

Access Analysis Study

For

***MARIJUANA OUTLET PROJECT
10715 SORRENTIO VALLEY ROAD***

City of San Diego Project Number: 527802

Submitted To: Sure Felt LLC

Submitted By:

***Darnell & Associates, Inc.
4411 Mercury Street, Suite 207A
San Diego, California 92111***

Revised: March 6, 2018
February 28, 2018
February 9, 2018
January 23, 2018

Darnell & Associates, Inc.

March 6, 2018

Belinda Smith
Sure Felt LLC
10751 Sorrento Valley Road
San Diego, CA. 92121

D&A Ref. No: 171203

Subject: Access Analysis Study for the Proposed Marijuana Outlet located at 10715 Sorrento Valley Road, San Diego, CA. 92121 City Project Number 527802

Dear Ms. Smith:

In accordance with your authorization, Darnell & Associates, Inc. (D&A) has prepared the access analysis study for the proposed Marijuana Outlet Project to respond to the LDR-Transportation Development comments.

This study analyzes the traffic impacts associated with the proposed project on the project access, Sorrento Valley Road roadway segments, and the Sorrento Valley Road intersections at Arbutus and Sorrento Valley Boulevard under:

- Existing Conditions;
- Existing Plus Project Conditions;
- Near Term (2018) Conditions, and
- Near Term (2018) Plus Project Conditions.

If you have any questions or require additional information, please feel free to contact this office.

Sincerely,

DARNELL & ASSOCIATES, INC.



Bill E. Darnell, P.E.

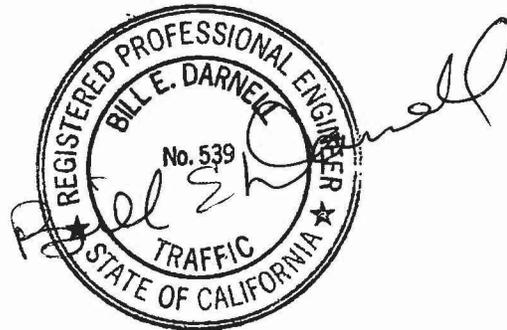
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3/6/2018

Date

ACCESS ANALYSIS STUDY

For

SORRENTO VALLEY MARIJUANA OUTLET

AT

10715 SORRENTO VALLEY ROAD

In the City of San Diego

CITY PROJECT NUMBER; 527802

Prepared for:

Sure Felt LLC

10951 Sorrento Valley Road
San Diego, CA. 92121

Prepared by:

DARNELL & ASSOCIATES, INC.

4411 Mercury Street, Suite 207A
San Diego, California 92111
619-233-9373

March 6, 2018

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SECTION I – EXECUTIVE SUMMARY

- The project proposes a Conditional Use Permit to operate a 3,697 square foot Marijuana Outlet Use and a 703 square foot Commercial Office Use within an existing 5,451 square foot building that was previously operated as a financial institution use. 1,051 square feet of the existing building will remain vacant for the duration of the CUP.
- The project is expected to generate 933 average daily trips, with 84 AM peak hour trips (split 43 inbound and 41 outbound), and 149 PM peak hour trips (split 74 inbound and 75 outbound).
- Based on the City of San Diego guidelines, the access analysis study was focused on:
 - Sorrento Valley Road between Sorrento Valley Boulevard and Carroll Canyon Road;
 - Sorrento Valley Road/ Arbutus Street;
 - Sorrento Valley Road/Sorrento Valley Boulevard; and
 - Sorrento Valley Road Project Access/Sorrento Valley Road.
- The access analysis analyzed roadways and intersections under the following conditions:
 - Existing Conditions;
 - Existing Plus Project Conditions;
 - Near Term (2018) Plus Cumulative Projects; and
 - Near Term (2018) Plus Cumulative Projects Plus Project Conditions.
- The project analysis does not identify any significant traffic impacts at roadway segments for Existing Conditions and Near Term (2018) Conditions with and without the project. The roadways analyzed will all operate at LOS “C” or better with the development of the project for each condition.
- The project analysis does not identify any significant traffic impacts for each intersection analyzed for Existing Conditions and Near Term (2018) Conditions with and without the project. Each of the intersections analyzed will all operate at LOS “D” or better with the development of the project for each condition. Therefore the project is not required to provide any mitigation.
- Analysis of project impacts concludes that the project does not exceed City of San Diego significance thresholds, and therefore the project is not required to provide mitigation.
- Review of the project on-site circulation was found to be satisfactory.

SECTION II - INTRODUCTION

PROJECT DESCRIPTION

The project proposes a Conditional Use Permit (CUP) to operate a 3,761 square foot Marijuana Outlet and a 703 square foot Commercial Office Use within an existing 5,451 square foot building that was previously operated as a Financial Institution (Credit Union Facility). For the duration of the CUP, 1,051 square feet of the building will remain vacant and not to be occupied at any time during the entire term, for any reason whatsoever, including storage space. **Figure 1** is a Vicinity Map showing the location of the Project. **Figure 2** presents the project site plan.

TRIP GENERATION

The project is expected to generate 933 daily, 84 AM peak hour trips (43 in, 41 out) and 149 PM peak hour trips (74 in, 75 out).

SCENARIOS STUDIED

The following traffic scenarios were analyzed in this report:

Existing Conditions refers to that condition which exists on the ground today, including existing traffic counts and existing lane configurations at intersections and on roadway segments.

Existing Plus Project Conditions refers to that condition which adds project traffic to existing traffic volumes and existing configurations at intersection and roadway segments.

Near Term (No Project) refers to that condition which adds cumulative project traffic to existing traffic volumes to represent the 2018 Opening Day for the project. This scenario does not include the proposed project.

Near Term Plus Project refers to that condition with the proposed project traffic added onto the Near Term traffic volumes.

REPORT ORGANIZATION

Section I presents the Executive Summary, Section II of the report is the introduction and presents the project scenarios studied and analysis methodology. Section III evaluates the existing roadway characteristics surrounding the project area. Section IV examines proposed project trip generation and distribution assumptions. Section V identifies cumulative projects to be analyzed. Section VI analyzes the traffic impacts associated with Existing Conditions, Existing Conditions Plus Project, Near Term (2018) Conditions and Near Term (2018) Plus Project Conditions with and without the project. Section VII addresses project access, Bicycles, Parking and Transit. Section VIII summarizes the report's findings and conclusions.



LEGEND



— PROJECT SITE

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FIGURE 1

VICINITY MAP

ANALYSIS METHODOLOGY

Synchro, version 8.0, was utilized to analyze the morning and afternoon peak hour conditions of the intersections in the project vicinity. The signalized intersection methodology defines level of service (LOS) based on delay using variables such as lane configuration, traffic volumes, and signal timing. The unsignalized intersection methodology defines LOS based on the longest delay experienced by any single movement. Since the Synchro program calculates the average delay per vehicle, there may be instances where the Synchro analysis will show a reduction in delay with the addition of more traffic. This phenomenon occurs when the additional traffic is added to a movement that experiences a shorter amount of delay, thereby decreasing the intersection's average delay per vehicle (i.e. a larger amount of vehicles will have to wait a shorter time while only a few vehicles have to wait an extended period of time). Synchro 8 and Synchro 10 software are similar and provide the same or similar functions and analysis tools. Both of the softwares provide the following:

- HCM Methodology
- Intersection Capacity Utilization (ICU) Methodology;
- HCM 2010 Methodology;
- Use of Aerials;
- Improved Lane Change Capabilities (SIM Traffic); and
- Records Videos of Simulation (SIM Traffic).

It should be noted, however, that even if the addition of traffic results in a lower average intersection delay per vehicle, the total delay at the intersection will gradually increase as more traffic is added to the intersection. The measure of effectiveness utilized in this report is the average intersection delay, not the total intersection delay.

Table 1 - Level of Service Ranges		
LOS	Intersections	
	Signalized Avg Control Delay (sec/veh) ¹	Unsignalized Avg Control Delay (sec/veh) ¹
A	Less than or equal to 10.0	Less than or equal to 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	Greater than 80.0	Greater than 50.1

¹ The delay ranges shown are based on the 2000 Highway Capacity Manual (HCM)
LOS = Level of Service; mph; sec/veh=seconds per vehicle, Avg = Average

Roadway segments were analyzed by comparing the daily traffic volumes to the capacity of the roadway to determine the ratio of volume to capacity (V/C). Capacities are obtained from the City of San Diego Traffic Impact Manual, as shown in Table 2.

Table 2 - Roadway Classifications, Levels of Service & Average Daily Traffic						
Street Classifications	Lanes	Level of Service				
		A	B	C	D	E
Freeway	8	60,000	84,000	120,000	140,000	150,000
Freeway	6	45,000	63,000	90,000	110,000	120,000
Freeway	4	30,000	42,000	60,000	70,000	80,000
Expressway	6	30,000	42,000	60,000	70,000	80,000
Prime Arterial	6	25,000	35,000	50,000	55,000	60,000
Major Arterial	6	20,000	31,500	40,000	45,000	50,000
Major Arterial	4	15,000	24,500	35,000	40,000	40,000
Collector	4	10,000	14,000	20,000	25,000	30,000
Collector (no center lane)	4					
(continuous)	2	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2	4,000	5,500	7,500	9,000	10,000
Collector (commercial-industrial)	2	2,500	3,500	5,000	6,500	8,000
Collector (multi-family)	2	2,500	3,500	5,000	6,500	8,000
Sub-Collector (single-family)	2	---	---	2,200	---	---

zzz = approximate recommended ADT based on City of San Diego Street Design Manual

NOTES

- The volumes and average daily level of service listed above are only intended as a general planning guideline
- Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators/attractors.
Source: City of San Diego Traffic Impact Study Manual- Table 2, Page 8
- The 5-Lane Major roadway LOS "E" Capacity was established based on the incremental lane capacity of 5,000 daily vehicles per lane that result with a 6-Lane Major Arterial LOS "E" Roadway Capacity of 50,000. When compared to a 4-Lane Major Arterial Capacity of 40,000 listed on Table 2. The additional 10,000 LOS "E" Capacity was divided to provide 5,000 ADT additional capacity.

SECTION III - EXISTING CONDITIONS

This section of the access analysis is intended to assess the existing conditions of the roadways and intersections within the vicinity of the project to determine travel flow and/or delay difficulties, if any, that exist prior to adding the traffic generated by the proposed project. The existing conditions analysis establishes a base condition that is used to assess the other scenarios discussed in this report.

Darnell & Associates, Inc. (D&A) conducted a field review of the area surrounding the project in December 2017 and January 2018. The existing roadway geometries are illustrated in **Figure 3**. Daily and peak hour traffic counts are shown in **Figure 4**. Copies of the daily and peak hour counts are included in Appendix A.

EXISTING ROADWAY CHARACTERISTICS

Sorrento Valley Road is classified as a 4-lane Major Road in the Torrey Pines Community Plan. The roadway is improved with a raised median, bike lanes, bus stops, and two (2) lanes northbound and two (2) lanes southbound from Sorrento Valley Boulevard to Carroll Canyon Road. Parking is restricted and the posted speed limit is 45 MPH.

Roadway segment counts were taken on Wednesday, January 3, 2018, as were the counts at Sorrento Valley Road/Arbutus Street. Existing counts at the intersection of Sorrento Valley Road/Sorrento Valley Boulevard were taken on Thursday, January 11, 2018.

KEY ROADWAY SEGMENTS AND INTERSECTIONS

Roadway Segments:

To establish the roadway segments and intersections to be analyzed, the City's Traffic Impact Study Manual requirements, of analyzing locations where the project adds 50 or more directional peak hour trips was used plus all known congested or potentially congested locations that may be impacted by the proposed development. The analysis identified the following segments that the project would add 50 or more directional peak hour trips. The study area roadway segments to be analyzed are as follows:

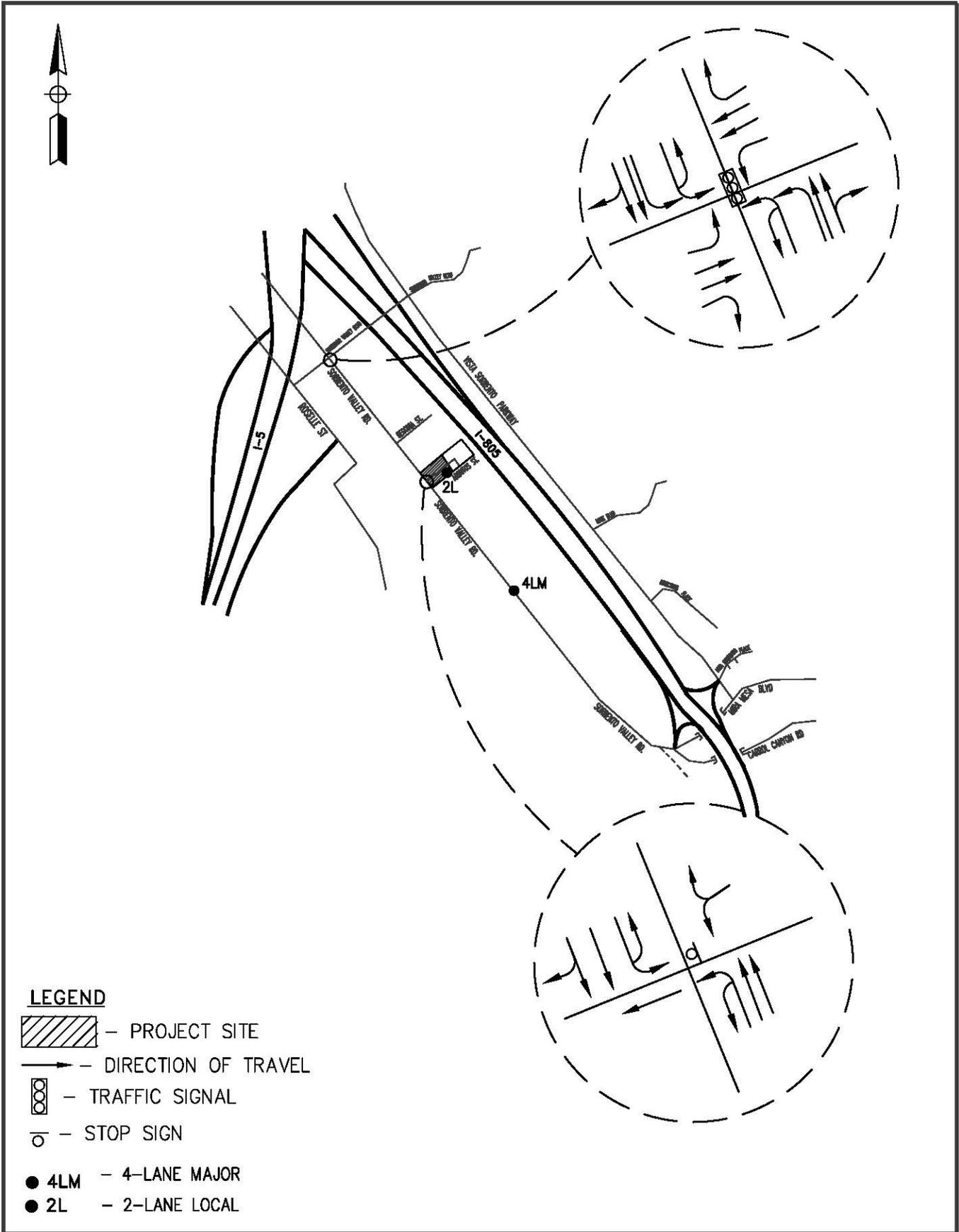
- Sorrento Valley Road between Sorrento Valley Boulevard and Arbutus Street; and
- Sorrento Valley Road between Arbutus Street and Carroll Canyon Road.

