
		Business Park	136 TSF	33	22	55	26	31	57	1,692
	Subtotal			48	67	115	76	61	137	2,447
13	KB/Summerhill	Single Fam. Detached	70 DU	13	39	52	43	26	69	661
14	Darling/Bundy Canyon	Multifamily Housing (Low-Rise)	140 DU	11	43	54	48	25	73	883
<b>City of Wildomar Cumulative Subtotal</b>				<b>521</b>	<b>442</b>	<b>963</b>	<b>955</b>	<b>953</b>	<b>1,908</b>	<b>21,463</b>
<b>Total Cumulative Projects Trip Generation</b>				<b>1,512</b>	<b>1,247</b>	<b>2,759</b>	<b>2,889</b>	<b>3,004</b>	<b>5,893</b>	<b>62,453</b>

<sup>1</sup> TSF = Thousand Square Feet; DU = Dwelling Units; LF = Linear Feet of Tunnel

<sup>2</sup> The TAG Property includes 2,407 single family dwelling units. The construction of 750 units has been assumed based on the opening year of 2021.

<sup>3</sup> The John Laing project includes 1,449 multi family dwelling units. The construction of 750 units has been assumed based on the opening year of 2021.

<sup>4</sup> Source: Lake Elsinore Diamond Sports Center TIA, Urban Crossroads, October 2018.

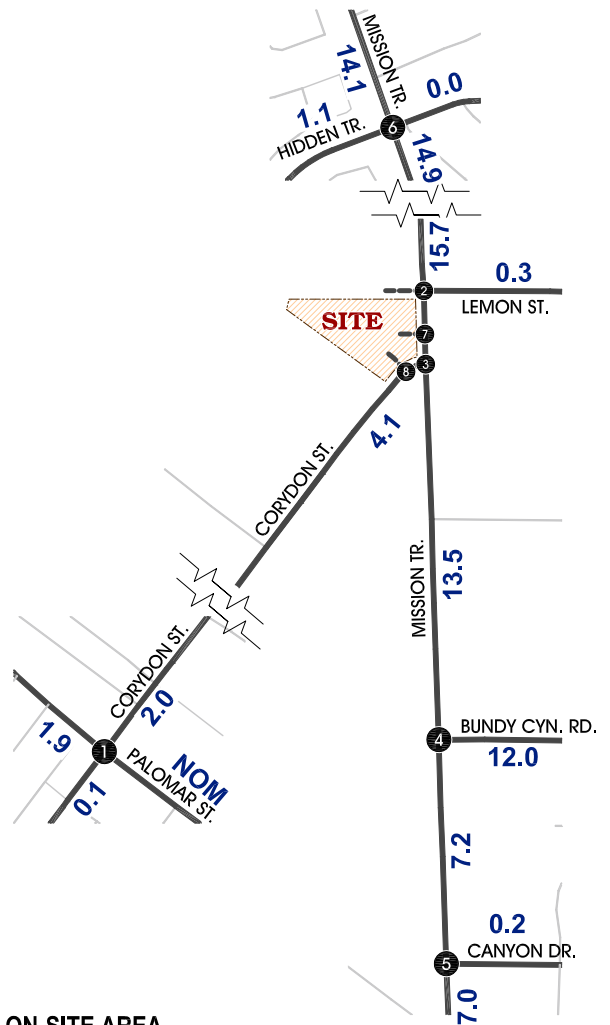
<sup>5</sup> Source: City of Wildomar - Initial Study & Mitigated Negative Declaration, PlaceWorks, November 2019

<sup>6</sup> Residential units are estimated to be built by Year 2021

# FIGURE 4-D CUMULATIVE DEVELOPMENTS ONLY TRAFFIC VOLUMES

## AM PEAK HOUR

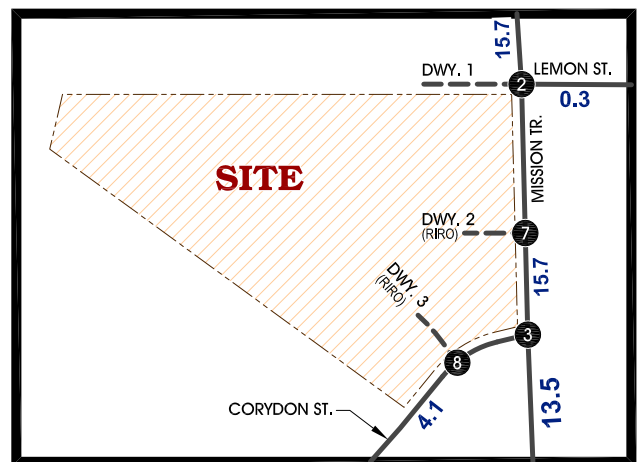
1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)	
↙64 ↘3 ↖1	↖1 ↘0 ↙0	↙384	↖3 ↘4	↙75 ↘313	
↖34 ↘0 ↙0	↖0 ↘4 ↙0	↖338 ↘4		↖71 ↘19	↖32 ↘270
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)		5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)	
↙87 ↘245	↖195 ↘55	↙0 ↘138 ↖4	↖6 ↘0 ↙0	↙1 ↘228 ↖0	↖0 ↘0 ↙0
↖107 ↘70		↖0 ↘0 ↙0	↖0 ↘170 ↙0	↖3 ↘24	↖16 ↘425 ↙0
7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)			
FUTURE INTERSECTION		FUTURE INTERSECTION			



## PM PEAK HOUR

1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)	
↙73 ↘7 ↖2	↖2 ↘0 ↙0	↙725	↖6 ↘6	↙148 ↘583	
↖95 ↘0 ↙0	↖0 ↘6 ↙0	↖754 ↘7		↖152 ↘44	↖34 ↘609
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)		5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)	
↙218 ↘409	↖437 ↘134	↙0 ↘340 ↖11	↖14 ↘0 ↙0	↙6 ↘736 ↖0	↖0 ↘0 ↙0
↖205 ↘122		↖0 ↘0 ↙0	↖0 ↘323 ↙0	↖9 ↘42	↖44 ↘599 ↙0
7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)			
FUTURE INTERSECTION		FUTURE INTERSECTION			

## ON-SITE AREA



### LEGEND:

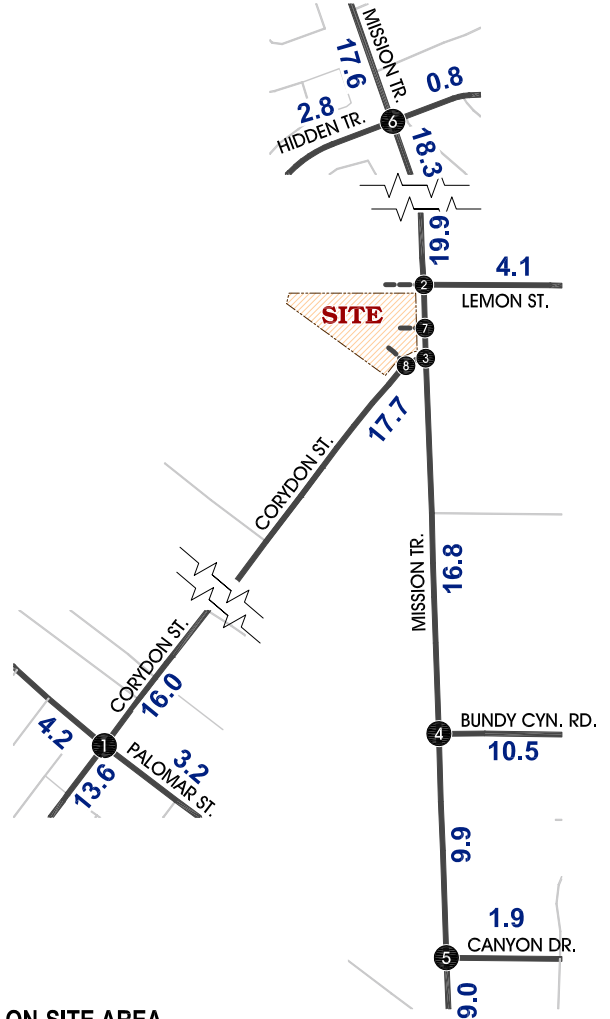
- 8 = INTERSECTION ID
- 10.0** = VEHICLES PER DAY (1000's)



# FIGURE 4-E EXISTING PLUS PROJECT (2021) TRAFFIC VOLUMES

## AM PEAK HOUR

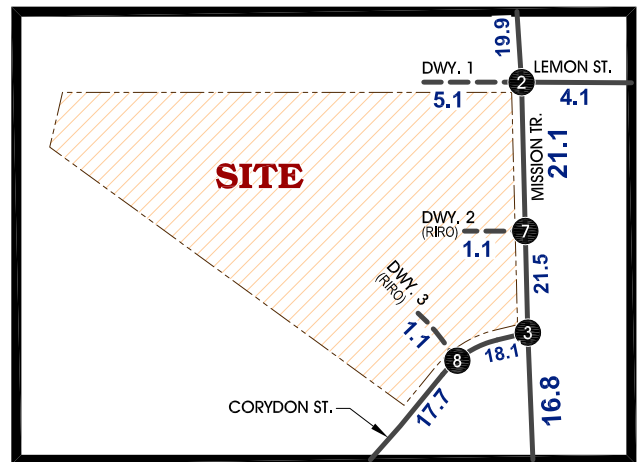
1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)	
←39 ←469 ←22	←49 ←27 ←76	←59 ←736 ←35	←29 ←58 ←53	←378 ←496	
133 68 21	17 592 78	176 22 60	157 658 94	501 250	266 408
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)		5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)	
←386 ←300	←278 ←53	←1 ←274 ←152	←111 ←0 ←115	←10 ←504 ←9	←11 ←2 ←12
	357 65	2 0 0	1 306 110	48 2 137	114 659 3
7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)			
←40 ←809		←29	←78 ←566		
65	909	751			



## PM PEAK HOUR

1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)	
←140 ←475 ←39	←34 ←61 ←70	←48 ←637 ←40	←37 ←48 ←48	←388 ←384	
97 33 12	5 541 28	160 23 55	129 733 142	556 243	320 448
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)		5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)	
←291 ←286	←392 ←142	←3 ←374 ←50	←65 ←0 ←22	←42 ←680 ←26	←15 ←2 ←9
	335 54	6 1 7	4 319 21	30 5 54	101 668 9
7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)			
←32 ←708		←29	←66 ←643		
63	1004	799			

## ON-SITE AREA



### LEGEND:

- 8 = INTERSECTION ID
- 10.0** = VEHICLES PER DAY (1000's)





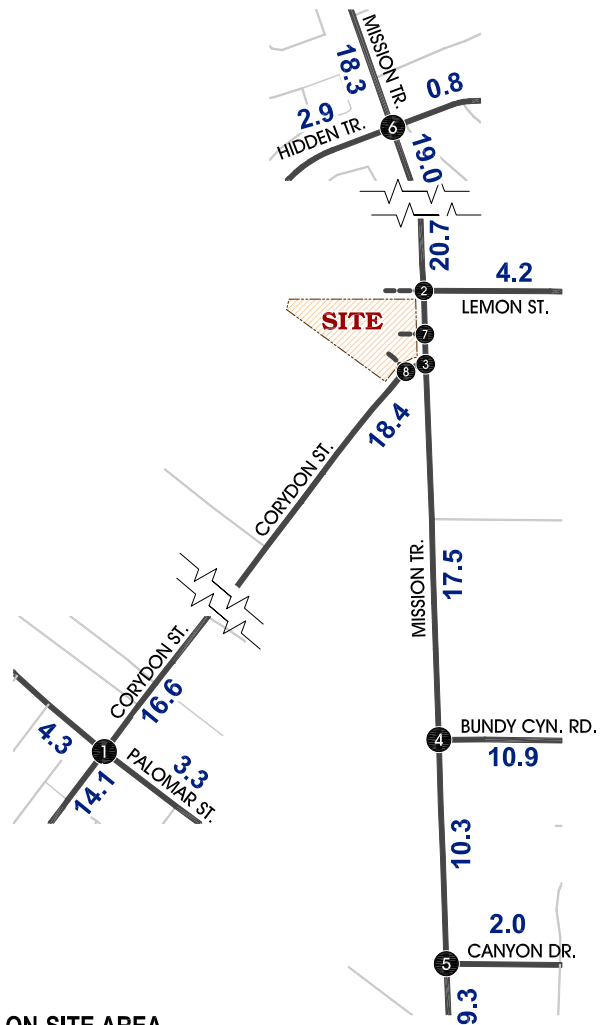
# FIGURE 4-F EXISTING PLUS AMBIENT PLUS PROJECT (2021) TRAFFIC VOLUMES

## AM PEAK HOUR

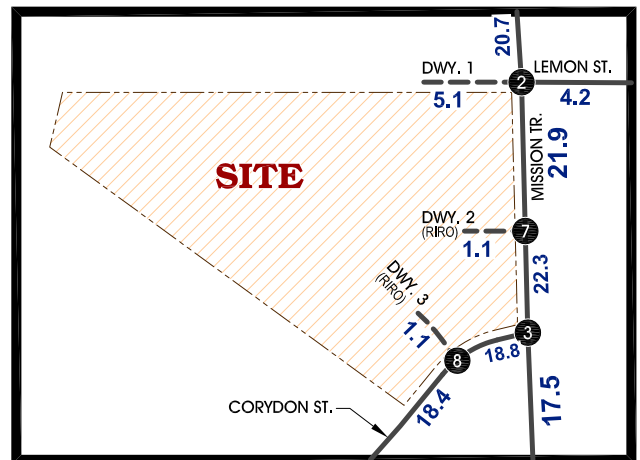
1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)	
←40 ←487 ←23	←51 ←28 ←79	←59 ←766 ←36	←31 ←58 ←56	←393 ←514	
138→ 71→ 22→	18→ 615→ 81→	176→ 22→ 60→	157→ 690→ 96→	519→ 260→	274→ 425→
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)		5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)	
←400 ←312	←288 ←55	←1 ←284 ←158	←115 ←0 ←120	←10 ←523 ←9	←11 ←2 ←12
370→ 68→	2→ 0→ 0→	1→ 317→ 114→	50→ 2→ 142→	118→ 685→ 3→	
7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)			
←40 ←842		←29 ←78 ←589			
65→	944→	779→			

## PM PEAK HOUR

1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)	
←145 ←493 ←40	←35 ←63 ←73	←48 ←663 ←42	←39 ←48 ←50	←403 ←397	
101→ 34→ 12→	5→ 562→ 29→	160→ 23→ 55→	129→ 767→ 148→	577→ 253→	330→ 467→
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)		5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)	
←301 ←297	←407 ←148	←3 ←388 ←51	←67 ←0 ←23	←44 ←707 ←27	←16 ←2 ←9
347→ 56→	6→ 1→ 7→	4→ 331→ 22→	31→ 5→ 56→	104→ 694→ 9→	
7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)			
←32 ←737		←29 ←66 ←669			
63→	1044→	830→			



## ON-SITE AREA



### LEGEND:

- 8 = INTERSECTION ID
- 10.0** = VEHICLES PER DAY (1000's)



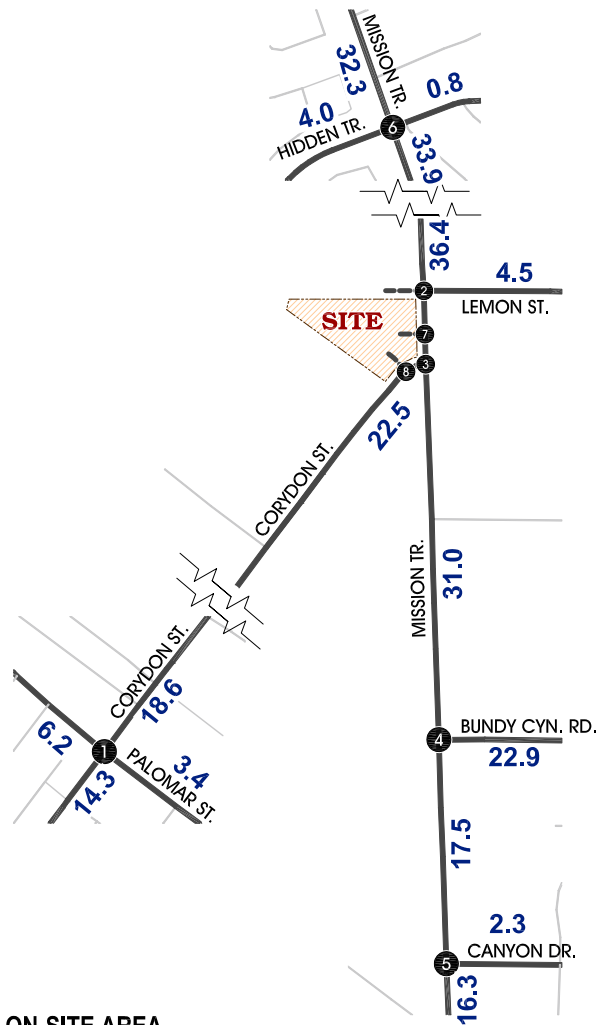
# FIGURE 4-G EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (EAPC 2021) TRAFFIC VOLUMES

## AM PEAK HOUR

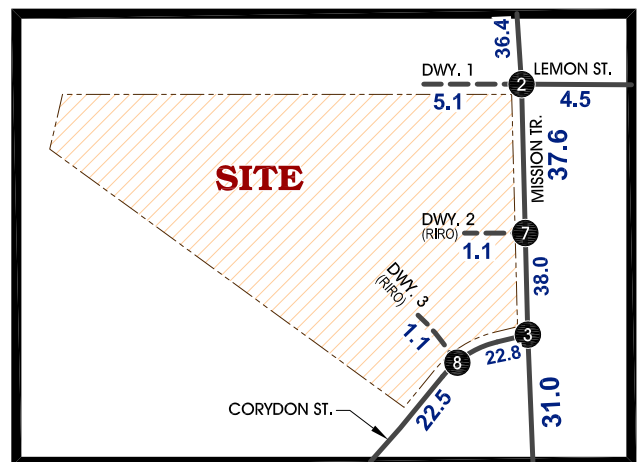
1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)	
104 ← 490 → 24	52 ← 28 → 79	59 ← 1150 → 37	34 ← 58 → 60	468 ← 827 →	
172 ← 71 → 22	18 ← 619 → 81	176 ← 22 → 60	157 ← 1028 → 102	590 ← 279 →	306 ← 695 →
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)		5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)	
487 ← 557 →	483 ← 110 →	1 ← 422 → 162	121 ← 0 → 120	11 ← 751 → 9	11 ← 2 → 12
	477 ← 138 →	2 ← 0 → 2	1 ← 487 → 114	53 ← 2 → 166	134 ← 1110 → 3
7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)			
40 ← 1230 →		29 ← 78 → 696			
65 ← 1285 →		869 ← →			

## PM PEAK HOUR

1. Corydon St. (NS) / Palomar St. (EW)		2. Mission Tr. (NS) / Lemon St. - Dwy. 1 (EW)		3. Mission Tr. (NS) / Corydon St. (EW)	
218 ← 500 → 42	37 ← 63 → 73	48 ← 1388 → 48	48 ← 48 → 57	551 ← 980 →	
196 ← 34 → 12	5 ← 588 → 29	160 ← 23 → 55	129 ← 1521 → 155	729 ← 297 →	364 ← 1076 →
4. Mission Tr. (NS) / Bundy Cyn. Rd. (EW)		5. Mission Tr. (NS) / Canyon Dr. (EW)		6. Mission Tr. (NS) / Hidden Tr. (EW)	
519 ← 706 →	844 ← 282 →	3 ← 728 → 62	81 ← 0 → 23	50 ← 1443 → 27	16 ← 2 → 9
	552 ← 178 →	6 ← 7 →	4 ← 654 → 22	40 ← 5 → 98	148 ← 1293 → 9
7. Mission Tr. (NS) / Dwy. 2 (EW)		8. Dwy. 3 (NS) / Corydon St. (EW)			
32 ← 1468 →		29 ← 66 → 852			
63 ← 1805 →		1026 ← →			



## ON-SITE AREA



### LEGEND:

- 8 = INTERSECTION ID
- 10.0** = VEHICLES PER DAY (1000's)



## 5.0 TRAFFIC ANALYSIS

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

- 1) When existing traffic conditions (Analysis Scenario 1) exceed the General Plan target LOS.
- 2) When project traffic, when added to existing traffic (Analysis Scenario 2), will deteriorate the LOS to below the target LOS, and impacts cannot be mitigated through project conditions of approval.
- 3) When cumulative traffic (Analysis Scenario 3) exceeds the target LOS, and impacts cannot be mitigated through existing infrastructure funding mechanisms.

### A. Existing plus Project (E+P) Conditions

The results of the E+P conditions intersection analysis are summarized in Table 5-1. The E+P condition operations analysis worksheets are provided in Appendix "D".

For Project access purposes, the following intersections are configured as follows:

#### **#2 – Mission Trail / Driveway 1 – Lemon Street**

- Modify traffic signal to include the future west leg
- Construct one shared eastbound (EB) left/through lane and one EB right turn lane
- Provide a dedicated northbound (NB) left turn lane

#### **#7 – Mission Trail / Driveway 2**

- Install stop control on the eastbound approach
- Construct an EB right turn lane
- Restrict intersection to right-in/right-out access only

#### **#8 – Driveway 3 / Corydon Street**

- Install stop control on the southbound approach
- Construct a SB right turn lane
- Restrict intersection to right-in/right-out access only

For E+P conditions, the study area intersections are anticipated to continue to operate at an acceptable level of service (LOS "D" or better) during peak hours with the existing geometry and traffic controls.

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

ID	Intersection	Traffic Control <sup>1</sup>	Intersection Approach Lanes <sup>2</sup>												Delay <sup>3</sup> (secs.)		Level of Service <sup>3</sup>		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
1	Corydon St. / Palomar St.	TS	1	1	1	1	1	1	1	1	1	1	1	1	0	19.0	15.6	B	B
2	Mission Tr. / Lemon St. - Dwy. 1	TS	<u>1</u>	2	1	1	2	0	<u>0.5</u>	<u>0.5</u>	<u>1</u>	0	1!	0	33.0	26.1	C	C	
3	Mission Tr. / Corydon St.	TS	1	2	0	0	2	1	2	0	2	0	0	0	31.1	32.4	C	C	
4	Mission Tr. / Bundy Cyn. Rd.	TS	1	2	0	2	2	0	0	0	0	1	0	1>	18.6	28.8	B	C	
5	Mission Tr. / Canyon Dr.	TS	1	2	0	1	2	0	0	1!	0	0	1!	0	26.6	13.8	C	B	
6	Mission Tr. / Hidden Tr.	TS	1	2	0	1	2	1	1	1	0	1	1	0	17.6	12.8	B	B	
7	Mission Tr. / Dwy. 2	<u>CSS</u>	0	2	0	0	2	1	0	0	<u>1</u>	0	0	0	12.3	11.6	B	B	
8	Dwy. 3 / Corydon St.	<u>CSS</u>	0	0	0	0	0	<u>1</u>	0	2	0	0	1	0	13.1	14.0	B	B	

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

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

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; > = Right Turn Overlap Phase; 1 = Improvement

<sup>3</sup> Delay and level of service calculated using the following analysis software: Synchro 10 Software

Table 5-2 provides a summary of the E+P conditions roadway segment capacity analysis. As shown on Table 5-2, the study area roadway segment of Corydon St., west of Mission Trail is anticipated to potentially exceed capacity (PEC) with existing geometry.

**B. Existing plus Ambient Growth plus Project (EAP) (2021) Conditions**

The results of the EAP (2021) conditions intersection analysis are summarized in Table 5-3. The EAP (2021) condition operations analysis worksheets are provided in Appendix "E".

For EAP (2021) conditions, the study area intersections are anticipated to operate at an acceptable level of service (LOS "D" or better) during the peak hours with existing geometry and traffic controls.

Table 5-4 provides a summary of the EAP (2021) conditions roadway segment capacity analysis. As shown on Table 5-4, the study area roadway segment of Corydon Street, west of Mission Trail is anticipated to continue to potentially exceed LOS "E" capacity thresholds with existing geometry.

**C. Existing plus Ambient Growth plus Project +Cumulative (EAPC) (2021) Conditions**

The results of the EAPC (2021) conditions intersection analysis are summarized in Table 5-5. The EAPC (2021) condition operations analysis worksheets are provided in Appendix "F". For EAPC (2021) conditions, the study area intersections are anticipated to continue to operate at an acceptable level of service (LOS "D" or better) during peak hours with the existing geometry and traffic controls.

Table 5-6 provides a summary of the EAPC (2021) conditions roadway segment capacity analysis. As shown on Table 5-6, the study area roadway segment of Corydon Street, west of Mission Trail is anticipated to be deficient (LOS D,  $v/c > 1.24$ ) with existing geometry. Improvements shown on Table 5-6 indicate that widening Corydon Street, west of Mission Trail is anticipated to improve roadway segment capacity to fall within acceptable LOS threshold (LOS "AC",  $v/c < 1.0$ ).

**TABLE 5-2**  
**ROADWAY SEGMENT ANALYSIS FOR**  
**EXISTING PLUS PROJECT CONDITIONS**

Roadway	Segment Limits	General Plan Roadway Classification	Through Travel Lanes <sup>1</sup>	Roadway Capacity and LOS Criteria <sup>2</sup> (Maximum 2-Way ADT)	Existing + Project Conditions		
				LOS E	ADT <sup>3</sup>	V/C <sup>3,4</sup>	LOS <sup>4</sup>
Corydon St.	west of Mission Tr.	Major	2	17,100 <sup>5</sup>	18,074	1.06	PEC
Mission Tr.	south of Corydon St.	Arterial	4	35,932 <sup>6</sup>	16,838	0.47	A

<sup>1</sup> 1 = Existing number of through lanes

<sup>2</sup> Source: City of Lake Elsinore Daily Traffic Volume Capacity Values

<sup>3</sup> V/C = ADT / LOS E Roadway Capacity

<sup>4</sup> LOS A (Acceptable) = 0 to 0.80 v/c; LOS AC (Approaching Capacity) = 0.81 to 1.00 v/c;  
 LOS PEC (Potentially Exceeds Capacity) = 1.01 to 1.24; LOS D (Deficient) = >1.24

<sup>5</sup> LOS capacity estimated based on a 4-Lane Major Roadway(LOS E = 34,100)

<sup>6</sup> LOS capacity estimated based on a 6-Lane Urban Arterial Roadway(LOS E = 53,900)

**TABLE 5-3**  
**INTERSECTION ANALYSIS FOR**  
**EXISTING PLUS AMBIENT PLUS PROJECT (2021) CONDITIONS**

ID	Intersection	Traffic Control <sup>1</sup>	Intersection Approach Lanes <sup>2</sup>												Delay <sup>3</sup> (secs.)		Level of Service <sup>3</sup>		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
1	Corydon St. / Palomar St.	TS	1	1	1	1	1	1	1	1	1	1	1	1	0	19.6	15.8	B	B
2	Mission Tr. / Lemon St. - Dwy. 1	TS	<u>1</u>	2	1	1	2	0	<u>0.5</u>	<u>0.5</u>	<u>1</u>	0	1!	0	33.6	26.2	C	C	
3	Mission Tr. / Corydon St.	TS	1	2	0	0	2	1	2	0	2	0	0	0	31.6	32.9	C	C	
4	Mission Tr. / Bundy Cyn. Rd.	TS	1	2	0	2	2	0	0	0	0	1	0	1>	22.9	28.9	C	C	
5	Mission Tr. / Canyon Dr.	TS	1	2	0	1	2	0	0	1!	0	0	1!	0	27.0	20.0	C	B	
6	Mission Tr. / Hidden Tr.	TS	1	2	0	1	2	1	1	1	0	1	1	0	17.6	12.9	B	B	
7	Mission Tr. / Dwy. 2	<u>CSS</u>	0	2	0	0	2	1	0	0	<u>1</u>	0	0	0	12.6	11.8	B	B	
8	Mission Tr. / Dwy. 3	<u>CSS</u>	0	0	0	0	0	<u>1</u>	0	2	0	0	1	0	13.4	14.3	B	B	

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

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

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; > = Right Turn Overlap Phase; 1 = Improvement

<sup>3</sup> Delay and level of service calculated using the following analysis software: Synchro 10 Software

**TABLE 5-4**  
**ROADWAY SEGMENT ANALYSIS FOR**  
**EXISTING PLUS AMBIENT PLUS PROJECT (2021) CONDITIONS**

Roadway	Segment Limits	General Plan Roadway Classification	Through Travel Lanes <sup>1</sup>	Roadway Capacity and LOS Criteria <sup>2</sup> (Maximum 2-Way ADT)	EAP (2021) Conditions		
				LOS E	ADT <sup>3</sup>	V/C <sup>3,4</sup>	LOS <sup>4</sup>
Corydon St.	west of Mission Tr.	Major	2	17,100 <sup>5</sup>	18,752	1.10	PEC
Mission Tr.	south of Corydon St.	Arterial	4	35,932 <sup>6</sup>	17,464	0.49	A

<sup>1</sup> 1 = Existing number of through lanes

<sup>2</sup> Source: City of Lake Elsinore Daily Traffic Volume Capacity Values

<sup>3</sup> V/C = ADT / LOS E Roadway Capacity

<sup>4</sup> LOS A (Acceptable) = 0 to 0.80 v/c; LOS AC (Approaching Capacity) = 0.81 to 1.00 v/c;  
 LOS PEC (Potentially Exceeds Capacity) = 1.01 to 1.24; LOS D (Deficient) = >1.24

<sup>5</sup> LOS capacity estimated based on a 4-Lane Major Roadway(LOS E = 34,100)

<sup>6</sup> LOS capacity estimated based on a 6-Lane Urban Arterial Roadway(LOS E = 53,900)



**TABLE 5-5  
INTERSECTION ANALYSIS FOR  
EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (2021) CONDITIONS**

ID	Intersection	Traffic Control <sup>1</sup>	Intersection Approach Lanes <sup>2</sup>												Delay <sup>3</sup> (secs.)		Level of Service <sup>3</sup>		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R					
1	Corydon St. / Palomar St.	TS	1	1	1	1	1	1	1	1	1	1	1	1	0	21.0	18.9	C	B
2	Mission Tr. / Lemon St. - Dwy. 1	TS	<u>1</u>	2	1	1	2	0	<u>0.5</u>	<u>0.5</u>	<u>1</u>	0	1!	0	51.7	40.3	D	D	
3	Mission Tr. / Corydon St.	TS	1	2	0	0	2	1	2	0	2	0	0	0	32.4	33.8	C	C	
4	Mission Tr. / Bundy Cyn. Rd.	TS	1	2	0	2	2	0	0	0	0	1	0	1>	32.0	37.3	C	D	
5	Mission Tr. / Canyon Dr.	TS	1	2	0	1	2	0	0	1!	0	0	1!	0	29.6	20.8	C	C	
6	Mission Tr. / Hidden Tr.	TS	1	2	0	1	2	1	1	1	0	1	1	0	19.5	14.8	B	B	
7	Mission Tr. / Dwy. 2	<u>CSS</u>	0	2	0	0	2	1	0	0	<u>1</u>	0	0	0	15.8	18.5	C	C	
8	Mission Tr. / Dwy. 3	<u>CSS</u>	0	0	0	0	0	<u>1</u>	0	2	0	0	1	0	14.8	17.3	B	C	

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

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

L = Left; T = Through; R = Right; 1! = Shared Left-Through-Right Lane; 0.5 = Shared Lane; > = Right Turn Overlap Phase; 1 = Improvement

<sup>3</sup> Delay and level of service calculated using the following analysis software: Synchro 10 Software

**BOLD** = Operating at an unacceptable Level of Service (LOS "E" or worse)

**TABLE 5-6**  
**ROADWAY SEGMENT ANALYSIS FOR**  
**EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (2021) CONDITIONS**

Roadway	Segment Limits	General Plan Roadway Classification	Through Travel Lanes <sup>1</sup>	Roadway Capacity and LOS Criteria <sup>2</sup> (Maximum 2-Way ADT)	EAPC (2021) Conditions		
				LOS E	ADT <sup>3</sup>	V/C <sup>3,4</sup>	LOS <sup>4</sup>
Corydon St. - With Improvements	west of Mission Tr.	Major	2	17,100 <sup>5</sup>	22,828	<b>1.33</b>	D
		Major	<u>4</u>	34,100 <sup>5</sup>	22,828	0.67	A
Mission Tr.	south of Corydon St.	Arterial	4	35,932 <sup>6</sup>	30,956	0.86	AC

<sup>1</sup> 1 = Existing number of through lanes; 1 = Improvement

<sup>2</sup> Source: City of Lake Elsinore Daily Traffic Volume Capacity Values

<sup>3</sup> V/C = ADT / LOS E Roadway Capacity; **BOLD** = Deficient (LOS D)

<sup>4</sup> LOS A (Acceptable) = 0 to 0.80 v/c; LOS AC (Approaching Capacity) = 0.81 to 1.00 v/c;  
LOS PEC (Potentially Exceeds Capacity) = 1.01 to 1.24; LOS D (Deficient) = >1.24

<sup>5</sup> LOS capacity estimated based on a 4-Lane Major Roadway(LOS E = 34,100)

<sup>6</sup> LOS capacity estimated based on a 6-Lane Urban Arterial Roadway(LOS E = 53,900)

## 6.0 FINDINGS AND RECOMMENDATIONS

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This section of the report summarizes the project impacts for each scenario analyzed. Physical and funding recommendations are provided to address the project-related impacts. The scenarios evaluated include:

- **Existing (2019) Conditions**
- **Existing + Project (2021)**
- **Existing + Ambient + Project (2021)**
- **Existing + Ambient + Project + Cumulative (2021)**

Table 6-1 presents a summary of the level of service analyses for the scenarios described above.

### A. Traffic Impacts and Level of Service Analysis

For Existing (2019), E+P, EAP (2021), and EAPC (2021) traffic conditions, the study area intersections are operating at an acceptable level of service (LOS “D” or better) during the peak hours with the existing geometry and traffic controls.

For Project access purposes, the following intersections are configured as follows:

#### **#2 – Mission Trail / Driveway 1 – Lemon Street**

- Modify traffic signal to include the future west leg
- Construct one shared eastbound (EB) left/through lane and one EB right turn lane
- Provide a dedicated northbound (NB) left turn lane

#### **#7 – Mission Trail / Driveway 2**

- Install stop control on the eastbound approach
- Construct an EB right turn lane
- Restrict intersection to right-in/right-out access only

#### **#8 – Driveway 3 / Corydon Street**

- Install stop control on the southbound approach
- Construct a SB right turn lane
- Restrict intersection to right-in/right-out access only

The study area roadway segment of Corydon Street, west of Mission Trail is anticipated to potentially exceed capacity (LOS D,  $v/c > 1.24$ ) under EAPC (2021) conditions with existing geometry. Widening Corydon Street, west of Mission Trail is anticipated to improve roadway segment capacity to fall within acceptable LOS threshold (LOS “AC”,  $v/c < 1.0$ ).

**TABLE 6-1  
INTERSECTION ANALYSIS SUMMARY**

ID	Intersection	Traffic Control <sup>1</sup>	EXISTING				E+P				EAP (2021)				EAPC (2021)			
			Delay <sup>2</sup> (secs.)		Level of Service <sup>2</sup>		Delay <sup>2</sup> (secs.)		Level of Service <sup>2</sup>		Delay <sup>2</sup> (secs.)		Level of Service <sup>2</sup>		Delay <sup>2</sup> (secs.)		Level of Service <sup>2</sup>	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1	Corydon St. / Palomar St.	TS	18.0	15.0	B	B	19.0	15.6	B	B	19.6	15.8	B	B	21.0	18.9	C	B
2	Mission Tr. / Lemon St. - Dwy. 1	TS	6.3	8.9	A	A	33.0	26.1	C	C	33.6	26.2	C	C	51.7	40.3	D	D
3	Mission Tr. / Corydon St.	TS	28.0	30.2	C	C	31.1	32.4	C	C	31.6	32.9	C	C	32.4	33.8	C	C
4	Mission Tr. / Bundy Cyn. Rd.	TS	18.4	22.4	B	C	18.6	28.8	B	C	22.9	28.9	C	C	32.0	37.3	C	D
5	Mission Tr. / Canyon Dr.	TS	21.4	11.1	C	B	26.6	13.8	C	B	27.0	20.0	C	B	29.6	20.8	C	C
6	Mission Tr. / Hidden Tr.	TS	15.3	11.7	B	B	17.6	12.8	B	B	17.6	12.9	B	B	19.5	14.8	B	B
7	Mission Tr. / Dwy. 2	<u>CSS</u>	-	-	-	-	12.3	11.6	B	B	12.6	11.8	B	B	15.8	18.5	C	C
8	Mission Tr. / Dwy. 3	<u>CSS</u>	-	-	-	-	13.1	14.0	B	B	13.4	14.3	B	B	14.8	17.3	B	C

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

<sup>2</sup> Delay and level of service calculated using the following analysis software: Synchro 10 Software

## B. Funding Mechanisms

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

### **Transportation Uniform Mitigation Fee (TUMF)**

The Transportation Uniform Mitigation Fee (TUMF) Program was established to assist in funding the Regional System of Highways and Arterials throughout Riverside County. TUMF allows developers to contribute toward sustaining the regional transportation system on a “fair share” basis. Managed by the Western Riverside Council of Governments (WRCOG), the program is not designed to be the only source of revenue but would complement funds generated by Measure A, local transportation fee programs, etc. It should be noted that Corydon Street is included in the WRCOG TUMF network and the project will be paying TUMF fees as its mitigation.

### **Development Impact Fees (DIF)**

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

The project should contribute towards these funding mechanisms to address potential cumulative impacts throughout the City.

## C. Circulation Recommendations

Construction of on-site improvements shall occur in conjunction with adjacent project development activity or as needed for project access purposes.

The recommended on-site roadway improvements are described below:

- Construct Mission Trail adjacent to the project boundary to its ultimate half-section width as a Major Roadway (80 ft. curb-to-curb width).
- Construct Corydon Street adjacent to the project boundary to its ultimate half-section width as an Urban Arterial Roadway (96 ft. curb-to-curb width).
- Modify existing traffic signal at Mission Trail/Lemon Street (#2) to include the future Project Driveway 1 (west leg).
- Provide stop sign controls at Project Driveway 2 and Project Driveway 3.
- On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.
- Verify that minimum sight distance is provided at the project access points.

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**APPENDIX A**

**SCOPING AGREEMENT**





## SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Lake Elsinore requirements for traffic impact analysis of the following project. The analysis must follow the Riverside County Transportation Department Traffic Study Guidelines dated Feb 2008.

