

Appendix 5.12-1 Transportation Impact Analysis

Appendices

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TRANSPORTATION IMPACT ANALYSIS
INLAND VALLEY MEDICAL CENTER EXPANSION
Wildomar, California
July 26, 2021

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TRANSPORTATION IMPACT ANALYSIS
INLAND VALLEY MEDICAL CENTER EXPANSION
Wildomar, California
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1.0 INTRODUCTION

The Inland Valley Medical Center Expansion project (“project”) is a proposed expansion of the existing medical center. The project site is located at 36485 Inland Valley Drive, south of Clinton Keith Road between I-15 and Inland Valley Drive in the City of Wildomar.

This Transportation Impact Analysis report has been prepared to evaluate the effects of the project on the local transportation system. Per the City’s guidelines, two analyses are presented in this report: 1) a Level of Service assessment to review the operational performance of the local transportation system consistent with the City of Wildomar Mobility Plan, and 2) a Vehicle Miles Traveled assessment to evaluate significant Project impacts under the California Environmental Quality Act (CEQA).

This report has been organized as follows:

- Project Description
- Level of Service (LOS) Assessment (General Plan Consistency Analysis)
 - Study Area, Analysis Scenarios, Approach and Methodology
 - LOS Impact Thresholds
 - Existing Conditions
 - Analysis of Existing Conditions
 - Project Trip Generation / Distribution / Assignment
 - Near-Term Opening Year 2026 Conditions and Cumulative Projects
 - Analysis of Near-Term Opening Year 2026 Scenarios
 - Site Access Review
 - Active Transportation and Public Transit Review
 - Improvements and Recommendations
- Vehicle Miles Traveled Assessment (CEQA Analysis)
 - VMT Background
 - VMT Impact Thresholds
 - VMT Analysis Methodology
 - Project VMT Analysis
 - Significant VMT Impacts and Mitigation Measures

2.0 PROJECT DESCRIPTION

2.1 Project Location

The Inland Valley Medical Center is located on a 22.24-acre site in the City of Wildomar. The site is bounded by Clinton Keith to the north, Inland Valley Drive to the east, Prielipp Road to the south, and Interstate 15 (I-15) the west.

Figure 2–1 and *Figure 2–2* depicts the Project Vicinity Map and Project Area Map

2.2 Project Description

The project will provide for expanding the existing Inland Valley Medical Center with a new addition to the hospital that includes expansion of all services and critical ancillary support for 100 new patient beds, bringing the campus total to 202 beds.

The existing buildings include several one and two-story structures: Buildings A, B-H, C, I, a Central Utility Plant (CUP), and an Administration building. Buildings A and I house patient rooms and Building B-H houses the diagnostic and treatment areas. The Administration building houses non-clinical functions. Building C will be demolished.

Demolition of existing Building C will allow new construction on the 7-story tower to commence. The podium area of the new tower will connect to existing buildings I and A, unifying the hospital campus. The ground level will be the emergency department with direct entry/access for walk-in patients and ambulance, with Operating Rooms on the second floor above. The bed tower will be above the podium and center on axis with Building A. The new tower is placed to allow the existing hospital Building B-H, and the existing CUP to remain operations during construction.

Modifications to Building I, which currently houses patient rooms on the second floor over open parking stalls, will enclose the first floor for a new loading dock and Materials Management department.

Modifications to Building A, which currently houses patient rooms on the second floor, include a new main entry canopy and lobby renovation, which will be the new front door to the medical center; a connecting corridor that links the new entry with public elevators in the new tower; and renovation of spaces for relocated departments once the new hospital is completed.

A new CUP will serve the new tower and backfeed existing Buildings I and I that are to remain. The project will conclude with demolition of existing hospital building B-H and the creation of new surface parking lots.

Opening year for the completion of the expansion project was assumed to be Year 2026.

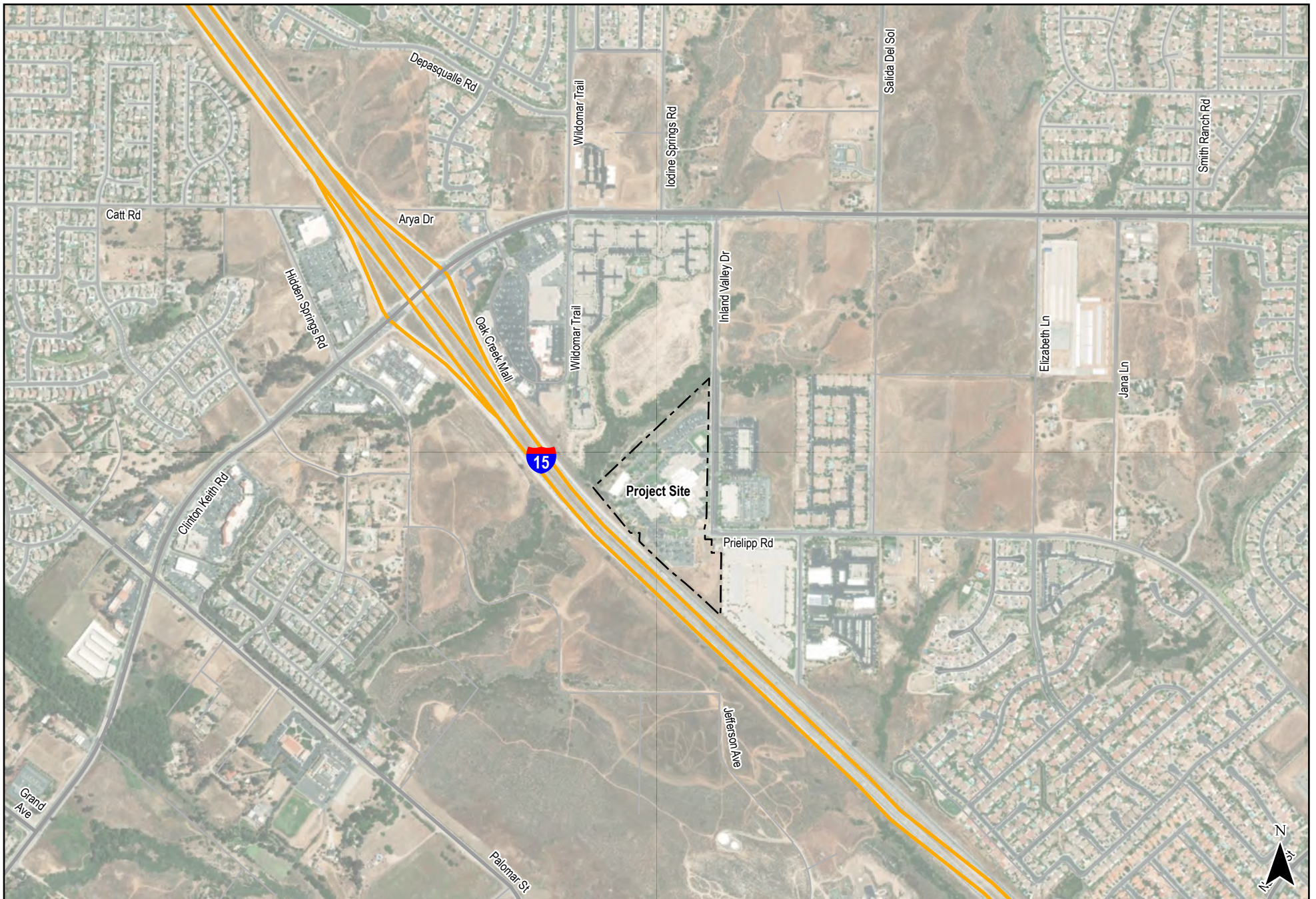
Figure 2–3 depicts the Project Site Plan.

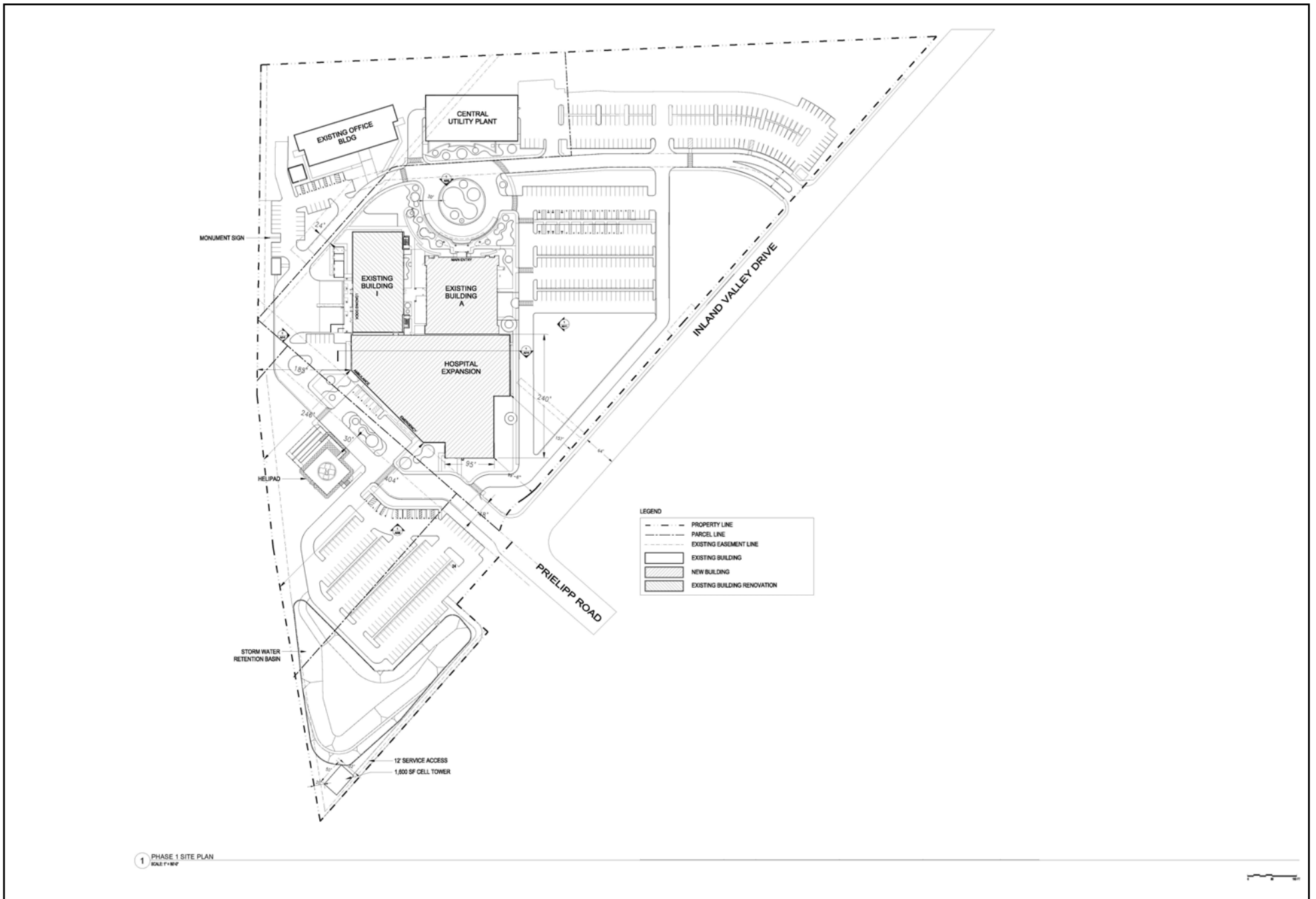
2.3 Project Access

Regional access is available to the site via Interstate 15, utilizing the Clinton Keith Road interchange. Existing site access is via several unsignalized driveways on Inland Valley Drive between the northern end of the project site and Prielipp Road. The Project will entail closure of all driveways between the north access point and the south access point. A detailed discussion of existing and proposed project access is provided in *Section 10.0* of this report.



Figure 2-1
Project Vicinity Map





3.0 STUDY AREA, ANALYSIS SCENARIOS, APPROACH AND METHODOLOGY

3.1 Study Area

The study area for this project encompasses locations affected by proposed project. The scope of the study area was developed in coordination with City staff using existing traffic volumes, the proposed project distribution, and a working knowledge of the local transportation.

The intersections and segments included in the study area are listed below:

INTERSECTIONS

1. I-15 Southbound Ramps / Clinton Keith Road
2. I-15 Northbound Ramps / Clinton Keith Road
3. Clinton Keith Road / Arya Road
4. Clinton Keith Road / Wildomar Trail
5. Clinton Keith Road / Inland Valley Drive
6. Clinton Keith / Smith Ranch Road
7. Inland Valley Drive / Prielipp Road

SEGMENTS

1. Clinton Keith Road: Arya Road to Wildomar Trail
2. Clinton Keith Road: Wildomar Trail to Inland Valley Drive
3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road
4. Inland Valley Drive: Clinton Keith to Prielipp Road
5. Prielipp Road: East of Inland Valley Drive

3.2 Analysis Scenarios

This traffic analysis assesses the study area intersections and street segments in the project study area to determine and evaluate the traffic effects on the local circulation system due to the proposed project. A total of three (3) scenarios are analyzed in this study, including:

- Existing
- Near-Term Opening Year 2026
- Near-Term Opening Year 2026 + Project

3.3 Analysis Approach

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis considering factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments.

There are various methodologies used to analyze signalized intersections, unsignalized intersections, and street segments. The measure of effectiveness for intersection and segment operations is level of service (LOS), which denotes the operating conditions which occur at a given intersection or on a given roadway segment under various traffic volume loads.

LOS is a qualitative measure used to describe a quantitative analysis considering factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Levels of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst. Level of service designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments.

In the Highway Capacity Manual 6th Edition, (HCM 6), Level of Service for signalized intersections is defined in terms of delay. The level of service analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

3.3.1 Signalized Intersections

For signalized intersections, LOS criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Table 3-1 summarizes the signalized intersections levels of service descriptions. **Table 3-2** depicts the intersection LOS and corresponding delay ranges, which are based on overall intersection delay (signalized intersections) and the average control delay for any minor movement (unsignalized intersections), respectively. LOS relative to signalized and unsignalized intersection is further described below.

Level of service A describes operations with very low delay, (i.e., less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

**TABLE 3-1
INTERSECTION LEVEL OF SERVICE DESCRIPTIONS**

Level of Service	Description
A	Occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Occurs generally with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
C	Results generally when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Results generally in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.
F	Considered to be unacceptable to most drivers. This condition often occurs with oversaturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high volume-to-capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels

**TABLE 3-2
INTERSECTION LOS & DELAY RANGES**

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.1	≥ 50.1

Source: Highway Capacity Manual 6th edition

3.3.2 *Unsignalized Intersections*

For unsignalized intersections, LOS is determined by the computed or measured control delay and is defined for each minor movement: LOS is not defined for the intersection. Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

3.3.3 *Street Segments*

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the Riverside County's *Roadway Classification, Level of Service, and ADT Table*. **Table 3-3** provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics.

**TABLE 3-3
RIVERSIDE COUNTY
DAILY ROADWAY CAPACITY VALUES**

Facility	Number of Lanes	Maximum Two-Way Volume (ADT)		
		LOS C	LOS D	LOS E
Collector	2	10,400	11,700	13,000
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Arterial	2	14,400	16,200	18,000
Arterial	4	28,700	32,300	35,900
Mountain Arterial (3)	2	12,900	14,500	16,100
Mountain Arterial	3	16,700	18,800	20,900
Mountain Arterial	4	29,800	33,500	37,200
Urban Arterial	4	28,700	32,300	35,900
Urban Arterial	6	43,100	48,500	53,900
Urban Arterial	8	57,400	64,600	71,800
Expressway	4	32,700	36,800	40,900
Expressway	6	49,000	55,200	61,300
Expressway	8	65,400	73,500	81,700
Freeway	4	61,200	68,900	76,500
Freeway	6	94,000	105,800	117,500
Freeway	8	128,400	144,500	160,500
Freeway	10	160,500	180,500	200,600
Ramp ⁽⁴⁾	1	16,000	18,000	20,000

Notes:

1. All capacity figures are based on optimum conditions and are intended as guidelines for planning purposes only.
2. Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables, as defined in the Riverside County Congestion Management Program.
3. Two-way roadways designated as future roadways that conform to design standards for vertical and horizontal alignment are analyzed as arterials.
4. Ramp capacity is given as a one-way traffic volume.

Revised: March 2001

4.0 LEVEL OF SERVICE IMPACT THRESHOLDS

The City of Wildomar is currently in the process of developing its inaugural comprehensive Mobility Element and Active Transportation Plan, as well as updated guidelines for the preparation of transportation studies. Consistent with City of Wildomar’s historic practice, the County of Riverside Transportation Analysis Guidelines (December 2020) are used to analyze Level of Service (LOS) to maintain consistency with the City’s General Plan. Following the implementation of Senate Bill (SB) 743 as of July 1, 2020, vehicular delay (i.e., LOS) is no longer used for CEQA impact determination.

Vehicle Miles Traveled (VMT) analysis within the City of Wildomar is addressed separately, beginning in Section 13.0 of this report.

Within the City of Wildomar, LOS D is considered acceptable for Circulation Plan roadway facilities based on the City’s General Plan and the 2013 Housing Element Environmental Impact Report.

4.1 Conditions for Operational Improvements

Operational improvements would be required under the following conditions:

1. When existing traffic conditions exceed the General Plan target LOS.
2. When project traffic, when added to existing traffic, will deteriorate the LOS to below the target LOS.
3. When cumulative traffic exceeds the target LOS.

4.2 Improvements to Address Level of Service Deficiencies

Improvements for project level impacts should focus on providing operations that offset the project impact (e.g., achieve a “no project” level of service). Improvements could consist of signal timing improvements, lane restriping, or new lanes to study facilities.

Cumulative deficiencies should include a fair share contribution toward achieving acceptable levels of service as noted below. Alternatively, if a cumulative location is included in an existing traffic impact fee program (such as TUMF), payment of those fees would constitute an appropriate contribution.

For improvements that are needed where the applicant is not solely responsible, a fair share computation should be computed and reported for each such mitigation. The fair share amount should be calculated using the following formula:

$$\text{Fair share} = \text{project trips} / \text{project trips} + \text{future development trips}$$

Trips noted above should correspond to the peak hour where the deficiency occurs for intersection assessment or daily trips for roadway segment impacts. If a project degrades operations during both peak hours, then the analysis should identify the peak hour for fair share assessment that has the highest project burden for fair share contribution.

5.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed Project requires an understanding of the existing transportation system within the project area.

Figure 5-1 shows an existing conditions diagram, including existing signalized intersections and lane configurations.

5.1 Existing Street Network

The following is a description of the existing street network in the study area. All existing functional classifications referenced are based on the City of Wildomar *Mobility Plan Existing Conditions Report* (June 2020)

Clinton Keith Road

Clinton Keith Road has a functional classification of 6-Lane Urban Arterial from the I-15 Southbound Ramps to Wildomar Trail with six vehicle travel lanes and a combination of striped and raised median. The existing functional classification is 4-Lane Urban Arterial from Wildomar Trail to Inland Valley Drive with four vehicle travel lanes and a raised median. Clinton Keith Road has a functional classification of a 2-Lane Collector from Inland Valley Drive to Smith Ranch Road and is currently built as a two-lane undivided roadway. Curb, gutter, and sidewalks are provided along certain parts of the roadway. Bike lanes are only provided from I-15 Northbound Ramps to Wildomar Trail on Clinton Keith Road. A bus stop is provided at intersection Clinton Keith Road/ Wildomar Trail. Within the study area, on-street parking is prohibited, and the posted speed limit is generally 35-45 mph.

Interstate 15

Interstate 15 (I-15) is a major freeway that extends northwest and southeast through Riverside County. It is located west of the proposed project site which gives access to the site via northbound and southbound on-ramps and off-ramps at Clinton Keith Road. The posted speed limit is 70 mph.

Inland Valley Drive

Inland Valley Drive has an existing functional classification of 2-Lane Collector and is currently built as a two-lane undivided road. A Two-Way Left Turn Lane (TWLTL) is provided from the Inland Valley Medical Center main (northerly) access to Prielipp Road. Bike lanes are not provided on either side of the roadway. Curb, gutter, and sidewalks are provided along certain parts of the roadway. Bus stops are provided along this roadway segment. On-street parking is permitted along certain parts of the street and the posted speed limit is 45 mph.

Prielipp Road

Prielipp Road has a functional classification of 2-Lane Collector and is currently built as a two-lane undivided roadway from Inland Valley Drive to the City Limit. Bike lanes are not provided on either side of the roadway. Bus stops are provided along this roadway segment. Curb, gutter, and sidewalks are provided along both curbs. On-street parking is permitted, and the posted speed limit is 40 mph.

Bicycle, pedestrian, and transit conditions are described in more detail in *Section 11.0*, Active Transportation Review.

5.2 Existing Traffic Volumes

Table 5-1 is a summary of the most recent available average daily traffic volumes (ADTs) collected in September 2019 for the City of Wildomar *Mobility Plan Existing Conditions Report* (June 2020). LLG commissioned additional traffic counts in the study area during November 2020 which confirmed that local traffic volumes remain between 8-15% lower than 2019 due to the ongoing COVID-19 pandemic. As such, the 2019 traffic volumes are used as the existing baseline for analysis in this report.

Peak hour traffic counts at the study area intersections were supplemented with additional data from the *Wildomar Campus Master Plan Draft Traffic Study* (September 2016) as part of the *I-15 Corridor Campus Master Plan EIR* (August 2017) for the Mt. San Jacinto Community College District. Peak hour traffic counts at two (2) intersections not included in the *City Existing Conditions Report* were obtained from this report. These counts were conducted in May 2016. As such, a growth rate of 2% per year was applied for a period of three (3) years to adjust these counts to the Year 2019 baseline, with minor volume balancing between closely spaced intersections applied.

