

Jamacha 12ksf Office Building
Jamacha Boulevard (across from San Juhn St)
PDS2018-STP-18-009
November 7, 2018

Traffic Impact Study

Project Owner:

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Glossary of Terms and Acronyms

ADT.....	Average Daily Traffic
LOS.....	Level of Service
MPH.....	Miles per Hour
TIS.....	Traffic Impact Study
V/C.....	Volume to Capacity Ratio



Executive Summary

Jamacha Blvd at San Juhn St 12 ksf Office Building

The proposed project is a 12,000 sf Office Building located on the southside of Jamacha Boulevard generally across from San Juhn Street in Spring Valley, California. The project site is vacant.

Project access is provided from one new driveway on Jamacha Boulevard across from and in alignment with San Juhn Street.

The project is calculated to generate 240 ADT, 33 AM peak hour trips (30 inbound and 3 outbound), and 31 PM peak hour trips (6 inbound and 25 outbound).

Under existing + project conditions, all study elements were calculated to operate at LOS C or better. There are no significant direct impacts because the addition of project traffic does not exceed the significance thresholds; however, the project has potential cumulative impacts. The project applicant proposes to pay into the TIF program to mitigate any potential cumulative impacts. A summary of project impacts is shown in **Table E-1**.

TABLE E-1: SUMMARY OF PROJECT IMPACTS AND MITIGATION

Roadway Facility	Direct Impacts (Proposed Mitigation)	Cumulative Impacts (Proposed Mitigation)
Intersections	0 (no mitigation required)	Potential (TIF)
Segments	0 (no mitigation required)	Potential (TIF)

Note: To mitigate potential cumulative impacts, the County has established a Traffic Impact Fee (TIF) program.



1.0 Introduction

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

- 1.0 Introduction
- 2.0 Existing Conditions
- 3.0 Project Impact Analysis
- 4.0 General Plan Consistency and Build Out Analysis
- 5.0 Summary of Recommended Mitigation Measures
- 6.0 References
- 7.0 List of Preparers and Persons and Organizations Contacted

1.1 Purpose of the Report

The purpose of this Traffic Impact Study (TIS) is to determine and analyze potential traffic impacts for the proposed 12,000 sf office building.

1.2 Project Location and Description

The proposed project is a 12,000 sf Office Building located on the southside of Jamacha Boulevard generally across from San Juhn Street in Spring Valley, California. The project site is vacant.

Project access is provided from one new driveway on Jamacha Boulevard across from and in alignment with San Juhn Street.

The location of the project is shown in **Figure 1**. The map of the TIS area covering the extent of where 25 (two-way) AM and PM peak hour project trips are anticipated to travel is shown in **Figure 2**. A site plan is shown in **Figure 3**.

1.3 Planning Requirements

The project applicant does not propose a General Plan Amendment nor a Specific Plan Amendment. Zoning for the site is Office-Professional (C30).

Figure 1: Project Location

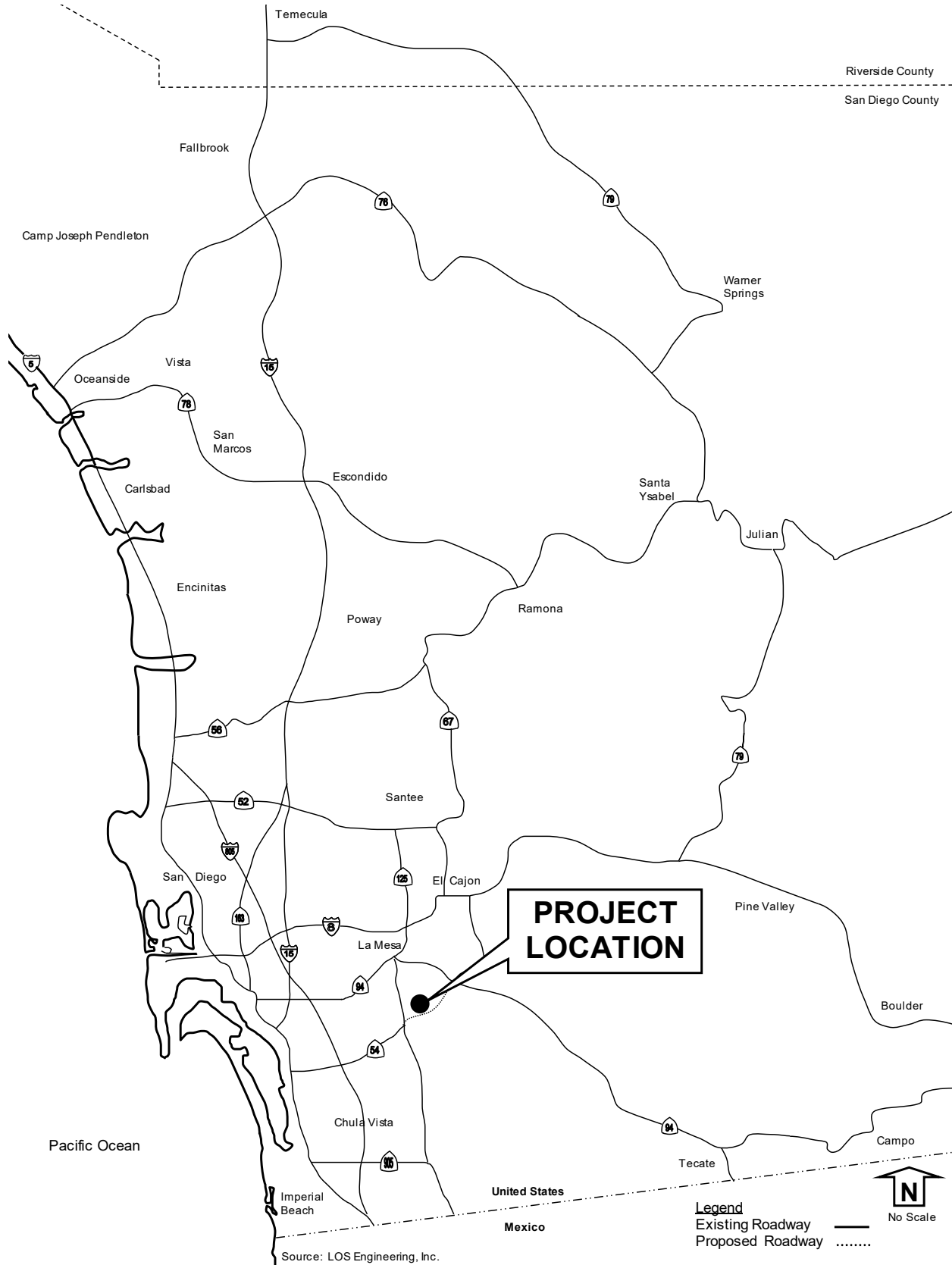
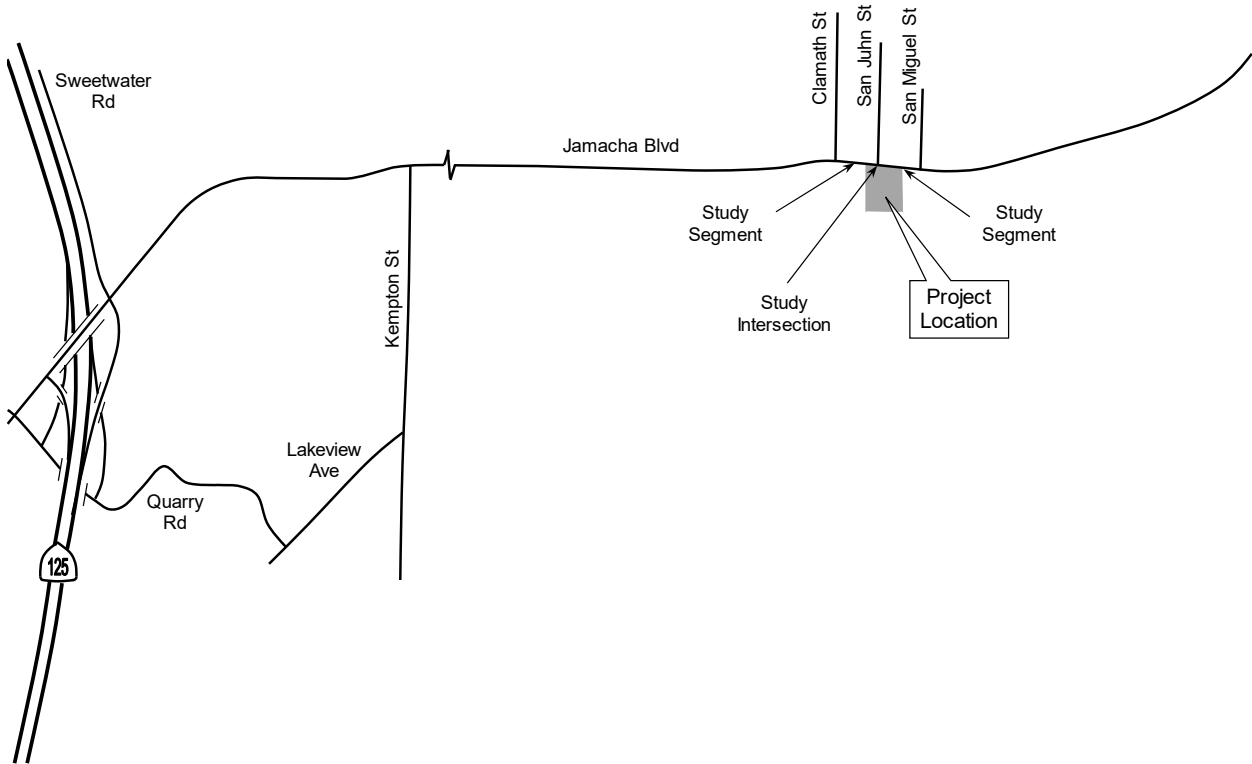


Figure 2: Traffic Impact Study Area



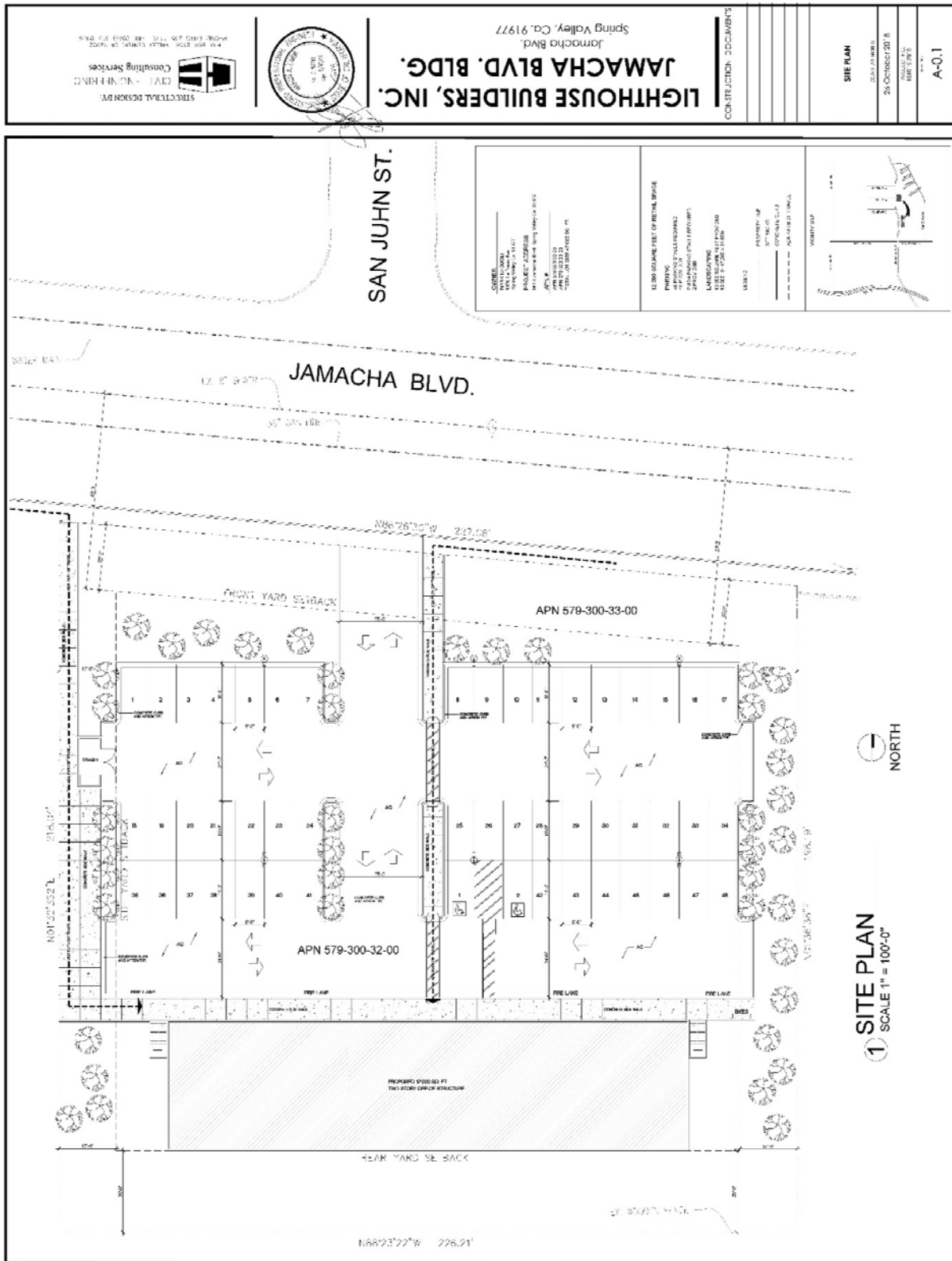
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— Existing Roadways



No Scale

Figure 3: Site Plan



Source: Civil Engineering Consulting Services

1.4 Significance Criteria

This section describes traffic impact significance criteria applied to this project and the SANDAG Congestion Management Program (CMP) requirements.

