Traffic Analysis

for:

Hume SoCal Expansion Project

In San Bernardino County

Prepared for:

Hume Lake Christian Camps

June 2025

Kimley»Horn

TRAFFIC ANALYSIS
FOR THE PROPOSED
HUME SOCAL EXPANSION PROJECT
IN SAN BERNARDINO COUNTY

Prepared by:

Kimley-Horn and Associates, Inc.
3801 University Avenue, Suite 300
Riverside, California 92501

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INTRODUCTION

Purpose and Study Objectives

This traffic analysis has been prepared to address the traffic-related impacts of the proposed Hume SoCal Expansion ("Project") in the County of San Bernardino. This traffic analysis has been conducted in accordance with the San Bernardino County *Transportation Impact Study Guidelines* (July 2019), and in accordance with the San Bernardino Association of Governments (SANBAG) Congestion Management Program (CMP) requirements (June 2016).

This report includes a description of existing traffic conditions in the surrounding area, estimated project trip generation and distribution, future traffic growth, VMT screening, and an assessment of project-related effects on the roadway system. Where necessary, circulation system improvements have been identified to mitigate significant project effects at the study locations.

Project Overview

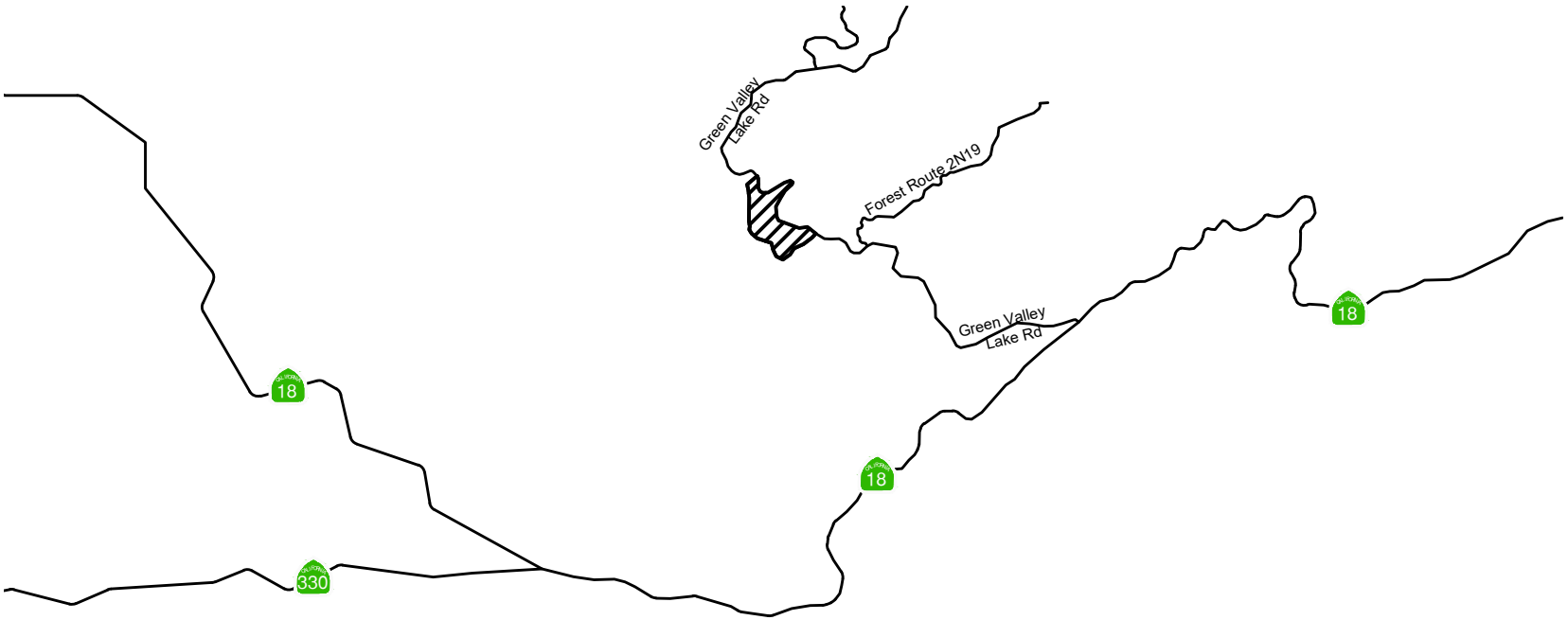
The Hume SoCal project area is located within the Green Valley Lake Community in the mountain region of San Bernardino County. The Project is located immediately west of Green Valley Lake Road and approximately 1.5 miles northwest of State Route 18. The Project would be developed on five parcels totaling approximately 251 acres. The site is shown in its regional setting on **Figure 1.**

The Project involves the expansion of campground uses for the existing Hume SoCal campground to accommodate up to approximately 2,700 additional guests, users, and visitors. This would be accomplished through the continued use of existing campground structures as well as the development of additional campground and recreational structures and uses within a 251-acre area of the Green Valley Lake community. A copy of the project site plan is provided on **Figure 2**.

The potential construction phasing of the expansion project is provided below for reference and is based on how structures, amenities, and features are grouped and located on the project site:

- Phase 1 – Camp Middle School (approximately 784-person capacity)
- Phase 2 – Camp High School (approximately 1,000-person capacity)
- Phase 3 – Camp Adult Lodge (approximately 100-140-person capacity)
- Phase 4 – Camp Elementary (approximately 250-500-person capacity)
- Phase 5 – Camp Wildwood (approximately 120-person capacity)

As a worst-case scenario, the "Plus Project" scenarios in this traffic analysis assume full build out of the Hume SoCal Expansion project.



NOT TO SCALE

LEGEND:

= Project Site

FIGURE 1
VICINITY MAP

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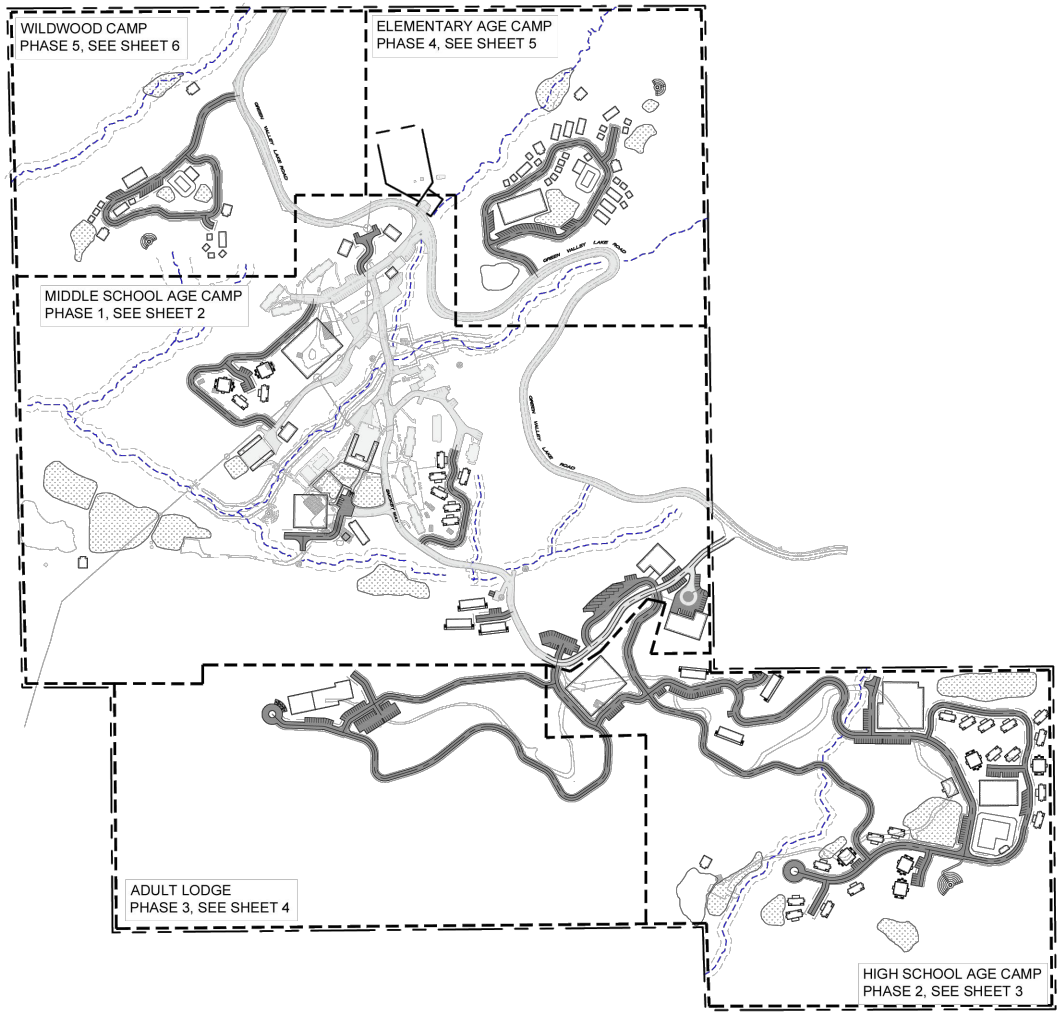

FIGURE 2
PROJECT SITE PLAN

Regional access to the site is provided primarily by State Route 18 (SR-18). Local access to the project area is provided primarily via Green Valley Lake Road. Direct vehicular access provisions for the project site would consist of two full-movement unsignalized driveways on Green Valley Lake Road.

ANALYSIS SCENARIOS AND METHODOLOGY

Study Locations

The study locations were established in consultation with County staff through the Scoping Agreement process (Scope of Study Form of the San Bernardino County *Transportation Impact Study Guidelines*). A copy of the approved Traffic Scope Approval Form is provided in ***Appendix A***.

Study Intersections:

1. Green Valley Lake Road at SR-18
D1. Green Valley Lake Road at South Project Driveway
D2. Green Valley Lake Road at North Project Driveway

Existing lane configurations and traffic control at the study intersections are shown on **Figure 3**.

Analysis Scenarios

Based on discussion with County staff during the Scoping agreement process, the project will be evaluated in the Friday evening and Sunday mid-day (MD) peak hours for the following conditions:

- Existing Conditions
- Opening Year 2027 Cumulative
- Opening Year 2027 Cumulative Plus Project
- Horizon Year 2040
- Horizon Year 2040 Plus Project

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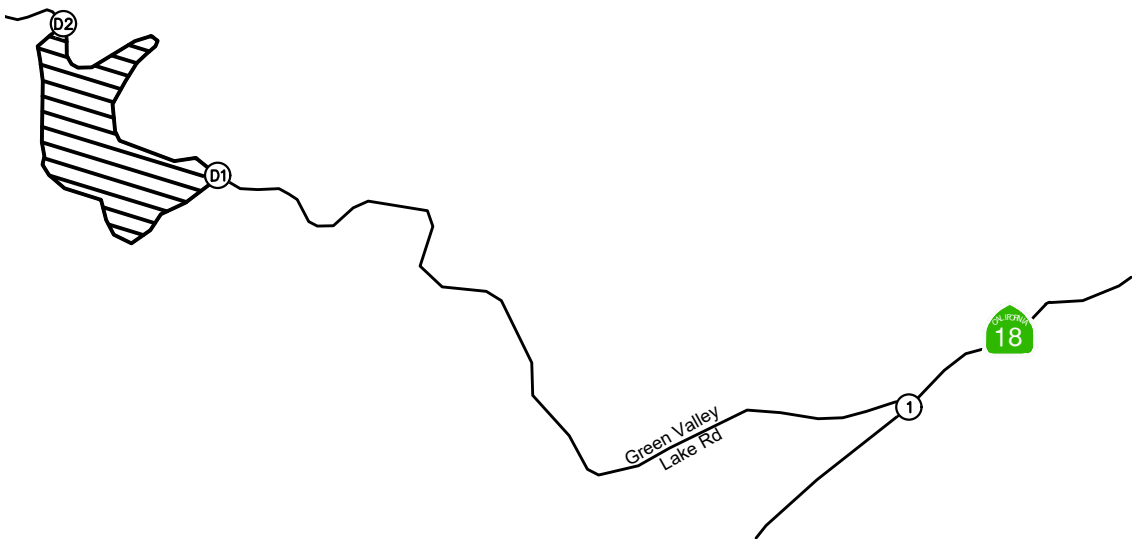

1. Green Valley Lake Rd at SR 18		D1. Green Valley Lake Rd at South Project Driveway		D2. Green Valley Lake Rd at North Project Driveway	

LEGEND:
- = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign

FIGURE 3
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

Intersection Analysis – HCM Methodology

Peak hour intersection operations were evaluated using the methodology outlined in the Highway Capacity Manual (HCM) 7th Edition, consistent with the requirements of the San Bernardino County CMP. The intersection analysis was conducted using the Vistro software program and using the input parameters specified in the San Bernardino County CMP.

Per the HCM methodology, Level of Service (LOS) for signalized intersections is defined in terms of average vehicle delay. Specifically, LOS criteria are stated in terms of the average control delay per vehicle during the peak hours. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay.

The procedure for unsignalized intersection analysis determines the average total delay, expressed in seconds of delay per vehicle, for left turns from the major street and from the stop-controlled minor street traffic stream. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable "gaps" in this stream through which conflicting traffic movements can be made.

The following charts provide a description of the operating characteristics of each Level of Service and average seconds of delay for signalized and unsignalized intersections.

LEVEL OF SERVICE DEFINITIONS	
Level of Service	**Description**
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service [1]	**Signalized Intersection (Average delay per vehicle, in seconds) [2]**	**Unsignalized Intersections (Average delay per vehicle, in seconds) [3]**
A	≤ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

[1] Per the San Bernardino County CMP, intersections will be considered deficient (LOS F) if the critical v/c ratio equals or exceeds 1.0.

[2] Source: Highway Capacity Manual (HCM 7th Edition), Exhibit 18-4.

[3] Source: Highway Capacity Manual (HCM 7th Edition), Exhibits 19-1 and 20-2.

Level of Service Standards and Measure of Significance

The County of San Bernardino minimum Level of Service standards require that intersections in the Valley regions operate at LOS D or better during peak hours.

Traffic effects at signalized intersections are considered locally significant when any of the following occurs between the "without project" and the "plus project" conditions:

- Any signalized study intersection in the Valley region that is operating at an acceptable LOS D or better without project traffic in which the addition of project traffic causes the intersection to degrade to an LOS E or F shall identify improvements to improve operations to LOS D or better.
- Any signalized study intersection in the Valley region that is operating at LOS E or F without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

Unsignalized intersections will require operational improvements if the study determines either section a) or both sections b) and c) occur:

a) The addition of project-related traffic causes the intersection to degrade from an LOS D or better to an LOS E or worse in the Valley region.
b) The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at an LOS E or F in the Valley region.
c) One or both of the following conditions are met:
    i. The project adds ten (10) or more trips to any minor street approach
    ii. The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

New development is required to identify improvements at intersections that show a locally significant project effect as shown above and operate at LOS E or worse under "Plus Project" conditions. The Level of Service must be improved to LOS D or better for study intersections.

General Plan Circulation Plan

The San Bernardino County Transportation & Mobility Element (October 2020) provide roadway designations for the roadway system serving the project site and the surrounding vicinity. A copy of the County's Circulation Plan is provided on **Figure 4**.

EXISTING TRAFFIC CONDITIONS

Existing Street System

Regional access to the site is provided primarily by the State Route 18 (SR-18). The SR-18 Freeway is located approximately 1.5 miles southeast of the project site. Local access to the project area is provided primarily via Green Valley Lake Road. The following provides a description of the roadways surrounding the project site.

State Route 18 (SR-18) is generally an east-west undivided roadway with one lane in each direction. The posted speed limit is 40 miles per hour (mph) and on-street parking is not permitted on both sides. SR-18 is designated as a Mountain Major Highway in the San Bernardino County Transportation & Mobility Element, Policy Map TM-1B.

Green Valley Lake Road is a north-south roadway with one lane in each direction. On-street parking is not permitted on both sides. Green Valley Lake Road is designated as a Mountain Secondary Highway in the San Bernardino County Transportation & Mobility Element. Green Valley Lake Road would provide access to the Project site via two full-movement unsignalized driveways.

Existing Transit Service

There is no bus stop that provides regular service within a ½ mile walk of the project site.

Existing Traffic Volumes

Existing peak hour turning movement volumes were collected in August 2023. Based on the peak operation of the proposed project, existing Friday evening and Sunday midday peak hour intersection volumes are presented on **Figure 5**. Traffic data collection worksheets are provided in ***Appendix B***.