Case No. \_\_\_\_\_  
 Related Cases - \_\_\_\_\_  
 SP No. n/a  
 EIR No. n/a  
 GPA No. n/a  
 CZ No. n/a  
 Project Name: Lake Elsinore Corydon/Mission Trails C-Store project  
 Project Address: North of Corydon St. and West of Mission Trails St.  
 Project Description: C-Store (16 vfp), Fast Food w/DT (5.298 tsf), General Office (11.52 tsf),  
 Auto Care Ctr. (11.52 tsf), car wash

	Consultant	Developer
Name:	<u>Trames Solutions, Inc.</u>	<u>RED Corydon, LLC.</u>
Address:	<u>Scott Sato</u> <u>4225 Oceanside Blvd., #354H</u> <u>Oceanside, CA 92056</u>	<u>38122 Stone Meadow Dr.</u> <u>Murrieta, CA 92562</u>
Phone No:	<u>(760) 291-1400</u>	_____
Date:	<u>10/2/2019</u>	_____

**A. Trip Generation Source:** \_\_\_\_\_ ITE 10th Edition (See Tables 1 & 2)

Current GP Land Use: SP Proposed Land Use: SP  
 Current Zoning: East Lake SP Proposed Zoning: East Lake SP

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	_____	_____	-	<u>187</u>	<u>147</u>	<b>334</b>
PM Trips	_____	_____	-	<u>143</u>	<u>150</u>	<b>293</b>

Internal Trip Allowance **Yes** ( 10 % Trip Discount)  
 Pass-By Trip Allowance **Yes** ( 63/66 % Trip Discount) Based on ITE for C-stores  
 Pass-By Trip Allowance **Yes** ( 50 % Trip Discount) Based on ITE for fast food restaurants

**B. Trip Geographic Distribution:** (See attached exhibit for detailed assignment). **See Figure C**  
 N \_\_\_\_\_ S \_\_\_\_\_ E \_\_\_\_\_ W \_\_\_\_\_

**C. Background Traffic**  
 Project Build-out Year 2021 Annual Ambient Growth Rate: 2.0 %  
 Phase Years \_\_\_\_\_  
 Other projects to be analyzed: City to provide  
 Model/Forecast methodology: \_\_\_\_\_

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

- |  |   |
|--|---|
| 1 <u>Palomar St./Corydon St.</u><br>2 <u>Mission Tr./Lemon St.</u><br>3 <u>Mission Tr./Corydon St.</u><br>4 <u>Mission Tr./Bundy Cyn. Rd.</u><br>5 <u>Mission Tr./Canyon Dr.</u> | 6 <u>Mission Tr./Hidden Tr.</u><br>7 <u>Proj. Driveways</u><br>8 _____<br>9 _____<br>10 _____ |
|--|---|

E. Study Roadway Segments:

- 1 Corydon St. w/o Mission Tr. 3 \_\_\_\_\_
- 2 Mission Tr. s/o Corydon St. 4 \_\_\_\_\_

F. Other Jurisdictional Impacts

Is this project within a City's Sphere of influence or one mile radius of City boundaries?

YES

If so, name of City jurisdiction: Wildomar

G. Site Plan See Figure B

H. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by City Staff)

- Existing
- Existing+Project
- Existing+Ambient Growth+Project
- Existing+Ambient Growth+Project+Cumulative Projects

I. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.

Date of Counts \_\_\_\_\_

Recommended by:

Scott Sato  
Consultant's Representative

Approved By:

[Signature] NRL 10/8/2019  
City of Lake Elsinore Date

Scoping Agreement Submitted on 8/23/2019  
Revised On 10/2/2019

**TABLE 1  
PROJECT TRIP GENERATION RATES<sup>1</sup>**

Land Use	ITE Code	Quantity <sup>2</sup>	Peak Hour Trip Rates						Daily
			AM			PM			
			IN	OUT	Total	IN	OUT	Total	
Super Convenience Mkt./Gas Station	960	16 VFP	14.04	14.04	28.08	11.48	11.48	22.96	230.52
Fast Food w/ Drive Thru	934	5.298 TSF	20.50	19.69	40.19	16.99	15.68	32.67	470.95
General Office Building	710	11.52 TSF	2.79	0.45	3.24	0.20	1.07	1.27	11.32
Automobile Care Center	942	11.52 TSF	1.49	0.76	2.25	1.49	1.62	3.11	31.10
Car Wash <sup>3</sup>	Data	120 LF	0.25	0.21	0.46	0.38	0.41	0.79	8.45

<sup>1</sup> Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017).

<sup>2</sup> VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LF = Linear Feet of Tunnel

<sup>3</sup> Source: Empirical driveway counts at the Fast Five Express, Murrieta, CA

**TABLE 2  
PROJECT TRIP GENERATION SUMMARY**

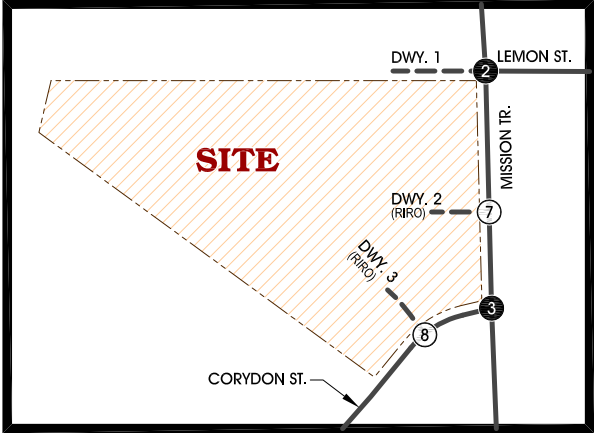
Land Use	ITE Code	Quantity <sup>1</sup>	Peak Hour						Daily
			AM			PM			
			In	Out	Total	In	Out	Total	
Super Convenience Mkt./Gas Station	960	16 VFP	225	225	450	184	184	368	3,688
- Pass-By Reduction (AM-63%, PM-66%)			-142	-142	-284	-121	-121	-242	-1,844
Fast Food w/ Drive Thru	934	5.298 TSF	109	104	213	90	83	173	2,495
- Pass-By Reduction (50%)			-53	-53	-106	-43	-43	-86	-1,248
General Office Building	710	11.52 TSF	32	5	37	2	12	14	130
Automobile Care Center	942	11.52 TSF	17	9	26	17	19	36	358
Car Wash	Data	120 LF	30	25	55	46	49	95	1,014
- Pass-By Reduction (AM-37%, PM-35%) <sup>2</sup>			-10	-10	-20	-16	-16	-32	-355
- Internal Interaction (10%)			-21	-16	-37	-16	-17	-33	-424
<b>TOTAL NET TRIPS</b>			<b>187</b>	<b>147</b>	<b>334</b>	<b>143</b>	<b>150</b>	<b>293</b>	<b>3,814</b>

<sup>1</sup> VFP = Vehicle Fueling Positions; TSF = Thousand Square Feet; LF = Linear Feet of Tunnel

<sup>2</sup> Pass-by reduction percentages were based on surveys at Lightning Express Car Wash, 17111 Hawthorne Blvd., Lawndale, CA

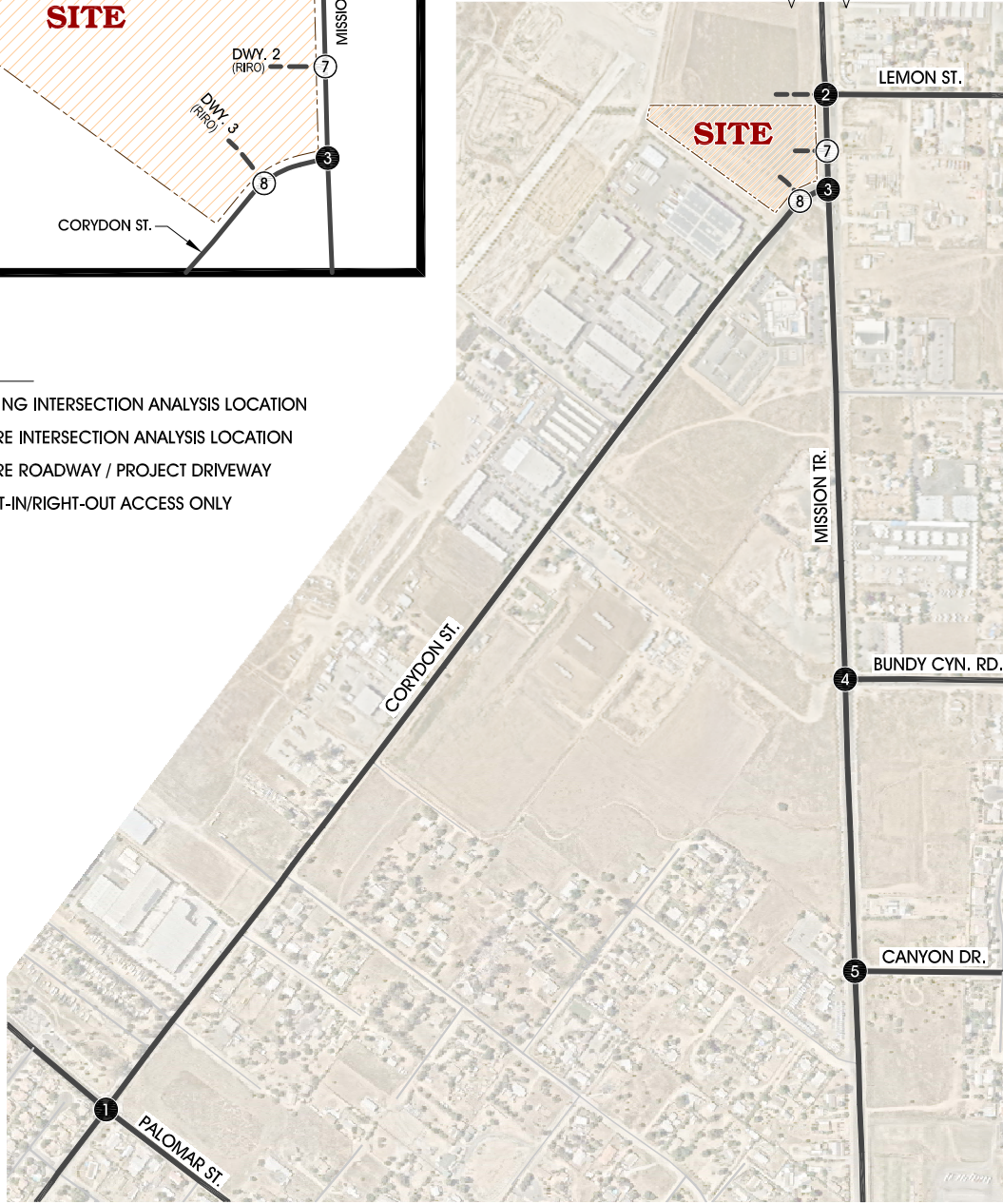
# FIGURE A STUDY AREA

**ON-SITE AREA**

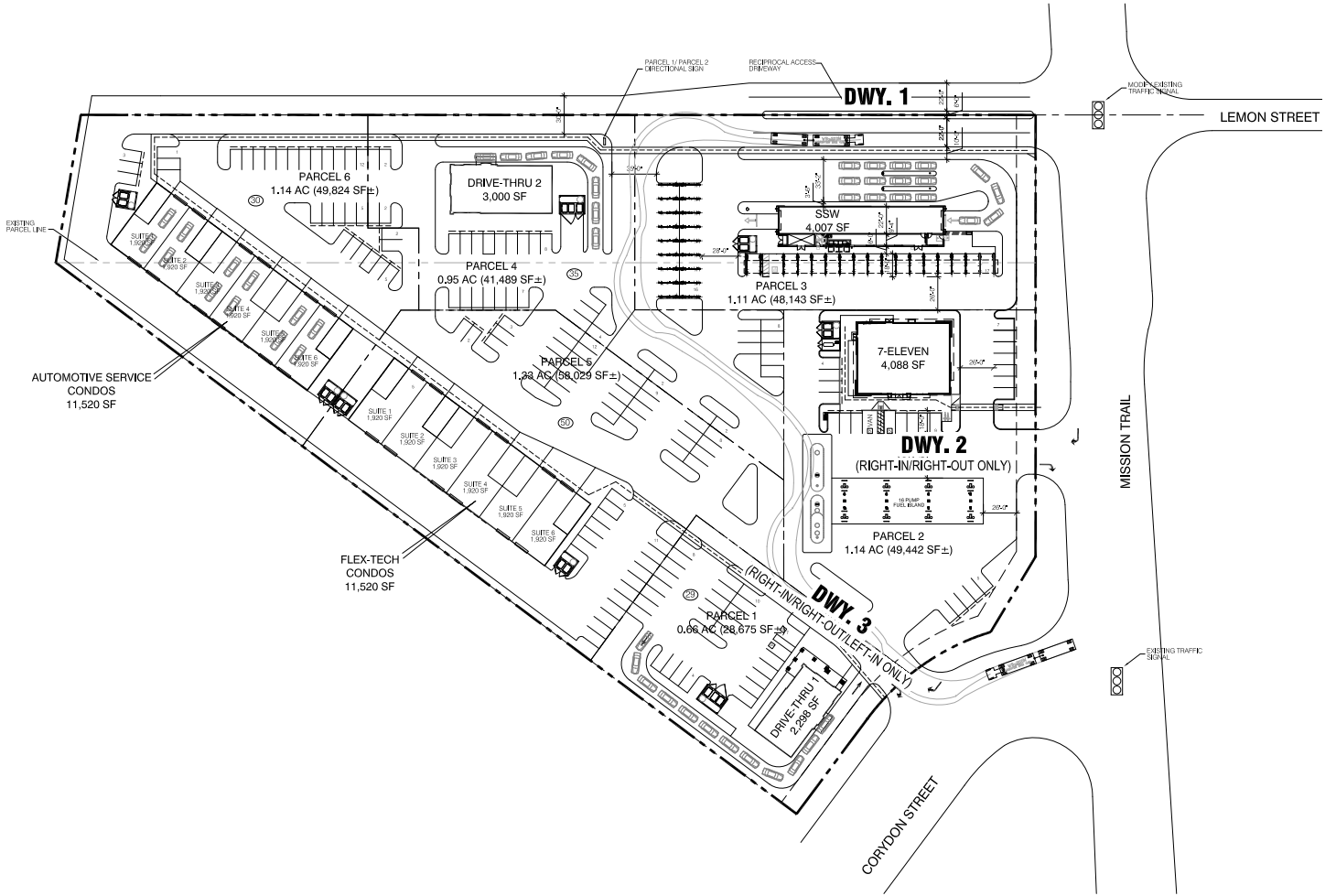


**LEGEND:**

- ⑥ = EXISTING INTERSECTION ANALYSIS LOCATION
- ② = FUTURE INTERSECTION ANALYSIS LOCATION
- = FUTURE ROADWAY / PROJECT DRIVEWAY
- (RIRO) = RIGHT-IN/RIGHT-OUT ACCESS ONLY



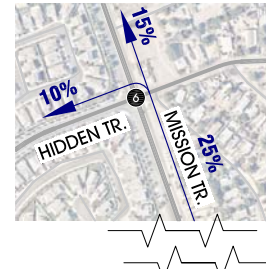
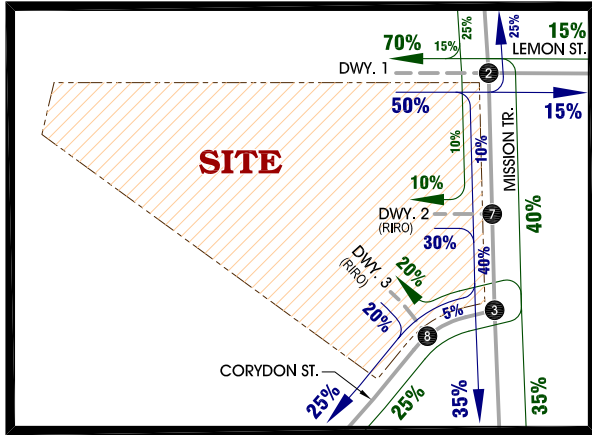
# FIGURE B SITE PLAN





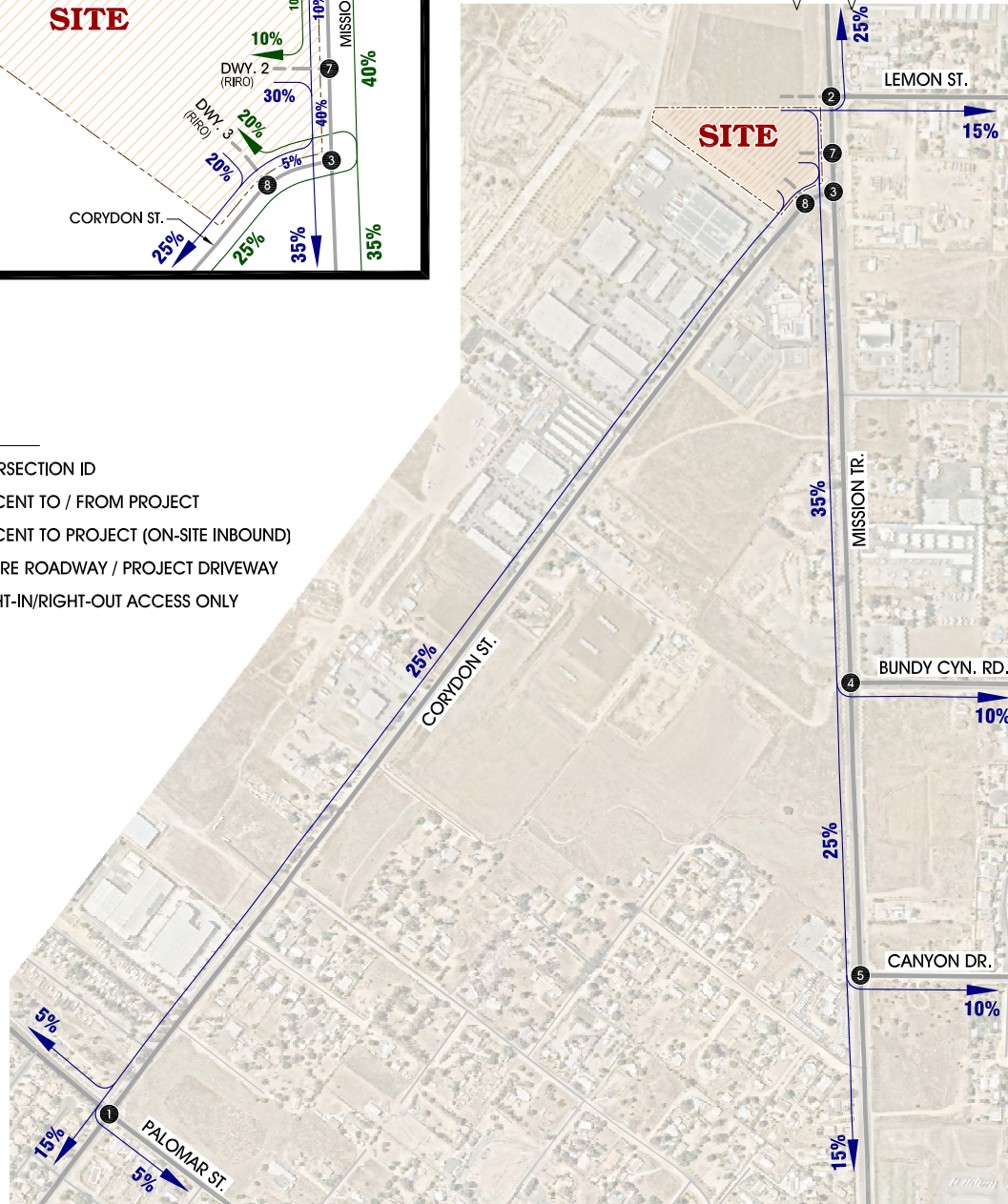
# FIGURE C PROJECT TRIP DISTRIBUTION

## ON-SITE DISTRIBUTION



## LEGEND:

- = INTERSECTION ID
- 10%** = PERCENT TO / FROM PROJECT
- 10%** = PERCENT TO PROJECT (ON-SITE INBOUND)
- = FUTURE ROADWAY / PROJECT DRIVEWAY
- (RIRO) = RIGHT-IN/RIGHT-OUT ACCESS ONLY



**APPENDIX B**

**TRAFFIC COUNTS AND PASS-BY SURVEY SHEETS**

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City of Wildomar  
 N/S: Corydon Road  
 E/W: Palomar Street  
 Weather: Clear

File Name : 01\_WDM\_Corydon\_Palomar AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

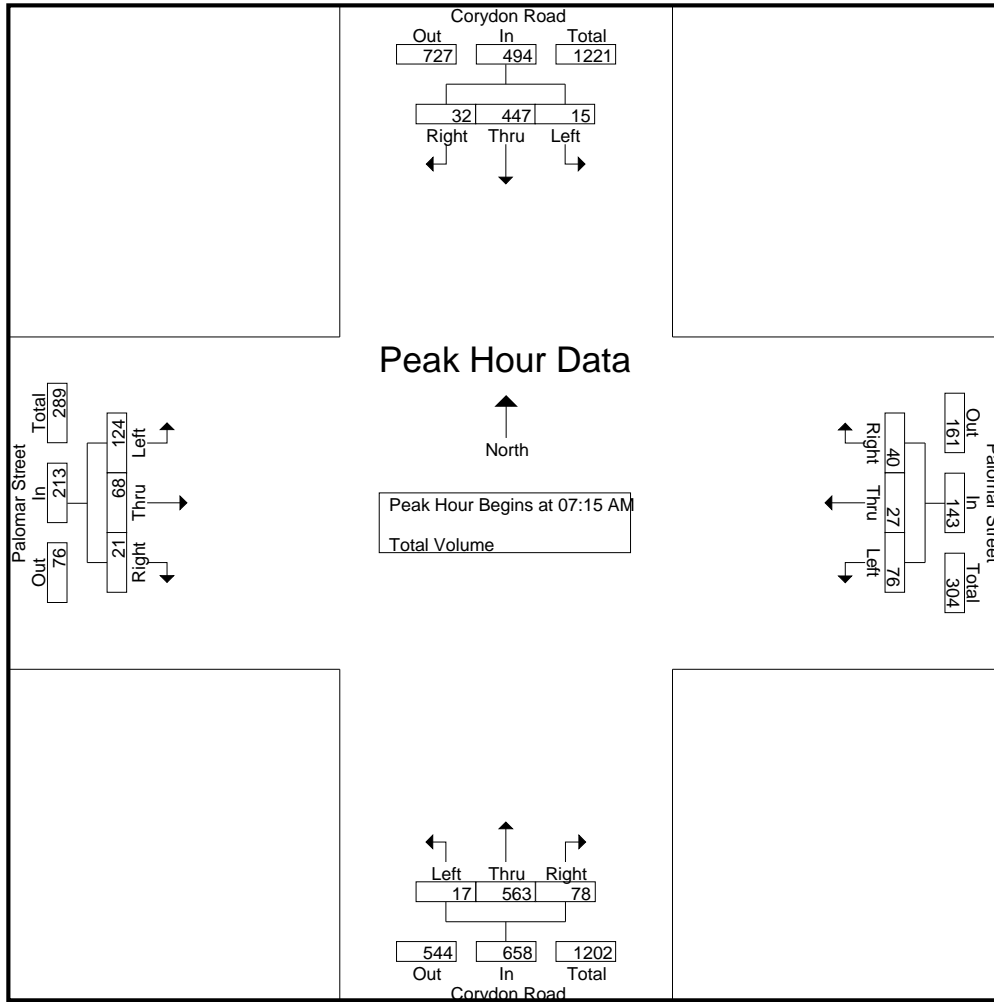
Groups Printed- Total Volume

Start Time	Corydon Road Southbound				Palomar Street Westbound				Corydon Road Northbound				Palomar Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	3	82	6	91	19	3	5	27	0	76	8	84	15	4	3	22	224
07:15 AM	5	88	11	104	19	8	7	34	2	91	10	103	23	14	4	41	282
07:30 AM	1	129	5	135	23	1	9	33	5	138	14	157	33	15	8	56	381
07:45 AM	7	146	10	163	16	7	16	39	4	171	33	208	31	22	7	60	470
Total	16	445	32	493	77	19	37	133	11	476	65	552	102	55	22	179	1357
08:00 AM	2	84	6	92	18	11	8	37	6	163	21	190	37	17	2	56	375
08:15 AM	4	54	14	72	20	14	6	40	2	81	16	99	25	26	1	52	263
08:30 AM	3	88	16	107	5	14	5	24	1	95	4	100	24	5	0	29	260
08:45 AM	3	55	11	69	4	6	7	17	2	67	3	72	25	6	2	33	191
Total	12	281	47	340	47	45	26	118	11	406	44	461	111	54	5	170	1089
Grand Total	28	726	79	833	124	64	63	251	22	882	109	1013	213	109	27	349	2446
Apprch %	3.4	87.2	9.5		49.4	25.5	25.1		2.2	87.1	10.8		61	31.2	7.7		
Total %	1.1	29.7	3.2	34.1	5.1	2.6	2.6	10.3	0.9	36.1	4.5	41.4	8.7	4.5	1.1	14.3	

Start Time	Corydon Road Southbound				Palomar Street Westbound				Corydon Road Northbound				Palomar Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	88	11	104	19	8	7	34	2	91	10	103	23	14	4	41	282
07:30 AM	1	129	5	135	23	1	9	33	5	138	14	157	33	15	8	56	381
07:45 AM	7	146	10	163	16	7	16	39	4	171	33	208	31	22	7	60	470
08:00 AM	2	84	6	92	18	11	8	37	6	163	21	190	37	17	2	56	375
Total Volume	15	447	32	494	76	27	40	143	17	563	78	658	124	68	21	213	1508
% App. Total	3	90.5	6.5		53.1	18.9	28		2.6	85.6	11.9		58.2	31.9	9.9		
PHF	.536	.765	.727	.758	.826	.614	.625	.917	.708	.823	.591	.791	.838	.773	.656	.888	.802

City of Wildomar  
 N/S: Corydon Road  
 E/W: Palomar Street  
 Weather: Clear

File Name : 01\_WDM\_Corydon\_Palomar AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	07:15 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	5	88	11	104	<b>23</b>	1	9	33	2	91	10	103	33	15	<b>8</b>	56
+15 mins.	1	129	5	135	16	7	<b>16</b>	39	5	138	14	157	31	22	7	<b>60</b>
+30 mins.	<b>7</b>	<b>146</b>	10	<b>163</b>	18	11	8	37	4	<b>171</b>	<b>33</b>	<b>208</b>	<b>37</b>	17	2	56
+45 mins.	2	84	6	92	20	<b>14</b>	6	<b>40</b>	<b>6</b>	163	21	190	25	<b>26</b>	1	52
Total Volume	15	447	32	494	77	33	39	149	17	563	78	658	126	80	18	224
% App. Total	3	90.5	6.5		51.7	22.1	26.2		2.6	85.6	11.9		56.2	35.7	8	
PHF	.536	.765	.727	.758	.837	.589	.609	.931	.708	.823	.591	.791	.851	.769	.563	.933

City of Wildomar  
 N/S: Corydon Road  
 E/W: Palomar Street  
 Weather: Clear

File Name : 01\_WDM\_Corydon\_Palomar PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

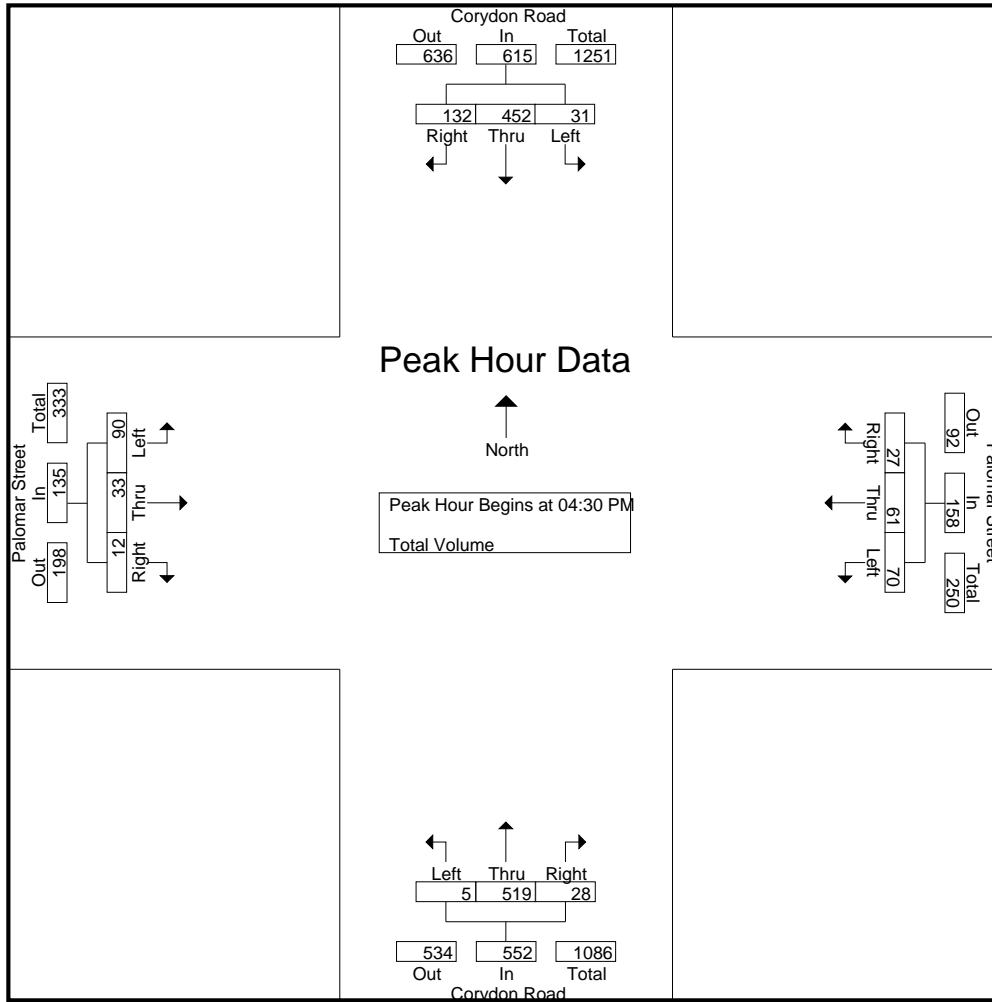
Groups Printed- Total Volume

Start Time	Corydon Road Southbound				Palomar Street Westbound				Corydon Road Northbound				Palomar Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	6	106	26	138	18	11	5	34	3	110	7	120	16	9	0	25	317
04:15 PM	5	103	33	141	22	12	7	41	2	112	7	121	20	6	0	26	329
04:30 PM	8	114	35	157	19	15	3	37	1	143	8	152	19	11	5	35	381
04:45 PM	3	98	28	129	19	10	10	39	1	122	6	129	23	11	1	35	332
Total	22	421	122	565	78	48	25	151	7	487	28	522	78	37	6	121	1359
05:00 PM	10	114	40	164	16	17	8	41	1	140	5	146	24	5	4	33	384
05:15 PM	10	126	29	165	16	19	6	41	2	114	9	125	24	6	2	32	363
05:30 PM	12	103	33	148	19	13	7	39	3	137	11	151	30	10	0	40	378
05:45 PM	9	84	36	129	25	9	7	41	0	123	12	135	23	4	0	27	332
Total	41	427	138	606	76	58	28	162	6	514	37	557	101	25	6	132	1457
Grand Total	63	848	260	1171	154	106	53	313	13	1001	65	1079	179	62	12	253	2816
Apprch %	5.4	72.4	22.2		49.2	33.9	16.9		1.2	92.8	6		70.8	24.5	4.7		
Total %	2.2	30.1	9.2	41.6	5.5	3.8	1.9	11.1	0.5	35.5	2.3	38.3	6.4	2.2	0.4	9	

Start Time	Corydon Road Southbound				Palomar Street Westbound				Corydon Road Northbound				Palomar Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	8	114	35	157	<b>19</b>	15	3	37	1	<b>143</b>	8	<b>152</b>	19	<b>11</b>	<b>5</b>	<b>35</b>	381
04:45 PM	3	98	28	129	19	10	<b>10</b>	39	1	122	6	129	23	11	1	35	332
05:00 PM	<b>10</b>	114	<b>40</b>	164	16	17	8	41	1	140	5	146	<b>24</b>	5	4	33	<b>384</b>
05:15 PM	10	<b>126</b>	29	<b>165</b>	16	<b>19</b>	6	41	<b>2</b>	114	<b>9</b>	125	24	6	2	32	363
Total Volume	31	452	132	615	70	61	27	158	5	519	28	552	90	33	12	135	1460
% App. Total	5	73.5	21.5		44.3	38.6	17.1		0.9	94	5.1		66.7	24.4	8.9		
PHF	.775	.897	.825	.932	.921	.803	.675	.963	.625	.907	.778	.908	.938	.750	.600	.964	.951

City of Wildomar  
 N/S: Corydon Road  
 E/W: Palomar Street  
 Weather: Clear

File Name : 01\_WDM\_Corydon\_Palomar PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	04:30 PM				05:00 PM				05:00 PM				04:45 PM			
+0 mins.	8	114	35	157	16	17	<b>8</b>	<b>41</b>	1	<b>140</b>	5	146	23	<b>11</b>	1	35
+15 mins.	3	98	28	129	16	<b>19</b>	6	41	2	114	9	125	24	5	<b>4</b>	33
+30 mins.	<b>10</b>	114	<b>40</b>	164	19	13	7	39	<b>3</b>	137	11	<b>151</b>	24	6	2	32
+45 mins.	10	<b>126</b>	29	<b>165</b>	<b>25</b>	9	7	41	0	123	<b>12</b>	135	<b>30</b>	10	0	<b>40</b>
Total Volume	31	452	132	615	76	58	28	162	6	514	37	557	101	32	7	140
% App. Total	5	73.5	21.5		46.9	35.8	17.3		1.1	92.3	6.6		72.1	22.9	5	
PHF	.775	.897	.825	.932	.760	.763	.875	.988	.500	.918	.771	.922	.842	.727	.438	.875

City of Lake Elsinore  
 N/S: Mission Trail  
 E/W: Lemon Street  
 Weather: Clear

File Name : 02\_LKE\_Mission Trail\_Lemon AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

Groups Printed- Total Volume

Start Time	Mission Trail Southbound			Lemon Street Westbound			Mission Trail Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	4	135	139	16	8	24	101	16	117	280
07:15 AM	8	123	131	19	6	25	112	15	127	283
07:30 AM	6	193	199	14	20	34	170	17	187	420
07:45 AM	11	220	231	29	9	38	199	33	232	501
Total	29	671	700	78	43	121	582	81	663	1484
08:00 AM	5	177	182	11	7	18	215	25	240	440
08:15 AM	13	158	171	13	9	22	197	19	216	409
08:30 AM	5	104	109	19	17	36	180	18	198	343
08:45 AM	4	93	97	6	8	14	116	13	129	240
Total	27	532	559	49	41	90	708	75	783	1432
Grand Total	56	1203	1259	127	84	211	1290	156	1446	2916
Apprch %	4.4	95.6		60.2	39.8		89.2	10.8		
Total %	1.9	41.3	43.2	4.4	2.9	7.2	44.2	5.3	49.6	

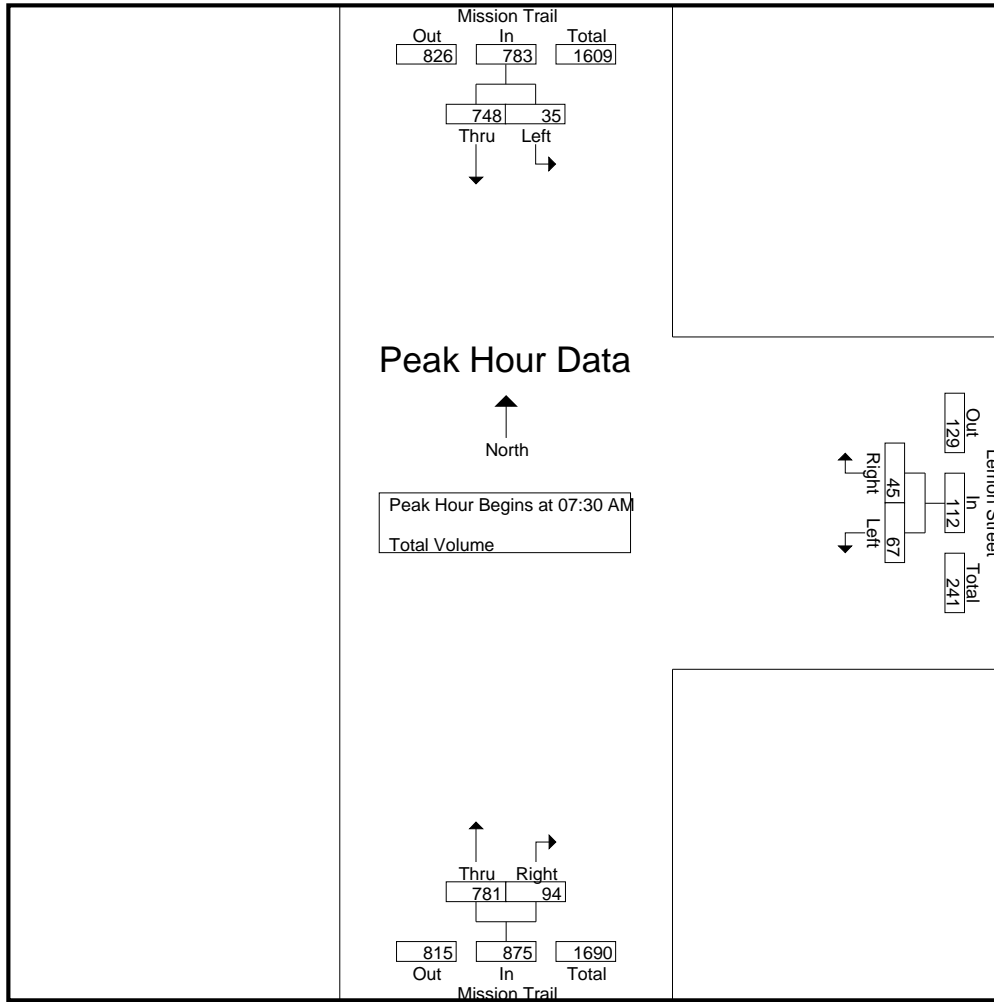
Start Time	Mission Trail Southbound			Lemon Street Westbound			Mission Trail Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:30 AM	6	193	199	14	<b>20</b>	34	170	17	187	420
07:45 AM	11	<b>220</b>	<b>231</b>	<b>29</b>	9	<b>38</b>	199	<b>33</b>	232	<b>501</b>
08:00 AM	5	177	182	11	7	18	<b>215</b>	25	<b>240</b>	440
08:15 AM	<b>13</b>	158	171	13	9	22	197	19	216	409
Total Volume	35	748	783	67	45	112	781	94	875	1770
% App. Total	4.5	95.5		59.8	40.2		89.3	10.7		
PHF	.673	.850	.847	.578	.563	.737	.908	.712	.911	.883

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

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Lake Elsinore  
 N/S: Mission Trail  
 E/W: Lemon Street  
 Weather: Clear

File Name : 02\_LKE\_Mission Trail\_Lemon AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	07:30 AM			07:00 AM			07:45 AM		
+0 mins.	6	193	199	16	8	24	199	33	232
+15 mins.	11	<b>220</b>	<b>231</b>	19	6	25	<b>215</b>	25	<b>240</b>
+30 mins.	5	177	182	14	<b>20</b>	34	197	19	216
+45 mins.	<b>13</b>	158	171	<b>29</b>	9	<b>38</b>	180	18	198
Total Volume	35	748	783	78	43	121	791	95	886
% App. Total	4.5	95.5		64.5	35.5		89.3	10.7	
PHF	.673	.850	.847	.672	.538	.796	.920	.720	.923

City of Lake Elsinore  
 N/S: Mission Trail  
 E/W: Lemon Street  
 Weather: Clear

File Name : 02\_LKE\_Mission Trail\_Lemon PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