1.4.1 County of San Diego Guidelines for Determining Significance

Based on the San Diego County *Report Format & Content Requirements Transportation and Traffic*, dated August 24, 2011, a project may have the following allowable increases on congested roadway segments and intersections as shown in **Table 1**.

TABLE 1: COUNTY OF SAN DIEGO SIGNIFICANT TRAFFIC IMPACT THRESHOLDS

Measures of Significant Project Impacts to Congestion Allowable Increases on Congested Roads and Intersections					
Operations	Road Segments			Intersections	
	2-Lane Road	4-Lane Road	6-Lane Road	Signalized	Un-signalized
LOS E	200 ADT	400 ADT	600 ADT	Delay of 2 seconds or less	20 or less peak hour trips on a critical movement
LOS F	100 ADT	200 ADT	300 ADT	Either a Delay of 1 second, or 5 peak hour trips or less on a critical movement	5 or less peak hour trips on a critical movement

Source: County of San Diego *Guidelines for Determining Significance* Tables 1 and 2. Note: A critical movement is one that is experiencing excessive queues. By adding proposed project trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate its share of the cumulative impacts. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

A direct impact would occur when the significance criteria are exceeded. If the proposed project exceeds the values provided in the above table, then the individually proposed project would result in a direct traffic impact. Specific improvements to mitigate direct impacts must be identified.

A cumulative impact would occur when two conditions are met: 1) build-out of all near-term projects results in a cumulative traffic impact and 2) the amount of traffic generated by the individual proposed project contributes (even in a small part) to that cumulative impact. Both conditions must be met for an individual project to result in a cumulative traffic impact.

Potential mitigation measures may include traffic signal improvements (i.e. signal coordination), physical road improvements, street re-striping and parking prohibitions, fair-share contributions, and transportation demand management programs.

1.4.2 SANDAG Congestion Management Program Requirements

The San Diego Association of Governments (SANDAG) has the following statement on their website regarding the Congestion Management Program (CMP) - details included in **Appendix A**:

“In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the region’s continued compliance with the federal congestion management process.”

2.0 Existing Conditions

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

2.1 Existing Transportation Conditions

The study area includes the segment of Jamacha Boulevard from Clamath Street to San Miguel Street. The existing roadway conditions are shown in **Figure 4**.

Jamacha Boulevard in the project vicinity is classified as a *4.1A Major Road* on the County Mobility Element Network map (a copy of the County Mobility Element map is included in **Appendix B**). Jamacha Boulevard from Clamath Street to San Miguel Street is constructed as a four-lane roadway undivided roadway with two travel lanes in each direction, a center two way left turn lane, and bike lanes on both sides of the roadway. On-street parking is prohibited along the project frontage. A posted speed limit of 45 MPH was observed west of the project site. A segment capacity of 34,200 at LOS E was applied to match the current configuration of Jamacha Boulevard with a center two way left turn lane (4.1B) vs. the mobility classification of 4.1A (37,000 ADT at LOS E) for raised median conditions.

2.1.1 Existing Traffic Volumes and LOS Analyses

Existing peak hour intersection volumes were collected on Wednesday, August 22, 2018 from 7-9 AM and 4-6 PM at the following intersection:

- 1) Jamacha Blvd/San Juhn St

Additionally, existing daily traffic volumes were collected on Wednesday, August 22, 2018 for the following segments:

- 1) Jamacha Blvd between Clamath St and San Juhn St
- 2) Jamacha Blvd between San Juhn St and San Miguel St

Schools in the immediate project vicinity were in session starting August 9, 2018 (school calendars are included in **Appendix C**).

The existing AM, PM, and daily volumes are shown on **Figure 5**, with count data included in **Appendix D**. Intersection and segment LOS are shown in **Tables 2 and 3**, respectively.

Figure 4: Existing Roadway Conditions

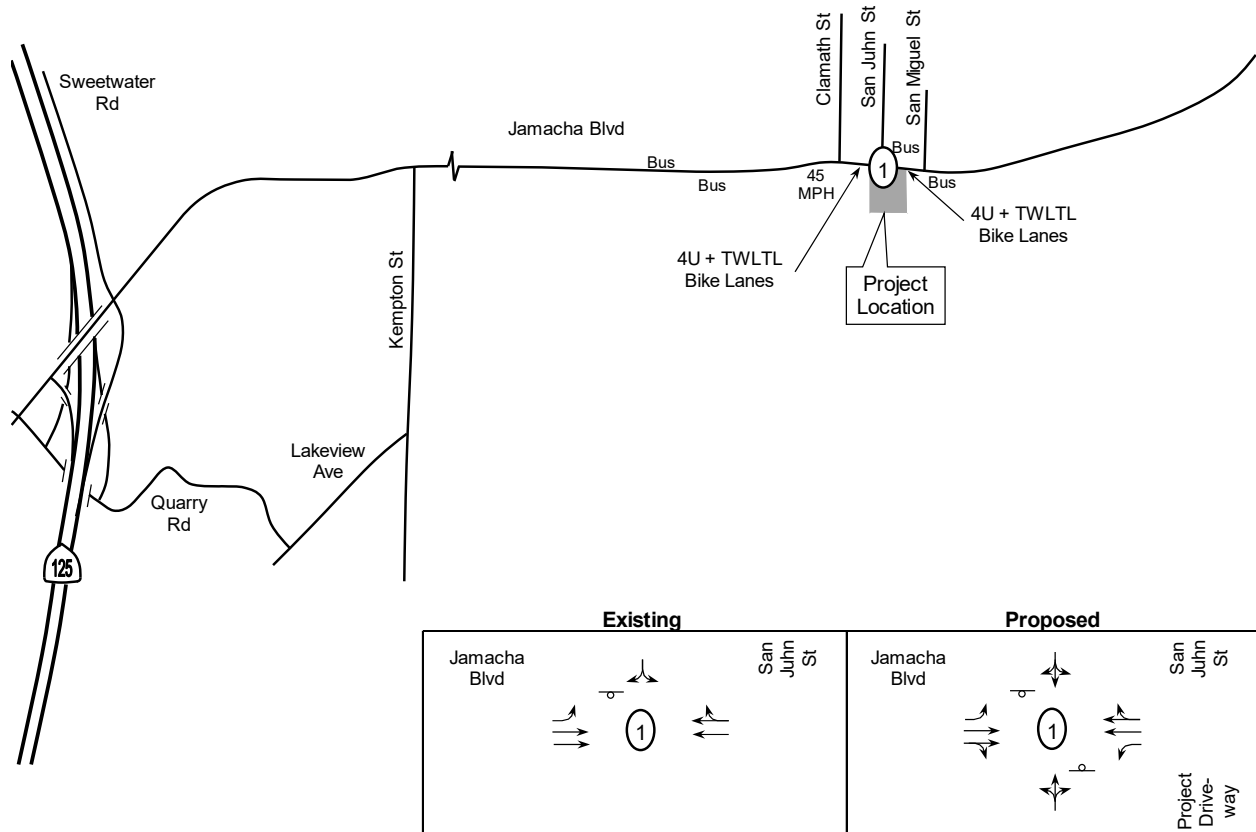
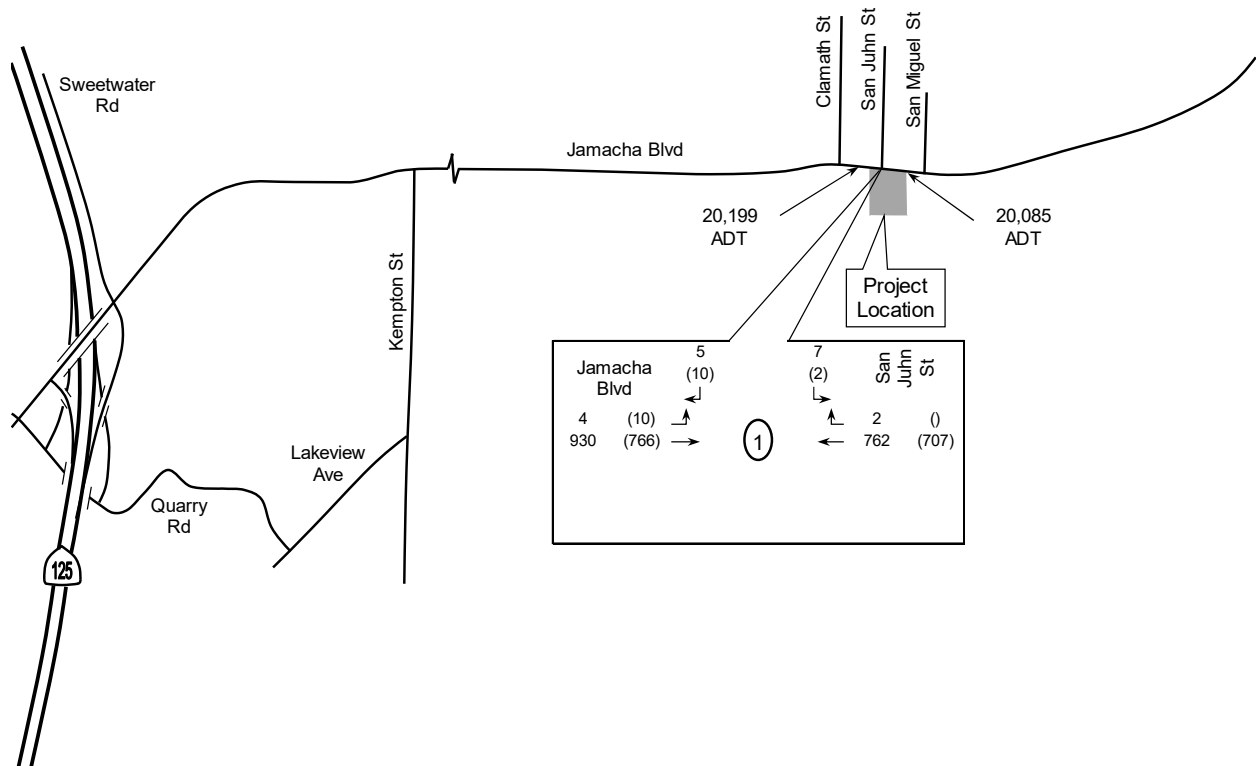


Figure 5: Existing Volumes



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- XX AM peak hour volumes at intersections
- (YY) PM peak hour volumes at intersections
a () represents a 0 PM volume
- Z.ZZZ ADT volumes shown along segments
- (#) Intersection Reference Number to LOS Tables
- Existing Roadways

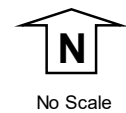


TABLE 2: EXISTING INTERSECTION LEVEL OF SERVICE

Intersection and (Analysis) ¹	Movement	Peak Hour	Existing	
			Delay ²	LOS ³
1) Jamacha Blvd at San Juhn St (U)	SB LR	AM	16.8	C
	SB LR	PM	12.2	B

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service.