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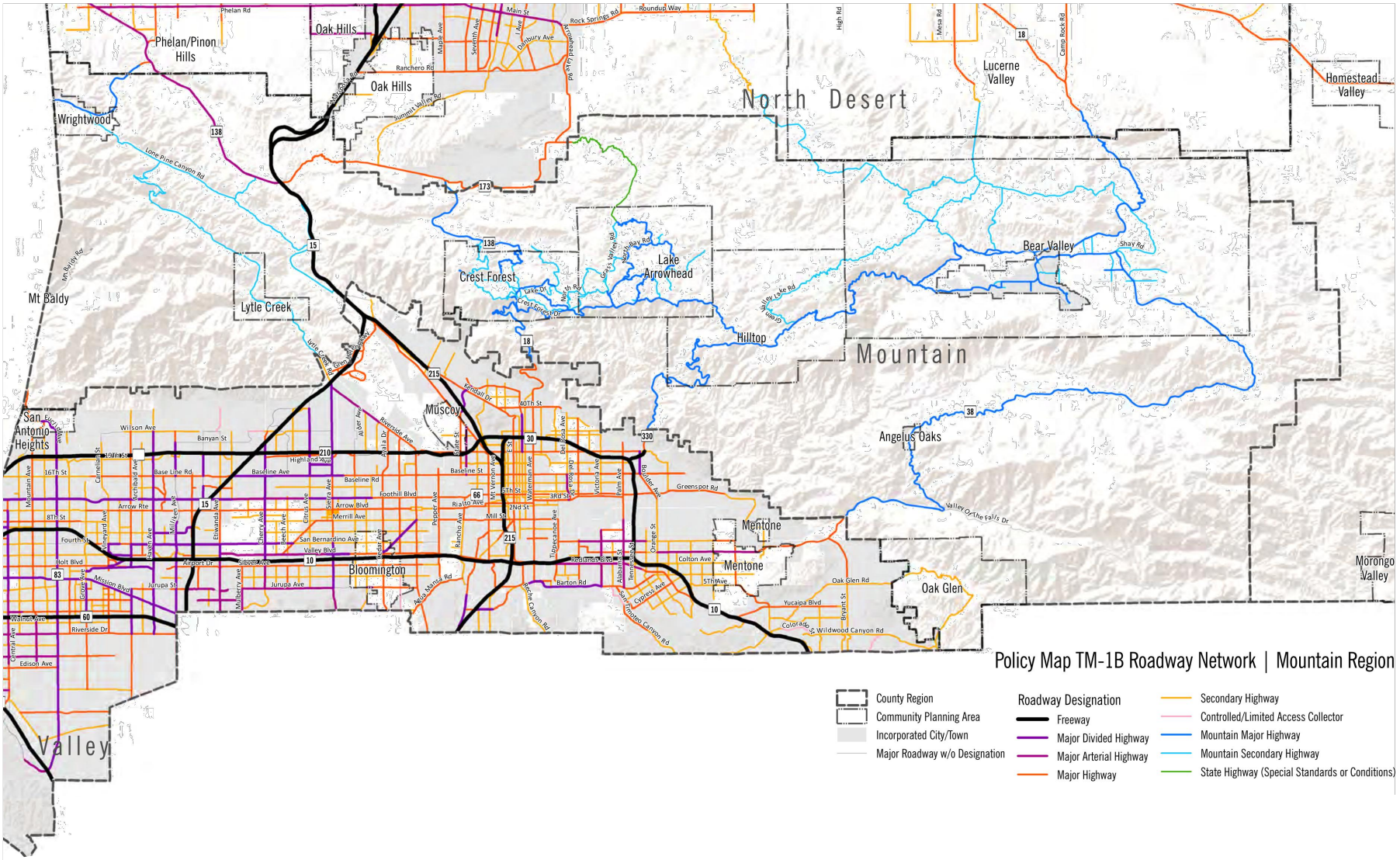

FIGURE 4
COUNTY OF SAN BERNARDINO ROADWAY NETWORK MAP

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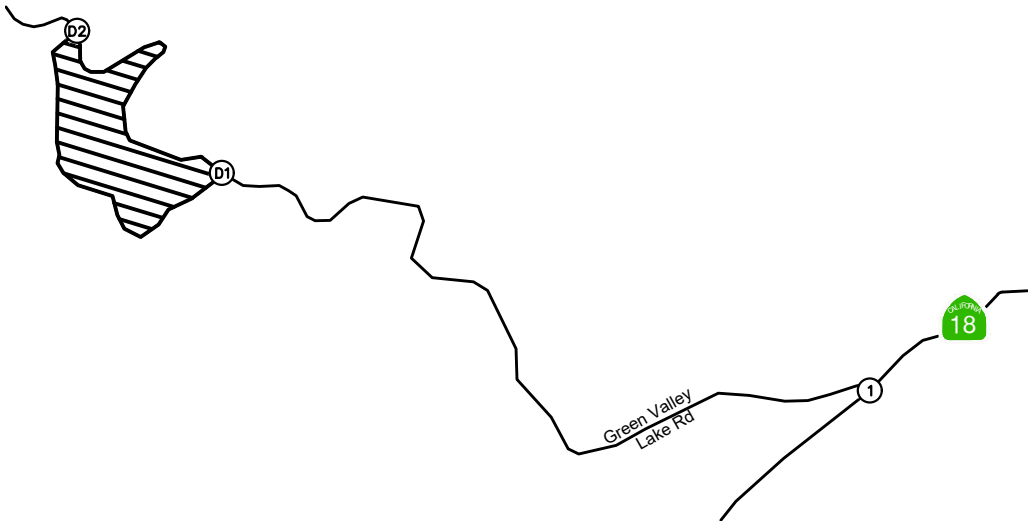


1. Green Valley Lake Rd at SR 18	D1. Green Valley Lake Rd at South Project Driveway	D2. Green Valley Lake Rd at North Project Driveway
6/10 ↙ 265/951 ↓ 5/9 → 52/64 → ↑ 58/42 ↑ 439/309	47/77 ↓ ↑ 64/52	0/1 ↙ 43/71 ↓ 3/1 → 2/7 → ↑ 1/2 ↑ 64/48

LEGEND:

(X) = Study Intersection

XX/YY = PM/MD Peak Hour Turning Movement Volumes

FIGURE 5
EXISTING TRAFFIC VOLUMES

Existing Operating Conditions

Peak Hour Operating Conditions

An intersection Level of Service analysis was conducted for the Friday evening and Sunday midday peak hours using the analysis procedures and assumptions described previously in this report. The results are shown on **Table 1**. Review of this table indicates that all study intersections currently operate at an acceptable Level of Service during both peak hours. Copies of the intersection analysis worksheets are provided in ***Appendix C***.

OPENING YEAR 2027 CUMULATIVE

The project Opening Year is anticipated to be Year 2027. An ambient growth rate of 2.0% per year was applied to existing traffic volumes to develop Opening Year 2027 base forecasts.

Cumulative Projects

In addition to ambient growth, traffic volumes from Cumulative Projects in the Project vicinity were added to develop Opening Year 2027 Cumulative forecasts. Cumulative Projects consist of any project that has been approved and is not yet occupied, as well as projects that are in various stages of the application and approval process, but have not yet been approved.

Based on information provided by County staff, the following Cumulative Projects were identified:

- Boat Storage Facility in Arrowbear (approximately 2.2 miles from project site)
- Motel in Running Springs (approximately 5.3 miles from project site)

Due to the distance and limited amount of Cumulative Projects, it is anticipated that the 2% ambient annual growth rate to Year 2027(8% total growth rate) would reflect the addition of Cumulative Project traffic. However, as a conservative approach, an additional 2% growth (10% total growth from existing) was applied to Opening Year 2027 base volumes to account for Cumulative Project traffic. The resulting Opening Year 2027 Cumulative traffic volumes are shown on **Figure 6**.

Peak Hour Operating Conditions

An intersection Level of Service analysis was conducted for Opening Year 2027 Cumulative conditions. The results are shown on **Table 2**. Intersection analysis worksheets are provided in ***Appendix C***. Review of this table indicates that, with the addition of Cumulative Project traffic, the following intersection would operate at an unacceptable Level of Service under Opening Year 2027 Cumulative conditions:

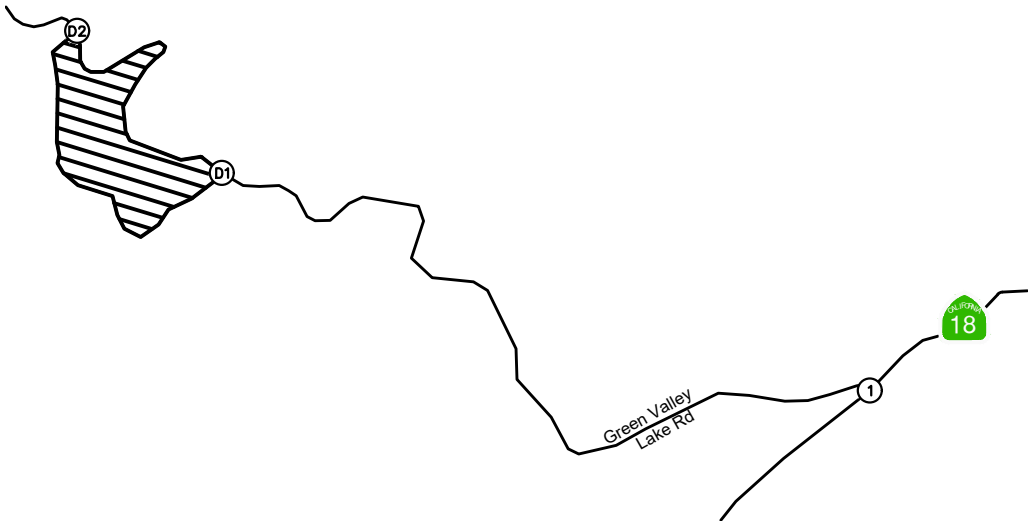
- #1 - Green Valley Lake Road at SR-18: MD – LOS E

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	Friday PM Peak Hour		Sunday MD Peak Hour	
			Delay	LOS	Delay	LOS
1	Green Valley Lake Road at SR-18	U	16.8	C	34.4	D
D1	Green Valley Lake Road at South Driveway	U	0.0	A	0.0	A
D2	Green Valley Lake Road at North Driveway	U	9.2	A	9.3	A

Notes:
- Bold and Shaded values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- S = Signalized
- U = Unsignalized

NOT TO SCALE



1. Green Valley Lake Rd at SR 18	D1. Green Valley Lake Rd at South Project Driveway	D2. Green Valley Lake Rd at North Project Driveway
7/11 ↓ 292/1046 ↓ 6/10 → 57/70 → ↑ 64/46 ↑ 483/340	52/85 ↓ ↑ 70/57	0/1 ↓ 47/78 ↓ 3/1 → 2/8 → ↑ 1/2 ↑ 70/53

LEGEND:

(X) = Study Intersection

XX/YY = PM/MD Peak Hour Turning Movement Volumes

FIGURE 6
OPENING YEAR 2027 CUMULATIVE TRAFFIC VOLUMES

TABLE 2
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2027 CUMULATIVE

Int. #	Intersection	Traffic Control	Friday PM Peak Hour		Sunday MD Peak Hour	
			Delay	LOS	Delay	LOS
1	Green Valley Lake Road at SR-18	U	18.0	C	40.4	E
D1	Green Valley Lake Road at South Driveway	U	0.0	A	0.0	A
D2	Green Valley Lake Road at North Driveway	U	9.2	A	9.4	A

Notes:
- Bold and Shaded values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- S = Signalized
- U = Unsignalized

The Level of Service for an unsignalized intersection is reported based on the single approach movement with the highest delay, which in this case, would be the eastbound approach for intersection #1. The side street traffic at this intersection experiences delay during the peak hours while waiting for an acceptable gap in traffic on SR-18. While the side street approach operates at a deficient Level of Service based on the highest delay approach, the overall intersection delay would be acceptable. Any queuing that occurs on the side street is contained on the minor intersection approach and does not impact the progression of traffic on the main arterial.

PROJECT TRAFFIC

Project Trip Generation

Due to the unique characteristics of the proposed project, the number of trips anticipated to be generated by the proposed project was approximated using site-specific information provided by the applicant. The estimated daily trips for a typical week during the summer/peak season and the shoulder/off season are provided in ***Appendix D***. A summary of estimated trips during the summer/peak and shoulder/off seasons is provided in **Table 3**. Based on review of Table 3, under summer/peak season conditions, the proposed is estimated to generate approximately 25 trips during the typical weekday AM and PM peak hours (25 inbound in the AM peak hour, and 25 outbound in the PM peak hour), and 88 trips (25 inbound and 63 outbound) during the weekend peak hour. As a conservative analysis, the weekend peak hour trips during the summer/peak season were assumed to be added during both the Friday PM and Sunday midday peak hours.

As noted earlier, the potential construction phasing of the proposed project is provided below for reference:

- Phase 1 – Camp Middle School (approximately 784-person capacity)
- Phase 2 – Camp High School (approximately 1,000-person capacity)
- Phase 3 – Camp Adult Lodge (approximately 100-140-person capacity)
- Phase 4 – Camp Elementary (approximately 250-500-person capacity)
- Phase 5 – Camp Wildwood (approximately 120-person capacity)

As a worst-case scenario, the "Plus Project" scenarios in this traffic analysis assume full build out of the Hume SoCal Expansion project.

Trip Distribution and Assignment

Project trip distribution assumptions for the project site were developed taking into account the proposed site uses, existing travel patterns, and routes to and from the regional roadway system. Trip distribution assumptions are shown on **Figure 7**.

Trip distribution percentages at each study intersection were applied to the project trip generation to determine the project trips through each intersection. The resulting project-related peak hour trips are shown on **Figure 8**.

TABLE 3
SUMMARY OF PROJECT TRIP GENERATION
HUME SOCAL PROJECT

Trip Generation Estimates										
Land Use	Daily[1]	Weekday AM Peak Hour			Weekday PM Peak Hour			Weekend PM Peak Hour[2,3]		
		In	Out	Total	In	Out	Total	In	Out	Total
Youth Camp and Adult Retreat Center (Summer/Peak Season)	100	25	0	25	0	25	25	25	63	88
Youth Camp and Adult Retreat Center (Shoulder/Off Season)	39	4	0	4	0	4	4	4	46	50

Notes:

[1] Based on 7-day average daily trip (see Appendix D)

[2] Weekend peak hour trip generation estimates based on the following assumptions:
- Inbound traffic: Employees entering project site during peak hour.
- Outbound traffic: 50% of student buses and 50% of adult vehicles leaving the project site during the peak hour (see Appendix D)

[3] Because of this characteristic of the project, the traffic counts were collected on Friday and Sunday.

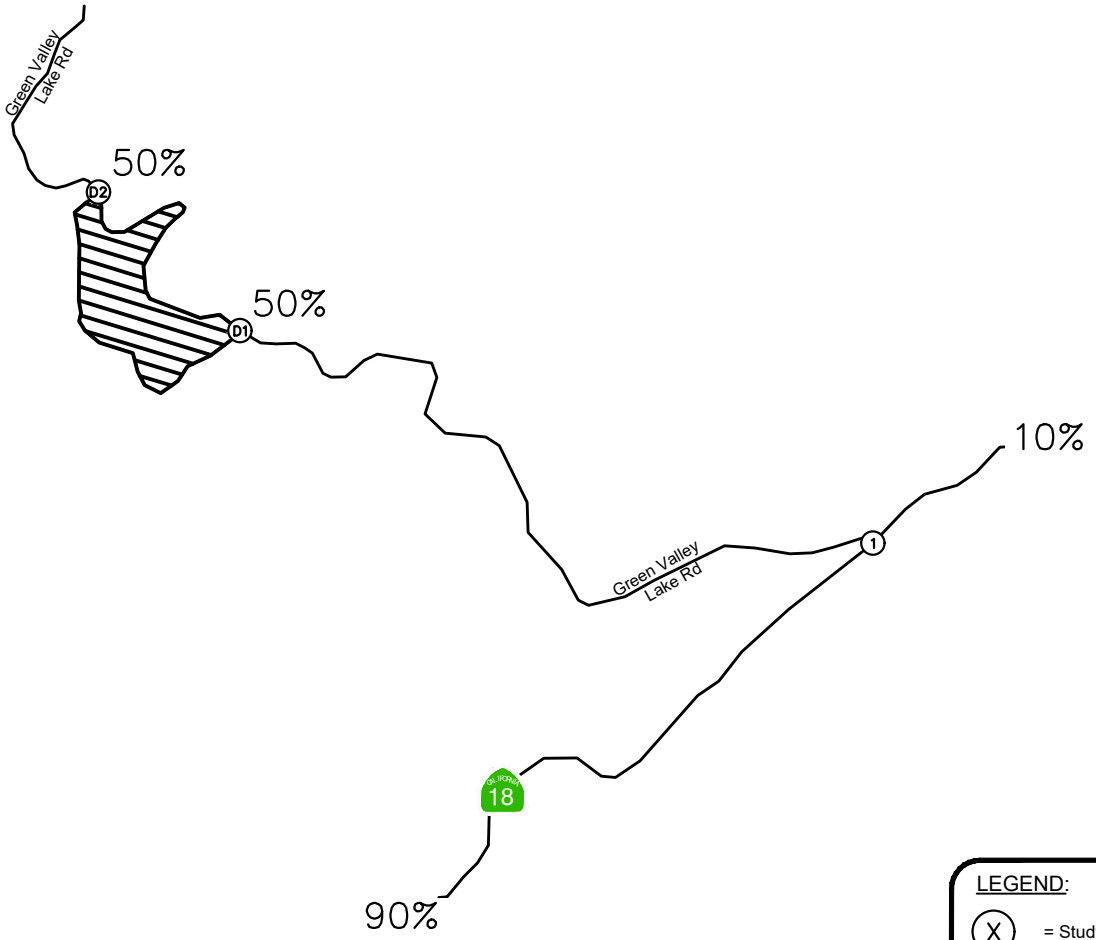


FIGURE 7
PROJECT TRIP DISTRIBUTION

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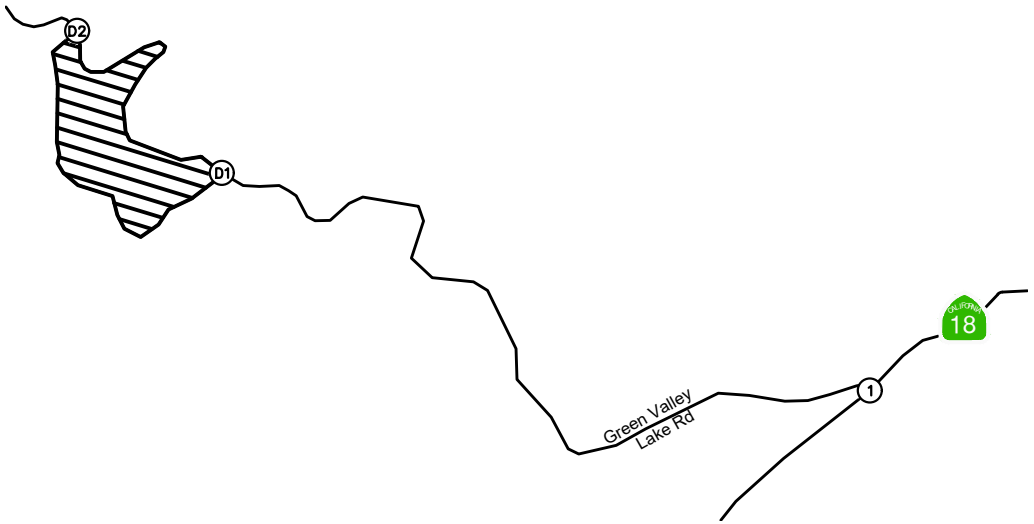


1. Green Valley Lake Rd at SR 18	D1. Green Valley Lake Rd at South Project Driveway	D2. Green Valley Lake Rd at North Project Driveway
3/3 ↙ 6/6 → 57/57 → ↑ 23/23	32/32 ↓ 32/32 → ↑ 13/13 ↑ 13/13	32/32 → ↑ 13/13

LEGEND:

(X) = Study Intersection

XX/YY = PM/MD Peak Hour Turning Movement Volumes

FIGURE 8
PROJECT-RELATED TRAFFIC VOLUMES

OPENING YEAR 2027 CUMULATIVE PLUS PROJECT

Project-related traffic was added to Opening Year 2027 Cumulative traffic volumes to develop Opening Year 2027 Cumulative Plus Project forecasts. The resulting traffic volumes are shown on **Figure 9**.

Peak Hour Operating Conditions

An intersection Level of Service analysis was conducted for Opening Year 2027 Cumulative Plus Project conditions. The results are shown on **Table 4**. Copies of the intersection analysis worksheets are provided in ***Appendix C***.

Review of table 4 indicates that, with the addition of Project traffic, the following intersection would continue to operate at an unacceptable Level of Service under Opening Year 2027 Cumulative Plus Project conditions:

- #1 - Green Valley Lake Road at SR-18: MD – LOS F

HORIZON YEAR 2040 CONDITIONS

To derive the Horizon Year 2040 volumes, an ambient growth rate of 1.0% per year was applied to existing traffic volumes to develop Horizon Year 2040 forecasts. The resulting traffic volumes for Horizon Year 2040 are shown on **Figure 10**.