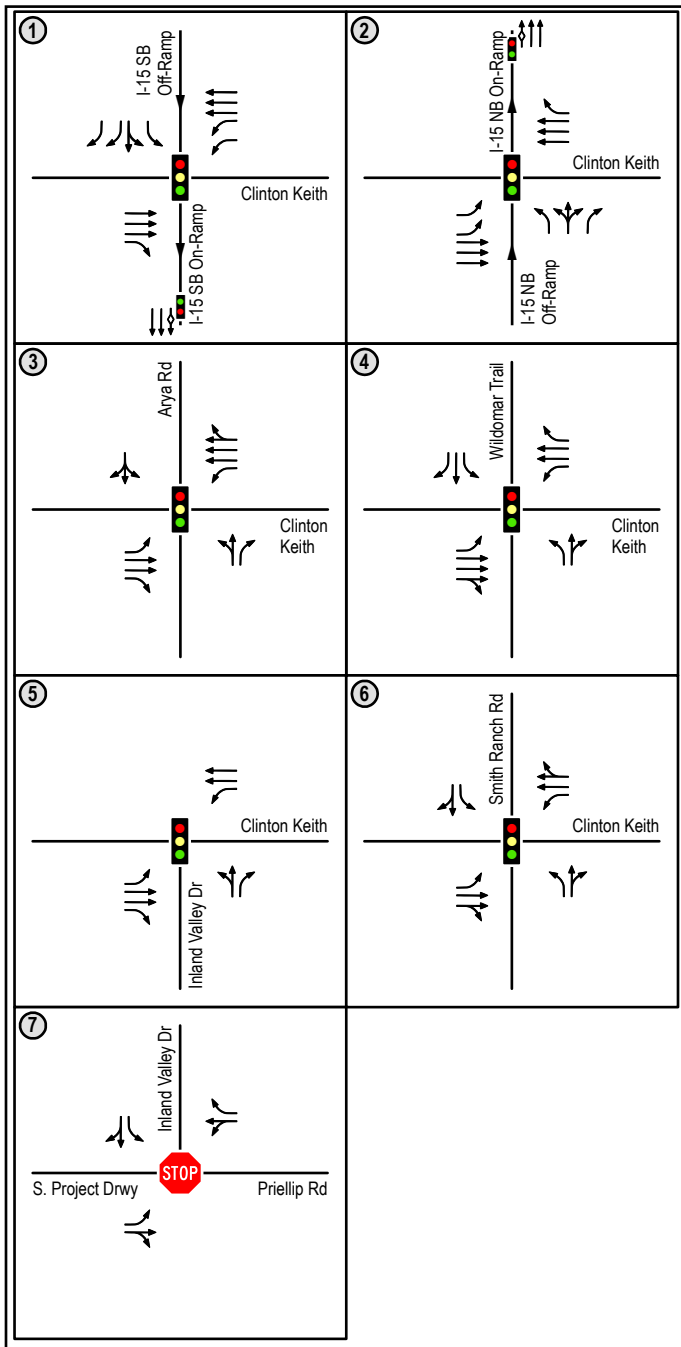
Figure 5-2 depicts the Existing Traffic Volumes. **Appendix A** contains the manual count sheets.

TABLE 5-1
EXISTING TRAFFIC VOLUMES

Street Segment	ADT ^a
Clinton Keith Road	
1. Arya Road to Wildomar Trail	31,650
2. Wildomar Trail to Inland Valley Drive	29,790
3. Inland Valley Drive to Smith Ranch Road	23,440
Inland Valley Drive	
4. Clinton Keith Road to Prielipp Road	11,760
Prielipp Road	
5. East of Inland Valley Drive	6,860

Footnotes:

a. Average Daily Traffic Volumes.



	Traffic signal		HOV lane		Study intersection
	Ramp meter		Sneaker lane		
	Stop sign		Right-Turn Overlap		
	Turning movements		Project site		

Figure 5-1
Existing Conditions Diagram

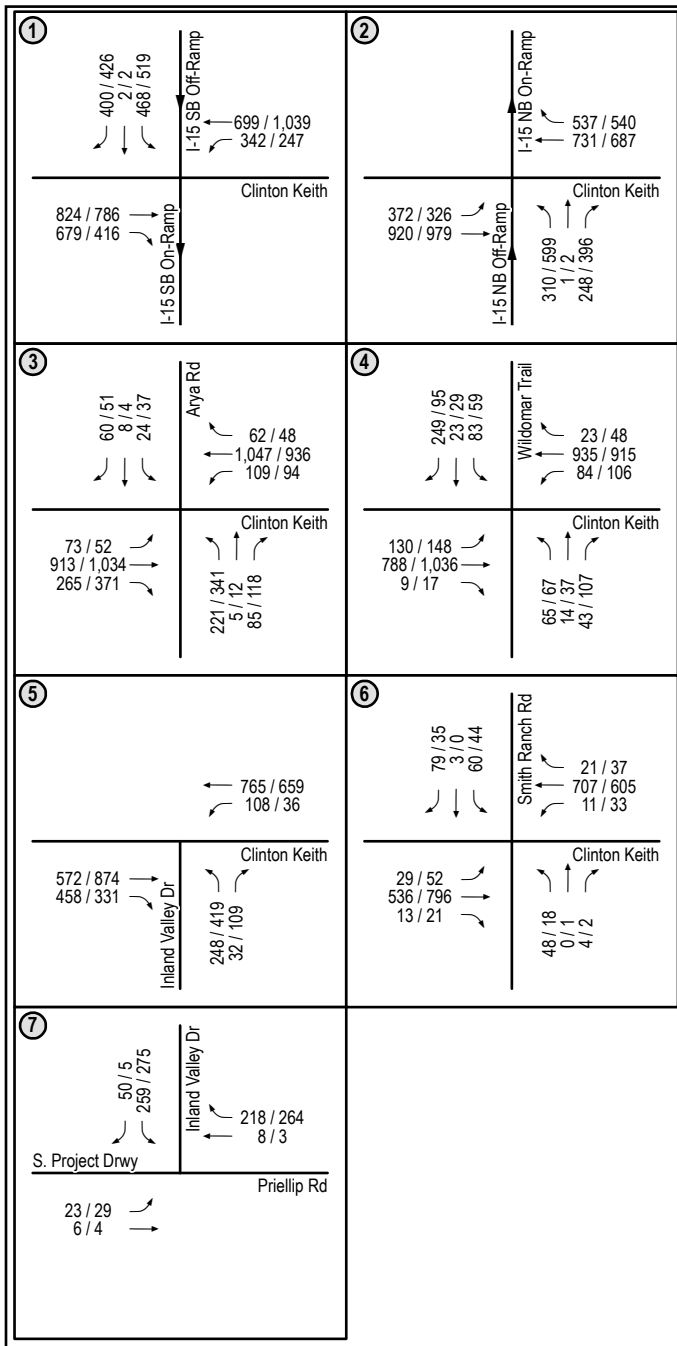


Figure 5-2
Existing Traffic Volumes

6.0 ANALYSIS OF EXISTING CONDITIONS

6.1 Peak Hour Intersection Levels of Service

Table 6-1 summarizes the Existing peak hour intersection operations. As seen in *Table 6-1*, all intersections are calculated to operate at acceptable LOS C or better.

Appendix B provides the Existing peak hour intersection analysis worksheets.

TABLE 6-1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Delay ^a	LOS ^b
1. I-15 Southbound Ramps / Clinton Keith Road	Signal	AM	24.7	C
		PM	20.0	B
2. I-15 Northbound Ramps / Clinton Keith Road	Signal	AM	20.3	C
		PM	24.5	C
3. Clinton Keith Road / Arya Road	Signal	AM	28.0	C
		PM	28.4	C
4. Clinton Keith Road / Wildomar Trail	Signal	AM	14.8	B
		PM	12.5	B
5. Clinton Keith Road / Inland Valley Drive	Signal	AM	13.0	B
		PM	15.6	B
6. Clinton Keith Road / Smith Ranch Road	Signal	AM	16.0	B
		PM	14.6	B
7. Inland Valley Drive / Prielipp Road	AWSC ^c	AM	11.1	B
		PM	12.8	B

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. AWSC – All-Way Stop Controlled intersection. Average delay is reported.

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

6.2 Daily Street Segment Levels of Service

Table 6–2 summarizes the Existing segment operations. As seen in *Table 6–2*, all study area segments are calculated to currently operate at LOS D or better except the following:

- Segment #3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road – LOS F
- Segment #4. Inland Valley Drive: Clinton Keith Road to Prielipp Road – LOS E

**TABLE 6–2
EXISTING STREET SEGMENT OPERATIONS**

Street Segment	Classification	Capacity (LOS E) ^a	ADT ^b	LOS ^c	V/C ^d	LOS Threshold Exceeded?
Clinton Keith Road						
1. Arya Road to Wildomar Trail	6-lane Urban Arterial	53,900	31,650	A	0.587	No
2. Wildomar Trail to Inland Valley Drive	4-lane Urban Arterial	35,900	29,790	D	0.830	No
3. Inland Valley Drive to Smith Ranch Road	2-lane Collector	13,000	23,440	F	1.803	Yes
Inland Valley Drive						
4. Clinton Keith Road to Prielipp Road	2-lane Collector	13,000	11,760	E	0.905	Yes
Prielipp Road						
5. East of Inland Valley Drive	2-lane Collector	13,000	6,860	A	0.528	No

Footnotes:

- a. Capacities based on Riverside County Roadway Classification Table.
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to Capacity.

7.0 PROJECT TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

7.1 Trip Generation

The trip generation rates for the “Hospital” land use from the *Institute of Transportation Engineer Trip Generation Manual, 10th Edition* were used to develop the trip generation for the proposed project.

According to ITE, hospital trip generation is calculated based on the number of patient beds. As noted in *Section 2.2*, the project will expand the existing Inland Valley Medical Center with a new addition to the hospital that includes expansion of all services and critical ancillary support for 100 new patient beds, while 18 beds in existing facilities will be removed, a net increase of 82 beds bringing the campus total to 202 beds.

Table 7-1 tabulates the total project traffic generation. The total project is calculated to generate approximately 1,830 ADT with 149 AM peak hour trips (107 inbound / 42 outbound) and 155 PM peak hour trips (43 inbound / 112 outbound).

TABLE 7-1
PROJECT TRIP GENERATION

Land Use	Quantity	Daily Trip Ends (ADT) ^a		AM Peak Hour					PM Peak Hour				
		Rate ^b	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Proposed Uses													
Hospital (ITE 610)	100 beds	22.32 /bed	2,232	1.84	72:28	131	51	182	1.89	28:72	53	136	189
Existing Uses to be removed													
Hospital (ITE 610)	18 beds	22.32 /bed	402	1.84	72:28	24	9	33	1.89	28:72	10	24	34
Net Trips	—	—	1,830	—	—	107	42	149	—	—	43	112	155

Footnotes:

a. ADT = Average Daily Traffic.

b. Trip rates from *Institute of Transportation Engineers Trip Generation Manual, 10th Ed.*

7.2 Trip Distribution and Assignment

Trip distribution is the process of determining traffic percentage splits on the regional and local roadway network. Trip distribution for the project was based upon the existing traffic patterns, the land use characteristics of the project, the roadway network and the general location of other land uses to which project trips would originate or terminate.

Figure 7-1 depicts the Project Trip Distribution and **Figure 7-2** depicts the Project Trip Assignment.

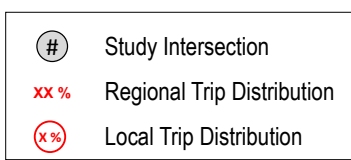
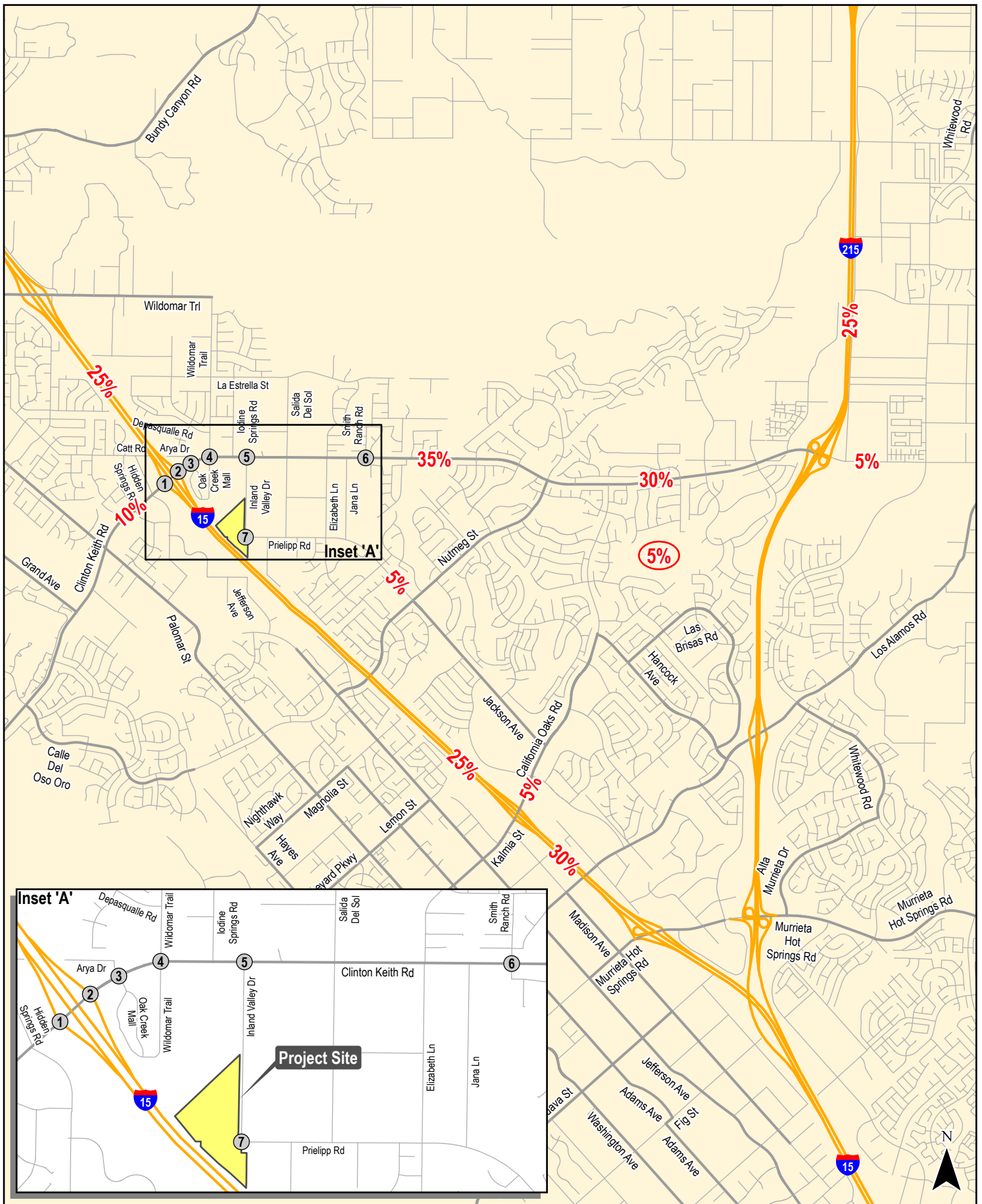
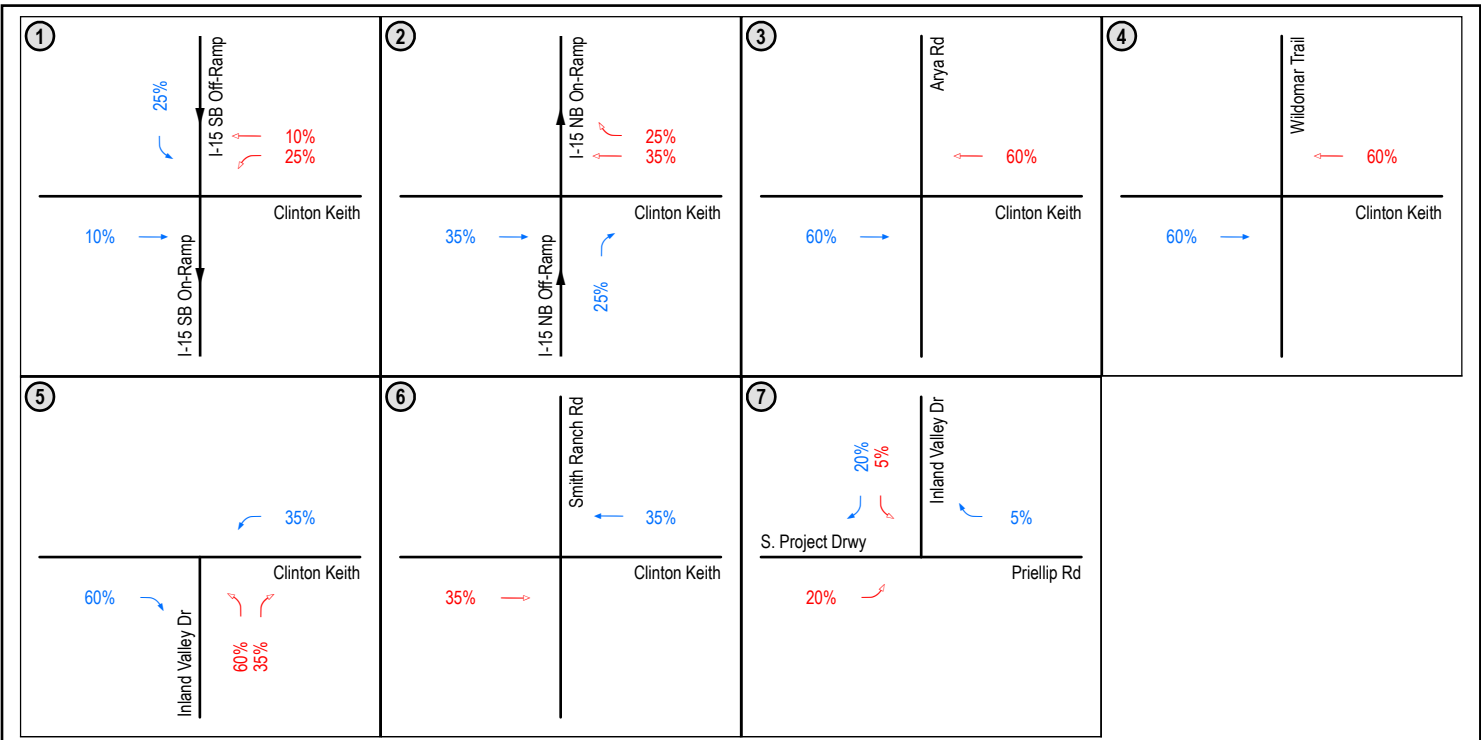


Figure 7-1
 Project Traffic Distribution
 (Page 1 of 2)
 UHS - INLAND VALLEY



Study Intersection

Inbound Trip Distribution

Outbound Trip Distribution

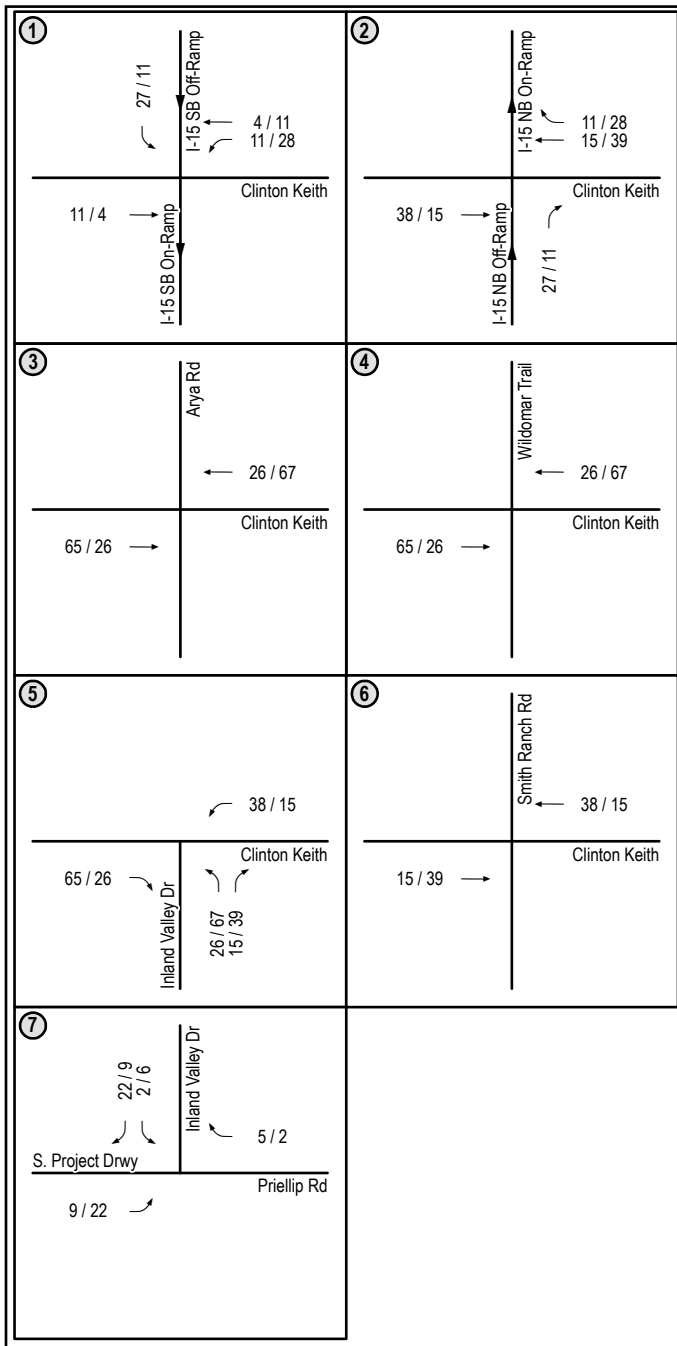


Figure 7-2
Project Traffic Volumes

8.0 NEAR-TERM OPENING YEAR 2026 AND CUMULATIVE PROJECTS CONDITIONS

8.1 Cumulative Projects

Cumulative projects are other projects in the study area that will add traffic to the local circulation system in the near future. LLG coordinated with City of Wildomar staff to identify relevant, pending cumulative projects in the study area that could be constructed and generating traffic in the study area vicinity by the time of project opening. Based on this research, ten (10) cumulative projects were identified nearby that would add traffic to study area intersections and street segments.