Groups Printed- Total Volume

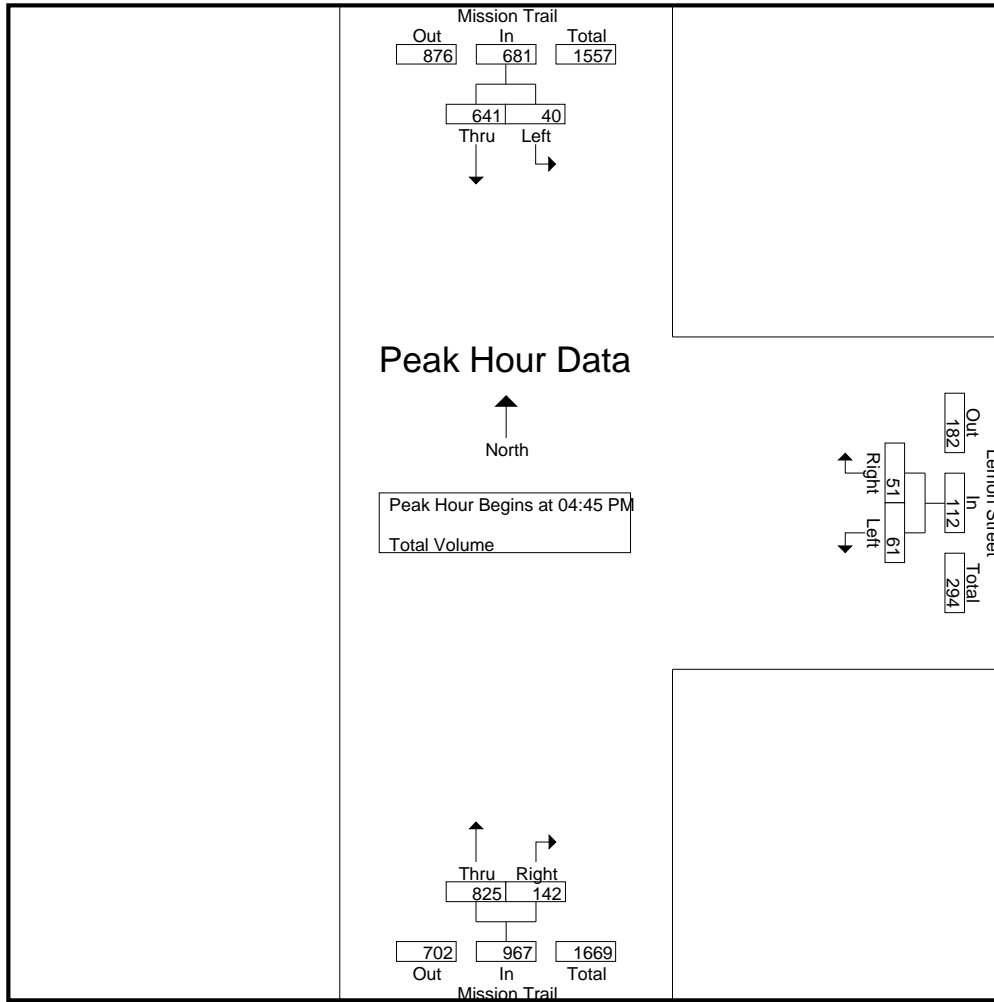
Start Time	Mission Trail Southbound			Lemon Street Westbound			Mission Trail Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	11	166	177	21	13	34	188	23	211	422
04:15 PM	14	161	175	17	18	35	208	29	237	447
04:30 PM	9	166	175	10	11	21	199	34	233	429
04:45 PM	15	131	146	11	7	18	221	43	264	428
Total	49	624	673	59	49	108	816	129	945	1726
05:00 PM	5	166	171	11	14	25	202	34	236	432
05:15 PM	12	184	196	21	9	30	187	35	222	448
05:30 PM	8	160	168	18	21	39	215	30	245	452
05:45 PM	9	139	148	18	21	39	207	27	234	421
Total	34	649	683	68	65	133	811	126	937	1753
Grand Total	83	1273	1356	127	114	241	1627	255	1882	3479
Apprch %	6.1	93.9		52.7	47.3		86.5	13.5		
Total %	2.4	36.6	39	3.7	3.3	6.9	46.8	7.3	54.1	

Start Time	Mission Trail Southbound			Lemon Street Westbound			Mission Trail Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:45 PM	<b>15</b>	131	146	11	7	18	<b>221</b>	<b>43</b>	<b>264</b>	428
05:00 PM	5	166	171	11	14	25	202	34	236	432
05:15 PM	12	<b>184</b>	<b>196</b>	<b>21</b>	9	30	187	35	222	448
05:30 PM	8	160	168	18	<b>21</b>	<b>39</b>	215	30	245	<b>452</b>
Total Volume	40	641	681	61	51	112	825	142	967	1760
% App. Total	5.9	94.1		54.5	45.5		85.3	14.7		
PHF	.667	.871	.869	.726	.607	.718	.933	.826	.916	.973

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

City of Lake Elsinore  
 N/S: Mission Trail  
 E/W: Lemon Street  
 Weather: Clear

File Name : 02\_LKE\_Mission Trail\_Lemon PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	04:30 PM			05:00 PM			04:15 PM		
+0 mins.	9	166	175	11	14	25	208	29	237
+15 mins.	15	131	146	21	9	30	199	34	233
+30 mins.	5	166	171	18	21	39	221	43	264
+45 mins.	12	184	196	18	21	39	202	34	236
Total Volume	41	647	688	68	65	133	830	140	970
% App. Total	6	94		51.1	48.9		85.6	14.4	
PHF	.683	.879	.878	.810	.774	.853	.939	.814	.919



City of Wildomar  
 N/S: Mission Trail  
 E/W: Corydon Road  
 Weather: Clear

File Name : 03\_WDM\_Mission Trail\_Corydon AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

Groups Printed- Total Volume

Start Time	Mission Trail Southbound			Mission Trail Northbound			Corydon Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	81	68	149	48	53	101	66	38	104	354
07:15 AM	71	75	146	48	53	101	82	39	121	368
07:30 AM	94	107	201	45	72	117	107	61	168	486
07:45 AM	119	133	252	54	80	134	144	58	202	588
Total	365	383	748	195	258	453	399	196	595	1796
08:00 AM	123	62	185	48	103	151	131	83	214	550
08:15 AM	108	69	177	41	149	190	72	48	120	487
08:30 AM	57	69	126	55	97	152	94	41	135	413
08:45 AM	48	59	107	34	58	92	72	33	105	304
Total	336	259	595	178	407	585	369	205	574	1754
Grand Total	701	642	1343	373	665	1038	768	401	1169	3550
Apprch %	52.2	47.8		35.9	64.1		65.7	34.3		
Total %	19.7	18.1	37.8	10.5	18.7	29.2	21.6	11.3	32.9	

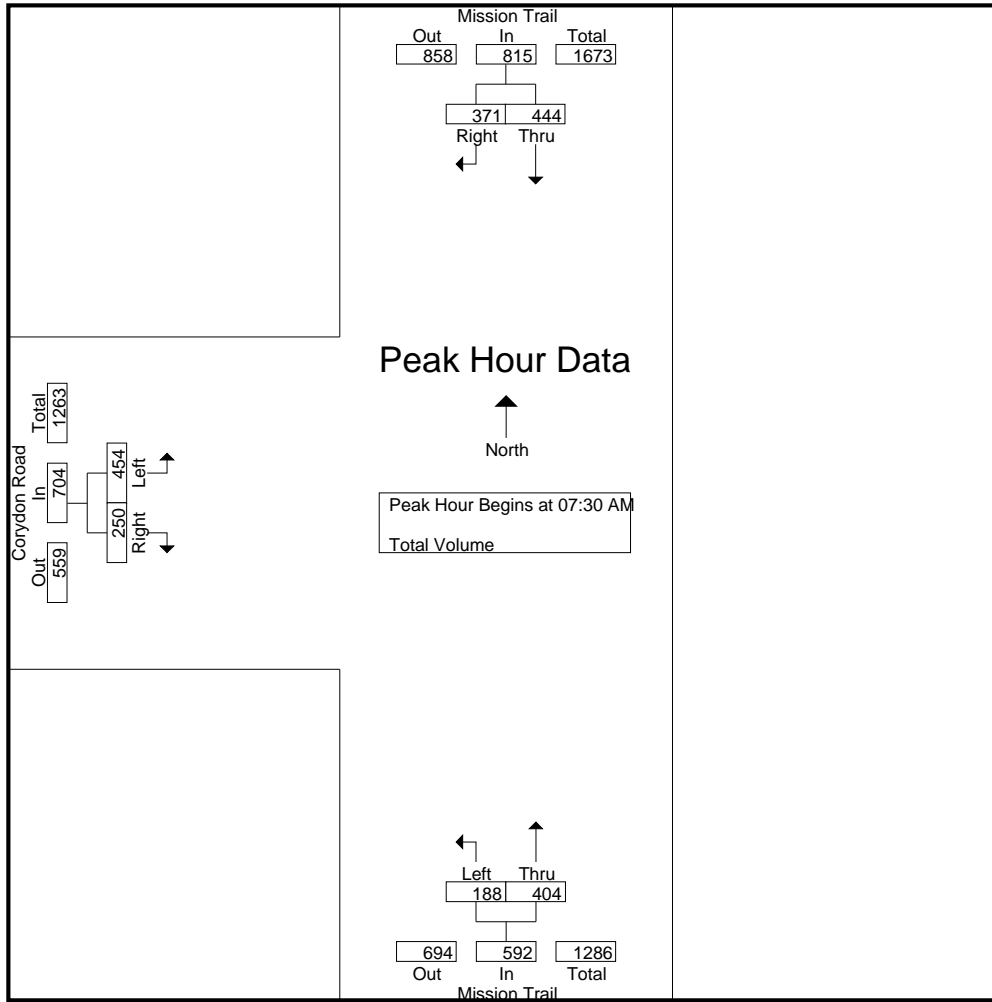
Start Time	Mission Trail Southbound			Mission Trail Northbound			Corydon Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:30 AM	94	107	201	45	72	117	107	61	168	486
07:45 AM	119	<b>133</b>	<b>252</b>	<b>54</b>	80	134	<b>144</b>	58	202	<b>588</b>
08:00 AM	<b>123</b>	62	185	48	103	151	131	<b>83</b>	<b>214</b>	550
08:15 AM	108	69	177	41	<b>149</b>	<b>190</b>	72	48	120	487
Total Volume	444	371	815	188	404	592	454	250	704	2111
% App. Total	54.5	45.5		31.8	68.2		64.5	35.5		
PHF	.902	.697	.809	.870	.678	.779	.788	.753	.822	.898

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

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Wildomar  
 N/S: Mission Trail  
 E/W: Corydon Road  
 Weather: Clear

File Name : 03\_WDM\_Mission Trail\_Corydon AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	07:30 AM			07:45 AM			07:15 AM		
+0 mins.	94	107	201	54	80	134	82	39	121
+15 mins.	119	<b>133</b>	<b>252</b>	48	103	151	107	61	168
+30 mins.	<b>123</b>	62	185	41	<b>149</b>	<b>190</b>	<b>144</b>	58	202
+45 mins.	108	69	177	<b>55</b>	97	152	131	<b>83</b>	<b>214</b>
Total Volume	444	371	815	198	429	627	464	241	705
% App. Total	54.5	45.5		31.6	68.4		65.8	34.2	
PHF	.902	.697	.809	.900	.720	.825	.806	.726	.824

City of Wildomar  
 N/S: Mission Trail  
 E/W: Corydon Road  
 Weather: Clear

File Name : 03\_WDM\_Mission Trail\_Corydon PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

Groups Printed- Total Volume

Start Time	Mission Trail Southbound			Mission Trail Northbound			Corydon Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	82	100	182	56	115	171	92	76	168	521
04:15 PM	74	110	184	59	129	188	114	53	167	539
04:30 PM	72	109	181	55	106	161	132	81	213	555
04:45 PM	72	71	143	60	136	196	130	62	192	531
Total	300	390	690	230	486	716	468	272	740	2146
05:00 PM	75	105	180	69	97	166	144	65	209	555
05:15 PM	95	110	205	54	104	158	125	57	182	545
05:30 PM	89	94	183	72	126	198	121	59	180	561
05:45 PM	81	82	163	35	107	142	120	61	181	486
Total	340	391	731	230	434	664	510	242	752	2147
Grand Total	640	781	1421	460	920	1380	978	514	1492	4293
Apprch %	45	55		33.3	66.7		65.5	34.5		
Total %	14.9	18.2	33.1	10.7	21.4	32.1	22.8	12	34.8	

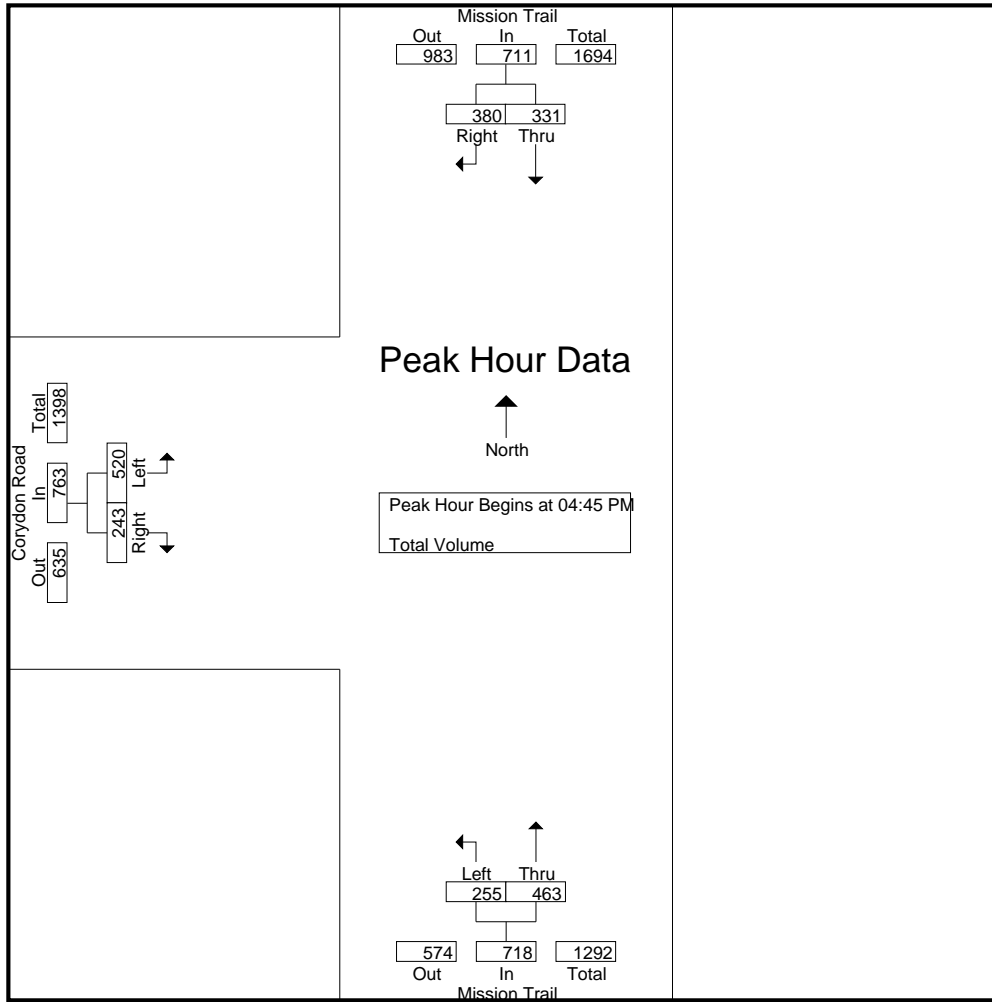
Start Time	Mission Trail Southbound			Mission Trail Northbound			Corydon Road Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:45 PM	72	71	143	60	<b>136</b>	196	130	62	192	531
05:00 PM	75	105	180	69	97	166	<b>144</b>	<b>65</b>	<b>209</b>	555
05:15 PM	<b>95</b>	<b>110</b>	<b>205</b>	54	104	158	125	57	182	545
05:30 PM	89	94	183	<b>72</b>	126	<b>198</b>	121	59	180	<b>561</b>
Total Volume	331	380	711	255	463	718	520	243	763	2192
% App. Total	46.6	53.4		35.5	64.5		68.2	31.8		
PHF	.871	.864	.867	.885	.851	.907	.903	.935	.913	.977

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

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Wildomar  
 N/S: Mission Trail  
 E/W: Corydon Road  
 Weather: Clear

File Name : 03\_WDM\_Mission Trail\_Corydon PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	05:00 PM			04:45 PM			04:30 PM		
+0 mins.	75	105	180	60	<b>136</b>	196	132	<b>81</b>	<b>213</b>
+15 mins.	<b>95</b>	<b>110</b>	<b>205</b>	69	97	166	130	62	192
+30 mins.	89	94	183	54	104	158	<b>144</b>	65	209
+45 mins.	81	82	163	<b>72</b>	126	<b>198</b>	125	57	182
Total Volume	340	391	731	255	463	718	531	265	796
% App. Total	46.5	53.5		35.5	64.5		66.7	33.3	
PHF	.895	.889	.891	.885	.851	.907	.922	.818	.934

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

File Name : 04\_WDM\_Mission Trail\_Bundy Canyon AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

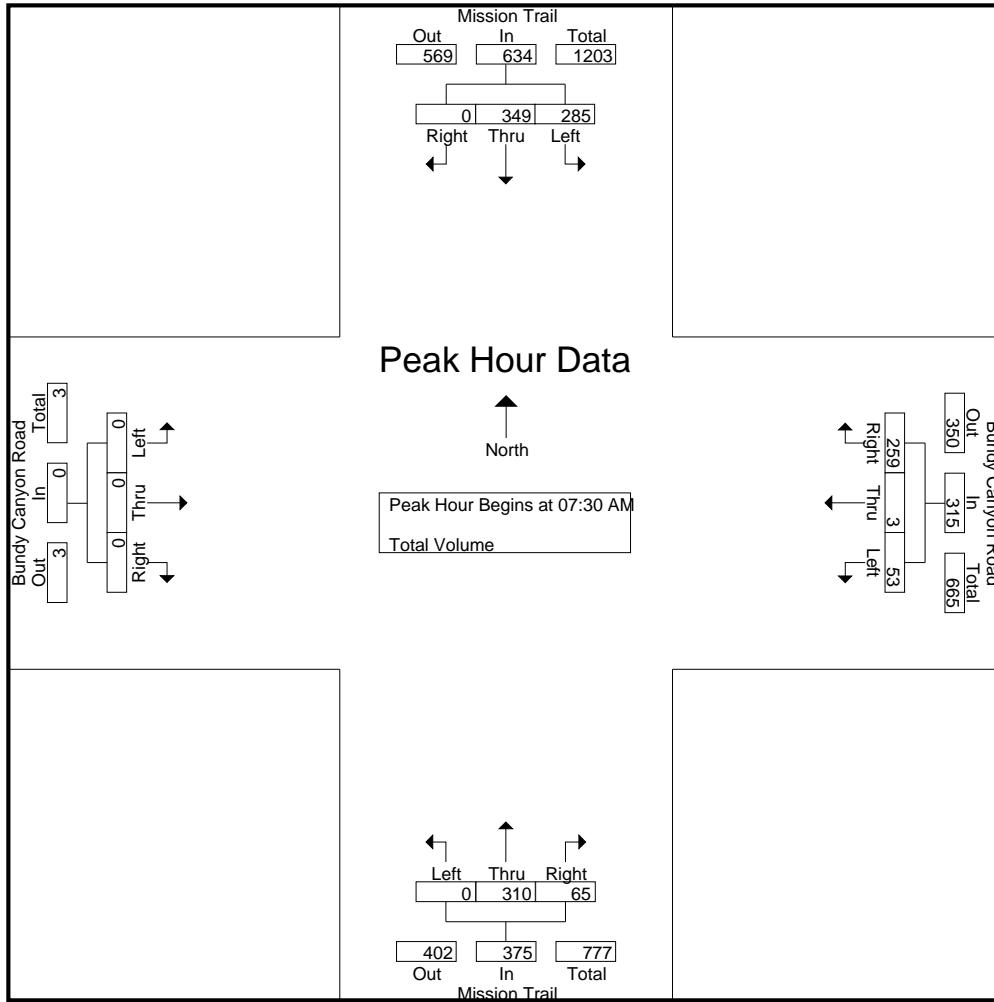
Groups Printed- Total Volume

Start Time	Mission Trail Southbound				Bundy Canyon Road Westbound				Mission Trail Northbound				Bundy Canyon Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	50	63	0	113	11	0	50	61	0	42	17	59	0	0	0	0	233
07:15 AM	37	50	0	87	13	0	38	51	0	50	14	64	0	0	0	0	202
07:30 AM	66	75	0	141	7	0	47	54	0	66	14	80	0	0	0	0	275
07:45 AM	62	86	0	148	13	2	63	78	0	72	15	87	0	0	0	0	313
Total	215	274	0	489	44	2	198	244	0	230	60	290	0	0	0	0	1023
08:00 AM	84	100	0	184	13	1	64	78	0	84	23	107	0	0	0	0	369
08:15 AM	73	88	0	161	20	0	85	105	0	88	13	101	0	0	0	0	367
08:30 AM	51	47	0	98	9	0	65	74	0	71	17	88	0	0	1	1	261
08:45 AM	47	24	0	71	11	0	51	62	0	43	7	50	0	0	0	0	183
Total	255	259	0	514	53	1	265	319	0	286	60	346	0	0	1	1	1180
Grand Total	470	533	0	1003	97	3	463	563	0	516	120	636	0	0	1	1	2203
Apprch %	46.9	53.1	0		17.2	0.5	82.2		0	81.1	18.9		0	0	100		
Total %	21.3	24.2	0	45.5	4.4	0.1	21	25.6	0	23.4	5.4	28.9	0	0	0	0	

Start Time	Mission Trail Southbound				Bundy Canyon Road Westbound				Mission Trail Northbound				Bundy Canyon Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	66	75	0	141	7	0	47	54	0	66	14	80	0	0	0	0	275
07:45 AM	62	86	0	148	13	2	63	78	0	72	15	87	0	0	0	0	313
08:00 AM	<b>84</b>	<b>100</b>	0	<b>184</b>	13	1	64	78	0	<b>84</b>	<b>23</b>	<b>107</b>	0	0	0	0	<b>369</b>
08:15 AM	73	88	0	161	<b>20</b>	0	<b>85</b>	<b>105</b>	0	<b>88</b>	13	101	0	0	0	0	367
Total Volume	285	349	0	634	53	3	259	315	0	310	65	375	0	0	0	0	1324
% App. Total	45	55	0		16.8	1	82.2		0	82.7	17.3		0	0	0		
PHF	.848	.873	.000	.861	.663	.375	.762	.750	.000	.881	.707	.876	.000	.000	.000	.000	.897

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

File Name : 04\_WDM\_Mission Trail\_Bundy Canyon AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	07:30 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	66	75	0	141	13	2	63	78	0	72	15	87	0	0	0	0
+15 mins.	62	86	0	148	13	1	64	78	0	84	23	107	0	0	0	0
+30 mins.	84	100	0	184	20	0	85	105	0	88	13	101	0	0	0	0
+45 mins.	73	88	0	161	9	0	65	74	0	71	17	88	0	0	1	1
Total Volume	285	349	0	634	55	3	277	335	0	315	68	383	0	0	1	1
% App. Total	45	55	0		16.4	0.9	82.7		0	82.2	17.8		0	0	100	
PHF	.848	.873	.000	.861	.688	.375	.815	.798	.000	.895	.739	.895	.000	.000	.250	.250

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

File Name : 04\_WDM\_Mission Trail\_Bundy Canyon PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

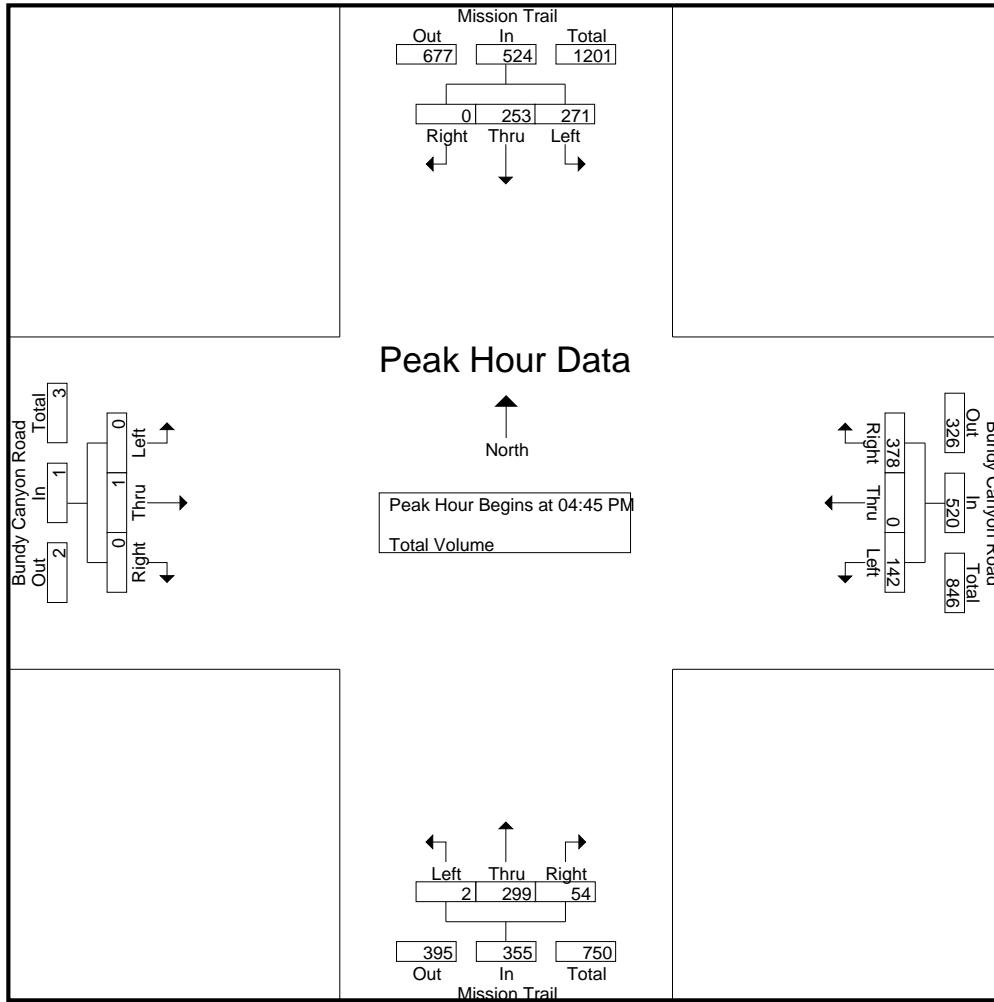
Groups Printed- Total Volume

Start Time	Mission Trail Southbound				Bundy Canyon Road Westbound				Mission Trail Northbound				Bundy Canyon Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	80	70	0	150	27	0	73	100	1	78	16	95	0	0	0	0	345
04:15 PM	65	45	0	110	30	0	83	113	0	86	19	105	0	0	0	0	328
04:30 PM	92	51	0	143	18	0	70	88	0	71	13	84	0	0	0	0	315
04:45 PM	69	58	0	127	29	0	103	132	1	90	7	98	0	0	0	0	357
Total	306	224	0	530	104	0	329	433	2	325	55	382	0	0	0	0	1345
05:00 PM	71	65	0	136	32	0	82	114	0	60	8	68	0	0	0	0	318
05:15 PM	65	70	0	135	27	0	87	114	0	76	15	91	0	0	0	0	340
05:30 PM	66	60	0	126	54	0	106	160	1	73	24	98	0	1	0	1	385
05:45 PM	63	62	0	125	31	0	83	114	0	68	14	82	0	0	0	0	321
Total	265	257	0	522	144	0	358	502	1	277	61	339	0	1	0	1	1364
Grand Total	571	481	0	1052	248	0	687	935	3	602	116	721	0	1	0	1	2709
Apprch %	54.3	45.7	0		26.5	0	73.5		0.4	83.5	16.1		0	100	0		
Total %	21.1	17.8	0	38.8	9.2	0	25.4	34.5	0.1	22.2	4.3	26.6	0	0	0	0	

Start Time	Mission Trail Southbound				Bundy Canyon Road Westbound				Mission Trail Northbound				Bundy Canyon Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	69	58	0	127	29	0	103	132	1	90	7	98	0	0	0	0	357
05:00 PM	71	65	0	136	32	0	82	114	0	60	8	68	0	0	0	0	318
05:15 PM	65	70	0	135	27	0	87	114	0	76	15	91	0	0	0	0	340
05:30 PM	66	60	0	126	54	0	106	160	1	73	24	98	0	1	0	1	385
Total Volume	271	253	0	524	142	0	378	520	2	299	54	355	0	1	0	1	1400
% App. Total	51.7	48.3	0		27.3	0	72.7		0.6	84.2	15.2		0	100	0		
PHF	.954	.904	.000	.963	.657	.000	.892	.813	.500	.831	.563	.906	.000	.250	.000	.250	.909

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

File Name : 04\_WDM\_Mission Trail\_Bundy Canyon PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	04:30 PM				04:45 PM				04:00 PM				04:45 PM			
+0 mins.	<b>92</b>	51	0	<b>143</b>	29	0	103	132	<b>1</b>	78	16	95	0	0	0	0
+15 mins.	69	58	0	127	32	0	82	114	0	86	<b>19</b>	<b>105</b>	0	0	0	0
+30 mins.	71	65	0	136	27	0	87	114	0	71	13	84	0	0	0	0
+45 mins.	65	<b>70</b>	0	135	<b>54</b>	0	<b>106</b>	<b>160</b>	1	<b>90</b>	7	98	0	<b>1</b>	0	<b>1</b>
Total Volume	297	244	0	541	142	0	378	520	2	325	55	382	0	1	0	1
% App. Total	54.9	45.1	0		27.3	0	72.7		0.5	85.1	14.4		0	100	0	
PHF	.807	.871	.000	.946	.657	.000	.892	.813	.500	.903	.724	.910	.000	.250	.000	.250



City of Wildomar  
 N/S: Mission Trail  
 E/W: Wildomar Library DW/Canyon Drive  
 Weather: Clear

File Name : 05\_WDM\_Mission Trail\_Canyon AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

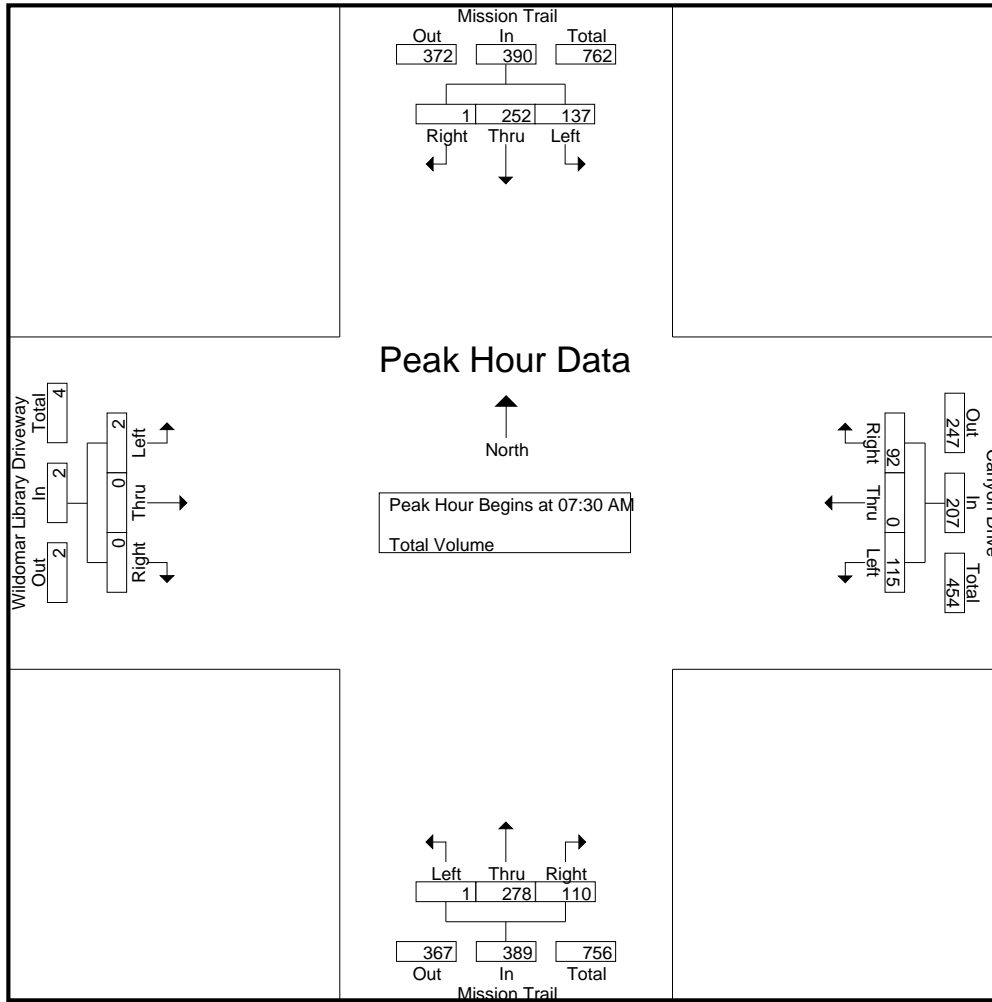
Groups Printed- Total Volume

Start Time	Mission Trail Southbound				Canyon Drive Westbound				Mission Trail Northbound				Wildomar Library Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	4	66	0	70	10	0	7	17	0	49	3	52	0	0	0	0	139
07:15 AM	7	57	0	64	11	0	9	20	0	57	7	64	0	0	0	0	148
07:30 AM	9	69	0	78	10	0	8	18	1	72	12	85	0	0	0	0	181
07:45 AM	21	74	1	96	16	0	14	30	0	69	18	87	2	0	0	2	215
<b>Total</b>	<b>41</b>	<b>266</b>	<b>1</b>	<b>308</b>	<b>47</b>	<b>0</b>	<b>38</b>	<b>85</b>	<b>1</b>	<b>247</b>	<b>40</b>	<b>288</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>683</b>
08:00 AM	60	49	0	109	38	0	33	71	0	72	44	116	0	0	0	0	296
08:15 AM	47	60	0	107	51	0	37	88	0	65	36	101	0	0	0	0	296
08:30 AM	17	40	0	57	20	0	23	43	0	64	8	72	0	0	0	0	172
08:45 AM	4	32	0	36	4	1	3	8	0	49	1	50	0	0	0	0	94
<b>Total</b>	<b>128</b>	<b>181</b>	<b>0</b>	<b>309</b>	<b>113</b>	<b>1</b>	<b>96</b>	<b>210</b>	<b>0</b>	<b>250</b>	<b>89</b>	<b>339</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>858</b>
<b>Grand Total</b>	<b>169</b>	<b>447</b>	<b>1</b>	<b>617</b>	<b>160</b>	<b>1</b>	<b>134</b>	<b>295</b>	<b>1</b>	<b>497</b>	<b>129</b>	<b>627</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1541</b>
Apprch %	27.4	72.4	0.2		54.2	0.3	45.4		0.2	79.3	20.6		100	0	0		
Total %	11	29	0.1	40	10.4	0.1	8.7	19.1	0.1	32.3	8.4	40.7	0.1	0	0	0.1	

Start Time	Mission Trail Southbound				Canyon Drive Westbound				Mission Trail Northbound				Wildomar Library Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	69	0	78	10	0	8	18	1	72	12	85	0	0	0	0	181
07:45 AM	21	74	1	96	16	0	14	30	0	69	18	87	2	0	0	2	215
08:00 AM	60	49	0	109	38	0	33	71	0	72	44	116	0	0	0	0	296
08:15 AM	47	60	0	107	51	0	37	88	0	65	36	101	0	0	0	0	296
Total Volume	137	252	1	390	115	0	92	207	1	278	110	389	2	0	0	2	988
% App. Total	35.1	64.6	0.3		55.6	0	44.4		0.3	71.5	28.3		100	0	0		
PHF	.571	.851	.250	.894	.564	.000	.622	.588	.250	.965	.625	.838	.250	.000	.000	.250	.834

City of Wildomar  
 N/S: Mission Trail  
 E/W: Wildomar Library DW/Canyon Drive  
 Weather: Clear

File Name : 05\_WDM\_Mission Trail\_Canyon AM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	07:30 AM				07:45 AM				07:30 AM				07:00 AM			
+0 mins.	9	69	0	78	16	0	14	30	1	72	12	85	0	0	0	0
+15 mins.	21	74	1	96	38	0	33	71	0	69	18	87	0	0	0	0
+30 mins.	60	49	0	109	51	0	37	88	0	72	44	116	0	0	0	0
+45 mins.	47	60	0	107	20	0	23	43	0	65	36	101	2	0	0	2
Total Volume	137	252	1	390	125	0	107	232	1	278	110	389	2	0	0	2
% App. Total	35.1	64.6	0.3		53.9	0	46.1		0.3	71.5	28.3		100	0	0	
PHF	.571	.851	.250	.894	.613	.000	.723	.659	.250	.965	.625	.838	.250	.000	.000	.250

City of Wildomar  
 N/S: Mission Trail  
 E/W: Wildomar Library DW/Canyon Drive  
 Weather: Clear

File Name : 05\_WDM\_Mission Trail\_Canyon PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 1

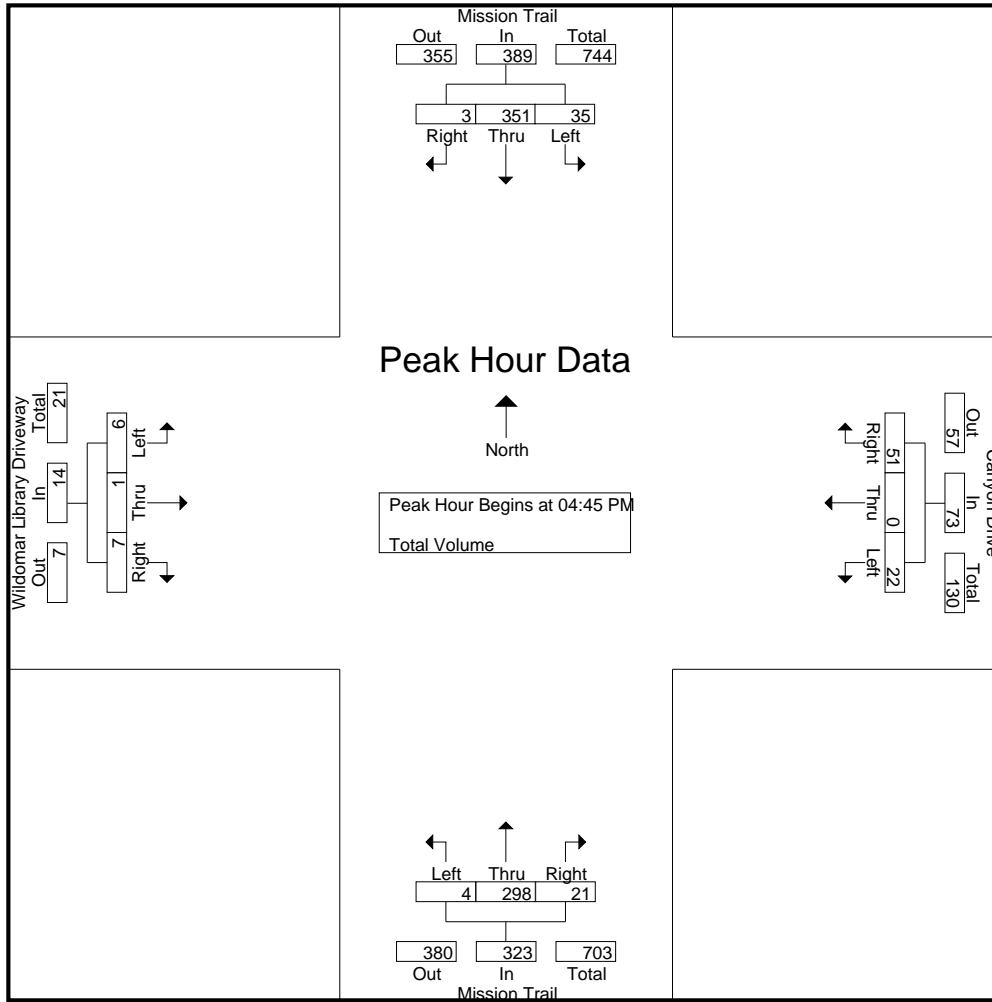
Groups Printed- Total Volume

Start Time	Mission Trail Southbound				Canyon Drive Westbound				Mission Trail Northbound				Wildomar Library Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	5	89	1	95	3	0	9	12	1	86	4	91	1	1	2	4	202
04:15 PM	11	60	2	73	13	0	13	26	3	83	11	97	2	0	2	4	200
04:30 PM	8	60	4	72	10	0	12	22	1	70	10	81	3	0	2	5	180
04:45 PM	10	79	0	89	4	0	17	21	2	83	6	91	1	0	3	4	205
Total	34	288	7	329	30	0	51	81	7	322	31	360	7	1	9	17	787
05:00 PM	8	85	2	95	9	0	12	21	1	55	6	62	0	0	3	3	181
05:15 PM	7	87	1	95	5	0	11	16	1	73	6	80	3	0	1	4	195
05:30 PM	10	100	0	110	4	0	11	15	0	87	3	90	2	1	0	3	218
05:45 PM	6	91	0	97	5	0	2	7	0	76	6	82	1	0	2	3	189
Total	31	363	3	397	23	0	36	59	2	291	21	314	6	1	6	13	783
Grand Total	65	651	10	726	53	0	87	140	9	613	52	674	13	2	15	30	1570
Apprch %	9	89.7	1.4		37.9	0	62.1		1.3	90.9	7.7		43.3	6.7	50		
Total %	4.1	41.5	0.6	46.2	3.4	0	5.5	8.9	0.6	39	3.3	42.9	0.8	0.1	1	1.9	