TABLE 3: EXISTING SEGMENT ADT VOLUMES AND LEVEL OF SERVICE

Segment	Mobility Classification (as built)	LOS E Capacity	Existing		
			Daily Volume	V/C	LOS
<u>Jamacha Boulevard</u>					
Clamath St to San Juhn St	Major 4.1A (4.1B)	34,200	20,199	0.591	B
San Juhn St to San Miguel St	Major 4.1A (4.1B)	34,200	20,085	0.587	B

Notes: 4U+TWLTL = 4 un-divided lanes + two way left turn lane. Daily volume is a 24 hour volume. LOS: Level of Service
V/C: Volume to Capacity Ratio.

Under existing conditions, all study elements were calculated to operate at LOS C or better. LOS calculations are included in **Appendix E**.

2.2 Existing Parking, Transit and On-site Circulation

The existing site is vacant. Project access is provided from one new driveway on Jamacha Boulevard across from and in alignment with San Juhn Street. On-site circulation will provide access to off-street parking.

The Metropolitan Transit System (MTS) shows Bus Route 856 on Jamacha Boulevard along the project frontage (MTS map and schedule are included in **Appendix F**).

3.0 Project Impact Analysis

This section describes the traffic analysis methodology.

3.1 Analysis and Methodology

The project study area was based on direction from County staff and guidelines as outlined in the County of San Diego *Guidelines for Determining Significance and Report Format and Content Requirements Transportation and Traffic* dated August 24, 2011.

The traffic analyses prepared for this study were based on the *2010 Highway Capacity Manual* (HCM) operations analysis using Level of Service (LOS) evaluation criteria. The operating conditions of the study intersections, roadway segments, and highway segments are measured using the HCM LOS designations, which range from A through F. LOS A represents the best operating condition and LOS F denotes the worst operating condition. The individual LOS criteria for each roadway component are described below.

3.1.1 Intersections

The study intersections were analyzed based on the **operational analysis** outlined in the 2010 HCM. This process defines LOS in terms of **average control delay** per vehicle, which is measured in seconds. LOS at the intersections were calculated using the computer software program Synchro 10.0 (Trafficware Corporation). The HCM LOS for the range of delay by seconds for un-signalized and signalized intersections is described in **Table 4**.

TABLE 4: INTERSECTION LEVEL OF SERVICE DEFINITIONS (HCM 2010)

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

TWSC: Two Way Stop Control. AWSC: All Way Stop Control. Source: Highway Capacity Manual 2010 (exhibit 19-1 for two way stop control, exhibit 20-2 for all way stop control, and exhibit 18-4 for signalized intersections).

3.1.2 Street Segments

The street segments were analyzed based on the functional classification of the roadway using the County of San Diego *Average Daily Vehicle Trips* capacity lookup table. The roadway segment capacity and LOS standards used to analyze street segments are summarized in **Table 5**.

TABLE 5: STREET SEGMENT DAILY CAPACITY AND LOS (COUNTY OF SAN DIEGO GENERAL PLAN UPDATE)

Mobility Element Roads Classification		LOS A	LOS B	LOS C	LOS D	LOS E
Expressway	6.1	<36,000	<54,000	<70,000	<86,000	<108,000
Prime Arterial	6.2	<22,200	<37,000	<44,600	<50,000	<57,000
Major Road w/raised median	4.1A	<14,800	<24,700	<29,600	<33,400	<37,000
Major Rd w/intermittent turn lanes	4.1B	<13,700	<22,800	<27,400	<30,800	<34,200
Boulevard w/raised median	4.2A	<18,000	<21,000	<24,000	<27,000	<30,000
Boulevard w/Intermittent turn lanes	4.2B	<16,800	<19,600	<22,500	<25,000	<28,000
Community Collector w/raised median	2.1A	<10,000	<11,700	<13,400	<15,000	<19,000
Community Collector w/cont. turn lane	2.1B	<3,000	<6,000	<9,500	<13,500	<19,000
Community Collector w/intermit. turn lane	2.1C	<3,000	<6,000	<9,500	<13,500	<19,000
Community Collector w/improvement opt.	2.1D	<3,000	<6,000	<9,500	<13,500	<19,000
Community Collector	2.1E	<1,900	<4,100	<7,100	<10,900	<16,200
Light Collector w/raised median	2.2A	<3,000	<6,000	<9,500	<13,500	<19,000
Light Collector w/continuous left turn lane	2.2B	<3,000	<6,000	<9,500	<13,500	<19,000
Light Collector w/intermittent turn lane	2.2C	<3,000	<6,000	<9,500	<13,500	<19,000
Light Collector w/ passing lane	2.2D	<3,000	<6,000	<9,500	<13,500	<19,000
Light Collector - no median	2.2E	<1,900	<4,100	<7,100	<10,900	<16,200
Light Collector w/ reduced shoulder	2.2F	<5,800	<6,800	<7,800	<8,700	<9,700
Minor Collector w/raised median	2.3A	<3,000	<6,000	<7,000	<8,000	<9,000
Minor Collector w/intermittent turn lane	2.3B	<3,000	<6,000	<7,000	<8,000	<9,000
Minor Collector – no median	2.3C	<1,900	<4,100	<6,000	<7,000	<8,000
Non-Mobility Element Roads Classification				LOS C		
Rural Residential Road 2 lanes				<1,500		

Source: County of San Diego Public Road Standards, March, 2012.

3.2 Project Trip Generation

The project trip generation was calculated using the SANDAG *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002. The project is calculated to generate 240 ADT, 33 AM peak hour trips (30 inbound and 3 outbound), and 31 PM peak hour trips (6 inbound and 25 outbound) as shown in **Table 6**.

TABLE 6: PROJECT TRIP GENERATION

Proposed Land Use	Rate	Size & Units	ADT	%	Split	AM			PM		
						IN	OUT	%	Split	IN	OUT
Office	20 /KSF	12,000 SF	240	14%	0.9 0.1	30	3	13%	0.2 0.8	6	25

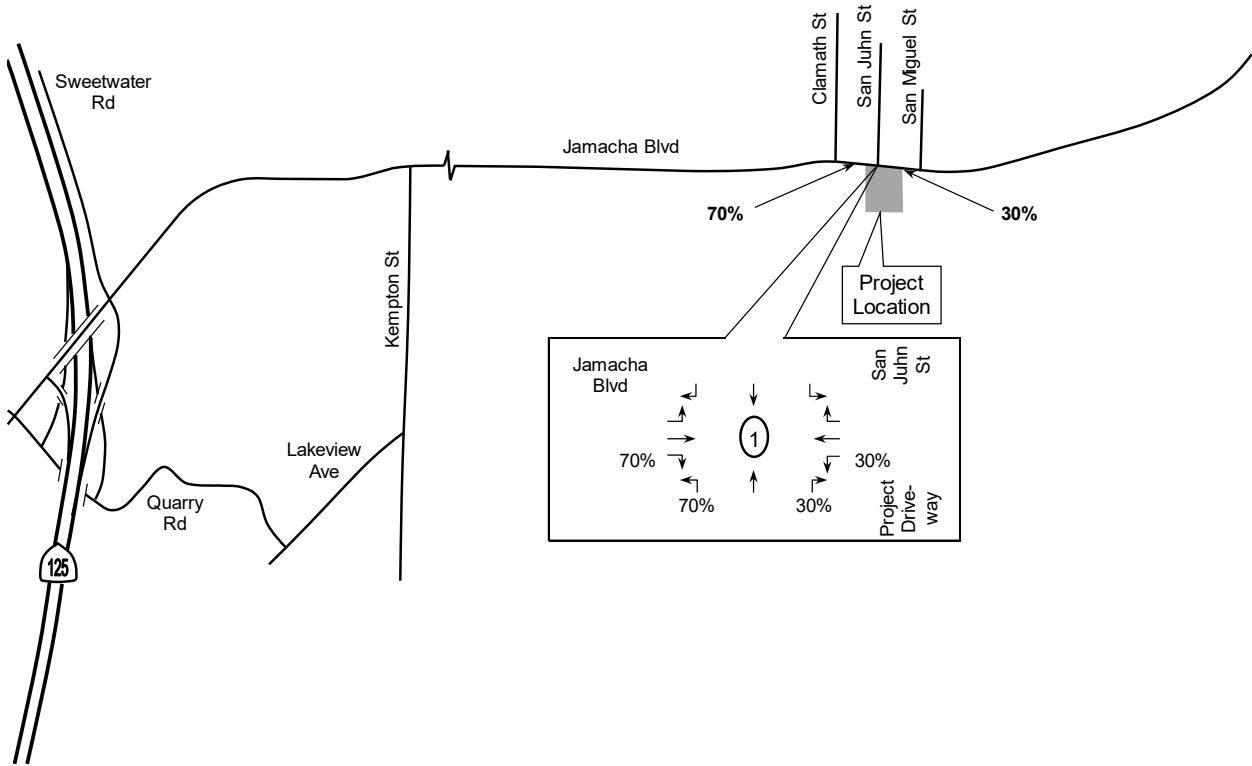
Source: SANDAG *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.

SF - Square Feet; ADT-Average Daily Traffic; Split-percent inbound and outbound.

3.3 Project Trip Distribution and Assignment

The project distribution was based a review of background traffic patterns and surrounding trip attractors. The project distribution as shown in **Figure 6**. The project trip assignment is shown in **Figure 7**.

Figure 6: Project Distribution

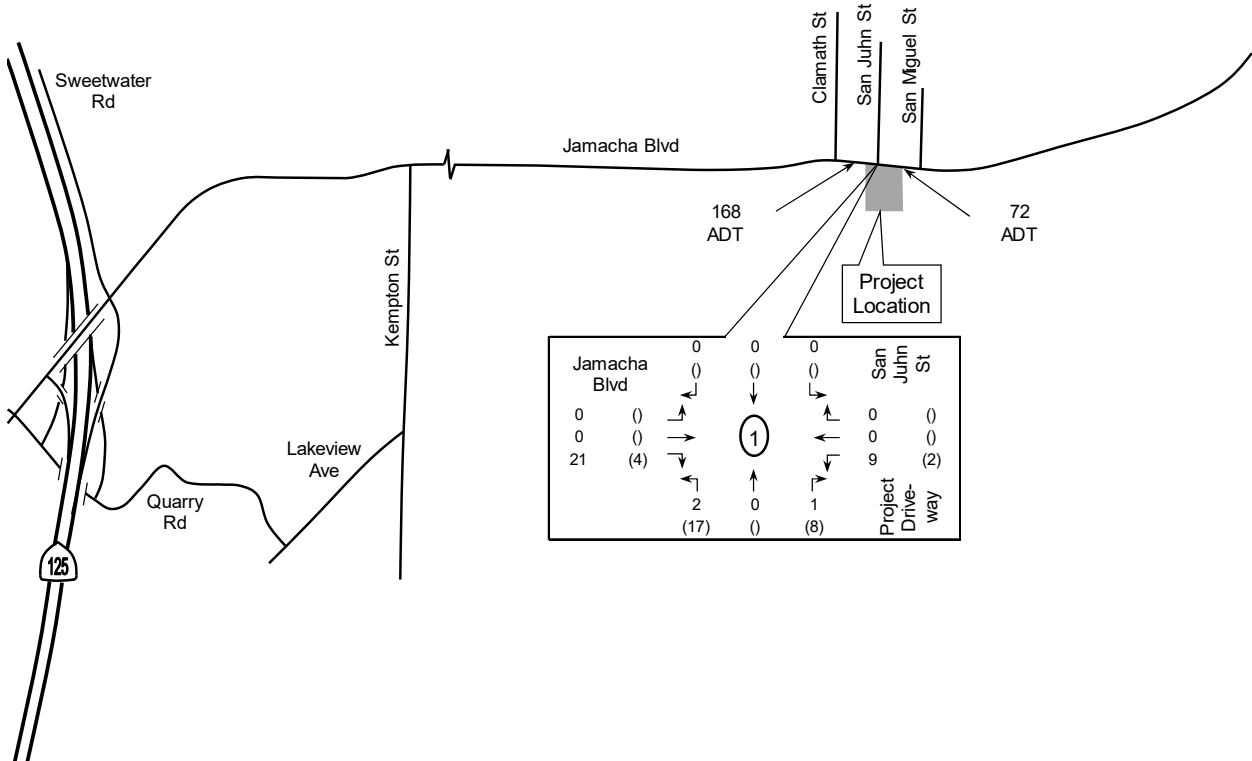


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- % Distribution
- # Intersection Reference Number to LOS Tables
- Existing Roadways



Figure 7: Project Trip Assignment

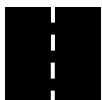


LEGEND

- XX AM peak hour volumes at intersections
- (YY) PM peak hour volumes at intersections
a () represents a 0 PM volume
- ZZZZ ADT volumes shown along segments
- (#) Intersection Reference Number to LOS Tables
- Existing Roadways



No Scale



3.4 Existing + Project Conditions

This section will summarize the analysis for the addition of project traffic onto the existing background traffic for AM, PM, and daily traffic conditions. The peak hour intersection volumes and daily traffic volumes for this scenario of existing + project are shown in **Figure 8**. The LOS calculated for the intersections and segments are shown in **Tables 7 and 8**, respectively.