1. **Oak Springs Ranch Phase 2** is a proposed project to develop a 288-unit apartment project on the southwesterly vacant portion of the Oak Springs Ranch Specific Plan located at the southwest corner of Inland Valley Drive and Clinton Keith Road. The project is currently under review.
2. **Wildomar Ridge Residential** is an approved project to develop 77 single family detached and attached residences. The project site is located east of Wildomar Trail and north of Clinton Keith Road. The project was approved on 2/8/2017.
3. **Westpark Promenade** is an approved mixed-use project to develop 118,354 square feet of commercial retail and 191 for-sale townhomes/condos. The project site located north of Arya Road. The project was approved on 12/14/2016.
4. **Villa Sienna Apartments** is an approved project for the development of 170 multi-family apartment units. The project site is located north of Prielipp Road between Elizabeth Lane and Jana Lane. The project was approved on 11/12/2015.
5. **Grove Park Mixed Use** is an approved project to develop a 50,000 square foot retail center and a 162-unit multi-family apartment project. The project site is located southwest of Salida Del Sol and Clinton Keith Road. The project was approved on 2/10/2016.
6. **Horizons Mixed Use** is an approved project to develop an 86-unit assisted living facility and a 138-unit multi-family townhome/condominium project. The project site is located north of Prielipp Road and west of Elizabeth Lane. The project was approved on 2/10/2016.
7. **Rancon Medical & Retail Center** is an approved project for the development of 96,240 square feet of medical, office, and retail uses. The project site is located southwest of Clinton Keith Road and Elizabeth Lane. The project was approved on 10/1/2014.
8. **Clinton Keith Village Retail Center** is an approved project to develop a 40,000 square foot commercial retail center, including a 7-Eleven gas station with alcohol sales. The project site is located on the northeast corner of Wildomar Trail and Clinton Keith Road. As of December 2020, the project is under construction.
9. **Smith Ranch Self Storage** is an approved project to develop a 150,000 square foot self-storage facility with RV parking and 10,000 square foot office building. The project site is located on the southwest corner of Smith Ranch Road and Clinton Keith Road. As of December 2020, the project is under construction.

10. Mt. San Jacinto Community College District is proposing a staged construction program for the new I-15 Corridor Campus of Mt. San Jacinto College (MSJC). The project site is northeast of Clinton Keith Road and Salida del Sol in the City of Wildomar on a vacant 78.32-acre parcel. The campus would accommodate approximately 15,000 part-time or 10,000 full-time equivalent (FTE) students at ultimate build-out, expected between Year 2035 through 2038, depending on enrollment demand and funding availability. Approximately 400 staff would also be employed at full build-out.

The MSJC project has an opening year of 2022. Phase II of construction, which will serve up to 2,800 FTE students is anticipated to occur between Years 2024 through 2027. Therefore, the Project Opening Year 2026, MSJC Phase II traffic is assumed. MSJC Phase II is calculated to generate 3,444 ADT with 336 AM peak hour trips (280 in/ 56 out) and 336 PM peak hour trips (224 in/ 112 out).

Remaining cumulative development and ambient growth in the Project study area was accounted for with a 2% annual growth rate. The 2% growth rate was applied to existing Year 2020 traffic data for a period of six years to reach Opening Year 2026. Traffic generated by the identified cumulative project was added to develop Near-Term Opening Year 2026 conditions.

Figure 8-1 depicts the Cumulative Projects Location Map.

Figure 8-2 and *Figure 8-3* depict the Near-Term Opening Year 2026 Traffic Volumes without and with the Project, respectively.

8.2 Roadway Conditions

The City of Wildomar Capital Improvement Program (CIP) includes the ultimate widening of Clinton Keith Road (CIP No. 025-1). Phase 1 of this project, which will provide four lanes of traffic and bike lanes between Wildomar Trail to the east City limits, is funded with construction imminent and anticipated to be complete prior to Opening Year 2026. This improvement is therefore assumed in Near-Term Opening Year 2026 conditions.



Figure 8-1
Cumulative Project Location Map

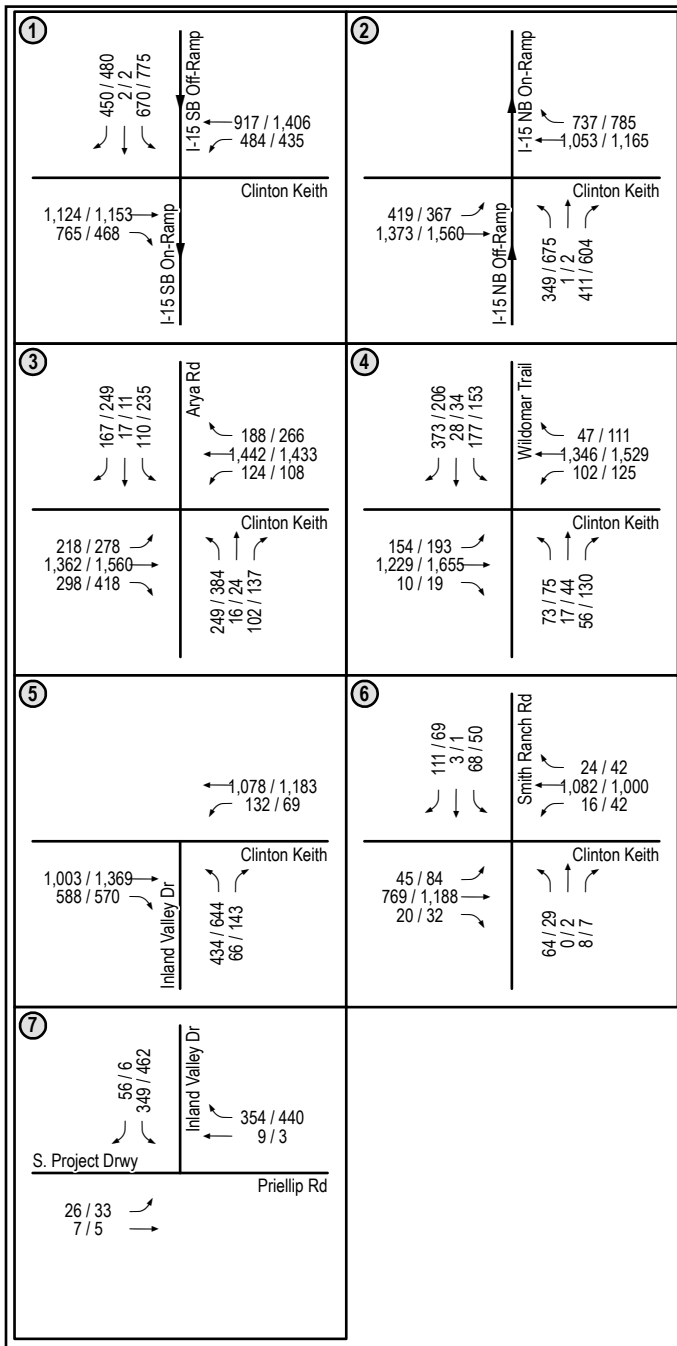
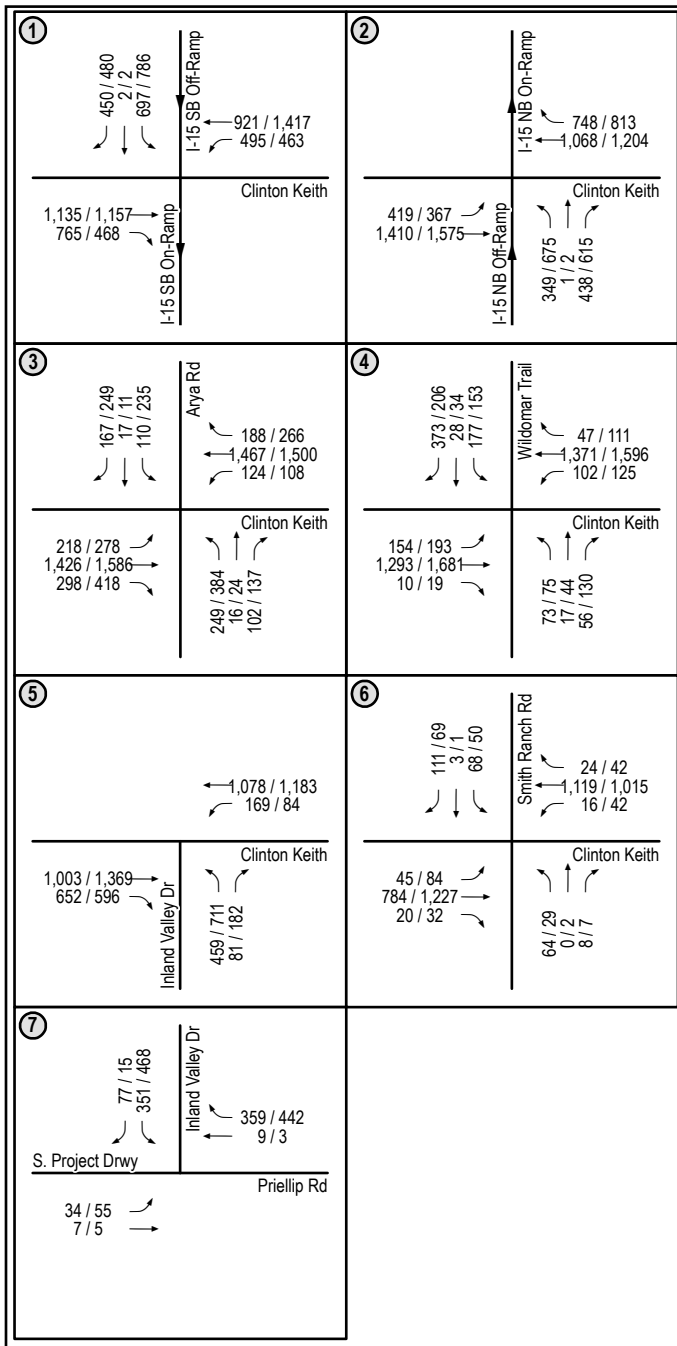


Figure 8-2
Near-Term Opening Year 2026 Traffic Volumes



N:\3093\Figure
Date: 4/26/2021
Time: 3:47 PM

- ① Study Intersections
- ↔ Intersection AM/PM Peak Hour Volumes
- x,xxx Average Daily Traffic (ADT)

Figure 8-3
Near-Term Opening Year 2026 + Project Traffic Volumes

9.0 ANALYSIS OF NEAR-TERM OPENING YEAR 2026 SCENARIOS

9.1 Near-Term Opening Year 2026

9.1.1 Intersection Analysis

Table 9-1 summarizes the Near-Term Opening Year 2026 peak hour intersection operations. According to this table, all intersections are calculated to operate at LOS D or better during AM/PM peak hours except the following:

- Intersection #3. Clinton Keith Road / Arya Road (LOS E during the PM peak hour)

Appendix C provides the Near-Term Opening Year 2026 peak hour intersection analysis worksheets.

9.1.2 Segment Operations

Table 9-2 summarizes the Near-Term Opening Year 2026 segment operations. Based on this table, all study area segments are calculated to continue to operate at LOS D or better except the following:

- Segment #2. Clinton Keith Road: Wildomar Trail to Inland Valley Drive – LOS E
- Segment #3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road – LOS F
- Segment #4. Inland Valley Drive: Clinton Keith Road to Prielipp Road – LOS F

9.2 Near-Term Opening Year 2026 + Project

9.2.1 Intersection Analysis

Table 9-1 summarizes the Near-Term Opening Year 2026 + Project peak hour intersection operations. Based on this table, with the addition of project traffic volumes all intersections are calculated to continue to operate at LOS D or better except the following:

- Intersection #3. Clinton Keith Road / Arya Road (LOS E during the PM peak hour)

Using the City's applied LOS impact threshold, the project is not required to identify improvements at this intersection as the project-related increase in delay is less than the established threshold of 5.0 seconds.

Appendix D provides the Near-Term Opening Year 2026 peak hour intersection analysis worksheets.

9.2.2 Segment Operations

Table 9-2 summarizes the Near-Term Opening Year 2026 + Project segment operations. As seen in **Table 9-2**, with the addition of project traffic, all study area segments are calculated to continue to operate at LOS D or better except the following:

- Segment #2. Clinton Keith Road: Wildomar Trail to Inland Valley Drive – LOS F
- Segment #3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road – LOS F
- **Segment #4. Inland Valley Drive: Clinton Keith Road to Prielipp Road – LOS F**

Using the City's applied LOS impact threshold, the project should identify improvements for the one (1) deficient segment of Inland Valley Drive **bolded** and underlined above, as the project adds traffic in excess of 5% of the roadway capacity (e.g., a volume-to-capacity ratio increase of 0.05). See *Section 12.0* for a discussion of recommended improvements.

**TABLE 9-1
NEAR-TERM OPENING YEAR 2026 INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing		Near-Term Opening Year 2026		Near-Term Opening Year 2026 + Project		Δ^c	LOS Threshold Exceeded?
			Delay ^a	LOS ^b	Delay	LOS	Delay	LOS		
1. I-15 Southbound Ramps / Clinton Keith Road	Signal	AM	24.7	C	47.8	D	50.4	D	2.6	No
		PM	20.0	B	30.7	C	31.4	C	0.7	No
2. I-15 Northbound Ramps / Clinton Keith Road	Signal	AM	20.3	C	24.7	C	26.2	C	1.5	No
		PM	24.5	C	43.2	D	47.3	D	4.1	No
3. Clinton Keith Road / Arya Road	Signal	AM	28.0	C	>100.0	F	>100.0	F	0.4	Yes
		PM	28.4	C	>100.0	F	>100.0	F	0.4	Yes
4. Clinton Keith Road / Wildomar Trail	Signal	AM	14.8	B	18.9	B	18.9	B	0.0	No
		PM	12.5	B	44.5	D	50.7	D	6.2	No
5. Clinton Keith Road / Inland Valley Drive	Signal	AM	13.0	B	19.7	B	25.9	C	6.2	No
		PM	15.6	B	36.4	D	44.8	D	8.4	No
6. Clinton Keith / Smith Ranch Road	Signal	AM	16.0	B	24.5	C	26.3	C	1.8	No
		PM	14.6	B	25.7	C	27.5	C	1.8	No

Continued on Next Page

**TABLE 9-1
NEAR-TERM OPENING YEAR 2026 INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing		Near-Term Opening Year 2026		Near-Term Opening Year 2026 + Project		Δ^c	LOS Threshold Exceeded?
			Delay ^a	LOS ^b	Delay	LOS	Delay	LOS		
<i>Continued from Previous Page</i>										
7. Inland Valley Drive / Prielipp Road	AWSC ^d	AM	11.1	B	15.2	C	15.5	C	0.3	No
		PM	12.8	B	29.0	D	31.6	D	2.6	No

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Increase in delay due to Project Traffic.
- d. AWSC – All-Way Stop Controlled intersection. Average delay is reported.

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

**TABLE 9-2
NEAR-TERM OPENING YEAR 2026 STREET SEGMENT OPERATIONS**

Street Segment	Capacity (LOS E) ^a	Existing			Near-Term Opening Year 2026			Near-Term Opening Year 2026 + Project			Δ ^e	LOS Threshold Exceeded?
		ADT ^b	LOS _c	V/C ^d	ADT	LOS	V/C	ADT	LOS	V/C		
Clinton Keith Road												
1. Arya Road to Wildomar Trail	53,900	31,650	A	0.587	48,991	E	0.909	50,089	E	0.929	0.020	Yes
2. Wildomar Trail to Inland Valley Drive	35,900	29,790	D	0.830	46,380	F	1.292	47,478	F	1.323	0.031	Yes
3. Inland Valley Drive to Smith Ranch Road ^f	13,000 (35,900)	23,440	F	1.803	36,015	F	1.385	36,656	F	1.021	0.018	Yes
Inland Valley Drive												
4. Clinton Keith Road to Prielipp Road	13,000	11,760	E	0.905	18,003	F	1.385	19,833	F	1.526	0.141	Yes
Prielipp Road												
5. East of Inland Valley Drive	13,000	6,860	A	0.528	11,023	D	0.848	1 1,115	D	0.855	0.007	No

Footnotes:

- a. Capacities based on Riverside County Roadway Classification Table.
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to Capacity ratio.
- e. Increase in V/C ratio due to Project traffic.
- f. Clinton Keith Road Phase 1 Widening assumed complete in Near-Term Opening Year 2026 conditions. Improved capacity shown in parentheses.

General Notes:

- **BOLD** and **SHADING** indicate LOS threshold exceeded and the need for improvements.

10.0 SITE ACCESS REVIEW

10.1 Existing Site Access

Currently, primary access to the site for patients and visitors is via an unsignalized driveway located at the northern end of the site. Employee parking is located at the south end of the site, with this driveway forming the west leg of the all-way stop controlled intersection of Inland Valley Drive / Prielipp Road. Three other unsignalized secondary driveways are provided along Inland Valley Drive for ambulances, surgery center pick-up/drop-off, and service loading/drop-off.

10.2 Proposed Site Access

The project proposes to consolidate the several secondary access points between the northern end of the site and Prielipp Road. At project buildout the northern access point will serve all non-emergency patient, visitor, and staff entry and drop-off. The driveway at the southern access point opposite Prielipp Road will serve emergency entry and drop-off, including ambulance and walk-in patients, as well as service loading/drop-off. Existing driveways between these two locations will be closed.

Figure 10-1 illustrates existing conditions at the Project driveways. **Figure 10-2** shows Existing + Project traffic volumes and **Figure 10-3** shows Near-Term Opening Year 2026 with Project traffic volumes.

Table 10-1 shows the calculated levels of service at Project access points under Near-Term Opening Year 2026 as well as Existing traffic conditions with the addition of the Project. As shown in **Table 10-1**, both driveways are calculated to operate at LOS D or better under Existing + Project conditions. With the addition of ambient growth plus cumulative projects the northern driveway is calculated to operate at a deficient LOS in both peak hours. Inland Valley Drive / Prielipp Road continues to operate at acceptable LOS D or better.

Appendix E contains the site access intersection analysis worksheets.

**TABLE 10-1
PROJECT ACCESS INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing + Project		Near-Term Opening Year 2026 + Project	
			Delay ^a	LOS ^b	Delay	LOS
A. Inland Valley Drive / N. Project Driveway	MSSC ^c	AM	26.4	D	41.6	E
		PM	33.7	D	>100.0	F
B. Inland Valley Drive / Prielipp Road	AWSC ^d	AM	11.0	B	16.2	C
		PM	11.6	B	25.8	D

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service
- c. Minor Street Stop-Controlled intersection. Minor street left-turn delay reported.
- d. All-Way Stop-Controlled intersection. Average delay reported.

UNSIGNALIZED	
DELAY/LOS THRESHOLDS	
Delay	LOS
0.0 ≤ 10.0	A
10.1 to 15.0	B
15.1 to 25.0	C
25.1 to 35.0	D
35.1 to 50.0	E
≥ 50.1	F

10.3 Traffic Signal Warrants

Based on the analysis of both project access intersections as shown in *Table 10-1*, Inland Valley Drive / Prielipp Road is calculated to operate at LOS D or better in near-term with Project conditions. The northern project driveway is calculated to operate at LOS D with the addition of Project traffic to existing conditions; however, with the addition of ambient growth and cumulative projects the driveway operations would degrade to LOS E or F.

Traffic signal warrant analysis has been completed to determine if a signal would be warranted at either location under future conditions. Warrants were prepared separately for the Existing + Project and Near-Term Opening Year 2026 with Project scenarios. As outlined in Chapter 4C, “Traffic Control Signal Needs Studies,” of the *2014 California Manual on Uniform Traffic Control Devices* (California MUTCD), the peak hour warrant (Warrant 3) was analyzed for the two (2) subject project access points to determine if a traffic signal would be warranted under the Near-Term Opening Year 2026 + Project conditions.

The lane configurations at the north project driveway at Inland Valley Drive are as follows:

- Inland Valley Drive (southbound): 1 shared thru/right-turn lane; 1 left-turn lane (two-way left-turn lane)
- KB Home Driveway (westbound): 1 shared left/thru/right-turn lane
- Inland Valley Drive (northbound): 1 shared thru/right-turn lane; 1 left-turn lane (two-way left-turn lane)
- Inland Valley Medical Center North Driveway: 1 shared left/thru/right-turn lane

Inland Valley Drive (northbound / southbound) is the major street at this location.

The lane configurations at Inland Valley Drive / Prielipp Road are as follows:

- Inland Valley Drive (southbound): 1 right-turn lane; 1 shared thru/left-turn lane
- Prielipp Road (westbound): 1 shared left/thru lane; 1 right-turn lane
- Inland Valley Medical Center South Driveway: 1 shared thru/right-turn lane; 1 left-turn lane

The major street turns at this intersection. Inland Valley Drive (southbound) and Prielipp Road (westbound) are the major street approaches.