Start Time	Mission Trail Southbound				Canyon Drive Westbound				Mission Trail Northbound				Wildomar Library Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	10	79	0	89	4	0	17	21	2	83	6	91	1	0	3	4	205
05:00 PM	8	85	2	95	9	0	12	21	1	55	6	62	0	0	3	3	181
05:15 PM	7	87	1	95	5	0	11	16	1	73	6	80	3	0	1	4	195
05:30 PM	10	100	0	110	4	0	11	15	0	87	3	90	2	1	0	3	218
Total Volume	35	351	3	389	22	0	51	73	4	298	21	323	6	1	7	14	799
% App. Total	9	90.2	0.8		30.1	0	69.9		1.2	92.3	6.5		42.9	7.1	50		
PHF	.875	.878	.375	.884	.611	.000	.750	.869	.500	.856	.875	.887	.500	.250	.583	.875	.916

City of Wildomar  
 N/S: Mission Trail  
 E/W: Wildomar Library DW/Canyon Drive  
 Weather: Clear

File Name : 05\_WDM\_Mission Trail\_Canyon PM  
 Site Code : 20119606  
 Start Date : 9/18/2019  
 Page No : 2



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

	05:00 PM				04:15 PM				04:00 PM				04:00 PM			
+0 mins.	8	85	2	95	13	0	13	26	1	86	4	91	1	1	2	4
+15 mins.	7	87	1	95	10	0	12	22	3	83	11	97	2	0	2	4
+30 mins.	10	100	0	110	4	0	17	21	1	70	10	81	3	0	2	5
+45 mins.	6	91	0	97	9	0	12	21	2	83	6	91	1	0	3	4
Total Volume	31	363	3	397	36	0	54	90	7	322	31	360	7	1	9	17
% App. Total	7.8	91.4	0.8		40	0	60		1.9	89.4	8.6		41.2	5.9	52.9	
PHF	.775	.908	.375	.902	.692	.000	.794	.865	.583	.936	.705	.928	.583	.250	.750	.850

City of Lake Elsinore  
 N/S: Mission Trail  
 E/W: Hidden Trail/Elberta Road  
 Weather: Clear

File Name : 06\_LKE\_Mission Trail\_Hidden Trail AM  
 Site Code : 20119606  
 Start Date : 10/2/2019  
 Page No : 1

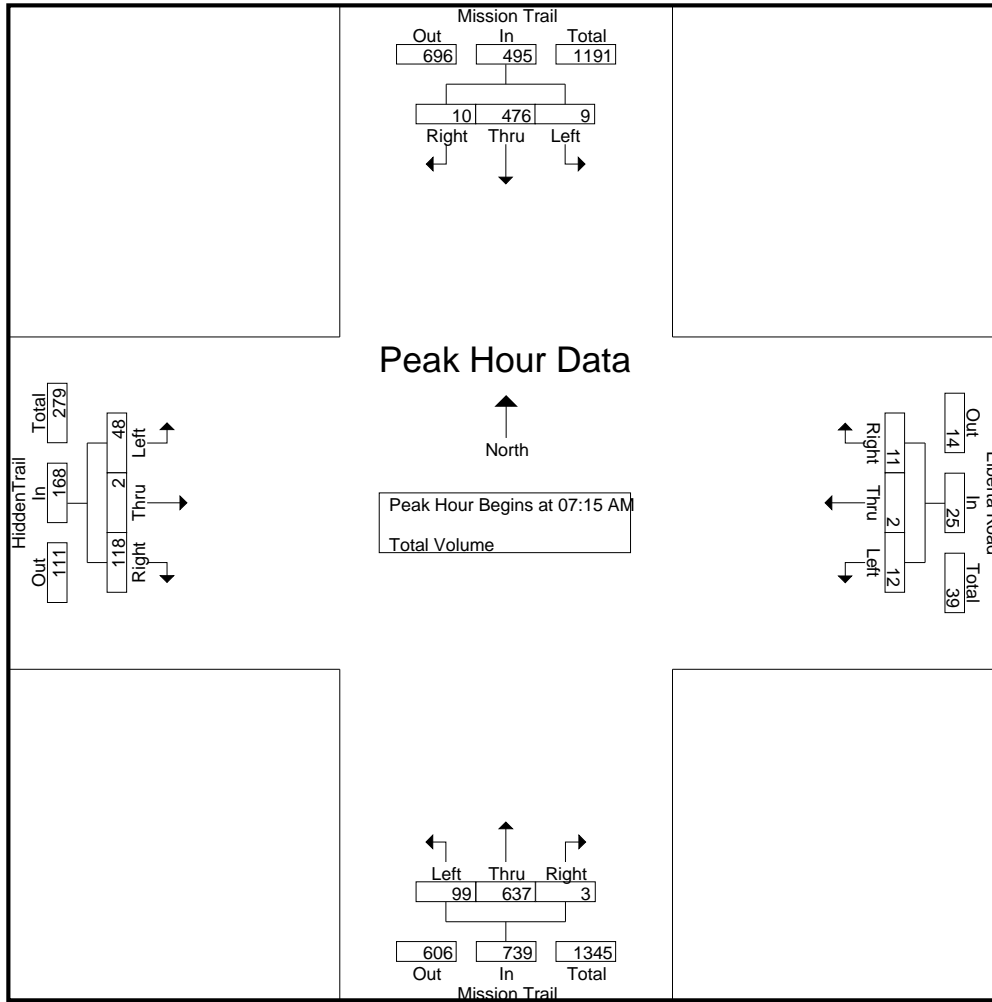
Groups Printed- Total Volume

Start Time	Mission Trail Southbound				Elberta Road Westbound				Mission Trail Northbound				HiddenTrail Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	103	1	105	5	0	4	9	12	117	1	130	18	2	42	62	306
07:15 AM	3	115	1	119	4	0	0	4	14	154	0	168	16	1	40	57	348
07:30 AM	0	111	0	111	4	0	3	7	30	178	1	209	8	0	36	44	371
07:45 AM	2	133	3	138	1	2	4	7	35	144	1	180	12	1	28	41	366
Total	6	462	5	473	14	2	11	27	91	593	3	687	54	4	146	204	1391
08:00 AM	4	117	6	127	3	0	4	7	20	161	1	182	12	0	14	26	342
08:15 AM	1	97	7	105	1	0	4	5	12	107	1	120	4	0	13	17	247
08:30 AM	0	100	2	102	2	0	1	3	8	115	1	124	6	1	12	19	248
08:45 AM	2	80	6	88	1	1	0	2	9	116	0	125	6	0	9	15	230
Total	7	394	21	422	7	1	9	17	49	499	3	551	28	1	48	77	1067
Grand Total	13	856	26	895	21	3	20	44	140	1092	6	1238	82	5	194	281	2458
Apprch %	1.5	95.6	2.9		47.7	6.8	45.5		11.3	88.2	0.5		29.2	1.8	69		
Total %	0.5	34.8	1.1	36.4	0.9	0.1	0.8	1.8	5.7	44.4	0.2	50.4	3.3	0.2	7.9	11.4	

Start Time	Mission Trail Southbound				Elberta Road Westbound				Mission Trail Northbound				HiddenTrail Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	115	1	119	4	0	0	4	14	154	0	168	16	1	40	57	348
07:30 AM	0	111	0	111	4	0	3	7	30	178	1	209	8	0	36	44	371
07:45 AM	2	133	3	138	1	2	4	7	35	144	1	180	12	1	28	41	366
08:00 AM	4	117	6	127	3	0	4	7	20	161	1	182	12	0	14	26	342
Total Volume	9	476	10	495	12	2	11	25	99	637	3	739	48	2	118	168	1427
% App. Total	1.8	96.2	2		48	8	44		13.4	86.2	0.4		28.6	1.2	70.2		
PHF	.563	.895	.417	.897	.750	.250	.688	.893	.707	.895	.750	.884	.750	.500	.738	.737	.962

City of Lake Elsinore  
 N/S: Mission Trail  
 E/W: Hidden Trail/Elberta Road  
 Weather: Clear

File Name : 06\_LKE\_Mission Trail\_Hidden Trail AM  
 Site Code : 20119606  
 Start Date : 10/2/2019  
 Page No : 2



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

	07:15 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	3	115	1	119	5	0	4	9	14	154	0	168	18	2	42	62
+15 mins.	0	111	0	111	4	0	0	4	30	178	1	209	16	1	40	57
+30 mins.	2	133	3	138	4	0	3	7	35	144	1	180	8	0	36	44
+45 mins.	4	117	6	127	1	2	4	7	20	161	1	182	12	1	28	41
Total Volume	9	476	10	495	14	2	11	27	99	637	3	739	54	4	146	204
% App. Total	1.8	96.2	2		51.9	7.4	40.7		13.4	86.2	0.4		26.5	2	71.6	
PHF	.563	.895	.417	.897	.700	.250	.688	.750	.707	.895	.750	.884	.750	.500	.869	.823

City of Lake Elsinore  
 N/S: Mission Trail  
 E/W: Hidden Trail/Elberta Road  
 Weather: Clear

File Name : 06\_LKE\_Mission Trail\_Hidden Trail PM  
 Site Code : 20119606  
 Start Date : 10/2/2019  
 Page No : 1

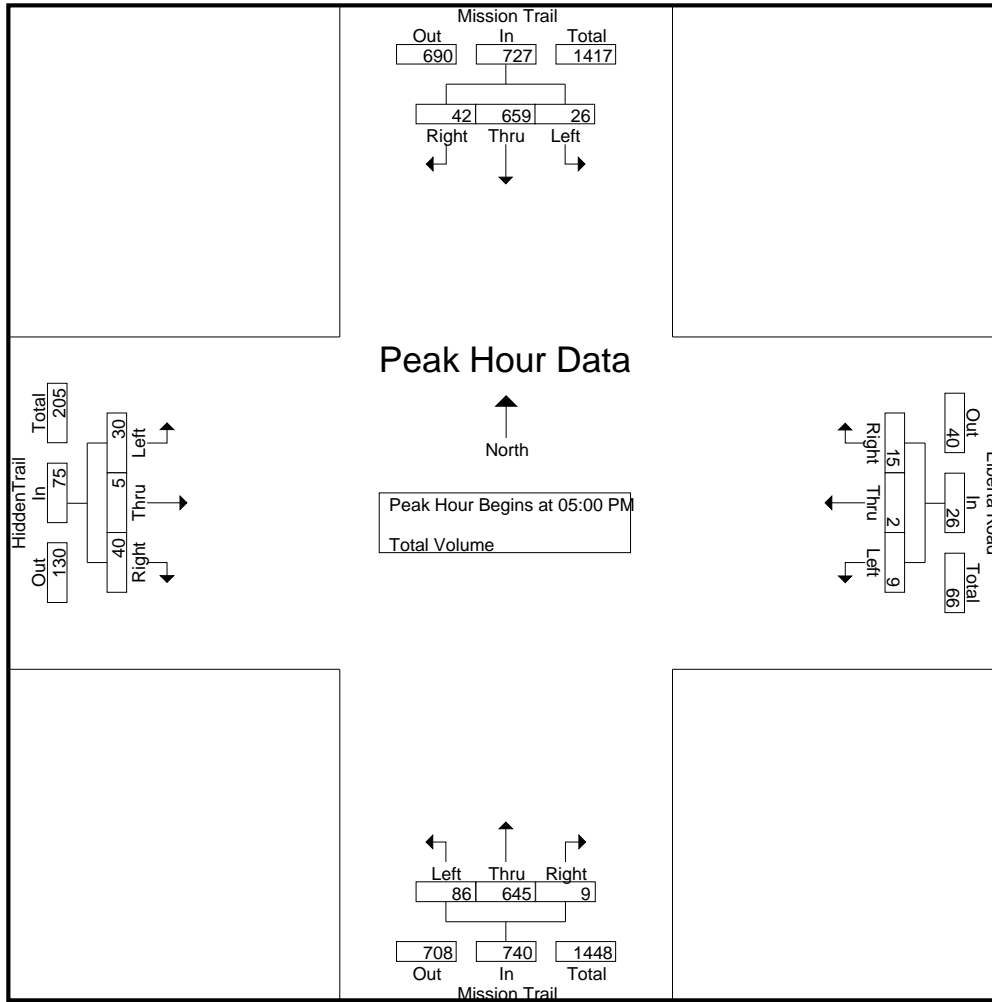
Groups Printed- Total Volume

Start Time	Mission Trail Southbound				Elberta Road Westbound				Mission Trail Northbound				HiddenTrail Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	9	156	11	176	3	0	2	5	26	164	1	191	9	0	14	23	395
04:15 PM	7	152	10	169	0	0	5	5	12	177	3	192	3	1	11	15	381
04:30 PM	7	165	6	178	3	0	5	8	21	150	4	175	9	1	5	15	376
04:45 PM	6	142	12	160	3	0	3	6	19	131	2	152	4	0	14	18	336
Total	29	615	39	683	9	0	15	24	78	622	10	710	25	2	44	71	1488
05:00 PM	8	179	7	194	3	1	7	11	22	168	4	194	7	1	13	21	420
05:15 PM	10	167	14	191	5	1	3	9	21	168	3	192	7	0	6	13	405
05:30 PM	5	166	7	178	0	0	2	2	16	154	1	171	8	1	9	18	369
05:45 PM	3	147	14	164	1	0	3	4	27	155	1	183	8	3	12	23	374
Total	26	659	42	727	9	2	15	26	86	645	9	740	30	5	40	75	1568
Grand Total	55	1274	81	1410	18	2	30	50	164	1267	19	1450	55	7	84	146	3056
Apprch %	3.9	90.4	5.7		36	4	60		11.3	87.4	1.3		37.7	4.8	57.5		
Total %	1.8	41.7	2.7	46.1	0.6	0.1	1	1.6	5.4	41.5	0.6	47.4	1.8	0.2	2.7	4.8	

Start Time	Mission Trail Southbound				Elberta Road Westbound				Mission Trail Northbound				HiddenTrail Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	8	<b>179</b>	7	<b>194</b>	3	<b>1</b>	<b>7</b>	<b>11</b>	22	<b>168</b>	<b>4</b>	<b>194</b>	7	<b>1</b>	<b>13</b>	21	<b>420</b>
05:15 PM	<b>10</b>	167	<b>14</b>	191	<b>5</b>	1	3	9	21	168	3	192	7	0	6	13	405
05:30 PM	5	166	7	178	0	0	2	2	16	154	1	171	<b>8</b>	1	9	18	369
05:45 PM	3	147	14	164	1	0	3	4	<b>27</b>	155	1	183	8	<b>3</b>	12	<b>23</b>	374
Total Volume	26	659	42	727	9	2	15	26	86	645	9	740	30	5	40	75	1568
% App. Total	3.6	90.6	5.8		34.6	7.7	57.7		11.6	87.2	1.2		40	6.7	53.3		
PHF	.650	.920	.750	.937	.450	.500	.536	.591	.796	.960	.563	.954	.938	.417	.769	.815	.933

City of Lake Elsinore  
 N/S: Mission Trail  
 E/W: Hidden Trail/Elberta Road  
 Weather: Clear

File Name : 06\_LKE\_Mission Trail\_Hidden Trail PM  
 Site Code : 20119606  
 Start Date : 10/2/2019  
 Page No : 2



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

	05:00 PM				04:30 PM				05:00 PM				05:00 PM			
+0 mins.	8	<b>179</b>	7	<b>194</b>	3	0	5	8	22	<b>168</b>	<b>4</b>	<b>194</b>	7	1	<b>13</b>	21
+15 mins.	<b>10</b>	167	<b>14</b>	191	3	0	3	6	21	168	3	192	7	0	6	13
+30 mins.	5	166	7	178	3	<b>1</b>	<b>7</b>	<b>11</b>	16	154	1	171	<b>8</b>	1	9	18
+45 mins.	3	147	14	164	<b>5</b>	1	3	9	<b>27</b>	155	1	183	8	<b>3</b>	12	<b>23</b>
Total Volume	26	659	42	727	14	2	18	34	86	645	9	740	30	5	40	75
% App. Total	3.6	90.6	5.8		41.2	5.9	52.9		11.6	87.2	1.2		40	6.7	53.3	
PHF	.650	.920	.750	.937	.700	.500	.643	.773	.796	.960	.563	.954	.938	.417	.769	.815



## FAST FIVE EMPIRICAL COUNT DATA

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City of Murrieta  
 Jackson Avenue / Murrieta Hot Springs Road  
 24 Hour Driveway Counts  
 Driveways

	Jackson Ave Driveway			Murrieta Hot Springs Road Driveway			TOTAL	
	Entering	Exiting		Entering	Exiting		Entering	Exiting
0:00	0	0	0:00	0	0	0:00	0	0
0:15	0	0	0:15	0	0	0:15	0	0
0:30	0	0	0:30	0	0	0:30	0	0
0:45	0	0	0:45	0	0	0:45	0	0
1:00	0	0	1:00	0	0	1:00	0	0
1:15	0	0	1:15	0	0	1:15	0	0
1:30	0	0	1:30	0	0	1:30	0	0
1:45	0	0	1:45	0	0	1:45	0	0
2:00	0	0	2:00	0	0	2:00	0	0
2:15	0	0	2:15	0	0	2:15	0	0
2:30	0	0	2:30	0	0	2:30	0	0
2:45	0	0	2:45	0	0	2:45	0	0
3:00	0	0	3:00	0	0	3:00	0	0
3:15	0	0	3:15	0	0	3:15	0	0
3:30	0	0	3:30	0	0	3:30	0	0
3:45	0	0	3:45	0	0	3:45	0	0
4:00	0	0	4:00	0	0	4:00	0	0
4:15	0	0	4:15	0	0	4:15	0	0
4:30	0	0	4:30	0	0	4:30	0	0
4:45	0	0	4:45	0	0	4:45	0	0
5:00	0	0	5:00	0	0	5:00	0	0
5:15	0	0	5:15	0	0	5:15	0	0
5:30	0	0	5:30	0	0	5:30	0	0
5:45	1	0	5:45	1	0	5:45	2	0
6:00	0	0	6:00	0	1	6:00	0	1
6:15	0	0	6:15	0	0	6:15	0	0
6:30	0	0	6:30	0	0	6:30	0	0
6:45	1	1	6:45	2	0	6:45	3	1
7:00	0	0	7:00	2	1	7:00	2	1
7:15	3	2	7:15	2	0	7:15	5	2
7:30	2	2	7:30	5	2	7:30	7	4
7:45	4	3	7:45	3	1	7:45	7	4
8:00	2	9	8:00	4	0	8:00	6	9
8:15	4	7	8:15	6	1	8:15	10	8
8:30	5	5	8:30	6	1	8:30	11	6
8:45	1	7	8:45	9	1	8:45	10	8
9:00	3	7	9:00	6	2	9:00	9	9
9:15	7	17	9:15	14	2	9:15	21	19
9:30	2	8	9:30	9	5	9:30	11	13
9:45	6	8	9:45	6	3	9:45	12	11
10:00	8	14	10:00	7	7	10:00	15	21
10:15	4	5	10:15	10	2	10:15	14	7
10:30	7	13	10:30	11	6	10:30	18	19
10:45	5	12	10:45	13	4	10:45	18	16
11:00	3	11	11:00	14	4	11:00	17	15
11:15	7	16	11:15	9	3	11:15	16	19
4:00	0	0	4:00	0	0	4:00	0	0
4:15	0	0	4:15	0	0	4:15	0	0
4:30	0	0	4:30	0	0	4:30	0	0

City of Murrieta  
 Jackson Avenue / Murrieta Hot Springs Road  
 24 Hour Driveway Counts  
 Driveways

	Jackson Ave Driveway			Murrieta Hot Springs Road Driveway			TOTAL	
	Entering	Exiting		Entering	Exiting		Entering	Exiting
12:15	5	7	12:15	9	5	12:15	14	12
12:30	1	10	12:30	10	3	12:30	11	13
12:45	3	6	12:45	8	1	12:45	11	7
13:00	3	13	13:00	12	3	13:00	15	16
13:15	4	10	13:15	15	2	13:15	19	12
13:30	3	16	13:30	9	2	13:30	12	18
13:45	1	10	13:45	14	7	13:45	15	17
14:00	3	11	14:00	12	3	14:00	15	14
14:15	11	10	14:15	8	6	14:15	19	16
14:30	1	7	14:30	15	6	14:30	16	13
14:45	2	1	14:45	23	7	14:45	25	8
15:00	4	13	15:00	7	6	15:00	11	19
15:15	3	13	15:15	10	2	15:15	13	15
15:30	9	25	15:30	10	6	15:30	19	31
15:45	2	12	15:45	9	4	15:45	11	16
16:00	8	12	16:00	11	3	16:00	19	15
16:15	4	12	16:15	10	6	16:15	14	18
16:30	3	5	16:30	9	6	16:30	12	11
16:45	5	11	16:45	9	4	16:45	14	15
17:00	7	13	17:00	10	5	17:00	17	18
17:15	1	1	17:15	7	5	17:15	8	6
17:30	4	9	17:30	4	3	17:30	8	12
17:45	0	8	17:45	7	3	17:45	7	11
18:00	2	11	18:00	4	0	18:00	6	11
18:15	0	4	18:15	7	3	18:15	7	7
18:30	3	3	18:30	5	4	18:30	8	7
18:45	1	2	18:45	3	0	18:45	4	2
19:00	2	6	19:00	0	0	19:00	2	6
19:15	0	3	19:15	0	0	19:15	0	3
19:30	0	0	19:30	0	0	19:30	0	0
19:45	0	0	19:45	0	0	19:45	0	0
20:00	0	0	20:00	0	0	20:00	0	0
20:15	0	4	20:15	0	0	20:15	0	4
20:30	0	0	20:30	0	0	20:30	0	0
20:45	0	0	20:45	0	0	20:45	0	0
21:00	0	0	21:00	0	0	21:00	0	0
21:15	0	0	21:15	0	0	21:15	0	0
21:30	0	0	21:30	0	0	21:30	0	0
21:45	0	0	21:45	0	0	21:45	0	0
22:00	0	0	22:00	0	0	22:00	0	0
22:15	0	0	22:15	0	0	22:15	0	0
22:30	0	0	22:30	0	0	22:30	0	0
22:45	0	0	22:45	0	0	22:45	0	0
23:00	0	0	23:00	0	0	23:00	0	0
23:15	0	0	23:15	0	0	23:15	0	0
23:30	0	0	23:30	0	0	23:30	0	0
23:45	0	0	23:45	0	0	23:45	0	0
	184	450		435	169		619	619

## PASS-BY SURVEY SHEETS

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Lightning Express Car Wash  
Pass-By Survey Summary

Trip Type	Number of Surveys		Percentage of Surveys	
	AM	PM	AM	PM
Primary	43	35	43%	35%
Pass-By	37	35	37%	35%
Diverted	20	30	20%	30%
Total	100	100		

**Figure 5.17 Sample Questionnaire  
for Pass-By Trip Interview**

Name of Development Lightning Express  
 Location of Surveyor 1711 Hawthorn Blvd  
 Date of Survey 6-1-18

210

**Sample Survey Instrument**

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
7:26	D	No	Yes	
7:28	D	No	Yes	
7:33	A	Yes		
7:34	D	No	Yes	
7:34	A	Yes		
7:41	A	No	No	5 miles
7:42	A	Yes		
7:43	D	No	No	4 miles
7:43	A	No	No	1 mile
7:44	B	Yes		
7:45	A	No	Yes	
7:52	B	Yes		
7:53	A	Yes		
7:54	A	Yes		
7:58	A	No	Yes	
8:00	A	No	Yes	
8:02	A	No	Yes	



### Figure 5.17 Sample Questionnaire for Pass-By Trip Interview

Name of Development LIGHTNING EXPRESS  
 Location of Surveyor 17111 HAWTHORN BLVD.  
 Date of Survey 6-1-18

#### Sample Survey Instrument

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
8:03	A	No	Yes	
8:03	A	No	No	5 miles
8:08	A	No	Yes	
8:09	A	Yes		
8:09	A	No	No	6 miles
8:10	B	Yes		
8:11	A	Yes		
8:14	A	No	Yes	
8:14	A	Yes		
8:14	A	Yes		
8:17	B	Yes		
8:18	D	No	Yes	
8:22	A	No	No	1 mile
8:22	A	No	Yes	
	A	No	Yes	
23	A	No	Yes	
24	A	Yes		

3

**Figure 5.17 Sample Questionnaire for Pass-By Trip Interview**

Name of Development LIGHTNING EXPRESS  
 Location of Surveyor 17111 Hawthorn Blvd.  
 Date of Survey 6-1-18

**Sample Survey Instrument**

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
8:24	A	Yes		
8:24	A	Yes		
8:25	A	Yes		
8:25	D	No	No	1 mile
8:25	B	Yes		
8:26	B	Yes		
8:27	A	No	No	2 miles
8:27	A	No	Yes	
8:27	A	Yes		
8:28	A	No	Yes	
8:29	D	No	No	1 mile
8:30	A	No	Yes	
8:30	A	No	Yes	
8:31	D	No	Yes	
8:33	A	No	No	1 mile
8:35	A	No	Yes	
8:35	A	Yes		



**Figure 5.17 Sample Questionnaire for Pass-By Trip Interview**

Name of Development Lightning Express  
 Location of Surveyor 17111 Hawthorn Blvd.  
 Date of Survey 6-1-18

**Sample Survey Instrument**

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
8:36	A	Yes		
8:37	A	NO	NO	1 mile
8:38	A	Yes		
8:38	B	Yes		
8:38	B	Yes		
8:39	A	Yes		
8:40	A	Yes		
8:40	A	Yes		
8:42	B	NO	Yes	
8:43	A	NO	Yes	
8:43	A	NO	NO	1 mile
8:44	D	NO	Yes	
8:44	B	Yes		
8:45	B	Yes		
8:45	A	Yes		
8:45	A	NO	Yes	
8:48	A	Yes		

Figure 5.17 Sample Questionnaire for Pass-By Trip Interview

Name of Development Lightning Express  
Location of Surveyor 17111 Hawthorn Blvd.  
Date of Survey 6-1-18

Sample Survey Instrument

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home, B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
8:49	A	No	Yes	
8:49	A	No	Yes	
8:51	A	NO	NO	1 mile
8:52	A	Yes		
8:53	A	NO	NO	1 mile
8:54	A	Yes		
8:58	A	Yes		
9:00	D	NO	Yes	
9:02	A	NO	NO	2 miles
9:02	A	Yes		
9:03	A	NO	NO	1 mile
9:04	A	Yes		
9:04	D	NO	NO	1 mile
9:05	D	NO	Yes	
9:06	A	Yes		
9:06	B	Yes		
9:07	C	NO	Yes	



Figure 5.17 Sample Questionnaire for Pass-By Trip Interview

Name of Development LIGHTNING EXPRESS  
Location of Surveyor 17111 Hawthorn Blvd.  
Date of Survey 6-1-18

Sample Survey Instrument

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
9:09	A	NO	yes	
9:10	A	NO	yes	
9:10	B	yes		
9:13	A	NO	yes	
9:16	A	NO	yes	
9:16	A	NO	yes	
9:18	B	yes		
9:18	A	NO	NO	3 miles
9:19	A	NO	yes	
9:20	A	NO	NO	5 miles
9:22	A	yes		
9:23	A	NO	NO	7 miles
9:24	B	NO	yes	
9:26	B	NO	yes	
9:24	A	yes		

**Figure 5.17 Sample Questionnaire  
for Pass-By Trip Interview**

Name of Development LIGHTNING Express  
 Location of Surveyor 17111 HAWTHORN BLVD.  
 Date of Survey 6-1-18

**3-6 Sample Survey Instrument**

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
2:57	D	No	No	1 mile
2:57	A	yes		
2:58	A	yes		
2:59	B	NO	No	3 miles
3:00	B	No	yes	
3:02	B	NO	yes	
3:02	A	NO	No	2 miles
3:03	A	NO	yes	
3:04	B	yes		
3:04	B	yes		
3:06	A	yes		
3:06	A	yes		
3:07	A	yes		
3:07	A	NO	No	1 mile
3:07	A	NO	No	2 miles
3:09	A	yes		
3:09	A	NO	yes	



Figure 5.17 Sample Questionnaire for Pass-By Trip Interview

Name of Development LIGHTNING EXPRESS  
Location of Surveyor 17111 Hawthorn Blvd.  
Date of Survey 6-1-18

Sample Survey Instrument

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
15:10	B	NO	NO	2 miles
15:10	B	NO	NO	2 miles
15:13	B	NO	yes	
15:13	D	NO	yes	
15:14	A	NO	yes	
15:14	C	yes		
15:15	B	NO	yes	
15:16	B	NO	yes	
15:16	B	NO	yes	
15:16	A	yes		
15:17	B	NO	yes	
15:20	B	yes		
15:21	B	NO	NO	2 miles
15:21	B	NO	NO	5 miles
15:22	A	yes		
15:23	D	NO	yes	
15:23	B	NO	yes	

**Figure 5.17 Sample Questionnaire  
for Pass-By Trip Interview**

Name of Development LIGHTNING EXPRESS  
 Location of Surveyor 17111 HAWTHORN BLVD.  
 Date of Survey 6-1-18

**Sample Survey Instrument**

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
15:24	A	yes		
15:26	A	NO	NO	1 mile
15:27	A	NO	yes	
15:29	A	NO	NO	1 mile
15:29	A	NO	yes	
15:30	D	NO	NO	1 mile
15:30	B	NO	NO	2 miles
15:31	A	yes		
15:31	B	NO	yes	
15:32	B	NO	NO	2 miles
15:34	D	NO	yes	
15:34	A	yes		
15:35	A	yes		
15:35	A	yes		
15:36	A	yes		
15:38	A	NO	yes	
15:38	C	NO	yes	



Figure 5.17 Sample Questionnaire for Pass-By Trip Interview

Name of Development LIGHTING EXPRESS  
Location of Surveyor 17111 Hawthorn Blvd.  
Date of Survey 6-1-18

Sample Survey Instrument

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
15:39	D	NO	NO	1 mile
15:41	A	yes		
15:44	A	NO	yes	
15:45	A	NO	yes	
15:47	B	NO	NO	2 miles
15:47	B	NO	NO	3 miles
15:48	B	yes		
15:49	A	yes		
15:49	B	NO	NO	2 miles
15:50	A	yes		
15:51	A	NO	yes	
15:52	B	NO	yes	
15:52	B	yes		
15:53	B	<del>NO</del> yes	NO	8 miles
15:53	A	yes		
15:54	D	NO	yes	
15:55	B	NO	NO	2 miles

Figure 5.17 Sample Questionnaire for Pass-By Trip Interview

Name of Development LIGHTNING EXPRESS  
Location of Surveyor 17111 HAWTHORN Blvd.  
Date of Survey 6-1-16

Sample Survey Instrument

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
1556	A	yes		
1556	B	NO	yes	
1556	B	NO	yes	
1557	D	NO	NO	1 mile
1559	D	NO	NO	1 mile
1600	C	NO	yes	
16:01	D	yes		
16:01	A	yes		
16:01	A	NO	yes	
16:02	D	NO	NO	1 mile
16:03	A	yes		
16:03	A	NO	yes	
16:04	A	yes		
16:05	A	yes		
16:05	A	yes		
16:06	A	NO	yes	
16:06	A	yes		



**Figure 5.17 Sample Questionnaire for Pass-By Trip Interview**

Name of Development LIGHTNING EXPRESS  
 Location of Surveyor 17111 HAWTHORN BLVD.  
 Date of Survey 6-1-18

**Sample Survey Instrument**

TIME OF DAY	Q1. Where did your trip begin immediately prior to arriving at this site?	Q2. Will you go directly back to your origin from here?	Q3. Would you have driven by this site if you had not stopped here now?	Q4. If No to Q.3, how many miles out of your way did you travel to get here?
	A. Home B. Work C. Other Retail D. Other	Y. Yes [end of survey] N. No	Y. Yes [end of survey] N. No	
16:07	A	yes		
16:09	C	NO	yes	
16:10	A	NO	NO	1 mile
16:11	D	NO	NO	1 mile
16:12	A	NO	yes	
16:13	D	NO	NO	1 mile
16:13	B	NO	yes	
16:14	A	NO	yes	
16:14	A	NO	NO	1 mile
16:15	D	NO	NO	2 miles
16:16	C	NO	NO	2 miles
16:18	A	yes		
16:19	A	NO	yes	
16:20	A	yes		
16:20	D	NO	NO	1 mile

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**APPENDIX C**

**EXISTING (2019) CONDITIONS  
ANALYSIS CALCULATION WORKSHEETS**



Lanes, Volumes, Timings  
1: Corydon St. & Palomar St.

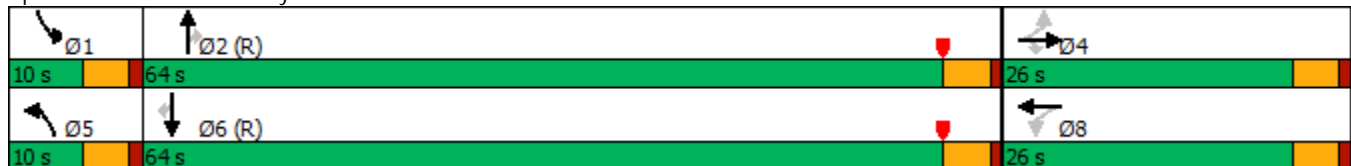
Existing AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	68	21	76	27	40	17	563	78	15	447	32
Future Volume (vph)	124	68	21	76	27	40	17	563	78	15	447	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		100	150		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		657			541			638			554	
Travel Time (s)		12.8			10.5			9.7			8.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0		10.0	64.0	64.0	10.0	64.0	64.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	26.0%		10.0%	64.0%	64.0%	10.0%	64.0%	64.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary
























Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Corydon St. & Palomar St.



HCM 6th Signalized Intersection Summary  
1: Corydon St. & Palomar St.

Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	68	21	76	27	40	17	563	78	15	447	32
Future Volume (veh/h)	124	68	21	76	27	40	17	563	78	15	447	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	155	85	26	95	34	50	21	704	98	19	559	40
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	339	288	255	124	182	39	1240	1051	37	1237	1048
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.02	0.66	0.66	0.02	0.66	0.66
Sat Flow, veh/h	1314	1870	1585	1282	684	1006	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	155	85	26	95	0	84	21	704	98	19	559	40
Grp Sat Flow(s),veh/h/ln	1314	1870	1585	1282	0	1689	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	11.5	3.9	1.4	6.9	0.0	4.3	1.2	20.3	2.2	1.1	14.4	0.9
Cycle Q Clear(g_c), s	15.8	3.9	1.4	10.8	0.0	4.3	1.2	20.3	2.2	1.1	14.4	0.9
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	339	288	255	0	306	39	1240	1051	37	1237	1048
V/C Ratio(X)	0.61	0.25	0.09	0.37	0.00	0.27	0.53	0.57	0.09	0.52	0.45	0.04
Avail Cap(c_a), veh/h	298	402	341	298	0	363	98	1240	1051	98	1237	1048
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	35.1	34.1	39.7	0.0	35.3	48.4	9.1	6.1	48.5	8.2	5.9
Incr Delay (d2), s/veh	2.7	0.4	0.1	0.9	0.0	0.5	10.7	1.9	0.2	11.0	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	1.8	0.5	2.2	0.0	1.8	0.6	7.2	0.7	0.6	5.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	35.5	34.2	40.6	0.0	35.7	59.1	11.0	6.2	59.5	9.4	5.9
LnGrp LOS	D	D	C	D	A	D	E	B	A	E	A	A
Approach Vol, veh/h		266			179			823			618	
Approach Delay, s/veh		40.8			38.3			11.7			10.7	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	70.8		22.6	6.7	70.6		22.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	59.5		21.5	5.5	59.5		21.5				
Max Q Clear Time (g_c+I1), s	3.1	22.3		17.8	3.2	16.4		12.8				
Green Ext Time (p_c), s	0.0	5.3		0.3	0.0	3.8		0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.0								
HCM 6th LOS				B								



Lanes, Volumes, Timings  
2: Mission Tr. & Lemon St.

Existing AM Peak Hour

	↙	↖	↑	↗	↘	↓
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↑↑	↗	↘	↑↑
Traffic Volume (vph)	67	45	781	94	35	748
Future Volume (vph)	67	45	781	94	35	748
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	100	
Storage Lanes	1	0		1	1	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	833		442			567
Travel Time (s)	18.9		6.0			7.7
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)						
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	8		2			6
Permitted Phases				2	6	
Detector Phase	8		2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	22.5		22.5	22.5	22.5	22.5
Total Split (s)	37.0		83.0	83.0	83.0	83.0
Total Split (%)	30.8%		69.2%	69.2%	69.2%	69.2%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		C-Max	C-Max	C-Max	C-Max

Intersection Summary












Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Mission Tr. & Lemon St.



HCM 6th Signalized Intersection Summary  
2: Mission Tr. & Lemon St.

Existing AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	67	45	781	94	35	748
Future Volume (veh/h)	67	45	781	94	35	748
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	51	888	107	40	850
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	93	63	2964	1322	501	2964
Arrive On Green	0.09	0.09	0.83	0.83	0.83	0.83
Sat Flow, veh/h	1024	687	3647	1585	566	3647
Grp Volume(v), veh/h	128	0	888	107	40	850
Grp Sat Flow(s),veh/h/ln	1725	0	1777	1585	566	1777
Q Serve(g_s), s	8.7	0.0	6.6	1.4	2.0	6.3
Cycle Q Clear(g_c), s	8.7	0.0	6.6	1.4	8.7	6.3
Prop In Lane	0.59	0.40		1.00	1.00	
Lane Grp Cap(c), veh/h	157	0	2964	1322	501	2964
V/C Ratio(X)	0.82	0.00	0.30	0.08	0.08	0.29
Avail Cap(c_a), veh/h	467	0	2964	1322	501	2964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.88	0.88	1.00	1.00
Uniform Delay (d), s/veh	53.6	0.0	2.2	1.8	3.2	2.2
Incr Delay (d2), s/veh	9.8	0.0	0.2	0.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	1.1	0.2	0.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	63.4	0.0	2.4	1.9	3.5	2.4
LnGrp LOS	E	A	A	A	A	A
Approach Vol, veh/h	128		995			890
Approach Delay, s/veh	63.4		2.4			2.5
Approach LOS	E		A			A
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		104.6			104.6	15.4
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		78.5			78.5	32.5
Max Q Clear Time (g_c+I1), s		8.6			10.7	10.7
Green Ext Time (p_c), s		7.0			6.8	0.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			6.3			
HCM 6th LOS			A			
<b>Notes</b>						
User approved volume balancing among the lanes for turning movement.						

Lanes, Volumes, Timings  
3: Mission Tr. & Corydon Rd.