Intersections:

The study area intersections to be analyzed:

- 1) Sorrento Valley Road at Arbutus Street; and
- 2) Sorrento Valley Road at Sorrento Valley Boulevard.

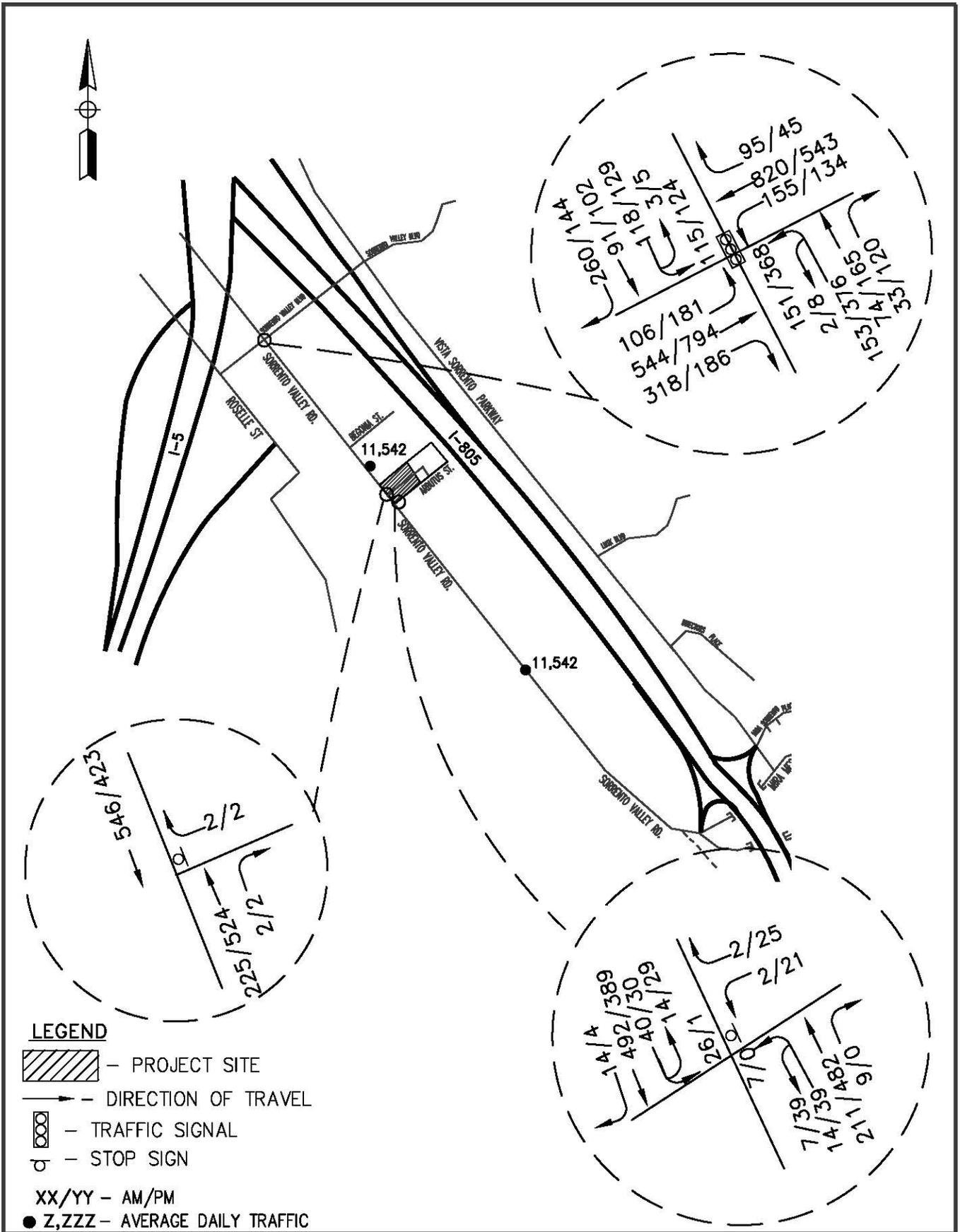
The existing daily and peak hour traffic counts are included in Appendix A.



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FIGURE 3
EXISTING CONDITIONS



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FIGURE 4
EXISTING TRAFFIC VOLUMES

EXISTING LEVEL of SERVICE CONDITIONS

EXISTING TRAFFIC CONDITIONS

Existing roadway classifications and intersection geometrics are presented on **Figure 3**. **Figure 4** presents the existing (2018) daily and AM/PM peak hour traffic volumes. The u-turns at each intersection are also shown on **Figure 4**. The u-turns shown at the intersections on **Figure 4** are generated due to the raised median in Sorrento Valley Road that requires vehicles to make a u-turn to reach their destination.

Roadway Segments

Table 3 – Summary of Existing Roadway Level of Service					
Roadway Segments	Existing				
	Classification	Capacity (a) ADT	ADT	LOS	v/c
Sorrento Valley Road					
Arbutus Street to Sorrento Valley Boulevard	4-Lane Major	40,000	11,542	A	0.29
South of Arbutus Street.	4-Lane Major	40,000	11,542 (b)	A	0.29

(a) Capacity is based on the upper limit of LOS E per the City of San Diego Level of Service Thresholds for a 4-Lane Major Road.
 (b) The volumes for Sorrento Valley Road South of Arbutus Street are estimated since separate counts were not conducted.
 ADT = Average Daily Traffic; LOS = Level of Service. Existing traffic count data was collected on Wednesday, January 3, 2018.

The roadway segments were analyzed under existing conditions shown on **Figures 3 and 4**. The roadway segments daily levels of service are shown in Table 3. As shown in Table 3, all roadway segments operate at LOS “A”.

Intersections

The study intersections were analyzed under existing conditions shown on **Figures 3 and 4**. The intersection AM and PM peak hour levels of service are summarized in Table 4. As shown in Table 4, all of the study intersections operate at an acceptable LOS “D” or better during the AM and PM peak hours under existing conditions. As shown on Table 4, the project driveway (which is restricted to right in/out only operation due to the existing median installed on Sorrento Valley Road) operates at an acceptable LOS “A” level of service. The Synchro worksheets are presented in Appendix A.

The Sorrento Valley Road/Arbutus Street intersection is presently designed to provide access to the existing one way parking lot on the west side of Sorrento Valley Road between Arbutus Street and Sorrento Valley Boulevard. The parking lot serves the existing Sorrento Valley Transit Center located at the northwest corner of Sorrento Valley Road and Sorrento Valley Boulevard.

Table 4 – Summary of Existing Intersection Level of Service

Intersection	Traffic Control	Existing Conditions			
		AM PEAK		PM PEAK	
		Delay veh/sec	LOS	Delay veh/sec	LOS
1. Sorrento Valley Road at Sorrento Valley Boulevard	Signal	46.6	D	41.5	D
2. Sorrento Valley Road at Arbutus Street	TWSC	12.1	B	16.7	C
3. Sorrento Valley Road at Project Dwy	OWSC	9.0	A	10.1	A
Delay= seconds of delay per vehicles; veh/sec=seconds per vehicle, Avg = Average LOS = Level of Services; OWSC = One Way Stop Control, TWSC = Two Way Stop Control.					

The Sorrento Valley Road at Sorrento Valley Boulevard intersection traffic signal controls were updated with an adaptive signal control system in approximately late 2016 or early 2017. The adaptive control system operates to minimize delays at the intersection based on demands rather than operating on a fixed signal cycle program. Therefore, in Synchro 8 the signal was modeled as “actuated” with optimization of the signal operation for existing conditions and the subsequent addition of project traffic and cumulative projects analysis.

SECTION IV -PROJECT RELATED CONDITIONS

TRIP GENERATION

Trip generation for the proposed project was calculated based on the trip rates used in the Trip Generation Manual published by the City of San Diego and the ITE Trip Generation for Marijuana Dispensaries.

The proposed project will be located in an existing 5,451 square foot building. The Marijuana Outlet will encompass 3,697 square feet of the building. The project will be conditioned to provide 703 square feet of Commercial Office Space and 1,051 square feet of vacant space for the duration of the proposed Conditional Use Permit.

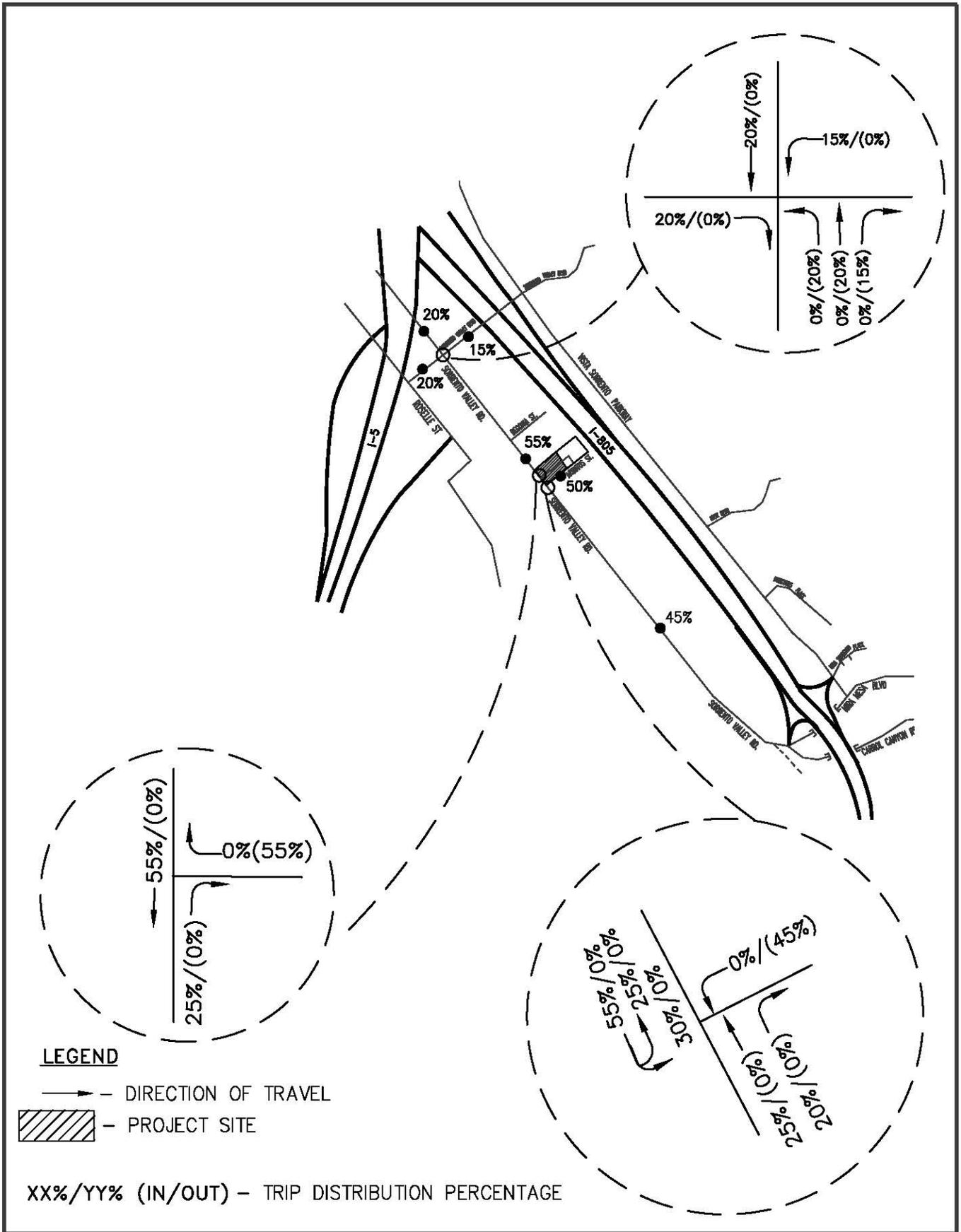
Table 5 summarizes the AM and PM peak hour and average daily trip (ADT) generation for the proposed project. The project is expected to generate 933 average daily trips, with 84 AM peak hour trips (43 in, 41 out), and 149 PM peak hour trips (74 in, 75 out).