Warrant 3 consists of two categories. The need for a traffic shall be considered if the criteria in either of the two categories are met. Category A requires three (3) conditions to be met for the same one (1) hour of an average day: 1) minor street delay exceeding four (4) vehicle-hours, 2) minor street volume exceeding 100 vehicles per hour, and 3) total entering volume at the intersection exceeding 800 vehicles. Category B plots the AM and PM entering volumes on a linear graphic (Figure 4C-4 of the MUTCD) to determine if the volumes exceed the allowable thresholds. For the signal warrant to be met, either Category A or B must be satisfied.

Table 10-2a & 10-2b below illustrate the two categories and summarize results for the Inland Valley Drive / N. Project Driveway intersection under both scenarios. Similarly, **Table 10-3a & 10-3b** provide results for Inland Valley Drive / Prielipp Road.

Appendix F contains the complete details of the warrant analysis including Figure 4C-4.

As shown in the tables below, neither Category A nor Category B are satisfied at Inland Valley Drive / N. Project Driveway under the Existing + Project scenario. With the addition of growth and cumulative projects, both Category A and Category B are satisfied under the Near-Term Opening Year 2026 with Project scenario.

At Inland Valley Drive / Prielipp Road, neither Category A nor Category B are satisfied under either scenario.

TABLE 10-2A
WARRANT 3: PEAK HOUR – EXISTING + PROJECT
INLAND VALLEY DRIVE / N. PROJECT DRIVEWAY

Warrant 3 – Peak Hour		Category A <u>or</u> Category B Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Category A		Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
(All Parts 1, 2, and 3 below must be satisfied)								
1.	The total delay experienced for traffic on one minor-street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; <u>AND</u>				Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
2.	The volume on the same-minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>				Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
3.	The entering volume serviced during the hour equals or exceeds 800 vph for the intersections with four or more approaches or 650 vehicles per hour for intersections with three approaches.				Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Category B		Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Approach Lanes		One	Two	Warrant Volume	AM	PM		
Both Approaches -Major Street		X		See Figure 4C-4 below	876	784		
Highest Approach -Minor Street		X		See Figure 4C-4 below	65	172		
The plotted point falls above the applicable curve on Figure 4C-4.					Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

TABLE 10-2B
**WARRANT 3: PEAK HOUR – YEAR 2026 WITH PROJECT
 INLAND VALLEY DRIVE / N. PROJECT DRIVEWAY**

Warrant 3 – Peak Hour		Category A <u>or</u> Category B Satisfied *			Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Category A		Satisfied *			Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
(All Parts 1, 2, and 3 below must be satisfied)								
1. The total delay experienced for traffic on one minor-street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND					Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
2. The volume on the same-minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND					Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
3. The entering volume serviced during the hour equals or exceeds 800 vph for the intersections with four or more approaches or 650 vehicles per hour for intersections with three approaches.					Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Category B		Satisfied *			Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Approach Lanes		One	Two	Warrant Volume	AM	PM		
Both Approaches -Major Street		X		See Figure 4C-4 below	1,140	1,169		
Highest Approach -Minor Street		X		See Figure 4C-4 below	70	183		
The plotted point falls above the applicable curve on Figure 4C-4.					Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>

TABLE 10-3A
WARRANT 3: PEAK HOUR – EXISTING + PROJECT
INLAND VALLEY DRIVE / PRIELIPP ROAD

Warrant 3 – Peak Hour		Category A <u>or</u> Category B Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Category A		Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
(All Parts 1, 2, and 3 below must be satisfied)								
1. The total delay experienced for traffic on one minor-street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND					Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
2. The volume on the same-minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND					Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
3. The entering volume serviced during the hour equals or exceeds 800 vph for the intersections with four or more approaches or 650 vehicles per hour for intersections with three approaches.					Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Category B		Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Approach Lanes		One	Two	Warrant Volume	AM	PM		
Both Approaches -Major Street		X		See Figure 4C-4 below	563	564		
Highest Approach -Minor Street		X		See Figure 4C-4 below	37	55		
The plotted point falls above the applicable curve on Figure 4C-4.					Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

TABLE 10-3B
**WARRANT 3: PEAK HOUR – YEAR 2026 WITH PROJECT
 INLAND VALLEY DRIVE / PRIELIPP ROAD**

Warrant 3 – Peak Hour		Category A <u>or</u> Category B Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Category A		Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
(All Parts 1, 2, and 3 below must be satisfied)								
1.	The total delay experienced for traffic on one minor-street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>			
2.	The volume on the same-minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>			
3.	The entering volume serviced during the hour equals or exceeds 800 vph for the intersections with four or more approaches or 650 vehicles per hour for intersections with three approaches.	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>			
Category B		Satisfied *			Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Approach Lanes		One	Two	Warrant Volume	AM	PM		
Both Approaches -Major Street		X		See Figure 4C-4 below	796	928		
Highest Approach -Minor Street		X		See Figure 4C-4 below	41	60		
The plotted point falls above the applicable curve on Figure 4C-4.					Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>

10.4 Recommended Site Access Improvements

As shown in *Sections 10.2 and 10.3*, the Project’s northern driveway on Inland Valley Drive is calculated to deteriorate from acceptable operations under Existing + Project conditions to unacceptable operations with the addition of ambient growth and cumulative projects under Near-Term Opening Year 2026 with Project conditions.

Signal warrants would not be met for Existing + Project conditions but would be satisfied for Near-Term Opening Year 2026 with Project conditions. Per the MUTCD, the satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. However, no other improvements within the existing right-of-way and intersection control were identified that would provide acceptable LOS at this intersection.

Because the deficient LOS at this location occurs only with the addition of cumulative projects traffic, a fair share contribution toward the construction of a signal is appropriate. The Project’s proportionate fair share toward signalization of this intersection is 31.3% according to the County of Riverside fair share formula. Fair share calculations for all applicable locations are provided in *Section 12.3* of this

report. Post-signalization intersection operations are shown in *Table 10-4*. As shown, the driveway would operate at LOS B or better during peak hours following signalization.

Appendix E also contains the post-improvement site access intersection analysis worksheets.

**TABLE 10-4
POST-IMPROVEMENT PROJECT ACCESS INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Near-Term Opening Year 2026 + Project	
			Delay ^a	LOS ^b
A. Inland Valley Drive / N. Project Driveway	<i>Signal</i>	AM	8.7	A
		PM	10.8	B

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service

SIGNALIZED	
DELAY/LOS THRESHOLDS	
Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

Based on the review of existing conditions and the proposed site plan, the following additional improvements are recommended:

- All project access driveways shall be evaluated to ensure adequate sight distance is provided to the satisfaction of the City engineer.
- All project access driveways shall be evaluated to ensure adequate turning radius using emergency response design vehicle.
- Provide enhanced signage to improve visibility and direct users (i.e., patients, visitors, staff, ambulance, and service/loading) to the appropriate areas.

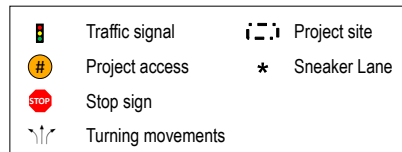


Figure 10-1
Site Access Conditions



Figure 10-2
Site Access Volumes (Existing + Project)



Figure 10-3
Site Access Volumes (Opening Year 2026 + Project)

11.0 ACTIVE TRANSPORTATION REVIEW

This section presents the pedestrian, bicycle, and transit conditions in the Project area.

11.1 Pedestrian Traffic Review

Continuous sidewalks are provided along both sides of Clinton Keith Road from I-15 to Inland Valley Drive. From Inland Valley Drive to Smith Ranch Road, sidewalks are generally missing, with limited exceptions where parcels adjacent to Clinton Keith Road have been developed.

On Inland Valley Drive, continuous sidewalks are provided on both sides of the road from the project site to Prielipp Road and are not provided between the project site and Clinton Keith Road. Continuous sidewalks are provided on both sides of Prielipp Road from Inland Valley Drive to Yamas Drive.

ADA compliant curb ramps are provided at all the signalized intersections and unsignalized intersection.

The signalized intersections of I-15 Southbound Ramps/ Clinton Keith Road and I-15 Northbound Ramps/ Clinton Keith Road currently only allows pedestrian crossing along the north and south leg of the intersection.

The signalized intersections of Arya Road/ Clinton Keith Road and Smith Ranch Road/ Clinton Keith Road currently allows pedestrian crossing along the north, south, and west leg.

The signalized intersection of Wildomar Trail/ Clinton Keith Road provides striped pedestrian crossings on all four legs of the intersection controlled by flashing pedestrian signals.

The signalized intersection Inland Valley Drive/ Clinton Keith Road currently only allows pedestrian crossing along the south leg of the intersection.

The unsignalized intersection Inland Valley Drive/ Prielipp Road provides striped pedestrian crossing on the north and west leg of the intersection. Pedestrian crossing is allowed on all four legs of the intersection.

11.2 Bicycle Traffic Review

Currently, there is a Class II bike lane on Clinton Keith Road from I-15 Southbound Ramps to Wildomar Trail. There are no other existing bike facilities within the study area.

Class II bike lanes are planned to be extended on Clinton Keith Road from Wildomar Trail to the eastern city limits as part of the Clinton Keith Road Widening capital improvement project.

Figure 11-1 illustrates the Active Transportation conditions in the study area.

11.3 Transit Traffic Review

Transit service in the study area is provided by Riverside Transit Authority (RTA) Route 23. Route 23 serves Temecula, Murrieta, and Wildomar and operates hourly between 5:20 AM and 8:30 PM on

weekdays with approximate one-hour headways. Weekend service operates between 7:20 AM and 7:20 PM also with an approximate one-hour headways. **Figure 11-2** illustrates the Transit Conditions in the study area.

The project site is located within ¼ mile walking distance from two stop pairs serving Route 23 located along Inland Valley Drive and Prielipp Road. **Table 11-1** summarizes the existing amenities at the stops located within ¼ mile of the project site.

**TABLE 11-1
EXISTING AMENITIES BY BUS STOP**

Intersection	Route	Stop ID	Direction of Travel	Average Daily Ridership	Amenities
Inland Valley Dr @ Hospital (Prielipp Rd)	23	1338	NB	53a	Sign and Pole, Route Designations, Transit Information, Schedule Display, Route Map, Red Curb, Seating, ADA Compliant, Bus Pad
		1342	SB	86	Sign and Pole, Route Designations, Transit Information, Schedule Display, Route Map, Seating, Passenger Shelter, ADA Compliant, Extended Sidewalk, Kiosk, Trash Receptacle
Inland Valley Dr & Prielipp Rd	23	2524	EB	14	Sign and Pole, Route Designations, Transit Information, Red Curb
		2522	WB	15	Sign and Pole, Route Designations, Transit Information, Schedule Display, Route Map, Red Curb, Seating, Trash Receptacle

11.4 Active Transportation Recommendations

The following active transportation improvements are recommended in the immediate vicinity of the Project site.

11.4.1 *Inland Valley Drive / Northerly Project Access / Stonebridge Medical Center Northerly Access*

As discussed in *Section 10.0*, signalization of this intersection is anticipated in the future with traffic volumes from area development added to those generated by the Project. At that time, the future signal will provide a controlled pedestrian crossing and pedestrian crossing activity north of Prielipp Road should be channelized to this location.

Pending the future signal, the existing marked crosswalk located near the Stonebridge Medical Center Southerly Access provides a convenient location located approximately at the mid-point of developed parcels on either side of the roadway. Additional uncontrolled crossings are not recommended.



11.4.2 *Inland Valley Drive / Stonebridge Medical Center Southerly Access*

This location, between Inland Valley Medical Center ambulance and surgery center access, provides a marked crosswalk with advanced yield lines.

As discussed above, with the future signalization of the northerly driveway serving the Project site on the west and the Stonebridge Medical Center to the east, pedestrian activity should be directed to the controlled crossing provided by the traffic signal following its construction. At that time, this mid-block crossing should be considered for removal.

In the interim, it is recommended that low-cost improvements consistent with MUTCD guidance be provided. Per MUTCD Section 3B.18:

If a marked crosswalk exists across an uncontrolled roadway where the speed limit exceeds 40 mph and the roadway has four or more lanes of travel and an ADT of 12,000 vehicles per day or greater, advanced yield lines with associated Yield Here to Pedestrians (R1-5, R1-5a) signs

should be placed 20 to 50 feet in advance of the crosswalk, adequate visibility should be provided by parking prohibitions, pedestrian crossing (W11-2) warning signs with diagonal downward pointing arrow (W16-7p) plaques should be installed at the crosswalk, a high-visibility crosswalk marking pattern should be used (See Figure 3B-17(CA)).

To meet MUTCD recommendations, the following should be provided:

- Provide Yield Here to Pedestrians (R1-5) signage in advance of crosswalk.
- Consider restriping existing solid stop bar with yield lines per MUTCD
- Restripe the crosswalk with a high-visibility crosswalk marking pattern

Figure 11-3 depicts the recommended improvements at this location.



11.4.3 Inland Valley Drive / Prielipp Road

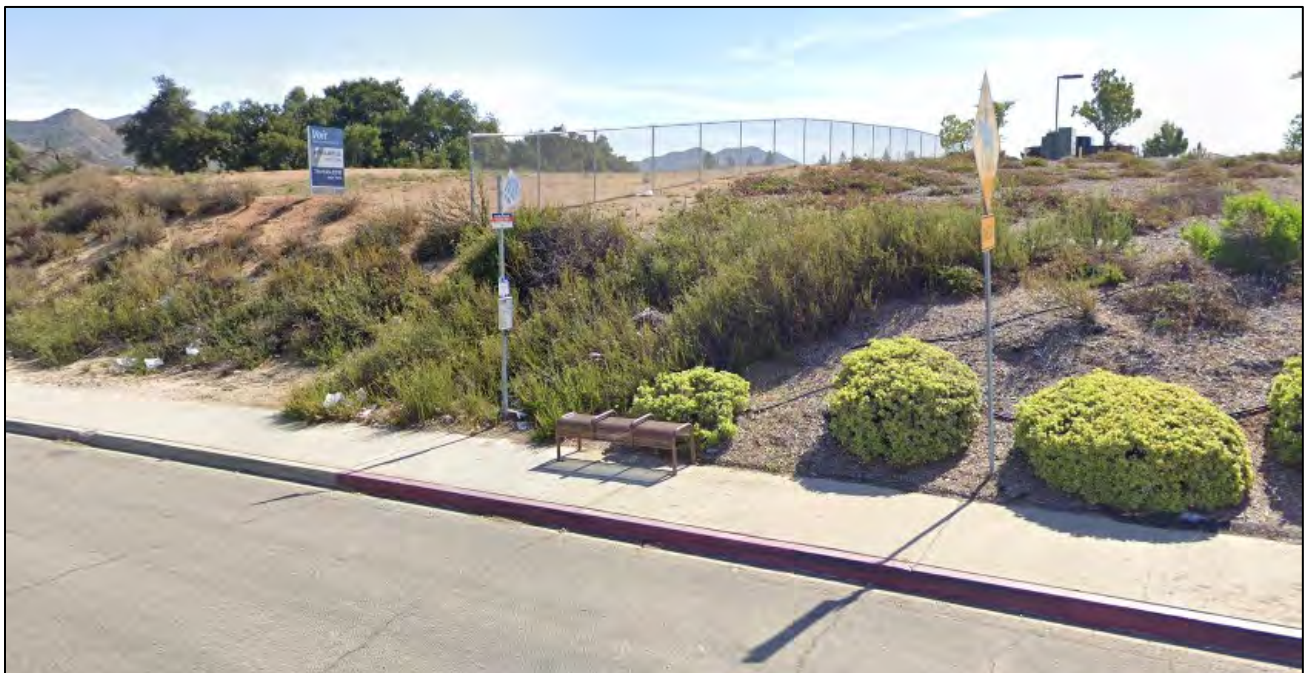
At this intersection it is recommended to restripe the existing crosswalks with high visibility continental markings to the satisfaction of the City engineer. **Figure 11-4** depicts the recommended improvements at this location.



11.4.4 *Other Locations*

The following active transportation improvements should also be considered:

- If feasible, enhance the existing bus stop located on the east side of Inland Valley Drive (stop ID: 1338) with a bus shelter and trash receptacle outside the sidewalk area consistent with Riverside Transit Authority (RTA) design standards.



- Provide short-term bicycle parking on-site to current City standards.

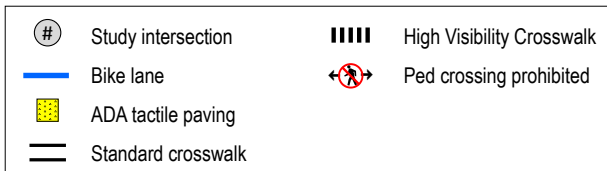
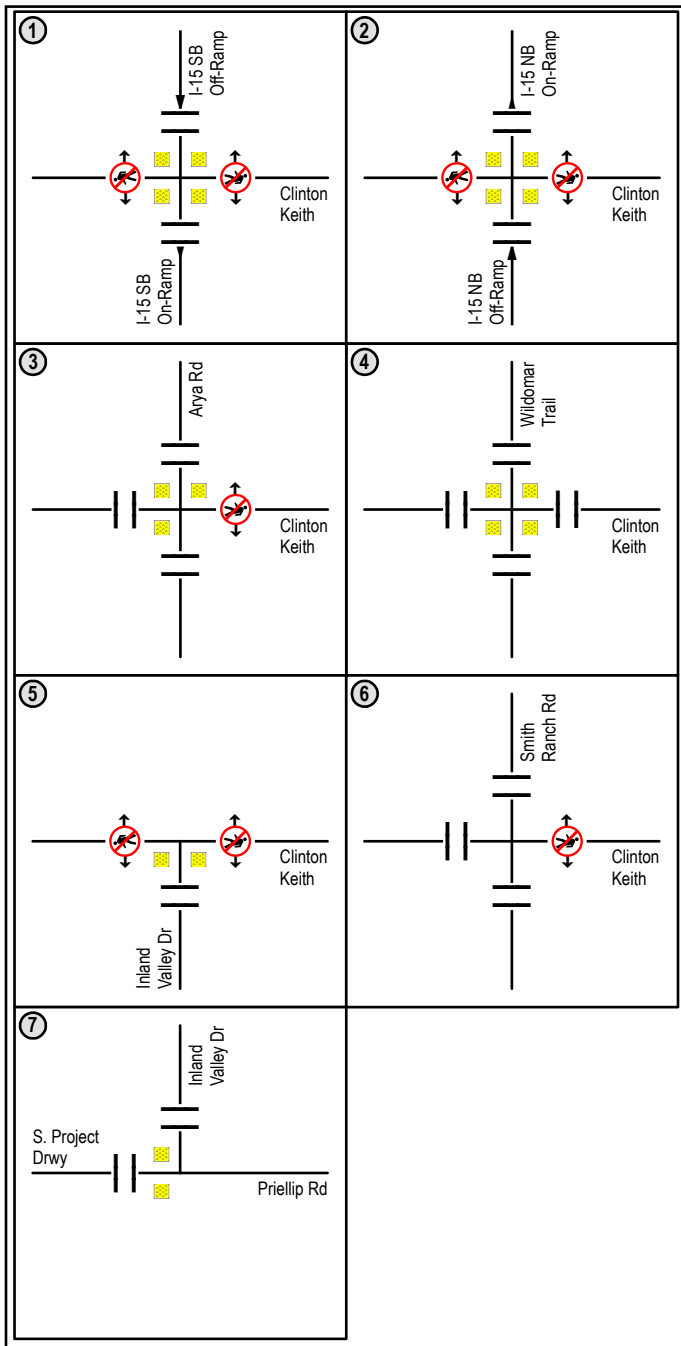
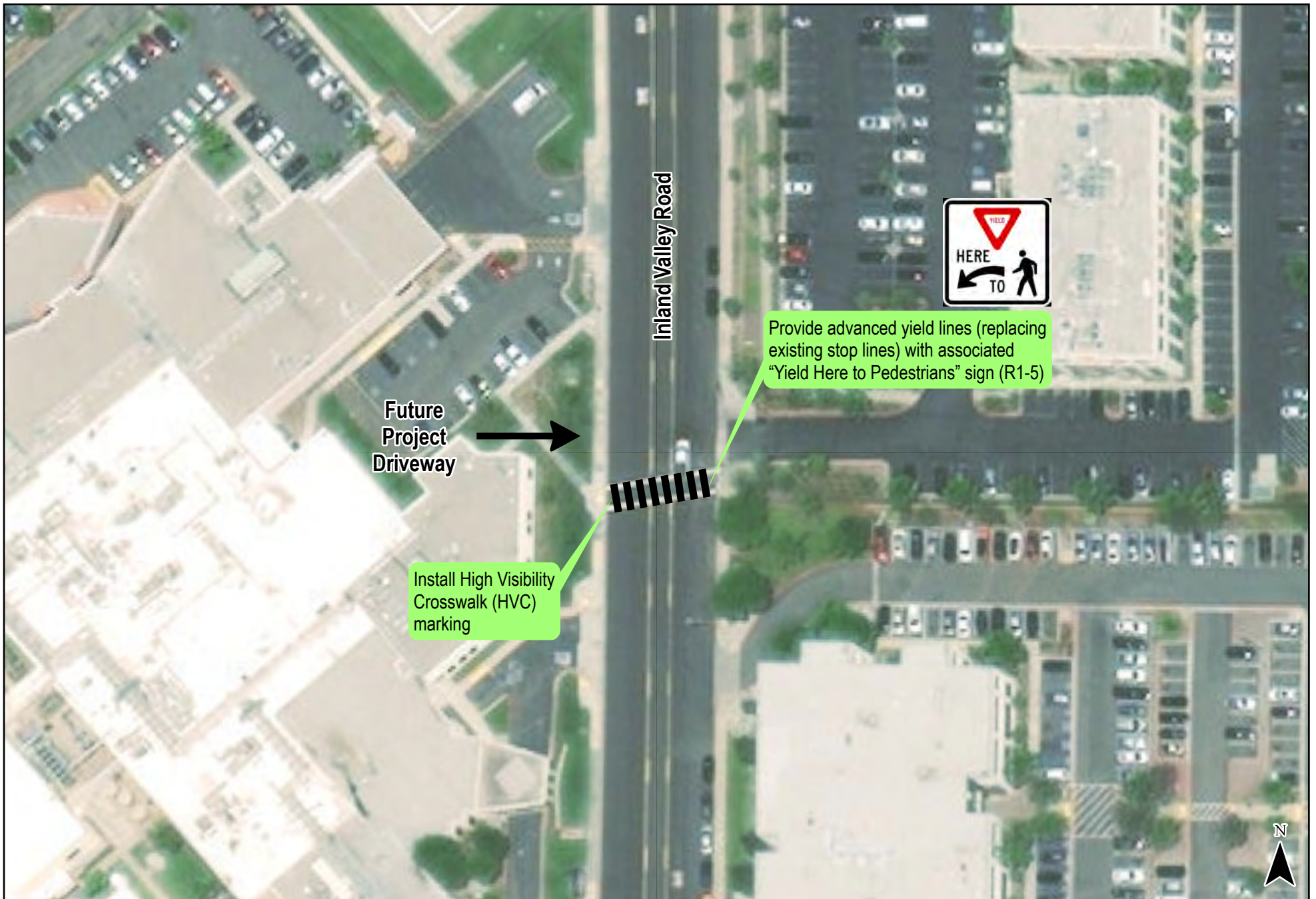


Figure 11-1
Active Transportation Conditions







Install High Visibility Crosswalk (HVC) marking on EB and SB legs

Project Driveway →

Inland Valley Road

Prielipp Road



12.0 IMPROVEMENTS AND RECOMMENDATIONS

12.1 Operational Deficiencies

Based on the intersection and segment analyses provided in this report, the following operational deficiencies are noted.