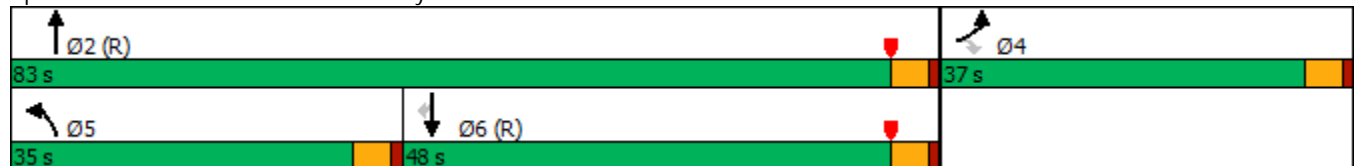
Existing AM Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	454	250	188	421	444	371
Future Volume (vph)	454	250	188	421	444	371
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270	270	125			115
Storage Lanes	1	1	1			1
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			50	50	
Link Distance (ft)	806			2217	442	
Travel Time (s)	18.3			30.2	6.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	37.0	37.0	35.0	83.0	48.0	48.0
Total Split (%)	30.8%	30.8%	29.2%	69.2%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

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

Splits and Phases: 3: Mission Tr. & Corydon Rd.



HCM 6th Signalized Intersection Summary  
3: Mission Tr. & Corydon Rd.

Existing AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	454	250	188	421	444	371
Future Volume (veh/h)	454	250	188	421	444	371
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	504	278	209	468	493	412
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	619	499	241	2651	2037	909
Arrive On Green	0.18	0.18	0.14	0.75	0.57	0.57
Sat Flow, veh/h	3456	2790	1781	3647	3647	1585
Grp Volume(v), veh/h	504	278	209	468	493	412
Grp Sat Flow(s),veh/h/ln	1728	1395	1781	1777	1777	1585
Q Serve(g_s), s	16.8	10.9	13.8	4.6	8.2	18.0
Cycle Q Clear(g_c), s	16.8	10.9	13.8	4.6	8.2	18.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	619	499	241	2651	2037	909
V/C Ratio(X)	0.81	0.56	0.87	0.18	0.24	0.45
Avail Cap(c_a), veh/h	936	756	453	2651	2037	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.97	0.97	0.95	0.95
Uniform Delay (d), s/veh	47.3	44.9	50.8	4.5	12.7	14.8
Incr Delay (d2), s/veh	3.4	1.0	8.9	0.1	0.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	8.5	6.5	1.3	3.1	6.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.7	45.9	59.7	4.6	13.0	16.3
LnGrp LOS	D	D	E	A	B	B
Approach Vol, veh/h	782			677	905	
Approach Delay, s/veh	49.0			21.6	14.5	
Approach LOS	D			C	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		94.0		26.0	20.7	73.3
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		78.5		32.5	30.5	43.5
Max Q Clear Time (g_c+I1), s		6.6		18.8	15.8	20.0
Green Ext Time (p_c), s		3.0		2.7	0.5	4.4
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			28.0			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
4: Mission Tr. & Bundy Cyn.. Rd.

Existing AM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	259	310	65	285	349
Future Volume (vph)	53	259	310	65	285	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	295	
Storage Lanes	1	1		0	2	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	1549		1368			2217
Travel Time (s)	35.2		18.7			30.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	3	1	2		1	6
Permitted Phases		3				
Detector Phase	3	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		9.5	22.5
Total Split (s)	46.0	33.0	41.0		33.0	74.0
Total Split (%)	38.3%	27.5%	34.2%		27.5%	61.7%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary












Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Mission Tr. & Bundy Cyn.. Rd.



HCM 6th Signalized Intersection Summary  
 4: Mission Tr. & Bundy Cyn.. Rd.

Existing AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	53	259	310	65	285	349
Future Volume (veh/h)	53	259	310	65	285	349
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	288	344	72	317	388
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	105	925	892	184	1812	3078
Arrive On Green	0.06	0.06	0.30	0.30	0.52	0.87
Sat Flow, veh/h	1781	1585	3025	606	3456	3647
Grp Volume(v), veh/h	59	288	207	209	317	388
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1761	1728	1777
Q Serve(g_s), s	3.9	0.0	11.0	11.2	5.8	2.0
Cycle Q Clear(g_c), s	3.9	0.0	11.0	11.2	5.8	2.0
Prop In Lane	1.00	1.00		0.34	1.00	
Lane Grp Cap(c), veh/h	105	925	540	536	1812	3078
V/C Ratio(X)	0.56	0.31	0.38	0.39	0.17	0.13
Avail Cap(c_a), veh/h	616	1379	540	536	1812	3078
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.98	0.98	0.96	0.96
Uniform Delay (d), s/veh	55.0	12.7	32.9	33.0	14.9	1.2
Incr Delay (d2), s/veh	4.6	0.2	2.0	2.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.9	4.8	4.9	2.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	59.6	12.9	34.9	35.1	15.0	1.3
LnGrp LOS	E	B	C	D	B	A
Approach Vol, veh/h	347		416			705
Approach Delay, s/veh	20.9		35.0			7.4
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	67.4	41.0			108.4	11.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	28.5	36.5			69.5	41.5
Max Q Clear Time (g_c+I1), s	7.8	13.2			4.0	5.9
Green Ext Time (p_c), s	1.0	2.1			2.4	1.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			18.4			
HCM 6th LOS			B			

Lanes, Volumes, Timings  
5: Mission Tr. & Canyon Dr.

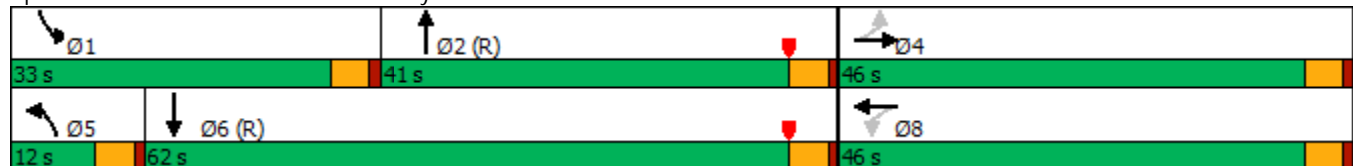
Existing AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	0	115	0	92	1	278	110	137	252	1
Future Volume (vph)	2	0	0	115	0	92	1	278	110	137	252	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	155		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		272			1270			2015			1368	
Travel Time (s)		6.2			28.9			27.5			18.7	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	46.0	46.0		46.0	46.0		12.0	41.0		33.0	62.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%		10.0%	34.2%		27.5%	51.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary



















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

Splits and Phases: 5: Mission Tr. & Canyon Dr.



HCM 6th Signalized Intersection Summary  
5: Mission Tr. & Canyon Dr.

Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	0	115	0	92	1	278	110	137	252	1
Future Volume (veh/h)	2	0	0	115	0	92	1	278	110	137	252	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	0	0	139	0	111	1	335	133	165	304	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	0	0	202	3	127	2	1469	573	193	2525	8
Arrive On Green	0.19	0.00	0.00	0.19	0.00	0.19	0.00	0.76	0.76	0.22	1.00	1.00
Sat Flow, veh/h	1087	0	0	812	17	662	1781	2498	974	1781	3633	12
Grp Volume(v), veh/h	2	0	0	250	0	0	1	237	231	165	149	156
Grp Sat Flow(s),veh/h/ln	1087	0	0	1492	0	0	1781	1777	1695	1781	1777	1868
Q Serve(g_s), s	0.0	0.0	0.0	19.1	0.0	0.0	0.1	4.5	4.7	10.7	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	19.5	0.0	0.0	0.1	4.5	4.7	10.7	0.0	0.0
Prop In Lane	1.00		0.00	0.56		0.44	1.00		0.57	1.00		0.01
Lane Grp Cap(c), veh/h	268	0	0	332	0	0	2	1045	997	193	1235	1298
V/C Ratio(X)	0.01	0.00	0.00	0.75	0.00	0.00	0.41	0.23	0.23	0.86	0.12	0.12
Avail Cap(c_a), veh/h	466	0	0	562	0	0	111	1045	997	423	1235	1298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.30	1.30	1.30	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	39.3	0.0	0.0	47.1	0.0	0.0	59.8	6.4	6.4	46.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.5	0.0	0.0	84.5	0.5	0.5	10.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	7.5	0.0	0.0	0.1	1.6	1.6	4.6	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	0.0	50.6	0.0	0.0	144.4	6.9	6.9	56.4	0.2	0.2
LnGrp LOS	D	A	A	D	A	A	F	A	A	E	A	A
Approach Vol, veh/h		2			250			469			470	
Approach Delay, s/veh		39.3			50.6			7.2			19.9	
Approach LOS		D			D			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.5	75.1		27.4	4.7	87.9		27.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.5	36.5		41.5	7.5	57.5		41.5				
Max Q Clear Time (g_c+I1), s	12.7	6.7		2.2	2.1	2.0		21.5				
Green Ext Time (p_c), s	0.3	2.6		0.0	0.0	1.6		1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.4								
HCM 6th LOS				C								



Lanes, Volumes, Timings  
6: Mission Trail & Hidden Tr.-Elberta Rd.

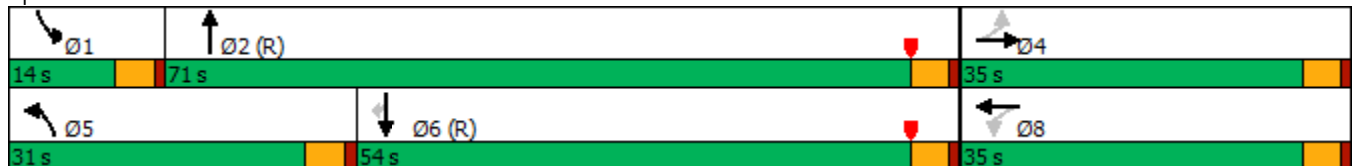
Existing AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	2	118	12	2	11	99	637	3	9	476	10
Future Volume (vph)	48	2	118	12	2	11	99	637	3	9	476	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	90			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		565			432			733			527	
Travel Time (s)		12.8			9.8			10.0			7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	35.0	35.0		35.0	35.0		31.0	71.0		14.0	54.0	54.0
Total Split (%)	29.2%	29.2%		29.2%	29.2%		25.8%	59.2%		11.7%	45.0%	45.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary























Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Mission Trail & Hidden Tr.-Elberta Rd.



HCM 6th Signalized Intersection Summary  
6: Mission Trail & Hidden Tr.-Elberta Rd.

Existing AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	2	118	12	2	11	99	637	3	9	476	10
Future Volume (veh/h)	48	2	118	12	2	11	99	637	3	9	476	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	2	123	12	2	11	103	664	3	9	496	10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	3	161	93	26	141	129	2807	13	19	2530	1129
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.08	0.85	0.85	0.01	0.78	0.78
Sat Flow, veh/h	1401	25	1564	1266	250	1373	1781	3628	16	1781	3554	1585
Grp Volume(v), veh/h	50	0	125	12	0	13	103	325	342	9	496	10
Grp Sat Flow(s),veh/h/ln	1401	0	1589	1266	0	1623	1781	1777	1867	1781	1777	1585
Q Serve(g_s), s	4.0	0.0	9.2	1.1	0.0	0.9	6.8	4.1	4.1	0.6	4.3	0.2
Cycle Q Clear(g_c), s	4.9	0.0	9.2	10.3	0.0	0.9	6.8	4.1	4.1	0.6	4.3	0.2
Prop In Lane	1.00		0.98	1.00		0.85	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	194	0	163	93	0	167	129	1375	1445	19	2530	1129
V/C Ratio(X)	0.26	0.00	0.77	0.13	0.00	0.08	0.80	0.24	0.24	0.47	0.20	0.01
Avail Cap(c_a), veh/h	406	0	404	285	0	413	393	1375	1445	141	2530	1129
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.10	1.10	1.10	1.10	1.10
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.9	0.0	52.4	57.4	0.0	48.7	54.3	2.3	2.3	58.9	4.2	3.8
Incr Delay (d2), s/veh	0.7	0.0	7.3	0.6	0.0	0.2	10.5	0.4	0.4	16.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	4.0	0.4	0.0	0.4	3.3	1.1	1.1	0.4	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	0.0	59.7	58.1	0.0	48.9	64.8	2.7	2.7	75.6	4.4	3.8
LnGrp LOS	D	A	E	E	A	D	E	A	A	E	A	A
Approach Vol, veh/h		175			25			770			515	
Approach Delay, s/veh		57.4			53.3			11.0			5.6	
Approach LOS		E			D			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	97.4		16.8	13.2	89.9		16.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	66.5		30.5	26.5	49.5		30.5				
Max Q Clear Time (g_c+I1), s	2.6	6.1		11.2	8.8	6.3		12.3				
Green Ext Time (p_c), s	0.0	3.9		0.8	0.2	3.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									



Lanes, Volumes, Timings  
1: Corydon St. & Palomar St.

Existing PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	33	12	70	61	27	5	519	28	31	452	132
Future Volume (vph)	90	33	12	70	61	27	5	519	28	31	452	132
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		100	150		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		657			541			638			554	
Travel Time (s)		12.8			10.5			9.7			8.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0		11.0	61.0	61.0	13.0	63.0	63.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	26.0%		11.0%	61.0%	61.0%	13.0%	63.0%	63.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary
























Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Corydon St. & Palomar St.



HCM 6th Signalized Intersection Summary  
1: Corydon St. & Palomar St.

Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	33	12	70	61	27	5	519	28	31	452	132
Future Volume (veh/h)	90	33	12	70	61	27	5	519	28	31	452	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	35	13	74	64	28	5	546	29	33	476	139
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	263	223	241	173	76	12	1299	1101	53	1343	1138
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.01	0.69	0.69	0.03	0.72	0.72
Sat Flow, veh/h	1304	1870	1585	1357	1234	540	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	95	35	13	74	0	92	5	546	29	33	476	139
Grp Sat Flow(s),veh/h/ln	1304	1870	1585	1357	0	1773	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	7.1	1.6	0.7	5.0	0.0	4.7	0.3	12.6	0.6	1.8	9.6	2.7
Cycle Q Clear(g_c), s	11.8	1.6	0.7	6.7	0.0	4.7	0.3	12.6	0.6	1.8	9.6	2.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	263	223	241	0	249	12	1299	1101	53	1343	1138
V/C Ratio(X)	0.49	0.13	0.06	0.31	0.00	0.37	0.43	0.42	0.03	0.62	0.35	0.12
Avail Cap(c_a), veh/h	291	402	341	342	0	381	116	1299	1101	151	1343	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	37.6	37.2	40.6	0.0	38.9	49.5	6.6	4.8	47.9	5.3	4.4
Incr Delay (d2), s/veh	1.9	0.2	0.1	0.7	0.0	0.9	23.5	1.0	0.0	11.0	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.8	0.3	1.7	0.0	2.1	0.2	4.2	0.2	0.9	3.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	37.9	37.3	41.3	0.0	39.9	73.0	7.6	4.8	59.0	6.1	4.6
LnGrp LOS	D	D	D	D	A	D	E	A	A	E	A	A
Approach Vol, veh/h		143			166			580			648	
Approach Delay, s/veh		43.4			40.5			8.0			8.4	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	73.9		18.6	5.1	76.3		18.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	56.5		21.5	6.5	58.5		21.5				
Max Q Clear Time (g_c+I1), s	3.8	14.6		13.8	2.3	11.6		8.7				
Green Ext Time (p_c), s	0.0	3.6		0.2	0.0	3.4		0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				15.0								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
2: Mission Tr. & Lemon St.

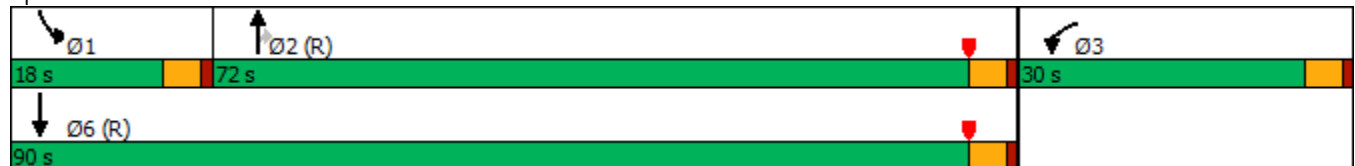
Existing PM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	61	51	841	142	40	650
Future Volume (vph)	61	51	841	142	40	650
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		50	100	
Storage Lanes	1	0		1	1	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	833		442			567
Travel Time (s)	18.9		6.0			7.7
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)						
Turn Type	Prot		NA	Perm	Prot	NA
Protected Phases	3		2		1	6
Permitted Phases				2		
Detector Phase	3		2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	9.5		22.5	22.5	9.5	22.5
Total Split (s)	30.0		72.0	72.0	18.0	90.0
Total Split (%)	25.0%		60.0%	60.0%	15.0%	75.0%
Yellow Time (s)	3.5		3.5	3.5	3.5	3.5
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5		4.5	4.5	4.5	4.5
Lead/Lag			Lag	Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	Yes	
Recall Mode	None		C-Max	C-Max	None	C-Max

Intersection Summary












Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Mission Tr. & Lemon St.



HCM 6th Signalized Intersection Summary  
2: Mission Tr. & Lemon St.

Existing PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	61	51	841	142	40	650
Future Volume (veh/h)	61	51	841	142	40	650
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1870	1870	1870	1870
Adj Flow Rate, veh/h	63	53	867	146	41	670
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	2	2	2	2
Cap, veh/h	78	65	2745	1224	55	2988
Arrive On Green	0.08	0.08	0.77	0.77	0.03	0.84
Sat Flow, veh/h	923	776	3647	1585	1781	3647
Grp Volume(v), veh/h	117	0	867	146	41	670
Grp Sat Flow(s),veh/h/ln	1714	0	1777	1585	1781	1777
Q Serve(g_s), s	8.1	0.0	8.8	2.8	2.7	4.4
Cycle Q Clear(g_c), s	8.1	0.0	8.8	2.8	2.7	4.4
Prop In Lane	0.54	0.45		1.00	1.00	
Lane Grp Cap(c), veh/h	144	0	2745	1224	55	2988
V/C Ratio(X)	0.81	0.00	0.32	0.12	0.74	0.22
Avail Cap(c_a), veh/h	364	0	2745	1224	200	2988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.87	0.87	1.00	1.00
Uniform Delay (d), s/veh	54.0	0.0	4.1	3.4	57.7	1.9
Incr Delay (d2), s/veh	10.3	0.0	0.3	0.2	17.5	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	2.3	0.8	1.5	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.4	0.0	4.4	3.6	75.2	2.0
LnGrp LOS	E	A	A	A	E	A
Approach Vol, veh/h	117		1013			711
Approach Delay, s/veh	64.4		4.3			6.3
Approach LOS	E		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.2	97.2			105.4	14.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	13.5	67.5			85.5	25.5
Max Q Clear Time (g_c+I1), s	4.7	10.8			6.4	10.1
Green Ext Time (p_c), s	0.0	7.0			4.6	0.3

Intersection Summary

HCM 6th Ctrl Delay			8.9			
HCM 6th LOS			A			

Notes

User approved volume balancing among the lanes for turning movement.

Lanes, Volumes, Timings  
3: Mission Tr. & Corydon Rd.

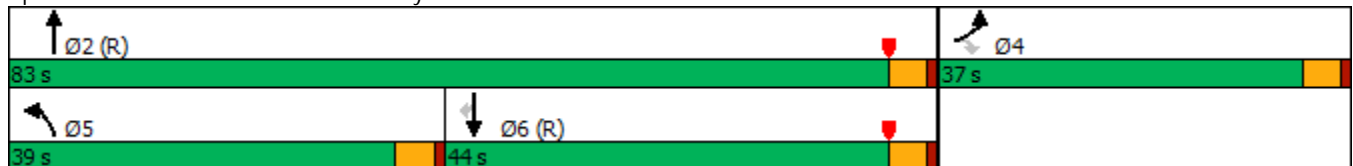
Existing PM Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	520	243	255	463	331	380
Future Volume (vph)	520	243	255	463	331	380
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	270	270	125			115
Storage Lanes	1	1	1			1
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			50	50	
Link Distance (ft)	808			2217	442	
Travel Time (s)	18.4			30.2	6.0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	37.0	37.0	39.0	83.0	44.0	44.0
Total Split (%)	30.8%	30.8%	32.5%	69.2%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

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

Splits and Phases: 3: Mission Tr. & Corydon Rd.





HCM 6th Signalized Intersection Summary  
3: Mission Tr. & Corydon Rd.

Existing PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	520	243	255	463	331	380
Future Volume (veh/h)	520	243	255	463	331	380
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	531	248	260	472	338	388
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	643	519	293	2626	1909	851
Arrive On Green	0.19	0.19	0.16	0.74	0.54	0.54
Sat Flow, veh/h	3456	2790	1781	3647	3647	1585
Grp Volume(v), veh/h	531	248	260	472	338	388
Grp Sat Flow(s),veh/h/ln	1728	1395	1781	1777	1777	1585
Q Serve(g_s), s	17.7	9.5	17.1	4.8	5.8	18.0
Cycle Q Clear(g_c), s	17.7	9.5	17.1	4.8	5.8	18.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	643	519	293	2626	1909	851
V/C Ratio(X)	0.83	0.48	0.89	0.18	0.18	0.46
Avail Cap(c_a), veh/h	936	756	512	2626	1909	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	0.97	0.97
Uniform Delay (d), s/veh	47.0	43.6	49.0	4.7	14.2	17.0
Incr Delay (d2), s/veh	4.1	0.7	8.8	0.1	0.2	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	7.5	8.0	1.4	2.2	6.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.1	44.3	57.9	4.9	14.4	18.7
LnGrp LOS	D	D	E	A	B	B
Approach Vol, veh/h	779			732	726	
Approach Delay, s/veh	48.9			23.7	16.7	
Approach LOS	D			C	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.2		26.8	24.2	68.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		78.5		32.5	34.5	39.5
Max Q Clear Time (g_c+I1), s		6.8		19.7	19.1	20.0
Green Ext Time (p_c), s		3.0		2.6	0.6	3.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			30.2			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
4: Mission Tr. & Bundy Cyn.. Rd.

Existing PM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	142	378	299	54	271	253
Future Volume (vph)	142	378	299	54	271	253
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	295	
Storage Lanes	1	1		0	2	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	1549		1368			2217
Travel Time (s)	35.2		18.7			30.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	3	1	2		1	6
Permitted Phases		3				
Detector Phase	3	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		9.5	22.5
Total Split (s)	35.0	46.0	39.0		46.0	85.0
Total Split (%)	29.2%	38.3%	32.5%		38.3%	70.8%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 33.3 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Mission Tr. & Bundy Cyn.. Rd.



HCM 6th Signalized Intersection Summary  
4: Mission Tr. & Bundy Cyn.. Rd.

Existing PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 		 	 
Traffic Volume (veh/h)	142	378	299	54	271	253
Future Volume (veh/h)	142	378	299	54	271	253
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	156	415	329	59	298	278
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	209	951	867	154	1668	2871
Arrive On Green	0.12	0.12	0.29	0.29	0.48	0.81
Sat Flow, veh/h	1781	1585	3110	535	3456	3647
Grp Volume(v), veh/h	156	415	192	196	298	278
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1774	1728	1777
Q Serve(g_s), s	10.2	0.0	10.4	10.6	5.9	2.0
Cycle Q Clear(g_c), s	10.2	0.0	10.4	10.6	5.9	2.0
Prop In Lane	1.00	1.00		0.30	1.00	
Lane Grp Cap(c), veh/h	209	951	511	510	1668	2871
V/C Ratio(X)	0.75	0.44	0.38	0.38	0.18	0.10
Avail Cap(c_a), veh/h	453	1168	511	510	1668	2871
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.98	0.98
Uniform Delay (d), s/veh	51.2	13.0	34.2	34.2	17.6	2.4
Incr Delay (d2), s/veh	5.3	0.3	2.1	2.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	6.0	4.6	4.7	2.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.5	13.3	36.3	36.4	17.6	2.5
LnGrp LOS	E	B	D	D	B	A
Approach Vol, veh/h	571		388			576
Approach Delay, s/veh	25.1		36.3			10.3
Approach LOS	C		D			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	62.4	39.0			101.4	18.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	41.5	34.5			80.5	30.5
Max Q Clear Time (g_c+I1), s	7.9	12.6			4.0	12.2
Green Ext Time (p_c), s	1.0	1.9			1.7	1.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			22.4			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
5: Mission Tr. & Canyon Dr.

Existing PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1	7	22	0	51	4	298	21	35	351	3
Future Volume (vph)	6	1	7	22	0	51	4	298	21	35	351	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	155		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		272			1270			2015			1368	
Travel Time (s)		6.2			28.9			27.5			18.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	39.0	39.0		39.0	39.0		18.0	55.0		26.0	63.0	
Total Split (%)	32.5%	32.5%		32.5%	32.5%		15.0%	45.8%		21.7%	52.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary




















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 28 (23%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Mission Tr. & Canyon Dr.



HCM 6th Signalized Intersection Summary  
5: Mission Tr. & Canyon Dr.

Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1	7	22	0	51	4	298	21	35	351	3
Future Volume (veh/h)	6	1	7	22	0	51	4	298	21	35	351	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	1	8	24	0	55	4	324	23	38	382	3
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	22	57	63	8	72	9	2663	188	53	2948	23
Arrive On Green	0.07	0.07	0.07	0.07	0.00	0.07	0.01	0.79	0.79	0.06	1.00	1.00
Sat Flow, veh/h	530	324	855	360	113	1084	1781	3367	238	1781	3614	28
Grp Volume(v), veh/h	16	0	0	79	0	0	4	170	177	38	188	197
Grp Sat Flow(s),veh/h/ln	1709	0	0	1556	0	0	1781	1777	1828	1781	1777	1865
Q Serve(g_s), s	0.0	0.0	0.0	4.2	0.0	0.0	0.3	2.7	2.7	2.5	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0	5.9	0.0	0.0	0.3	2.7	2.7	2.5	0.0	0.0
Prop In Lane	0.44		0.50	0.30		0.70	1.00		0.13	1.00		0.02
Lane Grp Cap(c), veh/h	157	0	0	143	0	0	9	1405	1446	53	1449	1522
V/C Ratio(X)	0.10	0.00	0.00	0.55	0.00	0.00	0.43	0.12	0.12	0.71	0.13	0.13
Avail Cap(c_a), veh/h	485	0	0	480	0	0	200	1405	1446	319	1449	1522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	52.8	0.0	0.0	55.0	0.0	0.0	59.5	2.9	2.9	55.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	3.3	0.0	0.0	28.7	0.2	0.2	15.5	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	2.5	0.0	0.0	0.2	0.7	0.7	1.3	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	0.0	0.0	58.3	0.0	0.0	88.2	3.1	3.1	71.4	0.2	0.2
LnGrp LOS	D	A	A	E	A	A	F	A	A	E	A	A
Approach Vol, veh/h		16			79			351			423	
Approach Delay, s/veh		53.0			58.3			4.0			6.6	
Approach LOS		D			E			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	99.4		12.5	5.1	102.4		12.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.5	50.5		34.5	13.5	58.5		34.5				
Max Q Clear Time (g_c+I1), s	4.5	4.7		3.1	2.3	2.0		7.9				
Green Ext Time (p_c), s	0.0	1.8		0.0	0.0	2.0		0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.1								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
6: Mission Trail & Hidden Tr.-Elberta Rd.

Existing PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	5	40	9	2	15	86	645	9	26	659	42
Future Volume (vph)	30	5	40	9	2	15	86	645	9	26	659	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	90			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		565			432			733			527	
Travel Time (s)		12.8			9.8			10.0			7.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	27.0	27.0		27.0	27.0		28.0	76.0		17.0	65.0	65.0
Total Split (%)	22.5%	22.5%		22.5%	22.5%		23.3%	63.3%		14.2%	54.2%	54.2%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary























Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Mission Trail & Hidden Tr.-Elberta Rd.



HCM 6th Signalized Intersection Summary  
6: Mission Trail & Hidden Tr.-Elberta Rd.

Existing PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	5	40	9	2	15	86	645	9	26	659	42
Future Volume (veh/h)	30	5	40	9	2	15	86	645	9	26	659	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	43	10	2	16	92	694	10	28	709	45
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	9	75	91	9	75	117	2906	42	45	2736	1220
Arrive On Green	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.81	0.81	0.03	0.77	0.77
Sat Flow, veh/h	1395	168	1443	1357	179	1433	1781	3586	52	1781	3554	1585
Grp Volume(v), veh/h	32	0	48	10	0	18	92	344	360	28	709	45
Grp Sat Flow(s),veh/h/ln	1395	0	1611	1357	0	1612	1781	1777	1861	1781	1777	1585
Q Serve(g_s), s	2.7	0.0	3.5	0.9	0.0	1.3	6.1	5.5	5.5	1.9	6.9	0.8
Cycle Q Clear(g_c), s	4.0	0.0	3.5	4.4	0.0	1.3	6.1	5.5	5.5	1.9	6.9	0.8
Prop In Lane	1.00		0.90	1.00		0.89	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	118	0	84	91	0	84	117	1440	1508	45	2736	1220
V/C Ratio(X)	0.27	0.00	0.57	0.11	0.00	0.21	0.79	0.24	0.24	0.62	0.26	0.04
Avail Cap(c_a), veh/h	307	0	302	275	0	302	349	1440	1508	186	2736	1220
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.4	0.0	55.6	57.7	0.0	54.5	55.2	2.7	2.7	57.9	4.0	3.3
Incr Delay (d2), s/veh	1.2	0.0	6.0	0.5	0.0	1.3	11.0	0.4	0.4	13.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.6	0.3	0.0	0.6	3.0	1.2	1.3	1.0	1.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	0.0	61.6	58.2	0.0	55.8	66.2	3.1	3.1	71.1	4.2	3.3
LnGrp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		80			28			796			782	
Approach Delay, s/veh		60.0			56.7			10.4			6.5	
Approach LOS		E			E			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	101.7		10.7	12.4	96.9		10.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	71.5		22.5	23.5	60.5		22.5				
Max Q Clear Time (g_c+I1), s	3.9	7.5		6.0	8.1	8.9		6.4				
Green Ext Time (p_c), s	0.0	4.1		0.2	0.2	5.0		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.7								
HCM 6th LOS				B								





**APPENDIX D**

**EXISTING PLUS PROJECT CONDITIONS  
INTERSECTION ANALYSIS CALCULATION WORKSHEETS**



Lanes, Volumes, Timings  
1: Corydon St. & Palomar St.

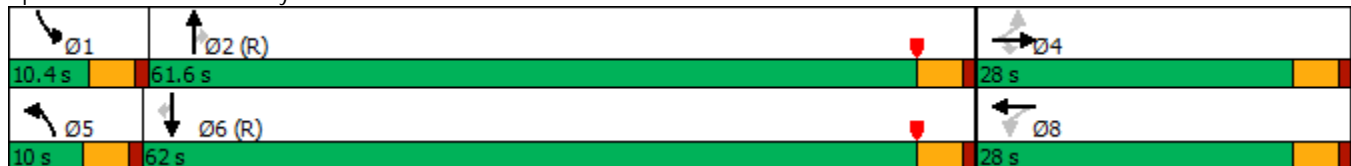
Existing + Project AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	68	21	76	27	49	17	592	78	22	469	39
Future Volume (vph)	133	68	21	76	27	49	17	592	78	22	469	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		100	150		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		657			541			638			554	
Travel Time (s)		12.8			10.5			9.7			8.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	28.0	28.0	28.0	28.0	28.0		10.0	61.6	61.6	10.4	62.0	62.0
Total Split (%)	28.0%	28.0%	28.0%	28.0%	28.0%		10.0%	61.6%	61.6%	10.4%	62.0%	62.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary
























Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Corydon St. & Palomar St.



HCM 6th Signalized Intersection Summary  
1: Corydon St. & Palomar St.

Existing + Project AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	68	21	76	27	49	17	592	78	22	469	39
Future Volume (veh/h)	133	68	21	76	27	49	17	592	78	22	469	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	166	85	26	95	34	61	21	740	98	28	586	49
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	368	312	275	118	212	39	1199	1016	48	1208	1024
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.02	0.64	0.64	0.03	0.65	0.65
Sat Flow, veh/h	1301	1870	1585	1282	600	1077	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	166	85	26	95	0	95	21	740	98	28	586	49
Grp Sat Flow(s),veh/h/ln	1301	1870	1585	1282	0	1677	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	12.5	3.8	1.3	6.7	0.0	4.8	1.2	23.5	2.4	1.6	16.1	1.1
Cycle Q Clear(g_c), s	17.3	3.8	1.3	10.6	0.0	4.8	1.2	23.5	2.4	1.6	16.1	1.1
Prop In Lane	1.00		1.00	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	368	312	275	0	330	39	1199	1016	48	1208	1024
V/C Ratio(X)	0.63	0.23	0.08	0.35	0.00	0.29	0.53	0.62	0.10	0.58	0.48	0.05
Avail Cap(c_a), veh/h	315	440	372	324	0	394	98	1199	1016	105	1208	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	33.8	32.8	38.2	0.0	34.2	48.4	10.7	6.9	48.1	9.1	6.5
Incr Delay (d2), s/veh	2.9	0.3	0.1	0.7	0.0	0.5	10.7	2.4	0.2	10.6	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	1.7	0.5	2.1	0.0	2.0	0.6	8.6	0.7	0.8	5.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	34.1	32.9	39.0	0.0	34.7	59.1	13.0	7.1	58.7	10.5	6.5
LnGrp LOS	D	C	C	D	A	C	E	B	A	E	B	A
Approach Vol, veh/h		277			190			859			663	
Approach Delay, s/veh		40.2			36.8			13.5			12.3	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	68.6		24.2	6.7	69.1		24.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.9	57.1		23.5	5.5	57.5		23.5				
Max Q Clear Time (g_c+I1), s	3.6	25.5		19.3	3.2	18.1		12.6				
Green Ext Time (p_c), s	0.0	5.6		0.4	0.0	4.0		0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				19.0								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
2: Mission Tr. & Project Dwy. 1/Lemon St.

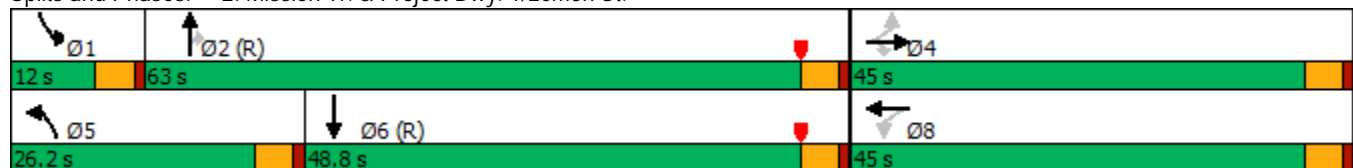
Existing + Project AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	22	60	53	58	29	157	658	94	35	736	59
Future Volume (vph)	176	22	60	53	58	29	157	658	94	35	736	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		50	100		0
Storage Lanes	0		1	0		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		260			833			251			567	
Travel Time (s)		5.9			18.9			3.4			7.7	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		26.2	63.0	63.0	12.0	48.8	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%		21.8%	52.5%	52.5%	10.0%	40.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary






















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

Splits and Phases: 2: Mission Tr. & Project Dwy. 1/Lemon St.



HCM 6th Signalized Intersection Summary  
 2: Mission Tr. & Project Dwy. 1/Lemon St.

Existing + Project AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	22	60	53	58	29	157	658	94	35	736	59
Future Volume (veh/h)	176	22	60	53	58	29	157	658	94	35	736	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	200	25	68	60	66	33	178	748	107	40	836	67
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	29	535	76	78	30	208	1845	823	55	1444	116
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.12	0.52	0.52	0.03	0.43	0.43
Sat Flow, veh/h	677	85	1585	104	231	88	1781	3554	1585	1781	3332	267
Grp Volume(v), veh/h	225	0	68	159	0	0	178	748	107	40	446	457
Grp Sat Flow(s),veh/h/ln	762	0	1585	423	0	0	1781	1777	1585	1781	1777	1822
Q Serve(g_s), s	0.0	0.0	3.6	7.2	0.0	0.0	11.8	15.4	4.2	2.7	22.8	22.8
Cycle Q Clear(g_c), s	33.3	0.0	3.6	40.5	0.0	0.0	11.8	15.4	4.2	2.7	22.8	22.8
Prop In Lane	0.89		1.00	0.38		0.21	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	314	0	535	184	0	0	208	1845	823	55	770	790
V/C Ratio(X)	0.72	0.00	0.13	0.86	0.00	0.00	0.86	0.41	0.13	0.73	0.58	0.58
Avail Cap(c_a), veh/h	314	0	535	184	0	0	322	1845	823	111	770	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	27.5	45.8	0.0	0.0	52.0	17.6	14.9	57.7	25.7	25.7
Incr Delay (d2), s/veh	7.6	0.0	0.1	32.1	0.0	0.0	12.9	0.7	0.3	17.0	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	1.4	6.5	0.0	0.0	5.8	6.0	1.5	1.4	9.7	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	0.0	27.6	77.9	0.0	0.0	64.9	18.2	15.2	74.7	28.9	28.8
LnGrp LOS	D	A	C	E	A	A	E	B	B	E	C	C
Approach Vol, veh/h		293			159			1033			943	
Approach Delay, s/veh		41.0			77.9			26.0			30.8	
Approach LOS		D			E			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	66.8		45.0	18.5	56.5		45.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	58.5		40.5	21.7	44.3		40.5				
Max Q Clear Time (g_c+I1), s	4.7	17.4		35.3	13.8	24.8		42.5				
Green Ext Time (p_c), s	0.0	5.5		0.7	0.3	4.9		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.0									
HCM 6th LOS			C									

Lanes, Volumes, Timings  
3: Mission Tr. & Corydon Rd.

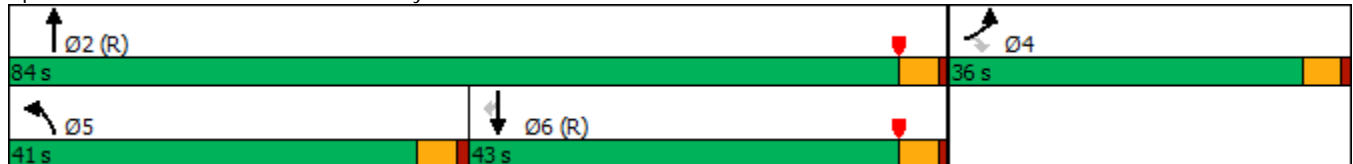
Existing + Project AM Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	501	250	266	408	496	378
Future Volume (vph)	501	250	266	408	496	378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125			115
Storage Lanes	2	2	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			50	50	
Link Distance (ft)	219			2217	190	
Travel Time (s)	5.0			30.2	2.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	36.0	36.0	41.0	84.0	43.0	43.0
Total Split (%)	30.0%	30.0%	34.2%	70.0%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary













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

Splits and Phases: 3: Mission Tr. & Corydon Rd.



HCM 6th Signalized Intersection Summary  
3: Mission Tr. & Corydon Rd.












Existing + Project AM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	501	250	266	408	496	378
Future Volume (veh/h)	501	250	266	408	496	378
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	557	278	296	453	551	420
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	668	539	330	2600	1809	807
Arrive On Green	0.19	0.19	0.18	0.73	0.51	0.51
Sat Flow, veh/h	3456	2790	1781	3647	3647	1585
Grp Volume(v), veh/h	557	278	296	453	551	420
Grp Sat Flow(s),veh/h/ln	1728	1395	1781	1777	1777	1585
Q Serve(g_s), s	18.6	10.7	19.5	4.7	10.8	21.2
Cycle Q Clear(g_c), s	18.6	10.7	19.5	4.7	10.8	21.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	668	539	330	2600	1809	807
V/C Ratio(X)	0.83	0.52	0.90	0.17	0.30	0.52
Avail Cap(c_a), veh/h	907	732	542	2600	1809	807
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	1.00	1.00
Uniform Delay (d), s/veh	46.5	43.4	47.8	5.0	17.1	19.7
Incr Delay (d2), s/veh	5.0	0.8	10.8	0.1	0.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	8.4	9.3	1.4	4.2	7.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.5	44.1	58.6	5.1	17.5	22.1
LnGrp LOS	D	D	E	A	B	C
Approach Vol, veh/h	835			749	971	
Approach Delay, s/veh	49.1			26.2	19.5	
Approach LOS	D			C	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		92.3		27.7	26.7	65.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		79.5		31.5	36.5	38.5
Max Q Clear Time (g_c+I1), s		6.7		20.6	21.5	23.2
Green Ext Time (p_c), s		2.9		2.6	0.7	4.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			31.1			
HCM 6th LOS			C			



Lanes, Volumes, Timings  
4: Mission Tr. & Bundy Cyn.. Rd.