TABLE 7: EXISTING + PROJECT INTERSECTION LEVEL OF SERVICE

Intersection & (Analysis) ¹	Move-ment	Peak Hour	Existing		Existing + Project			County Sig ⁶	
			Delay ²	LOS ³	Delay ²	LOS ³	Delta ⁴		CM Vol ⁵
1) Jamacha Blvd at San Juhn St/Project Access (U)	SB LTR	AM	16.8	C	18.9	C	2.1	0	No
	SB LTR	PM	12.2	B	12.5	B	0.3	0	No
	NB LTR	AM	DNE	NA	22.1	C	NA	3	No
	NB LTR	PM	DNE	NA	18.6	C	NA	25	No

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. 3) LOS: Level of Service. 4) Delta is the increase in delay from project. 5) Critical Movement Volume. 6) Significant impact based on SD County criteria that allows up to 5 peak hour project trips on a critical movement (i.e. EB LTR) at an unsignalized intersection at LOS F and up to 20 at LOS E. DNE: Does Not Exist. NA: Not Applicable.

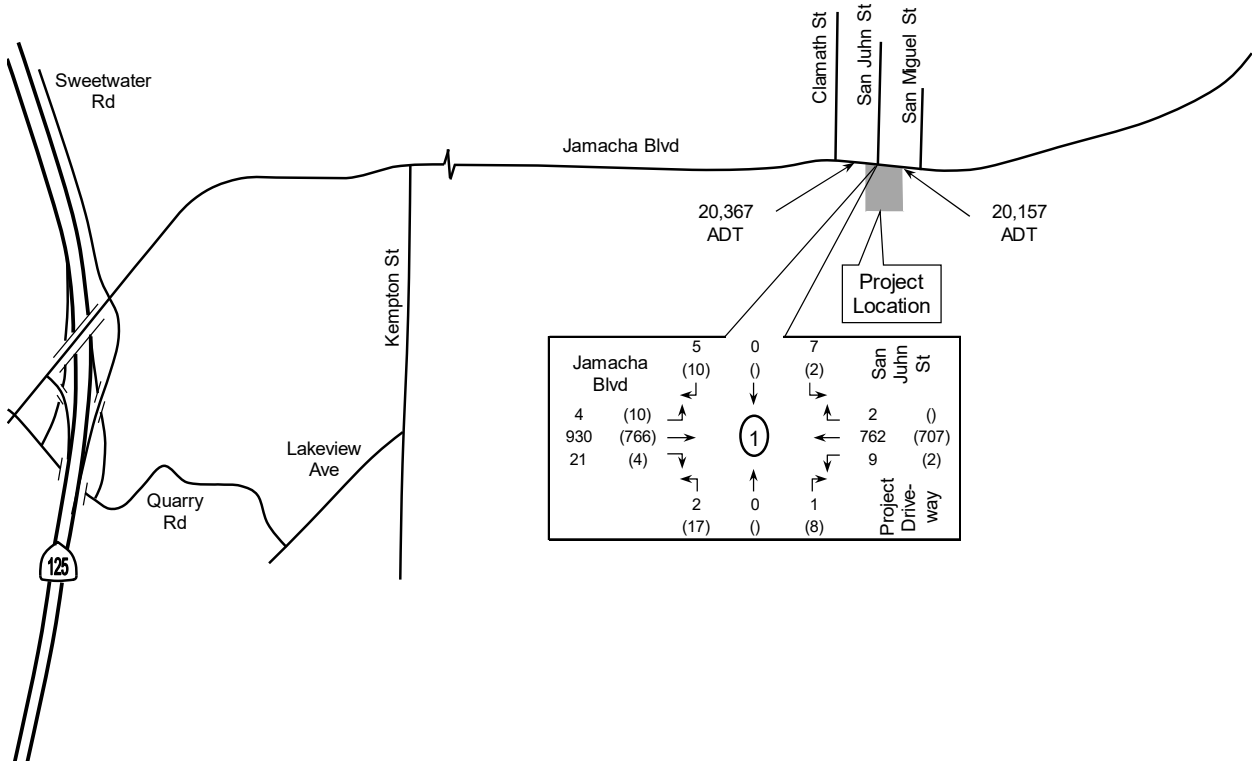
TABLE 8: EXISTING + PROJECT SEGMENT ADT VOLUMES AND LEVEL OF SERVICE

Segment	Mobility Classification (as built)	LOS E Capacity	Existing		Project		Existing + Project			Project Impact?	
			Daily Volume	V/C	Daily Volume	Daily Volume	V/C	LOS	Change in V/C		
<u>Jamacha Boulevard</u>											
Clamath St to San Juhn St	Major 4.1A (4.1B)	34,200	20,199	0.591	B	168	20,367	0.596	B	0.005	No
San Juhn St to San Miguel St	Major 4.1A (4.1B)	34,200	20,085	0.587	B	72	20,157	0.589	B	0.002	No

Notes: 4U+TWLTL = 4 un-divided lanes + two way left turn lane. Daily volume is a 24 hour volume. LOS: Level of Service. V/C: Volume to Capacity Ratio.

Under existing + project conditions, all study elements were calculated to operate at LOS C or better. There are no significant direct impacts because the addition of project traffic does not exceed the significance thresholds. LOS calculations are included in **Appendix G**.

Figure 8: Existing + Project Volumes



LEGEND

- XX AM peak hour volumes at intersections
- (YY) PM peak hour volumes at intersections
a () represents a 0 PM volume
- ZZZZ ADT volumes shown along segments
- # Intersection Reference Number to LOS Tables
- Existing Roadways



No Scale

3.5 Ramps

The project distribution of trips using surrounding interstate on-ramps is anticipated to be 5 or less peak hour trips; therefore, an on-ramp meter analysis is not provided.

3.6 Congestion Management Program

The San Diego Association of Governments (SANDAG) has the following statement on their website regarding the Congestion Management Program (CMP) - details included in Appendix A:

“In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by 23 CFR 450.320 to ensure the region’s continued compliance with the federal congestion management process.”

3.7 Hazards Due To An Existing Transportation Design Feature

Project has frontage on Jamacha Boulevard. Any required improvements will be constructed to maintain existing conditions as it relates to existing design features.

3.8 Hazards To Pedestrians or Bicyclists

Project has frontage on Jamacha Boulevard. Any required improvements will be constructed to maintain existing conditions as it relates to pedestrian and bicyclists.

3.9 Public Transportation

MTS shows Bus Route 856 along Jamacha Boulevard in the vicinity of the project (MTS map and schedules are included in Appendix F).

3.10 Impact Summary Table

The project is calculated to have no direct impacts and the potential for cumulative impacts as summarized in **Table 9**.

TABLE 9: IMPACT SUMMARY TABLE

Roadway Facility	Direct Impacts	Cumulative Impacts
Intersections	0	Potential
Segments	0	Potential

Note: To mitigate potential cumulative impacts, the County has established a Traffic Impact Fee (TIF) program.



4.0 General Plan Consistency and Build-out Analysis

The project applicant does not propose a General Plan Amendment nor a Specific Plan Amendment. Therefore, a build-out analysis is not required.

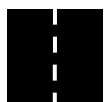
5.0 Summary of Recommended Mitigation Measures

The project is calculated to have no direct impacts; however, the project may contribute to potential cumulative impacts.

5.1 Cumulative Impacts

Because the proposed project is located within the Spring Valley TIF area, the project applicant proposes to pay into the TIF program to mitigate any potential cumulative impacts. The County of San Diego has developed an overall programmatic solution that addresses existing and projected future road deficiencies in the unincorporated portion of San Diego County. This program includes the adoption of a TIF program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. Based on SANDAG regional growth and land use forecasts, the SANDAG Regional Transportation Model was utilized to analyze projected build-out development conditions on the existing mobility element roadway network throughout the unincorporated area of the County. Based on the results of the traffic modeling, funding necessary to construct transportation facilities that will mitigate cumulative impacts from new development was identified. Existing roadway deficiencies will be corrected through improvement project funded by other public funding sources, such as TransNet, gas tax, and grants. Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan (RTP). This plan, which considers freeway build-out over the next 30 years, will use funds from TransNET, state, and federal funding to improve freeways to projected level of service objectives in the RTP.

The proposed project is calculated to generate 240 daily trips. These trips will be distributed on mobility element roadways in the County that were analyzed by the TIF program, some of which currently are projected to operate at inadequate levels of service. These project trips therefore contribute to a potential significant cumulative impact and mitigation is required. The potential growth represented by this project was included in the growth projections upon which the TIF project is based. The TIF cost is based on the year when building permits are pulled and type of building permit.



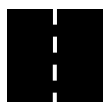
5.2 Summary of Impacts, Mitigation, and Project Improvements

The project is calculated to have no direct impacts and potential cumulative impacts. A summary of project impacts and proposed mitigation is shown in **Table 10**.

TABLE 10: SUMMARY OF PROJECT IMPACTS AND MITIGATION

Roadway Facility	Direct Impacts (Proposed Mitigation)	Cumulative Impacts (Proposed Mitigation)
Intersections	0 (no mitigation required)	Potential (TIF)
Segments	0 (no mitigation required)	Potential (TIF)

Note: To mitigate potential cumulative impacts, the County has established a Traffic Impact Fee (TIF) program.



6.0 References

County of San Diego. August 24, 2011. *Guidelines for Determining Significance and Report Format and Content Requirements Traffic and Transportation*. Print.

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7.0 List of Preparers and Persons and Organizations Contacted

7.1 List of Preparers

Justin Rasas, P.E. (RCE 60690), LOS Engineering, Inc. Author

7.2 Organizations Contacted

Applicant, Mark Khouli

Civil Engineer, Marco Limon, P.E.

Counts Unlimited, Kris Campos

Appendix A

Congestion Management Program SANDAG Position



**BOARD OF DIRECTORS
OCTOBER 23, 2009**

**AGENDA ITEM NO. 09-10-6
ACTION REQUESTED – INFORMATION**

CONGESTION MANAGEMENT PROGRAM PROCESS

File Number 3100400

Introduction

SANDAG, as the Congestion Management Agency (CMA), is required by state law to prepare and regularly update a Congestion Management Program (CMP) for the San Diego region. The last CMP update was adopted by SANDAG in November 2008. On May 8, 2009, the Board of Directors directed staff to work with local jurisdictions that wished to prepare resolutions electing to opt out of the state CMP. A majority of the jurisdictions representing a majority of the population have adopted resolutions electing to be exempt from the state CMP. This informational report also was presented at the October 16, 2009, Transportation Committee meeting.

Discussion

The purposes of the CMP are to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG staff evaluated options for future direction of the CMP and discussed these options at multiple meetings of the Cities/County Transportation Advisory Committee and the Regional Planning Technical Working Group. One option was to streamline the SANDAG CMP process and the other was to opt out of the state CMP process. As previously stated, at its May 8, 2009, meeting, the Board of Directors discussed these options and voted to direct staff to work with local jurisdictions that wished to prepare resolutions electing to opt out of the state CMP.

Assembly Bill (AB) 2419, passed in 1996, allows congestion management agencies to “opt out” of the state CMP process. Section 65088.3 of the California Government Code states *“This chapter does not apply in a county in which a majority of local governments, collectively comprised of the city councils and the county board of supervisors, which in total also represent a majority of the population in the county, each adopt resolutions electing to be exempt from the congestion management program.”* Over the past few months 14 out of the 19 local jurisdictions, representing a majority of the population in San Diego County have adopted resolutions electing to be exempt from the state CMP process. The local jurisdictions that adopted resolutions include: Carlsbad, Chula Vista, El Cajon, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, City of San Diego, County of San Diego, San Marcos, and Santee.

SANDAG will continue to meet the federal congestion management provisions through existing SANDAG planning and performance monitoring activities, such as the Regional Transportation Plan (RTP) and other multimodal performance monitoring efforts. Federal congestion management provisions are more flexible and utilize the RTP as the primary tool to provide solutions for congestion. The RTP includes identification and evaluation of anticipated performance and expected benefits of appropriate congestion management strategies (demand management, operational improvements, transit improvements, systems management improvements, etc.).