12.1.1 Existing Conditions

The following facilities are calculated to exceed the target LOS under existing conditions:

- Street Segment #3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road – LOS F
- Street Segment #4. Inland Valley Drive: Clinton Keith Road to Prielipp Road – LOS F

12.1.2 Near-Term Opening Year 2026 Conditions

The following facilities are calculated to exceed the target LOS under Near-Term Opening Year 2026 conditions:

- Intersection #3. Clinton Keith Road / Arya Road – LOS F (AM/PM peak hours)
- Street Segment #1. Clinton Keith Road: Arya Road to Wildomar Trail – LOS E
- Street Segment #2. Clinton Keith Road: Wildomar Trail to Inland Valley Drive – LOS F
- Street Segment #3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road – LOS F
- Street Segment #4. Inland Valley Drive: Clinton Keith Road to Prielipp Road – LOS F

12.2 Level of Service Improvements

12.2.1 Existing Conditions

The following improvements have been identified to address the LOS deficiencies identified under existing conditions:

TRA-1. ***Street Segment #3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road*** – The City of Wildomar Capital Improvement Program (CIP) includes the ultimate widening of Clinton Keith Road (CIP No. 025-1). Phase 1 of this project, which will provide four lanes of traffic and bike lanes between Wildomar Trail to the east City limits, is funded with construction imminent and anticipated to be complete prior to Opening Year 2026. This improvement is assumed in Near-Term Opening Year 2026 conditions and would improve existing street segment operations to LOS B or better as shown in ***Table 12-1***.

TRA-2. ***Street Segment #4. Inland Valley Drive: Clinton Keith Road to Prielipp Road*** – Inland Valley Drive from Clinton Keith Road to Prielipp Road is currently built as a two-lane collector. A two-way left-turn lane is provided along the southern portion of this segment in the area fronting the Project site on the west side of the roadway and other existing medical office buildings on the east side of the roadway. The parcels fronting Inland Valley Drive north of this area have not been developed and frontage improvements have not been completed.

Inland Valley Drive has an ultimate classification of 4-Lane Secondary Collector according to Wildomar Circulation Plan.

Street improvements for Inland Valley Drive from Clinton Keith Rd to Prielipp Rd are listed in the City of Wildomar Development Impact Fee (DIF) program (Table 3.1). Per the City of Wildomar 2015 Impact Fee Study Update:

“the two inside travel lanes across the frontage of any development project are considered project improvements necessary for access to the development, and therefore will be the direct responsibility of abutting developers on either side of the street. Any additional street improvements...are covered by the impact fees calculated in this chapter.”

Therefore, much of the necessary widening and frontage improvements to improve Inland Valley Drive to a Secondary Collector will be the responsibility of abutting developers as the parcels north of the Project site develop. The remaining street improvements are covered by the impact fees calculated. As the required improvement is included in an existing traffic impact fee program to which the Project will pay into, payment of those fees constitutes an appropriate contribution to the deficiency identified and no further payment or improvements are required. This improvement would improve existing street segment operations to LOS A as shown in *Table 12-1*.

**TABLE 12-1
EXISTING STREET SEGMENT OPERATIONS**

#	Street Segment	ADT ^a	Existing			Existing w/ Improvements		
			Capacity ^b	LOS ^c	LOS Threshold Exceeded?	Capacity	LOS	LOS Threshold Exceeded?
TRA-1	Clinton Keith Road 3. Inland Valley Drive to Smith Ranch Road	23,440	13,000	F	Yes	35,900	B	No
TRA-2	Inland Valley Drive 4. Clinton Keith Road to Prielipp Road	11,760	13,000	F	Yes	25,900	A	No

Footnotes:

- a. Average Daily Traffic Volumes.
- b. Capacities based on Riverside County Roadway Classification Table.
- c. Level of Service.

12.2.2 Near-Term Opening Year 2026 Conditions

The following improvements have been identified to address the LOS deficiencies identified in Near-Term Opening Year 2026 conditions. Each improvement was evaluated to determine if it is an eligible facility in the WRCOG/CVAG TUMF or other approved funding mechanism. If improvements with an approved funding mechanism can provide the target LOS, payment into the TUMF (and/or other

adopted funding program) will be considered as the project's cumulative contribution toward the identified improvements. For improvements needed beyond those eligible within an adopted funding program that project's proportionate fair share contribution is identified.

TRA-3. **Intersection #3. Clinton Keith Road / Arya Road** – Traffic signal improvements at Clinton Keith Road / Arya Drive to modify the intersection to its ultimate configuration are identified in the City of Wildomar DIF program. The Impact Fee share is planned to be 50% of the total cost of the improvement. The Project will contribute required impact fees that will partially fund this improvement. The Project will also contribute a fair share of 5.0% to the unfunded cost of the improvement, not to exceed 50% of the total cost.

TRA-4. **Street Segment #1. Clinton Keith Road: Arya Road to Wildomar Trail** – This street segment is built to its ultimate six lane cross-section. However, the signalized intersections on Clinton Keith Road from the I-15 interchange to Wildomar Trail are closely spaced and these intersections provide the transportation constraint on operational capacity on this segment. Intersection #4, Clinton Keith Road / Wildomar Trail is calculated to operate at LOS D or better. Intersection #3, Clinton Keith Road / Arya Drive is calculated to be deficient, but improvements are identified in TRA-3. The Project will also contribute a fair share of 5.7%, based on the Project's weighted average fair share across the corridor, to signal synchronization along Clinton Keith Road.

Traffic signal improvements at Clinton Keith Road / Wildomar Trail are also identified in the City of Wildomar DIF program, to which the Project will contribute required fees.

TRA-5. **Street Segment #2. Clinton Keith Road: Wildomar Trail to Inland Valley Drive** – Phase 2 (ultimate widening) will provide six lanes of traffic and bike lanes on Clinton Keith Road from I-15 to Elizabeth Lane as part of the City of Wildomar Capital Improvement Program (CIP No. 025-1). Clinton Keith Road Widening Phase 2 is eligible for funding from the Transportation Uniform Mitigation Fees (TUMF) program. The Project's required payment into the TUMF program represents the Project's contribution toward this improvement. As shown in **Table 12-2**, this street segment would operate at acceptable LOS D following completion of this improvement. The Project will also contribute a fair share of 5.7%, based on the Project's weighted average fair share across the corridor, to signal synchronization along Clinton Keith Road.

Intersection improvements on Clinton Keith Road at Wildomar Trail, Inland Valley Drive, and Smith Ranch Road are also identified in the City of Wildomar DIF program, which would contribute toward improved traffic operations on Clinton Keith Road.

TRA-6. **Street Segment #3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road** - Phase 2 (ultimate widening) will provide six lanes of traffic and bike lanes on Clinton Keith Road from I-15 to Elizabeth Lane as part of the City of Wildomar Capital Improvement Program (CIP No. 025-1). The Project's required payment into the TUMF program represents the Project's contribution toward this improvement. As shown in **Table 12-2**, this street

segment would operate at LOS B following completion of this improvement. The Project will also contribute a fair share of 5.7%, based on the Project's weighted average fair share across the corridor, to signal synchronization along Clinton Keith Road.

TRA-7. **Street Segment #4. Inland Valley Drive: Clinton Keith Road to Prielipp Road** – The completion of TRA-2 would also address this deficiency in Near-Term Opening Year 2026 conditions. As shown in *Table 12–2*, this street segment would operate at LOS C in Near-Term Opening Year 2026 conditions with the completion of this improvement.

TRA-8. **Project Access #A. Inland Valley Drive / Northerly Project Driveway**: Provide a fair share contribution of 31.3% toward the future signalization of this driveway. The future traffic signal should provide north-south protected left-turn phasing. As shown in *Table 10–4*, this intersection would operate at LOS B or better following completion of this improvement.

**TABLE 12-2
NEAR-TERM STREET SEGMENT OPERATIONS**

#	Street Segment	ADT ^a	Near-Term with Project			Near-Term with Project w/ Improvements		
			Capacity ^b	LOS ^c	LOS Threshold Exceeded?	Capacity	LOS	LOS Threshold Exceeded?
	Clinton Keith Road							
TRA-4	3. Arya Drive to Wildomar Trail	50,089	53,900	E	Yes	53,900	E	No ^d
TRA-5	4. Wildomar Trail to Inland Valley Drive	47,478	35,900	F	Yes	53,900	D	No
TRA-6	5. Inland Valley Drive to Smith Ranch Road	36,656	35,900	F	Yes	53,900	B	No
	Inland Valley Drive							
TRA-7	6. Clinton Keith Road to Prielipp Road	19,833	13,000	F	Yes	25,900	C	No

Footnotes:

- a. Average Daily Traffic Volumes.
- b. Capacities based on Riverside County Roadway Classification Table.
- c. Level of Service.
- d. Segment is built to its ultimate capacity, however, TRA-3, TRA-4 will improve operations at the signalized intersections bounding this segment. These intersections are the constraint on operational capacity on this short segment.

12.3 Fair Share

The project’s fair share was identified for improvements needed beyond those eligible within an adopted funding program. **Table 12-4** provides the fair share calculations. Fair share calculations were completed using the trips associated with the development of the proposed Project in Near-Term Opening Year 2026 conditions. The fair share was calculated using the following formula:

$$\text{Fair Share \%} = \frac{\text{Project Traffic Volumes}}{\text{Buildout (With Project) Traffic Volumes} - \text{Existing Traffic Volumes}}$$

For intersections, the combined AM and PM peak hour volumes were used to calculate the fair share percentages. For street segments, the ADT volumes were used.

**TABLE 12-4
FAIR SHARE CALCULATIONS**

MM#	Location	Near-Term Opening Year 2026 with Project		Improvement Cost Estimate	
		Formula	Fair Share % ^a	Total Cost	Fair Share (\$)
TRA-3	Intersection #3. Clinton Keith Road / Arya Drive	$\frac{182}{(9,578-5,970)} =$	5.0%	\$111,464 ^b	\$5,573
TRA-4	Segment #1. Clinton Keith Road: Arya Drive to Wildomar Trail	$\frac{1,098}{(50,089-31,650)} =$	6.0%	—	—
TRA-5	Segment #2. Clinton Keith Road: Wildomar Trail to Inland Valley Drive	$\frac{1,098}{(47,478-29,790)} =$	6.2%	—	—
TRA-6	Segment #3. Clinton Keith Road: Inland Valley Drive to Smith Ranch Road	$\frac{641}{(36,656-23,440)} =$	4.9%	—	—
TRA-4, 5, 6	Clinton Keith Road: Arya Drive to Smith Ranch Road (Average)	$\frac{946}{(44,741-28,293)} =$	5.7%	\$16,000 ^c	\$912
TRA-8	Inland Valley Drive / N. Project Driveway	$\frac{305}{(2,623-1,649)} =$	31.3%	\$250,000	\$78,250

Footnotes:

- a. Fair share = Project Traffic / (Total Traffic – Existing Traffic)
- b. Total cost of intersection improvements per City of Wildomar DIF program is \$222,928. The impact fee is planned to cover 50% of the cost of the improvements. The Project’s fair share is calculated based on the remaining 50%.
- c. The cost of this improvement is calculated for the Clinton Keith Road corridor between Arya Drive and Smith Ranch Road. Corridor includes four (4) signalized intersections. Local timing, coordination timing, field support, and stamped timing sheet estimated at \$4,000 per intersection.

12.4 Summary of Other Recommended Improvements

The following site access improvements are recommended:

- All project access driveways shall be evaluated to ensure adequate sight distance is provided to the satisfaction of the City engineer.
- All project access driveways shall be evaluated to ensure adequate turning radius using emergency response design vehicle.
- Provide enhanced signage to improve visibility and direct users (i.e., patients, visitors, staff, ambulance, and service/loading) to the appropriate areas.

In addition, the following active transportation improvements should be considered:

- Inland Valley Drive / Northerly Project Access / Stonebridge Medical Center Northerly Access
 - As discussed in *Section 10.0*, signalization of this intersection is anticipated in the future with traffic volumes from area development added to those generated by the Project. At that time, the future signal will provide a controlled pedestrian crossing and pedestrian crossing activity north of Prielipp Road should be channelized to this location.
 - Pending the future signal, the existing marked crosswalk located near the Stonebridge Medical Center Southerly Access provides a convenient location located approximately at the mid-point of developed parcels on either side of the roadway. Additional uncontrolled crossings are not recommended.
- Inland Valley Drive / Stonebridge Medical Center Southerly Access (between Inland Valley Medical Center ambulance and surgery center access)
 - Provide Yield Here to Pedestrians (R1-5) signage in advance of crosswalk.
 - Consider restriping existing solid stop bar with yield lines per MUTCD.
 - Restripe the crosswalk with a high-visibility crosswalk marking pattern.
- Inland Valley Drive / Prielipp Road
 - Restripe the existing crosswalks with high visibility continental markings to the satisfaction of the City engineer.
- If feasible, enhance the existing bus stop located on the east side of Inland Valley Drive (stop ID: 1338) with a bus shelter and trash receptacle outside the sidewalk area consistent with Riverside Transit Authority (RTA) design standards.
- Provide short-term bicycle parking on-site to current City standards.

13.0 VEHICLE MILES TRAVELED OVERVIEW

This section presents an overview and background on the VMT and the implementation of California State Law Senate Bill 743 (SB 743) requiring its use in the evaluation of transportation impacts for CEQA.

13.1 VMT Background

VMT is defined as the “amount and distance of automobile travel attributable to a project” per CEQA Guidelines Section 15064.3. VMT is a measure of the use and efficiency of the transportation network as well land uses in a region. VMTs are calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (roundtrip) travel and is estimated for a typical weekday for the purposes of measuring transportation impacts.

13.2 Senate Bill 743

In September 2013, the Governor’s Office signed SB 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. These changes include the elimination of auto delay, level of service (LOS), and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. The guidance identifies VMT as the most appropriate CEQA transportation metric, along with the elimination of Auto Delay/LOS for CEQA purposes statewide. The justification for this paradigm shift is that Auto Delay/LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions.

In December 2018, after over five years of stakeholder-driven development, the California Natural Resource Agency certified and adopted the CEQA Statute. Effective July 1, 2020, the VMT guidelines shall apply statewide.

13.3 CEQA Statute

The following is an excerpt from *Section 15064.3 Determining the Significance of Transportation Impacts*.

Subdivision (a): Purpose

This section describes specific considerations for evaluating a project’s transportation impacts. Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, “vehicle miles traveled” refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project’s effect on automobile delay shall not constitute a significant environmental impact.

Subdivision (b): Criteria for Analyzing Transportation Impacts

While subdivision (a) sets forth general principles related to transportation analysis, subdivision (b) focuses on specific criteria for determining the significance of transportation

impacts. It is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology.

Subdivision (b)(1): Land Use Projects

Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

Subdivision (b)(2): Transportation Projects

Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

Subdivision (b)(3): Qualitative Analysis

If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

Subdivision (b)(4): Methodology

A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

Subdivision (c): Applicability

The provisions of this section shall apply prospectively as described in section 15007. A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide.

13.4 Local / Regional Agency Transition to SB743

The City of Wildomar is currently in the process of developing its inaugural comprehensive Mobility Element and Active Transportation Plan, as well as updated guidelines for the preparation of transportation studies.

However, the City has adopted VMT CEQA Threshold Policy Guidelines by City Council Resolution (June 10, 2020). For detailed analysis, screening, and methodology this report relies on the County of Riverside's *Transportation Analysis Guidelines* (December 2020) which incorporate SB 743 and CEQA VMT analysis, except as it differs from the City of Wildomar's recommended VMT thresholds.

14.0 VMT ANALYSIS METHODOLOGY

Per the City guidance, each project will be evaluated to determine if it can be screened from needing a separate VMT analysis. The determination will be made during the Pre-Application Review or during consultation with the Planning Department prior to making application. These screening determinations are not absolute, and the City may determine that a project specific VMT analysis must be prepared to support the project.

For projects that do not screen out of VMT analysis the project generated VMT is compared to the VMT expected to be generated by the General Plan land use assumed for the project site.

14.1 Project Screening

When a project is being considered, the first task will be to see if it should be screened out of needing to conduct a detailed VMT analysis.

The following projects are considered to have a de minimis effect on VMT and the City may determine that a project specific VMT analysis is unnecessary.

- Any project that generates or attracts 110 or fewer daily trips. This generally corresponds to the following “typical” development potentials:
 - 11 single family housing units
 - 16 multi-family, condominiums, or townhouse 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
- Projects statutorily or categorically exempt from CEQA.
- Locally serving retail 50,000 square feet or less
- Mixed use projects with at least 30 percent residential

This list is based on the Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* and should be considered preliminary with an expectation that the City will amend it over time.

As the list of screening criteria provided in the City’s adopted resolution should be considered preliminary, the following list of screening criteria per the County of Riverside and other local jurisdictions were considered in screening for project types presumed to cause a less-than-significant impact:

- Projects near high-quality transit

- Affordable housing
- Local essential service (local-serving day care, police or fire facility, medical/dental building under 50,000 square feet, government offices, local or community parks)
- Map-based screening (area of development is under threshold as shown in screening map as allowed by Transportation Department)
- Office and other employment-related land uses reducing commutes outside the local area.
- Local-serving day care centers, pre-K and K-12 schools
- Local parks and civic uses
- Local-serving gas stations, banks, and hotels (e.g., non-destination hotels)
- Local serving community colleges that are consistent with SCAG RTP/SCS assumptions
- Student housing projects

Generally, projects that require a General Plan Amendment or are of sufficient size to require an environmental impact report would need to conduct a project-specific analysis of VMT using the City’s adopted methodology. Not all larger projects would automatically result in greater VMT however, so each project will be reviewed, and a determination made.

14.2 VMT Assessment for Non-Screened Development

Based on the adopted resolution, the City of Wildomar recommends that the Riverside County Travel Demand Model (RIVTAM) for calculating the appropriate VMT per service population in the region. This methodology will be used for conducting detailed VMT assessments for projects not screened out using the criteria above.

14.3 VMT Impact Significance Thresholds

14.3.1 CEQA Thresholds

The City of Wildomar has selected VMT thresholds of significance based on guidance the Western Riverside Council of Governments (WRCOG) Implementation Study adjusted by City staff to meet the needs of the City.

Related to the City’s approach to VMT in comparing a project to the City’s General Plan Update and EIR and the potential analysis of CEQA VMT Impact Thresholds, two sections of CEQA are important to consider first:

1. Section 15183. Projects Consistent with a Community Plan or Zoning

- (a) CEQA mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether

there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.

2. Section 15130. Discussion of Cumulative Impacts

(e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in CEQA Section 15183(j).

As such, and as noted above projects that are consistent with the General Plan Update EIR do not typically require additional environmental review, except in certain situations. Therefore impacts, whether in the local context or cumulative would start with consideration of the land use in the General Plan. Additionally, projects should consider whether a potential impact is addressed in the City's General Plan.

14.3.2 *City Thresholds*

WRCOG evaluated potential VMT threshold within the context of SB 743, legal opinions related to the legislation, proposed CEQA Guidelines updates, and the Technical Advisory produce by OPR.

Fehr & Peers examined the OPR recommendation of a 15 percent reduction and concluded that a rural-suburban area such as Wildomar would struggle to achieve this level of reduction as many VMT reduction strategies assume an urban and transit rich environment.