Table 5 – Project Trip Generation								
Trip Generation Rates								
Land Use	Daily Rate	AM Peak			PM Peak			
		% of Daily	In/Out Ratio		% of Daily	In/Out Ratio		
Marijuana Outlet	250/KSF	9%	(5:5)		16%	(5:5)		
Commercial Office Use	$\text{Ln}(T) = 0.756 \text{Ln}(x) + 3.95$	13%	(9:1)		14%	(2:8)		
Trip Generation								
Land Use	Density	ADT	AM Peak			PM Peak		
			In	Out	Total	In	Out	Total
Marijuana Outlet	3,367 S.F	924	42	41	83	74	74	148
Commercial Office Use	703 S.F.	9	1	0	1	0	1	1
Total		933	43	41	84	74	75	149

TRIP DISTRIBUTION/TRIP ASSIGNMENT

The proposed project traffic was assigned to the study intersections and roadways based on field observations and review of traffic counts with 55% of project traffic oriented to/from the north and 45% to/from the south on Sorrento Valley Road at Arbutus Street. **Figure 5** illustrates the project’s trip distribution percentages.

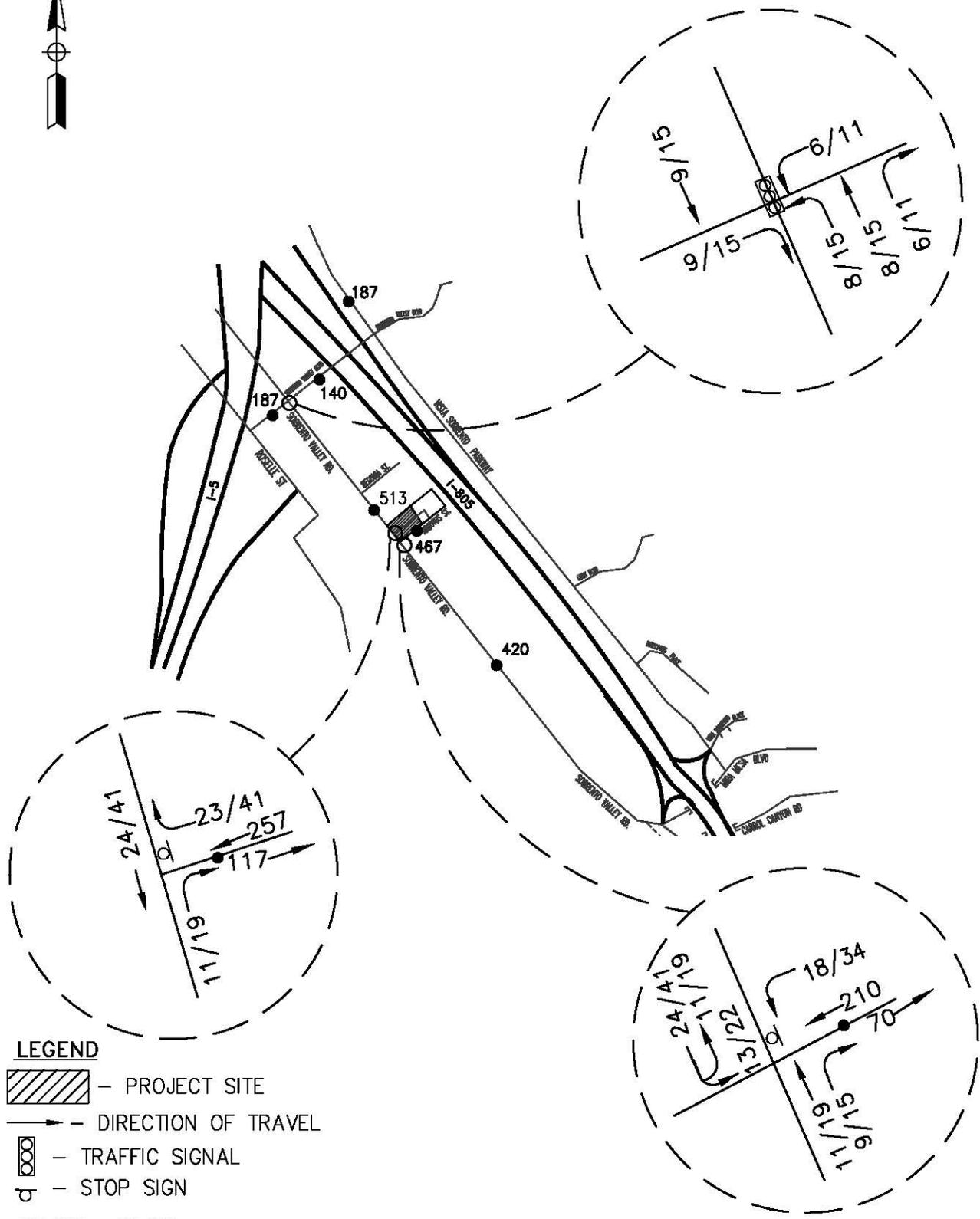
Project traffic was then assigned to the roadway network using the distribution percentages on **Figure 5**. **Figure 6** shows the projects expected Average Daily Trips (ADT) on the study roadways and the AM/PM pear hour trips at each intersection. Project traffic shown on **Figure 6** was then added to the Existing traffic volumes presented on **Figure 4** and the Existing Plus Project traffic volumes are presented on **Figure 7**.



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FIGURE 5
TRIP DISTRIBUTION



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FIGURE 6
PROJECT TRAFFIC VOLUMES

SECTION V – CUMULATIVE PROJECTS

The City of San Diego has identified three (3) projects to be analyzed with the Near Term 2018 Opening Day Conditions. The three (3) projects and each project’s trip generation are presented in Table 6.

Table 6 – Cumulative Projects Location and Trip Generation							
Project	Daily Traffic	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Mira Sorrento Office Park: Project Number: 16742	7,378	913	101	1,014	171	890	1,061
Sorrento Valley Marijuana Outlet: 10150 Sorrento Valley Road Project Number: 545299	1,343	61	60	121	108	107	215
San Diego Releaf 10170 Sorrento Valley Road Project Number: 575936	81	1	2	3	4	4	8
Total:	8,802	975	163	1,138	283	1,001	2,285

The assignment of Cumulative project traffic Shown on Table 6 at the study area roadways and intersections analyzed in a memorandum dated January 11, 2018. A copy of the memorandum is presented in Appendix A. The resulting cumulative projects traffic assigned to the study area roadways and intersection is presented on **Figure 8**.

SECTION VI - IMPACTS

LEVELS OF SIGNIFICANCE STANDARDS

This study utilizes the City of San Diego's significance thresholds to assess the potential traffic impact on the roadways and intersections located within the project's vicinity. The City's significance criteria for facilities operating at LOS "E" and "F" are shown in Table 7.

Since the City of San Diego considers LOS D to be an acceptable level of service, the City of San Diego's CEQA thresholds were only applied to roadway segments and intersections that were found to be operating at LOS "E" and LOS "F". Impacts are also significant if the project traffic causes a facility to go from an acceptable LOS "D" to an unacceptable LOS "E" or "F" condition.

Table 7 - City of San Diego CEQA Significance Thresholds			
LOS with Project	Allowable Increase/Decrease Due to Project Impacts		
	Intersections	Roadway Segments	
	Delay (sec)	V/C	Speed (mph)
E	2.0	0.02	1
F	1.0	0.01	0.5

ADT = average daily traffic; LOS= level of service; V/C =volume to capacity; sec =seconds of delay per vehicle. mph =miles per hour

EXISTING PLUS PROJECT CONDITIONS

The project traffic volumes presented on **Figure 6** were added to the existing traffic volumes presented on **Figure 4**. The results for existing plus project conditions are presented on **Figure 7**.

Existing Plus Project Roadway Segments

The roadway segments were analyzed under Existing Conditions with and without the proposed project. Based on the daily capacity analysis summarized on Table 8, all segments of Sorrento Valley Road operate at LOS "A" with and without the project.

Table 8 –Summary of Existing and Existing Plus Project Roadway Level of Service											
Roadway Segment	Existing Conditions					Existing Plus Project Conditions					Sig?
	Classification	Capacity (a)	ADT	v/c Ratio	LOS	Project Traffic	ADT	v/c Ratio	Δ v/c Ratio	LOS	
Sorrento Valley Road											
Arbutus Street to Sorrento Valley Boulevard	4-Lane Major	40,000	11,542	A	0.29	513	12,055	0.30	0.01	A	NO
South of Arbutus Street	4-Lane Major	40,000	11,542	A	0.29	420	11,962	0.30	0.01	A	NO

Capacity is based on the upper limit of LOS E per the City of San Diego Level of Service Thresholds for a 4-Lane Major Road.
 (a) Estimated based on 10% increase of ADT North of Arbutus Street. ADT = Average Daily Traffic; LOS = Level of Service.
 Existing traffic count data was collected on Wednesday, January 3, 2018.

Existing Plus Project Intersections

The intersections were analyzed under Existing Conditions with and without the proposed project. The intersection levels of service for the Existing Conditions and Existing Plus Project Conditions are summarized in Table 9. All study intersections operate at LOS “D” or better for the Existing Conditions with and without the project.

Project driveway operation is also shown in Table 9. As shown on Table 9, the project driveway operates at LOS “A” in the AM peak and LOS B in the PM peak with the Project. Copies of the Synchro Worksheets are presented in Appendix B.

# Intersection	Traffic Control	Existing Conditions			Existing Plus Project Conditions		Δ in Delay veh/sec	Sig?
		Peak Hour	Delay veh/sec	LOS	Delay veh/sec	LOS		
Sorrento Valley Road at Sorrento Valley Boulevard	Signal	AM	46.6	D	47.3	D	0.7	NO
		PM	41.5	D	42.1	D	0.6	NO
Sorrento Valley Road at Arbutus	TWSC	AM	12.1	B	16.7	C	4.8	NO
		PM	16.7	C	30.0	D	13.3	NO
Sorrento Valley Road at Project Dwy	OWSC	AM	9.0	A	9.1	A	0.1	NO
		PM	10.1	A	10.5	B	0.4	NO

Delay= seconds of delay per vehicles; LOS = Level of Services; SIG = City of San Diego's CEQA Significance Thresholds; OWSC = One Way Stop Control, TWSC = Two Way Stop Control.

NEAR TERM (2018) TRAFFIC

To generate Near Term (2018) traffic volumes, cumulative projects traffic presented in Section V on **Figure 8** were added to the existing traffic volumes presented on **Figure 4**. The results are presented on **Figure 9**. The project’s traffic volumes shown on **Figure 6** were then added to the Near Term 2018 traffic volumes and the results are presented on **Figure 10**. **Figure 10** presents the Near Term 2018 Conditions with Project Traffic Volumes.

Near Term (Opening Day 2018) Roadway Segment Analysis

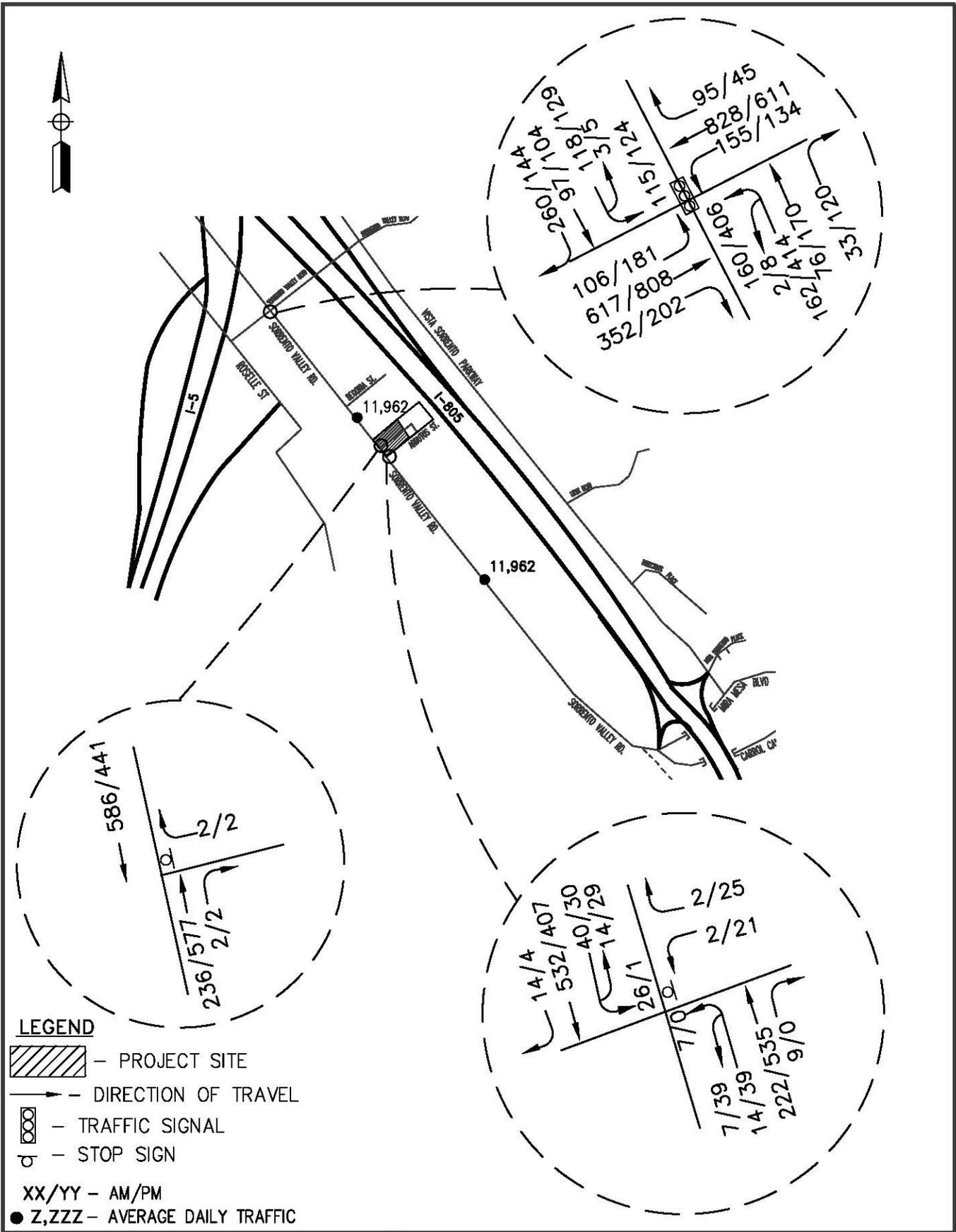
The Near Term (2018) daily traffic volumes on Figures 9 and 10 were analyzed with and without the project. The results are presented on Table 10. Review of Table 10 shows each roadway segment will operate at LOS “A” for Near Term conditions without the project and with addition of project traffic will continue to operate LOS “A”.