Additionally, appropriate analysis of multimodal strategies and alternatives for corridors is required when an increase in single occupancy vehicle capacity is proposed.

Next Steps

SANDAG staff will notify the California Transportation Commission and State Controller of the region's decision to elect to be exempt from the state CMP.

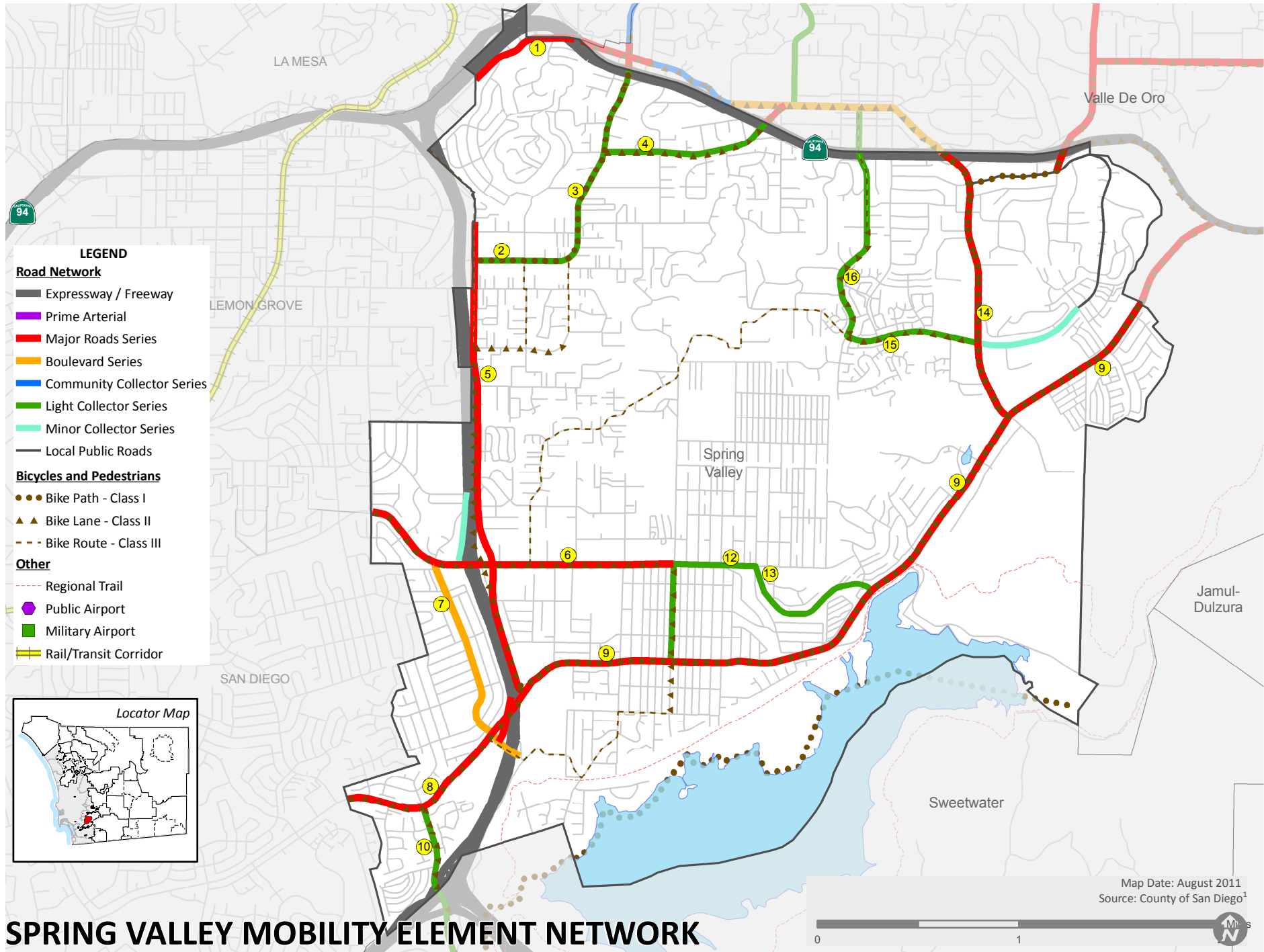
GARY L. GALLEGOS
Executive Director

Key Staff Contact: Heather Werdick, (619) 699-6967, hwe@sandag.org

Funds are budgeted in Work Element #3100400

Appendix B

County of San Diego Mobility Element Excerpts



SPRING VALLEY MOBILITY ELEMENT NETWORK

Mobility Element Network—Spring Valley Community Planning Area Matrix			
ID ^a	Road Segment	Designation/Improvement #.#X = [# of lanes].[roadway classification][improvement]	Special Circumstances
1	Broadway/Campo Road (SA 1010) <u>Segment:</u> Lemon Grove city limits to SR- 94 (Valle de Oro)	4.1A Major Road Raised Median	None
2	Troy Street (SA 950.2) <u>Segment:</u> Sweetwater Road to Bancroft Drive	2.2D Light Collector Improvement Options [Continuous Turn Lane]	None
3	Bancroft Drive (SA 950.2) <u>Segment:</u> Troy Street to SR-94	2.2D Light Collector Improvement Options [Continuous Turn Lane]	Accepted at LOS E <u>Segment:</u> Troy Street to State Route 94 eastbound ramp
4	Kenwood Drive (SC 2122) <u>Segment:</u> Bancroft Drive to the SR-94 interchange ramps	2.2D Light Collector Improvement Options [Intermittent Turn Lanes]	None Shoulder as Parking Lane Separate Bike Lane required—Bancroft Drive to Helix Street
5	Sweetwater Road (SF 1269) <u>Segment:</u> Lemon Grove city limits to Jamacha Boulevard	4.1B Major Road Intermittent Turn Lanes	None
6	Jamacha Road (SA 990) <u>Segment:</u> San Diego city limits to Grand Avenue	4.1B Major Road Intermittent Turn Lanes	Accepted at LOS E/F <u>Segment:</u> SR-125 southbound ramp to Sweetwater Road
7	Elketon Boulevard (SC 2190) <u>Segment:</u> Jamacha Road to Quarry Road	4.2B Boulevard Intermittent Turn Lanes—Jamacha Road to Paradise Valley Road 2.2E Community Collector Paradise Valley Road to Quarry Road	Shoulder as Parking Lane Separate Bike Lane required—Jamacha Road to Paradise Valley Road
8	Paradise Valley Road (SA 1050) <u>Segment:</u> San Diego city limits to Sweetwater Road	4.1B Major Road Intermittent Turn Lanes	Accepted at LOS F <u>Segment:</u> Elkelton Boulevard to Sweetwater Road
9	Jamacha Boulevard (SF1397) <u>Segment:</u> Sweetwater Road to Valle de Oro CPA boundary	4.1A Major Road Raised Median	None



Mobility Element Network—Spring Valley Community Planning Area Matrix			
ID ^a	Road Segment	Designation/Improvement #.#X = [# of lanes].[roadway classification][improvement]	Special Circumstances
10	Worthington Street (SC 2210) <u>Segment:</u> Paradise Valley Road to Sweetwater CPA boundary	2.2C Light Collector Intermittent Turn Lanes	None
11	Grand Avenue (SC 2200) <u>Segment:</u> Apple Street to Jamacha Boulevard	2.2D Light Collector Improvement Options [Raised Median]	Shoulder as Parking Lane Separate Bike Lane required—Apple Street to Jamacha Boulevard
12	Apple Street (SA 990) <u>Segment:</u> Grand Avenue to Maya Street	2.2E Light Collector	None
13	Maya Street (SA 990) <u>Segment:</u> Apple Street to Jamacha Boulevard	2.2E Light Collector	None
14	Sweetwater Springs Boulevard (SA 970) <u>Segment:</u> SR-94 interchange to Jamacha Boulevard	4.1A Major Road Raised Median	None
15	Austin Drive (SC 2130) <u>Segment:</u> South Barcelona Street to Sweetwater Springs Boulevard	2.2E Light Collector South Barcelona Street to Avenida Bosques 2.2A Light Collector Raised Median—Avenida Bosques to Sweetwater Springs Boulevard	Shoulder as Parking Lane Separate Bike Lane required—South Barcelona Street to Sweetwater Springs Boulevard
16	South Barcelona Street (SC 2110) <u>Segment:</u> Austin Drive to SR-94	2.2E Light Collector	Shoulder as Parking Lane Separate Bike Lane required—Austin Drive to Paseo Via de Oro

a. ID = Roadway segment on Figure M-A-20

Appendix C

Calendar for Nearby Schools

La Mesa-Spring Valley School District Master Calendar • 2018-2019

KEY
 W Teacher Workday
 S Staff Development Day (No School)
 N Non-work Day (No School)

180 Student Days - First Day of School - 8/9
 1 Staff Development/Work Day - 8/6
 2 Teacher Work Days - 8/7, 8/8
 1 Staff Development Day - 12/21
 184 Teacher Days

October Break 10/8 - 10/19
 Winter Break 12/24 - 1/4
 Spring Break 4/15 - 4/26

(Principals Report 7/19/18-6/21/19, 201 Work Days)

JULY																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

AUGUST																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

SEPTEMBER																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		

OCTOBER																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

NOVEMBER																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		

DECEMBER																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

JANUARY																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

FEBRUARY																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				

MARCH																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

APRIL																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		

MAY																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	

JUNE																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		

August 2018

La Presa Elementary / La Presa Elementary Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9 8:15 AM First Day of School	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Appendix D

Count Data



County of San Diego
 Jamacha Boulevard
 W/ San Juhn Street

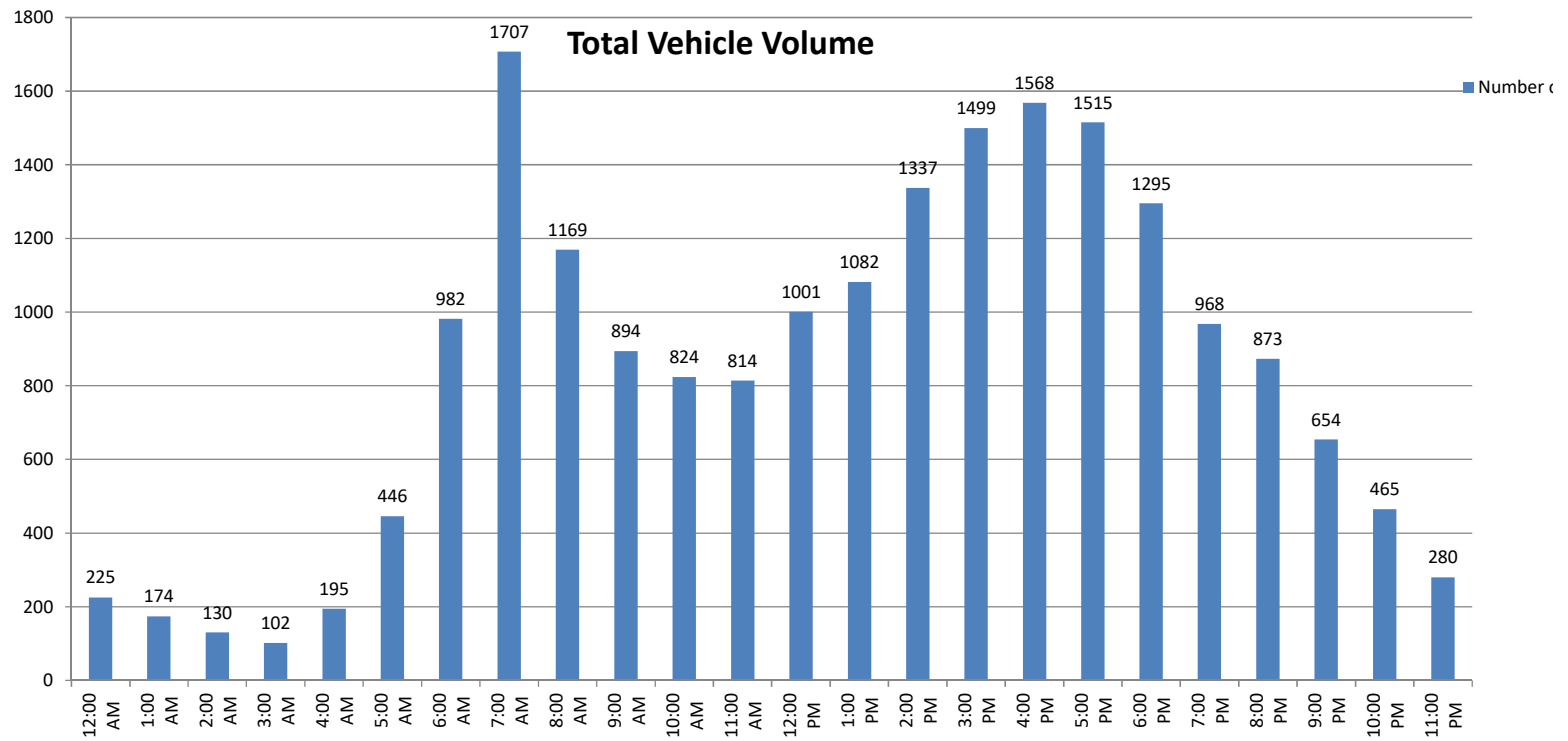
File Name 002
 Site Code: 143-18616
 24 Hour Directional Volume Count