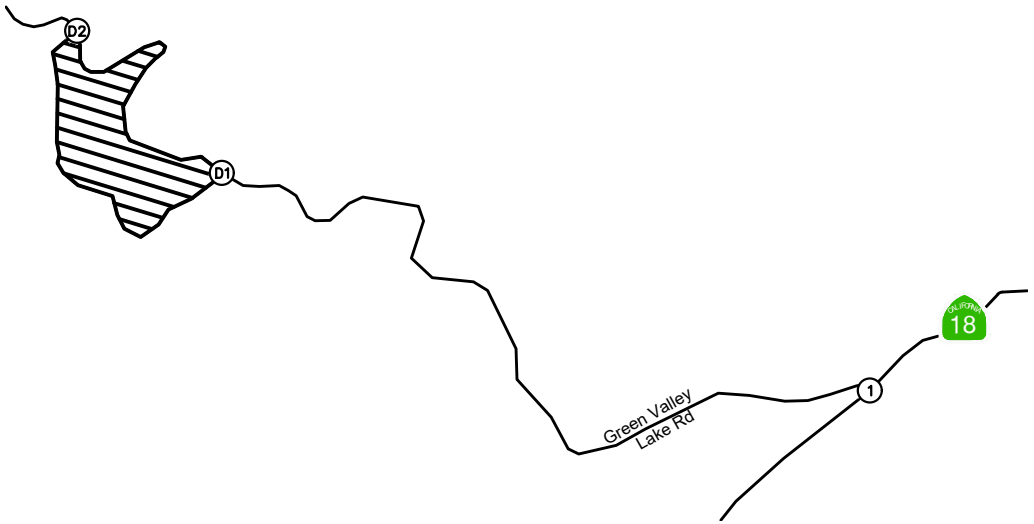
Peak Hour Operating Conditions

An intersection Level of Service analysis was conducted for Horizon Year 2040 conditions, and the results are shown on **Table 5**. Copies of intersection analysis worksheets are provided in ***Appendix C***.

Review of Table 5 indicates that the following intersection would continue to operate at an unacceptable Level of Service under Horizon Year 2040 conditions:

- #1 - Green Valley Lake Road at SR-18: MD – LOS F

NOT TO SCALE



1. Green Valley Lake Rd at SR 18	D1. Green Valley Lake Rd at South Project Driveway	D2. Green Valley Lake Rd at North Project Driveway
10/14 ↓, 292/1046 ↓ 12/16 → 114/127 → 87/69 ↰, 483/340 ↑	84/117 ↓ 32/32 → 13/13 ↰, 83/70 ↑	0/1 ↓, 47/78 ↓ 3/1 → 34/40 → 14/15 ↰, 70/53 ↑

LEGEND:

(X) = Study Intersection

XX/YY = PM/MD Peak Hour Turning Movement Volumes

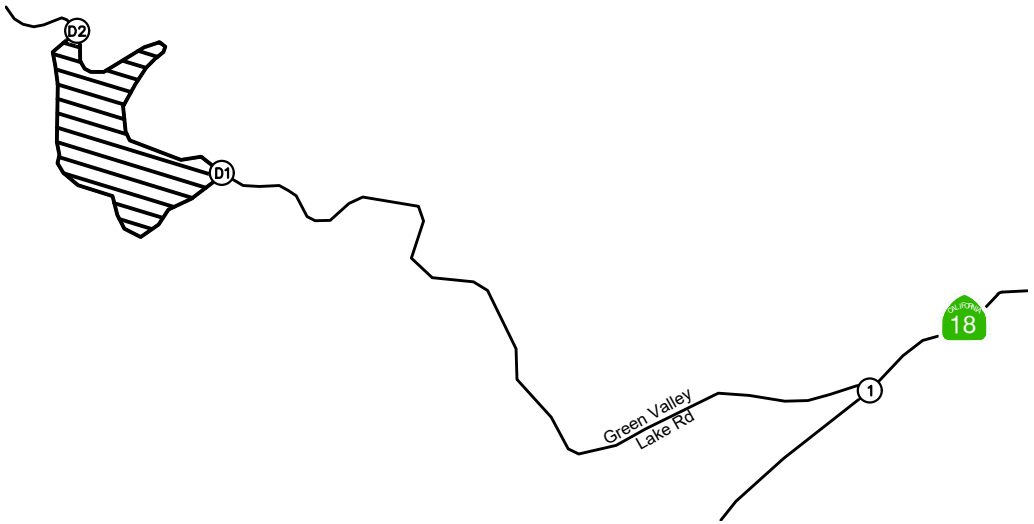
FIGURE 9
OPENING YEAR 2027 CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES

TABLE 4
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2027 CUMULATIVE PLUS PROJECT

Int. #	Intersection	Traffic Control	Friday PM Peak Hour						Sunday MD Peak Hour					
			Without Project		With Project		Change in Delay	Cumulative Effect?	Without Project		With Project		Change in Delay	Cumulative Effect?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Green Valley Lake Road at SR-18	U	18.0	C	19.9	C	1.9	No	40.4	E	56.7	F	16.3	Yes
D1	Green Valley Lake Road at South Driveway	U	0.0	A	8.9	A	8.9	No	0.0	A	9.1	A	9.1	No
D2	Green Valley Lake Road at North Driveway	U	9.3	A	9.6	A	0.3	No	9.4	A	9.7	A	0.3	No

Notes:
- Bold and Shaded values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- S = Signalized
- U = Unsignalized

NOT TO SCALE



1. Green Valley Lake Rd at SR 18	D1. Green Valley Lake Rd at South Project Driveway	D2. Green Valley Lake Rd at North Project Driveway
7/12 ↓ 310/1113 6/11 → ↑ 68/49 514/362 61/75 ↘	55/90 ↓ ↑ 75/61	0/1 ↓ 50/83 4/1 → ↑ 1/2 75/56 2/8 ↘

LEGEND:

(X) = Study Intersection

XX/YY = PM/MD Peak Hour Turning Movement Volumes

FIGURE 10
HORIZON YEAR 2040 TRAFFIC VOLUMES

TABLE 5
SUMMARY OF INTERSECTION OPERATION
HORIZON YEAR 2040

Int. #	Intersection	Traffic Control	Friday PM Peak Hour		Sunday MD Peak Hour	
			Delay	LOS	Delay	LOS
1	Green Valley Lake Road at SR-18	U	19.7	C	52.0	F
D1	Green Valley Lake Road at South Driveway	U	0.0	A	0.0	A
D2	Green Valley Lake Road at North Driveway	U	9.3	A	9.4	A

Notes:
- Bold and Shaded values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- S = Signalized
- U = Unsignalized

HORIZON YEAR 2040 PLUS PROJECT CONDITIONS

Project-related traffic was added to Horizon Year 2040 traffic volumes to develop Horizon Year 2040 Plus Project traffic volumes. The resulting traffic volumes are shown on **Figure 11**.

Peak Hour Operating Conditions

An intersection Level of Service analysis was conducted for Horizon Year 2040 Plus Project conditions, and the results are shown on **Table 6.** Copies of intersection analysis worksheets are provided in ***Appendix C***.

Review of Table 6 indicates that, with the addition of Project traffic, the following intersection would continue to operate at an unacceptable Level of Service under Horizon Year 2040 Plus Project conditions:

- #1 - Green Valley Lake Road at SR-18: MD – LOS F

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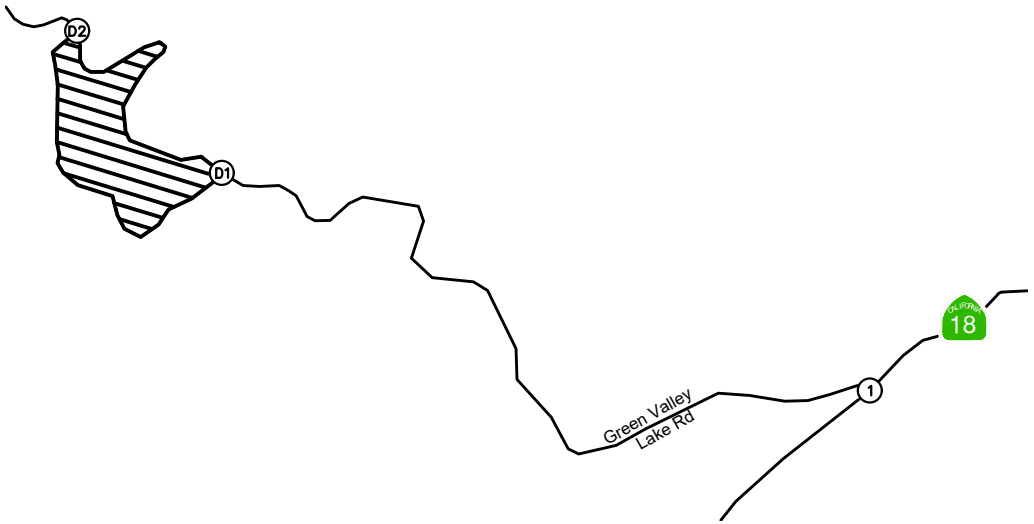


1. Green Valley Lake Rd at SR 18	D1. Green Valley Lake Rd at South Project Driveway	D2. Green Valley Lake Rd at North Project Driveway
10/15 ↓ 310/1113 ↓ 12/17 → 118/132 ← 91/72 ↑ 514/362 ↑	87/122 ↓ 32/32 ← 13/13 ↑ 88/74 ↑	0/1 ↓ 50/83 ↓ 4/1 → 34/40 ← 14/15 ↑ 75/56 ↑

LEGEND:

X = Study Intersection

XX/YY = PM/MD Peak Hour Turning Movement Volumes

FIGURE 11
HORIZON YEAR 2040 PLUS PROJECT TRAFFIC VOLUMES

TABLE 6
SUMMARY OF INTERSECTION OPERATION
HORIZON YEAR 2040 PLUS PROJECT

Int. #	Intersection	Traffic Control	Friday PM Peak Hour						Sunday MD Peak Hour					
			Without Project		With Project		Change in Delay	Cumulative Effect?	Without Project		With Project		Change in Delay	Cumulative Effect?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Green Valley Lake Road at SR-18	U	19.7	C	21.9	C	2.2	No	52.0	F	82.9	F	30.9	Yes
D1	Green Valley Lake Road at South Driveway	U	0.0	A	8.9	A	8.9	No	0.0	A	9.2	A	9.2	No
D2	Green Valley Lake Road at North Driveway	U	9.3	A	9.7	A	0.4	No	9.4	A	9.8	A	0.4	No

Notes:
- Bold and Shaded values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- S = Signalized
- U = Unsignalized

TRAFFIC SIGNAL WARRANT ANALYSIS

A traffic signal warrant analysis was conducted for the following unsignalized intersection:

- #1 – Green Valley Lake Road at SR-18

Signal warrants were based on the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD). The warrants were conducted using Warrant 3 (Peak Hour Warrant) for the following scenarios:

- Opening Year 2027 Cumulative
- Opening Year 2027 Cumulative Plus Project
- Horizon Year 2040
- Horizon Year 2040 Plus Project

Traffic Signal Warrant Analysis worksheets are provided in ***Appendix E***. Based on the signal warrant analysis, Warrant 3 was met during the following scenarios:

- Opening Year 2027 Cumulative
- Opening Year 2027 Cumulative Plus Project
- Horizon Year 2040
- Horizon Year 2040 Plus Project

The CA MUTCD specifically states that, "The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." The reference document goes on to state a number of other factors to take into account when considering a signal for a specific location, including whether or not a signal would improve the overall safety of the intersection, whether it would benefit or disrupt progressive traffic flow, frequency of peak hours, and consideration of site-specific characteristics such as queuing, signal spacing, and overall delay to the main street through movements.

The decision to install a traffic signal should be based on engineering judgement, and not solely upon satisfying a single peak hour warrant. It is recommended that a decision about signalization at the intersection should be made based on future observations as well as engineering judgement, based on the factors listed above.

As noted earlier, the Level of Service for an unsignalized intersection is reported based on the single approach movement with the highest delay, which in this case, would be the eastbound approach for intersection #1. The side street traffic at this intersection experiences delay during the peak hours while waiting for an acceptable gap in traffic on SR-18. While the side street approach operates at a deficient Level of Service based on the highest delay approach, the overall intersection delay would be acceptable. Any queuing that occurs on the side street is contained on the minor intersection approach and does not impact the progression of traffic on the main arterial.

IMPROVEMENTS AND RECOMMENDATIONS

Intersection Improvements

Based on the San Bernardino County TIA Guidelines and significance thresholds presented earlier in this report, under Opening Year 2027 Cumulative Plus Project and Horizon Year 2040 Plus Project scenarios, the following study intersection would experience a project-related effect due to the increase in delay caused by the addition of project traffic:

- #1 – Green Valley Lake Road at SR-18 (Cumulative effect)

Implementation of the following improvements under applicable Opening Year 2027 Cumulative Plus Project and Horizon Year 2040 Plus Project scenarios are recommended to address the LOS deficiency at the following study intersection:

<u>#1 – Green Valley Lake Road at SR-18</u>

- Install traffic signal

A summary of the intersection operation before and after implementation of the recommended improvements is provided on **Table 7**. Copies of intersection analysis worksheets with improvements are provided in ***Appendix C.*** Recommended improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair-share contribution toward future improvements, or a combination of these approaches. The project fair share proportion for non-programmed improvements at the deficient study intersection under Opening Year 2027 Cumulative Plus Project and Horizon Year 2040 Plus Project scenarios are shown on **Table 8 and 9** respectively.

TABLE 7
SUMMARY OF INTERSECTION OPERATION
RECOMMENDED IMPROVEMENTS

Int. #	Intersection	Improvements	Peak Hour	Proposed Traffic Control	OPENING YEAR 2027 CUMULATIVE						Horizon YEAR 2040					
					Without Project		With Project		With Improvements		Without Project		With Project		With Improvements	
					Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Green Valley Lake Road at SR-18	•Install traffic signal	Friday PM	S	18.0	C	19.9	C	7.2	A	19.7	C	21.9	C	7.2	A
			Sunday MD	S	40.4	**E**	56.7	**F**	12.8	B	52.0	**F**	82.9	**F**	15.6	C

Notes:
- Bold values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

S = Signalized
U = Unsignalized

TABLE 8

SUMMARY OF PROJECT FAIR SHARE - OPENING YEAR 2027 CUMULATIVE PLUS PROJECT

		Friday PM					Sunday MD				
		Total Volume		Total	Project		Total Volume		Total	Project	
Int. #	Intersection	2024	2027	Growth	Trips	%-age	2024	2027	Growth	Trips	%-age
1	Green Valley Lake Road at SR-18	825	998	173	89	8.9%	1,385	1,612	227	89	5.5%

Notes:
- Fair Share percentage is calculated based on the ratio of Project trips to total volume in the Opening Year.

TABLE 9

SUMMARY OF PROJECT FAIR SHARE - HORIZON YEAR 2040 PLUS PROJECT

Int. #	Intersection	Friday PM					Sunday MD				
		Total Volume		Total	Project		Total Volume		Total	Project	
		2024	2040	Growth	Trips	%-age	2024	2040	Growth	Trips	%-age
1	Green Valley Lake Road at SR-18	825	1,055	230	89	8.4%	1,385	1,711	326	89	5.2%

Notes:
- Fair Share percentage is calculated based on the ratio of Project trips to total volume in the Horizon Year.

CEQA VEHICLE MILES TRAVELED (VMT) ASSESSMENT

Senate Bill 743 (SB 743) was approved by California legislature in September 2013. SB 743 requires changes to California Environmental Quality Act (CEQA), specifically directing the Governor's Office of Planning and Research (OPR) to develop alternative metrics to the use of vehicular "Level of Service" (LOS) for evaluating transportation projects. OPR has prepared a technical advisory ("OPR Technical Advisory") for evaluating transportation impacts in CEQA and has recommended that Vehicle Miles Traveled (VMT) replace LOS as the primary measure of transportation impacts. The Natural Resources Agency has adopted updates to CEQA Guidelines to incorporate SB 743 that requires VMT for the purposes of determining a significant transportation impact under CEQA.

The San Bernardino County Transportation Impact Study Guidelines (July 2019) provide details on appropriate screening thresholds that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed level analysis. Screening thresholds are broken down into the following three criteria:

1. Project Type Screening
2. Transit Priority Area (TPA) Screening
3. Low VMT Area Screening

Land development projects that meet one or more of the above screening thresholds may be presumed to create a less-than-significant impact on transportation and circulation. The screening thresholds were reviewed and evaluated for this project.

Project Type Screening

The San Bernardino County *Transportation Impact Study Guidelines* identify that the following project types would be presumed to have a less-than-significant VMT impact:

- K-12 schools
- Local-serving retail less than 50,000 sq. ft.
- Local parks
- Day care centers
- Local serving gas stations
- Local serving banks
- Student housing projects
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Projects generating less than 110 daily vehicle trips
    - This generally corresponds to the following "typical" development potentials:
        - 11 single family housing units
        - 16 multi-family, condominiums, or townhouse housing units
        - 10,000 sq. ft. of office

- 15,000 sq. ft. of light industrial
- 63,000 sq. ft. of warehousing
- 79,000 sq. ft. of high cube transload and short-term storage warehouse
- 12 hotel rooms

The project will involve the construction of a summer camp that generates less than 110 average daily trips; therefore, the project would be screened out based on project type.

The Project Type Screening threshold is met.

Low VMT Generating Area

A project located within a low VMT generating area as determined by the County's guidelines and the SBCTA VMT Screening Tool would be considered to not have a less-than-significant transportation impact. Based on the County's guidelines and the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT generating area. Results of the SBCTA VMT Screening Tool are provided in **Figure 12**.

The Low VMT Generating Area threshold is not met.

Transit Priority Area (TPA) Screening

A project located within a TPA as determined by the San Bernardino County Transportation Authority (SBCTA) VMT Screening Tool would be considered to have a less-than-significant transportation impact. Based on the SBCTA VMT Screening Tool, the proposed project is not located within a TPA.

The Transit Priority Area threshold is not met.