Table 11 – Summary of Near Term (2018) Intersection Level of Service

Intersection	Traffic Control	Near Term (2018) Conditions			Near Term (2018) Plus Project Conditions		Δ in Delay veh/sec	Sig?
		Peak Hour	Delay veh/sec	LOS	Delay veh/sec	LOS		
Sorrento Valley Road at Sorrento Valley Boulevard	Signal	AM	51.0	D	51.9	D	0.9	NO
		PM	46.2	D	48.1	D	1.9	NO
Sorrento Valley Road at Arbutus	TWSC	AM	12.4	B	17.5	C	5.1	NO
		PM	18.1	C	34.9	D	16.8	NO
Sorrento Valley Road at Project Dwy	OWSC	AM	9.0	A	9.2	A	0.2	NO
		PM	10.3	B	10.8	B	0.5	NO

Delay= seconds of delay per vehicles; LOS = Level of Services; SIG = City of San Diego's CEQA Significance Thresholds; OWSC = One Way Stop Control, TWSC = Two Way Stop Control.

In summary, the project does not create any significant roadway and/or intersection impacts in the Existing Plus Project or Near Term Plus Project scenarios.

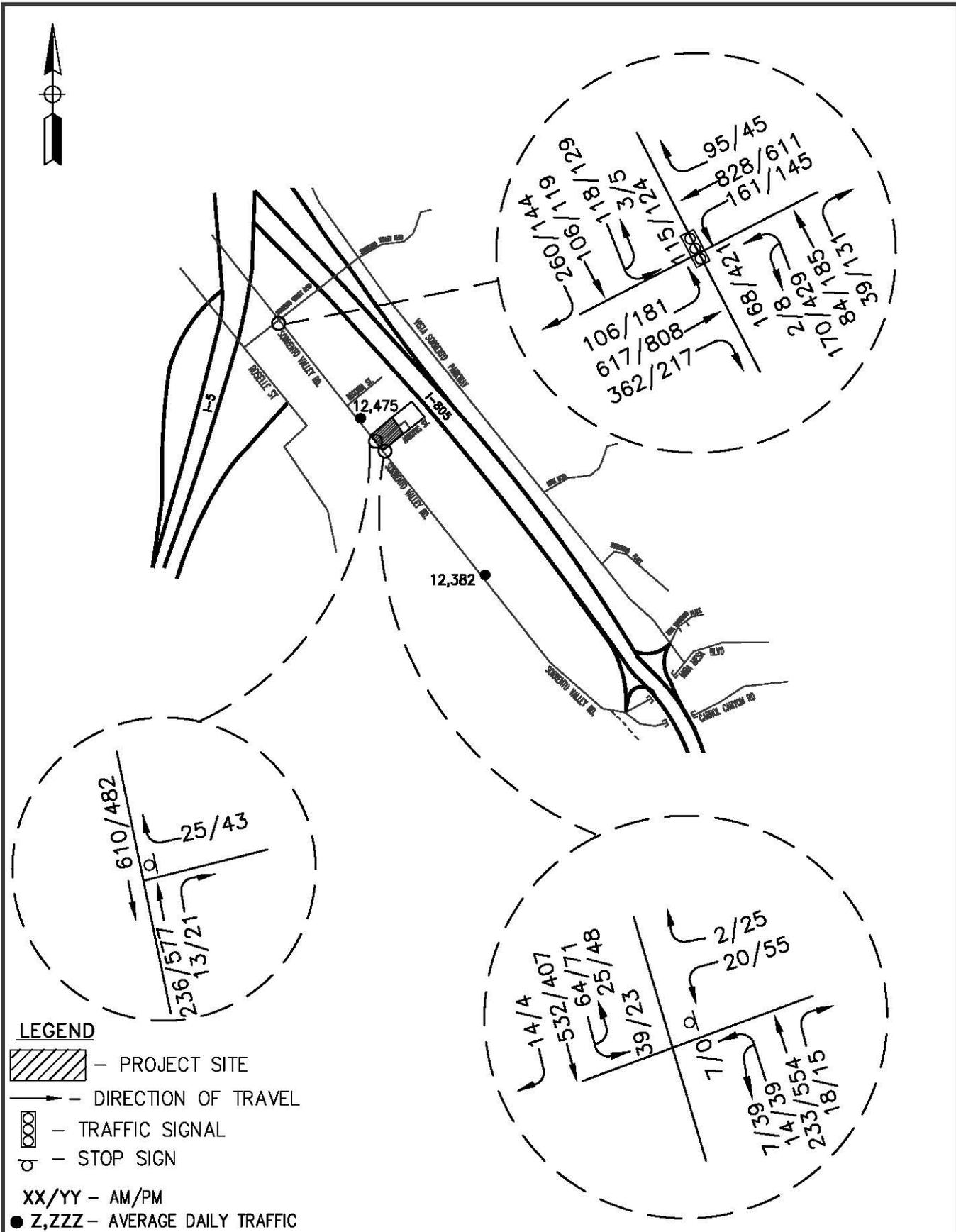


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1701203-AD 3-6-18 JAM

FIGURE 9

2018 NEAR TERM TRAFFIC VOLUMES



LEGEND

- PROJECT SITE
- DIRECTION OF TRAVEL
- TRAFFIC SIGNAL
- STOP SIGN
- XX/YY - AM/PM
- Z,ZZZ - AVERAGE DAILY TRAFFIC

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 1701203-AD 3-6-18 JAM

FIGURE 10
 NEAR TERM (2018) PLUS PROJECT TRAFFIC VOLUMES

Table 11 – Summary of Near Term (2018) Intersection Level of Service								
Intersection	Traffic Control	Near Term (2018) Conditions			Near Term (2018) Plus Project Conditions		Δ in Delay veh/sec	Sig?
		Peak Hour	Delay veh/sec	LOS	Delay veh/sec	LOS		
Sorrento Valley Road at Sorrento Valley Boulevard	Signal	AM	51.0	D	51.9	D	0.9	NO
		PM	46.2	D	48.1	D	1.9	NO
Sorrento Valley Road at Arbutus	TWSC	AM	12.4	B	17.5	C	5.1	NO
		PM	18.1	C	34.9	D	16.8	NO
Sorrento Valley Road at Project Dwy	OWSC	AM	9.0	A	9.2	A	0.2	NO
		PM	10.3	B	10.8	B	0.5	NO
Delay= seconds of delay per vehicles; LOS = Level of Services; SIG = City of San Diego's CEQA Significance Thresholds; OWSC = One Way Stop Control, TWSC = Two Way Stop Control.								

In summary, the project does not create any significant roadway and/or intersection impacts in the Existing Plus Project or Near Term Plus Project scenarios.

SECTION VII – PROJECT ACCESS, BICYCLES, PARKING & TRANSIT

PROJECT ACCESS AND CIRCULATION

Access to the project is provided off of Arbutus Street and a right in/out access driveway is provided on Sorrento Valley Road. The Sorrento Valley Road access as shown on Table 11 is expected to operate at LOS “A” in the AM peak and LOS “B” in the PM peak with and without the proposed project.

BICYCLES

Sorrento Valley Road is striped to accommodate Class 2 bike lanes in both directions.

PARKING

Parking for the Marijuana Outlet is based on San Diego Municipal Code (SDMC) Section 142.0530 Table 142-05E for the parking ratio in the IL-3-1 zone outside of a transit area, which is 5 spaces per 1,000 square feet of floor area, requiring a total of 22 parking spaces. The project provides 22 parking spaces which includes 1 van accessible space. Per San Diego Municipal Code (SDMC) Section 142.0530(d) (B) (ii), the project is also required to have one (1) designated space for carpool/zero emissions vehicles as part of the 22 required spaces. The project also includes two motorcycle parking spaces and three bicycle parking spaces (2 short-term and 1 long-term).

TRANSIT

Public transit system in the area is served by the Sorrento Valley Transit Center located at the northwest corner of Sorrento Valley Boulevard approximately 1,400 feet from the proposed project. Carroll Canyon Coaster connection Route 973 operates on Sorrento Valley Road with a stop at the Sorrento Valley Transit Center.

SECTION VIII - SUMMARY OF FINDINGS AND CONCLUSIONS

- The project proposes a Conditional Use Permit to operate a 3,697 square foot Marijuana Outlet Use and a 703 square foot Commercial Office Use within an existing 5,451 square foot building that was previously operated as a credit use. 1,051 square feet of the existing building will remain vacant for the duration of the CUP.
- The project is estimated to generate 933 average daily trips, with 84 AM peak hour trips (split 43 inbound and 41 outbound), and 149 PM peak hour trips (split 74 inbound and 75 outbound).
- Based on the City of San Diego guidelines, the traffic study was focused on:
 - Sorrento Valley Road between Sorrento Valley Boulevard and Carroll Canyon Road;
 - Sorrento Valley Road/ Arbutus Street;
 - Sorrento Valley Road/Sorrento Valley Boulevard; and
 - Sorrento Valley Road Project Access/Sorrento Valley Road.
- The access analysis analyzed roadways and intersections under the following conditions:
 - Existing Conditions;
 - Existing Plus Project Conditions;
 - Near Term (2018) Plus Cumulative Projects; and
 - Near Term (2018) Plus Cumulative Projects Plus Project Conditions.
- The project analysis does not identify any significant traffic impacts at roadway segments for Existing Conditions and Near Term (2018) Conditions with and without the project. The roadways analyzed will all operate at LOS “C” or better with the development of the project for each condition.
- The project analysis does not identify any significant traffic impacts for each intersection analyzed for Existing Conditions and Near Term (2018) Conditions with and without the project. Each of the intersections analyzed will all operate at LOS “D” or better with the development of the project for each condition. Therefore the project is not required to provide any mitigation.
- Analysis of project impacts concludes that the project does not exceed City of San Diego significance thresholds, and therefore the project is not required to provide mitigation.
- Review of the project on-site circulation found it to be satisfactory.

VOLUME

Sorrento Valley Rd N/O Arbutus St

Day: Wednesday
Date: 1/3/2018

City: Sorrento Valley
Project #: CA18_4004_001

DAILY TOTALS					NB	SB	EB	WB	Total		
					5,079	6,463	0	0	11,542		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	6			7	12:00	97	118			215
00:15	2	10			12	12:15	100	115			215
00:30	2	3			5	12:30	90	129			219
00:45	2	7	7	26	9	12:45	96	383	136	498	232
01:00	1	4			5	13:00	107	144			251
01:15	3	0			3	13:15	97	116			213
01:30	1	2			3	13:30	91	143			234
01:45	2	7	2	8	4	13:45	96	391	117	520	213
02:00	1	0			1	14:00	80	128			208
02:15	0	4			4	14:15	110	124			234
02:30	3	5			8	14:30	105	129			234
02:45	3	7	5	14	8	14:45	114	409	113	494	227
03:00	2	4			6	15:00	124	135			259
03:15	3	0			3	15:15	103	118			221
03:30	1	2			3	15:30	131	102			233
03:45	6	12	2	8	8	15:45	109	467	110	465	219
04:00	2	2			4	16:00	153	110			263
04:15	7	7			14	16:15	147	90			237
04:30	4	2			6	16:30	131	116			247
04:45	15	28	4	15	19	16:45	106	537	103	419	209
05:00	11	12			23	17:00	135	103			238
05:15	23	18			41	17:15	144	94			238
05:30	33	26			59	17:30	109	80			189
05:45	35	102	35	91	70	17:45	112	500	78	355	190
06:00	35	53			88	18:00	90	88			178
06:15	34	49			83	18:15	83	79			162
06:30	49	76			125	18:30	57	77			134
06:45	51	169	137	315	188	18:45	47	277	76	320	123
07:00	43	125			168	19:00	46	52			98
07:15	50	130			180	19:15	35	63			98
07:30	60	155			215	19:30	20	51			71
07:45	59	212	137	547	196	19:45	46	147	33	199	79
08:00	48	123			171	20:00	20	45			65
08:15	59	139			198	20:15	16	26			42
08:30	71	118			189	20:30	20	25			45
08:45	77	255	123	503	200	20:45	18	74	33	129	51
09:00	83	130			213	21:00	17	26			43
09:15	73	101			174	21:15	19	29			48
09:30	62	118			180	21:30	21	34			55
09:45	81	299	100	449	181	21:45	10	67	32	121	42
10:00	80	90			170	22:00	5	14			19
10:15	80	131			211	22:15	2	7			9
10:30	70	86			156	22:30	3	6			9
10:45	86	316	97	404	183	22:45	7	17	12	39	19
11:00	84	102			186	23:00	4	8			12
11:15	99	112			211	23:15	4	15			19
11:30	91	125			216	23:30	2	14			16
11:45	107	381	135	474	242	23:45	5	15	13	50	18
TOTALS	1795	2854			4649	TOTALS	3284	3609			6893
SPLIT %	38.6%	61.4%			40.3%	SPLIT %	47.6%	52.4%			59.7%

DAILY TOTALS					NB	SB	EB	WB	Total
					5,079	6,463	0	0	11,542
AM Peak Hour	11:30	07:30			11:45	PM Peak Hour	15:30	12:45	15:45
AM Pk Volume	395	554			891	PM Pk Volume	540	539	966
Pk Hr Factor	0.923	0.894			0.920	Pk Hr Factor	0.882	0.936	0.918
7-9 Volume	467	1050			1517	4-6 Volume	1037	774	1811
7-9 Peak Hour	08:00	07:30			07:30	4-6 Peak Hour	16:00	16:00	16:00
7-9 Pk Volume	255	554			780	4-6 Pk Volume	537	419	956
Pk Hr Factor	0.828	0.894			0.907	Pk Hr Factor	0.877	0.903	0.909