Date: 8/22/2018	Eastbound				Westbound				Combined Totals	
	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Morning	Afternoon
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	30	129			38	128				
12:15	26	128			31	121				
12:30	19	122			33	132				
12:45	14	125	89	504	34	116	136	497	225	1001
1:00	18	122			25	126				
1:15	17	126			21	138				
1:30	24	151			24	122				
1:45	12	166	71	565	33	131	103	517	174	1082
2:00	8	160			25	150				
2:15	10	146			21	182				
2:30	13	188			23	203				
2:45	8	169	39	663	22	139	91	674	130	1337
3:00	10	195			11	231				
3:15	6	185			15	167				
3:30	15	191			11	201				
3:45	14	185	45	756	20	144	57	743	102	1499
4:00	11	227			20	199				
4:15	24	189			30	181				
4:30	25	194			34	226				
4:45	27	194	87	804	24	158	108	764	195	1568
5:00	28	203			48	194				
5:15	40	181			57	165				
5:30	73	235			62	197				
5:45	70	169	211	788	68	171	235	727	446	1515
6:00	72	195			79	169				
6:15	106	163			88	153				
6:30	149	174			115	148				
6:45	235	140	562	672	138	153	420	623	982	1295
7:00	188	157			194	138				
7:15	241	135			190	111				
7:30	244	104			176	123				
7:45	271	102	944	498	203	98	763	470	1707	968
8:00	159	114			225	111				
8:15	170	106			128	112				
8:30	123	98			130	105				
8:45	120	100	572	418	114	127	597	455	1169	873
9:00	128	112			116	86				
9:15	110	98			115	88				
9:30	108	67			125	55				
9:45	96	76	442	353	96	72	452	301	894	654
10:00	92	67			105	67				
10:15	86	57			99	75				
10:30	114	56			108	56				
10:45	125	43	417	223	95	44	407	242	824	465
11:00	94	36			117	35				
11:15	98	23			114	42				
11:30	98	35			84	45				
11:45	118	27	408	121	91	37	406	159	814	280
Totals	3887	6365			3775	6172				
Combined Totals		10252				9947				
ADT										20199
AM Peak Hour	700	AM			715	AM				
Volume	944				794					
P.H.F.	0.871				0.882					
PM Peak Hour		445	PM			400	PM			
Volume		813				764				
P.H.F.		0.865				0.845				
Percentage	37.9%	62.1%			38.0%	62.0%				



24 Hour Volume Plot
**Jamacha Boulevard
 W/ San Juhn Street**
 8/22/2018

Start Time	8/22/2018
12:00 AM	225
1:00 AM	174
2:00 AM	130
3:00 AM	102
4:00 AM	195
5:00 AM	446
6:00 AM	982
7:00 AM	1707
8:00 AM	1169
9:00 AM	894
10:00 AM	824
11:00 AM	814
12:00 PM	1001
1:00 PM	1082
2:00 PM	1337
3:00 PM	1499
4:00 PM	1568
5:00 PM	1515
6:00 PM	1295
7:00 PM	968
8:00 PM	873
9:00 PM	654
10:00 PM	465
11:00 PM	280
Total	20199



Volumes represent the combined totals for both directions



County of San Diego
 Jamacha Boulevard
 E/ San Juhn Street

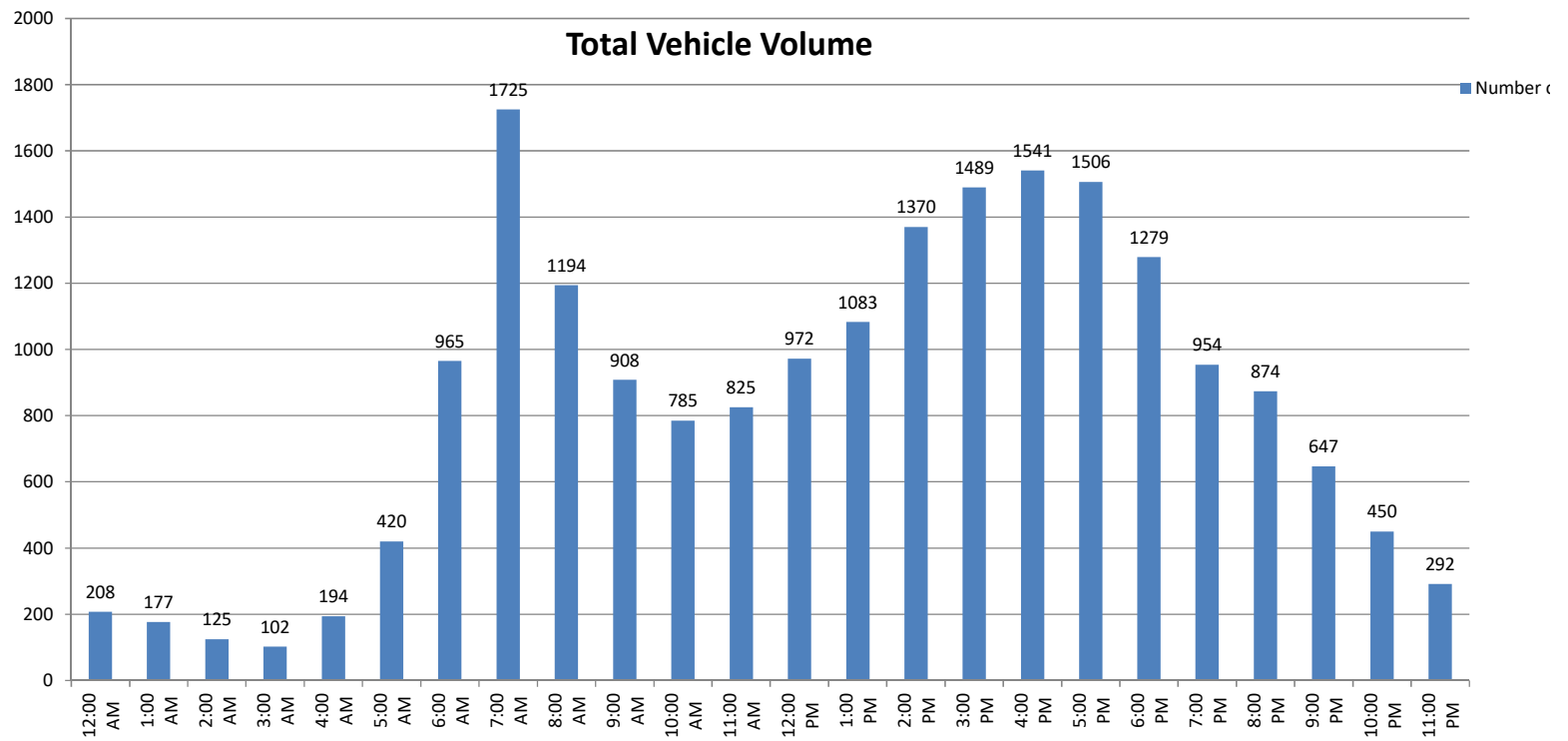
File Name 001
 Site Code: 143-18616
 24 Hour Directional Volume Count

Date: 8/22/2018	Eastbound				Westbound				Combined Totals	
	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Morning	Afternoon
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	21	126			28	118				
12:15	28	113			28	117				
12:30	25	135			43	128				
12:45	10	116	84	490	25	119	124	482	208	972
1:00	21	126			25	133				
1:15	14	123			18	131				
1:30	21	144			31	125				
1:45	19	161	75	554	28	140	102	529	177	1083
2:00	9	141			20	166				
2:15	10	177			25	194				
2:30	14	140			22	163				
2:45	10	186	43	644	15	203	82	726	125	1370
3:00	8	188			13	184				
3:15	7	195			15	199				
3:30	11	187			16	158				
3:45	13	185	39	755	19	193	63	734	102	1489
4:00	11	184			23	182				
4:15	19	222			32	203				
4:30	24	190			25	178				
4:45	24	198	78	794	36	184	116	747	194	1541
5:00	26	183			56	174				
5:15	29	188			41	198				
5:30	55	215			72	181				
5:45	75	197	185	783	66	170	235	723	420	1506
6:00	66	184			79	150				
6:15	94	178			114	168				
6:30	126	160			104	148				
6:45	211	159	497	681	171	132	468	598	965	1279
7:00	200	145			206	128				
7:15	222	140			158	126				
7:30	229	120			200	102				
7:45	292	96	943	501	218	97	782	453	1725	954
8:00	204	116			192	123				
8:15	179	94			105	94				
8:30	156	112			131	117				
8:45	113	107	652	429	114	111	542	445	1194	874
9:00	124	93			109	85				
9:15	112	113			121	75				
9:30	111	78			110	64				
9:45	113	68	460	352	108	71	448	295	908	647
10:00	79	55			89	76				
10:15	93	66			96	63				
10:30	100	58			102	39				
10:45	108	46	380	225	118	47	405	225	785	450
11:00	101	40			115	32				
11:15	104	30			91	53				
11:30	95	24			92	36				
11:45	111	39	411	133	116	38	414	159	825	292
Totals	3847	6341			3781	6116				
Combined Totals		10188				9897				
ADT										20085
AM Peak Hour	715	AM			700	AM				
Volume	947				782					
P.H.F.	0.811				0.897					
PM Peak Hour		400	PM			345	PM			
Volume		794				756				
P.H.F.		0.894				0.931				
Percentage	37.8%	62.2%			38.2%	61.8%				



24 Hour Volume Plot
**Jamacha Boulevard
 E/ San Juhn Street**
 8/22/2018

Start Time	8/22/2018
12:00 AM	208
1:00 AM	177
2:00 AM	125
3:00 AM	102
4:00 AM	194
5:00 AM	420
6:00 AM	965
7:00 AM	1725
8:00 AM	1194
9:00 AM	908
10:00 AM	785
11:00 AM	825
12:00 PM	972
1:00 PM	1083
2:00 PM	1370
3:00 PM	1489
4:00 PM	1541
5:00 PM	1506
6:00 PM	1279
7:00 PM	954
8:00 PM	874
9:00 PM	647
10:00 PM	450
11:00 PM	292
Total	20085



Volumes represent the combined totals for both directions



PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: San Juhn Street
E/W: Jamacha Boulevard

Date: 8/22/2018
Day: WEDNESDAY
Project # 143-18616

TURNING MOVEMENT COUNT

Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM

Vehicle Counts

	San Juhn Street Northbound			San Juhn Street Southbound			Jamacha Boulevard Eastbound			Jamacha Boulevard Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	0	0	3	0	185	0	0	187	2	377
7:15 AM	0	0	0	1	0	0	0	221	0	0	189	0	411
7:30 AM	0	0	0	5	0	3	0	219	0	0	159	0	386
7:45 AM	0	0	0	0	0	2	2	289	0	0	203	1	497
8:00 AM	0	0	0	1	0	0	2	201	0	0	211	1	416
8:15 AM	0	0	0	0	0	2	1	180	0	0	180	0	363
8:30 AM	0	0	0	0	0	1	0	160	0	0	126	0	287
8:45 AM	0	0	0	0	0	0	0	109	0	0	112	1	222
TOTAL VOLUMES:	0	0	0	7	0	11	5	1564	0	0	1367	5	2959

AM Peak Hr Begins at: 7:15 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	7	0	5	4	930	0	0	762	2	1710

PEAK HR FACTOR:	0.000	0.375	0.802	0.901	0.860
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Bicycle Counts

	San Juhn Street Northbound			San Juhn Street Southbound			Jamacha Boulevard Eastbound			Jamacha Boulevard Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	2	0	0	1	0	3