NOT TO SCALE

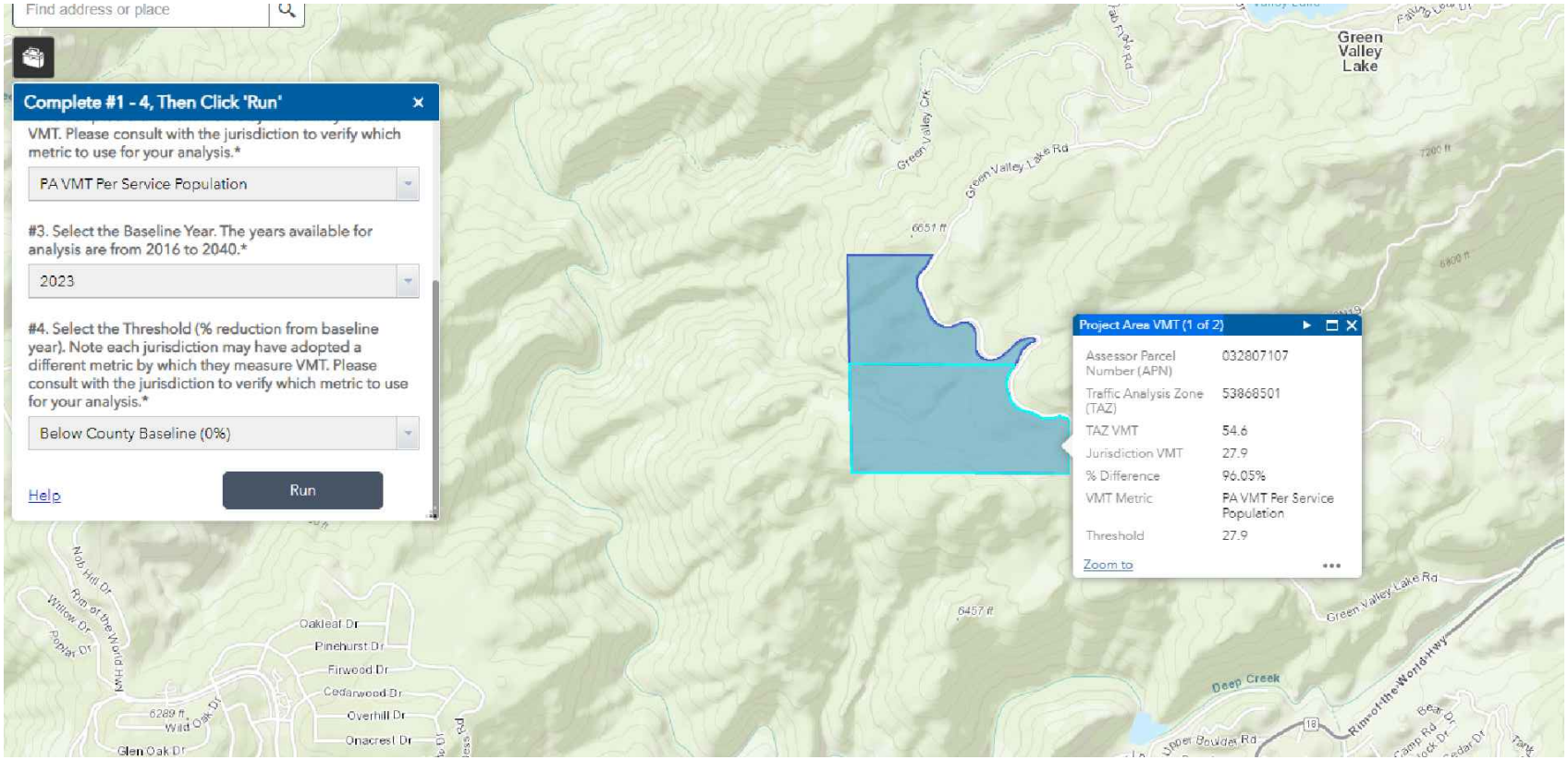


FIGURE 12
SBCTA VMT SCREENING MAP

FINDINGS AND CONCLUSIONS

- The Project involves the expansion of campground uses for the existing Hume SoCal campground to accommodate up to 2,854 total occupants.

- Under Existing Conditions, all study intersections currently operate at an acceptable Level of Service.

- The Opening Year 2027 conditions includes a 2% ambient annual growth rate. To be conservative, an additional 2% growth rate (10% total growth from existing) was applied to account for Cumulative Project traffic. Under Opening Year 2027 Cumulative Conditions, the following intersection would operate at an unacceptable Level of Service:

    - #1 – Green Valley Lake Road at SR-18

- The proposed project is estimated to generate 88 trips (25 inbound and 63 outbound) during the summer/peak season weekend peak hour. As a conservative analysis, the weekend peak hour trips during the summer/peak season were assumed to be added during both the Friday PM and Sunday midday peak hours.

- Project traffic was added to Opening Year 2027 Cumulative conditions to establish Opening Year Cumulative Plus Project conditions. Under Opening Year 2027 Cumulative Plus Project conditions, the following intersection would continue to operate at an unacceptable Level of Service:

    - #1 – Green Valley Lake Road at SR-18 (Cumulative effect)

- Under Horizon Year 2040 Conditions, the following intersection would continue to operate at an unacceptable Level of Service:

    - #1 – Green Valley Lake Road at SR-18

- Project traffic was added to Horizon Year 2040 traffic volumes to establish Horizon Year 2040 Plus Project conditions. Under Horizon Year 2040 Plus Project conditions, the following intersection would continue to operate at an unacceptable Level of Service:

    - #1 – Green Valley Lake Road at SR-18 (Cumulative effect)

- Based on San Bernardino County VMT Screening thresholds, the proposed project would screen out of further VMT analysis as the project will involve the construction of a summer camp that generates less than 110 average daily trips. Therefore, the project would have a less-than-significant VMT impact and no further VMT analysis is required for the proposed project.

- Recommended improvements under applicable Opening Year 2027 Cumulative Plus Project condition were provided to address the project's effect at study intersections.

- Recommended improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair-share contribution toward future improvements, or a combination of these approaches. Conditions placed upon the applicant for the recommended improvements should be coordinated with the Public Works Director and City Engineer.

APPENDIX A

APPROVED
SCOPE OF STUDY
FORM

SCOPE FOR TRAFFIC STUDY

Project Name:	Hume SoCal Project

This Scope for Traffic Study acknowledges San Bernardino County Department of Public Works, Traffic Division requirements of traffic impact analysis for the project and is subject to change:
Available on the Department of Public Works Website:
http://cms.sbcounty.gov/dpw/Transportation/Traffic.aspx

Project Address/APN	APN: 0328-071-10		
Project Description	Youth Camp and Adult Retreat Center		
City	Green Valley Lake, California		
Project Horizon Year	2040	**Project Buildout Year**	2027
Closest Intersection (Xtn) to the Project			
Xtn N/S Street Name	Green Valley Lake Road		
Xtn E/W Street Name	California State Route 18		
County Supervisorial District	3	**Ambient Growth Rate per Year Valley 2%, Desert 1%**	2%

	Traffic Engineer	**Owner/Developer**
Company	Kimley-Horn and Associates, Inc.	Hume Lake Christian Camps
Name	Trevor Briggs	Rick Parkinson
Address	1100 Town and Country Road, Suite 700	5545 Hume Lake Road
City, State, Zip Code	Orange, CA 92868	Fresno, CA 93727
Phone #	714-939-1030	
Email address	trevor.briggs@kimley-horn.com	rparkinson@hume.org

Prepared By: 

Print Name: Trevor Briggs, P.E.

Owner/Engineer **Date** 01/17/2024

SCOPE FOR TRAFFIC STUDY

Project Name:	Hume SoCal Project

1. Traffic Distribution: Please insert or attach Figure(s) illustrating project trip distribution in percentages and volumes at the study intersections analyzed.

2. Trip Credit: Exact amount of credit subject to approval by Traffic Division.

Transportation Demand Management (TDM)	No	
Existing Active Land Use	No	
Previous Land Use	No	
Internal Trip Reduction	No	
Pass-by Trip Reduction	No	

3. Related Projects: Consultant should check with Planning in the San Bernardino County Department of Land Use Services and planning departments of adjoining Cities. Documentation of the consultation from these agencies shall be included in the traffic study. Related projects list shall be submitted to Traffic Division for our review and approval before being incorporated in the study.

4. Freeway Analysis: The potential traffic impact on the following Freeway(s) must be considered.

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Vehicle Miles Traveled-Focused Transportation Impact Study Guide (May 2020) and can be obtained from https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using HCM procedures. Appendix A of the San Bernardino County Transportation Authority CMP outlines allowable modifications to these procedures. The San Bernardino County Transportation Authority CMP can be viewed online at: https://www.gosbcta.com/planning-sustainability/?term=249

SCOPE FOR TRAFFIC STUDY

Project Name:	Hume SoCal Project

5. Trip Generation

Trip Generation Rate(s) Source: ITE Trip Generation	**I – Institute of Transportation Engineers; S – San Diego Traffic Generators; C – County; O – Other:**	**Edition:**	11th

Land Use Code	**Land Use**	**Rate Based on**	**Qty**	***AVTE vs**	**ADT(a)**	Weekday a.m. peak		Weekday p.m. peak		Weekend peak hour(b)(c)	
						In	Out	In	Out	In	Out
-	Youth Camp and Adult Retreat Center (Summer/Peak Season)				100	25	0	0	25	25	63
-	Youth Camp and Adult Retreat Center (Shoulder/Off Season)				39	4	0	0	4	4	46

(a) Based on 7-Day Average (See Attachment A)

(b) Weekend peak hour trip generation estimates based on the following assumption:

- Inbound traffic: Employees entering project site during peak hour.
- Outbound traffic: 50% of student buses and 50% of adult vehicles leaving the project site during the peak hour. (See Attachment A)

(c) Because of the characteristic of this project, the traffic counts will be collected on Saturday or Sunday.

* - Average Vehicle Trip Ends.
For ITE Land Uses provide number and name of Land Use. e.g. LU 814 - Variety Store

SCOPE FOR TRAFFIC STUDY

Project Name:	Hume SoCal Project

6. Study Intersections: At minimum, the study shall include the following intersections. The list is subject to change after related projects, trip generation and distribution are determined. Consultant should check with adjoining Cities regarding their requirements in addition to the following County/City intersections. Documentation of the consultation from these agencies shall be included in the traffic study. (See Attachment 1)

Xtn #	% County	% City	N-S/E-W Street Name	City	Signalized	CMP
1	100%	0%	Green Valley Lake Rd/SR 18	SB County / Caltrans	No	No
2	100%	0%	Green Valley Lake Rd/South Project Driveway	SB County	No	No
3	100%	0%	Green Valley Lake Rd/North Project Driveway	SB County	No	No

Cities/agencies to be consulted: CALTRANS

SCOPE FOR TRAFFIC STUDY

Project Name:	Hume SoCal Project

7. Other:

Traffic counts may be conducted immediately per the following:
• Must be taken on Tuesdays, Wednesdays or Thursdays. • Certain projects may need to collect traffic counts on Friday or Sunday
• Must exclude holidays, and the first weekdays before and after the holiday.
• Must be taken on days when local schools or colleges are in session.
• Must be taken on days of good weather, and avoid atypical conditions (e.g., road construction, detours, or major traffic incidents).
• Traffic counts used for other traffic studies in the area shall **NOT** be reused again, unless 25% of the counts conducted for that particular traffic study are validated with new counts. The difference in volumes between the old and new counts at each corresponding movement should not be more than 10%.
• New traffic counts shall be checked to ensure the difference in volumes at corresponding approaches, if applicable, between two adjacent intersections is no more than 10% unless the difference can be justified.
• For all proposed mitigation measures, a conceptual plan for the improvements shall be submitted to our Traffic Studies section for review and approval prior to the approval of the Traffic Impact Analysis. All proposed improvements shall be within the right-of-way.
• For all cumulative mitigation measures, a cost estimate for the improvement shall be submitted.
• Raw traffic counts data must be included with traffic analysis study
• Traffic Counts must not be older than 2018

This analysis must follow the most current Traffic Impact Study Guidelines for the County as stated in the County's Road Planning and Design Standards.

8. Fees

The County charges on an actual cost basis for review of traffic studies. An initial deposit of $3400 is required at the time that a land use application is filed with the Department of Land Use Services If the review costs exceed the initial deposit, the applicant will be expected to provide additional funds and the review will be suspended until the additional funds are deposited.

Project Name:	Hume SoCal Project

9. Contact Information:

Please submit a signed copy of this scope for approval by the Traffic Division. Draft scopes may be sent electronically. Final scope with signature should be submitted in person or by US Mail to:

County of San Bernardino
Dept. of Public Works, Traffic Division
825 E. 3rd Street, Rm 115
San Bernardino, CA 92415-0835

Phone: 909-387-8186
Fax: 909-387-7809
Email: Maria.Miranda@dpw.sbcounty.gov or Jeremy.Johnson@dpw.sbcounty.gov

ATTACHMENT A – TRIP GENERATION

Summer: Up on Sunday from 9am – 1pm; Down on Saturday from 9am to 11am

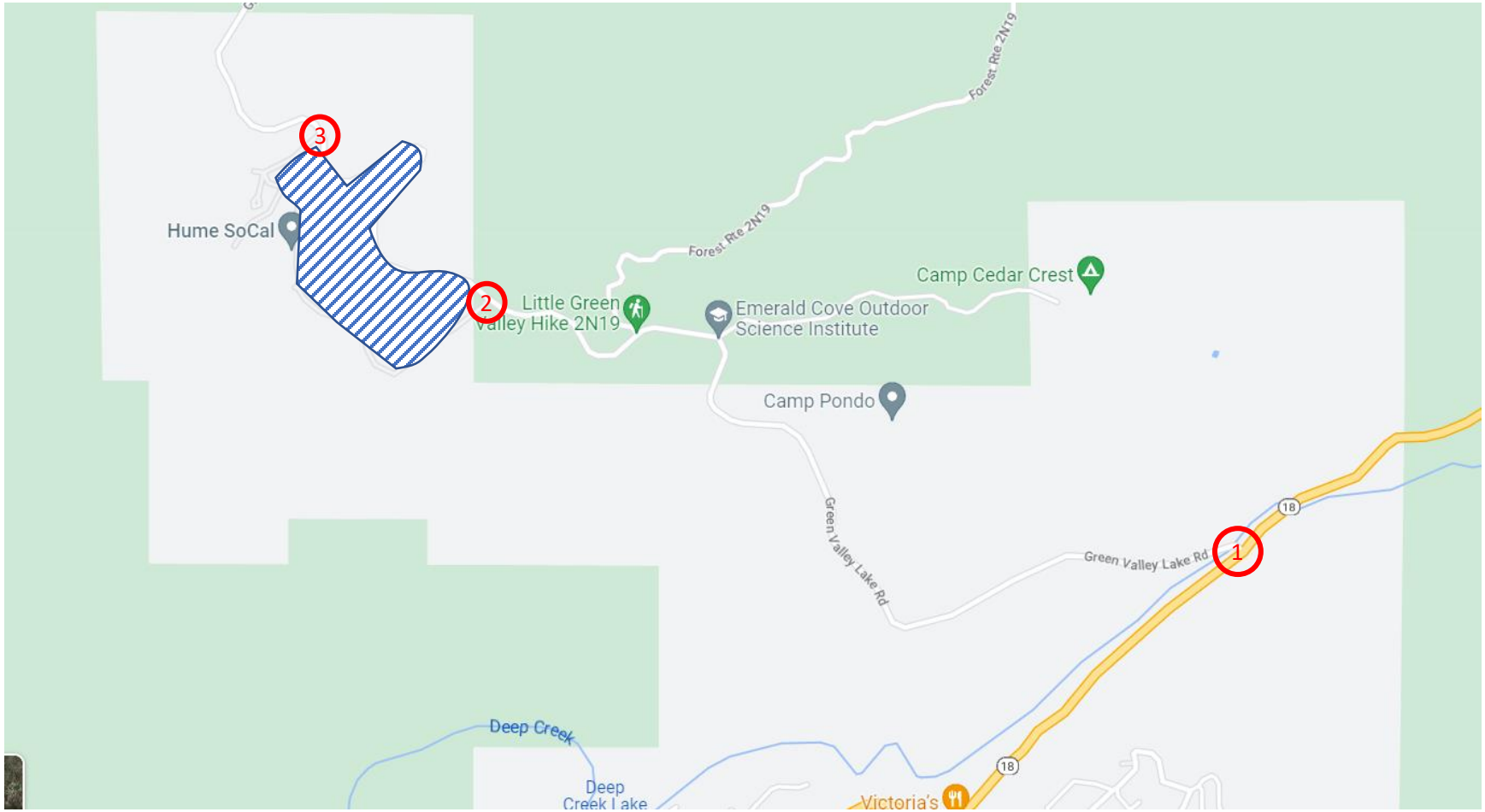
	Summer	Trip	Assumption	Mon	Tue	Wed	Thu	Fri	Sat	Sun	7-day Average
Employees	250	50	90% live on Site. 10% make trips	50	50	50	50	50	50	50	50
Student Campers	2500	50	Buses @50 students per bus	0	0	0	0	0	100	100	29
Adults	150	75	Vehicle Occupancy - 2	0	0	0	0	75	0	75	21
				50	50	50	50	125	150	225	**100**

- Peak day trips are on Sunday – 225 trips. On weekdays, there are 50 trips generated by 10% employees who don't live on the site.
- Seven-day average daily trips are 100, less than 110.
- In Shoulder season (non-summer), peak daily trips are 39.

Shoulder: Up on Friday from 3pm – 7pm; Down on Sunday from 10am – 12pm

	Shoulder	Trip	Assumption	Mon	Tue	Wed	Thu	Fri	Sat	Sun	7-day Average
Employees	40	8	90% live on Site. 10% make trips	8	8	8	8	8	8	8	8
Student Campers	800	16	Buses @50 students per bus	0	0	0	0	32	0	32	9
Adults	150	75	Vehicle Occupancy - 2	0	0	0	0	75	0	75	22
				8	8	8	8	115	8	115	**39**

ATTACHMENT B – STUDY AREA



Legend:

- Project Site
- Study Intersection
- Project Driveway

Study Intersections:

1. Green Valley Lake Rd/SR 18
2. Green Valley Lake Rd/South Project Driveway
3. Green Valley Lake Rd/North Project Driveway

APPENDIX B

TRAFFIC COUNT
DATA SHEETS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

County of San Bernardino
N/S: Green Valley Lake Road
E/W: SR-18
Weather: Clear

File Name : 01_CSB_Green VL_SR-18 Fr PM
Site Code : 10823695
Start Date : 8/4/2023
Page No : 1

Groups Printed- Total Volume

	Green Valley Lake Road Southbound			SR-18 Westbound			SR-18 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	0	12	12	66	1	67	14	118	132	211
04:15 PM	0	13	13	68	3	71	17	117	134	218
04:30 PM	5	16	21	71	0	71	10	100	110	202
04:45 PM	0	11	11	60	2	62	17	104	121	194
Total	5	52	57	265	6	271	58	439	497	825
05:00 PM	1	10	11	53	2	55	17	98	115	181
05:15 PM	1	17	18	58	2	60	8	98	106	184
05:30 PM	1	9	10	46	2	48	12	108	120	178
05:45 PM	0	16	16	47	4	51	18	124	142	209
Total	3	52	55	204	10	214	55	428	483	752
Grand Total	8	104	112	469	16	485	113	867	980	1577
Apprch %	7.1	92.9		96.7	3.3		11.5	88.5		
Total %	0.5	6.6	7.1	29.7	1	30.8	7.2	55	62.1	

	Green Valley Lake Road Southbound			SR-18 Westbound			SR-18 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	12	12	66	1	67	14	**118**	132	211
04:15 PM	0	13	13	68	**3**	**71**	**17**	117	**134**	**218**
04:30 PM	**5**	**16**	**21**	**71**	0	71	10	100	110	202
04:45 PM	0	11	11	60	2	62	17	104	121	194
Total Volume	5	52	57	265	6	271	58	439	497	825
% App. Total	8.8	91.2		97.8	2.2		11.7	88.3		
PHF	.250	.813	.679	.933	.500	.954	.853	.930	.927	.946