National Data & Surveying Services Intersection Turning Movement Count

Location: Sorrento Valley Rd & Sorrento Valley Blvd
 City: Sorrento Valley
 Control: Signalized

Project ID: 18-04007-001
 Date: 1/11/2018

Total

NS/EW Streets:	Sorrento Valley Rd				Sorrento Valley Rd				Sorrento Valley Blvd				Sorrento Valley Blvd				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	1 WR	0 WU	
AM																	
7:00 AM	22	18	9	0	13	15	40	1	29	118	76	0	17	170	22	0	500
7:15 AM	36	11	5	0	14	14	24	1	19	100	68	0	41	160	14	0	527
7:30 AM	36	18	8	1	19	13	48	0	30	120	75	0	44	258	26	0	696
7:45 AM	33	24	6	0	24	18	51	0	21	134	71	0	45	172	30	0	629
8:00 AM	29	16	12	1	25	26	68	1	28	147	72	0	46	185	24	0	680
8:15 AM	51	20	11	0	36	34	64	0	23	114	83	0	17	218	20	0	691
8:30 AM	38	14	4	1	30	13	77	2	34	149	92	0	47	245	21	0	767
8:45 AM	41	24	13	2	27	27	42	0	34	122	82	0	37	147	17	0	615
TOTAL VOLUMES :	286	145	68	5	188	160	414	5	218	1004	619	0	294	1525	174	0	5105
APPROACH %'s :	56.75%	28.77%	13.49%	0.99%	24.51%	20.86%	53.98%	0.65%	11.84%	54.54%	33.62%	0.00%	14.75%	76.52%	8.73%	0.00%	
PEAK HR VOL :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	151	74	33	2	115	91	260	3	106	544	318	0	155	820	95	0	2767
PEAK HR FACTOR :	0.740	0.771	0.668	0.500	0.799	0.669	0.844	0.375	0.779	0.913	0.864	0.000	0.624	0.837	0.792	0.000	0.902
	0.793				0.875				0.880				0.855				
PM																	
4:00 PM	85	56	24	1	32	25	46	1	34	122	32	0	42	148	16	0	564
4:15 PM	140	39	15	2	20	20	34	1	49	209	63	0	29	140	9	0	770
4:30 PM	89	44	33	2	28	25	38	1	46	198	43	0	30	139	13	0	729
4:45 PM	74	45	31	3	36	25	27	2	32	189	38	0	34	133	9	0	678
5:00 PM	65	37	41	1	40	32	45	1	54	198	42	0	41	131	14	0	742
5:15 PM	100	50	45	0	49	34	54	1	46	135	27	0	30	97	15	0	683
5:30 PM	71	53	40	0	32	24	27	1	53	144	37	0	35	122	16	0	655
5:45 PM	78	50	28	0	41	32	28	1	40	161	41	0	26	120	22	0	668
TOTAL VOLUMES :	702	374	257	9	278	217	299	9	354	1356	323	0	267	1030	114	0	5589
APPROACH %'s :	52.31%	27.87%	19.15%	0.67%	34.62%	27.02%	37.24%	1.12%	17.41%	66.70%	15.89%	0.00%	18.92%	73.00%	8.08%	0.00%	
PEAK HR VOL :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	368	165	120	8	124	102	144	5	181	794	186	0	134	543	45	0	2919
PEAK HR FACTOR :	0.657	0.917	0.732	0.667	0.775	0.797	0.800	0.625	0.838	0.950	0.738	0.000	0.817	0.979	0.804	0.000	0.948
	0.843				0.794				0.904				0.970				

National Data & Surveying Services Intersection Turning Movement Count

Location: Sorrento Valley Rd & Arbutus St
 City: Sorrento Valley
 Control: 1-Way Stop(WB)

Project ID: 18-04003-001
 Date: 1/3/2018

Total

NS/EW Streets	Sorrento Valley Rd				Sorrento Valley Rd				Arbutus St				Arbutus St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	2	0	0	1	2	0	0	0	0	0	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
6:30 AM	2	48	0	0	3	70	0	0	0	0	0	0	0	0	2	0	125
6:45 AM	2	43	3	2	10	125	2	6	0	0	0	0	0	0	0	0	195
7:00 AM	1	35	1	1	10	101	3	5	0	0	0	0	0	0	1	0	158
7:15 AM	0	39	4	0	4	123	1	8	0	0	0	0	0	0	3	0	182
7:30 AM	2	55	1	2	9	135	6	5	0	0	0	0	1	0	0	0	216
7:45 AM	1	53	2	2	6	119	4	4	0	0	0	0	0	0	0	0	192
8:00 AM	3	44	3	1	3	110	2	4	0	0	0	0	1	0	0	0	171
8:15 AM	1	59	3	2	8	128	2	1	0	0	0	0	0	0	1	0	205
TOTAL VOLUMES :	12	376	17	10	53	911	20	35	0	0	0	0	2	0	8	0	1444
APPROACH %'s :	2.89%	90.60%	4.10%	2.41%	5.20%	89.40%	1.96%	3.43%					20.00%	0.00%	80.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	7	213	9	7	26	492	14	14	0	0	0	0	2	0	2	0	784
PEAK HR FACTOR :	0.583	0.894	0.750	0.875	0.722	0.911	0.583	0.700	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.907
			0.900				0.881								1.000		
PM	1	2	0	0	1	2	0	0	0	0	0	0	0	1	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	145	0	7	1	105	1	4	0	0	0	0	2	0	6	0	271
4:15 PM	0	133	0	9	0	81	0	7	0	0	0	0	9	0	5	0	244
4:30 PM	0	111	0	12	0	111	2	8	0	0	0	0	8	0	9	0	261
4:45 PM	0	93	0	11	0	92	1	10	0	0	0	0	2	0	5	0	214
5:00 PM	0	139	1	11	0	97	0	6	0	0	0	0	6	0	2	0	262
5:15 PM	0	129	0	5	0	85	0	3	0	0	0	0	4	0	3	0	233
5:30 PM	0	104	1	7	1	81	0	5	0	0	0	0	7	0	7	0	213
5:45 PM	0	100	0	5	0	74	1	3	0	0	0	0	1	0	1	0	185
TOTAL VOLUMES :	0	954	2	67	2	730	5	46	0	0	0	0	39	0	38	0	1883
APPROACH %'s :	0.00%	93.26%	0.20%	6.55%	0.26%	93.23%	0.64%	5.87%					50.65%	0.00%	49.35%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	482	0	39	1	389	4	29	0	0	0	0	21	0	25	0	990
PEAK HR FACTOR :	0.000	0.831	0.000	0.813	0.250	0.876	0.500	0.725	0.000	0.000	0.000	0.000	0.583	0.000	0.694	0.000	0.513
			0.857				0.874								0.676		

APPENDIX B

- January 11, 2018 Cumulative Projects Memorandum

Darnell & ASSOCIATES INC.

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

Date: January 11, 2018

To: Ann Gonsalves, City of San Diego
Mathew King, City of San Diego
Leo Alo, City of San Diego
Belinda Smith, Sorrento Valley Investment Group

From: Mr. Bill E. Darnell, Darnell & Associates, Inc.



D&A Number: 171203

Subject: Trip Generation and assignment of Cumulative Projects for the Sorrento Valley Marijuana Outlet project located at 10715 Sorrento Valley Road, City Project Number: 527802

Dear Ms. Gonsalves:

Trip generation of the three (3) projects you identified has been estimated and assigned to Sorrento Valley Road/Arbutus and Sorrento Valley Road /Sorrento Valley Parkway intersections based on the following trip generation:

4 Mira Sorrento Office Park Project, No. 16742:

Daily = 7,378
AM Peak = 1,014
In = 913
Out = 101

PM Peak = 1,061
In = 171
Out = 890

Sorrento Valley Marijuana Outlet (5,370 S.F.), CUP Project No. 545299:
Located at 10150 Sorrento Valley Road.

Daily 1,343 (5.37 S.F. x 250/KSF)

AM Peak (9%)
Total = 121
In = 61
Out = 60

PM Peak (16%)
Total = 215
In = 108
Out = 107

4 San Diego Releaf CUP Project (2,014 S.F.), No. 575936:
 Located at 10170 Sorrento Valley Road.

Daily 81 (2,014 S.F. x 40/KSF)

AM Peak (3%)

Total = 3

In = 2

Out = 1

PM Peak (9%)

Total = 8

In = 4

Out = 4

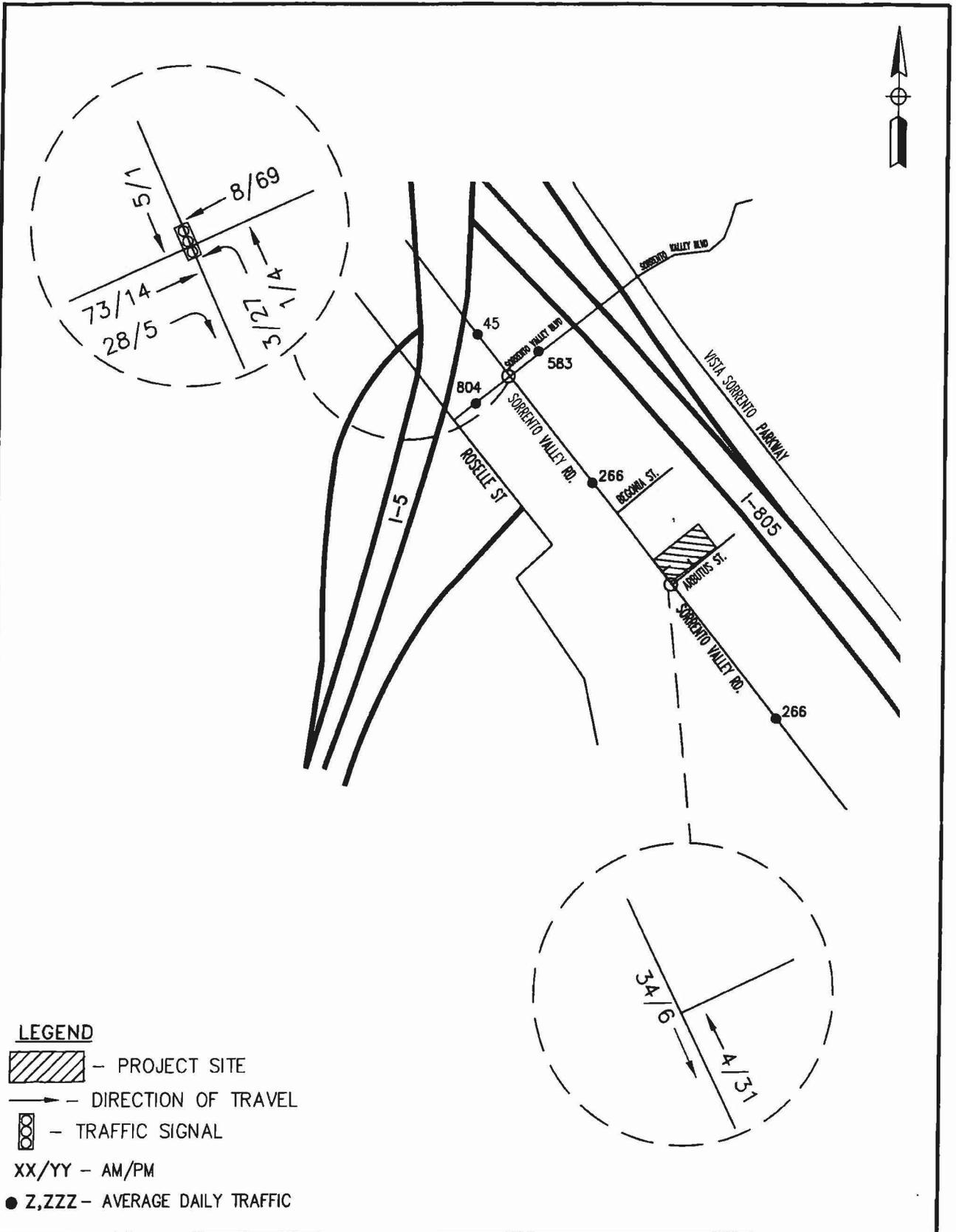
The three (3) projects are estimated to generate the following daily and peak hour traffic volumes.

Land Use	Daily	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Sorrento Valley Marijuana Outlet (5,370 S.F.), CUP Project No. 545299	1,343	61	60	121	108	107	215
San Diego Releaf(2,014 S.F.), CUP Project No. 575936:	81	1	2	3	4	4	8
Sub-Total	1,424	62	62	124	112	111	223
Mira Sorrento Office Park Project, No. 16742	7,378	913	101	1,014	171	890	1,061
Total	8,802	975	163	1,138	283	1,001	2,285

We then assigned cumulative projects traffic to the study area intersections based on 10.8% of the total cumulative projects traffic will be oriented to the I-5/Sorrento Valley Boulevard on/off ramp. Figure 1 presents the Mira Sorrento Office Project Traffic. Figure 2 presents the Sorrento Valley Marijuana Outlet and San Diego Releaf CUP project traffic. The cumulative traffic volumes on Figures 1 and 2 were then added to present the total cumulative project traffic to be analyzed with the 10715 Sorrento Valley Road Marijuana Outlet project.

We anticipate receiving the Sorrento Valley Boulevard/Sorrento Valley Road intersection count by Monday and will complete our focused Traffic Study for submittal next week.

Please call if you have any questions.