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

Pedestrian Counts

	San Juhn Street North Leg	San Juhn Street South Leg	Jamacha Boulevard East Leg	Jamacha Boulevard West Leg	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	1	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	4	0	0	0	4
8:15 AM	3	0	0	0	3
8:30 AM	1	0	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	8	0	1	0	9

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	4	0	1	0	5



PO Box 1178
Corona, CA 92880
951-268-6268

Location: San Diego
N/S: San Juhn Street
E/W: Jamacha Boulevard

Date: 8/22/2018
Day: WEDNESDAY
Project # 143-18616

TURNING MOVEMENT COUNT

Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

Vehicle Counts

	San Juhn Street Northbound			San Juhn Street Southbound			Jamacha Boulevard Eastbound			Jamacha Boulevard Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	0	0	0	0	2	3	184	0	0	180	0	369
4:15 PM	0	0	0	0	0	2	2	221	0	0	176	0	401
4:30 PM	0	0	0	2	0	4	0	170	0	0	198	0	374
4:45 PM	0	0	0	0	0	2	5	191	0	0	153	0	351
5:00 PM	0	0	0	0	0	3	3	155	0	0	163	0	324
5:15 PM	0	0	0	0	0	3	3	171	0	0	159	2	338
5:30 PM	0	0	0	0	0	3	3	213	0	0	196	2	417
5:45 PM	0	0	0	0	0	1	4	190	0	0	181	1	377
TOTAL VOLUMES:	0	0	0	2	0	20	23	1495	0	0	1406	5	2951

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	2	0	10	10	766	0	0	707	0	1495

PEAK HR FACTOR:	0.000			0.500			0.870			0.893			0.932
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Bicycle Counts

	San Juhn Street Northbound			San Juhn Street Southbound			Jamacha Boulevard Eastbound			Jamacha Boulevard Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	2	1	0	0	0	0	0	3
4:30 PM	0	0	0	0	2	1	0	0	0	0	1	0	4
4:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	1	0	1	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
TOTAL VOLUMES:	0	0	0	0	5	7	2	1	0	0	1	0	16

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	4	5	1	0	0	0	1	0	11

Pedestrian Counts

	San Juhn Street North Leg	San Juhn Street South Leg	Jamacha Boulevard East Leg	Jamacha Boulevard West Leg	TOTAL
4:00 PM	1	0	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

PEAK VOLUMES:	North Leg	South Leg	East Leg	West Leg	TOTAL
	1	0	0	0	1

Appendix E

Existing LOS Calculations

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	930	762	2	7	5
Future Vol, veh/h	4	930	762	2	7	5
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	1081	886	2	8	6

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	893	0	-	0	1448 454
Stage 1	-	-	-	-	892 -
Stage 2	-	-	-	-	556 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	755	-	-	-	122 553
Stage 1	-	-	-	-	361 -
Stage 2	-	-	-	-	538 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	752	-	-	-	120 548
Mov Cap-2 Maneuver	-	-	-	-	247 -
Stage 1	-	-	-	-	357 -
Stage 2	-	-	-	-	536 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	752	-	-	-	320
HCM Lane V/C Ratio	0.006	-	-	-	0.044
HCM Control Delay (s)	9.8	-	-	-	16.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	766	707	0	2	10
Future Vol, veh/h	10	766	707	0	2	10
Conflicting Peds, #/hr	5	0	0	5	5	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	824	760	0	2	11

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	765	0	-	0	1204 390
Stage 1	-	-	-	-	765 -
Stage 2	-	-	-	-	439 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	844	-	-	-	177 609
Stage 1	-	-	-	-	420 -
Stage 2	-	-	-	-	617 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	840	-	-	-	173 604
Mov Cap-2 Maneuver	-	-	-	-	299 -
Stage 1	-	-	-	-	413 -
Stage 2	-	-	-	-	615 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	840	-	-	-	516
HCM Lane V/C Ratio	0.013	-	-	-	0.025
HCM Control Delay (s)	9.3	-	-	-	12.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Appendix F

Transit Service Near Project



CASH FARES / Tarifas en efectivo

Exact fare, please / Favor de pagar la cantidad exacta	
Day Pass (Regional) / Pase diario (Regional) Compass Card required (\$2) / Se requiere un Compass Card (\$2)	\$5.00
One-Way Fare / Tarifa de una dirección	\$2.25
Senior (60+)/Disabled/Medicare Mayores de 60 años/Discapacitados/Medicare	\$1.10*
Children 5 & under / Niños de 5 años o menos Up to two children ride free per paying adult / Máximo dos niños viajan gratis por cada adulto	FREE / GRATIS
MONTHLY PASSES / Pases mensual	
Adult / Adulto	\$72.00
Senior (60+)/Disabled/Medicare Mayores de 60 años/Discapacitados/Medicare	\$18.00*
Youths (18 and under) Jóvenes (18 años o menos)	\$36.00*

*I.D. required for discount fare or pass.
*Se requiere identificación para tarifas o pases de descuento.

DAY PASS (REGIONAL) / Pase diario (Regional)

All passes are sold on Compass Card, which can be reloaded and reused for up to five years. Compass Cards are available for \$2 at select outlets. A \$5 Day Pass requires a Compass Card. A paper Day Pass can be purchased on board buses for an additional \$2 fee.

Todos los pases se venden en el Compass Card, el cual puede ser recargado y reutilizado por hasta cinco años. Compass Cards están disponibles por \$2 en selectas sucursales. Un pase de un día por \$5 requiere un Compass Card. Un pase de un día de papel se puede obtener a bordo los autobuses por un costo adicional de \$2.

DIRECTORY / Directorio

Regional Transit Information Información de transporte público regional	511 or/ó (619) 233-3004
TTY/TDD (teletype for hearing impaired) Teletipo para sordos	(619) 234-5005 or/ó (888) 722-4889
InfoExpress (24-hour info via Touch-Tone phone) Información las 24 horas (via teléfono de teclas)	(619) 685-4900
Customer Service / Suggestions Servicio al cliente / Sugerencias	(619) 557-4555
SafeWatch	(619) 557-4500
Lost & Found Objetos extraviados	(619) 557-4555
Transit Store	(619) 234-1060 12th & Imperial Transit Center M-F 8am-5pm
For MTS online trip planning Planificación de viajes por Internet	sdmts.com

For more information on riding MTS services, pick up a Rider's Guide on a bus or at the Transit Store, or visit sdmts.com.
Para obtener más información sobre el uso de los servicios de MTS, recoga un 'Rider's Guide' en un autobús o en la Transit Store, o visita a sdmts.com.

Thank you for riding MTS! ¡Gracias por viajar con MTS!

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SDSU – Rancho SD /
Cuyamaca College
via College Grove /
Spring Valley

DESTINATIONS

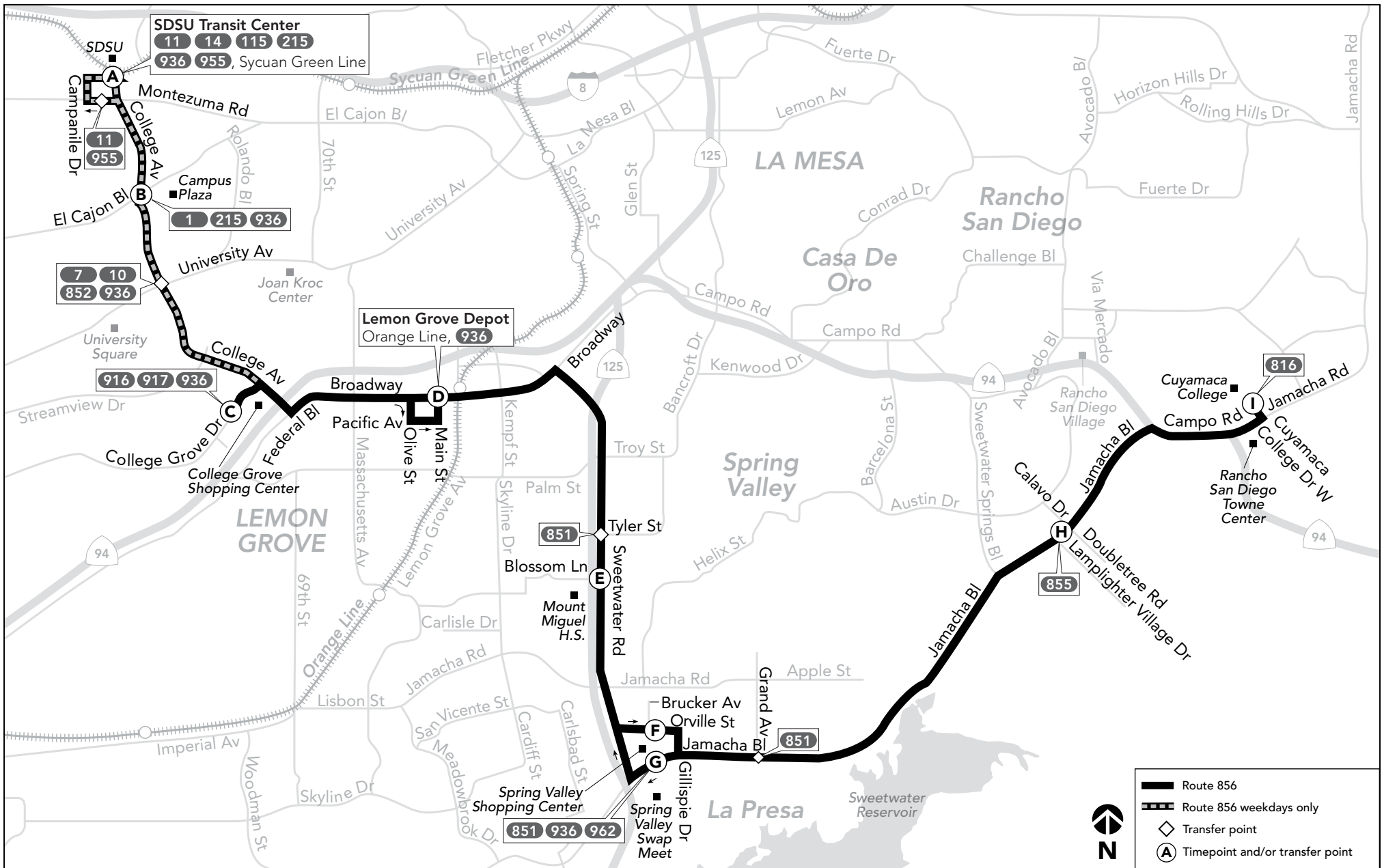
- College Grove Center
- Cuyamaca College
- Lemon Grove Depot
- SDSU
- Spring Valley
- Spring Valley Swap Meet



SDSU
Lemon Grove



Alternative formats available upon request. Please call: (619) 557-4555 / Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555



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Route 856 – Monday through Friday / Lunes a viernes

Rancho San Diego ➔ Spring Valley ➔ Lemon Grove ➔ SDSU

(I) Cuyamaca College DEPART	(H) Jamacha Bl. & Doubletree Rd.	(G) Spring Valley Shopping Center	(E) Sweetwater Rd. & Blossom Ln.	(D) Lemon Grove Depot (Broadway)	(C) College Grove Center	(B) College Av. & El Cajon Bl.	(A) SDSU T.C. ARRIVE
—	4:33a	4:43a	4:48a	4:59a	5:08a	5:15a	5:21a
—	5:03	5:13	5:18	5:29	5:38	5:45	5:51
—	5:33	5:43	5:48	5:59	6:08	6:15	6:21
5:56a	6:02	6:12	6:17	6:29	6:38	6:45	6:52
—	6:30	6:41	6:47	6:59	7:09	7:17	7:24
6:51	6:58	7:09	7:15	7:27	7:38	7:47	7:54
7:19	7:26	7:38	7:44	7:57	8:08	8:17	8:24
7:49	7:56	8:08	8:14	8:27	8:38	8:47	8:54
8:19	8:26	8:38	8:44	8:57	9:08	9:17	9:24
8:50	8:57	9:08	9:14	9:27	9:38	9:46	9:53
9:20	9:27	9:38	9:44	9:57	10:08	10:16	10:23
9:50	9:57	10:08	10:14	10:27	10:38	10:46	10:53
10:20	10:27	10:38	10:44	10:57	11:08	11:16	11:23
10:50	10:57	11:08	11:14	11:27	11:38	11:46	11:53
11:19	11:26	11:37	11:43	11:56	12:08p	12:16p	12:23p
11:49	11:56	12:07p	12:13p	12:26p	12:39	12:47	12:54
12:17p	12:25p	12:36	12:42	12:56	1:09	1:17	1:24
12:47	12:55	1:06	1:12	1:26	1:39	1:47	1:54
1:17	1:25	1:36	1:42	1:56	2:09	2:17	2:24
1:47	1:55	2:06	2:12	2:26	2:39	2:47	2:54
2:16	2:24	2:36	2:42	2:56	3:09	3:17	3:25
2:46	2:54	3:06	3:12	3:26	3:39	3:47	3:55
3:16	3:24	3:36	3:42	3:56	4:09	4:17	4:25
3:48	3:56	4:08	4:14	4:28	4:41	4:49	4:57
4:18	4:26	4:38	4:44	4:58	5:11	5:19	5:27
4:52	4:59	5:10	5:16	5:29	5:41	5:49	5:56
5:22	5:29	5:40	5:46	5:59	6:11	6:19	6:26
5:52	5:59	6:10	6:16	6:29	6:41	6:49	6:56
6:22	6:29	6:39	6:45	6:57	7:08	7:16	7:23
6:52	6:59	7:09	7:15	7:27	7:38	7:46	7:53
8:10	8:17	8:27	8:32	8:42	8:52	9:00	9:07
9:12	9:18	9:28	9:33	9:43	9:52	9:59	10:05