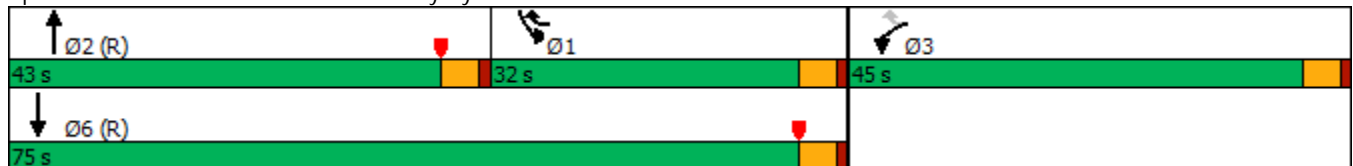
Existing + Project AM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	53	278	357	65	300	386
Future Volume (vph)	53	278	357	65	300	386
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	295	
Storage Lanes	1	1		0	2	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	1549		1368			2217
Travel Time (s)	35.2		18.7			30.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	3	1	2		1	6
Permitted Phases		3				
Detector Phase	3	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		9.5	22.5
Total Split (s)	45.0	32.0	43.0		32.0	75.0
Total Split (%)	37.5%	26.7%	35.8%		26.7%	62.5%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 32 (27%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Mission Tr. & Bundy Cyn.. Rd.



HCM 6th Signalized Intersection Summary  
 4: Mission Tr. & Bundy Cyn.. Rd.

Existing + Project AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 		 	 
Traffic Volume (veh/h)	53	278	357	65	300	386
Future Volume (veh/h)	53	278	357	65	300	386
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	309	397	72	333	429
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	106	898	965	174	1752	3075
Arrive On Green	0.06	0.06	0.32	0.32	0.51	0.87
Sat Flow, veh/h	1781	1585	3102	541	3456	3647
Grp Volume(v), veh/h	59	309	233	236	333	429
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1773	1728	1777
Q Serve(g_s), s	3.9	0.0	12.3	12.5	6.3	2.2
Cycle Q Clear(g_c), s	3.9	0.0	12.3	12.5	6.3	2.2
Prop In Lane	1.00	1.00		0.31	1.00	
Lane Grp Cap(c), veh/h	106	898	570	569	1752	3075
V/C Ratio(X)	0.56	0.34	0.41	0.41	0.19	0.14
Avail Cap(c_a), veh/h	601	1339	570	569	1752	3075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.98	0.98	0.95	0.95
Uniform Delay (d), s/veh	54.9	14.0	31.9	31.9	16.1	1.2
Incr Delay (d2), s/veh	4.5	0.2	2.1	2.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	4.5	5.4	5.5	2.3	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	59.4	14.2	34.0	34.1	16.2	1.3
LnGrp LOS	E	B	C	C	B	A
Approach Vol, veh/h	368		469			762
Approach Delay, s/veh	21.5		34.0			7.8
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	65.3	43.0			108.3	11.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	27.5	38.5			70.5	40.5
Max Q Clear Time (g_c+I1), s	8.3	14.5			4.2	5.9
Green Ext Time (p_c), s	1.0	2.4			2.7	1.3
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			18.6			
HCM 6th LOS			B			

Lanes, Volumes, Timings  
5: Mission Tr. & Canyon Dr.

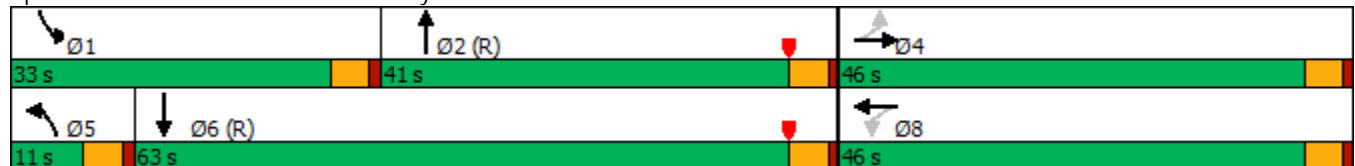
Existing + Project AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	0	115	0	111	1	306	110	152	274	1
Future Volume (vph)	2	0	0	115	0	111	1	306	110	152	274	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	155		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		272			1270			2015			1368	
Travel Time (s)		6.2			28.9			27.5			18.7	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	46.0	46.0		46.0	46.0		11.0	41.0		33.0	63.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%		9.2%	34.2%		27.5%	52.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary




















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 99 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Mission Tr. & Canyon Dr.



HCM 6th Signalized Intersection Summary  
5: Mission Tr. & Canyon Dr.

Existing + Project AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	0	115	0	111	1	306	110	152	274	1
Future Volume (veh/h)	2	0	0	115	0	111	1	306	110	152	274	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	0	0	139	0	134	1	369	133	183	330	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	0	0	198	4	152	2	1442	512	214	2472	7
Arrive On Green	0.21	0.00	0.00	0.21	0.00	0.21	0.00	0.56	0.56	0.12	0.68	0.68
Sat Flow, veh/h	1008	0	0	743	21	736	1781	2570	913	1781	3634	11
Grp Volume(v), veh/h	2	0	0	273	0	0	1	253	249	183	161	170
Grp Sat Flow(s),veh/h/ln	1008	0	0	1500	0	0	1781	1777	1706	1781	1777	1868
Q Serve(g_s), s	0.0	0.0	0.0	20.6	0.0	0.0	0.1	8.8	9.0	12.1	3.8	3.8
Cycle Q Clear(g_c), s	0.2	0.0	0.0	21.2	0.0	0.0	0.1	8.8	9.0	12.1	3.8	3.8
Prop In Lane	1.00		0.00	0.51		0.49	1.00		0.54	1.00		0.01
Lane Grp Cap(c), veh/h	268	0	0	354	0	0	2	997	957	214	1209	1271
V/C Ratio(X)	0.01	0.00	0.00	0.77	0.00	0.00	0.41	0.25	0.26	0.85	0.13	0.13
Avail Cap(c_a), veh/h	443	0	0	563	0	0	96	997	957	423	1209	1271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	37.9	0.0	0.0	46.2	0.0	0.0	59.9	13.5	13.5	51.8	6.8	6.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.6	0.0	0.0	84.5	0.6	0.7	9.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	8.2	0.0	0.0	0.1	3.4	3.3	5.8	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	0.0	0.0	49.8	0.0	0.0	144.4	14.1	14.2	61.0	7.0	7.0
LnGrp LOS	D	A	A	D	A	A	F	B	B	E	A	A
Approach Vol, veh/h		2			273			503			514	
Approach Delay, s/veh		37.9			49.8			14.4			26.2	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.9	71.8		29.2	4.7	86.1		29.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.5	36.5		41.5	6.5	58.5		41.5				
Max Q Clear Time (g_c+I1), s	14.1	11.0		2.2	2.1	5.8		23.2				
Green Ext Time (p_c), s	0.4	2.7		0.0	0.0	1.7		1.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.6								
HCM 6th LOS				C								

Lanes, Volumes, Timings  
6: Mission Trail & Hidden Tr.-Elberta Rd.

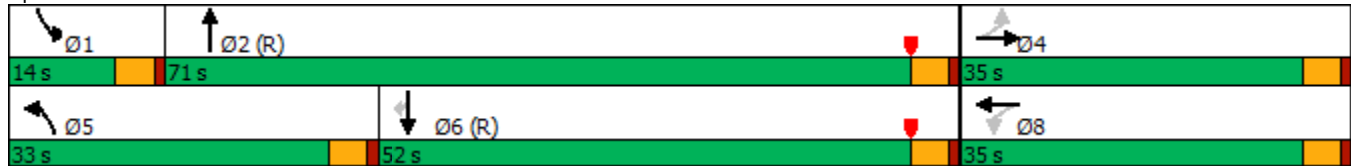
Existing + Project AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	2	137	12	2	11	114	659	3	9	504	10
Future Volume (vph)	48	2	137	12	2	11	114	659	3	9	504	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	90			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		565			432			733			527	
Travel Time (s)		12.8			9.8			10.0			7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	35.0	35.0		35.0	35.0		33.0	71.0		14.0	52.0	52.0
Total Split (%)	29.2%	29.2%		29.2%	29.2%		27.5%	59.2%		11.7%	43.3%	43.3%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary























Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 14 (12%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Mission Trail & Hidden Tr.-Elberta Rd.



HCM 6th Signalized Intersection Summary  
6: Mission Trail & Hidden Tr.-Elberta Rd.

Existing + Project AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	2	137	12	2	11	114	659	3	9	504	10
Future Volume (veh/h)	48	2	137	12	2	11	114	659	3	9	504	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	2	143	12	2	11	119	686	3	9	525	10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	3	181	93	29	158	147	2763	12	19	2450	1093
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.08	0.76	0.76	0.01	0.69	0.69
Sat Flow, veh/h	1401	22	1566	1243	250	1373	1781	3628	16	1781	3554	1585
Grp Volume(v), veh/h	50	0	145	12	0	13	119	336	353	9	525	10
Grp Sat Flow(s),veh/h/ln	1401	0	1588	1243	0	1623	1781	1777	1868	1781	1777	1585
Q Serve(g_s), s	4.0	0.0	10.7	1.1	0.0	0.9	7.9	6.7	6.7	0.6	6.5	0.2
Cycle Q Clear(g_c), s	4.8	0.0	10.7	11.8	0.0	0.9	7.9	6.7	6.7	0.6	6.5	0.2
Prop In Lane	1.00		0.99	1.00		0.85	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	212	0	183	93	0	187	147	1353	1422	19	2450	1093
V/C Ratio(X)	0.24	0.00	0.79	0.13	0.00	0.07	0.81	0.25	0.25	0.47	0.21	0.01
Avail Cap(c_a), veh/h	406	0	404	265	0	413	423	1353	1422	141	2450	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.5	0.0	51.7	57.4	0.0	47.3	54.1	4.2	4.2	59.0	6.8	5.8
Incr Delay (d2), s/veh	0.6	0.0	7.5	0.6	0.0	0.2	9.9	0.4	0.4	16.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	4.6	0.4	0.0	0.4	3.8	1.9	2.0	0.4	2.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	0.0	59.2	58.0	0.0	47.5	64.0	4.7	4.6	75.6	7.0	5.8
LnGrp LOS	D	A	E	E	A	D	E	A	A	E	A	A
Approach Vol, veh/h		195			25			808			544	
Approach Delay, s/veh		56.8			52.6			13.4			8.1	
Approach LOS		E			D			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	95.9		18.3	14.4	87.2		18.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	66.5		30.5	28.5	47.5		30.5				
Max Q Clear Time (g_c+I1), s	2.6	8.7		12.7	9.9	8.5		13.8				
Green Ext Time (p_c), s	0.0	4.0		0.9	0.2	3.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									

Lanes, Volumes, Timings  
7: Mission Tr. & Project Dwy. 2

Existing + Project AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	65	0	909	809	40
Future Volume (vph)	0	65	0	909	809	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			50	50	
Link Distance (ft)	172			190	251	
Travel Time (s)	3.9			2.6	3.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	65	0	909	809	40
Future Vol, veh/h	0	65	0	909	809	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	68	0	957	852	42

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	447	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-
Pot Cap-1 Maneuver	0	559	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	559	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 559	-	-
HCM Lane V/C Ratio	- 0.122	-	-
HCM Control Delay (s)	- 12.3	-	-
HCM Lane LOS	- B	-	-
HCM 95th %tile Q(veh)	- 0.4	-	-



Lanes, Volumes, Timings  
8: Corydon Rd. & Project Dwy. 3

Existing + Project AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Volume (vph)	0	751	566	78	0	29
Future Volume (vph)	0	751	566	78	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	170			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	219		238	
Travel Time (s)		13.5	5.0		5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Vol, veh/h	0	751	566	78	0	29
Future Vol, veh/h	0	751	566	78	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	791	596	82	0	31

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	637
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	476
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	476
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	476
HCM Lane V/C Ratio	-	-	-	0.064
HCM Control Delay (s)	-	-	-	13.1
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Lanes, Volumes, Timings  
1: Corydon St. & Palomar St.

Existing + Project PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	33	12	70	61	34	5	541	28	39	475	140
Future Volume (vph)	97	33	12	70	61	34	5	541	28	39	475	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		100	150		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		657			541			638			554	
Travel Time (s)		12.8			10.5			9.7			8.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0		10.0	61.0	61.0	13.0	64.0	64.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	26.0%		10.0%	61.0%	61.0%	13.0%	64.0%	64.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary
























Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Corydon St. & Palomar St.



HCM 6th Signalized Intersection Summary  
1: Corydon St. & Palomar St.

Existing + Project PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	33	12	70	61	34	5	541	28	39	475	140
Future Volume (veh/h)	97	33	12	70	61	34	5	541	28	39	475	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	102	35	13	74	64	36	5	569	29	41	500	147
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	282	239	254	169	95	12	1273	1078	61	1324	1122
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.01	0.68	0.68	0.03	0.71	0.71
Sat Flow, veh/h	1295	1870	1585	1357	1124	632	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	102	35	13	74	0	100	5	569	29	41	500	147
Grp Sat Flow(s),veh/h/ln	1295	1870	1585	1357	0	1757	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	7.7	1.6	0.7	5.0	0.0	5.1	0.3	14.0	0.6	2.3	10.7	3.0
Cycle Q Clear(g_c), s	12.8	1.6	0.7	6.6	0.0	5.1	0.3	14.0	0.6	2.3	10.7	3.0
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	282	239	254	0	265	12	1273	1078	61	1324	1122
V/C Ratio(X)	0.51	0.12	0.05	0.29	0.00	0.38	0.43	0.45	0.03	0.68	0.38	0.13
Avail Cap(c_a), veh/h	284	402	341	342	0	378	98	1273	1078	151	1324	1122
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	36.8	36.4	39.6	0.0	38.3	49.5	7.3	5.2	47.8	5.8	4.7
Incr Delay (d2), s/veh	2.0	0.2	0.1	0.6	0.0	0.9	23.5	1.1	0.0	12.4	0.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.7	0.3	1.7	0.0	2.2	0.2	4.7	0.2	1.2	3.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	37.0	36.5	40.2	0.0	39.1	73.0	8.5	5.2	60.2	6.6	4.9
LnGrp LOS	D	D	D	D	A	D	E	A	A	E	A	A
Approach Vol, veh/h		150			174			603			688	
Approach Delay, s/veh		43.1			39.6			8.9			9.5	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	72.5		19.6	5.1	75.3		19.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	56.5		21.5	5.5	59.5		21.5				
Max Q Clear Time (g_c+I1), s	4.3	16.0		14.8	2.3	12.7		8.6				
Green Ext Time (p_c), s	0.0	3.8		0.2	0.0	3.6		0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				15.6								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
2: Mission Tr. & Project Dwy. 1/Lemon St.

Existing + Project PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	23	55	48	48	37	129	733	142	40	637	48
Future Volume (vph)	160	23	55	48	48	37	129	733	142	40	637	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		50	100		0
Storage Lanes	0		1	0		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		260			833			251			567	
Travel Time (s)		5.9			18.9			3.4			7.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	45.0	45.0	45.0	45.0	45.0		26.0	61.0	61.0	14.0	49.0	
Total Split (%)	37.5%	37.5%	37.5%	37.5%	37.5%		21.7%	50.8%	50.8%	11.7%	40.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary






















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

Splits and Phases: 2: Mission Tr. & Project Dwy. 1/Lemon St.



HCM 6th Signalized Intersection Summary  
 2: Mission Tr. & Project Dwy. 1/Lemon St.

Existing + Project PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	23	55	48	48	37	129	733	142	40	637	48
Future Volume (veh/h)	160	23	55	48	48	37	129	733	142	40	637	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	165	24	57	49	49	38	133	756	146	41	657	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	30	486	80	77	45	162	1954	871	55	1643	122
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.09	0.55	0.55	0.03	0.49	0.49
Sat Flow, veh/h	681	99	1585	129	252	148	1781	3554	1585	1781	3352	250
Grp Volume(v), veh/h	189	0	57	136	0	0	133	756	146	41	348	358
Grp Sat Flow(s),veh/h/ln	780	0	1585	528	0	0	1781	1777	1585	1781	1777	1825
Q Serve(g_s), s	0.0	0.0	3.1	6.2	0.0	0.0	8.8	14.6	5.5	2.7	14.9	14.9
Cycle Q Clear(g_c), s	28.4	0.0	3.1	34.6	0.0	0.0	8.8	14.6	5.5	2.7	14.9	14.9
Prop In Lane	0.87		1.00	0.36		0.28	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	296	0	486	203	0	0	162	1954	871	55	871	895
V/C Ratio(X)	0.64	0.00	0.12	0.67	0.00	0.00	0.82	0.39	0.17	0.74	0.40	0.40
Avail Cap(c_a), veh/h	338	0	535	251	0	0	319	1954	871	141	871	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	0.0	29.9	43.3	0.0	0.0	53.6	15.4	13.4	57.7	19.4	19.4
Incr Delay (d2), s/veh	3.3	0.0	0.1	4.9	0.0	0.0	10.0	0.6	0.4	17.5	1.4	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	1.2	4.3	0.0	0.0	4.3	5.5	1.9	1.5	6.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	0.0	30.0	48.2	0.0	0.0	63.6	16.0	13.8	75.2	20.8	20.7
LnGrp LOS	D	A	C	D	A	A	E	B	B	E	C	C
Approach Vol, veh/h		246			136			1035			747	
Approach Delay, s/veh		39.2			48.2			21.8			23.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	70.5		41.3	15.4	63.3		41.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	56.5		40.5	21.5	44.5		40.5				
Max Q Clear Time (g_c+I1), s	4.7	16.6		30.4	10.8	16.9		36.6				
Green Ext Time (p_c), s	0.0	5.8		0.9	0.2	4.0		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			C									

Lanes, Volumes, Timings  
3: Mission Tr. & Corydon Rd.

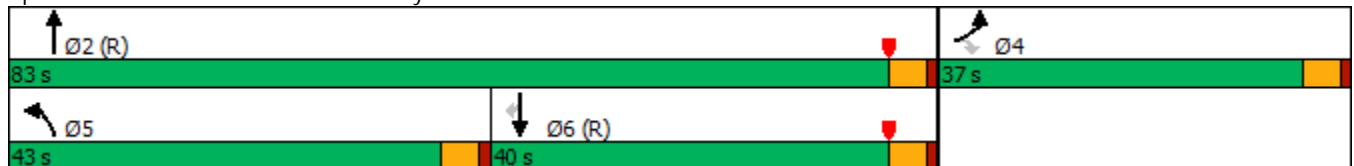
Existing + Project PM Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	556	243	320	448	384	388
Future Volume (vph)	556	243	320	448	384	388
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125			115
Storage Lanes	2	2	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			50	50	
Link Distance (ft)	219			2217	190	
Travel Time (s)	5.0			30.2	2.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	37.0	37.0	43.0	83.0	40.0	40.0
Total Split (%)	30.8%	30.8%	35.8%	69.2%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary













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

Splits and Phases: 3: Mission Tr. & Corydon Rd.



HCM 6th Signalized Intersection Summary  
3: Mission Tr. & Corydon Rd.

Existing + Project PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	556	243	320	448	384	388
Future Volume (veh/h)	556	243	320	448	384	388
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	567	248	327	457	392	396
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	547	361	2590	1737	775
Arrive On Green	0.20	0.20	0.20	0.73	0.49	0.49
Sat Flow, veh/h	3456	2790	1781	3647	3647	1585
Grp Volume(v), veh/h	567	248	327	457	392	396
Grp Sat Flow(s),veh/h/ln	1728	1395	1781	1777	1777	1585
Q Serve(g_s), s	18.9	9.4	21.5	4.8	7.6	20.4
Cycle Q Clear(g_c), s	18.9	9.4	21.5	4.8	7.6	20.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	678	547	361	2590	1737	775
V/C Ratio(X)	0.84	0.45	0.91	0.18	0.23	0.51
Avail Cap(c_a), veh/h	936	756	571	2590	1737	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.90	0.90	1.00	1.00
Uniform Delay (d), s/veh	46.4	42.6	46.7	5.1	17.6	20.9
Incr Delay (d2), s/veh	4.9	0.6	11.2	0.1	0.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	7.5	10.3	1.4	3.0	7.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.3	43.1	58.0	5.2	17.9	23.3
LnGrp LOS	D	D	E	A	B	C
Approach Vol, veh/h	815			784	788	
Approach Delay, s/veh	48.8			27.2	20.6	
Approach LOS	D			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		92.0		28.0	28.8	63.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		78.5		32.5	38.5	35.5
Max Q Clear Time (g_c+I1), s		6.8		20.9	23.5	22.4
Green Ext Time (p_c), s		2.9		2.6	0.8	3.1
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			32.4			
HCM 6th LOS			C			



Lanes, Volumes, Timings  
4: Mission Tr. & Bundy Cyn.. Rd.

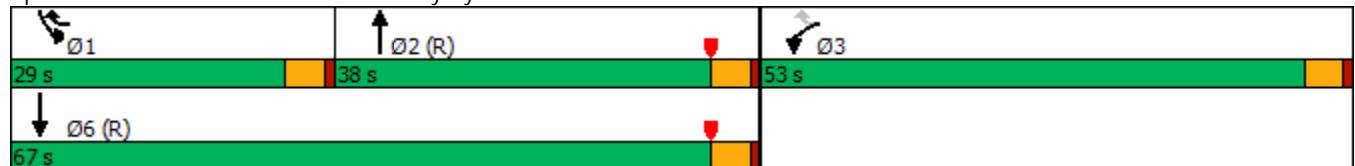
Existing + Project PM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	142	392	335	54	286	291
Future Volume (vph)	142	392	335	54	286	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	295	
Storage Lanes	1	1		0	2	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	1549		1368			2217
Travel Time (s)	35.2		18.7			30.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	3	1	2		1	6
Permitted Phases		3				
Detector Phase	3	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		9.5	22.5
Total Split (s)	53.0	29.0	38.0		29.0	67.0
Total Split (%)	44.2%	24.2%	31.7%		24.2%	55.8%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 33.3 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Mission Tr. & Bundy Cyn.. Rd.



HCM 6th Signalized Intersection Summary  
4: Mission Tr. & Bundy Cyn.. Rd.

Existing + Project PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 		 	 
Traffic Volume (veh/h)	142	392	335	54	286	291
Future Volume (veh/h)	142	392	335	54	286	291
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	156	431	368	59	314	320
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	473	599	1566	249	387	2344
Arrive On Green	0.27	0.27	0.51	0.51	0.11	0.66
Sat Flow, veh/h	1781	1585	3165	488	3456	3647
Grp Volume(v), veh/h	156	431	212	215	314	320
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1782	1728	1777
Q Serve(g_s), s	8.5	27.9	8.0	8.1	10.6	4.0
Cycle Q Clear(g_c), s	8.5	27.9	8.0	8.1	10.6	4.0
Prop In Lane	1.00	1.00		0.27	1.00	
Lane Grp Cap(c), veh/h	473	599	906	909	387	2344
V/C Ratio(X)	0.33	0.72	0.23	0.24	0.81	0.14
Avail Cap(c_a), veh/h	720	818	906	909	706	2344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.97	0.97
Uniform Delay (d), s/veh	35.5	31.9	16.4	16.4	52.0	7.6
Incr Delay (d2), s/veh	0.4	2.0	0.6	0.6	4.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	10.9	3.2	3.2	4.7	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.9	33.9	17.0	17.0	56.0	7.8
LnGrp LOS	D	C	B	B	E	A
Approach Vol, veh/h	587		427			634
Approach Delay, s/veh	34.4		17.0			31.7
Approach LOS	C		B			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.0	65.7			83.6	36.4
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	24.5	33.5			62.5	48.5
Max Q Clear Time (g_c+I1), s	12.6	10.1			6.0	29.9
Green Ext Time (p_c), s	0.8	2.2			2.0	2.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			28.8			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
5: Mission Tr. & Canyon Dr.

Existing + Project PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1	7	22	0	65	4	319	21	50	374	3
Future Volume (vph)	6	1	7	22	0	65	4	319	21	50	374	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	155		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		272			1270			2015			1368	
Travel Time (s)		6.2			28.9			27.5			18.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	40.0	40.0		40.0	40.0		16.0	52.0		28.0	64.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		13.3%	43.3%		23.3%	53.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary




















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 56 (47%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Mission Tr. & Canyon Dr.



HCM 6th Signalized Intersection Summary  
5: Mission Tr. & Canyon Dr.

Existing + Project PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1	7	22	0	65	4	319	21	50	374	3
Future Volume (veh/h)	6	1	7	22	0	65	4	319	21	50	374	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	1	8	24	0	71	4	347	23	54	407	3
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	23	64	60	8	91	9	2605	172	70	2908	21
Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.08	0.01	0.77	0.77	0.04	0.80	0.80
Sat Flow, veh/h	526	295	821	287	108	1170	1781	3384	223	1781	3616	27
Grp Volume(v), veh/h	16	0	0	95	0	0	4	181	189	54	200	210
Grp Sat Flow(s),veh/h/ln	1642	0	0	1565	0	0	1781	1777	1830	1781	1777	1866
Q Serve(g_s), s	0.0	0.0	0.0	4.7	0.0	0.0	0.3	3.1	3.2	3.6	3.0	3.0
Cycle Q Clear(g_c), s	1.0	0.0	0.0	7.1	0.0	0.0	0.3	3.1	3.2	3.6	3.0	3.0
Prop In Lane	0.44		0.50	0.25		0.75	1.00		0.12	1.00		0.01
Lane Grp Cap(c), veh/h	171	0	0	160	0	0	9	1368	1409	70	1429	1500
V/C Ratio(X)	0.09	0.00	0.00	0.59	0.00	0.00	0.43	0.13	0.13	0.77	0.14	0.14
Avail Cap(c_a), veh/h	492	0	0	494	0	0	171	1368	1409	349	1429	1500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	51.5	0.0	0.0	54.2	0.0	0.0	59.5	3.5	3.5	57.1	2.6	2.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	3.5	0.0	0.0	28.7	0.2	0.2	15.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	3.0	0.0	0.0	0.2	0.9	0.9	1.9	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	0.0	0.0	57.7	0.0	0.0	88.2	3.7	3.7	72.4	2.8	2.8
LnGrp LOS	D	A	A	E	A	A	F	A	A	E	A	A
Approach Vol, veh/h		16			95			374			464	
Approach Delay, s/veh		51.7			57.7			4.6			10.9	
Approach LOS		D			E			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	96.9		13.9	5.1	101.0		13.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	23.5	47.5		35.5	11.5	59.5		35.5				
Max Q Clear Time (g_c+I1), s	5.6	5.2		3.0	2.3	5.0		9.1				
Green Ext Time (p_c), s	0.1	2.0		0.0	0.0	2.2		0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				13.8								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
6: Mission Trail & Hidden Tr.-Elberta Rd.

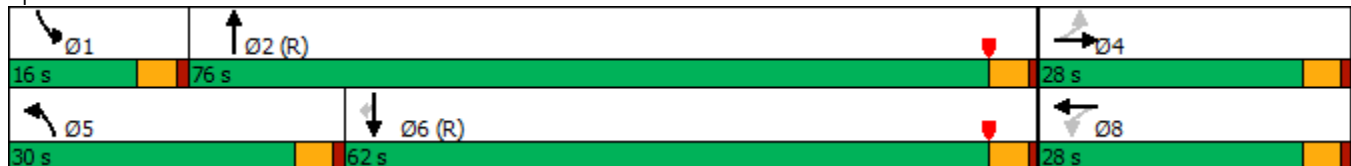
Existing + Project PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	5	54	9	2	15	101	668	9	26	680	42
Future Volume (vph)	30	5	54	9	2	15	101	668	9	26	680	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	90			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		565			432			733			527	
Travel Time (s)		12.8			9.8			10.0			7.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	28.0	28.0		28.0	28.0		30.0	76.0		16.0	62.0	62.0
Total Split (%)	23.3%	23.3%		23.3%	23.3%		25.0%	63.3%		13.3%	51.7%	51.7%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary























Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Mission Trail & Hidden Tr.-Elberta Rd.



HCM 6th Signalized Intersection Summary  
6: Mission Trail & Hidden Tr.-Elberta Rd.

Existing + Project PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	5	54	9	2	15	101	668	9	26	680	42
Future Volume (veh/h)	30	5	54	9	2	15	101	668	9	26	680	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	5	58	10	2	16	109	718	10	28	731	45
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	8	91	91	11	88	136	2872	40	45	2663	1188
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.08	0.80	0.80	0.03	0.75	0.75
Sat Flow, veh/h	1395	127	1477	1339	179	1433	1781	3588	50	1781	3554	1585
Grp Volume(v), veh/h	32	0	63	10	0	18	109	355	373	28	731	45
Grp Sat Flow(s),veh/h/ln	1395	0	1604	1339	0	1612	1781	1777	1861	1781	1777	1585
Q Serve(g_s), s	2.7	0.0	4.6	0.9	0.0	1.3	7.2	6.0	6.0	1.9	7.8	0.9
Cycle Q Clear(g_c), s	3.9	0.0	4.6	5.5	0.0	1.3	7.2	6.0	6.0	1.9	7.8	0.9
Prop In Lane	1.00		0.92	1.00		0.89	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	131	0	99	91	0	100	136	1422	1490	45	2663	1188
V/C Ratio(X)	0.24	0.00	0.64	0.11	0.00	0.18	0.80	0.25	0.25	0.62	0.27	0.04
Avail Cap(c_a), veh/h	318	0	314	271	0	316	379	1422	1490	171	2663	1188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.3	0.0	55.0	57.7	0.0	53.4	54.5	3.0	3.0	57.9	4.7	3.9
Incr Delay (d2), s/veh	1.0	0.0	6.6	0.5	0.0	0.9	10.3	0.4	0.4	13.2	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	2.0	0.3	0.0	0.5	3.5	1.4	1.5	1.0	2.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	0.0	61.6	58.2	0.0	54.3	64.8	3.4	3.4	71.1	5.0	3.9
LnGrp LOS	E	A	E	E	A	D	E	A	A	E	A	A
Approach Vol, veh/h		95			28			837			804	
Approach Delay, s/veh		59.8			55.7			11.4			7.2	
Approach LOS		E			E			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.5	100.6		11.9	13.7	94.4		11.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	71.5		23.5	25.5	57.5		23.5				
Max Q Clear Time (g_c+I1), s	3.9	8.0		6.6	9.2	9.8		7.5				
Green Ext Time (p_c), s	0.0	4.3		0.3	0.2	5.2		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				12.8								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
7: Mission Tr. & Project Dwy. 2

Existing + Project PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	63	0	1004	708	32
Future Volume (vph)	0	63	0	1004	708	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			50	50	
Link Distance (ft)	172			190	251	
Travel Time (s)	3.9			2.6	3.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	63	0	1004	708	32
Future Vol, veh/h	0	63	0	1004	708	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	66	0	1057	745	34

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	390	-	0	0
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-
Pot Cap-1 Maneuver	0	609	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	609	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 609	-	-
HCM Lane V/C Ratio	- 0.109	-	-
HCM Control Delay (s)	- 11.6	-	-
HCM Lane LOS	- B	-	-
HCM 95th %tile Q(veh)	- 0.4	-	-



Lanes, Volumes, Timings  
8: Corydon Rd. & Project Dwy. 3

Existing + Project PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Volume (vph)	0	799	643	66	0	29
Future Volume (vph)	0	799	643	66	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	170			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	219		238	
Travel Time (s)		13.5	5.0		5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Vol, veh/h	0	799	643	66	0	29
Future Vol, veh/h	0	799	643	66	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	841	677	69	0	31

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

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	431
HCM Lane V/C Ratio	-	-	-	0.071
HCM Control Delay (s)	-	-	-	14
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

**APPENDIX E**

**EXISTING PLUS AMBIENT PLUS PROJECT (2021) CONDITIONS  
INTERSECTION ANALYSIS CALCULATION WORKSHEETS**



Lanes, Volumes, Timings  
1: Corydon St. & Palomar St.

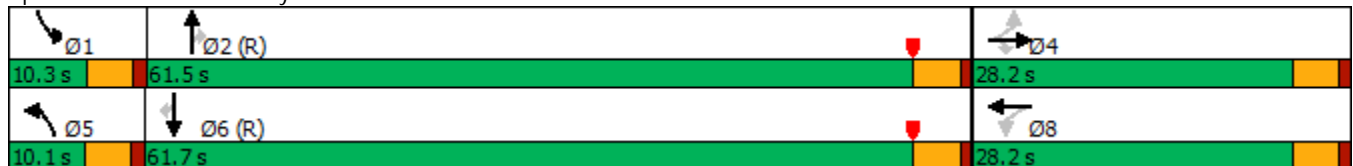
EAP (2021) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	71	22	79	28	51	18	615	81	23	487	40
Future Volume (vph)	138	71	22	79	28	51	18	615	81	23	487	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		100	150		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		657			541			638			554	
Travel Time (s)		12.8			10.5			9.7			8.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	28.2	28.2	28.2	28.2	28.2		10.1	61.5	61.5	10.3	61.7	61.7
Total Split (%)	28.2%	28.2%	28.2%	28.2%	28.2%		10.1%	61.5%	61.5%	10.3%	61.7%	61.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary
























Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Corydon St. & Palomar St.



HCM 6th Signalized Intersection Summary  
1: Corydon St. & Palomar St.

EAP (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	71	22	79	28	51	18	615	81	23	487	40
Future Volume (veh/h)	138	71	22	79	28	51	18	615	81	23	487	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	89	28	99	35	64	22	769	101	29	609	50
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	271	380	322	281	120	220	41	1186	1005	49	1195	1012
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.02	0.63	0.63	0.03	0.64	0.64
Sat Flow, veh/h	1296	1870	1585	1275	592	1083	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	172	89	28	99	0	99	22	769	101	29	609	50
Grp Sat Flow(s),veh/h/ln	1296	1870	1585	1275	0	1675	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	13.0	4.0	1.4	7.0	0.0	5.0	1.2	25.6	2.5	1.6	17.4	1.2
Cycle Q Clear(g_c), s	18.0	4.0	1.4	11.0	0.0	5.0	1.2	25.6	2.5	1.6	17.4	1.2
Prop In Lane	1.00		1.00	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	271	380	322	281	0	341	41	1186	1005	49	1195	1012
V/C Ratio(X)	0.64	0.23	0.09	0.35	0.00	0.29	0.54	0.65	0.10	0.59	0.51	0.05
Avail Cap(c_a), veh/h	314	443	376	323	0	397	100	1186	1005	103	1195	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	33.3	32.3	37.9	0.0	33.7	48.3	11.4	7.2	48.1	9.7	6.7
Incr Delay (d2), s/veh	3.3	0.3	0.1	0.8	0.0	0.5	10.7	2.8	0.2	10.7	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	1.8	0.6	2.2	0.0	2.0	0.6	9.5	0.8	0.8	6.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	33.6	32.4	38.7	0.0	34.2	59.0	14.1	7.4	58.7	11.2	6.8
LnGrp LOS	D	C	C	D	A	C	E	B	A	E	B	A
Approach Vol, veh/h		289			198			892			688	
Approach Delay, s/veh		40.0			36.4			14.5			12.9	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	67.9		24.8	6.8	68.4		24.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.8	57.0		23.7	5.6	57.2		23.7				
Max Q Clear Time (g_c+I1), s	3.6	27.6		20.0	3.2	19.4		13.0				
Green Ext Time (p_c), s	0.0	5.9		0.4	0.0	4.2		0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				19.6								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
2: Mission Tr. & Project Dwy. 1/Lemon St.

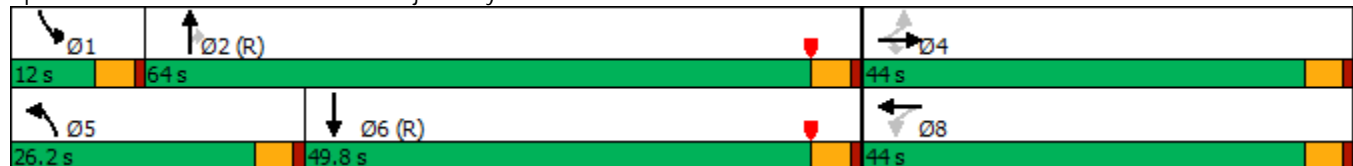
EAP (2021) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	22	60	56	58	31	157	690	98	36	766	59
Future Volume (vph)	176	22	60	56	58	31	157	690	98	36	766	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		50	100		0
Storage Lanes	0		1	0		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		260			833			251			567	
Travel Time (s)		5.9			18.9			3.4			7.7	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	44.0	44.0	44.0	44.0	44.0		26.2	64.0	64.0	12.0	49.8	
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%		21.8%	53.3%	53.3%	10.0%	41.5%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary






















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

Splits and Phases: 2: Mission Tr. & Project Dwy. 1/Lemon St.



HCM 6th Signalized Intersection Summary  
2: Mission Tr. & Project Dwy. 1/Lemon St.

EAP (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	22	60	56	58	31	157	690	98	36	766	59
Future Volume (veh/h)	176	22	60	56	58	31	157	690	98	36	766	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	200	25	68	64	66	35	178	784	111	41	870	67
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	29	522	77	73	29	208	1874	836	55	1477	114
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.12	0.53	0.53	0.03	0.44	0.44
Sat Flow, veh/h	695	87	1585	106	223	89	1781	3554	1585	1781	3343	257
Grp Volume(v), veh/h	225	0	68	165	0	0	178	784	111	41	462	475
Grp Sat Flow(s),veh/h/ln	782	0	1585	417	0	0	1781	1777	1585	1781	1777	1824
Q Serve(g_s), s	0.0	0.0	3.6	7.0	0.0	0.0	11.8	16.1	4.3	2.7	23.6	23.6
Cycle Q Clear(g_c), s	32.5	0.0	3.6	39.5	0.0	0.0	11.8	16.1	4.3	2.7	23.6	23.6
Prop In Lane	0.89		1.00	0.39		0.21	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	314	0	522	179	0	0	208	1874	836	55	785	806
V/C Ratio(X)	0.72	0.00	0.13	0.92	0.00	0.00	0.86	0.42	0.13	0.74	0.59	0.59
Avail Cap(c_a), veh/h	314	0	522	179	0	0	322	1874	836	111	785	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	28.2	47.2	0.0	0.0	52.0	17.2	14.4	57.7	25.3	25.3
Incr Delay (d2), s/veh	7.6	0.0	0.1	45.3	0.0	0.0	12.9	0.7	0.3	17.5	3.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	1.4	7.3	0.0	0.0	5.8	6.2	1.5	1.5	10.0	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	0.0	28.3	92.5	0.0	0.0	64.9	17.9	14.7	75.2	28.5	28.4
LnGrp LOS	D	A	C	F	A	A	E	B	B	E	C	C
Approach Vol, veh/h		293			165			1073			978	
Approach Delay, s/veh		41.5			92.5			25.4			30.4	
Approach LOS		D			F			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	67.8		44.0	18.5	57.5		44.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	59.5		39.5	21.7	45.3		39.5				
Max Q Clear Time (g_c+I1), s	4.7	18.1		34.5	13.8	25.6		41.5				
Green Ext Time (p_c), s	0.0	5.9		0.7	0.3	5.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			33.6									
HCM 6th LOS			C									



Lanes, Volumes, Timings  
3: Mission Tr. & Corydon Rd.