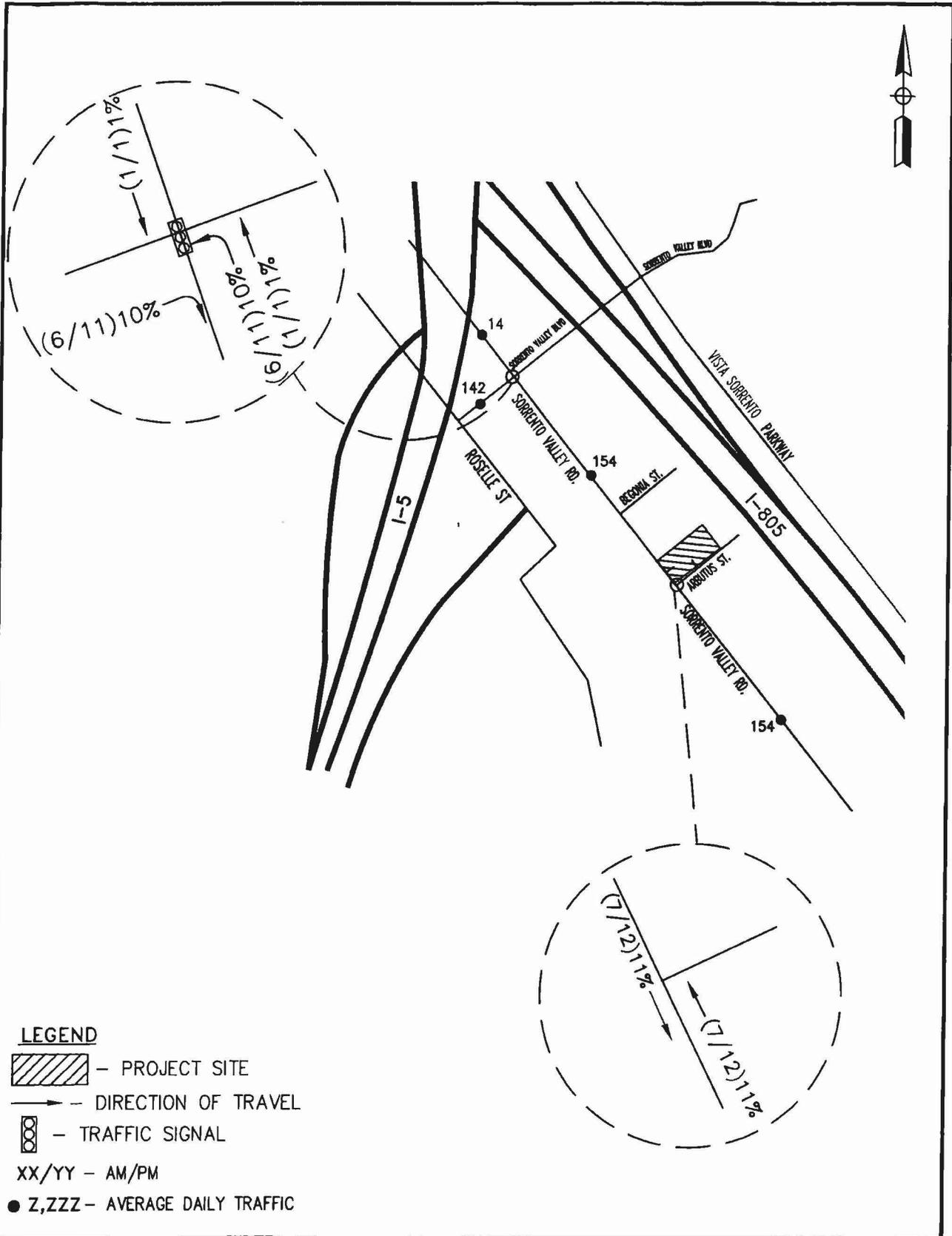


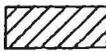
Darnell & ASSOCIATES, INC.

2-9-18 jom

FIGURE 1

MIRA SORRENTO OFFICE PROJECT TRAFFIC

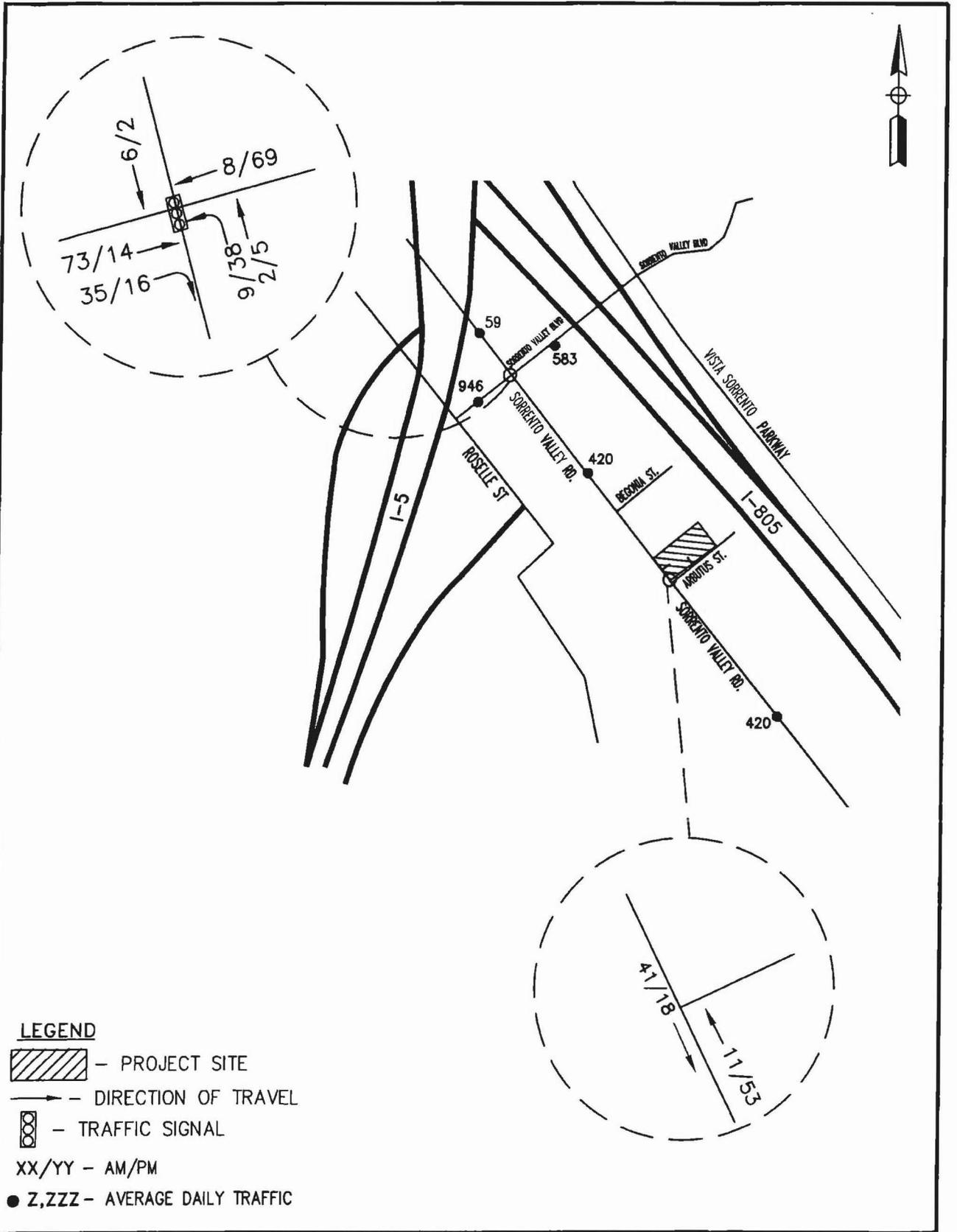


- LEGEND**
-  - PROJECT SITE
 -  - DIRECTION OF TRAVEL
 -  - TRAFFIC SIGNAL
 - XX/YY - AM/PM
 - Z,ZZZ - AVERAGE DAILY TRAFFIC

Darnell & ASSOCIATES, INC.

1-11-18 VLA

FIGURE 2
 SORRENTO VALLEY MARIJUANA OUTLET AND
 SAN DIEGO RELIEF PROJECT TRAFFIC



Darnell & ASSOCIATES, INC.
 2-9-18 JAM

FIGURE 3
 CUMULATIVE PROJECTS TRAFFIC

Synchro 8 Capacity Worksheets
➤ Existing Conditions

Sorrento Valley Dispensary
1: Sorrento Valley Rd & Sorrento Valley Blvd

Existing Conditions
Timing Plan: AM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	544	318	155	820	95	153	74	33	118	91	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1700	1900	1700	1900	1900	1900	1900	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	0.99	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.89	
Fit Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1610	3158	1441	1770	3167	1583	3072	3374		3433	3146	
Fit Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1610	3158	1441	1770	3167	1583	3072	3374		3433	3146	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	604	353	172	911	106	170	82	37	131	101	289
RTOR Reduction (vph)	0	5	222	0	0	72	0	28	0	0	221	0
Lane Group Flow (vph)	106	671	71	172	911	34	170	91	0	131	169	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7			8						
Actuated Green, G (s)	26.6	26.6	26.6	35.8	35.8	35.8	8.0	27.8		6.0	25.8	
Effective Green, g (s)	28.1	28.1	28.1	37.3	37.3	37.3	8.0	29.3		6.0	27.3	
Actuated g/C Ratio	0.24	0.24	0.24	0.32	0.32	0.32	0.07	0.25		0.05	0.23	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2		3.0	3.2	
Lane Grp Cap (vph)	387	760	346	565	1012	505	210	847		176	735	
v/s Ratio Prot	0.07	c0.21		0.10	c0.29		c0.06	0.03		c0.04	c0.05	
v/s Ratio Perm			0.05			0.02						
v/c Ratio	0.27	0.88	0.20	0.30	0.90	0.07	0.81	0.11		0.74	0.23	
Uniform Delay, d1	36.0	42.7	35.4	29.9	37.9	27.6	53.6	33.6		54.6	36.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	11.5	0.1	0.1	10.6	0.0	19.1	0.3		15.6	0.7	
Delay (s)	36.1	54.2	35.5	30.0	48.6	27.6	72.7	33.9		70.2	36.9	
Level of Service	D	D	D	C	D	C	E	C		E	D	
Approach Delay (s)		47.3			44.0			56.7			45.3	
Approach LOS		D			D			E			D	

Intersection Summary

HCM 2000 Control Delay	46.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	116.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Sorrento Valley Dispensary
1: Sorrento Valley Rd & Sorrento Valley Blvd

Existing Conditions
Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	181	794	186	134	543	45	376	165	120	129	102	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1700	1900	1700	1900	1900	1900	1900	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1610	3189	1441	1770	3167	1583	3072	3316		3433	3228	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1610	3189	1441	1770	3167	1583	3072	3316		3433	3228	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	836	196	141	572	47	396	174	126	136	107	152
RTOR Reduction (vph)	0	1	103	0	0	36	0	98	0	0	131	0
Lane Group Flow (vph)	172	874	73	141	572	11	396	202	0	136	128	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7			8						
Actuated Green, G (s)	34.4	34.4	34.4	23.8	23.8	23.8	17.6	23.0		8.6	14.0	
Effective Green, g (s)	35.9	35.9	35.9	25.3	25.3	25.3	17.6	24.5		8.6	15.5	
Actuated g/C Ratio	0.33	0.33	0.33	0.23	0.23	0.23	0.16	0.22		0.08	0.14	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2		3.0	3.2	
Lane Grp Cap (vph)	524	1037	469	405	726	363	490	736		267	453	
v/s Ratio Prot	0.11	c0.27		0.08	c0.18		c0.13	0.08		c0.04	c0.04	
v/s Ratio Perm			0.05			0.01						
v/c Ratio	0.33	0.84	0.16	0.35	0.79	0.03	0.81	0.27		0.51	0.28	
Uniform Delay, d1	28.1	34.6	26.4	35.6	40.0	33.0	44.7	35.5		48.8	42.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	6.1	0.1	0.2	5.2	0.0	9.0	0.2		1.5	0.4	
Delay (s)	28.2	40.7	26.5	35.8	45.2	33.0	53.7	35.8		50.4	42.8	
Level of Service	C	D	C	D	D	C	D	D		D	D	
Approach Delay (s)		36.9			42.7			46.0			45.4	
Approach LOS		D			D			D			D	

Intersection Summary

HCM 2000 Control Delay	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Sorrento Valley Dispensary
2: Sorrento Valley Rd & Parking/Arbutus St

Existing Conditions
Timing Plan: AM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	2	0	2	14	211	9	40	492	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	2	0	2	15	232	10	44	541	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	785	909	278	626	912	121	556			242		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	785	909	278	626	912	121	556			242		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	100	100	98			97		
cM capacity (veh/h)	272	260	719	355	259	908	1011			1322		
Approach Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	4	15	155	87	44	360	196					
Volume Left	2	15	0	0	44	0	0					
Volume Right	2	0	0	10	0	0	15					
cSH	511	1011	1700	1700	1322	1700	1700					
Volume to Capacity	0.01	0.02	0.09	0.05	0.03	0.21	0.12					
Queue Length 95th (ft)	1	1	0	0	3	0	0					
Control Delay (s)	12.1	8.6	0.0	0.0	7.8	0.0	0.0					
Lane LOS	B	A			A							
Approach Delay (s)	12.1	0.5			0.6							
Approach LOS	B											
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			30.7%		ICU Level of Service				A			
Analysis Period (min)			15									

Sorrento Valley Dispensary
2: Sorrento Valley Rd & Parking/Arbutus St

Existing Conditions
Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔		↖	↕		↗	↕	
Volume (veh/h)	0	0	0	21	0	25	39	482	0	30	389	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	23	0	27	43	530	0	33	427	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	874	1111	216	895	1113	265	432			530		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	874	1111	216	895	1113	265	432			530		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	90	100	96	96			97		
cM capacity (veh/h)	223	193	789	223	193	733	1124			1034		