SDSU ➔ Lemon Grove ➔ Spring Valley ➔ Rancho San Diego

(A) SDSU T.C. DEPART	(B) College Av. & El Cajon Bl.	(C) College Grove Center	(D) Lemon Grove Depot (Main St.)	(E) Sweetwater Rd. & Blossom Ln.	(F) Orville St. & Brucker Av.	(H) Jamacha Bl. & Doubletree Rd.	(I) Cuyamaca College ARRIVE
5:36a	5:39a	5:47a	5:58a	6:06a	6:11a	6:23a	6:31a
6:06	6:09	6:17	6:28	6:37	6:42	6:55	7:04
6:34	6:38	6:47	6:59	7:09	7:14	7:28	7:37
7:04	7:08	7:17	7:29	7:39	7:44	7:58	8:07
7:34	7:38	7:47	7:59	8:09	8:14	8:28	8:37
8:04	8:08	8:17	8:29	8:38	8:43	8:55	9:04
8:34	8:38	8:47	8:59	9:08	9:13	9:24	9:32
9:04	9:08	9:17	9:29	9:38	9:43	9:54	10:02
9:34	9:38	9:47	9:59	10:08	10:13	10:24	10:32
10:04	10:08	10:17	10:29	10:38	10:43	10:54	11:02
10:34	10:38	10:47	10:59	11:08	11:13	11:24	11:32
11:04	11:08	11:18	11:31	11:40	11:45	11:56	12:04p
11:34	11:38	11:48	12:01p	12:10p	12:15p	12:26p	12:34
12:08p	12:13p	12:23p	12:37	12:47	12:52	1:03	1:11
12:38	12:43	12:53	1:07	1:17	1:22	1:33	1:41
1:08	1:13	1:23	1:37	1:47	1:52	2:03	2:11
1:38	1:43	1:53	2:07	2:17	2:22	2:33	2:41
2:08	2:13	2:23	2:37	2:47	2:52	3:03	3:11
2:37	2:42	2:52	3:06	3:16	3:21	3:33	3:42
3:07	3:12	3:22	3:36	3:46	3:51	4:03	4:12
3:38	3:43	3:53	4:07	4:17	4:22	4:34	4:43
4:08	4:13	4:23	4:37	4:47	4:52	5:04	5:13
4:39	4:44	4:54	5:08	5:18	5:23	5:35	5:44
5:09	5:14	5:24	5:38	5:48	5:53	6:05	6:14
5:39	5:44	5:54	6:08	6:18	6:23	6:35	6:44
6:09	6:14	6:24	6:37	6:46	6:51	7:03	7:12
6:39	6:44	6:54	7:07	7:16	7:21	7:32	7:40
7:09	7:14	7:24	7:37	7:46	7:51	8:02	8:10
8:04	8:08	8:17	8:29	8:38	8:43	8:54	9:02
9:20	9:24	9:32	9:43	9:51	9:56	10:07	—
10:20	10:24	10:32	10:43	10:51	10:55	11:05	—

Route 856 – Saturday / sábado

Rancho San Diego ➔ Spring Valley ➔ Lemon Grove ➔ SDSU

(I) Cuyamaca College DEPART	(H) Jamacha Bl. & Doubletree Rd.	(G) Spring Valley Shopping Center	(E) Sweetwater Rd. & Blossom Ln.	(D) Lemon Grove Depot (Broadway)	(C) College Grove Center	(B) College Av. & El Cajon Bl.	(A) SDSU T.C. ARRIVE
5:27a	5:33a	5:43a	5:48a	5:59a	6:08a	—	—
6:26	6:33	6:43	6:48	6:59	7:08	—	—
7:38	7:45	7:56	8:01	8:12	8:22	—	—
8:38	8:45	8:56	9:01	9:12	9:22	—	—
9:37	9:44	9:55	10:00	10:12	10:23	—	—
10:37	10:44	10:55	11:00	11:12	11:23	—	—
11:36	11:43	11:54	11:59	12:11p	12:23p	—	—
12:36p	12:43p	12:54p	12:59p	1:11	1:24	—	—
1:36	1:43	1:54	1:59	2:11	2:24	—	—
2:35	2:42	2:54	2:59	3:11	3:24	—	—
3:35	3:42	3:54	3:59	4:11	4:24	—	—
4:37	4:44	4:55	5:00	5:12	5:24	—	—
5:37	5:44	5:55	6:00	6:12	6:24	—	—
6:39	6:46	6:56	7:01	7:12	7:22	—	—
7:41	7:47	7:57	8:02	8:12	8:22	—	—
8:41	8:47	8:57	9:02	9:12	9:21	—	—

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(A) SDSU T.C. DEPART	(B) College Av. & El Cajon Bl.	(C) College Grove Center	(D) Lemon Grove Depot (Main St.)	(E) Sweetwater Rd. & Blossom Ln.	(F) Orville St. & Brucker Av.	(H) Jamacha Bl. & Doubletree Rd.	(I) Cuyamaca College ARRIVE
—	—	6:31a	6:41a	6:48a	6:53a	7:03a	7:10a
—	—	7:31	7:41	7:48	7:53	8:03	8:10
—	—	8:31	8:41	8:49	8:54	9:04	9:12
—	—	9:32	9:43	9:52	9:57	10:07	10:15
—	—	10:31	10:43	10:52	10:57	11:08	11:16
—	—	11:40	11:52	12:01p	12:06p	12:17p	12:25p
—	—	12:39p	12:52p	1:01	1:06	1:17	1:25
—	—	1:39	1:52	2:01	2:06	2:17	2:25
—	—	2:39	2:52	3:01	3:06	3:17	3:25
—	—	3:39	3:52	4:01	4:06	4:17	4:25
—	—	4:39	4:52	5:01	5:06	5:17	5:25
—	—	5:42	5:54	6:03	6:08	6:19	6:27
—	—	6:32	6:44	6:53	6:58	7:08	7:16
—	—	7:33	7:44	7:53	7:58	8:08	8:15
—	—	8:33	8:44	8:53	8:58	9:08	—
—	—	9:33	9:44	9:52	9:56	10:06	—

Route 856 – Sunday / domingo

Rancho San Diego ➔ Spring Valley ➔ Lemon Grove ➔ SDSU

(I) Cuyamaca College DEPART	(H) Jamacha Bl. & Doubletree Rd.	(G) Spring Valley Shopping Center	(E) Sweetwater Rd. & Blossom Ln.	(D) Lemon Grove Depot (Broadway)	(C) College Grove Center	(B) College Av. & El Cajon Bl.	(A) SDSU T.C. ARRIVE
6:26a	6:33a	6:43a	6:48a	6:59a	7:08a	—	—
7:38	7:45	7:56	8:01	8:12	8:22	—	—
8:38	8:45	8:56	9:01	9:12	9:22	—	—
9:37	9:44	9:55	10:00	10:12	10:23	—	—
10:37	10:44	10:55	11:00	11:12	11:23	—	—
11:36	11:43	11:54	11:59	12:11p	12:23p	—	—
12:36p	12:43p	12:54p	12:59p	1:11	1:24	—	—
1:36	1:43	1:54	1:59	2:11	2:24	—	—
2:35	2:42	2:54	2:59	3:11	3:24	—	—
3:35	3:42	3:54	3:59	4:11	4:24	—	—
4:37	4:44	4:55	5:00	5:12	5:24	—	—
5:37	5:44	5:55	6:00	6:12	6:24	—	—

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(A) SDSU T.C. DEPART	(B) College Av. & El Cajon Bl.	(C) College Grove Center	(D) Lemon Grove Depot (Main St.)	(E) Sweetwater Rd. & Blossom Ln.	(F) Orville St. & Brucker Av.	(H) Jamacha Bl. & Doubletree Rd.	(I) Cuyamaca College ARRIVE
—	—	7:31a	7:41a	7:48a	7:53a	8:03a	8:10a
—	—	8:31	8:41	8:49	8:54	9:04	9:12
—	—	9:32	9:43	9:52	9:57	10:07	10:15
—	—	10:31	10:43	10:52	10:57	11:08	11:16
—	—	11:40	11:52	12:01p	12:06p	12:17p	12:25p
—	—	12:39p	12:52p	1:01	1:06	1:17	1:25
—	—	1:39	1:52	2:01	2:06	2:17	2:25
—	—	2:39	2:52	3:01	3:06	3:17	3:25
—	—	3:39 </					

Appendix G

Existing + Project LOS Calculations

AM Existing + Project
1: Project Access/San Juhn St & Jamacha Blvd

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↗		↖	↕↗			↕↗			↕↗	
Traffic Vol, veh/h	4	930	21	9	762	2	2	0	1	7	0	5
Future Vol, veh/h	4	930	21	9	762	2	2	0	1	7	0	5
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1081	24	10	886	2	2	0	1	8	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	893	0	0	1110	0	0	1576	2021	563	1468	2032	454
Stage 1	-	-	-	-	-	-	1108	1108	-	912	912	-
Stage 2	-	-	-	-	-	-	468	913	-	556	1120	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	755	-	-	625	-	-	74	57	470	89	57	553
Stage 1	-	-	-	-	-	-	224	284	-	295	351	-
Stage 2	-	-	-	-	-	-	545	350	-	483	280	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	752	-	-	622	-	-	71	55	466	87	55	548
Mov Cap-2 Maneuver	-	-	-	-	-	-	168	165	-	201	162	-
Stage 1	-	-	-	-	-	-	222	281	-	292	344	-
Stage 2	-	-	-	-	-	-	528	343	-	477	277	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.1			22.1			18.9		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	214	752	-	-	622	-	-	273
HCM Lane V/C Ratio	0.016	0.006	-	-	0.017	-	-	0.051
HCM Control Delay (s)	22.1	9.8	-	-	10.9	-	-	18.9
HCM Lane LOS	C	A	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.2

PM Existing + Project
1: Project Access/San Juhn St & Jamacha Blvd

HCM 2010 TWSC

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	
Traffic Vol, veh/h	10	766	4	2	707	0	17	0	8	2	0	10
Future Vol, veh/h	10	766	4	2	707	0	17	0	8	2	0	10
Conflicting Peds, #/hr	5	0	5	5	0	5	5	0	5	5	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	824	4	2	760	0	18	0	9	2	0	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	765	0	0	833	0	0	1242	1622	424	1208	1624	390
Stage 1	-	-	-	-	-	-	853	853	-	769	769	-
Stage 2	-	-	-	-	-	-	389	769	-	439	855	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	844	-	-	796	-	-	131	102	579	139	102	609
Stage 1	-	-	-	-	-	-	320	374	-	360	409	-
Stage 2	-	-	-	-	-	-	606	409	-	567	373	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	840	-	-	793	-	-	126	100	574	134	100	604
Mov Cap-2 Maneuver	-	-	-	-	-	-	237	219	-	253	221	-
Stage 1	-	-	-	-	-	-	315	368	-	354	406	-
Stage 2	-	-	-	-	-	-	591	406	-	549	367	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	18.6	12.5
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	292	840	-	-	793	-	-	491
HCM Lane V/C Ratio	0.092	0.013	-	-	0.003	-	-	0.026
HCM Control Delay (s)	18.6	9.3	-	-	9.6	-	-	12.5
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

LOS Engineering, Inc.