Therefore, City staff recommended the City adopt the Southern California Association of Governments (SCAG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) future year VMT projects by jurisdiction or subregion thresholds. The portion of the RTP/SCS that affects Wildomar is based on the land use element of the City's General Plan. As such, this assumes that projects consistent with the General Plan are also consistent with the RTP/SCS and should not require additional analysis for VMT.

Projects that require amendment to the General Plan that trigger an EIR will need to complete a VMT analysis. Other amendments to the General Plan would need to be evaluated on a case-by-case basis.

Future projects must demonstrate that they will reduce existing VMT by at least 3 percent. Projects that cannot demonstrate a 3 percent reduction in VMT will be required to conduct additional analysis and add mitigation as appropriate. If project design or operational features cannot reduce VMT below the threshold then an EIR may be required for the City to consider a statement of overriding considerations.

15.0 PROJECT VMT ANALYSIS

15.1 General Plan Consistency

The Project is consistent with the adopted General Plan Land Use Element. According to the City of Wildomar's adopted threshold, it is assumed that projects consistent with the General Plan are also consistent with the RTP/SCS and should not require additional analysis for VMT.

It is therefore concluded that the project would not result in a significant CEQA impact.

15.2 Project Screening

Based on the VMT screening criteria in *Section 14.1*, the project falls under the "office and other employment-related land uses reducing commutes outside the local area" category that presumes a less than significant VMT impact would occur with the proposed land use. The Project has been determined to be consistent with the adopted General Plan, therefore, no further analysis is required. However, an analysis of substantial evidence of the project's employment reducing commutes outside the local area is also provided informationally.

Per CEQA Section 15064.3 "Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be considered to have a less than significant transportation impact." The expansion of the Inland Valley Medical Center will provide additional employment opportunities for area residents that may otherwise commute farther distances outside the region in search of employment.

Substantial evidence for this conclusion is provided by an evaluation of the geographic distribution of employees at the existing Inland Valley Medical Center. *Table 15-1* provides a summary of the distribution of current employees by ZIP code. Included in *Table 15-1* are all ZIP codes containing five or more employees, representing over 92% of the total current employment at the IVMC.

Also calculated in *Table 15-1* is the average commute time to and from each of these ZIP codes during the AM/PM peak hours, which are ultimately averaged and weighted by the proportion of IVMC employees in each are to determine the average commute time for the existing site. The inbound travel time is based on travel during the AM peak period (7-9 AM) and the outbound travel time is based on travel during the PM peak period (4-6 PM). While employee shifts vary at the IVMC, this approach provides a commute time comparable to the citywide average.

This average commute time to/from the IVMC was then compared to the citywide average commute time as obtained from the most recently available American Community Survey data. As shown in *Table 15-1*, the typical commute to/from the Project site is substantially less than the citywide average for Wildomar. The average commute to/from the Project site is estimated to be 21.0 minutes or about 40% less than the average commute for all Wildomar. The expansion of employment associated with the Project will provide additional opportunities to area residents in closer proximity that the current average commute.

Based on this the VMT/Employee would be below the City's significance threshold of at least 3% below existing VMT/Employee and is considered to have a less than significant transportation impact. Additionally, although the project is not located within a Transit Priority Area, there is bus service immediately adjacent to the site, with stops on Inland Valley Drive and Prielipp Road, which has the potential for increased ridership and/or service in the future that would further reduce project VMT.

**TABLE 15-1
PROJECT VERSUS CITYWIDE COMMUTE TIME**

ZIP Code	# of Employees	Distance to IVMC (mi.)	Inbound Travel Time (min.)	Outbound Travel Time(min.)	Average Travel Time (min.)
92081	5	38.7	40	40	40
92223	5	49.4	45	50	47.5
92548	5	21.0	24	26	25
92553	5	30.4	30	35	32.5
92557	5	34.5	35	40	37.5
92026	6	34.2	30	30	30
92069	6	36.2	35	35	35
92879	6	29.4	28	30	29
92555	7	42.4	40	45	42.5
92582	7	26.8	40	40	40
92590	9	15.1	22	22	22
92057	10	32.4	30	35	32.5
92583	12	33.3	40	45	42.5
92543	13	22.1	30	30	30
92570	13	19.3	24	26	25
92544	15	37.5	70	75	72.5
92028	16	23.0	24	26	25
92883	16	20.8	22	24	23
92571	18	20.5	24	26	25
92587	24	14.0	20	22	21
92545	26	21.2	28	30	29
92585	32	17.5	18	20	19
92586	33	13.9	18	20	19
92532	41	9.4	14	14	14
92596	60	13.6	22	24	23
92530	75	17.9	26	28	27
92595	94	3.1	8	8	8
92591	99	12.6	16	18	17
92584	136	8.8	14	16	15
92592	159	20.9	26	30	28
92562	206	12.1	20	22	21
92563	219	7.2	14	16	15
Inland Valley Medical Center					21.0^a
City of Wildomar					37.4^b
Difference: Minutes/Percent					-16.4 /-43%

Footnotes:

- a. Average commute time to IVMC weighted by number of employees (existing).
- b. Source: 2019 American Community Survey 5-Year Estimates (Table DP03).

16.0 SIGNIFICANT VMT IMPACTS AND MITIGATION MEASURES

Given the project is presumed less than significant as proposed, no mitigation measures with respect to VMT are required.

Recommendations are made in this report to facilitate improved vehicular and non-vehicular circulation and site access, as discussed in detail in *Section 12.0*.

TECHNICAL APPENDICES
INLAND VALLEY MEDICAL CENTER EXPANSION
Wildomar, California
July 26, 2021

LLG Ref. 3-19-3093

**Linscott, Law &
Greenspan, Engineers**

4542 Ruffner Street
Suite 100

San Diego, CA 92111

858.300.8800 T

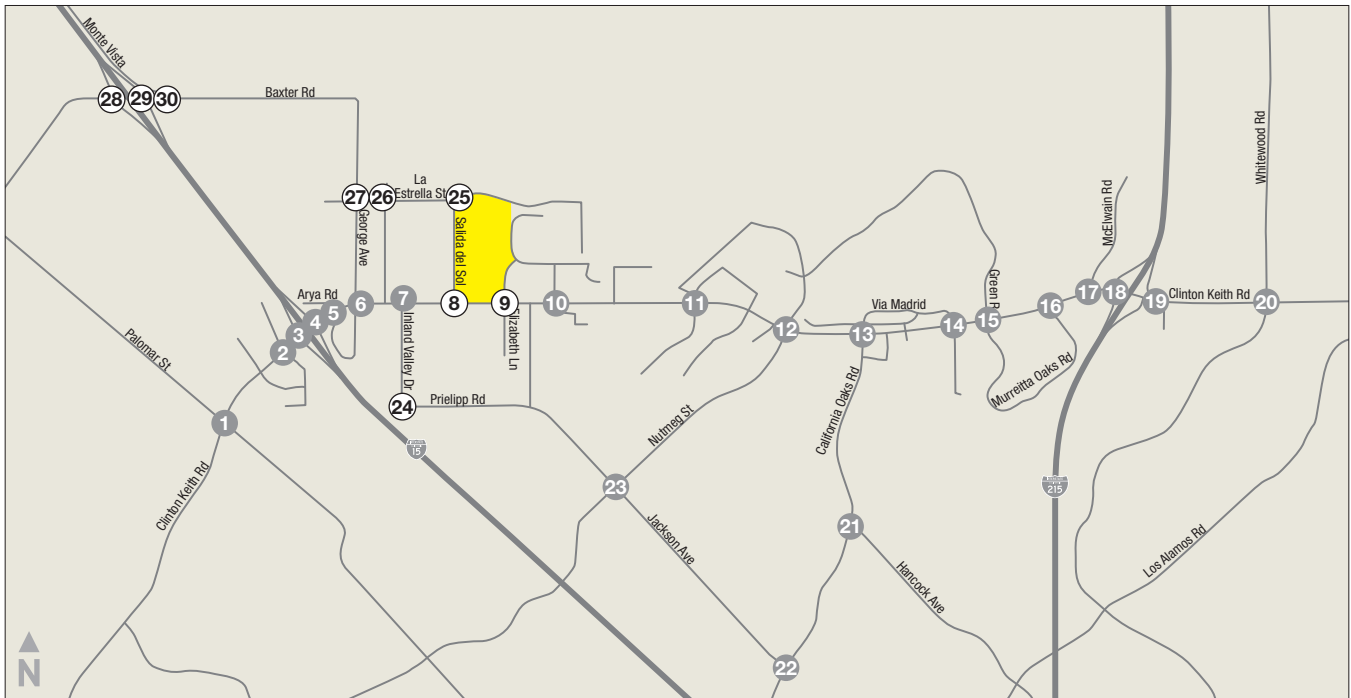
858.300.8810 F

www.llgengineers.com

APPENDIX A
INTERSECTION & SEGMENT COUNT SHEETS

2016 – 2019 COUNTS – FOR ANALYSIS

Figure 4 Existing (Year 2016) Intersection Peak Hour Traffic Volumes

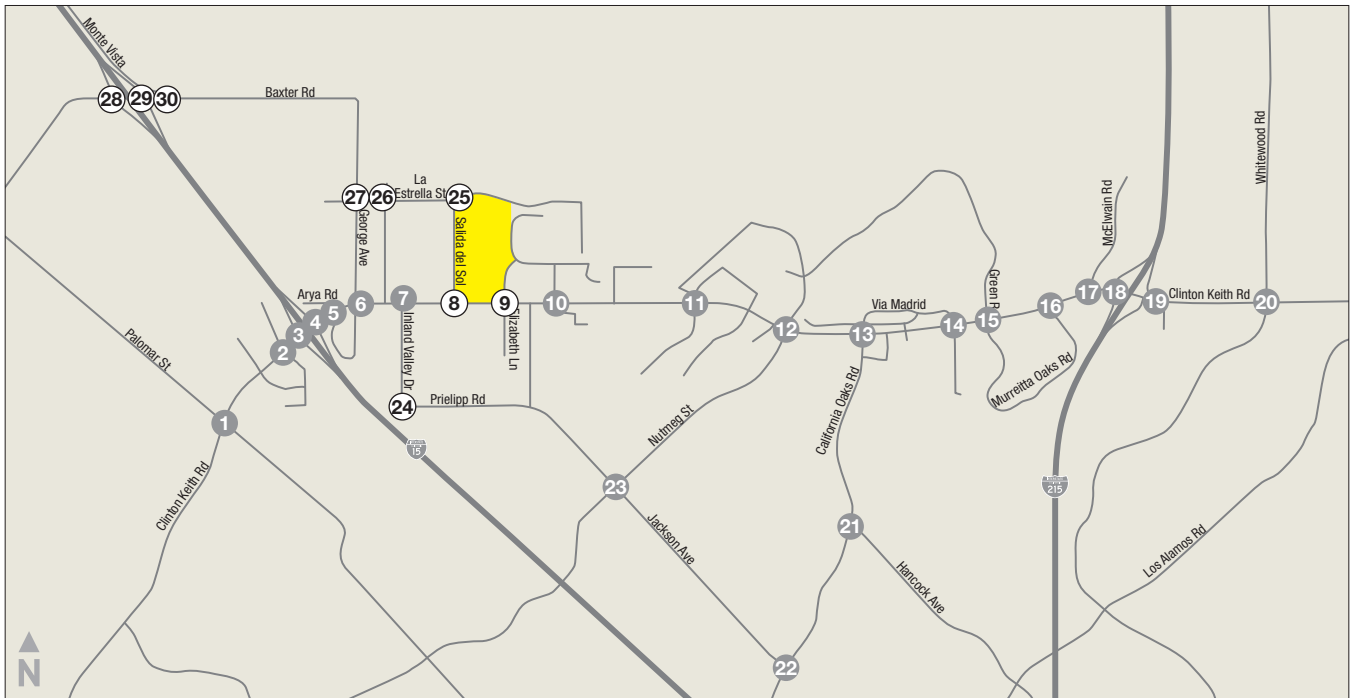


<p>Clinton Keith Rd/Palomar St</p>	<p>Clinton Keith Rd/Hidden Springs Rd</p>	<p>Clinton Keith Rd/I-15 SB Ramps</p>	<p>Clinton Keith Rd/I-15 NS Ramps</p>	<p>Clinton Keith Rd/Arya Rd</p>
<p>Clinton Keith Rd/George Ave</p>	<p>Clinton Keith Rd/Inland Valley Dr</p>	<p>Clinton Keith Rd/Salida del Sol</p>	<p>Clinton Keith Rd/Elizabeth Ln</p>	<p>Clinton Keith Rd/Smith Ranch Rd</p>
<p>Clinton Keith Rd/Copper Craft Dr</p>	<p>Clinton Keith Rd/Nutmeg St</p>	<p>Clinton Keith Rd/California Oaks Rd</p>	<p>Clinton Keith Rd/Via Madrid</p>	<p>Clinton Keith Rd/Greer Rd</p>

Legend

- Study Intersection
- Unsignalized Intersections
- ###/### AM/PM Turning Movement Volume

Figure 4 Existing (Year 2016) Intersection Peak Hour Traffic Volumes



<p>Clinton Keith Rd / Murreitta Oaks Rd</p>	<p>Clinton Keith Rd/McElwain Rd</p>	<p>Clinton Keith Rd/I-215 SB Ramps</p>	<p>Clinton Keith Rd/I-215 NB Ramps</p>	<p>Clinton Keith Rd/Whitewood Rd</p>
<p>California Oaks/Hancock Ave</p>	<p>California Oaks/Jackson Ave</p>	<p>Nutmeg Street/Jackson Ave</p>	<p>Inland Valley/Prielipp Rd</p>	<p>La Estrella St/Salida del Sol</p>
<p>La Estrella St/Iodine Springs Rd</p>	<p>La Estrella St/George Ave</p>	<p>Baxter Rd/SB I-15 Ramps</p>	<p>Baxter Rd/NB I-15 Ramps</p>	<p>Baxter Rd/Monte Vista</p>

Legend

- Study Intersection
- Unsignalized Intersections
- AM/PM Turning Movement Volume

As shown in Table 4, all study area intersections currently operate at acceptable LOS under Existing (Year 2016) Conditions with the exception of the following 4 intersections:

- Palomar Street/Clinton Keith Road : LOS E in the AM peak hour
- California Oaks Road/Clinton Keith Road: LOS F in the AM peak hour
- Murrieta Oaks Avenue/Clinton Keith Road: LOS E in the AM peak hour and LOS F in the PM peak hour
- Whitewood Road and Clinton Keith Road: LOS F in the PM peak hour

3.9 Existing Roadway Segment LOS

Table 5 provides a summary of the Existing (Year 2016) Conditions roadway segment capacity analysis based on the capacity thresholds identified on Table 3. As shown on Table 5, 2 out of the 8 existing study area roadway segments exceed the average daily vehicle capacity thresholds.

Table 5: Existing Roadway Segment Analysis

ID	Roadway	From	To	# Lanes	Estimated Daily Capacity	2016	V/C Ratio
A	Clinton Keith	Palomar	Hidden Springs	4D	34,100	25,484	0.75
B	Clinton Keith	Inland Valley	Salida del Sol	2U	13,000	18,911	1.45
C	Clinton Keith	Salida del Sol	Elizabeth	2U	13,000	18,973	1.46
D	Clinton Keith	Nutmeg	California Oaks	4U	34,100	22,968	0.67
E	Clinton Keith	Greer	Murieta Oaks	4U	34,100	32,517	0.95
F	Clinton Keith	West of Whitewood		6U	53,900	13,898	0.26
G	Baxter	East of Monte Vista		2U	13,000	3,303	0.25
H	La Estrella	East of George		2U	13,000	1,209	0.09

Bolded: Potentially exceeds capacity (v/c 1.01-1.25); **Bolded and Shaded:** Exceeds capacity (v/c >1.26)

As indicated in Section 2.5, the roadway segment analysis is used as a planning tool to evaluate the adequacy of existing roadway segment capacities. A v/c ratio of greater than 1.01 to 1.25 suggests that additional review is required; however, if adjacent intersections provide the lanes needed to achieve acceptable peak hour LOS, then segment capacity improvements between key intersections may not be needed. For roadway segments significantly exceeding capacity (v/c ratio > 1.25) then additional through lane roadway capacity and intersection improvements are more likely to be needed.

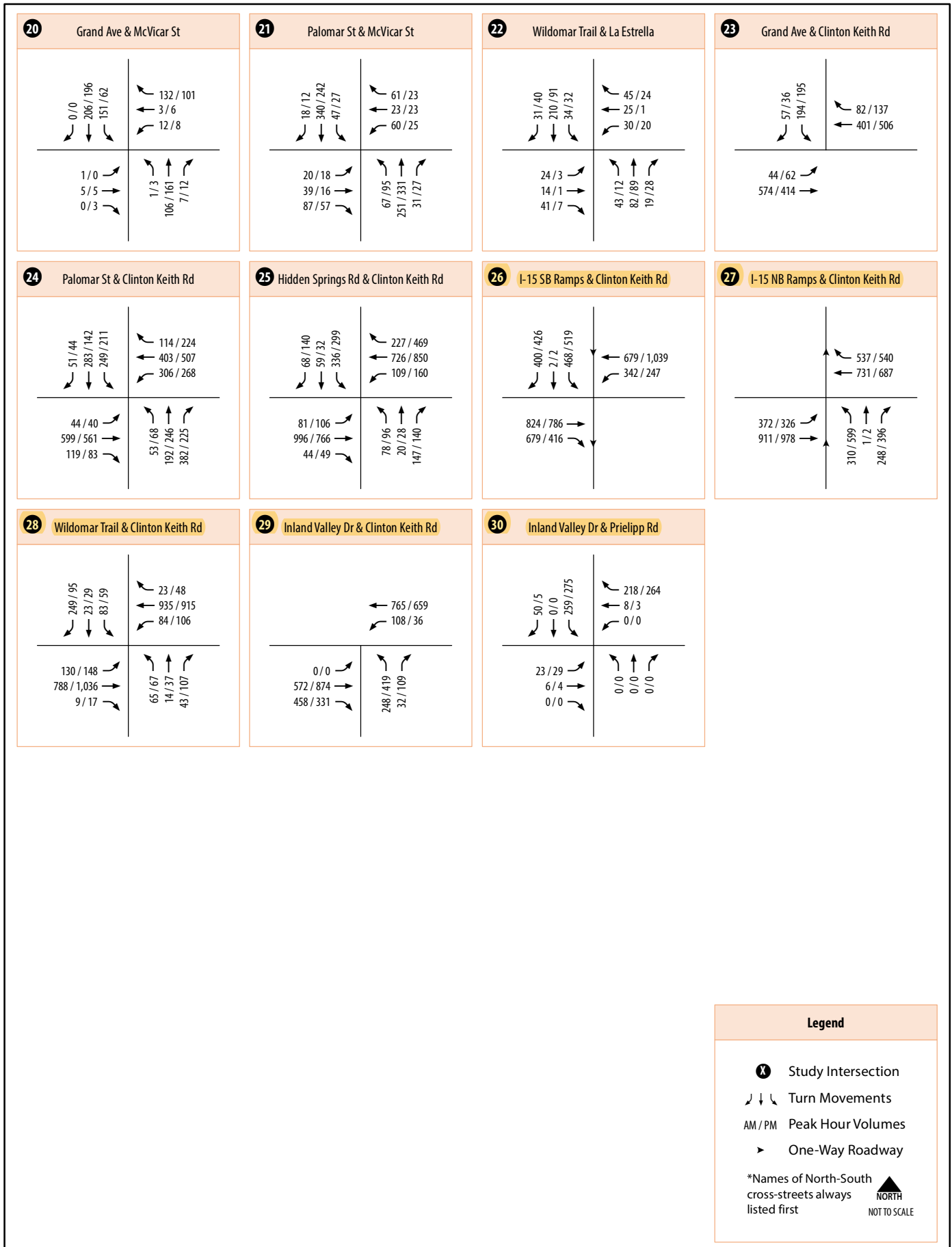
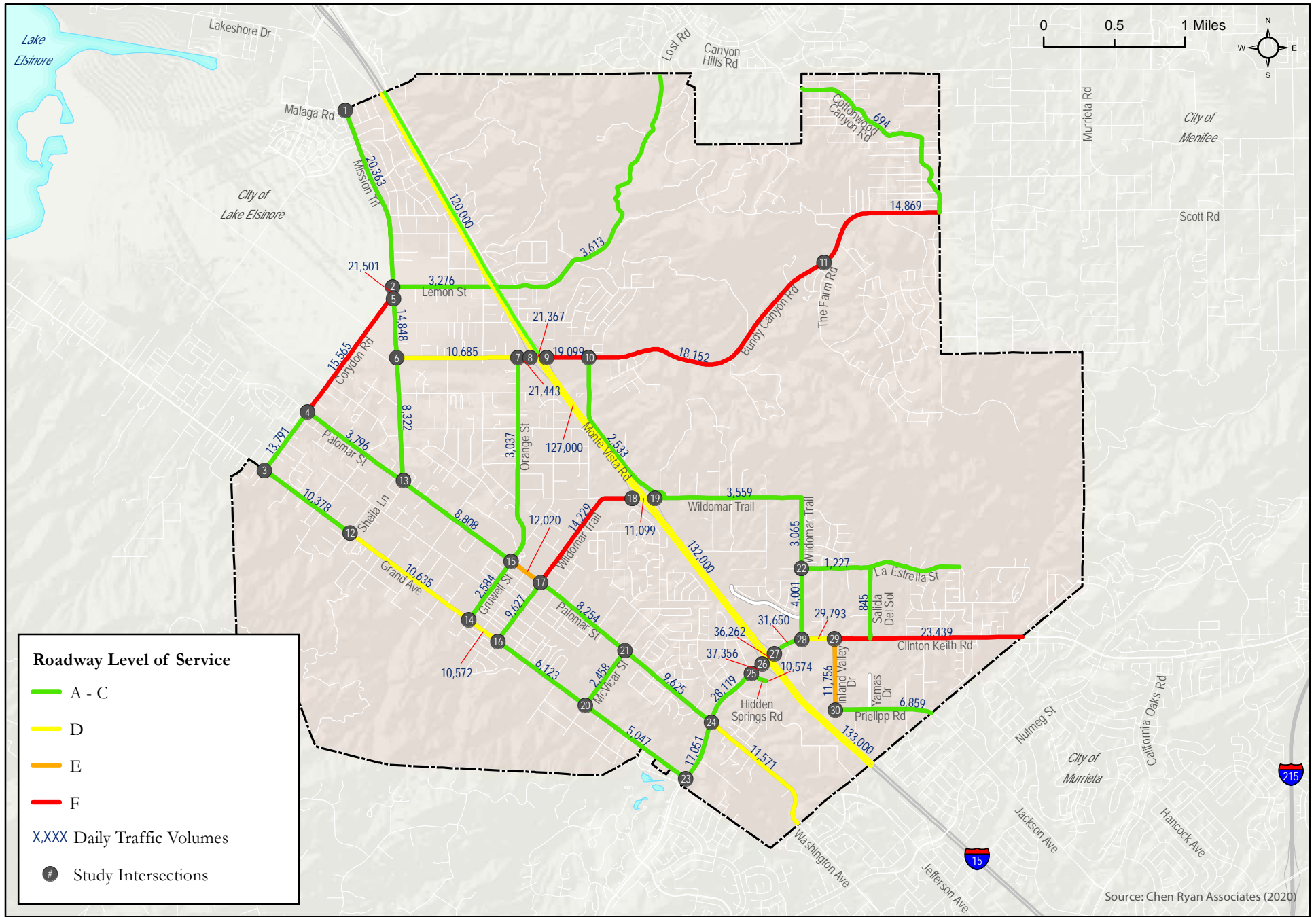