Direction Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	51	43	353	177	33	285	147
Volume Left	23	43	0	0	33	0	0
Volume Right	27	0	0	0	0	0	4
cSH	359	1124	1700	1700	1034	1700	1700
Volume to Capacity	0.14	0.04	0.21	0.10	0.03	0.17	0.09
Queue Length 95th (ft)	12	3	0	0	2	0	0
Control Delay (s)	16.7	8.3	0.0	0.0	8.6	0.0	0.0
Lane LOS	C	A			A		
Approach Delay (s)	16.7	0.6			0.6		
Approach LOS	C						

Intersection Summary			
Average Delay		1.4	
Intersection Capacity Utilization		30.0%	ICU Level of Service
Analysis Period (min)		15	A

Sorrento Valley Dispensary
3: Sorrento Valley Rd & Proj Dwy

Existing Conditions
Timing Plan: AM PEAK

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↖	↑↑			↑↑
Volume (veh/h)	0	2	225	2	0	546
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	245	2	0	593
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						1268
pX, platoon unblocked						
vC, conflicting volume	542	123			247	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	542	123			247	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	470	904			1316	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	2	163	84	297	297
Volume Left	0	0	0	0	0
Volume Right	2	0	2	0	0
cSH	904	1700	1700	1700	1700
Volume to Capacity	0.00	0.10	0.05	0.17	0.17
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	9.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.0	0.0		0.0	
Approach LOS	A				

Intersection Summary					
Average Delay		0.0			
Intersection Capacity Utilization		18.4%		ICU Level of Service	A
Analysis Period (min)		15			

Sorrento Valley Dispensary
3: Sorrento Valley Rd & Proj Dwy

Existing Conditions
Timing Plan: PM PEAK

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Volume (veh/h)	0	2	524	2	0	423
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	570	2	0	460
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						1260
pX, platoon unblocked						
vC, conflicting volume	801	286			572	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	801	286			572	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	322	711			897	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	2	380	192	230	230	
Volume Left	0	0	0	0	0	
Volume Right	2	0	2	0	0	
cSH	711	1700	1700	1700	1700	
Volume to Capacity	0.00	0.22	0.11	0.14	0.14	
Queue Length 95th (ft)	0	0	0	0	0	
Control Delay (s)	10.1	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	10.1	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			24.5%	ICU Level of Service		A
Analysis Period (min)			15			

Synchro 8 Capacity Worksheets
➤ Existing Plus Project Conditions

Sorrento Valley Dispensary
1: Sorrento Valley Rd & Sorrento Valley Blvd

Existing Plus Project
Timing Plan: AM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	544	327	161	820	95	162	82	39	118	100	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1700	1900	1700	1900	1900	1900	1900	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	0.98	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1610	3153	1441	1770	3167	1583	3072	3369		3433	3156	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1610	3153	1441	1770	3167	1583	3072	3369		3433	3156	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	604	363	179	911	106	180	91	43	131	111	289
RTOR Reduction (vph)	0	6	223	0	0	72	0	32	0	0	221	0
Lane Group Flow (vph)	106	679	71	179	911	34	180	102	0	131	179	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7			8						
Actuated Green, G (s)	26.7	26.7	26.7	35.8	35.8	35.8	8.0	27.8		6.0	25.8	
Effective Green, g (s)	28.2	28.2	28.2	37.3	37.3	37.3	8.0	29.3		6.0	27.3	
Actuated g/C Ratio	0.24	0.24	0.24	0.32	0.32	0.32	0.07	0.25		0.05	0.23	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2		3.0	3.2	
Lane Grp Cap (vph)	388	761	347	565	1011	505	210	845		176	737	
v/s Ratio Prot	0.07	c0.22		0.10	c0.29		c0.06	0.03		c0.04	c0.06	
v/s Ratio Perm			0.05			0.02						
v/c Ratio	0.27	0.89	0.20	0.32	0.90	0.07	0.86	0.12		0.74	0.24	
Uniform Delay, d1	36.0	42.8	35.4	30.1	38.0	27.6	53.8	33.8		54.6	36.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	12.5	0.1	0.1	10.7	0.0	26.6	0.3		15.6	0.8	
Delay (s)	36.1	55.3	35.5	30.2	48.7	27.7	80.4	34.1		70.3	37.1	
Level of Service	D	E	D	C	D	C	F	C		E	D	
Approach Delay (s)		48.1			44.1			60.6			45.3	
Approach LOS		D			D			E			D	

Intersection Summary

HCM 2000 Control Delay	47.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	116.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Sorrento Valley Dispensary
1: Sorrento Valley Rd & Sorrento Valley Blvd

Existing Plus Project
Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	181	794	201	145	543	45	391	180	131	129	117	144	
Ideal Flow (vphpl)	1900	1900	1900	1900	1700	1900	1700	1900	1900	1900	1900	1700	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95		0.97	0.95		
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.92		
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1610	3189	1441	1770	3167	1583	3072	3315		3433	3246		
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	1610	3189	1441	1770	3167	1583	3072	3315		3433	3246		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	191	836	212	153	572	47	412	189	138	136	123	152	
RTOR Reduction (vph)	0	1	113	0	0	36	0	107	0	0	130	0	
Lane Group Flow (vph)	172	875	78	153	572	11	412	220	0	136	145	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA		
Protected Phases	7	7		8	8		5	2		1	6		
Permitted Phases			7			8							
Actuated Green, G (s)	34.4	34.4	34.4	23.8	23.8	23.8	18.0	23.7		8.6	14.3		
Effective Green, g (s)	35.9	35.9	35.9	25.3	25.3	25.3	18.0	25.2		8.6	15.8		
Actuated g/C Ratio	0.32	0.32	0.32	0.23	0.23	0.23	0.16	0.23		0.08	0.14		
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5		4.0	5.5		
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2		3.0	3.2		
Lane Grp Cap (vph)	520	1031	466	403	721	360	498	752		265	462		
v/s Ratio Prot	0.11	c0.27		0.09	c0.18		c0.13	0.07		c0.04	c0.04		
v/s Ratio Perm			0.05			0.01							
w/c Ratio	0.33	0.85	0.17	0.38	0.79	0.03	0.83	0.29		0.51	0.31		
Uniform Delay, d1	28.4	35.0	26.9	36.2	40.4	33.3	45.0	35.5		49.2	42.7		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	0.1	6.4	0.1	0.2	5.6	0.0	10.3	0.2		1.7	0.4		
Delay (s)	28.6	41.4	26.9	36.4	46.0	33.3	55.3	35.8		50.9	43.1		
Level of Service	C	D	C	D	D	C	E	D		D	D		
Approach Delay (s)		37.4			43.3			46.7			45.7		
Approach LOS		D			D			D			D		
Intersection Summary													
HCM 2000 Control Delay			42.1		HCM 2000 Level of Service						D		
HCM 2000 Volume to Capacity ratio			0.75										
Actuated Cycle Length (s)			111.0		Sum of lost time (s)					16.0			
Intersection Capacity Utilization			72.6%		ICU Level of Service					C			
Analysis Period (min)			15										
c Critical Lane Group													

Sorrento Valley Dispensary
2: Sorrento Valley Rd & Parking/Arbutus St

Existing Plus Project
Timing Plan: AM PEAK

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	20	0	2	14	222	18	64	492	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	22	0	2	15	244	20	70	541	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	844	984	278	696	981	132	556			264		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	844	984	278	696	981	132	556			264		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	93	100	100	98			95		
cM capacity (veh/h)	242	230	719	311	231	893	1011			1297		
Direction Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	24	15	163	101	70	360	196					
Volume Left	22	15	0	0	70	0	0					
Volume Right	2	0	0	20	0	0	15					
cSH	331	1011	1700	1700	1297	1700	1700					
Volume to Capacity	0.07	0.02	0.10	0.06	0.05	0.21	0.12					
Queue Length 95th (ft)	6	1	0	0	4	0	0					
Control Delay (s)	16.7	8.6	0.0	0.0	7.9	0.0	0.0					
Lane LOS	C	A			A							
Approach Delay (s)	16.7	0.5			0.9							
Approach LOS	C											
Intersection Summary												
Average Delay			1.2									
Intersection Capacity Utilization			30.7%		ICU Level of Service					A		
Analysis Period (min)			15									

Sorrento Valley Dispensary
2: Sorrento Valley Rd & Parking/Arbutus St

Existing Plus Project
Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	55	0	25	39	501	15	71	389	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	60	0	27	43	551	16	78	427	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	974	1238	216	1014	1232	284	432			567		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	974	1238	216	1014	1232	284	432			567		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
IF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	66	100	96	96			92		
cM capacity (veh/h)	181	155	789	176	156	713	1124			1001		
Direction Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	88	43	367	200	78	285	147					
Volume Left	60	43	0	0	78	0	0					
Volume Right	27	0	0	16	0	0	4					
cSH	230	1124	1700	1700	1001	1700	1700					
Volume to Capacity	0.38	0.04	0.22	0.12	0.08	0.17	0.09					
Queue Length 95th (ft)	42	3	0	0	6	0	0					
Control Delay (s)	30.0	8.3	0.0	0.0	8.9	0.0	0.0					
Lane LOS	D	A			A							
Approach Delay (s)	30.0	0.6			1.4							
Approach LOS	D											
Intersection Summary												
Average Delay			3.1									
Intersection Capacity Utilization			32.8%		ICU Level of Service				A			
Analysis Period (min)			15									

Sorrento Valley Dispensary
3: Sorrento Valley Rd & Proj Dwy

Existing Plus Project
Timing Plan: AM PEAK

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑			↑↑
Volume (veh/h)	0	25	225	13	0	570
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	245	14	0	620
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						1254
pX, platoon unblocked						
vC, conflicting volume	561	129			259	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	561	129			259	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	457	896			1303	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	27	163	96	310	310	
Volume Left	0	0	0	0	0	
Volume Right	27	0	14	0	0	
cSH	896	1700	1700	1700	1700	
Volume to Capacity	0.03	0.10	0.06	0.18	0.18	
Queue Length 95th (ft)	2	0	0	0	0	
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	9.1	0.0		0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			19.1%		ICU Level of Service	A
Analysis Period (min)			15			

Sorrento Valley Dispensary
3: Sorrento Valley Rd & Proj Dwy

Existing Plus Project
Timing Plan: PM PEAK

	↙	↘	↑	↙	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↙	↑↑			↑↑
Volume (veh/h)	0	43	524	21	0	
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	47	570	23	0	500
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						1254
pX, platoon unblocked						
vC, conflicting volume	831	296			592	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	831	296			592	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	93			100	
cM capacity (veh/h)	308	700			979	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	47	380	213	250	250	
Volume Left	0	0	0	0	0	
Volume Right	47	0	23	0	0	
cSH	700	1700	1700	1700	1700	
Volume to Capacity	0.07	0.22	0.13	0.15	0.15	
Queue Length 95th (ft)	5	0	0	0	0	
Control Delay (s)	10.5	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	10.5	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		25.2%		ICU Level of Service	A	
Analysis Period (min)		15				

Synchro 8 Capacity Worksheets
➤ Near Term (2018) Condition

Sorrento Valley Dispensary
1: Sorrento Valley Rd & Sorrento Valley Blvd

NEAR TERM (2018) CONDITIONS

Timing Plan: AM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	617	352	155	828	95	162	76	33	118	97	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1700	1900	1700	1900	1900	1900	1900	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	0.99	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1610	3162	1441	1770	3167	1583	3072	3377		3433	3153	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1610	3162	1441	1770	3167	1583	3072	3377		3433	3153	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	686	391	172	920	106	180	84	37	131	108	289
RTOR Reduction (vph)	0	5	246	0	0	72	0	28	0	0	223	0
Lane Group Flow (vph)	106	756	82	172	920	34	180	93	0	131	174	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7			8						
Actuated Green, G (s)	28.1	28.1	28.1	36.3	36.3	36.3	8.0	27.7		6.0	25.7	
Effective Green, g (s)	29.6	29.6	29.6	37.8	37.8	37.8	8.0	29.2		6.0	27.2	
Actuated g/C Ratio	0.25	0.25	0.25	0.32	0.32	0.32	0.07	0.25		0.05	0.23	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2		3.0	3.2	
Lane Grp Cap (vph)	401	789	359	564	1009	504	207	831		173	723	
v/s Ratio Prot	0.07	c0.24		0.10	c0.29		c0.06	0.03		c0.04	c0.06	
v/s Ratio Perm			0.06			0.02						
v/c Ratio	0.26	0.96	0.23	0.30	0.91	0.07	0.87	0.11		0.76	0.24	
Uniform Delay, d1	35.8	43.9	35.4	30.5	38.8	28.1	54.8	34.7		55.6	37.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	21.9	0.1	0.1	11.9	0.0	29.0	0.3		17.1	0.8	
Delay (s)	35.9	65.8	35.5	30.6	50.7	28.1	83.8	34.9		72.7	38.1	
Level of Service	D	E	D	C	D	C	F	C		E	D	
Approach Delay (s)		54.8			45.8			64.2			46.7	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	51.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	118.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Sorrento Valley Dispensary
1: Sorrento Valley Rd & Sorrento Valley Blvd

NEAR TERM (2018) CONDITIONS

Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	181	808	202	134	611	45	414	170	120	129	104	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1700	1900	1700	1900	1900	1900	1900	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1610	3189	1441	1770	3167	1583	3072	3320		3433	3230	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1610	3189	1441	1770	3167	1583	3072	3320		3433	3230	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	851	213	141	643	47	436	179	126	136	109	152
RTOR Reduction (vph)	0	1	120	0	0	35	0	99	0	0	129	0
Lane Group Flow (vph)	172	890	72	141	643	12	436	206	0	136	132	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7			8						
Actuated Green, G (s)	28.9	28.9	28.9	24.0	24.0	24.0	15.2	20.8		8.4	14.0	
Effective Green, g (s)	30.4	30.4	30.4	25.5	25.5	25.5	15.2	22.3		8.4	15.5	
Actuated g/C Ratio	0.30	0.30	0.30	0.25	0.25	0.25	0.15	0.22		0.08	0.15	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2		3.0	3.2	
Lane Grp Cap (vph)	477	944	426	439	787	393	455	721		281	487	
v/s Ratio Prot	0.11	c0.28		0.08	c0.20		c0.14	0.06		c0.04	c0.04	
v/s Ratio Perm			0.05			0.01						
v/c Ratio	0.36	0.94	0.17	0.32	0.82	0.03	0.96	0.29		0.48	0.27	
Uniform Delay, d1	28.4	35.2	26.8	31.5	36.4	29.2	43.4	33.5		45.0	38.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	16.9	0.1	0.2	6.2	0.0	31.1	0.2		1.3	0.3	
Delay (s)	28.6	52.1	26.8	31.6	42.6	29.2	74.5	33.7		46.3	38.9	
Level of Service	C	D	C	C	D	C	E	C		D	D	
Approach Delay (s)		45.0			40.0			57.7			41.4	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	102.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Sorrento Valley Dispensary
2: Sorrento Valley Rd & Parking/Arbutus St