Counts Unlimited, Inc.
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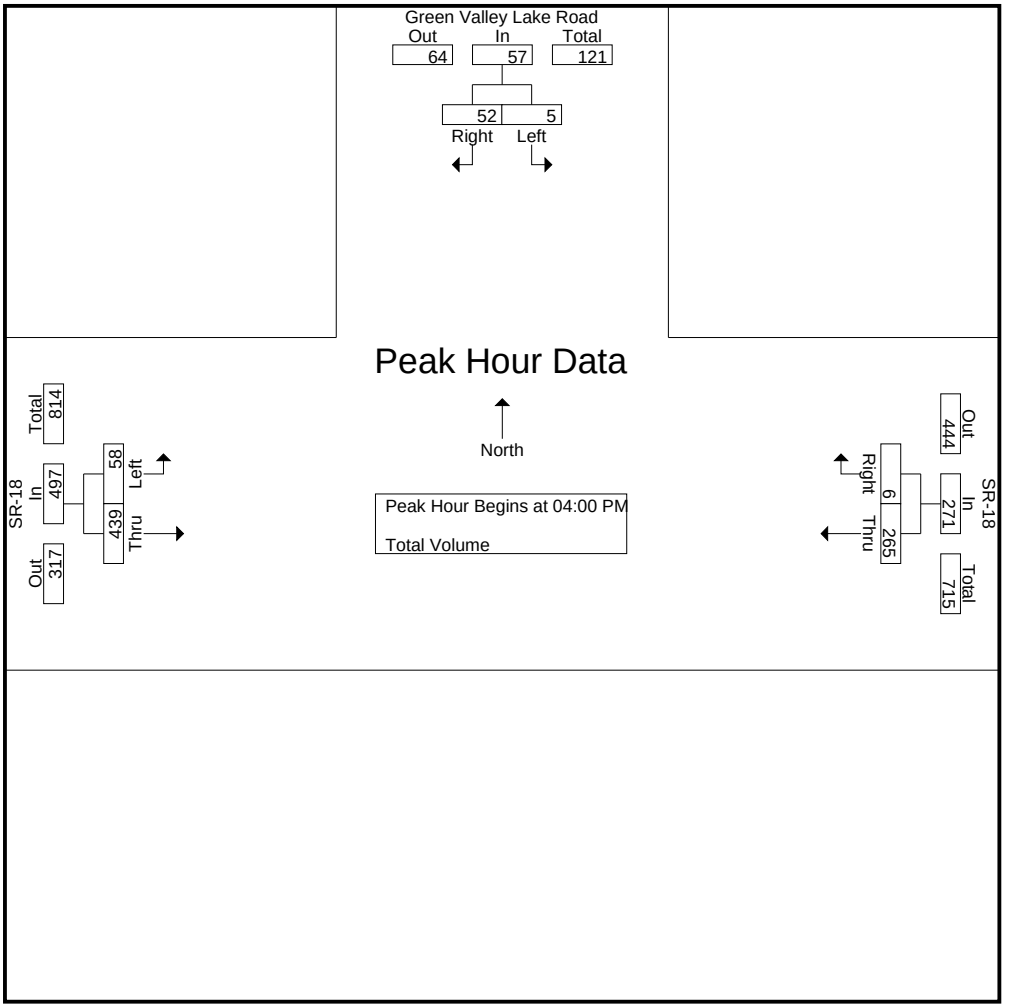
File Name : 01_CSB_Green VL_SR-18 Fr PM
Site Code : 10823695
Start Date : 8/4/2023
Page No : 2



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

	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	**5**	16	**21**	66	1	67	14	**118**	132
+15 mins.	0	11	11	68	**3**	**71**	**17**	117	**134**
+30 mins.	1	10	11	**71**	0	71	10	100	110
+45 mins.	1	**17**	18	60	2	62	17	104	121
Total Volume	7	54	61	265	6	271	58	439	497
% App. Total	11.5	88.5		97.8	2.2		11.7	88.3	
PHF	.350	.794	.726	.933	.500	.954	.853	.930	.927

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

County of San Bernardino
N/S: Green Valley Lake Road
E/W: SR-18
Weather: Clear

File Name : 01_CSB_Green VL_SR-18 Sun MD
Site Code : 10823695
Start Date : 8/6/2023
Page No : 1

Groups Printed- Total Volume

	Green Valley Lake Road Southbound			SR-18 Westbound			SR-18 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
10:00 AM	1	14	15	197	5	202	6	81	87	304
10:15 AM	3	16	19	202	0	202	8	71	79	300
10:30 AM	0	21	21	250	1	251	10	68	78	350
10:45 AM	0	19	19	227	3	230	7	84	91	340
Total	4	70	74	876	9	885	31	304	335	1294
11:00 AM	2	15	17	246	2	248	22	66	88	353
11:15 AM	3	14	17	234	2	236	6	77	83	336
11:30 AM	4	16	20	244	3	247	7	82	89	356
11:45 AM	1	11	12	213	2	215	8	89	97	324
Total	10	56	66	937	9	946	43	314	357	1369
Grand Total	14	126	140	1813	18	1831	74	618	692	2663
Apprch %	10	90		99	1		10.7	89.3		
Total %	0.5	4.7	5.3	68.1	0.7	68.8	2.8	23.2	26	

	Green Valley Lake Road Southbound			SR-18 Westbound			SR-18 Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 10:45 AM										
10:45 AM	0	**19**	19	227	**3**	230	7	**84**	**91**	340
11:00 AM	2	15	17	**246**	2	**248**	**22**	66	88	353
11:15 AM	3	14	17	234	2	236	6	77	83	336
11:30 AM	**4**	16	**20**	244	3	247	7	82	89	**356**
Total Volume	9	64	73	951	10	961	42	309	351	1385
% App. Total	12.3	87.7		99	1		12	88		
PHF	.563	.842	.913	.966	.833	.969	.477	.920	.964	.973

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County of San Bernardino
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File Name : 01_CSB_Green VL_SR-18 Sun MD
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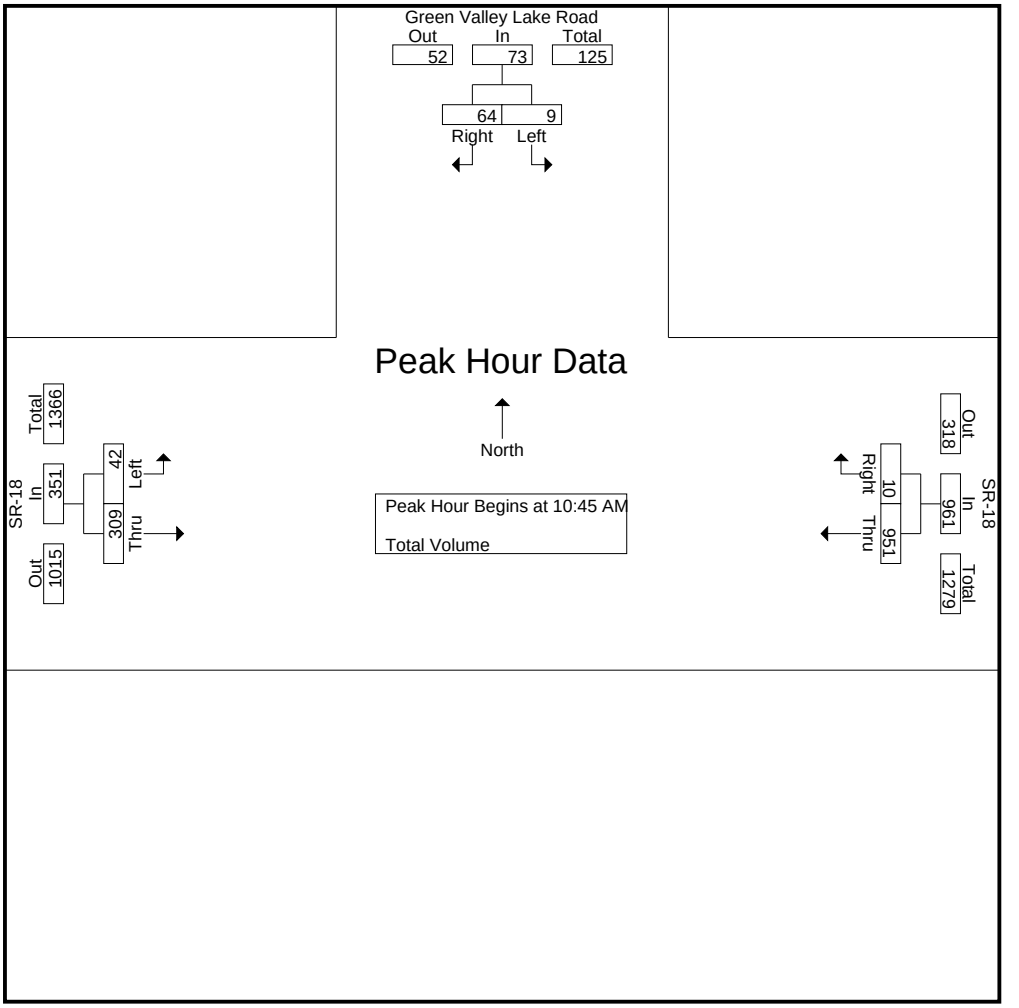

Peak Hour Analysis From 10:00 AM to 11:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	10:15 AM			10:30 AM			11:00 AM		
+0 mins.	**3**	16	19	**250**	1	**251**	**22**	66	88
+15 mins.	0	**21**	**21**	227	**3**	230	6	77	83
+30 mins.	0	19	19	246	2	248	7	82	89
+45 mins.	2	15	17	234	2	236	8	**89**	**97**
Total Volume	5	71	76	957	8	965	43	314	357
% App. Total	6.6	93.4		99.2	0.8		12	88	
PHF	.417	.845	.905	.957	.667	.961	.489	.882	.920

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County of San Bernardino
N/S: Green Valley Lake Road
E/W: Hume SoCal South Driveway
Weather: Clear

File Name : 02_CSB_Green VL_H S DW Fr PM
Site Code : 10823695
Start Date : 8/4/2023
Page No : 1

Groups Printed- Total Volume

	Green Valley Lake Road Southbound			Green Valley Lake Road Northbound			Hume SoCal South Driveway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	9	0	9	0	17	17	0	0	0	26
04:15 PM	15	0	15	0	16	16	0	0	0	31
04:30 PM	15	0	15	0	11	11	0	0	0	26
04:45 PM	8	0	8	0	20	20	0	0	0	28
Total	47	0	47	0	64	64	0	0	0	111
05:00 PM	12	0	12	0	14	14	0	0	0	26
05:15 PM	13	0	13	0	15	15	0	0	0	28
05:30 PM	11	0	11	0	11	11	0	0	0	22
05:45 PM	13	0	13	0	18	18	0	0	0	31
Total	49	0	49	0	58	58	0	0	0	107
Grand Total	96	0	96	0	122	122	0	0	0	218
Apprch %	100	0		0	100		0	0		
Total %	44	0	44	0	56	56	0	0	0	

	Green Valley Lake Road Southbound			Green Valley Lake Road Northbound			Hume SoCal South Driveway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	9	0	9	0	17	17	0	0	0	26
04:15 PM	**15**	0	**15**	0	16	16	0	0	0	**31**
04:30 PM	15	0	15	0	11	11	0	0	0	26
04:45 PM	8	0	8	0	**20**	**20**	0	0	0	28
Total Volume	47	0	47	0	64	64	0	0	0	111
% App. Total	100	0		0	100		0	0		
PHF	.783	.000	.783	.000	.800	.800	.000	.000	.000	.895

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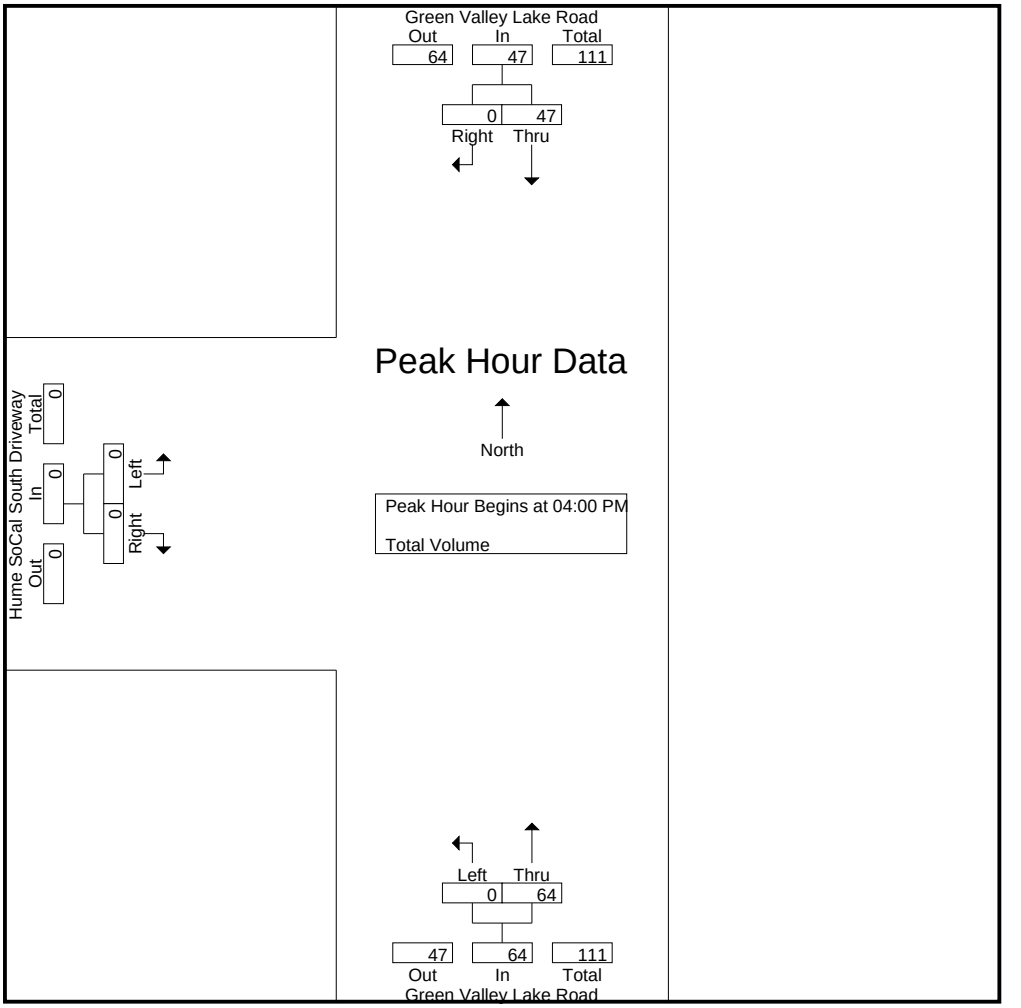
County of San Bernardino
N/S: Green Valley Lake Road
E/W: Hume SoCal South Driveway
Weather: Clear

File Name : 02_CSB_Green VL_H S DW Fr PM
Site Code : 10823695
Start Date : 8/4/2023
Page No : 2



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

	04:15 PM			04:00 PM			04:00 PM		
+0 mins.	**15**	0	**15**	0	17	17	0	0	0
+15 mins.	15	0	15	0	16	16	0	0	0
+30 mins.	8	0	8	0	11	11	0	0	0
+45 mins.	12	0	12	0	**20**	**20**	0	0	0
Total Volume	50	0	50	0	64	64	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.833	.000	.833	.000	.800	.800	.000	.000	.000

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County of San Bernardino
N/S: Green Valley Lake Road
E/W: Hume SoCal South Driveway
Weather: Clear

File Name : 02_CSB_Green VL_H S DW Sun MD
Site Code : 10823695
Start Date : 8/6/2023
Page No : 1

Groups Printed- Total Volume

	Green Valley Lake Road Southbound			Green Valley Lake Road Northbound			Hume SoCal South Driveway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
10:00 AM	17	0	17	0	10	10	0	0	0	27
10:15 AM	17	0	17	0	8	8	0	0	0	25
10:30 AM	19	0	19	0	10	10	0	0	0	29
10:45 AM	23	0	23	0	10	10	0	0	0	33
Total	76	0	76	0	38	38	0	0	0	114
11:00 AM	22	0	22	0	16	16	0	0	0	38
11:15 AM	13	0	13	0	16	16	0	0	0	29
11:30 AM	15	0	15	0	8	8	0	0	0	23
11:45 AM	8	0	8	0	10	10	0	0	0	18
Total	58	0	58	0	50	50	0	0	0	108
Grand Total	134	0	134	0	88	88	0	0	0	222
Apprch %	100	0		0	100		0	0		
Total %	60.4	0	60.4	0	39.6	39.6	0	0	0	

	Green Valley Lake Road Southbound			Green Valley Lake Road Northbound			Hume SoCal South Driveway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 10:30 AM										
10:30 AM	19	0	19	0	10	10	0	0	0	29
10:45 AM	**23**	0	**23**	0	10	10	0	0	0	33
11:00 AM	22	0	22	0	**16**	**16**	0	0	0	**38**
11:15 AM	13	0	13	0	16	16	0	0	0	29
Total Volume	77	0	77	0	52	52	0	0	0	129
% App. Total	100	0		0	100		0	0		
PHF	.837	.000	.837	.000	.813	.813	.000	.000	.000	.849

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County of San Bernardino
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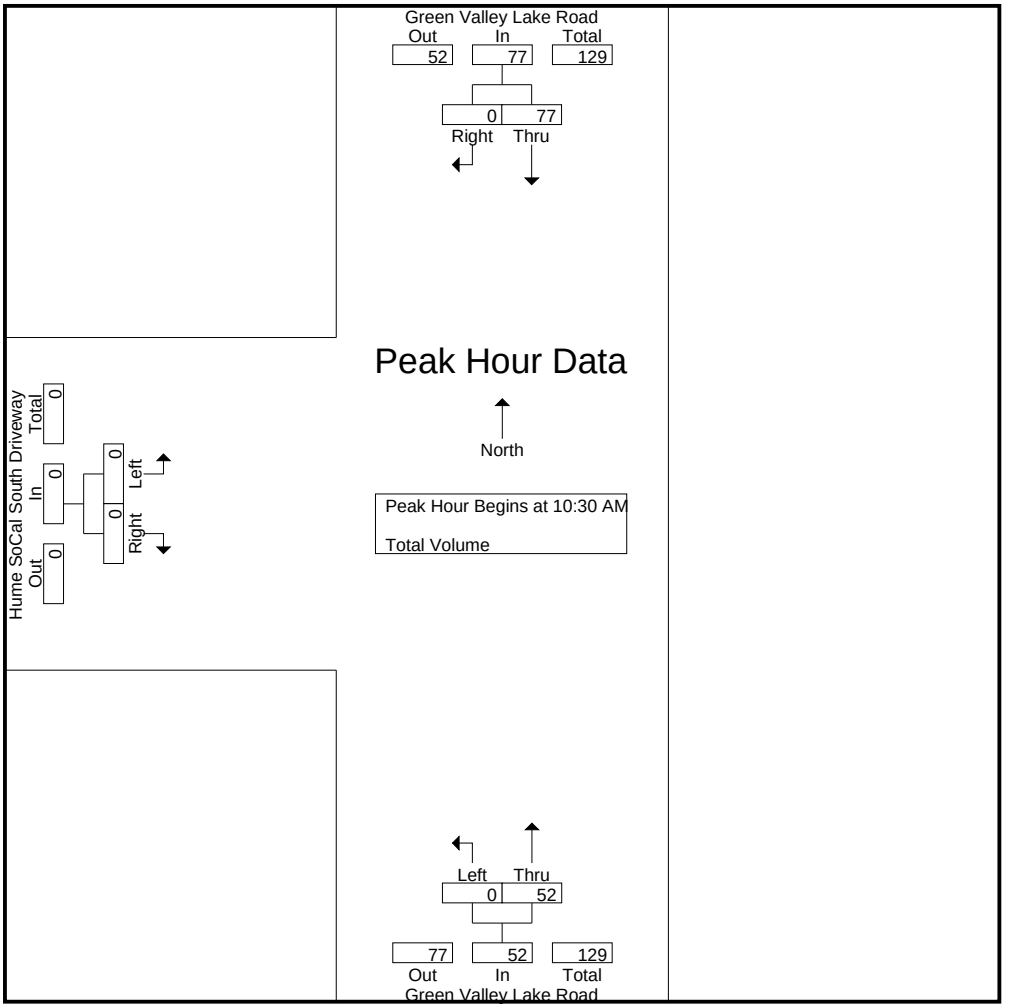
Weather: Clear