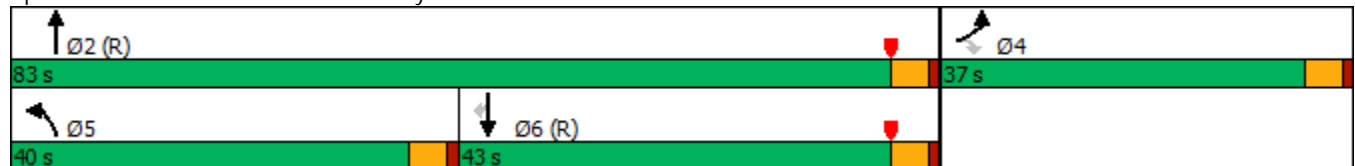
EAP (2021) AM Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	519	260	274	425	514	393
Future Volume (vph)	519	260	274	425	514	393
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125			115
Storage Lanes	2	2	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			50	50	
Link Distance (ft)	219			2217	190	
Travel Time (s)	5.0			30.2	2.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	37.0	37.0	40.0	83.0	43.0	43.0
Total Split (%)	30.8%	30.8%	33.3%	69.2%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

















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

Splits and Phases: 3: Mission Tr. & Corydon Rd.



HCM 6th Signalized Intersection Summary  
3: Mission Tr. & Corydon Rd.

EAP (2021) AM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	 	 		 	 	
Traffic Volume (veh/h)	519	260	274	425	514	393
Future Volume (veh/h)	519	260	274	425	514	393
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	577	289	304	472	571	437
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	691	558	337	2577	1771	790
Arrive On Green	0.20	0.20	0.19	0.73	0.50	0.50
Sat Flow, veh/h	3456	2790	1781	3647	3647	1585
Grp Volume(v), veh/h	577	289	304	472	571	437
Grp Sat Flow(s),veh/h/ln	1728	1395	1781	1777	1777	1585
Q Serve(g_s), s	19.2	11.1	20.0	5.1	11.5	22.9
Cycle Q Clear(g_c), s	19.2	11.1	20.0	5.1	11.5	22.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	691	558	337	2577	1771	790
V/C Ratio(X)	0.84	0.52	0.90	0.18	0.32	0.55
Avail Cap(c_a), veh/h	936	756	527	2577	1771	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	1.00	1.00
Uniform Delay (d), s/veh	46.1	42.8	47.5	5.2	18.0	20.9
Incr Delay (d2), s/veh	4.9	0.7	12.2	0.1	0.5	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	8.7	9.7	1.5	4.5	8.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.0	43.6	59.8	5.4	18.5	23.6
LnGrp LOS	D	D	E	A	B	C
Approach Vol, veh/h	866			776	1008	
Approach Delay, s/veh	48.6			26.7	20.7	
Approach LOS	D			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		91.5		28.5	27.2	64.3
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		78.5		32.5	35.5	38.5
Max Q Clear Time (g_c+I1), s		7.1		21.2	22.0	24.9
Green Ext Time (p_c), s		3.0		2.8	0.7	4.2
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			31.6			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
4: Mission Tr. & Bundy Cyn.. Rd.

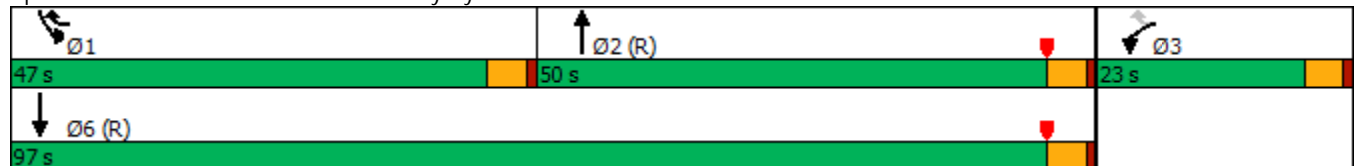
EAP (2021) AM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	55	288	370	68	312	400
Future Volume (vph)	55	288	370	68	312	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	295	
Storage Lanes	1	1		0	2	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	1549		1368			2217
Travel Time (s)	35.2		18.7			30.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	3	1	2		1	6
Permitted Phases		3				
Detector Phase	3	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		9.5	22.5
Total Split (s)	23.0	47.0	50.0		47.0	97.0
Total Split (%)	19.2%	39.2%	41.7%		39.2%	80.8%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary












Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Mission Tr. & Bundy Cyn.. Rd.



HCM 6th Signalized Intersection Summary  
4: Mission Tr. & Bundy Cyn.. Rd.

EAP (2021) AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	55	288	370	68	312	400
Future Volume (veh/h)	55	288	370	68	312	400
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	320	411	76	347	444
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	275	441	1827	335	429	2739
Arrive On Green	0.15	0.15	1.00	1.00	0.12	0.77
Sat Flow, veh/h	1781	1585	3092	550	3456	3647
Grp Volume(v), veh/h	61	320	242	245	347	444
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1771	1728	1777
Q Serve(g_s), s	3.6	18.5	0.0	0.0	11.7	3.9
Cycle Q Clear(g_c), s	3.6	18.5	0.0	0.0	11.7	3.9
Prop In Lane	1.00	1.00		0.31	1.00	
Lane Grp Cap(c), veh/h	275	441	1083	1079	429	2739
V/C Ratio(X)	0.22	0.73	0.22	0.23	0.81	0.16
Avail Cap(c_a), veh/h	275	441	1083	1079	1224	2739
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.97	0.97	0.94	0.94
Uniform Delay (d), s/veh	44.4	39.2	0.0	0.0	51.2	3.6
Incr Delay (d2), s/veh	0.4	5.9	0.5	0.5	3.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	9.2	0.1	0.1	5.1	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.9	45.0	0.5	0.5	54.6	3.7
LnGrp LOS	D	D	A	A	D	A
Approach Vol, veh/h	381		487			791
Approach Delay, s/veh	45.0		0.5			26.1
Approach LOS	D		A			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	19.4	77.6			97.0	23.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	42.5	45.5			92.5	18.5
Max Q Clear Time (g_c+I1), s	13.7	2.0			5.9	20.5
Green Ext Time (p_c), s	1.2	2.7			2.8	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			22.9			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
5: Mission Tr. & Canyon Dr.

EAP (2021) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	0	120	0	115	1	317	114	158	284	1
Future Volume (vph)	2	0	0	120	0	115	1	317	114	158	284	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	155		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50				50
Link Distance (ft)		272			1270			2015				1368
Travel Time (s)		6.2			28.9			27.5				18.7
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	46.0	46.0		46.0	46.0		11.0	41.0		33.0	63.0	
Total Split (%)	38.3%	38.3%		38.3%	38.3%		9.2%	34.2%		27.5%	52.5%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary



















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 34 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Mission Tr. & Canyon Dr.



HCM 6th Signalized Intersection Summary  
5: Mission Tr. & Canyon Dr.

EAP (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	0	120	0	115	1	317	114	158	284	1
Future Volume (veh/h)	2	0	0	120	0	115	1	317	114	158	284	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	0	0	145	0	139	1	382	137	190	342	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	0	0	205	4	157	2	1414	501	221	2445	7
Arrive On Green	0.21	0.00	0.00	0.21	0.00	0.21	0.00	0.55	0.55	0.12	0.67	0.67
Sat Flow, veh/h	1007	0	0	748	18	734	1781	2573	911	1781	3635	11
Grp Volume(v), veh/h	2	0	0	284	0	0	1	262	257	190	167	176
Grp Sat Flow(s),veh/h/ln	1007	0	0	1499	0	0	1781	1777	1706	1781	1777	1868
Q Serve(g_s), s	0.0	0.0	0.0	21.5	0.0	0.0	0.1	9.4	9.6	12.5	4.1	4.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	22.0	0.0	0.0	0.1	9.4	9.6	12.5	4.1	4.1
Prop In Lane	1.00		0.00	0.51		0.49	1.00		0.53	1.00		0.01
Lane Grp Cap(c), veh/h	275	0	0	365	0	0	2	977	938	221	1195	1257
V/C Ratio(X)	0.01	0.00	0.00	0.78	0.00	0.00	0.41	0.27	0.27	0.86	0.14	0.14
Avail Cap(c_a), veh/h	440	0	0	563	0	0	96	977	938	423	1195	1257
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	37.2	0.0	0.0	45.7	0.0	0.0	59.9	14.3	14.3	51.5	7.1	7.1
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.7	0.0	0.0	84.5	0.7	0.7	9.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	8.5	0.0	0.0	0.1	3.6	3.6	6.0	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	0.0	0.0	49.4	0.0	0.0	144.4	14.9	15.0	60.7	7.3	7.3
LnGrp LOS	D	A	A	D	A	A	F	B	B	E	A	A
Approach Vol, veh/h		2			284			520			533	
Approach Delay, s/veh		37.2			49.4			15.2			26.4	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.4	70.5		30.1	4.7	85.2		30.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.5	36.5		41.5	6.5	58.5		41.5				
Max Q Clear Time (g_c+I1), s	14.5	11.6		2.2	2.1	6.1		24.0				
Green Ext Time (p_c), s	0.4	2.8		0.0	0.0	1.8		1.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				27.0								
HCM 6th LOS				C								

Lanes, Volumes, Timings  
6: Mission Trail & Hidden Tr.-Elberta Rd.

EAP (2021) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	2	142	12	2	11	118	685	3	9	523	10
Future Volume (vph)	50	2	142	12	2	11	118	685	3	9	523	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	90			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		565			432			733			527	
Travel Time (s)		12.8			9.8			10.0			7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	35.0	35.0		35.0	35.0		33.0	71.0		14.0	52.0	52.0
Total Split (%)	29.2%	29.2%		29.2%	29.2%		27.5%	59.2%		11.7%	43.3%	43.3%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary























Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 28 (23%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Mission Trail & Hidden Tr.-Elberta Rd.



HCM 6th Signalized Intersection Summary  
6: Mission Trail & Hidden Tr.-Elberta Rd.

EAP (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	2	142	12	2	11	118	685	3	9	523	10
Future Volume (veh/h)	50	2	142	12	2	11	118	685	3	9	523	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	2	148	12	2	11	123	714	3	9	545	10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	3	186	93	30	163	152	2752	12	19	2430	1084
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.09	0.76	0.76	0.01	0.68	0.68
Sat Flow, veh/h	1401	21	1567	1237	250	1373	1781	3629	15	1781	3554	1585
Grp Volume(v), veh/h	52	0	150	12	0	13	123	350	367	9	545	10
Grp Sat Flow(s),veh/h/ln	1401	0	1588	1237	0	1623	1781	1777	1868	1781	1777	1585
Q Serve(g_s), s	4.1	0.0	11.0	1.1	0.0	0.9	8.1	7.1	7.1	0.6	6.9	0.2
Cycle Q Clear(g_c), s	5.0	0.0	11.0	12.2	0.0	0.9	8.1	7.1	7.1	0.6	6.9	0.2
Prop In Lane	1.00		0.99	1.00		0.85	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	216	0	188	93	0	192	152	1347	1416	19	2430	1084
V/C Ratio(X)	0.24	0.00	0.80	0.13	0.00	0.07	0.81	0.26	0.26	0.47	0.22	0.01
Avail Cap(c_a), veh/h	406	0	404	261	0	413	423	1347	1416	141	2430	1084
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	0.0	51.5	57.4	0.0	47.0	53.9	4.4	4.4	59.0	7.1	6.0
Incr Delay (d2), s/veh	0.6	0.0	7.5	0.6	0.0	0.1	9.8	0.5	0.4	16.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	4.8	0.4	0.0	0.4	3.9	2.0	2.1	0.4	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	0.0	59.0	58.0	0.0	47.2	63.8	4.8	4.8	75.6	7.3	6.0
LnGrp LOS	D	A	E	E	A	D	E	A	A	E	A	A
Approach Vol, veh/h		202			25			840			564	
Approach Delay, s/veh		56.6			52.4			13.5			8.4	
Approach LOS		E			D			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	95.5		18.7	14.7	86.6		18.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	66.5		30.5	28.5	47.5		30.5				
Max Q Clear Time (g_c+I1), s	2.6	9.1		13.0	10.1	8.9		14.2				
Green Ext Time (p_c), s	0.0	4.2		0.9	0.3	3.5		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									



Lanes, Volumes, Timings  
7: Mission Tr. & Project Dwy. 2

EAP (2021) AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	65	0	944	842	40
Future Volume (vph)	0	65	0	944	842	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			50	50	
Link Distance (ft)	172			190	251	
Travel Time (s)	3.9			2.6	3.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other  
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	65	0	944	842	40
Future Vol, veh/h	0	65	0	944	842	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	68	0	994	886	42

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	464	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-
Pot Cap-1 Maneuver	0	545	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	545	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	545	-	-
HCM Lane V/C Ratio	-	0.126	-	-
HCM Control Delay (s)	-	12.6	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

Lanes, Volumes, Timings  
 8: Corydon Rd. & Project Dwy. 3

EAP (2021) AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Volume (vph)	0	779	589	78	0	29
Future Volume (vph)	0	779	589	78	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	170			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	219		238	
Travel Time (s)		13.5	5.0		5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Vol, veh/h	0	779	589	78	0	29
Future Vol, veh/h	0	779	589	78	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	820	620	82	0	31

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

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	461
HCM Lane V/C Ratio	-	-	-	0.066
HCM Control Delay (s)	-	-	-	13.4
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Lanes, Volumes, Timings  
1: Corydon St. & Palomar St.

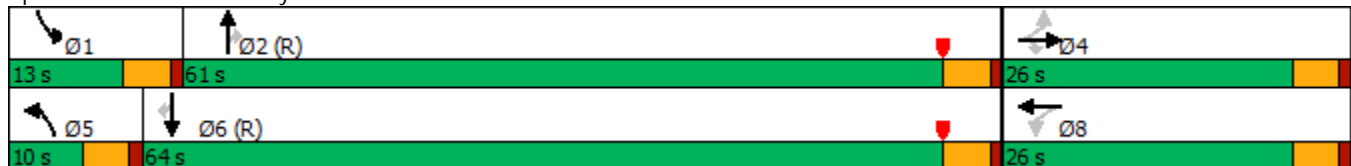
EAP (2021) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	34	12	73	63	35	5	562	29	40	493	145
Future Volume (vph)	101	34	12	73	63	35	5	562	29	40	493	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		100	150		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		657			541			638			554	
Travel Time (s)		12.8			10.5			9.7			8.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	26.0	26.0	26.0	26.0	26.0		10.0	61.0	61.0	13.0	64.0	64.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	26.0%		10.0%	61.0%	61.0%	13.0%	64.0%	64.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary
























Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Corydon St. & Palomar St.



HCM 6th Signalized Intersection Summary  
 1: Corydon St. & Palomar St.

EAP (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	101	34	12	73	63	35	5	562	29	40	493	145
Future Volume (veh/h)	101	34	12	73	63	35	5	562	29	40	493	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	106	36	13	77	66	37	5	592	31	42	519	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	290	246	260	175	98	12	1263	1071	61	1315	1115
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.01	0.68	0.68	0.03	0.70	0.70
Sat Flow, veh/h	1291	1870	1585	1356	1126	631	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	106	36	13	77	0	103	5	592	31	42	519	153
Grp Sat Flow(s),veh/h/ln	1291	1870	1585	1356	0	1757	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	8.0	1.7	0.7	5.2	0.0	5.3	0.3	15.0	0.6	2.3	11.4	3.2
Cycle Q Clear(g_c), s	13.3	1.7	0.7	6.8	0.0	5.3	0.3	15.0	0.6	2.3	11.4	3.2
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	290	246	260	0	273	12	1263	1071	61	1315	1115
V/C Ratio(X)	0.52	0.12	0.05	0.30	0.00	0.38	0.43	0.47	0.03	0.68	0.39	0.14
Avail Cap(c_a), veh/h	282	402	341	341	0	378	98	1263	1071	151	1315	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	36.4	36.0	39.3	0.0	37.9	49.5	7.7	5.4	47.7	6.1	4.9
Incr Delay (d2), s/veh	2.0	0.2	0.1	0.6	0.0	0.9	23.5	1.3	0.1	12.7	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.8	0.3	1.7	0.0	2.3	0.2	5.2	0.2	1.2	3.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	36.6	36.1	40.0	0.0	38.8	73.0	9.0	5.4	60.4	7.0	5.1
LnGrp LOS	D	D	D	D	A	D	E	A	A	E	A	A
Approach Vol, veh/h		155			180			628			714	
Approach Delay, s/veh		42.9			39.3			9.3			9.7	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	72.0		20.0	5.1	74.8		20.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	56.5		21.5	5.5	59.5		21.5				
Max Q Clear Time (g_c+I1), s	4.3	17.0		15.3	2.3	13.4		8.8				
Green Ext Time (p_c), s	0.0	4.0		0.2	0.0	3.8		0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				15.8								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
2: Mission Tr. & Project Dwy. 1/Lemon St.

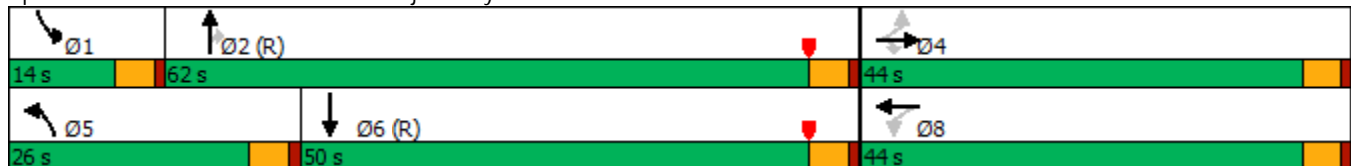
EAP (2021) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	23	55	50	48	39	129	767	148	42	663	48
Future Volume (vph)	160	23	55	50	48	39	129	767	148	42	663	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		50	100		0
Storage Lanes	0		1	0		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		260			833			251			567	
Travel Time (s)		5.9			18.9			3.4			7.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	44.0	44.0	44.0	44.0	44.0		26.0	62.0	62.0	14.0	50.0	
Total Split (%)	36.7%	36.7%	36.7%	36.7%	36.7%		21.7%	51.7%	51.7%	11.7%	41.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary






















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

Splits and Phases: 2: Mission Tr. & Project Dwy. 1/Lemon St.



HCM 6th Signalized Intersection Summary  
 2: Mission Tr. & Project Dwy. 1/Lemon St.

EAP (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	23	55	50	48	39	129	767	148	42	663	48
Future Volume (veh/h)	160	23	55	50	48	39	129	767	148	42	663	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	165	24	57	52	49	40	133	791	153	43	684	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	268	31	484	84	77	47	162	1957	873	57	1654	118
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.09	0.55	0.55	0.03	0.49	0.49
Sat Flow, veh/h	694	101	1585	140	251	155	1781	3554	1585	1781	3363	241
Grp Volume(v), veh/h	189	0	57	141	0	0	133	791	153	43	361	372
Grp Sat Flow(s),veh/h/ln	795	0	1585	546	0	0	1781	1777	1585	1781	1777	1827
Q Serve(g_s), s	0.0	0.0	3.1	6.8	0.0	0.0	8.8	15.4	5.8	2.9	15.6	15.6
Cycle Q Clear(g_c), s	27.7	0.0	3.1	34.4	0.0	0.0	8.8	15.4	5.8	2.9	15.6	15.6
Prop In Lane	0.87		1.00	0.37		0.28	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	299	0	484	208	0	0	162	1957	873	57	874	898
V/C Ratio(X)	0.63	0.00	0.12	0.68	0.00	0.00	0.82	0.40	0.18	0.76	0.41	0.41
Avail Cap(c_a), veh/h	331	0	522	245	0	0	319	1957	873	141	874	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	0.0	30.1	44.0	0.0	0.0	53.6	15.6	13.4	57.6	19.5	19.5
Incr Delay (d2), s/veh	3.3	0.0	0.1	5.9	0.0	0.0	10.0	0.6	0.4	18.7	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	1.2	4.5	0.0	0.0	4.3	5.9	2.0	1.5	6.3	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.0	30.2	49.9	0.0	0.0	63.6	16.2	13.8	76.3	20.9	20.9
LnGrp LOS	D	A	C	D	A	A	E	B	B	E	C	C
Approach Vol, veh/h		246			141			1077			776	
Approach Delay, s/veh		39.2			49.9			21.7			24.0	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	70.6		41.1	15.4	63.5		41.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	9.5	57.5		39.5	21.5	45.5		39.5				
Max Q Clear Time (g_c+I1), s	4.9	17.4		29.7	10.8	17.6		36.4				
Green Ext Time (p_c), s	0.0	6.1		0.9	0.2	4.2		0.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			26.2									
HCM 6th LOS			C									



Lanes, Volumes, Timings  
3: Mission Tr. & Corydon Rd.

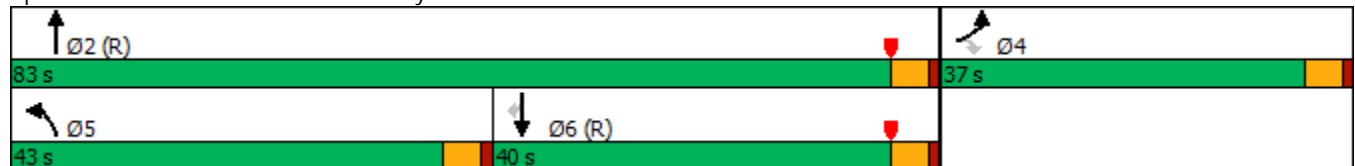
EAP (2021) PM Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	577	253	330	467	397	403
Future Volume (vph)	577	253	330	467	397	403
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125			115
Storage Lanes	2	2	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			50	50	
Link Distance (ft)	219			2217	190	
Travel Time (s)	5.0			30.2	2.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	37.0	37.0	43.0	83.0	40.0	40.0
Total Split (%)	30.8%	30.8%	35.8%	69.2%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary

















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

Splits and Phases: 3: Mission Tr. & Corydon Rd.














HCM 6th Signalized Intersection Summary  
3: Mission Tr. & Corydon Rd.

EAP (2021) PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	 	 		 	 	
Traffic Volume (veh/h)	577	253	330	467	397	403
Future Volume (veh/h)	577	253	330	467	397	403
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	589	258	337	477	405	411
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	700	565	371	2568	1694	756
Arrive On Green	0.20	0.20	0.21	0.72	0.48	0.48
Sat Flow, veh/h	3456	2790	1781	3647	3647	1585
Grp Volume(v), veh/h	589	258	337	477	405	411
Grp Sat Flow(s),veh/h/ln	1728	1395	1781	1777	1777	1585
Q Serve(g_s), s	19.7	9.8	22.2	5.2	8.1	22.0
Cycle Q Clear(g_c), s	19.7	9.8	22.2	5.2	8.1	22.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	700	565	371	2568	1694	756
V/C Ratio(X)	0.84	0.46	0.91	0.19	0.24	0.54
Avail Cap(c_a), veh/h	936	756	571	2568	1694	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	46.0	42.1	46.4	5.3	18.5	22.2
Incr Delay (d2), s/veh	5.3	0.6	11.9	0.1	0.3	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	7.8	10.6	1.6	3.2	8.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.3	42.6	58.3	5.5	18.9	25.0
LnGrp LOS	D	D	E	A	B	C
Approach Vol, veh/h	847			814	816	
Approach Delay, s/veh	48.7			27.3	21.9	
Approach LOS	D			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		91.2		28.8	29.5	61.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		78.5		32.5	38.5	35.5
Max Q Clear Time (g_c+I1), s		7.2		21.7	24.2	24.0
Green Ext Time (p_c), s		3.0		2.6	0.8	3.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			32.9			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
4: Mission Tr. & Bundy Cyn.. Rd.

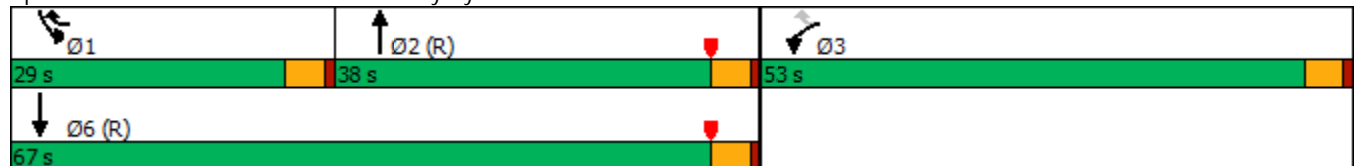
EAP (2021) PM Peak Hour

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	148	407	347	56	297	301
Future Volume (vph)	148	407	347	56	297	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	295	
Storage Lanes	1	1		0	2	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	1549		1368			2217
Travel Time (s)	35.2		18.7			30.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	3	1	2		1	6
Permitted Phases		3				
Detector Phase	3	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		9.5	22.5
Total Split (s)	53.0	29.0	38.0		29.0	67.0
Total Split (%)	44.2%	24.2%	31.7%		24.2%	55.8%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 33.3 (28%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 50  
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Mission Tr. & Bundy Cyn.. Rd.



HCM 6th Signalized Intersection Summary  
4: Mission Tr. & Bundy Cyn.. Rd.

EAP (2021) PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 		 	 
Traffic Volume (veh/h)	148	407	347	56	297	301
Future Volume (veh/h)	148	407	347	56	297	301
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	447	381	62	326	331
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	487	617	1527	246	400	2315
Arrive On Green	0.27	0.27	0.50	0.50	0.12	0.65
Sat Flow, veh/h	1781	1585	3157	494	3456	3647
Grp Volume(v), veh/h	163	447	220	223	326	331
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1781	1728	1777
Q Serve(g_s), s	8.8	28.8	8.5	8.6	11.1	4.3
Cycle Q Clear(g_c), s	8.8	28.8	8.5	8.6	11.1	4.3
Prop In Lane	1.00	1.00		0.28	1.00	
Lane Grp Cap(c), veh/h	487	617	885	888	400	2315
V/C Ratio(X)	0.33	0.72	0.25	0.25	0.82	0.14
Avail Cap(c_a), veh/h	720	824	885	888	706	2315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.99	0.99	0.97	0.97
Uniform Delay (d), s/veh	34.9	31.2	17.2	17.3	51.8	8.0
Incr Delay (d2), s/veh	0.4	2.1	0.7	0.7	4.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	11.2	3.4	3.5	4.8	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.3	33.3	17.9	17.9	55.8	8.2
LnGrp LOS	D	C	B	B	E	A
Approach Vol, veh/h	610		443			657
Approach Delay, s/veh	33.8		17.9			31.8
Approach LOS	C		B			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.4	64.3			82.7	37.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	24.5	33.5			62.5	48.5
Max Q Clear Time (g_c+I1), s	13.1	10.6			6.3	30.8
Green Ext Time (p_c), s	0.8	2.2			2.0	2.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			28.9			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
5: Mission Tr. & Canyon Dr.

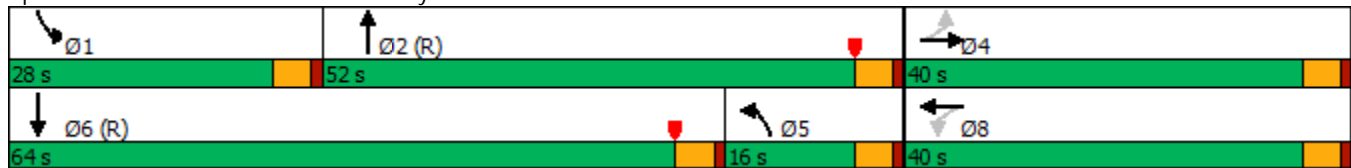
EAP (2021) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1	7	23	0	67	4	331	22	51	388	3
Future Volume (vph)	6	1	7	23	0	67	4	331	22	51	388	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	155		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		272			1270			2015			1368	
Travel Time (s)		6.2			28.9			27.5			18.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	40.0	40.0		40.0	40.0		16.0	52.0		28.0	64.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		13.3%	43.3%		23.3%	53.3%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary




















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 68 (57%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Mission Tr. & Canyon Dr.



HCM 6th Signalized Intersection Summary  
5: Mission Tr. & Canyon Dr.

EAP (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1	7	23	0	67	4	331	22	51	388	3
Future Volume (veh/h)	6	1	7	23	0	67	4	331	22	51	388	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	1	8	25	0	73	4	360	24	55	422	3
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	23	65	61	9	94	555	2594	172	72	1793	13
Arrive On Green	0.08	0.08	0.08	0.08	0.00	0.08	0.31	0.77	0.77	0.04	0.50	0.50
Sat Flow, veh/h	524	290	813	291	108	1165	1781	3382	225	1781	3617	26
Grp Volume(v), veh/h	16	0	0	98	0	0	4	188	196	55	207	218
Grp Sat Flow(s),veh/h/ln	1627	0	0	1564	0	0	1781	1777	1830	1781	1777	1866
Q Serve(g_s), s	0.0	0.0	0.0	4.9	0.0	0.0	0.2	3.3	3.3	3.7	8.0	8.0
Cycle Q Clear(g_c), s	1.0	0.0	0.0	7.3	0.0	0.0	0.2	3.3	3.3	3.7	8.0	8.0
Prop In Lane	0.44		0.50	0.26		0.74	1.00		0.12	1.00		0.01
Lane Grp Cap(c), veh/h	174	0	0	163	0	0	555	1363	1404	72	881	925
V/C Ratio(X)	0.09	0.00	0.00	0.60	0.00	0.00	0.01	0.14	0.14	0.77	0.24	0.24
Avail Cap(c_a), veh/h	491	0	0	494	0	0	555	1363	1404	349	881	925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	51.2	0.0	0.0	54.1	0.0	0.0	28.5	3.6	3.6	57.0	17.3	17.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	3.5	0.0	0.0	0.0	0.2	0.2	15.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	3.1	0.0	0.0	0.1	0.9	1.0	1.9	3.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.0	0.0	57.6	0.0	0.0	28.5	3.9	3.9	72.0	17.9	17.8
LnGrp LOS	D	A	A	E	A	A	C	A	A	E	B	B
Approach Vol, veh/h		16			98			388			480	
Approach Delay, s/veh		51.5			57.6			4.1			24.1	
Approach LOS		D			E			A			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	96.5		14.1	41.9	64.0		14.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	23.5	47.5		35.5	11.5	59.5		35.5				
Max Q Clear Time (g_c+I1), s	5.7	5.3		3.0	2.2	10.0		9.3				
Green Ext Time (p_c), s	0.1	2.0		0.0	0.0	2.3		0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.0								
HCM 6th LOS				B								

Lanes, Volumes, Timings  
6: Mission Trail & Hidden Tr.-Elberta Rd.

EAP (2021) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	5	56	9	2	16	104	694	9	27	707	44
Future Volume (vph)	31	5	56	9	2	16	104	694	9	27	707	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	90			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		565			432			733			527	
Travel Time (s)		12.8			9.8			10.0			7.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	28.0	28.0		28.0	28.0		30.0	76.0		16.0	62.0	62.0
Total Split (%)	23.3%	23.3%		23.3%	23.3%		25.0%	63.3%		13.3%	51.7%	51.7%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary























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

Splits and Phases: 6: Mission Trail & Hidden Tr.-Elberta Rd.



HCM 6th Signalized Intersection Summary  
6: Mission Trail & Hidden Tr.-Elberta Rd.

EAP (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	5	56	9	2	16	104	694	9	27	707	44
Future Volume (veh/h)	31	5	56	9	2	16	104	694	9	27	707	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	5	60	10	2	17	112	746	10	29	760	47
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	8	93	91	11	91	140	2867	38	46	2651	1183
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.08	0.80	0.80	0.03	0.75	0.75
Sat Flow, veh/h	1393	123	1480	1337	170	1441	1781	3590	48	1781	3554	1585
Grp Volume(v), veh/h	33	0	65	10	0	19	112	369	387	29	760	47
Grp Sat Flow(s),veh/h/ln	1393	0	1604	1337	0	1611	1781	1777	1862	1781	1777	1585
Q Serve(g_s), s	2.8	0.0	4.7	0.9	0.0	1.3	7.4	6.3	6.3	1.9	8.3	0.9
Cycle Q Clear(g_c), s	4.1	0.0	4.7	5.6	0.0	1.3	7.4	6.3	6.3	1.9	8.3	0.9
Prop In Lane	1.00		0.92	1.00		0.89	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	132	0	101	91	0	102	140	1419	1487	46	2651	1183
V/C Ratio(X)	0.25	0.00	0.64	0.11	0.00	0.19	0.80	0.26	0.26	0.63	0.29	0.04
Avail Cap(c_a), veh/h	317	0	314	269	0	315	379	1419	1487	171	2651	1183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	0.0	54.9	57.6	0.0	53.3	54.4	3.1	3.1	57.9	4.9	4.0
Incr Delay (d2), s/veh	1.0	0.0	6.6	0.5	0.0	0.9	10.2	0.4	0.4	13.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	2.1	0.3	0.0	0.6	3.6	1.5	1.6	1.0	2.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	0.0	61.5	58.2	0.0	54.2	64.6	3.5	3.5	71.2	5.2	4.1
LnGrp LOS	E	A	E	E	A	D	E	A	A	E	A	A
Approach Vol, veh/h		98			29			868			836	
Approach Delay, s/veh		59.7			55.5			11.4			7.4	
Approach LOS		E			E			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	100.3		12.1	13.9	94.0		12.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	11.5	71.5		23.5	25.5	57.5		23.5				
Max Q Clear Time (g_c+I1), s	3.9	8.3		6.7	9.4	10.3		7.6				
Green Ext Time (p_c), s	0.0	4.5		0.3	0.2	5.5		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				12.9								
HCM 6th LOS				B								



Lanes, Volumes, Timings  
7: Mission Tr. & Project Dwy. 2

EAP (2021) PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	63	0	1044	737	32
Future Volume (vph)	0	63	0	1044	737	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			50	50	
Link Distance (ft)	172			190	251	
Travel Time (s)	3.9			2.6	3.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other  
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	63	0	1044	737	32
Future Vol, veh/h	0	63	0	1044	737	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	66	0	1099	776	34

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	405	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.94	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.32	-
Pot Cap-1 Maneuver	0	595	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			
Mov Cap-1 Maneuver	-	595	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	595	-	-
HCM Lane V/C Ratio	-	0.111	-	-
HCM Control Delay (s)	-	11.8	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

Lanes, Volumes, Timings  
 8: Corydon Rd. & Project Dwy. 3

EAP (2021) PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Volume (vph)	0	830	669	66	0	29
Future Volume (vph)	0	830	669	66	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	170			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	219		238	
Travel Time (s)		13.5	5.0		5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Vol, veh/h	0	830	669	66	0	29
Future Vol, veh/h	0	830	669	66	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	874	704	69	0	31

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

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	416
HCM Lane V/C Ratio	-	-	-	0.073
HCM Control Delay (s)	-	-	-	14.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

## **APPENDIX F**

**EXISTING PLUS AMBIENT PLUS PROJECT PLUS CUMULATIVE (2021) CONDITIONS  
INTERSECTION ANALYSIS CALCULATION WORKSHEETS**



Lanes, Volumes, Timings  
1: Corydon St. & Palomar St.

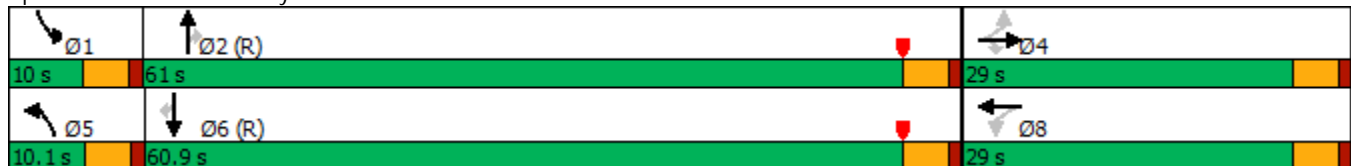
EAPC (2021) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	71	22	79	28	52	18	619	81	24	490	104
Future Volume (vph)	172	71	22	79	28	52	18	619	81	24	490	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		100	150		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		657			541			638			554	
Travel Time (s)		12.8			10.5			9.7			8.4	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	29.0	29.0	29.0	29.0	29.0		10.1	61.0	61.0	10.0	60.9	60.9
Total Split (%)	29.0%	29.0%	29.0%	29.0%	29.0%		10.1%	61.0%	61.0%	10.0%	60.9%	60.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary
























Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Corydon St. & Palomar St.



HCM 6th Signalized Intersection Summary  
1: Corydon St. & Palomar St.

EAPC (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	71	22	79	28	52	18	619	81	24	490	104
Future Volume (veh/h)	172	71	22	79	28	52	18	619	81	24	490	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	215	89	28	99	35	65	22	774	101	30	612	130
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	311	436	369	320	137	254	41	1129	957	50	1139	965
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.02	0.60	0.60	0.03	0.61	0.61
Sat Flow, veh/h	1295	1870	1585	1275	586	1088	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	215	89	28	99	0	100	22	774	101	30	612	130
Grp Sat Flow(s),veh/h/ln	1295	1870	1585	1275	0	1674	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	16.2	3.8	1.4	6.8	0.0	4.9	1.2	28.0	2.7	1.7	19.0	3.5
Cycle Q Clear(g_c), s	21.1	3.8	1.4	10.6	0.0	4.9	1.2	28.0	2.7	1.7	19.0	3.5
Prop In Lane	1.00		1.00	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	436	369	320	0	390	41	1129	957	50	1139	965
V/C Ratio(X)	0.69	0.20	0.08	0.31	0.00	0.26	0.54	0.69	0.11	0.60	0.54	0.13
Avail Cap(c_a), veh/h	326	458	388	336	0	410	100	1129	957	98	1139	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	30.9	29.9	35.2	0.0	31.3	48.3	13.4	8.4	48.0	11.4	8.3
Incr Delay (d2), s/veh	5.8	0.2	0.1	0.5	0.0	0.3	10.7	3.4	0.2	10.7	1.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	1.7	0.5	2.1	0.0	2.0	0.6	10.9	0.9	0.9	7.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	31.1	30.0	35.7	0.0	31.6	59.0	16.8	8.6	58.8	13.2	8.6
LnGrp LOS	D	C	C	D	A	C	E	B	A	E	B	A
Approach Vol, veh/h		332			199			897			772	
Approach Delay, s/veh		40.5			33.7			16.9			14.2	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	64.9		27.8	6.8	65.4		27.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	56.5		24.5	5.6	56.4		24.5				
Max Q Clear Time (g_c+I1), s	3.7	30.0		23.1	3.2	21.0		12.6				
Green Ext Time (p_c), s	0.0	5.8		0.2	0.0	4.5		0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				21.0								
HCM 6th LOS				C								



Lanes, Volumes, Timings  
2: Mission Tr. & Project Dwy. 1/Lemon St.

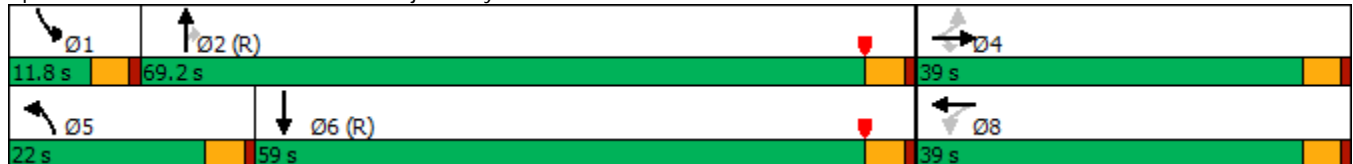
EAPC (2021) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	176	22	60	60	58	34	157	1028	102	37	1150	59
Future Volume (vph)	176	22	60	60	58	34	157	1028	102	37	1150	59
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		50	100		0
Storage Lanes	0		1	0		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		260			833			251			567	
Travel Time (s)		5.9			18.9			3.4			7.7	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	39.0	39.0	39.0	39.0	39.0		22.0	69.2	69.2	11.8	59.0	
Total Split (%)	32.5%	32.5%	32.5%	32.5%	32.5%		18.3%	57.7%	57.7%	9.8%	49.2%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary






















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 35.4 (30%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Mission Tr. & Project Dwy. 1/Lemon St.