Figure 4.31
 Traffic Volumes - Existing Conditions
 (Intersections 20-30)



Wildomar Mobility Plan

Figure 4.30
Daily Traffic Volumes and Roadway Level of Service



Table 4.13 Existing Roadway Level of Service

Roadway	Segment	Count Dates	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS
Corydon Road	Grand Avenue to Palomar Street	9/24/2019 & 9/25/2019	2-Lane Arterial	18,000	13,791	0.766	C
Corydon Road	Palomar Street to Mission Trail	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	15,565	1.197	F
Lemon Street	Mission Trail to I-15	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	3,276	0.252	C
Lemon Street	I-15 to Lost Road	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	3,613	0.278	C
Bundy Canyon Road	Mission Trail to Orange Street	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	10,685	0.822	D
Bundy Canyon Road	Orange Street to I-15 SB Ramps	9/25/2019 & 9/26/2019	4-Lane Urban Arterial	35,900	21,443	0.597	C
Bundy Canyon Road	I-15 SB Ramps to I-15 NB Ramps	9/25/2019 & 9/26/2019	4-Lane Urban Arterial	35,900	21,367	0.595	C
Bundy Canyon Road	I-15 NB Ramps to Monte Vista Road	9/25/2019 & 9/26/2019	2-Lane Arterial	18,000	19,099	1.061	F
Bundy Canyon Road	Monte Vista Road to The Farm Road	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	18,152	1.396	F
Bundy Canyon Road	The Farm Road to City Limit	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	14,869	1.144	F
Gruwell Street	Grand Avenue to Palomar Street	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	2,584	0.199	C
Wildomar Trail ¹	Grand Avenue to Palomar Street	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	9,627	0.741	C
Wildomar Trail ¹	Palomar Street to I-15 SB Ramps	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	14,229	1.095	F
Wildomar Trail ²	I-15 SB Ramps to I-15 NB Ramps	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	11,099	0.854	D
Wildomar Trail ²	I-15 NB Ramps to Wildomar Trail ³	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	3,559	0.274	C
La Estrella Street	Wildomar Trail ³ to Eastern Terminus	10/1/2019 & 10/2/2019	2-Lane Collector	13,000	1,227	0.094	C
McVicar Street	Grand Avenue to Palomar Street	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	2,458	0.189	C
Clinton Keith Road	Grand Avenue to Palomar Street	9/25/2019 & 9/26/2019	4-Lane Secondary	25,900	17,051	0.658	C
Clinton Keith Road	Palomar Street to Hidden Springs Road	10/1/2019 & 10/2/2019	4-Lane Urban Arterial	35,900	28,119	0.783	C
Clinton Keith Road	Hidden Springs Road to I-15 SB Ramps	9/25/2019 & 9/26/2019	6-Lane Urban Arterial	53,850	37,356	0.694	C
Clinton Keith Road	I-15 SB Ramps to I-15 NB Ramps	9/25/2019 & 9/26/2019	6-Lane Urban Arterial	53,850	36,262	0.673	C
Clinton Keith Road	I-15 NB Ramps to Wildomar Trail ⁴	9/25/2019 & 9/26/2019	6-Lane Urban Arterial	53,850	31,650	0.588	C
Clinton Keith Road	Wildomar Trail ⁴ to Inland Valley Drive	9/25/2019 & 9/26/2019	4-Lane Urban Arterial	35,900	29,793	0.830	D
Clinton Keith Road	Inland Valley Drive to City Limit	10/1/2019 & 10/2/2019	2-Lane Collector	13,000	23,439	1.803	F
Prielipp Road	Inland Valley Drive to City Limit	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	6,859	0.528	C
Grand Avenue	Corydon Road to Sheila Lane	9/24/2019 & 9/25/2019	2-Lane Arterial	18,000	10,378	0.577	C
Grand Avenue	Sheila Lane to Gruwell Street	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	10,635	0.818	D
Grand Avenue	Gruwell Street to Wildomar Trail ¹	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	10,572	0.813	D



Table 4.13 Existing Roadway Level of Service

Roadway	Segment	Count Dates	Functional Classification	Capacity (LOS E)	ADT	V/C	LOS
Grand Avenue	Wildomar Trail ¹ to McVicar Street	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	6,123	0.471	C
Grand Avenue	McVicar Street to Clinton Keith Road	10/9/2019 & 10/10/2019	2-Lane Collector	13,000	5,047	0.388	C
Palomar Street	Corydon Road to Mission Trail	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	3,796	0.292	C
Palomar Street	Mission Trail to Orange Street/Gruwell Street	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	8,808	0.678	C
Palomar Street	Orange Street/Gruwell Street to Wildomar Trail ¹	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	12,020	0.925	E
Palomar Street	Wildomar Trail ¹ to McVicar Street	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	8,254	0.635	C
Palomar Street	McVicar Street to Clinton Keith Road	9/24/2019 & 9/25/2019	2-Lane Arterial	18,000	9,625	0.535	C
Palomar Street	Clinton Keith Road to City Limit	9/24/2019 & 9/25/2019	2-Lane Collector	13,000	11,571	0.890	D
Mission Trail	City Limit to Lemon Street	9/24/2019 & 9/25/2019	4-Lane Arterial	35,900	20,363	0.567	C
Mission Trail	Lemon Street to Corydon Road	10/9/2019 & 10/10/2019	4-Lane Major	34,100	21,501	0.631	C
Mission Trail	Corydon Road to Bundy Canyon Road	9/24/2019 & 9/25/2019	4-Lane Arterial	35,900	14,848	0.414	C
Mission Trail	Bundy Canyon Road to Palomar Street	9/24/2019 & 9/25/2019	4-Lane Arterial	35,900	8,322	0.232	C
Orange Street	Bundy Canyon Road to Palomar Street	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	3,037	0.234	C
Monte Vista Road	Bundy Canyon Road to Wildomar Trail ²	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	2,533	0.195	C
Hidden Springs Road	Clinton Keith Road to South of Clinton Keith Road	9/25/2019 & 9/26/2019	4-Lane Arterial	35,900	10,574	0.295	C
Wildomar Trail ³	Wildomar Trail ¹ to La Estrella Street	10/9/2019 & 10/10/2019	2-Lane Collector	13,000	3,065	0.236	C
Wildomar Trail ⁴	La Estrella Street to Clinton Keith Road	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	4,001	0.308	C
Inland Valley Drive	Clinton Keith Road to Prielipp Road	9/25/2019 & 9/26/2019	2-Lane Collector	13,000	11,756	0.904	E
Salida Del Sol	La Estrella Street to Clinton Keith Road	10/1/2019 & 10/2/2019	2-Lane Collector	13,000	845	0.065	C
Cottonwood Canyon Road	City Limit to Bundy Canyon Road	9/25/2019 & 9/26/2019	Unpaved Road	N/A	694		C or better

Source: Counts Unlimited, Inc. (September-October 2019)

Note:

Bold letter indicates substandard LOS E and F.

¹ Formerly Central Street.

² Formerly Baxter Road.

³ Formerly Porras Road.

⁴ Formerly George Avenue.

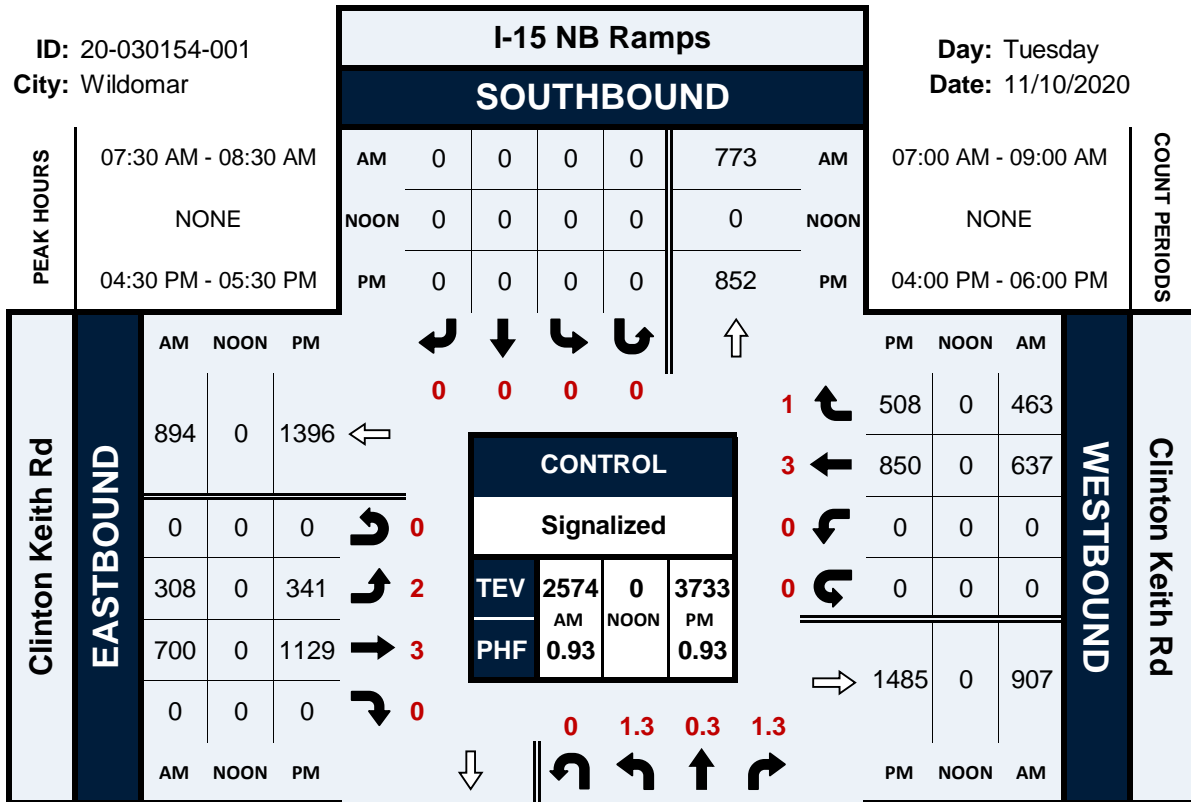
2020 COUNTS – FOR VALIDATION

I-15 NB Ramps & Clinton Keith Rd

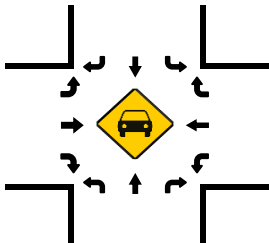
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City: Wildomar

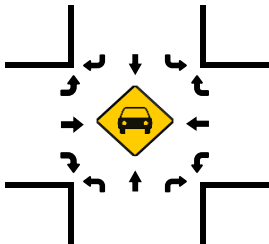
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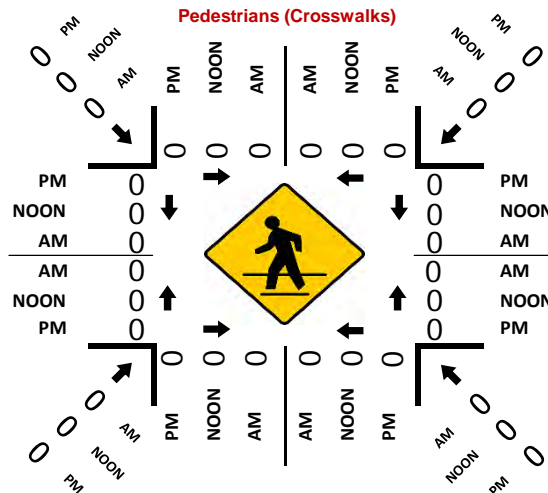
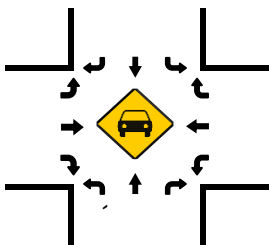
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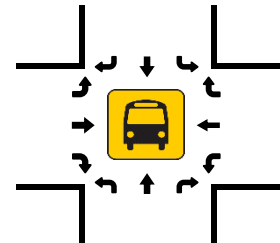
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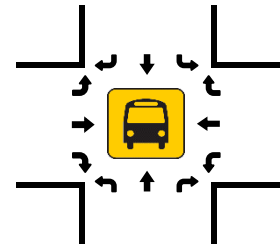
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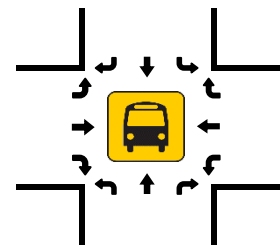
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Total Vehicles (NOON)



Total Vehicles (PM)

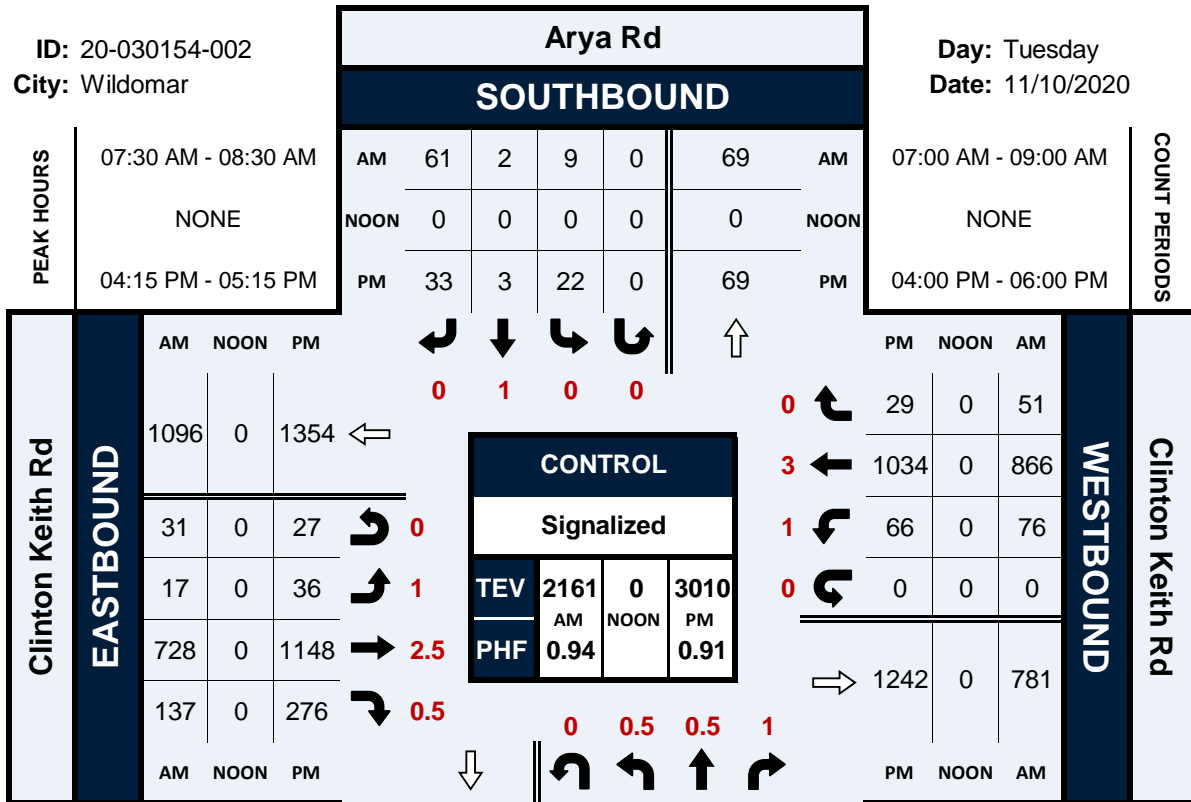


Arya Rd & Clinton Keith Rd

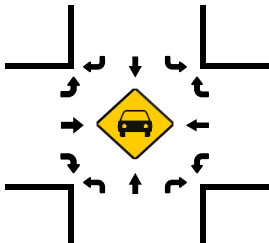
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City: Wildomar

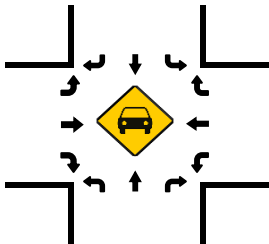
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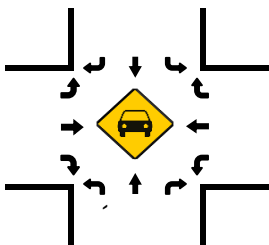
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Total Vehicles (NOON)

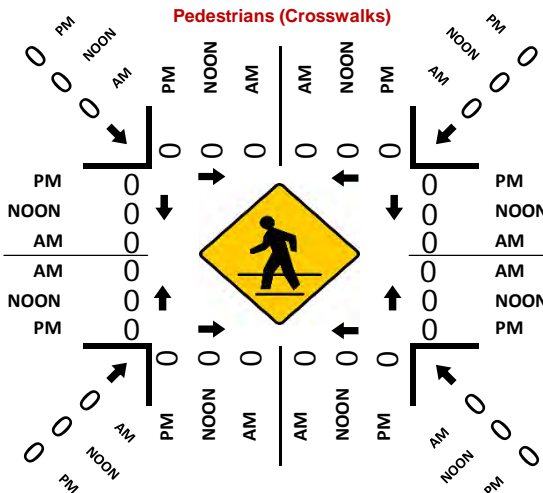


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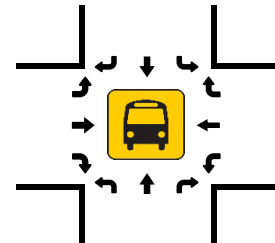


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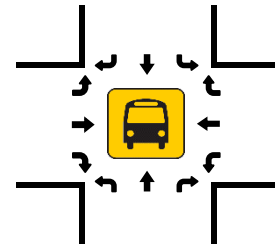
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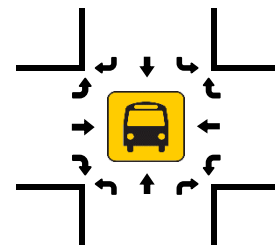
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Total Vehicles (NOON)



Total Vehicles (PM)