NEAR TERM (2018) CONDITIONS

Timing Plan: AM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	2	0	2	14	222	9	40	532	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	2	0	2	15	244	10	44	585	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	835	965	300	660	968	127	600			254		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	835	965	300	660	968	127	600			254		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	99	100	100	98			97		
cM capacity (veh/h)	250	241	696	335	240	900	973			1308		

Direction Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	4	15	163	91	44	390	210
Volume Left	2	15	0	0	44	0	0
Volume Right	2	0	0	10	0	0	15
cSH	489	973	1700	1700	1308	1700	1700
Volume to Capacity	0.01	0.02	0.10	0.05	0.03	0.23	0.12
Queue Length 95th (ft)	1	1	0	0	3	0	0
Control Delay (s)	12.4	8.8	0.0	0.0	7.8	0.0	0.0
Lane LOS	B	A			A		
Approach Delay (s)	12.4	0.5			0.5		
Approach LOS	B						

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization		31.8%	ICU Level of Service A
Analysis Period (min)		15	

Sorrento Valley Dispensary
2: Sorrento Valley Rd & Parking/Arbutus St

NEAR TERM (2018) CONDITIONS

Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	21	0	25	39	535	0	30	407	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	23	0	27	43	588	0	33	447	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	923	1189	226	963	1191	294	452			588		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	923	1189	226	963	1191	294	452			588		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	88	100	96	96			97		
cM capacity (veh/h)	204	173	777	199	173	702	1105			983		
Approach Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	51	43	392	196	33	298	153					
Volume Left	23	43	0	0	33	0	0					
Volume Right	27	0	0	0	0	0	4					
cSH	325	1105	1700	1700	983	1700	1700					
Volume to Capacity	0.16	0.04	0.23	0.12	0.03	0.18	0.09					
Queue Length 95th (ft)	14	3	0	0	3	0	0					
Control Delay (s)	18.1	8.4	0.0	0.0	8.8	0.0	0.0					
Lane LOS	C	A			A							
Approach Delay (s)	18.1	0.6			0.6							
Approach LOS	C											
Intersection Summary												
Average Delay			1.3									
Intersection Capacity Utilization			31.5%		ICU Level of Service					A		
Analysis Period (min)			15									

Sorrento Valley Dispensary
3: Sorrento Valley Rd & Proj Dwy

NEAR TERM (2018) CONDITIONS

Timing Plan: AM PEAK

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↖	↑↑			↑↑
Volume (veh/h)	0	2	236	2	0	586
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	257	2	0	637
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						1268
pX, platoon unblocked						
vC, conflicting volume	576	129			259	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	576	129			259	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	448	896			1303	
Direction	Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total		2	171	88	318	318
Volume Left		0	0	0	0	0
Volume Right		2	0	2	0	0
cSH		896	1700	1700	1700	1700
Volume to Capacity		0.00	0.10	0.05	0.19	0.19
Queue Length 95th (ft)		0	0	0	0	0
Control Delay (s)		9.0	0.0	0.0	0.0	0.0
Lane LOS		A				
Approach Delay (s)		9.0	0.0		0.0	
Approach LOS		A				
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			19.5%	ICU Level of Service		A
Analysis Period (min)			15			

Sorrento Valley Dispensary
3: Sorrento Valley Rd & Proj Dwy

NEAR TERM (2018) CONDITIONS
Timing Plan: PM PEAK

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕	↖	↘	↕
Volume (veh/h)	0	2	577	2	0	441
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	2	627	2	0	479
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						1260
pX, platoon unblocked						
vC, conflicting volume	868	315			629	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	868	315			629	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	292	681			949	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	2	418	211	240	240
Volume Left	0	0	0	0	0
Volume Right	2	0	2	0	0
cSH	681	1700	1700	1700	1700
Volume to Capacity	0.00	0.25	0.12	0.14	0.14
Queue Length 95th (ft)	0	0	0	0	0
Control Delay (s)	10.3	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.3	0.0		0.0	
Approach LOS	B				

Intersection Summary					
Average Delay			0.0		
Intersection Capacity Utilization			26.0%	ICU Level of Service	A
Analysis Period (min)			15		

Synchro 8 Capacity Worksheets
➤ Near Term (2018) Plus Project Conditions

NEAR TERM (2018) PLUS PRJ. CONDITIONS

Sorrento Valley Dispensary

1: Sorrento Valley Rd & Sorrento Valley Blvd

Timing Plan: AM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	617	361	161	828	95	170	84	39	118	106	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1700	1900	1700	1900	1900	1900	1900	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	0.99	0.95	1.00	1.00	0.85	1.00	0.95		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1610	3159	1441	1770	3167	1583	3072	3371		3433	3162	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1610	3159	1441	1770	3167	1583	3072	3371		3433	3162	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	118	686	401	179	920	106	189	93	43	131	118	289
RTOR Reduction (vph)	0	5	250	0	0	72	0	32	0	0	223	0
Lane Group Flow (vph)	106	761	83	179	920	34	189	104	0	131	184	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7			8						
Actuated Green, G (s)	28.1	28.1	28.1	36.3	36.3	36.3	8.0	27.7		6.0	25.7	
Effective Green, g (s)	29.6	29.6	29.6	37.8	37.8	37.8	8.0	29.2		6.0	27.2	
Actuated g/C Ratio	0.25	0.25	0.25	0.32	0.32	0.32	0.07	0.25		0.05	0.23	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2		3.0	3.2	
Lane Grp Cap (vph)	401	788	359	564	1009	504	207	829		173	725	
v/s Ratio Prot	0.07	c0.24		0.10	c0.29		c0.06	0.03		c0.04	c0.06	
v/s Ratio Perm			0.06			0.02						
v/c Ratio	0.26	0.97	0.23	0.32	0.91	0.07	0.91	0.12		0.76	0.25	
Uniform Delay, d1	35.8	44.0	35.4	30.6	38.8	28.1	55.0	34.8		55.6	37.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	23.5	0.1	0.1	11.9	0.0	38.5	0.3		17.1	0.8	
Delay (s)	35.9	67.5	35.6	30.7	50.7	28.1	93.5	35.1		72.7	38.2	
Level of Service	D	E	D	C	D	C	F	D		E	D	
Approach Delay (s)		55.9			45.7			69.1			46.6	
Approach LOS		E			D			E			D	

Intersection Summary

HCM 2000 Control Delay	51.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	118.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Sorrento Valley Dispensary

NEAR TERM (2018) PLUS PRJ. CONDITIONS

1: Sorrento Valley Rd & Sorrento Valley Blvd

Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	181	808	217	145	611	45	429	185	131	129	119	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1700	1900	1700	1900	1900	1900	1900	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	0.91	0.86	0.91	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1610	3188	1441	1770	3167	1583	3072	3319		3433	3248	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1610	3188	1441	1770	3167	1583	3072	3319		3433	3248	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	191	851	228	153	643	47	452	195	138	136	125	152
RTOR Reduction (vph)	0	1	128	0	0	35	0	108	0	0	129	0
Lane Group Flow (vph)	172	892	77	153	643	12	452	225	0	136	148	0
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	7		8	8		5	2		1	6	
Permitted Phases			7			8						
Actuated Green, G (s)	28.9	28.9	28.9	24.3	24.3	24.3	15.2	20.9		8.5	14.2	
Effective Green, g (s)	30.4	30.4	30.4	25.8	25.8	25.8	15.2	22.4		8.5	15.7	
Actuated g/C Ratio	0.29	0.29	0.29	0.25	0.25	0.25	0.15	0.22		0.08	0.15	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.0	5.5		4.0	5.5	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2		3.0	3.2	
Lane Grp Cap (vph)	474	940	424	442	792	396	452	721		283	494	
v/s Ratio Prot	0.11	c0.28		0.09	c0.20		c0.15	0.07		c0.04	c0.05	
v/s Ratio Perm			0.05			0.01						
v/c Ratio	0.36	0.95	0.18	0.35	0.81	0.03	1.00	0.31		0.48	0.30	
Uniform Delay, d1	28.7	35.6	27.1	31.7	36.4	29.2	43.9	33.9		45.2	38.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	17.8	0.1	0.2	6.0	0.0	42.3	0.3		1.3	0.4	
Delay (s)	28.9	53.4	27.2	31.9	42.4	29.2	86.3	34.1		46.5	39.2	
Level of Service	C	D	C	C	D	C	F	C		D	D	
Approach Delay (s)		45.8			39.8			64.2			41.6	
Approach LOS		D			D			E			D	

Intersection Summary		
HCM 2000 Control Delay	48.1	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.81	D
Actuated Cycle Length (s)	103.1	Sum of lost time (s)
Intersection Capacity Utilization	76.4%	16.0
Analysis Period (min)	15	ICU Level of Service
		D

Sorrento Valley Dispensary
2: Sorrento Valley Rd & Parking/Arbutus St

NEAR TERM (2018) PLUS PRJ. CONDITIONS
Timing Plan: AM PEAK

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	20	0	2	14	233	18	64	532	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	22	0	2	15	256	20	70	585	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	894	1040	300	730	1037	138	600			276		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	894	1040	300	730	1037	138	600			276		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	93	100	100	98			95		
cM capacity (veh/h)	223	213	696	294	214	885	973			1284		
Approach Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	24	15	171	105	70	390	210					
Volume Left	22	15	0	0	70	0	0					
Volume Right	2	0	0	20	0	0	15					
cSH	313	973	1700	1700	1284	1700	1700					
Volume to Capacity	0.08	0.02	0.10	0.06	0.05	0.23	0.12					
Queue Length 95th (ft)	6	1	0	0	4	0	0					
Control Delay (s)	17.5	8.8	0.0	0.0	8.0	0.0	0.0					
Lane LOS	C	A			A							
Approach Delay (s)	17.5	0.5			0.8							
Approach LOS	C											
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			31.8%		ICU Level of Service				A			
Analysis Period (min)			15									

Sorrento Valley Dispensary
2: Sorrento Valley Rd & Parking/Arbutus St

NEAR TERM (2018) PLUS PRJ. CONDITIONS

Timing Plan: PM PEAK

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	55	0	25	39	554	15	71	407	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	0	0	60	0	27	43	609	16	78	447	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1023	1316	226	1082	1310	313	452			625		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1023	1316	226	1082	1310	313	452			625		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	61	100	96	96			92		
cM capacity (veh/h)	166	138	777	156	139	683	1105			952		
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3					
Volume Total	88	43	406	219	78	298	153					
Volume Left	60	43	0	0	78	0	0					
Volume Right	27	0	0	16	0	0	4					
cSH	206	1105	1700	1700	952	1700	1700					
Volume to Capacity	0.43	0.04	0.24	0.13	0.08	0.18	0.09					
Queue Length 95th (ft)	49	3	0	0	7	0	0					
Control Delay (s)	34.9	8.4	0.0	0.0	9.1	0.0	0.0					
Lane LOS	D	A			A							
Approach Delay (s)	34.9	0.5			1.3							
Approach LOS	D											
Intersection Summary												
Average Delay			3.2									
Intersection Capacity Utilization			34.3%		ICU Level of Service				A			
Analysis Period (min)			15									

Sorrento Valley Dispensary
3: Sorrento Valley Rd & Proj Dwy

NEAR TERM (2018) PLUS PRJ. CONDITIONS

Timing Plan: AM PEAK

	↙	↘	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↑↑			↑↑
Volume (veh/h)	0	25	236	13	0	610
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	27	257	14	0	663
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						1268
pX, platoon unblocked						
vC, conflicting volume	595	135			271	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	595	135			271	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
pD queue free %	100	97			100	
cM capacity (veh/h)	435	889			1290	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	27	171	100	332	332	
Volume Left	0	0	0	0	0	
Volume Right	27	0	14	0	0	
cSH	889	1700	1700	1700	1700	
Volume to Capacity	0.03	0.10	0.06	0.20	0.20	
Queue Length 95th (ft)	2	0	0	0	0	
Control Delay (s)	9.2	0.0	0.0	0.0	0.0	
Lane LOS	A					
Approach Delay (s)	9.2	0.0		0.0		
Approach LOS	A					

Intersection Summary					
Average Delay		0.3			
Intersection Capacity Utilization		20.2%	ICU Level of Service	A	
Analysis Period (min)		15			

Sorrento Valley Dispensary
3: Sorrento Valley Rd & Proj Dwy

NEAR TERM (2018) PLUS PRJ. CONDITIONS
Timing Plan: PM PEAK

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↖	↑↑			↑↑
Volume (veh/h)	0	43	577	21	0	482
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	47	627	23	0	524
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						1260
pX, platoon unblocked						
vC, conflicting volume	901	325			650	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	901	325			650	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	93			100	
cM capacity (veh/h)	278	671			932	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	47	418	232	262	262	
Volume Left	0	0	0	0	0	
Volume Right	47	0	23	0	0	
cSH	671	1700	1700	1700	1700	
Volume to Capacity	0.07	0.25	0.14	0.15	0.15	
Queue Length 95th (ft)	6	0	0	0	0	
Control Delay (s)	10.8	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	10.8	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		26.6%		ICU Level of Service	A	
Analysis Period (min)		15				