File Name : 02_CSB_Green VL_H S DW Sun MD
Site Code : 10823695
Start Date : 8/6/2023
Page No : 2



Peak Hour Analysis From 10:00 AM to 11:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	10:15 AM			10:30 AM			10:00 AM		
+0 mins.	17	0	17	0	10	10	0	0	0
+15 mins.	19	0	19	0	10	10	0	0	0
+30 mins.	**23**	0	**23**	0	**16**	**16**	0	0	0
+45 mins.	22	0	22	0	16	16	0	0	0
Total Volume	81	0	81	0	52	52	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.880	.000	.880	.000	.813	.813	.000	.000	.000

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County of San Bernardino
N/S: Green Valley Lake Road
E/W: Hume SoCal North DW(Larrys Camp Rd)
Weather: Clear

File Name : 03_CSB_Green VL_H N DW Fr PM
Site Code : 10823695
Start Date : 8/4/2023
Page No : 1

Groups Printed- Total Volume

	Green Valley Lake Road Southbound			Green Valley Lake Road Northbound			Hume SoCal North Driveway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	9	0	9	1	19	20	0	1	1	30
04:15 PM	16	0	16	0	16	16	1	0	1	33
04:30 PM	11	0	11	0	10	10	1	1	2	23
04:45 PM	7	0	7	0	19	19	1	0	1	27
Total	43	0	43	1	64	65	3	2	5	113
05:00 PM	12	0	12	0	15	15	0	1	1	28
05:15 PM	12	1	13	1	14	15	1	1	2	30
05:30 PM	7	2	9	0	10	10	0	3	3	22
05:45 PM	11	0	11	1	15	16	0	2	2	29
Total	42	3	45	2	54	56	1	7	8	109
Grand Total	85	3	88	3	118	121	4	9	13	222
Apprch %	96.6	3.4		2.5	97.5		30.8	69.2		
Total %	38.3	1.4	39.6	1.4	53.2	54.5	1.8	4.1	5.9	

	Green Valley Lake Road Southbound			Green Valley Lake Road Northbound			Hume SoCal North Driveway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	9	0	9	**1**	**19**	**20**	0	**1**	1	30
04:15 PM	**16**	0	**16**	0	16	16	**1**	0	1	**33**
04:30 PM	11	0	11	0	10	10	1	1	**2**	23
04:45 PM	7	0	7	0	19	19	1	0	1	27
Total Volume	43	0	43	1	64	65	3	2	5	113
% App. Total	100	0		1.5	98.5		60	40		
PHF	.672	.000	.672	.250	.842	.813	.750	.500	.625	.856

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County of San Bernardino
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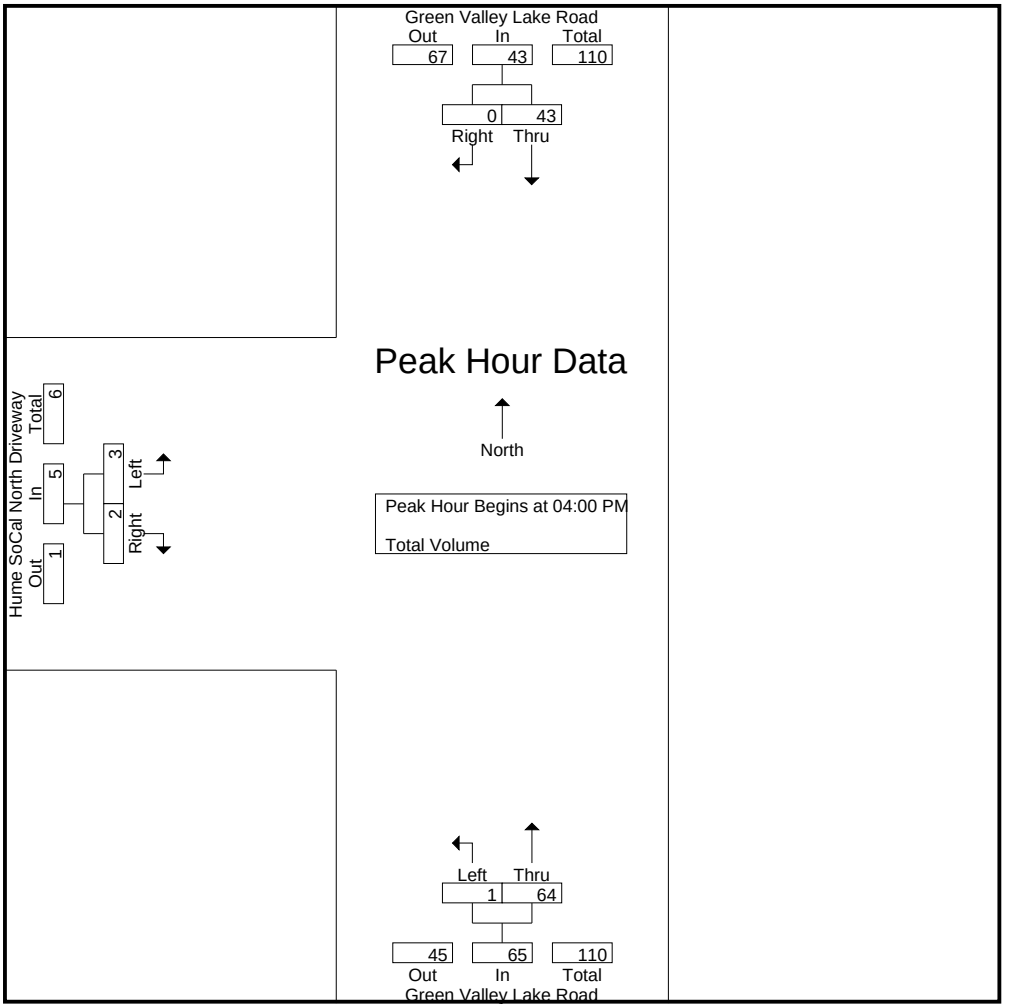
E/W: Hume SoCal North DW(Larrys Camp Rd)
Weather: Clear

File Name : 03_CSB_Green VL_H N DW Fr PM
Site Code : 10823695
Start Date : 8/4/2023
Page No : 2



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

	04:15 PM			04:00 PM			05:00 PM		
+0 mins.	**16**	0	**16**	**1**	**19**	**20**	0	1	1
+15 mins.	11	0	11	0	16	16	**1**	1	2
+30 mins.	7	0	7	0	10	10	0	**3**	**3**
+45 mins.	12	0	12	0	19	19	0	2	2
Total Volume	46	0	46	1	64	65	1	7	8
% App. Total	100	0		1.5	98.5		12.5	87.5	
PHF	.719	.000	.719	.250	.842	.813	.250	.583	.667

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County of San Bernardino
N/S: Green Valley Lake Road
E/W: Hume SoCal North DW(Larrys Camp Rd)
Weather: Clear

File Name : 03_CSB_Green VL_H N DW Sun MD
Site Code : 10823695
Start Date : 8/6/2023
Page No : 1

Groups Printed- Total Volume

	Green Valley Lake Road Southbound			Green Valley Lake Road Northbound			Hume SoCal North Driveway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
10:00 AM	14	0	14	0	7	7	0	0	0	21
10:15 AM	19	0	19	1	9	10	0	0	0	29
10:30 AM	16	1	17	0	10	10	1	3	4	31
10:45 AM	19	0	19	1	9	10	0	2	2	31
Total	68	1	69	2	35	37	1	5	6	112
11:00 AM	21	0	21	1	15	16	0	1	1	38
11:15 AM	15	0	15	0	14	14	0	1	1	30
11:30 AM	13	0	13	0	10	10	1	0	1	24
11:45 AM	10	0	10	0	10	10	0	0	0	20
Total	59	0	59	1	49	50	1	2	3	112
Grand Total	127	1	128	3	84	87	2	7	9	224
Apprch %	99.2	0.8		3.4	96.6		22.2	77.8		
Total %	56.7	0.4	57.1	1.3	37.5	38.8	0.9	3.1	4	

	Green Valley Lake Road Southbound			Green Valley Lake Road Northbound			Hume SoCal North Driveway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 10:00 AM to 11:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 10:30 AM										
10:30 AM	16	**1**	17	0	10	10	**1**	**3**	**4**	31
10:45 AM	19	0	19	**1**	9	10	0	2	2	31
11:00 AM	**21**	0	**21**	1	**15**	**16**	0	1	1	**38**
11:15 AM	15	0	15	0	14	14	0	1	1	30
Total Volume	71	1	72	2	48	50	1	7	8	130
% App. Total	98.6	1.4		4	96		12.5	87.5		
PHF	.845	.250	.857	.500	.800	.781	.250	.583	.500	.855

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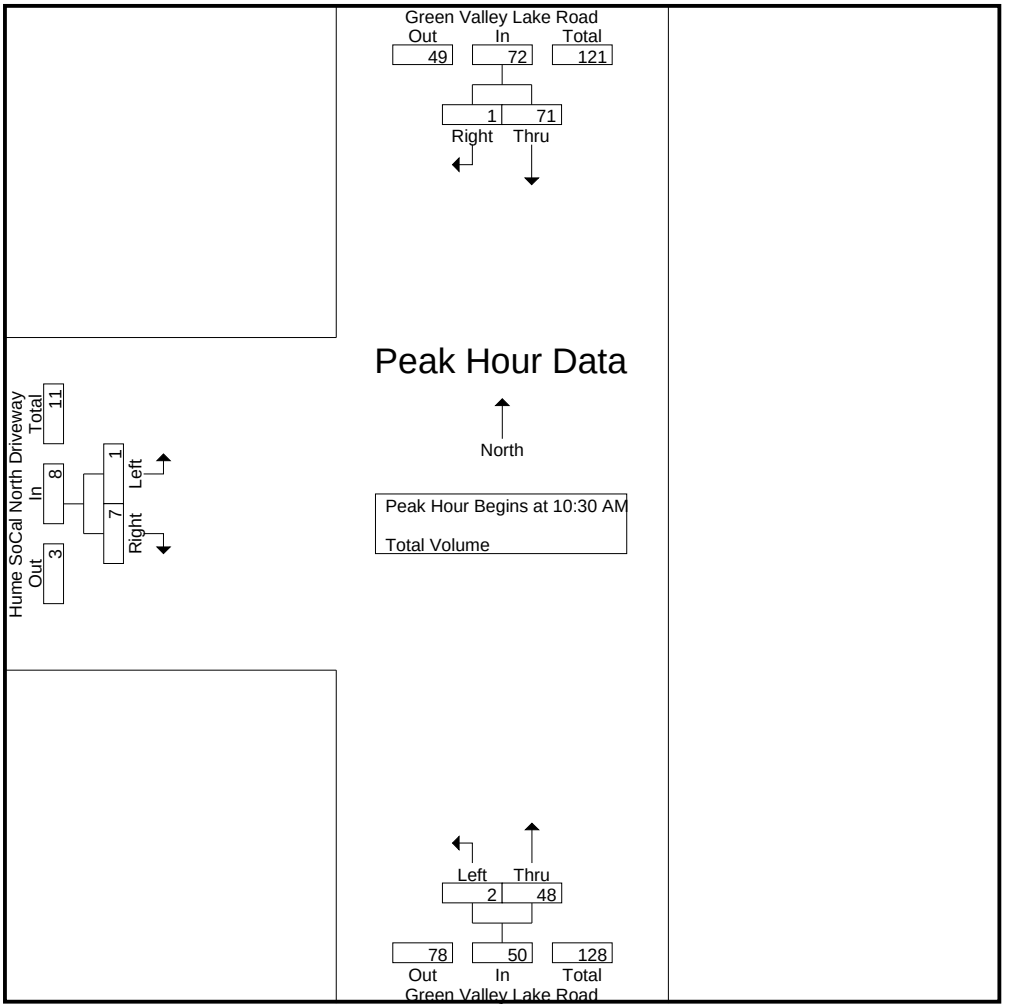
County of San Bernardino
N/S: Green Valley Lake Road
E/W: Hume SoCal North DW(Larrys Camp Rd)
Weather: Clear

File Name : 03_CSB_Green VL_H N DW Sun MD
Site Code : 10823695
Start Date : 8/6/2023
Page No : 2



Peak Hour Analysis From 10:00 AM to 11:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	10:15 AM			10:30 AM			10:30 AM		
+0 mins.	19	0	19	0	10	10	**1**	**3**	**4**
+15 mins.	16	**1**	17	**1**	9	10	0	2	2
+30 mins.	19	0	19	1	**15**	**16**	0	1	1
+45 mins.	**21**	0	**21**	0	14	14	0	1	1
Total Volume	75	1	76	2	48	50	1	7	8
% App. Total	98.7	1.3		4	96		12.5	87.5	
PHF	.893	.250	.905	.500	.800	.781	.250	.583	.500

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Phone: (951) 268-6268
email: counts@countsunlimited.com

County of San Bernardino
Green Valley Lake Road
W/ State Route 18
72 Hour Directional Volume Count

CSB002
Site Code: 108-23695

Start Time	7/28/23 Fri	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	12			3	12				
12:15		2	8			1	14				
12:30		0	16			3	7				
12:45		0	11	2	47	1	14	8	47	10	94
01:00		1	12			0	14				
01:15		0	11			1	**20**				
01:30		0	**18**			1	**20**				
01:45		1	**13**	2	54	0	**14**	2	68	4	122
02:00		0	**15**			0	**21**				
02:15		1	**13**			0	12				
02:30		0	16			0	15				
02:45		0	13	1	57	0	16	0	64	1	121
03:00		1	7			0	13				
03:15		0	14			0	17				
03:30		0	12			1	17				
03:45		2	10	3	43	0	15	1	62	4	105
04:00		2	12			0	4				
04:15		1	13			1	24				
04:30		1	10			0	17				
04:45		2	12	6	47	1	20	2	65	8	112
05:00		4	12			0	13				
05:15		1	8			4	17				
05:30		4	7			2	17				
05:45		6	16	15	43	0	15	6	62	21	105
06:00		6	9			5	18				
06:15		10	20			4	22				
06:30		3	13			3	8				
06:45		3	6	22	48	6	10	18	58	40	106
07:00		5	4			2	18				
07:15		5	4			9	15				
07:30		3	11			4	14				
07:45		7	6	20	25	9	13	24	60	44	85
08:00		6	9			7	14				
08:15		4	6			14	4				
08:30		10	3			7	4				
08:45		11	8	31	26	8	8	36	30	67	56
09:00		**15**	4			13	8				
09:15		**10**	0			11	7				
09:30		**12**	2			19	8				
09:45		**23**	2	60	8	8	2	51	25	111	33
10:00		12	2			6	5				
10:15		12	1			11	3				
10:30		10	3			8	3				
10:45		16	3	50	9	**13**	2	38	13	88	22
11:00		6	2			**13**	10				
11:15		17	1			**16**	4				
11:30		12	1			**10**	2				
11:45		22	4	57	8	10	2	49	18	106	26
Total		269	415	269	415	235	572	235	572	504	987
Combined Total		684		684		807		807		1491	
AM Peak	-	09:00	-	-	-	10:45	-	-	-	-	-
Vol.	-	60	-	-	-	52	-	-	-	-	-
P.H.F.		0.652				0.684					
PM Peak	-	-	01:30	-	-	-	01:15	-	-	-	-
Vol.	-	-	59	-	-	-	75	-	-	-	-
P.H.F.			0.819				0.893				
Percentage		39.3%	60.7%			29.1%	70.9%				

Counts Unlimited, Inc.

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Phone: (951) 268-6268
email: counts@countsunlimited.com

County of San Bernardino
Green Valley Lake Road
W/ State Route 18
72 Hour Directional Volume Count

CSB002
Site Code: 108-23695

Start Time	7/29/23 Sat	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		0	29			0	9				
12:15		0	14			4	22				
12:30		0	19			2	18				
12:45		1	**17**	1	79	0	12	6	61	7	140
01:00		0	**25**			1	11				
01:15		3	**15**			0	**24**				
01:30		1	**27**			3	**18**				
01:45		0	15	4	82	1	**22**	5	75	9	157
02:00		0	13			1	**15**				
02:15		1	16			2	12				
02:30		0	9			1	16				
02:45		0	14	1	52	0	26	4	69	5	121
03:00		2	18			0	17				
03:15		2	12			0	13				
03:30		0	19			0	16				
03:45		1	20	5	69	0	12	0	58	5	127
04:00		0	20			0	23				
04:15		1	12			1	16				
04:30		0	13			0	14				
04:45		1	7	2	52	0	17	1	70	3	122
05:00		0	13			0	10				
05:15		1	17			5	10				
05:30		1	11			7	9				
05:45		1	9	3	50	7	13	19	42	22	92
06:00		1	9			5	7				
06:15		5	9			7	8				
06:30		1	21			3	14				
06:45		3	16	10	55	6	7	21	36	31	91
07:00		2	9			4	6				
07:15		6	5			8	10				
07:30		13	8			13	16				
07:45		4	5	25	27	7	8	32	40	57	67
08:00		10	1			22	6				
08:15		10	12			14	3				
08:30		8	7			15	5				
08:45		15	3	43	23	11	5	62	19	105	42
09:00		32	5			13	5				
09:15		17	2			**27**	2				
09:30		16	1			**22**	1				
09:45		**25**	3	90	11	**15**	2	77	10	167	21
10:00		**15**	2			**18**	4				
10:15		**33**	0			17	3				
10:30		**18**	2			20	1				
10:45		9	2	75	6	14	3	69	11	144	17
11:00		19	1			13	1				
11:15		13	1			12	2				
11:30		14	2			11	2				
11:45		21	1	67	5	38	0	74	5	141	10
Total		326	511	326	511	370	496	370	496	696	1007
Combined Total		837		837		866		866		1703	
AM Peak	-	09:45	-	-	-	09:15	-	-	-	-	-
Vol.	-	91	-	-	-	82	-	-	-	-	-
P.H.F.		0.689				0.759					
PM Peak	-	-	00:45	-	-	-	01:15	-	-	-	-
Vol.	-	-	84	-	-	-	79	-	-	-	-
P.H.F.			0.778				0.823				
Percentage		38.9%	61.1%			42.7%	57.3%				

Counts Unlimited, Inc.