HCM 6th Signalized Intersection Summary  
2: Mission Tr. & Project Dwy. 1/Lemon St.

EAPC (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	22	60	60	58	34	157	1028	102	37	1150	59
Future Volume (veh/h)	176	22	60	60	58	34	157	1028	102	37	1150	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	200	25	68	68	66	39	178	1168	116	42	1307	67
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	25	456	45	39	13	206	2021	901	56	1666	85
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.12	0.57	0.57	0.03	0.48	0.48
Sat Flow, veh/h	706	88	1585	13	137	44	1781	3554	1585	1781	3439	176
Grp Volume(v), veh/h	225	0	68	173	0	0	178	1168	116	42	674	700
Grp Sat Flow(s),veh/h/ln	795	0	1585	194	0	0	1781	1777	1585	1781	1777	1839
Q Serve(g_s), s	0.0	0.0	3.8	0.7	0.0	0.0	11.8	25.3	4.1	2.8	37.8	38.0
Cycle Q Clear(g_c), s	33.8	0.0	3.8	34.5	0.0	0.0	11.8	25.3	4.1	2.8	37.8	38.0
Prop In Lane	0.89		1.00	0.39		0.23	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	285	0	456	97	0	0	206	2021	901	56	860	890
V/C Ratio(X)	0.79	0.00	0.15	1.78	0.00	0.00	0.86	0.58	0.13	0.75	0.78	0.79
Avail Cap(c_a), veh/h	285	0	456	97	0	0	260	2021	901	108	860	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	0.0	31.8	44.3	0.0	0.0	52.1	16.6	12.0	57.7	25.7	25.8
Incr Delay (d2), s/veh	13.8	0.0	0.1	387.2	0.0	0.0	20.9	1.2	0.3	18.1	7.1	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	0.0	1.5	13.4	0.0	0.0	6.3	9.6	1.4	1.5	16.3	16.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	0.0	32.0	431.5	0.0	0.0	73.0	17.8	12.3	75.7	32.8	32.7
LnGrp LOS	E	A	C	F	A	A	E	B	B	E	C	C
Approach Vol, veh/h		293			173			1462			1416	
Approach Delay, s/veh		50.6			431.5			24.1			34.0	
Approach LOS		D			F			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.3	72.7		39.0	18.4	62.6		39.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.3	64.7		34.5	17.5	54.5		34.5				
Max Q Clear Time (g_c+I1), s	4.8	27.3		35.8	13.8	40.0		36.5				
Green Ext Time (p_c), s	0.0	9.9		0.0	0.1	7.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			51.7									
HCM 6th LOS			D									

Lanes, Volumes, Timings  
3: Mission Tr. & Corydon Rd.

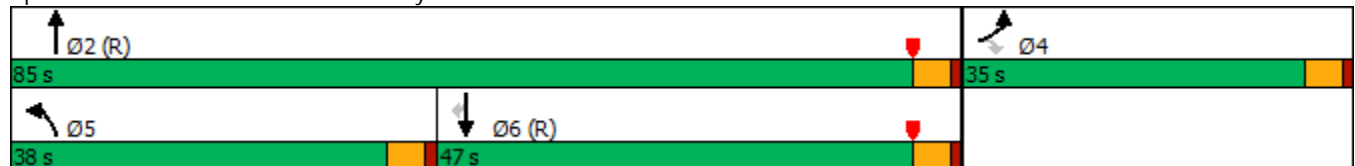
EAPC (2021) AM Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	590	279	306	695	827	468
Future Volume (vph)	590	279	306	695	827	468
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125			115
Storage Lanes	2	2	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			50	50	
Link Distance (ft)	219			2217	190	
Travel Time (s)	5.0			30.2	2.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	35.0	35.0	38.0	85.0	47.0	47.0
Total Split (%)	29.2%	29.2%	31.7%	70.8%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary













Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 70  
 Control Type: Actuated-Coordinated

Splits and Phases: 3: Mission Tr. & Corydon Rd.



HCM 6th Signalized Intersection Summary  
3: Mission Tr. & Corydon Rd.

EAPC (2021) AM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	590	279	306	695	827	468
Future Volume (veh/h)	590	279	306	695	827	468
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	656	310	340	772	919	520
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	756	610	372	2510	1634	729
Arrive On Green	0.22	0.22	0.21	0.71	0.46	0.46
Sat Flow, veh/h	3456	2790	1781	3647	3647	1585
Grp Volume(v), veh/h	656	310	340	772	919	520
Grp Sat Flow(s),veh/h/ln	1728	1395	1781	1777	1777	1585
Q Serve(g_s), s	22.0	11.7	22.4	9.8	22.6	31.6
Cycle Q Clear(g_c), s	22.0	11.7	22.4	9.8	22.6	31.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	756	610	372	2510	1634	729
V/C Ratio(X)	0.87	0.51	0.91	0.31	0.56	0.71
Avail Cap(c_a), veh/h	878	709	497	2510	1634	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.82	0.82	1.00	1.00
Uniform Delay (d), s/veh	45.2	41.2	46.4	6.6	23.6	26.1
Incr Delay (d2), s/veh	8.3	0.7	15.2	0.3	1.4	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	9.3	11.1	3.1	9.1	12.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.5	41.9	61.6	6.9	25.0	31.9
LnGrp LOS	D	D	E	A	C	C
Approach Vol, veh/h	966			1112	1439	
Approach Delay, s/veh	49.8			23.6	27.5	
Approach LOS	D			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		89.3		30.7	29.6	59.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		80.5		30.5	33.5	42.5
Max Q Clear Time (g_c+11), s		11.8		24.0	24.4	33.6
Green Ext Time (p_c), s		5.5		2.3	0.7	4.9
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			32.4			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
4: Mission Tr. & Bundy Cyn.. Rd.

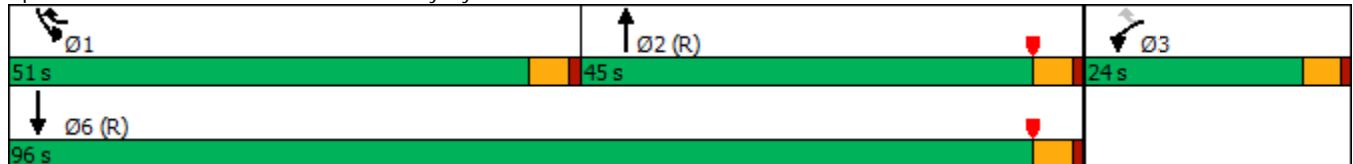
EAPC (2021) AM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	110	483	477	138	557	487
Future Volume (vph)	110	483	477	138	557	487
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	295	
Storage Lanes	1	1		0	2	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	1549		1368			2217
Travel Time (s)	35.2		18.7			30.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Shared Lane Traffic (%)						
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	3	1	2		1	6
Permitted Phases		3				
Detector Phase	3	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		9.5	22.5
Total Split (s)	24.0	51.0	45.0		51.0	96.0
Total Split (%)	20.0%	42.5%	37.5%		42.5%	80.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag		Lead	Lag		Lead	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 15 (13%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Mission Tr. & Bundy Cyn.. Rd.



HCM 6th Signalized Intersection Summary  
 4: Mission Tr. & Bundy Cyn.. Rd.

EAPC (2021) AM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 		 	 
Traffic Volume (veh/h)	110	483	477	138	557	487
Future Volume (veh/h)	110	483	477	138	557	487
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	122	537	530	153	619	541
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	289	587	1409	405	718	2710
Arrive On Green	0.16	0.16	0.52	0.52	0.21	0.76
Sat Flow, veh/h	1781	1585	2817	783	3456	3647
Grp Volume(v), veh/h	122	537	345	338	619	541
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1729	1728	1777
Q Serve(g_s), s	7.4	19.5	14.0	14.1	20.7	5.1
Cycle Q Clear(g_c), s	7.4	19.5	14.0	14.1	20.7	5.1
Prop In Lane	1.00	1.00		0.45	1.00	
Lane Grp Cap(c), veh/h	289	587	919	895	718	2710
V/C Ratio(X)	0.42	0.92	0.38	0.38	0.86	0.20
Avail Cap(c_a), veh/h	289	587	919	895	1339	2710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.90	0.90	0.82	0.82
Uniform Delay (d), s/veh	45.2	36.0	17.3	17.4	45.9	4.0
Incr Delay (d2), s/veh	1.0	19.1	1.1	1.1	2.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	17.8	5.5	5.4	8.8	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.2	55.1	18.4	18.5	48.6	4.1
LnGrp LOS	D	E	B	B	D	A
Approach Vol, veh/h	659		683			1160
Approach Delay, s/veh	53.5		18.4			27.8
Approach LOS	D		B			C
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	29.4	66.6			96.0	24.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	46.5	40.5			91.5	19.5
Max Q Clear Time (g_c+I1), s	22.7	16.1			7.1	21.5
Green Ext Time (p_c), s	2.2	3.8			3.5	0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			32.0			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
5: Mission Tr. & Canyon Dr.

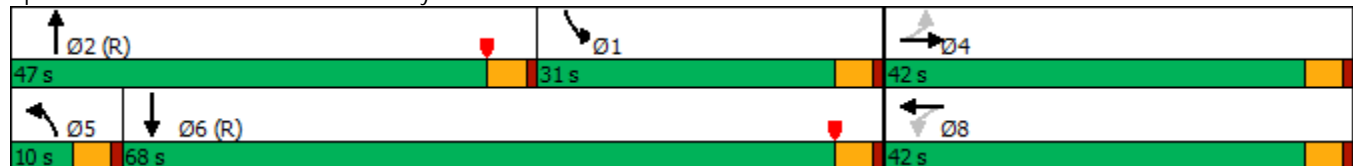
EAPC (2021) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	0	120	0	121	1	487	114	162	422	1
Future Volume (vph)	2	0	0	120	0	121	1	487	114	162	422	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	155		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		272			1270			2015			1368	
Travel Time (s)		6.2			28.9			27.5			18.7	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	42.0	42.0		42.0	42.0		10.0	47.0		31.0	68.0	
Total Split (%)	35.0%	35.0%		35.0%	35.0%		8.3%	39.2%		25.8%	56.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary



















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

Splits and Phases: 5: Mission Tr. & Canyon Dr.



HCM 6th Signalized Intersection Summary  
5: Mission Tr. & Canyon Dr.

EAPC (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	0	0	120	0	121	1	487	114	162	422	1
Future Volume (veh/h)	2	0	0	120	0	121	1	487	114	162	422	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	0	0	145	0	146	1	587	137	195	508	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	0	0	203	4	163	2	1013	236	564	2436	5
Arrive On Green	0.22	0.00	0.00	0.22	0.00	0.22	0.00	0.35	0.35	0.32	0.67	0.67
Sat Flow, veh/h	984	0	0	730	19	753	1781	2861	666	1781	3639	7
Grp Volume(v), veh/h	2	0	0	291	0	0	1	364	360	195	248	261
Grp Sat Flow(s),veh/h/ln	984	0	0	1502	0	0	1781	1777	1750	1781	1777	1869
Q Serve(g_s), s	0.0	0.0	0.0	22.0	0.0	0.0	0.1	20.0	20.1	10.1	6.4	6.4
Cycle Q Clear(g_c), s	0.2	0.0	0.0	22.6	0.0	0.0	0.1	20.0	20.1	10.1	6.4	6.4
Prop In Lane	1.00		0.00	0.50		0.50	1.00		0.38	1.00		0.00
Lane Grp Cap(c), veh/h	273	0	0	370	0	0	2	629	620	564	1190	1251
V/C Ratio(X)	0.01	0.00	0.00	0.79	0.00	0.00	0.41	0.58	0.58	0.35	0.21	0.21
Avail Cap(c_a), veh/h	392	0	0	514	0	0	82	629	620	564	1190	1251
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	36.9	0.0	0.0	45.6	0.0	0.0	59.9	31.5	31.5	31.5	7.6	7.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	5.4	0.0	0.0	84.5	3.8	3.9	0.4	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	8.9	0.0	0.0	0.1	8.8	8.7	4.2	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.0	0.0	51.0	0.0	0.0	144.4	35.3	35.4	31.8	8.0	8.0
LnGrp LOS	D	A	A	D	A	A	F	D	D	C	A	A
Approach Vol, veh/h		2			291			725			704	
Approach Delay, s/veh		36.9			51.0			35.5			14.6	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.5	47.0		30.5	4.7	84.8		30.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	26.5	42.5		37.5	5.5	63.5		37.5				
Max Q Clear Time (g_c+I1), s	12.1	22.1		2.2	2.1	8.4		24.6				
Green Ext Time (p_c), s	0.4	3.9		0.0	0.0	2.8		1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				29.6								
HCM 6th LOS				C								



Lanes, Volumes, Timings  
6: Mission Trail & Hidden Tr.-Elberta Rd.

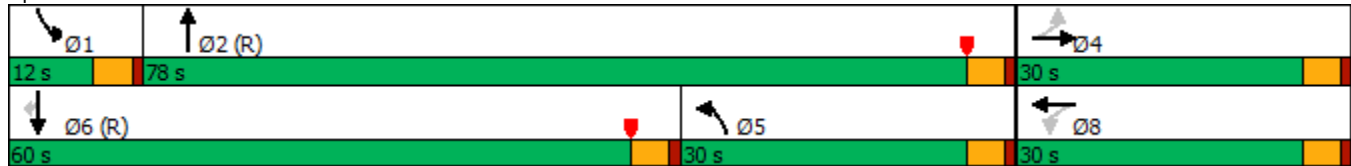
EAPC (2021) AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	2	166	12	2	11	134	1110	3	9	751	11
Future Volume (vph)	53	2	166	12	2	11	134	1110	3	9	751	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	90			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		565			432			733			527	
Travel Time (s)		12.8			9.8			10.0			7.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	30.0	30.0		30.0	30.0		30.0	78.0		12.0	60.0	60.0
Total Split (%)	25.0%	25.0%		25.0%	25.0%		25.0%	65.0%		10.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lag	Lag		Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary























Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 12 (10%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Mission Trail & Hidden Tr.-Elberta Rd.



HCM 6th Signalized Intersection Summary  
6: Mission Trail & Hidden Tr.-Elberta Rd.

EAPC (2021) AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	2	166	12	2	11	134	1110	3	9	751	11
Future Volume (veh/h)	53	2	166	12	2	11	134	1110	3	9	751	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	2	173	12	2	11	140	1156	3	9	782	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	2	210	92	33	184	519	2701	7	19	1644	733
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.29	0.74	0.74	0.01	0.46	0.46
Sat Flow, veh/h	1401	18	1570	1210	250	1373	1781	3636	9	1781	3554	1585
Grp Volume(v), veh/h	55	0	175	12	0	13	140	565	594	9	782	11
Grp Sat Flow(s),veh/h/ln	1401	0	1588	1210	0	1623	1781	1777	1869	1781	1777	1585
Q Serve(g_s), s	4.3	0.0	12.9	1.2	0.0	0.8	7.3	14.4	14.4	0.6	18.2	0.5
Cycle Q Clear(g_c), s	5.1	0.0	12.9	14.0	0.0	0.8	7.3	14.4	14.4	0.6	18.2	0.5
Prop In Lane	1.00		0.99	1.00		0.85	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	238	0	213	92	0	217	519	1320	1388	19	1644	733
V/C Ratio(X)	0.23	0.00	0.82	0.13	0.00	0.06	0.27	0.43	0.43	0.47	0.48	0.02
Avail Cap(c_a), veh/h	348	0	337	187	0	345	519	1320	1388	111	1644	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	50.6	57.4	0.0	45.4	32.7	5.8	5.8	59.0	22.2	17.5
Incr Delay (d2), s/veh	0.5	0.0	8.7	0.6	0.0	0.1	0.3	1.0	1.0	16.6	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	5.6	0.4	0.0	0.3	3.1	4.3	4.5	0.4	7.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	0.0	59.3	58.0	0.0	45.5	33.0	6.8	6.8	75.6	23.2	17.5
LnGrp LOS	D	A	E	E	A	D	C	A	A	E	C	B
Approach Vol, veh/h		230			25			1299			802	
Approach Delay, s/veh		56.6			51.5			9.6			23.7	
Approach LOS		E			D			A			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	93.6		20.6	39.4	60.0		20.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	73.5		25.5	25.5	55.5		25.5				
Max Q Clear Time (g_c+I1), s	2.6	16.4		14.9	9.3	20.2		16.0				
Green Ext Time (p_c), s	0.0	8.4		0.8	0.3	5.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			19.5									
HCM 6th LOS			B									

Lanes, Volumes, Timings  
7: Mission Tr. & Project Dwy. 2

EAPC (2021) AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	65	0	1285	1230	40
Future Volume (vph)	0	65	0	1285	1230	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			50	50	
Link Distance (ft)	172			190	251	
Travel Time (s)	3.9			2.6	3.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other  
Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	65	0	1285	1230	40
Future Vol, veh/h	0	65	0	1285	1230	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	68	0	1353	1295	42

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	669	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.94	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.32	-
Pot Cap-1 Maneuver	0	400	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	400	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	400	-	-
HCM Lane V/C Ratio	-	0.171	-	-
HCM Control Delay (s)	-	15.8	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-

Lanes, Volumes, Timings  
 8: Corydon Rd. & Project Dwy. 3

EAPC (2021) AM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Volume (vph)	0	869	696	78	0	29
Future Volume (vph)	0	869	696	78	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	170			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	219		238	
Travel Time (s)		13.5	5.0		5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Vol, veh/h	0	869	696	78	0	29
Future Vol, veh/h	0	869	696	78	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	915	733	82	0	31

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 774
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.23
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.319
Pot Cap-1 Maneuver	0	-	- 0 398
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 398
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	398
HCM Lane V/C Ratio	-	-	-	0.077
HCM Control Delay (s)	-	-	-	14.8
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.2

Lanes, Volumes, Timings  
1: Corydon St. & Palomar St.

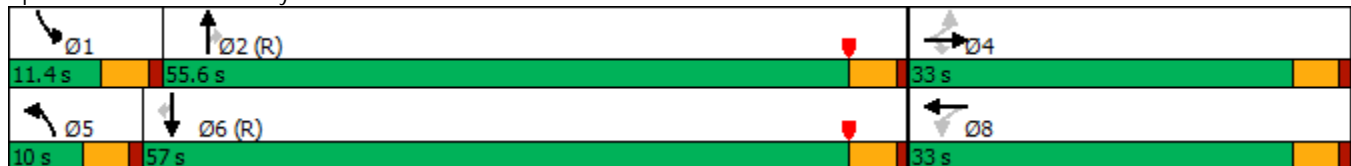
EAPC (2021) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	196	34	12	73	63	37	5	568	29	42	500	218
Future Volume (vph)	196	34	12	73	63	37	5	568	29	42	500	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	100		100	150		150
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		657			541			638			554	
Travel Time (s)		12.8			10.5			9.7			8.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			6
Detector Phase	4	4	4	8	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	33.0	33.0	33.0	33.0	33.0		10.0	55.6	55.6	11.4	57.0	57.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%		10.0%	55.6%	55.6%	11.4%	57.0%	57.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag							Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary
























Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated

Splits and Phases: 1: Corydon St. & Palomar St.



HCM 6th Signalized Intersection Summary  
1: Corydon St. & Palomar St.

EAPC (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	196	34	12	73	63	37	5	568	29	42	500	218
Future Volume (veh/h)	196	34	12	73	63	37	5	568	29	42	500	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	36	13	77	66	39	5	598	31	44	526	229
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	429	364	363	253	149	12	1123	952	63	1177	997
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.01	0.60	0.60	0.04	0.63	0.63
Sat Flow, veh/h	1289	1870	1585	1356	1102	651	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	206	36	13	77	0	105	5	598	31	44	526	229
Grp Sat Flow(s),veh/h/ln	1289	1870	1585	1356	0	1753	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	15.6	1.5	0.6	4.7	0.0	4.9	0.3	18.8	0.8	2.4	14.5	6.3
Cycle Q Clear(g_c), s	20.5	1.5	0.6	6.2	0.0	4.9	0.3	18.8	0.8	2.4	14.5	6.3
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	429	364	363	0	402	12	1123	952	63	1177	997
V/C Ratio(X)	0.68	0.08	0.04	0.21	0.00	0.26	0.43	0.53	0.03	0.70	0.45	0.23
Avail Cap(c_a), veh/h	376	533	452	438	0	500	98	1123	952	123	1177	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	30.3	29.9	32.7	0.0	31.6	49.5	11.7	8.1	47.7	9.6	8.0
Incr Delay (d2), s/veh	3.5	0.1	0.0	0.3	0.0	0.3	23.5	1.8	0.1	13.2	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.7	0.2	1.6	0.0	2.1	0.2	7.2	0.3	1.3	5.3	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	30.4	30.0	33.0	0.0	31.9	73.0	13.5	8.2	60.9	10.8	8.6
LnGrp LOS	D	C	C	C	A	C	E	B	A	E	B	A
Approach Vol, veh/h		255			182			634			799	
Approach Delay, s/veh		41.0			32.4			13.8			12.9	
Approach LOS		D			C			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	64.5		27.4	5.1	67.4		27.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.9	51.1		28.5	5.5	52.5		28.5				
Max Q Clear Time (g_c+I1), s	4.4	20.8		22.5	2.3	16.5		8.2				
Green Ext Time (p_c), s	0.0	3.9		0.4	0.0	4.1		0.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				18.9								
HCM 6th LOS				B								



Lanes, Volumes, Timings  
2: Mission Tr. & Project Dwy. 1/Lemon St.

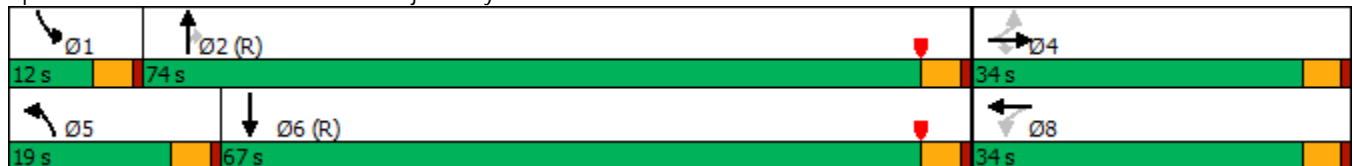
EAPC (2021) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	23	55	57	48	48	129	1521	155	48	1388	48
Future Volume (vph)	160	23	55	57	48	48	129	1521	155	48	1388	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		50	100		0
Storage Lanes	0		1	0		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		260			833			251			567	
Travel Time (s)		5.9			18.9			3.4			7.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8					2			
Detector Phase	4	4	4	8	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	34.0	34.0	34.0	34.0	34.0		19.0	74.0	74.0	12.0	67.0	
Total Split (%)	28.3%	28.3%	28.3%	28.3%	28.3%		15.8%	61.7%	61.7%	10.0%	55.8%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag							Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	

Intersection Summary






















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Mission Tr. & Project Dwy. 1/Lemon St.



















HCM 6th Signalized Intersection Summary  
 2: Mission Tr. & Project Dwy. 1/Lemon St.

EAPC (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	23	55	57	48	48	129	1521	155	48	1388	48
Future Volume (veh/h)	160	23	55	57	48	48	129	1521	155	48	1388	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	165	24	57	59	49	49	133	1568	160	49	1431	49
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	24	390	44	36	17	160	2154	961	63	1935	66
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.09	0.61	0.61	0.04	0.55	0.55
Sat Flow, veh/h	680	99	1585	10	145	70	1781	3554	1585	1781	3506	120
Grp Volume(v), veh/h	189	0	57	157	0	0	133	1568	160	49	724	756
Grp Sat Flow(s),veh/h/ln	779	0	1585	226	0	0	1781	1777	1585	1781	1777	1849
Q Serve(g_s), s	0.0	0.0	3.4	0.5	0.0	0.0	8.8	37.3	5.3	3.3	37.0	37.2
Cycle Q Clear(g_c), s	29.0	0.0	3.4	29.5	0.0	0.0	8.8	37.3	5.3	3.3	37.0	37.2
Prop In Lane	0.87		1.00	0.38		0.31	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	248	0	390	97	0	0	160	2154	961	63	981	1020
V/C Ratio(X)	0.76	0.00	0.15	1.62	0.00	0.00	0.83	0.73	0.17	0.78	0.74	0.74
Avail Cap(c_a), veh/h	248	0	390	97	0	0	215	2154	961	111	981	1020
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	0.0	35.4	45.9	0.0	0.0	53.7	16.7	10.3	57.4	20.3	20.4
Incr Delay (d2), s/veh	13.1	0.0	0.2	322.5	0.0	0.0	18.0	2.2	0.4	18.1	5.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	1.3	11.6	0.0	0.0	4.6	13.8	1.8	1.7	15.0	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	0.0	35.6	368.4	0.0	0.0	71.7	18.8	10.7	75.5	25.3	25.2
LnGrp LOS	E	A	D	F	A	A	E	B	B	E	C	C
Approach Vol, veh/h		246			157			1861			1529	
Approach Delay, s/veh		52.9			368.4			21.9			26.9	
Approach LOS		D			F			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	77.2		34.0	15.3	70.7		34.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	7.5	69.5		29.5	14.5	62.5		29.5				
Max Q Clear Time (g_c+I1), s	5.3	39.3		31.0	10.8	39.2		31.5				
Green Ext Time (p_c), s	0.0	14.3		0.0	0.1	10.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			40.3									
HCM 6th LOS			D									

Lanes, Volumes, Timings  
3: Mission Tr. & Corydon Rd.

EAPC (2021) PM Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	 	 		 	 	
Traffic Volume (vph)	729	297	364	1076	980	551
Future Volume (vph)	729	297	364	1076	980	551
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125			115
Storage Lanes	2	2	1			0
Taper Length (ft)	90		90			
Right Turn on Red		Yes				Yes
Link Speed (mph)	30			50	50	
Link Distance (ft)	219			2217	190	
Travel Time (s)	5.0			30.2	2.6	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Shared Lane Traffic (%)						
Turn Type	Prot	Perm	Prot	NA	NA	Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	36.0	36.0	37.0	84.0	47.0	47.0
Total Split (%)	30.0%	30.0%	30.8%	70.0%	39.2%	39.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max

Intersection Summary













Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated

Splits and Phases: 3: Mission Tr. & Corydon Rd.



HCM 6th Signalized Intersection Summary  
3: Mission Tr. & Corydon Rd.

EAPC (2021) PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	729	297	364	1076	980	551
Future Volume (veh/h)	729	297	364	1076	980	551
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	744	303	371	1098	1000	562
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	832	672	401	2432	1497	668
Arrive On Green	0.24	0.24	0.23	0.68	0.42	0.42
Sat Flow, veh/h	3456	2790	1781	3647	3647	1585
Grp Volume(v), veh/h	744	303	371	1098	1000	562
Grp Sat Flow(s),veh/h/ln	1728	1395	1781	1777	1777	1585
Q Serve(g_s), s	25.0	11.1	24.5	16.9	27.2	38.1
Cycle Q Clear(g_c), s	25.0	11.1	24.5	16.9	27.2	38.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	832	672	401	2432	1497	668
V/C Ratio(X)	0.89	0.45	0.92	0.45	0.67	0.84
Avail Cap(c_a), veh/h	907	732	482	2432	1497	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.40	0.40	1.00	1.00
Uniform Delay (d), s/veh	44.1	38.8	45.5	8.7	28.0	31.1
Incr Delay (d2), s/veh	10.7	0.5	10.6	0.2	2.4	12.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	8.9	11.5	5.4	11.3	15.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.8	39.3	56.1	8.9	30.3	43.3
LnGrp LOS	D	D	E	A	C	D
Approach Vol, veh/h	1047			1469	1562	
Approach Delay, s/veh	50.3			20.8	35.0	
Approach LOS	D			C	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		86.6		33.4	31.5	55.1
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		79.5		31.5	32.5	42.5
Max Q Clear Time (g_c+I1), s		18.9		27.0	26.5	40.1
Green Ext Time (p_c), s		9.0		1.9	0.6	1.7
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			33.8			
HCM 6th LOS			C			

Lanes, Volumes, Timings  
4: Mission Tr. & Bundy Cyn.. Rd.

EAPC (2021) PM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	282	844	552	178	706	519
Future Volume (vph)	282	844	552	178	706	519
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	295	
Storage Lanes	1	1		0	2	
Taper Length (ft)	90				90	
Right Turn on Red		Yes		Yes		
Link Speed (mph)	30		50			50
Link Distance (ft)	1549		1368			2217
Travel Time (s)	35.2		18.7			30.2
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Shared Lane Traffic (%)						
Turn Type	Prot	pm+ov	NA		Prot	NA
Protected Phases	3	1	2		1	6
Permitted Phases		3				
Detector Phase	3	1	2		1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	9.5	22.5		9.5	22.5
Total Split (s)	30.0	53.0	37.0		53.0	90.0
Total Split (%)	25.0%	44.2%	30.8%		44.2%	75.0%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag		Lag	Lead		Lag	
Lead-Lag Optimize?		Yes	Yes		Yes	
Recall Mode	None	None	C-Max		None	C-Max

Intersection Summary















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 83.3 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Mission Tr. & Bundy Cyn.. Rd.



HCM 6th Signalized Intersection Summary  
4: Mission Tr. & Bundy Cyn.. Rd.

EAPC (2021) PM Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 		 	 
Traffic Volume (veh/h)	282	844	552	178	706	519
Future Volume (veh/h)	282	844	552	178	706	519
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	310	927	607	196	776	570
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	356	977	716	231	1439	2576
Arrive On Green	0.20	0.20	0.27	0.27	0.42	0.72
Sat Flow, veh/h	1781	1585	2736	852	3456	3647
Grp Volume(v), veh/h	310	927	408	395	776	570
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1717	1728	1777
Q Serve(g_s), s	20.2	14.8	26.1	26.2	20.3	6.3
Cycle Q Clear(g_c), s	20.2	14.8	26.1	26.2	20.3	6.3
Prop In Lane	1.00	1.00		0.50	1.00	
Lane Grp Cap(c), veh/h	356	977	481	465	1439	2576
V/C Ratio(X)	0.87	0.95	0.85	0.85	0.54	0.22
Avail Cap(c_a), veh/h	379	997	481	465	1439	2576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.74	0.74
Uniform Delay (d), s/veh	46.5	21.2	41.4	41.4	26.3	5.4
Incr Delay (d2), s/veh	18.4	17.3	16.2	16.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	26.7	13.0	12.7	7.9	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.8	38.5	57.6	58.3	26.6	5.6
LnGrp LOS	E	D	E	E	C	A
Approach Vol, veh/h	1237		803			1346
Approach Delay, s/veh	45.1		57.9			17.7
Approach LOS	D		E			B
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	54.5	37.0			91.5	28.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	48.5	32.5			85.5	25.5
Max Q Clear Time (g_c+I1), s	22.3	28.2			8.3	22.2
Green Ext Time (p_c), s	2.9	1.8			3.7	1.8
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			37.3			
HCM 6th LOS			D			

Lanes, Volumes, Timings  
5: Mission Tr. & Canyon Dr.

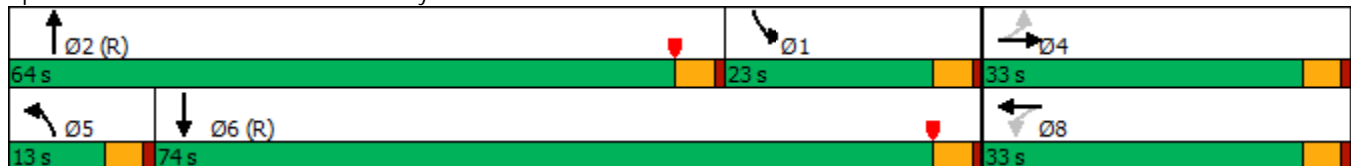
EAPC (2021) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	1	7	23	0	81	4	654	22	62	728	3
Future Volume (vph)	6	1	7	23	0	81	4	654	22	62	728	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	155		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		272			1270			2015			1368	
Travel Time (s)		6.2			28.9			27.5			18.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	
Total Split (s)	33.0	33.0		33.0	33.0		13.0	64.0		23.0	74.0	
Total Split (%)	27.5%	27.5%		27.5%	27.5%		10.8%	53.3%		19.2%	61.7%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary



















Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated

Splits and Phases: 5: Mission Tr. & Canyon Dr.



HCM 6th Signalized Intersection Summary  
5: Mission Tr. & Canyon Dr.

EAPC (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1	7	23	0	81	4	654	22	62	728	3
Future Volume (veh/h)	6	1	7	23	0	81	4	654	22	62	728	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	1	8	25	0	88	4	711	24	67	791	3
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	24	70	59	9	110	9	1739	59	537	2877	11
Arrive On Green	0.09	0.09	0.09	0.09	0.00	0.09	0.01	0.50	0.50	0.30	0.79	0.79
Sat Flow, veh/h	507	268	775	246	101	1222	1781	3508	118	1781	3631	14
Grp Volume(v), veh/h	16	0	0	113	0	0	4	360	375	67	387	407
Grp Sat Flow(s),veh/h/ln	1550	0	0	1569	0	0	1781	1777	1849	1781	1777	1868
Q Serve(g_s), s	0.0	0.0	0.0	5.4	0.0	0.0	0.3	15.4	15.4	3.3	6.9	6.9
Cycle Q Clear(g_c), s	1.0	0.0	0.0	8.4	0.0	0.0	0.3	15.4	15.4	3.3	6.9	6.9
Prop In Lane	0.44		0.50	0.22		0.78	1.00		0.06	1.00		0.01
Lane Grp Cap(c), veh/h	183	0	0	178	0	0	9	881	917	537	1408	1480
V/C Ratio(X)	0.09	0.00	0.00	0.64	0.00	0.00	0.43	0.41	0.41	0.12	0.27	0.27
Avail Cap(c_a), veh/h	399	0	0	405	0	0	126	881	917	537	1408	1480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	50.2	0.0	0.0	53.5	0.0	0.0	59.5	19.1	19.1	30.4	3.3	3.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	3.7	0.0	0.0	28.7	1.4	1.4	0.1	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	3.5	0.0	0.0	0.2	6.2	6.5	1.4	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.0	0.0	57.2	0.0	0.0	88.2	20.5	20.5	30.5	3.7	3.7
LnGrp LOS	D	A	A	E	A	A	F	C	C	C	A	A
Approach Vol, veh/h		16			113			739			861	
Approach Delay, s/veh		50.4			57.2			20.9			5.8	
Approach LOS		D			E			C			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.7	64.0		15.3	5.1	99.6		15.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.5	59.5		28.5	8.5	69.5		28.5				
Max Q Clear Time (g_c+I1), s	5.3	17.4		3.0	2.3	8.9		10.4				
Green Ext Time (p_c), s	0.1	4.3		0.0	0.0	4.8		0.5				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				16.0								
HCM 6th LOS				B								



Lanes, Volumes, Timings  
6: Mission Trail & Hidden Tr.-Elberta Rd.

EAPC (2021) PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	5	98	9	2	16	148	1293	9	27	1443	50
Future Volume (vph)	40	5	98	9	2	16	148	1293	9	27	1443	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	100		0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (ft)	90			90			90			60		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			50			50	
Link Distance (ft)		565			432			733			527	
Travel Time (s)		12.8			9.8			10.0			7.2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								6
Detector Phase	4	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	22.5	22.5		22.5	22.5		24.0	86.7		10.8	73.5	73.5
Total Split (%)	18.8%	18.8%		18.8%	18.8%		20.0%	72.3%		9.0%	61.3%	61.3%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag							Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	C-Max

Intersection Summary























Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow  
 Natural Cycle: 80  
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Mission Trail & Hidden Tr.-Elberta Rd.



HCM 6th Signalized Intersection Summary  
6: Mission Trail & Hidden Tr.-Elberta Rd.

EAPC (2021) PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	5	98	9	2	16	148	1293	9	27	1443	50
Future Volume (veh/h)	40	5	98	9	2	16	148	1293	9	27	1443	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	5	105	10	2	17	159	1390	10	29	1552	54
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	7	140	91	16	132	188	2785	20	46	2454	1094
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.11	0.77	0.77	0.03	0.69	0.69
Sat Flow, veh/h	1393	73	1524	1283	170	1441	1781	3617	26	1781	3554	1585
Grp Volume(v), veh/h	43	0	110	10	0	19	159	683	717	29	1552	54
Grp Sat Flow(s),veh/h/ln	1393	0	1596	1283	0	1611	1781	1777	1866	1781	1777	1585
Q Serve(g_s), s	3.5	0.0	8.1	0.9	0.0	1.3	10.5	17.2	17.2	1.9	28.8	1.3
Cycle Q Clear(g_c), s	4.8	0.0	8.1	9.0	0.0	1.3	10.5	17.2	17.2	1.9	28.8	1.3
Prop In Lane	1.00		0.95	1.00		0.89	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	173	0	146	91	0	148	188	1368	1437	46	2454	1094
V/C Ratio(X)	0.25	0.00	0.75	0.11	0.00	0.13	0.85	0.50	0.50	0.63	0.63	0.05
Avail Cap(c_a), veh/h	254	0	239	166	0	242	289	1368	1437	94	2454	1094
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	53.2	57.6	0.0	50.1	52.7	5.2	5.2	57.9	10.2	6.0
Incr Delay (d2), s/veh	0.7	0.0	7.6	0.5	0.0	0.4	13.0	1.3	1.2	13.4	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	3.5	0.3	0.0	0.5	5.2	4.8	5.0	1.0	9.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	0.0	60.8	58.1	0.0	50.5	65.7	6.5	6.4	71.2	11.5	6.0
LnGrp LOS	D	A	E	E	A	D	E	A	A	E	B	A
Approach Vol, veh/h		153			29			1559			1635	
Approach Delay, s/veh		58.6			53.1			12.5			12.3	
Approach LOS		E			D			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	96.9		15.5	17.2	87.3		15.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	6.3	82.2		18.0	19.5	69.0		18.0				
Max Q Clear Time (g_c+I1), s	3.9	19.2		10.1	12.5	30.8		11.0				
Green Ext Time (p_c), s	0.0	11.9		0.4	0.2	14.9		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			14.8									
HCM 6th LOS			B									

Lanes, Volumes, Timings  
7: Mission Tr. & Project Dwy. 2

EAPC (2021) PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	63	0	1805	1468	32
Future Volume (vph)	0	63	0	1805	1468	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	30			50	50	
Link Distance (ft)	172			190	251	
Travel Time (s)	3.9			2.6	3.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
<b>Intersection Summary</b>						
Area Type:	Other					
Control Type:	Unsignalized					

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	63	0	1805	1468	32
Future Vol, veh/h	0	63	0	1805	1468	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	66	0	1900	1545	34

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	790	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.94	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.32	-
Pot Cap-1 Maneuver	0	333	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	333	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	-	333	-
HCM Lane V/C Ratio	-	0.199	-
HCM Control Delay (s)	-	18.5	-
HCM Lane LOS	-	C	-
HCM 95th %tile Q(veh)	-	0.7	-

Lanes, Volumes, Timings  
8: Corydon Rd. & Project Dwy. 3

EAPC (2021) PM Peak Hour



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Volume (vph)	0	1026	852	66	0	29
Future Volume (vph)	0	1026	852	66	0	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	170			0	0	0
Storage Lanes	0			0	0	1
Taper Length (ft)	90				90	
Link Speed (mph)		30	30		30	
Link Distance (ft)		593	219		238	
Travel Time (s)		13.5	5.0		5.4	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑			↑
Traffic Vol, veh/h	0	1026	852	66	0	29
Future Vol, veh/h	0	1026	852	66	0	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1080	897	69	0	31

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	-	0	-	0	932
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.23
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.319
Pot Cap-1 Maneuver	0	-	-	-	322
Stage 1	0	-	-	-	-
Stage 2	0	-	-	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	322
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.3
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	322
HCM Lane V/C Ratio	-	-	-	0.095
HCM Control Delay (s)	-	-	-	17.3
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.3