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County of San Bernardino
Green Valley Lake Road
W/ State Route 18
72 Hour Directional Volume Count

CSB002
Site Code: 108-23695

Start Time	7/30/23 Sun	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	27			2	8				
12:15		0	13			1	18				
12:30		0	18			1	9				
12:45		0	**22**	2	80	2	8	6	43	8	123
01:00		1	**17**			0	10				
01:15		0	**20**			3	15				
01:30		0	**23**			1	14				
01:45		0	18	1	78	1	17	5	56	6	134
02:00		2	19			0	14				
02:15		0	15			1	10				
02:30		0	16			0	22				
02:45		0	13	2	63	0	13	1	59	3	122
03:00		0	21			1	18				
03:15		0	11			0	12				
03:30		1	18			0	10				
03:45		0	17	1	67	0	13	1	53	2	120
04:00		0	12			0	**33**				
04:15		0	16			0	**17**				
04:30		0	18			0	**10**				
04:45		1	12	1	58	0	**14**	0	74	1	132
05:00		0	13			0	12				
05:15		1	10			0	13				
05:30		3	10			0	8				
05:45		0	7	4	40	0	9	0	42	4	82
06:00		3	12			1	6				
06:15		5	3			1	11				
06:30		1	17			4	10				
06:45		6	11	15	43	1	3	7	30	22	73
07:00		6	10			7	14				
07:15		6	7			7	4				
07:30		7	13			9	9				
07:45		10	13	29	43	6	8	29	35	58	78
08:00		8	4			3	17				
08:15		16	6			4	10				
08:30		14	8			5	7				
08:45		13	10	51	28	9	3	21	37	72	65
09:00		4	1			19	1				
09:15		8	3			18	5				
09:30		5	1			9	3				
09:45		11	2	28	7	24	3	70	12	98	19
10:00		14	4			24	2				
10:15		11	1			18	2				
10:30		15	1			20	3				
10:45		19	1	59	7	**27**	2	89	9	148	16
11:00		**14**	2			**35**	1				
11:15		**14**	3			**43**	3				
11:30		**15**	1			**23**	1				
11:45		**22**	1	65	7	15	0	116	5	181	12
Total		258	521	258	521	345	455	345	455	603	976
Combined Total		779		779		800		800		1579	
AM Peak	-	11:00	-	-	-	10:45	-	-	-	-	-
Vol.	-	65	-	-	-	128	-	-	-	-	-
P.H.F.		0.739				0.744					
PM Peak	-	-	00:45	-	-	-	04:00	-	-	-	-
Vol.	-	-	82	-	-	-	74	-	-	-	-
P.H.F.			0.891				0.561				
Percentage		33.1%	66.9%			43.1%	56.9%				
ADT/AADT		ADT 1,591		AADT 1,591							

Counts Unlimited, Inc.

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

County of San Bernardino
State Route 18
S/ Green Valley Lake Road
72 Hour Directional Volume Count

CSB001
Site Code: 108-23695

Start Time	7/28/23 Fri	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		10	92			1	81				
12:15		8	193			7	60				
12:30		5	87			1	**90**				
12:45		10	154	33	526	1	**76**	10	307	43	833
01:00		5	**143**			1	**85**				
01:15		5	**128**			1	**79**				
01:30		2	**155**			1	69				
01:45		2	**160**	14	586	1	58	4	291	18	877
02:00		1	126			0	92				
02:15		2	110			2	96				
02:30		2	122			0	72				
02:45		0	132	5	490	2	64	4	324	9	814
03:00		5	142			2	73				
03:15		1	128			3	83				
03:30		2	112			3	83				
03:45		0	118	8	500	3	69	11	308	19	808
04:00		9	141			7	59				
04:15		3	116			4	69				
04:30		5	127			4	63				
04:45		6	119	23	503	5	68	20	259	43	762
05:00		9	119			5	69				
05:15		10	118			11	56				
05:30		16	114			10	54				
05:45		8	80	43	431	13	60	39	239	82	670
06:00		36	97			22	71				
06:15		30	132			30	57				
06:30		38	88			13	50				
06:45		50	118	154	435	21	36	86	214	240	649
07:00		35	108			23	39				
07:15		48	129			25	42				
07:30		45	102			32	64				
07:45		52	112	180	451	31	25	111	170	291	621
08:00		53	98			29	38				
08:15		75	88			44	32				
08:30		74	72			39	29				
08:45		71	68	273	326	54	21	166	120	439	446
09:00		81	67			61	20				
09:15		81	86			56	14				
09:30		94	47			73	18				
09:45		86	50	342	250	87	16	277	68	619	318
10:00		83	46			81	12				
10:15		71	45			91	12				
10:30		112	34			92	8				
10:45		83	34	349	159	82	8	346	40	695	199
11:00		**111**	31			**78**	9				
11:15		**114**	19			**91**	9				
11:30		**108**	20			**90**	6				
11:45		**103**	18	436	88	**93**	7	352	31	788	119
Total		1860	4745	1860	4745	1426	2371	1426	2371	3286	7116
Combined Total		6605		6605		3797		3797		10402	
AM Peak	-	11:00	-	-	-	11:00	-	-	-	-	-
Vol.	-	436	-	-	-	352	-	-	-	-	-
P.H.F.		0.956				0.946					
PM Peak	-	-	01:00	-	-	-	00:30	-	-	-	-
Vol.	-	-	586	-	-	-	330	-	-	-	-
P.H.F.			0.916				0.917				
Percentage		28.2%	71.8%			37.6%	62.4%				

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Phone: (951) 268-6268
email: counts@countsunlimited.com

County of San Bernardino
State Route 18
S/ Green Valley Lake Road
72 Hour Directional Volume Count

CSB001
Site Code: 108-23695

Start Time	7/29/23 Sat	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		18	121			5	103				
12:15		9	**148**			0	78				
12:30		15	**142**			3	104				
12:45		11	**131**	53	542	3	76	11	361	64	903
01:00		6	**133**			4	99				
01:15		6	129			3	86				
01:30		8	126			1	102				
01:45		4	129	24	517	9	87	17	374	41	891
02:00		6	109			4	86				
02:15		10	119			3	94				
02:30		5	96			2	93				
02:45		4	130	25	454	1	98	10	371	35	825
03:00		4	106			3	88				
03:15		3	121			3	103				
03:30		2	76			4	**124**				
03:45		2	92	11	395	3	**103**	13	418	24	813
04:00		4	108			0	**138**				
04:15		11	69			4	**114**				
04:30		3	88			3	109				
04:45		9	72	27	337	5	107	12	468	39	805
05:00		8	54			3	128				
05:15		20	64			2	107				
05:30		13	60			16	104				
05:45		25	34	66	212	5	99	26	438	92	650
06:00		26	44			14	82				
06:15		17	45			17	97				
06:30		35	38			8	99				
06:45		38	37	116	164	15	75	54	353	170	517
07:00		51	32			19	57				
07:15		42	32			14	58				
07:30		52	38			29	83				
07:45		85	30	230	132	24	49	86	247	316	379
08:00		121	31			30	42				
08:15		96	27			43	47				
08:30		119	25			30	52				
08:45		114	32	450	115	50	42	153	183	603	298
09:00		110	34			87	45				
09:15		159	33			58	35				
09:30		125	18			74	27				
09:45		120	26	514	111	**94**	25	313	132	827	243
10:00		121	19			**73**	27				
10:15		109	18			**82**	19				
10:30		134	17			**90**	16				
10:45		119	11	483	65	57	13	302	75	785	140
11:00		**136**	17			87	12				
11:15		**113**	17			87	7				
11:30		**151**	10			93	13				
11:45		**176**	9	576	53	69	7	336	39	912	92
Total		2575	3097	2575	3097	1333	3459	1333	3459	3908	6556
Combined Total		5672		5672		4792		4792		10464	
AM Peak	-	11:00	-	-	-	09:45	-	-	-	-	-
Vol.	-	576	-	-	-	339	-	-	-	-	-
P.H.F.		0.818				0.902					
PM Peak	-	-	00:15	-	-	-	03:30	-	-	-	-
Vol.	-	-	554	-	-	-	479	-	-	-	-
P.H.F.			0.936				0.868				
Percentage		45.4%	54.6%			27.8%	72.2%				

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County of San Bernardino
State Route 18
S/ Green Valley Lake Road
72 Hour Directional Volume Count

CSB001
Site Code: 108-23695

Start Time	7/30/23 Sun	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		11	**101**			7	**221**				
12:15		11	**112**			3	**223**				
12:30		11	**101**			2	**222**				
12:45		9	**93**	42	407	3	**171**	15	837	57	1244
01:00		5	75			5	189				
01:15		11	94			1	213				
01:30		3	79			2	216				
01:45		6	79	25	327	4	181	12	799	37	1126
02:00		3	103			3	190				
02:15		3	79			2	186				
02:30		0	102			1	172				
02:45		4	75	10	359	2	210	8	758	18	1117
03:00		1	78			0	147				
03:15		3	84			2	144				
03:30		1	77			6	189				
03:45		1	86	6	325	1	198	9	678	15	1003
04:00		1	80			7	132				
04:15		0	77			5	164				
04:30		3	66			4	181				
04:45		2	43	6	266	7	153	23	630	29	896
05:00		4	68			4	157				
05:15		4	53			5	108				
05:30		8	44			7	99				
05:45		15	38	31	203	12	115	28	479	59	682
06:00		11	43			15	58				
06:15		15	47			13	76				
06:30		15	30			17	105				
06:45		15	34	56	154	20	87	65	326	121	480
07:00		29	23			30	74				
07:15		40	38			25	72				
07:30		27	33			31	65				
07:45		101	25	197	119	36	60	122	271	319	390
08:00		63	40			62	69				
08:15		62	32			63	55				
08:30		78	22			63	47				
08:45		91	15	294	109	82	45	270	216	564	325
09:00		79	20			93	26				
09:15		63	29			104	33				
09:30		94	22			125	23				
09:45		95	16	331	87	153	12	475	94	806	181
10:00		75	12			166	15				
10:15		90	13			153	8				
10:30		86	13			**252**	11				
10:45		101	14	352	52	**247**	8	818	42	1170	94
11:00		**79**	12			**242**	7				
11:15		**81**	11			**292**	5				
11:30		**111**	9			242	8				
11:45		**105**	4	376	36	242	4	1018	24	1394	60
Total		1726	2444	1726	2444	2863	5154	2863	5154	4589	7598
Combined Total		4170		4170		8017		8017		12187	
AM Peak	-	11:00	-	-	-	10:30	-	-	-	-	-
Vol.	-	376	-	-	-	1033	-	-	-	-	-
P.H.F.		0.847				0.884					
PM Peak	-	-	12:00	-	-	-	12:00	-	-	-	-
Vol.	-	-	407	-	-	-	837	-	-	-	-
P.H.F.			0.908				0.938				
Percentage		41.4%	58.6%			35.7%	64.3%				
ADT/AADT		ADT 11,018		AADT 11,018							

APPENDIX C

INTERSECTION ANALYSIS WORKSHEETS

Hume SoCal Project

Vistro File: K:\...\Hume SoCal PM_2024-04-26.vistro
Report File: K:\...\0. EX PM.pdf

Scenario 1 EX PM
4/26/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.016	16.8	C
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	NB Thru	0.001	0.0	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.005	9.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	16.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	58	439	265	6	5	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	439	265	6	5	52
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	113	68	2	1	13
Total Analysis Volume [veh/h]	60	451	272	6	5	53
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.02	0.07
d_M, Delay for Movement [s/veh]	7.94	0.00	0.00	0.00	16.84	10.21
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.15	0.00	0.00	0.00	0.28	0.28
95th-Percentile Queue Length [ft/ln]	3.67	0.00	0.00	0.00	6.96	6.96
d_A, Approach Delay [s/veh]	0.93		0.00		10.78	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.30					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	64	47	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	64	47	0	0	0
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	19	14	0	0	0
Total Analysis Volume [veh/h]	0	75	55	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.32	0.00	0.00	0.00	9.17	8.56
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	1	64	43	0	3	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	64	43	0	3	2
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	19	13	0	1	1
Total Analysis Volume [veh/h]	1	75	50	0	4	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.31	0.00	0.00	0.00	9.18	8.56
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.50	0.50
d_A, Approach Delay [s/veh]	0.10		0.00		8.97	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	A					

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Scenario 1 EX MD
4/26/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.061	34.4	D
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	SB Thru	0.001	0.0	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.001	9.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	34.4
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.061

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	42	309	951	10	9	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	309	951	10	9	64
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	79	244	3	2	16
Total Analysis Volume [veh/h]	43	318	977	10	9	66
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.01	0.00	0.06	0.22
d_M, Delay for Movement [s/veh]	10.48	0.00	0.00	0.00	34.42	22.02
Movement LOS	B	A	A	A	D	C
95th-Percentile Queue Length [veh/ln]	0.20	0.00	0.00	0.00	1.11	1.11
95th-Percentile Queue Length [ft/ln]	4.90	0.00	0.00	0.00	27.77	27.77
d_A, Approach Delay [s/veh]	1.25		0.00		23.51	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	1.56					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	52	77	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	52	77	0	0	0
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	23	0	0	0
Total Analysis Volume [veh/h]	0	61	91	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.39	0.00	0.00	0.00	9.29	8.72
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.01	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	2	48	71	1	1	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	48	71	1	1	7
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	14	21	0	0	2
Total Analysis Volume [veh/h]	2	56	83	1	1	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	0.00	9.28	8.72
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.08	0.08	0.00	0.00	0.71	0.71
d_A, Approach Delay [s/veh]	0.25		0.00		8.79	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.62					
Intersection LOS	A					

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Scenario 3 OY 2027 CP PM
4/27/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.021	18.0	C
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	NB Thru	0.001	0.0	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.005	9.2	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	18.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.021

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	58	439	265	6	5	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	483	292	7	6	57
Peak Hour Factor	1.0000	1.0000	1.0000	0.9730	0.9730	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	121	73	2	2	14
Total Analysis Volume [veh/h]	64	483	292	7	6	57
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.02	0.08
d_M, Delay for Movement [s/veh]	8.00	0.00	0.00	0.00	17.98	10.44
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.32	0.32
95th-Percentile Queue Length [ft/ln]	4.00	0.00	0.00	0.00	8.05	8.05
d_A, Approach Delay [s/veh]	0.94		0.00		11.16	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.34					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	64	47	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	70	52	0	0	0
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	21	15	0	0	0
Total Analysis Volume [veh/h]	0	82	61	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	0.00	9.24	8.59
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.91	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	1	64	43	0	3	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	70	47	0	3	2
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	20	14	0	1	1
Total Analysis Volume [veh/h]	1	82	55	0	4	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.32	0.00	0.00	0.00	9.24	8.58
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.50	0.50
d_A, Approach Delay [s/veh]	0.09		0.00		9.02	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	A					

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Scenario 3 OY 2027 CP MD
4/27/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.078	40.4	E
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	SB Thru	0.001	0.0	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.001	9.4	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	40.4
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.078

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	42	309	951	10	9	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	340	1046	11	10	70
Peak Hour Factor	1.0000	1.0000	1.0000	0.9730	0.9730	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	85	262	3	3	18
Total Analysis Volume [veh/h]	46	340	1046	11	10	70
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.01	0.00	0.08	0.25
d_M, Delay for Movement [s/veh]	10.87	0.00	0.00	0.00	40.40	25.34
Movement LOS	B	A	A	A	E	D
95th-Percentile Queue Length [veh/ln]	0.22	0.00	0.00	0.00	1.40	1.40
95th-Percentile Queue Length [ft/ln]	5.61	0.00	0.00	0.00	34.90	34.90
d_A, Approach Delay [s/veh]	1.30		0.00		27.22	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	1.76					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	52	77	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	57	85	0	0	0
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	17	25	0	0	0
Total Analysis Volume [veh/h]	0	67	100	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	0.00	9.37	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.07	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	2	48	71	1	1	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	53	78	1	1	8
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	15	23	0	0	2
Total Analysis Volume [veh/h]	2	62	91	1	1	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.40	0.00	0.00	0.00	9.36	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.08	0.08	0.00	0.00	0.80	0.80
d_A, Approach Delay [s/veh]	0.23		0.00		8.83	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.62					
Intersection LOS	A					

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.045	19.9	C
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	EB Right	0.040	8.9	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.005	9.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	19.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.045

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	58	439	265	6	5	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	3	6	57
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	87	483	292	10	12	114
Peak Hour Factor	1.0000	1.0000	1.0000	0.9730	0.9730	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	121	73	3	3	29
Total Analysis Volume [veh/h]	87	483	292	10	12	114
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.04	0.15
d_M, Delay for Movement [s/veh]	8.07	0.00	0.00	0.00	19.87	11.25
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.22	0.00	0.00	0.00	0.73	0.73
95th-Percentile Queue Length [ft/ln]	5.56	0.00	0.00	0.00	18.36	18.36
d_A, Approach Delay [s/veh]	1.23		0.00		12.07	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.23					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	64	47	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	13	32	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	83	84	0	0	32
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	24	25	0	0	9
Total Analysis Volume [veh/h]	15	98	99	0	0	38
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	7.43	0.00	0.00	0.00	9.94	8.92
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.63	0.63	0.00	0.00	3.10	3.10
d_A, Approach Delay [s/veh]	0.99		0.00		8.92	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.80					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	1	64	43	0	3	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	70	47	0	3	34
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	20	14	0	1	10
Total Analysis Volume [veh/h]	16	82	55	0	4	40
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	7.34	0.00	0.00	0.00	9.60	8.73
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.67	0.67	0.00	0.00	3.49	3.49
d_A, Approach Delay [s/veh]	1.20		0.00		8.81	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.56					
Intersection LOS	A					

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.139	56.7	F
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	EB Right	0.042	9.1	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.001	9.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	56.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.139

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	42	309	951	10	9	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	3	6	57
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	69	340	1046	14	16	127
Peak Hour Factor	1.0000	1.0000	1.0000	0.9730	0.9730	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	85	262	4	4	32
Total Analysis Volume [veh/h]	69	340	1046	14	16	127
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.00	0.01	0.00	0.14	0.46
d_M, Delay for Movement [s/veh]	11.12	0.00	0.00	0.00	56.73	38.56
Movement LOS	B	A	A	A	F	E
95th-Percentile Queue Length [veh/ln]	0.35	0.00	0.00	0.00	3.49	3.49
95th-Percentile Queue Length [ft/ln]	8.76	0.00	0.00	0.00	87.29	87.29
d_A, Approach Delay [s/veh]	1.88		0.00		40.59	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	4.08					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.042

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	52	77	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	13	32	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	70	117	0	0	32
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	21	34	0	0	9
Total Analysis Volume [veh/h]	15	82	138	0	0	38
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	7.51	0.00	0.00	0.00	10.10	9.13
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.63	0.63	0.00	0.00	3.26	3.26
d_A, Approach Delay [s/veh]	1.16		0.00		9.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.68					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	2	48	71	1	1	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1000	1.1000	1.1000	1.1000	1.1000	1.1000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	53	78	1	1	40
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	15	23	0	0	12
Total Analysis Volume [veh/h]	18	62	91	1	1	47
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	7.42	0.00	0.00	0.00	9.76	8.92
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.76	0.76	0.00	0.00	3.94	3.94
d_A, Approach Delay [s/veh]	1.67		0.00		8.94	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.56					
Intersection LOS	A					

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Scenario 5 HY 2040 PM
4/26/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.023	19.7	C
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	NB Thru	0.001	0.0	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.006	9.3	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	19.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	58	439	265	6	5	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	514	310	7	6	61
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	132	80	2	2	16
Total Analysis Volume [veh/h]	70	528	319	7	6	63
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.01	0.00	0.00	0.02	0.09
d_M, Delay for Movement [s/veh]	8.09	0.00	0.00	0.00	19.70	10.73
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.18	0.00	0.00	0.00	0.37	0.37
95th-Percentile Queue Length [ft/ln]	4.51	0.00	0.00	0.00	9.31	9.31
d_A, Approach Delay [s/veh]	0.95		0.00		11.51	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.37					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	64	47	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	75	55	0	0	0
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	22	16	0	0	0
Total Analysis Volume [veh/h]	0	88	65	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.34	0.00	0.00	0.00	9.29	8.60
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.95	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	1	64	43	0	3	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	75	50	0	4	2
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	22	15	0	1	1
Total Analysis Volume [veh/h]	1	88	58	0	5	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	0.00	9.30	8.60
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.04	0.04	0.00	0.00	0.60	0.60
d_A, Approach Delay [s/veh]	0.08		0.00		9.10	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	A					

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Scenario 5 HY 2040 MD
4/26/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.106	52.0	F
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	SB Thru	0.001	0.0	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.001	9.4	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	52.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.106

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	42	309	951	10	9	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	362	1113	12	11	75
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	93	286	3	3	19
Total Analysis Volume [veh/h]	50	372	1144	12	11	77
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.01	0.00	0.11	0.32
d_M, Delay for Movement [s/veh]	11.49	0.00	0.00	0.00	51.99	32.20
Movement LOS	B	A	A	A	F	D
95th-Percentile Queue Length [veh/ln]	0.27	0.00	0.00	0.00	1.96	1.96
95th-Percentile Queue Length [ft/ln]	6.74	0.00	0.00	0.00	49.01	49.01
d_A, Approach Delay [s/veh]	1.36		0.00		34.68	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	2.18					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	52	77	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	61	90	0	0	0
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	18	27	0	0	0
Total Analysis Volume [veh/h]	0	72	106	0	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.42	0.00	0.00	0.00	9.44	8.80
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.12	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	2	48	71	1	1	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	56	83	1	1	8
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	16	24	0	0	2
Total Analysis Volume [veh/h]	2	65	97	1	1	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.41	0.00	0.00	0.00	9.42	8.80
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.08	0.08	0.00	0.00	0.80	0.80
d_A, Approach Delay [s/veh]	0.22		0.00		8.86	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.59					
Intersection LOS	A					

Hume SoCal Project

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Report File: K:\...\6. HY WP PM.pdf

Scenario 6 HY 2040 WP PM
4/26/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.051	21.9	C
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	EB Right	0.040	8.9	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.006	9.7	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	21.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.051

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	58	439	265	6	5	52
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	3	6	57
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	514	310	10	12	118
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	132	80	3	3	30
Total Analysis Volume [veh/h]	94	528	319	10	12	121
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.00	0.05	0.17
d_M, Delay for Movement [s/veh]	8.17	0.00	0.00	0.00	21.95	11.69
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.25	0.00	0.00	0.00	0.83	0.83
95th-Percentile Queue Length [ft/ln]	6.19	0.00	0.00	0.00	20.82	20.82
d_A, Approach Delay [s/veh]	1.23		0.00		12.61	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.26					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	64	47	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	13	32	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	88	87	0	0	32
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	26	26	0	0	9
Total Analysis Volume [veh/h]	15	104	102	0	0	38
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	7.43	0.00	0.00	0.00	9.99	8.93
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.63	0.63	0.00	0.00	3.11	3.11
d_A, Approach Delay [s/veh]	0.94		0.00		8.93	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.74					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	1	64	43	0	3	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	75	50	0	4	34
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	22	15	0	1	10
Total Analysis Volume [veh/h]	16	88	58	0	5	40
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.04
d_M, Delay for Movement [s/veh]	7.35	0.00	0.00	0.00	9.66	8.75
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.67	0.67	0.00	0.00	3.60	3.60
d_A, Approach Delay [s/veh]	1.13		0.00		8.85	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.49					
Intersection LOS	A					

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Green Valley Lake Rd/SR 18	Two-way stop	HCM 7th Edition	EB Left	0.184	82.9	F
2	Green Valley Lake Rd/South Project Driveway	Two-way stop	HCM 7th Edition	EB Right	0.042	9.2	A
3	Green Valley Lake Rd/North Project Driveway	Two-way stop	HCM 7th Edition	EB Left	0.001	9.8	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: Green Valley Lake Rd/SR 18

Control Type:	Two-way stop	Delay (sec / veh):	82.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.184

Intersection Setup

Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0
Entry Pocket Length [ft]	85.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00		40.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	SR 18		SR 18		Green Valley Lake Rd	
Base Volume Input [veh/h]	42	309	951	10	9	64
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	3	6	57
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	362	1113	15	17	132
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	93	286	4	4	34
Total Analysis Volume [veh/h]	74	372	1144	15	17	136
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	100
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.00	0.01	0.00	0.18	0.56
d_M, Delay for Movement [s/veh]	11.81	0.00	0.00	0.00	82.94	58.96
Movement LOS	B	A	A	A	F	F
95th-Percentile Queue Length [veh/ln]	0.42	0.00	0.00	0.00	5.02	5.02
95th-Percentile Queue Length [ft/ln]	10.43	0.00	0.00	0.00	125.41	125.41
d_A, Approach Delay [s/veh]	1.96		0.00		61.63	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	5.86					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 2: Green Valley Lake Rd/South Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.042

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		South Project Driveway	
Base Volume Input [veh/h]	0	52	77	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	13	32	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	74	122	0	0	32
Peak Hour Factor	0.8490	0.8490	0.8490	0.8490	0.8490	0.8490
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	22	36	0	0	9
Total Analysis Volume [veh/h]	15	87	144	0	0	38
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	7.52	0.00	0.00	0.00	10.18	9.16
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.63	0.63	0.00	0.00	3.29	3.29
d_A, Approach Delay [s/veh]	1.11		0.00		9.16	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.62					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 3: Green Valley Lake Rd/North Project Driveway

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Green Valley Lake Rd		Green Valley Lake Rd		North Project Driveway	
Base Volume Input [veh/h]	2	48	71	1	1	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1700	1.1700	1.1700	1.1700	1.1700	1.1700
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	0	0	32
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	15	56	83	1	1	40
Peak Hour Factor	0.8550	0.8550	0.8550	0.8550	0.8550	0.8550
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	16	24	0	0	12
Total Analysis Volume [veh/h]	18	65	97	1	1	47
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	7.43	0.00	0.00	0.00	9.81	8.96
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.16	0.16
95th-Percentile Queue Length [ft/ln]	0.76	0.76	0.00	0.00	3.97	3.97
d_A, Approach Delay [s/veh]	1.61		0.00		8.97	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.46					
Intersection LOS	A					

OY 2027 CUMULATIVE WITH PROJECT WITH IMPROVEMENTS

Option 1: Add TS

Number	1					
Intersection	Green Valley Lake Rd/SR 18					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Base Volume Input [veh/h]	58	439	265	6	5	52
Total Analysis Volume [veh/h]	87	483	292	10	12	114

Intersection Settings

Cycle Length [s]	60					
Active Pattern	Pattern 1					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	0	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	10	10	0	5	0
Maximum Green [s]	0	79	79	0	33	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	41	41	0	19	0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.76	0.76	0.76	0.11
(v / s)_i Volume / Saturation Flow Rate	0.09	0.29	0.18	0.09
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900
Arrival type	3		3	3
s, saturation flow rate [veh/h]	969	1683	1673	1445
c, Capacity [veh/h]	756	1275	1267	158
X, volume / capacity	0.12	0.38	0.24	0.80
d, Delay for Lane Group [s/veh]	4.22	3.34	2.60	34.89

Lane Group LOS	A	A	A	C
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.29	0.77	0.41	2.04
50th-Percentile Queue Length [ft/ln]	7.30	19.13	10.18	51.05
95th-Percentile Queue Length [veh/ln]	0.53	1.38	0.73	3.68
95th-Percentile Queue Length [ft/ln]	13.13	34.44	18.32	91.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.22	3.34	2.60	2.60	34.89	34.89
Movement LOS	A	A	A	A	C	C
Critical Movement	No	No	No	No	No	Yes
d_A, Approach Delay [s/veh]	3.47		2.60		34.89	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	7.17					
Intersection LOS	A					
Intersection V/C	0.374					

Option 1: Instal TS

Number	1					
Intersection	Green Valley Lake Rd/SR 18					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Base Volume Input [veh/h]	42	309	951	10	9	64
Total Analysis Volume [veh/h]	69	340	1046	14	16	127

Intersection Settings

Cycle Length [s]	60					
Active Pattern	Pattern 1					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	0	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	10	10	0	5	0
Maximum Green [s]	0	192	192	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	48	48	0	12	0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.75	0.75	0.75	0.12
(v / s)_i Volume / Saturation Flow Rate	0.14	0.20	0.63	0.10
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900
Arrival type	3		3	3
s, saturation flow rate [veh/h]	479	1683	1679	1448
c, Capacity [veh/h]	249	1257	1255	173
X, volume / capacity	0.28	0.27	0.84	0.83
d, Delay for Lane Group [s/veh]	21.45	2.93	12.30	35.35

Lane Group LOS	C	A	B	D
Critical Lane Group	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	0.90	0.55	4.95	2.33
50th-Percentile Queue Length [ft/ln]	22.53	13.82	123.86	58.29
95th-Percentile Queue Length [veh/ln]	1.62	0.99	8.60	4.20
95th-Percentile Queue Length [ft/ln]	40.56	24.87	215.12	104.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	21.45	2.93	12.30	12.30	35.35	35.35
Movement LOS	C	A	B	B	D	D
Critical Movement	No	No	No	No	No	Yes
d_A, Approach Delay [s/veh]	6.06		12.30		35.35	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	12.76					
Intersection LOS	B					
Intersection V/C	0.730					

HY 2040 WITH PROJECT
WITH IMPROVEMENTS

Unmitigated

Number	1					
Intersection	Green Valley Lake Rd/SR 18					
Control Type	Two-way stop					
Analysis Method	HCM 7th Edition					
Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Base Volume Input [veh/h]	58	439	265	6	5	52
Total Analysis Volume [veh/h]	91	514	310	10	12	118

Intersection Settings

Priority Scheme	Free		Free		Stop	
Flared Lane					No	
Storage Area [veh]	0		0		100	
Two-Stage Gap Acceptance					No	
Number of Storage Spaces in Median	0		0		0	

Capacity Analysis

Calculated Rank	2	1	1	1	3	2
v_c, Conflicting Flow Rate	320	0	0	0	1011	315
v_c, Stage 1	320	0	0	0	315	315
v_c, Stage 2	0	0	0	0	696	0
c_p,x, Potential Capacity [veh/h]	1240	0	0	0	265	725
c_p,x, Stage 1 [veh/h]	1785	0	0	0	740	1248
c_p,x, Stage 2 [veh/h]	1623	0	0	0	495	1085
c_m,x, Movement Capacity [veh/h]	1240	100000	100000	100000	246	725
c_m,x, Stage 1 [veh/h]	0	0	0	0	0	0
c_m,x, Stage 2 [veh/h]	0	0	0	0	0	0
c_T, Total Capacity [veh/h]	1240	100000	100000	100000	246	725

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.00	0.00	0.05	0.16
d_M, Delay for Movement [s/veh]	8.13	0.00	0.00	0.00	21.20	11.53
Movement LOS	A	A	A	A	C	B
Critical Movement	No	No	No	No	Yes	No
95th-Percentile Queue Length [veh/ln]	0.24	0.00	0.00	0.00	0.79	0.79
95th-Percentile Queue Length [ft/ln]	5.93	0.00	0.00	0.00	19.85	19.85
d_A, Approach Delay [s/veh]	1.22		0.00		12.42	
Approach LOS	A		A		B	
V/C_I, Worst Movement V/C Ratio	0.05					
d_I, Worst Movement Control Delay [s/veh]	21.20					
d_I, Intersection Delay [s/veh]	2.23					
Intersection LOS	C					

Option 1: Instal TS

Number	1					
Intersection	Green Valley Lake Rd/SR 18					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name	SR 18		SR 18		Green Valley Lake Rd	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Base Volume Input [veh/h]	42	309	951	10	9	64
Total Analysis Volume [veh/h]	72	362	1113	15	17	132

Intersection Settings

Cycle Length [s]	60					
Active Pattern	Pattern 1					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	0	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	10	10	0	5	0
Maximum Green [s]	0	78	78	0	14	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	49	49	0	11	0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.75	0.75	0.75	0.12
(v / s)_i Volume / Saturation Flow Rate	0.16	0.22	0.67	0.10
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900
Arrival type	3		3	3
s, saturation flow rate [veh/h]	449	1683	1679	1448
c, Capacity [veh/h]	213	1262	1259	169
X, volume / capacity	0.34	0.29	0.90	0.88
d, Delay for Lane Group [s/veh]	26.66	2.96	15.82	39.76

Lane Group LOS	C	A	B	D
Critical Lane Group	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	1.10	0.58	6.38	2.61
50th-Percentile Queue Length [ft/ln]	27.42	14.58	159.60	65.19
95th-Percentile Queue Length [veh/ln]	1.97	1.05	10.53	4.69
95th-Percentile Queue Length [ft/ln]	49.36	26.24	263.19	117.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.66	2.96	15.82	15.82	39.76	39.76
Movement LOS	C	A	B	B	D	D
Critical Movement	No	No	No	No	No	Yes
d_A, Approach Delay [s/veh]	6.89		15.82		39.76	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	15.64					
Intersection LOS	B					
Intersection V/C	0.775					

APPENDIX D

TRIP GENERATION

DATA WORKSHEETS

APPENDIX D
SUMMARY OF PROJECT TRIP GENERATION
HUME SOCAL PROJECT

Summer

	Quantity	Trips	Assumption	Mon	Tue	Wed	Thu	Fri	Sat	Sun	7-day Average
Employees	250	50	90% live on site, 10% commute	50	50	50	50	50	50	50	50
Student Campers	2500	50	Buses (50 students per bus)	0	0	0	0	0	100	100	29
Adults	150	75	Vehicle Occupancy -2	0	0	0	0	75	0	75	21
Total				50	50	50	50	125	150	225	100

Soulder (Non-Summer)

	Quantity	Trips	Assumption	Mon	Tue	Wed	Thu	Fri	Sat	Sun	7-day Average
Employees	40	8	90% live on site, 10% commute	8	8	8	8	8	8	8	8
Student Campers	800	16	Buses (50 students per bus)	0	0	0	0	32	0	32	9
Adults	150	75	Vehicle Occupancy -2	0	0	0	0	75	0	75	21
Total				8	8	8	8	115	8	115	39

APPENDIX E

TRAFFIC SIGNAL WARRANY ANALYSIS WORKSHEETS

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **SR-18** NB SB # OF APPROACH LANES: **1**

MINOR STREET: **Green Valley Lake Road** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **County of San Bernardino**

COMMENTS: Existing
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **Y**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **N**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**350**	**105**		**525**	**53**		**280**	**84**		**420**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,312	73	Y			Y	Y	**Y**	Y			Y	Y	**Y**	**Y**	
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	0	0														
05:00 PM	TO	06:00 PM	768	57	Y			Y	Y	**Y**	Y			Y	Y	**Y**		
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			2,080	130	2	0	**0**	2	2	**2**	2	0	**0**	2	2	**2**	**1**	**0**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**NOT SATISFIED**

04/26/24
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **SR-18** NB SB # OF APPROACH LANES: **1**

MINOR STREET: **Green Valley Lake Road** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **County of San Bernardino**

COMMENTS: Opening Year 2027
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **Y**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **N**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**350**	**105**		**525**	**53**		**280**	**84**		**420**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,443	80	Y			Y	Y	**Y**	Y			Y	Y	**Y**	**Y**	**Y**
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	0	0														
05:00 PM	TO	06:00 PM	846	63	Y			Y	Y	**Y**	Y			Y	Y	**Y**	**Y**	
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			2,289	143	2	0	**0**	2	2	**2**	2	0	**0**	2	2	**2**	**2**	**1**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

04/27/24
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **SR-18** NB SB # OF APPROACH LANES: **1**

MINOR STREET: **Green Valley Lake Road** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **County of San Bernardino**

COMMENTS: Opening Year 2027 Plus Project
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **Y**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **N**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**350**	**105**		**525**	**53**		**280**	**84**		**420**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,469	143	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	0	0														
05:00 PM	TO	06:00 PM	872	126	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			2,341	269	2	2	**2**	2	2	**2**	2	2	**2**	2	2	**2**	**2**	**2**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

04/27/24
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **SR-18** NB SB # OF APPROACH LANES: **1**

MINOR STREET: **Green Valley Lake Road** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **County of San Bernardino**

COMMENTS: Horzon Year 2040
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **Y**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **N**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**350**	**105**		**525**	**53**		**280**	**84**		**420**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,536	86	Y			Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	0	0														
05:00 PM	TO	06:00 PM	899	67	Y			Y	Y	**Y**	Y			Y	Y	**Y**	**Y**	
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			2,435	153	2	0	**0**	2	2	**2**	2	1	**1**	2	2	**2**	**2**	**1**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

04/27/24
Kimley-Horn and Associates

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET: **SR-18** NB SB # OF APPROACH LANES: **1**

MINOR STREET: **Green Valley Lake Road** EB WB # OF APPROACH LANES: **1**

CITY, STATE: **County of San Bernardino**

COMMENTS: Horzon Year 2040 Plus Project
0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N): **Y**
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N) **N**

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					**350**	**105**		**525**	**53**		**280**	**84**		**420**	**42**			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	1,562	149	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	0	0														
05:00 PM	TO	06:00 PM	925	130	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	Y	Y	**Y**	**Y**	**Y**
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			2,487	279	2	2	**2**	2	2	**2**	2	2	**2**	2	2	**2**	**2**	**2**
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			**NOT SATISFIED**			**NOT SATISFIED**						**NOT SATISFIED**	**SATISFIED**

04/27/24
Kimley-Horn and Associates

APPENDIX F
ESTIMATES COST ESTIMATES

APPENDIX F
TRAFFIC IMPROVEMENT FAIR-SHARE COST

#1 - Green Valley Lake Road at SR-18	Unit Cost	Quantity	Total
Install Traffic Signal	$ 400,000	1	$ 400,000
Project Fair Share percentage[1]			8.9%
Project Cost			$ 35,671
		Total Project Cost	**$** 35,671

[1] Higher of MD or PM project fair share percentage