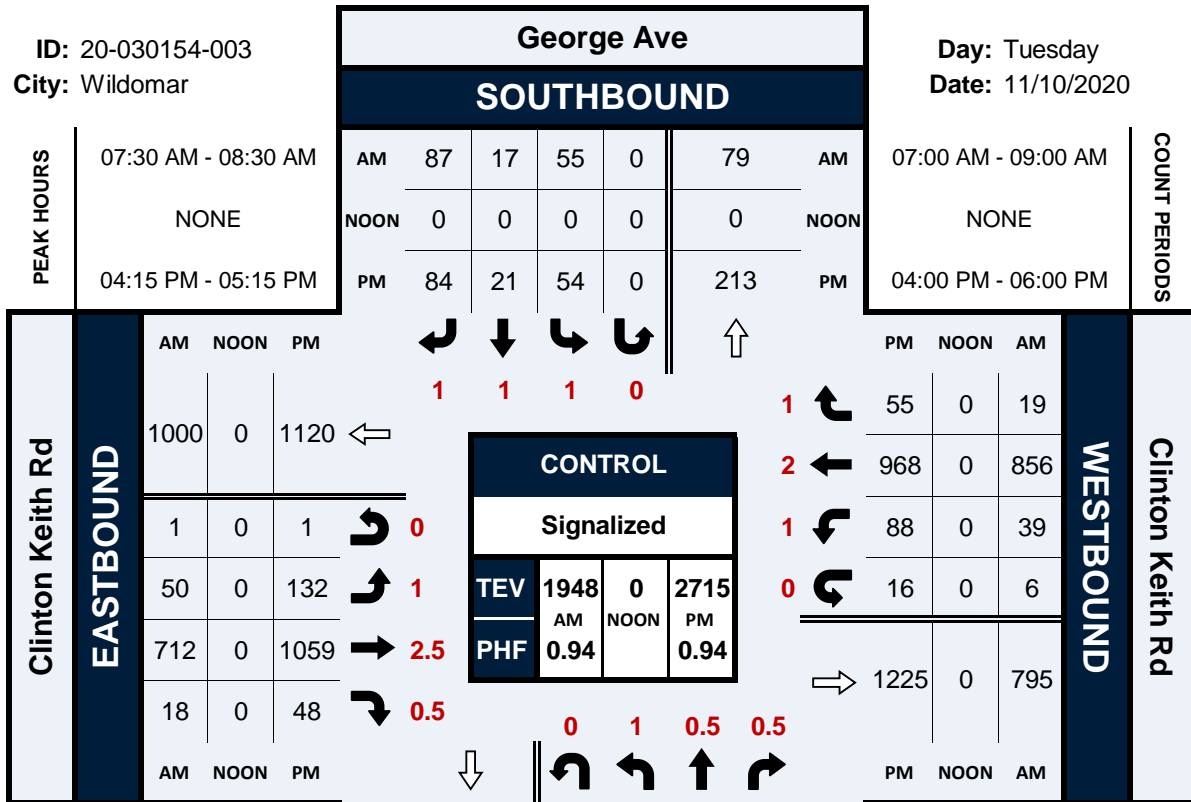


George Ave & Clinton Keith Rd

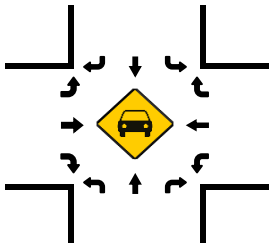
Peak Hour Turning Movement Count

ID: 20-030154-003
City: Wildomar

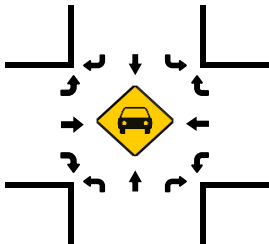
Day: Tuesday
Date: 11/10/2020



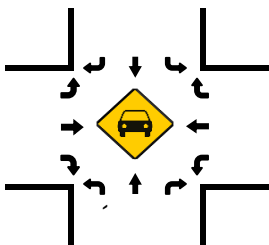
Total Vehicles (AM)



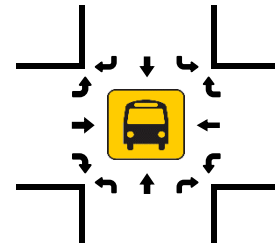
Total Vehicles (NOON)



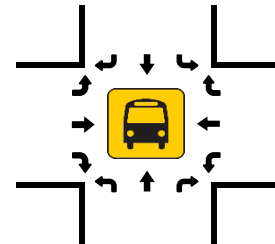
Total Vehicles (PM)



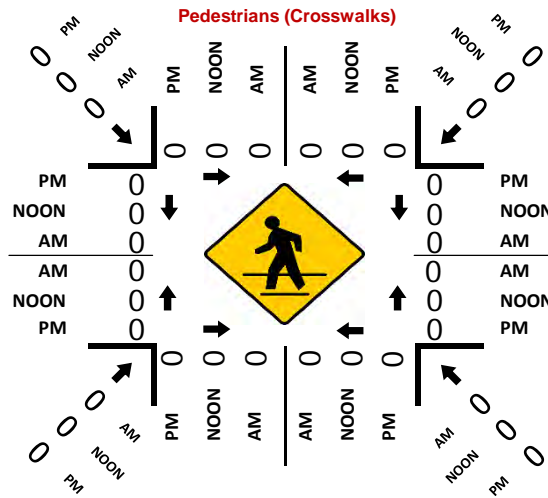
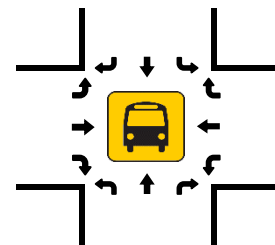
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)

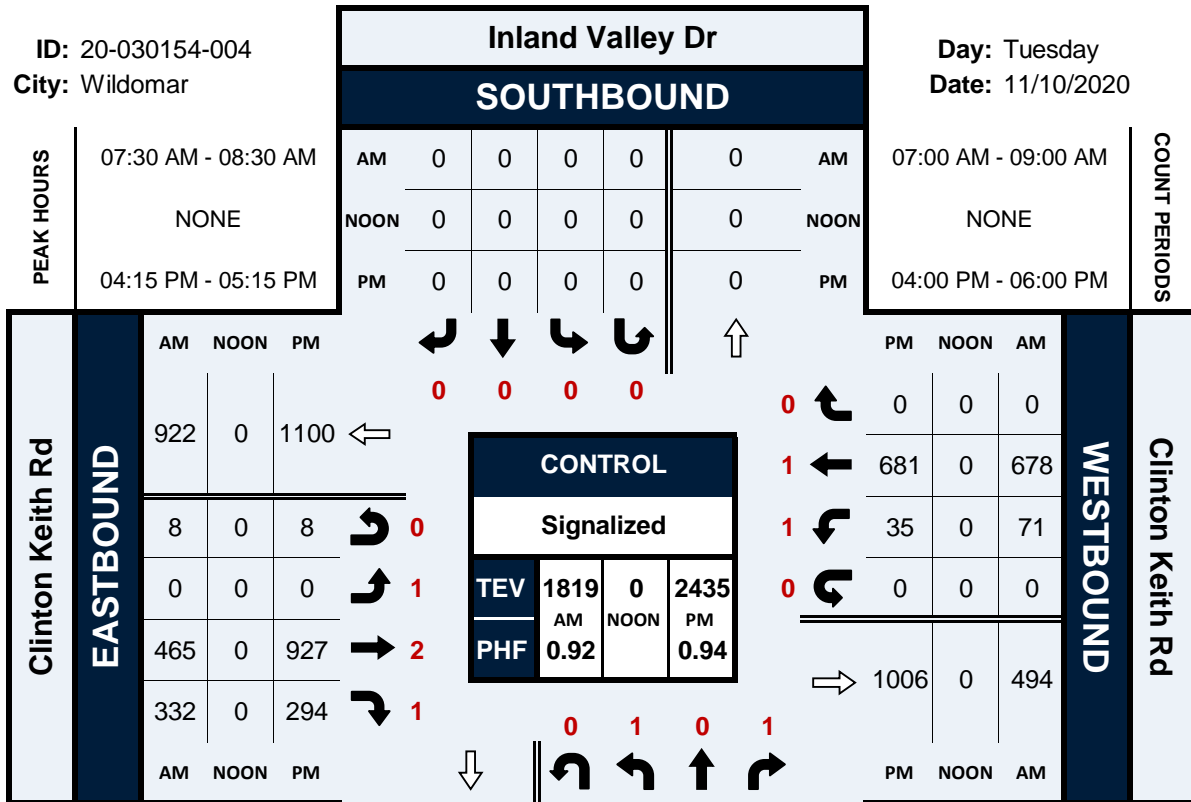


Inland Valley Dr & Clinton Keith Rd

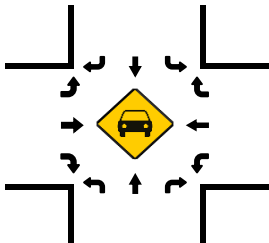
Peak Hour Turning Movement Count

ID: 20-030154-004
City: Wildomar

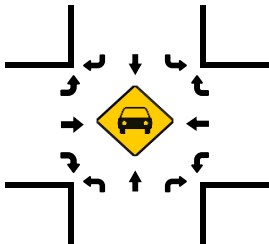
Day: Tuesday
Date: 11/10/2020



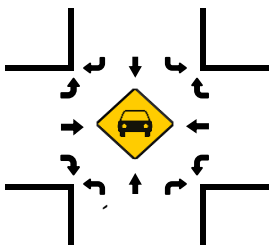
Total Vehicles (AM)



Total Vehicles (NOON)

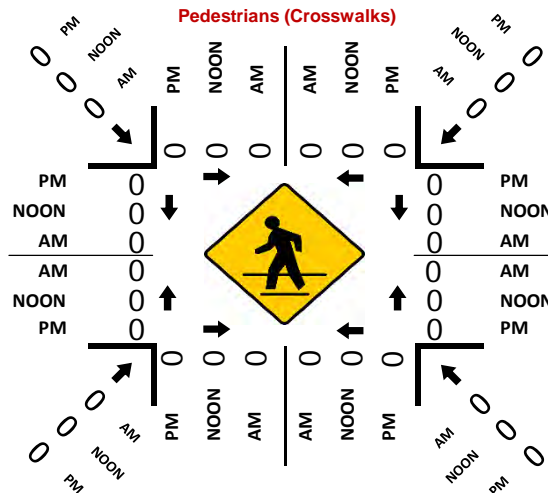


Total Vehicles (PM)

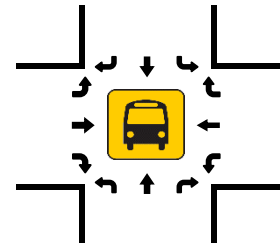


NORTHBOUND

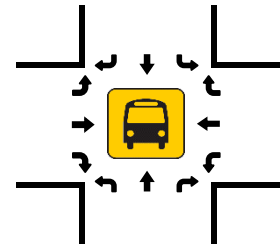
Inland Valley Dr



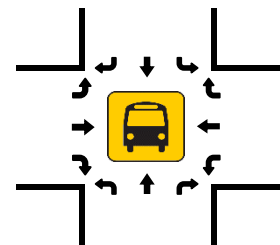
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)

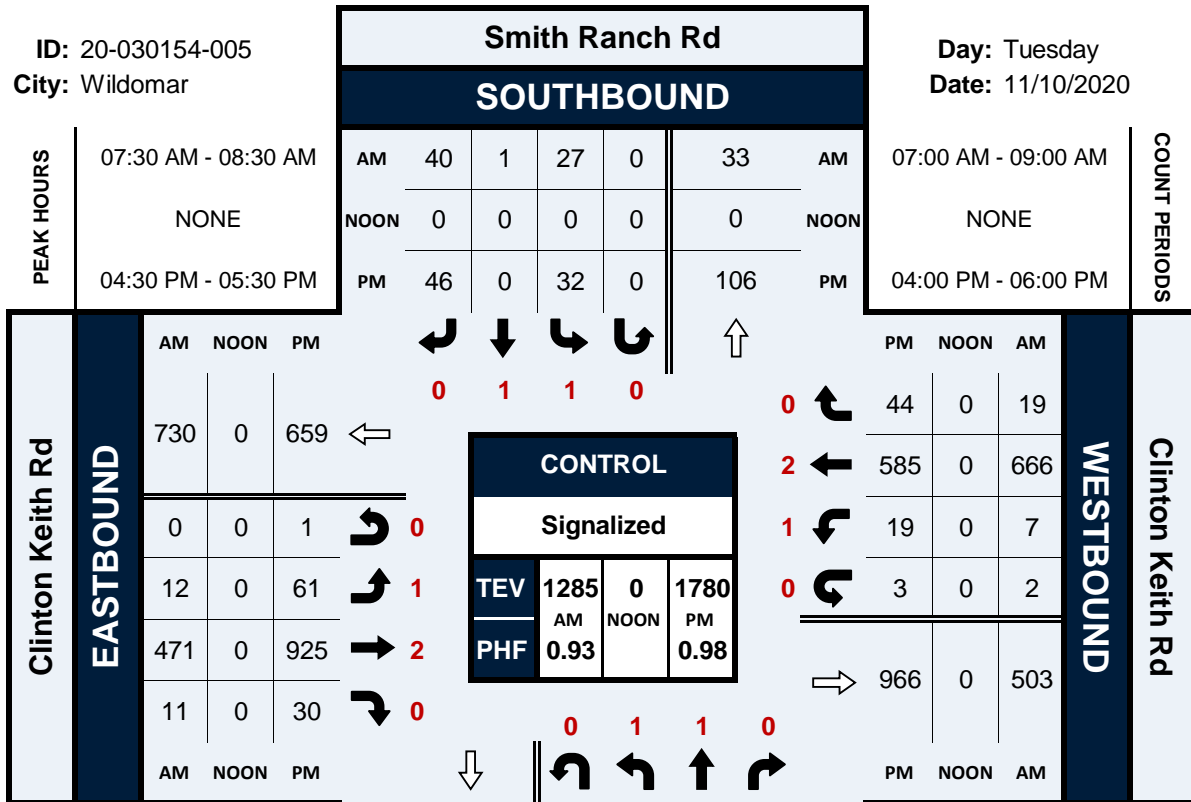


Smith Ranch Rd & Clinton Keith Rd

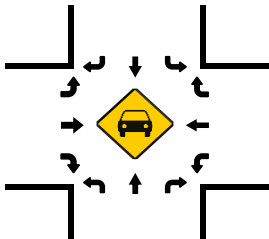
Peak Hour Turning Movement Count

ID: 20-030154-005
City: Wildomar

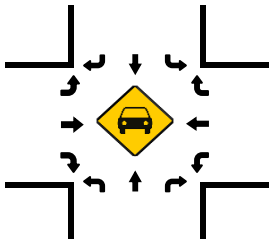
Day: Tuesday
Date: 11/10/2020



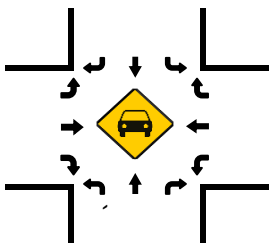
Total Vehicles (AM)



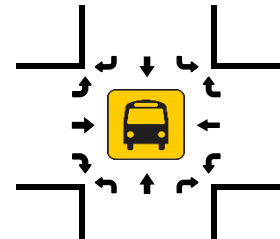
Total Vehicles (NOON)



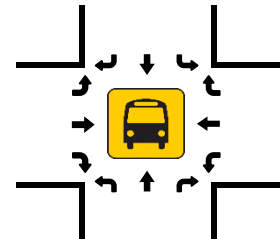
Total Vehicles (PM)



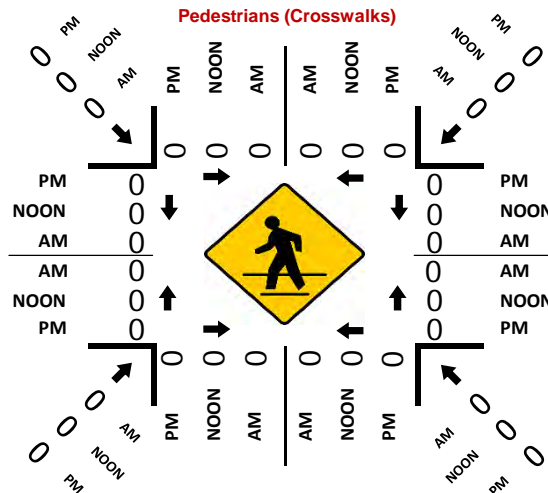
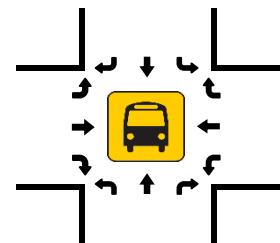
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)

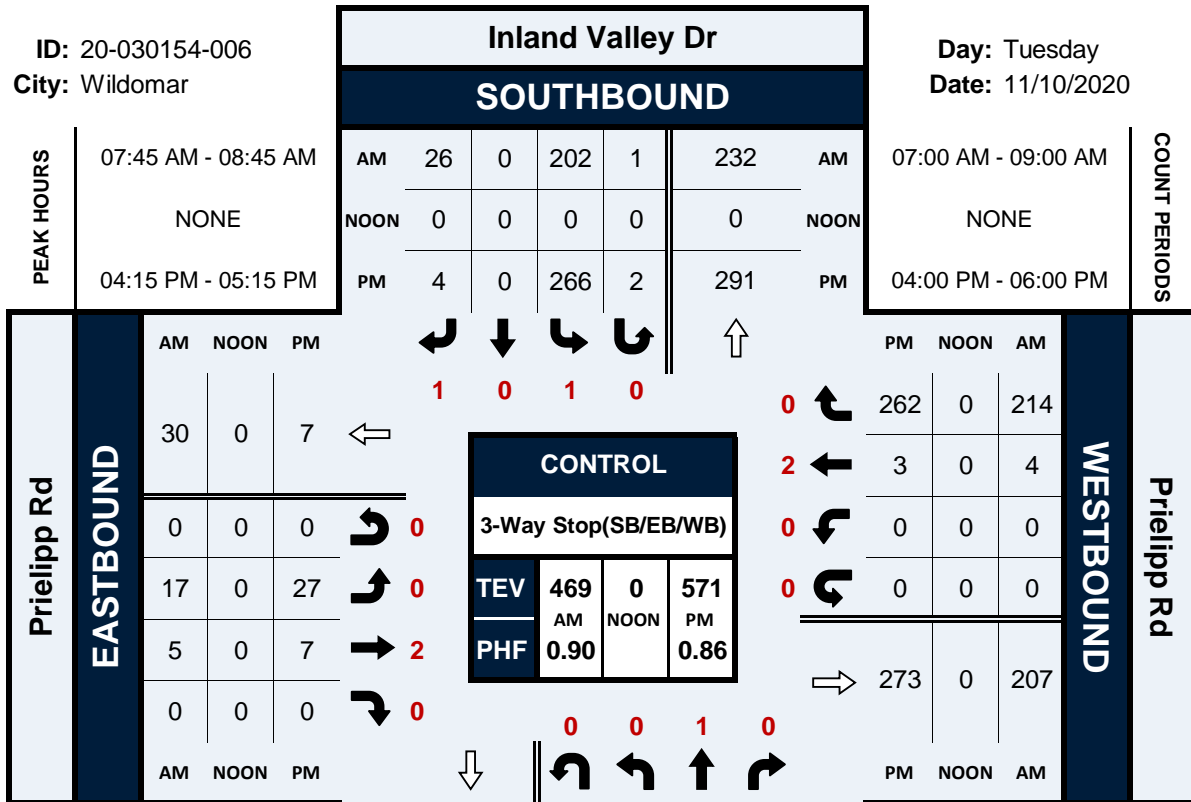


Inland Valley Dr & Prielipp Rd

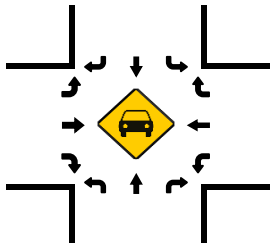
Peak Hour Turning Movement Count

ID: 20-030154-006
City: Wildomar

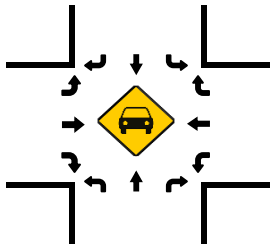
Day: Tuesday
Date: 11/10/2020



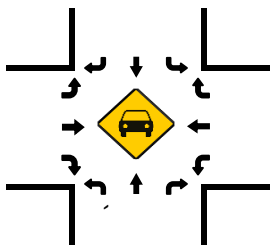
Total Vehicles (AM)



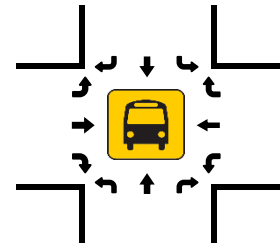
Total Vehicles (NOON)



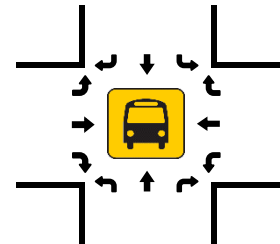
Total Vehicles (PM)



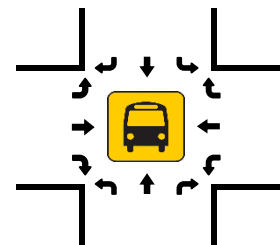
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



VOLUME

Clinton Keith Rd Bet. Arya Rd & George Ave

Day: Tuesday
Date: 11/10/2020

City: Wildomar
Project #: CA20_030155_001

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	13,273	14,722	27,995					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			33	18	51	12:00			210	206	416			
00:15			22	16	38	12:15			212	259	471			
00:30			24	18	42	12:30			206	286	492			
00:45			27	106	20	72	12:45		211	839	230	981	441	1820
01:00			13	18	31	13:00			223	201	424			
01:15			28	9	37	13:15			220	204	424			
01:30			13	15	28	13:30			222	252	474			
01:45			12	66	14	56	13:45		188	853	263	920	451	1773
02:00			9	16	25	14:00			230	236	466			
02:15			14	21	35	14:15			245	245	490			
02:30			11	13	24	14:30			246	258	504			
02:45			9	43	17	67	14:45		232	953	259	998	491	1951
03:00			11	24	35	15:00			250	279	529			
03:15			15	30	45	15:15			275	269	544			
03:30			10	38	48	15:30			283	260	543			
03:45			18	54	39	131	15:45		239	1047	317	1125	556	2172
04:00			17	59	76	16:00			295	299	594			
04:15			15	78	93	16:15			279	298	577			
04:30			20	117	137	16:30			290	292	582			
04:45			44	96	101	355	16:45		297	1161	255	1144	552	2305
05:00			52	109	161	17:00			306	340	646			
05:15			49	109	158	17:15			281	247	528			
05:30			47	134	181	17:30			280	224	504			
05:45			89	237	138	490	17:45		275	1142	213	1024	488	2166
06:00			73	130	203	18:00			278	197	475			
06:15			88	157	245	18:15			253	190	443			
06:30			110	196	306	18:30			214	166	380			
06:45			148	419	187	670	18:45		263	1008	161	714	424	1722
07:00			127	171	298	19:00			226	143	369			
07:15			138	232	370	19:15			169	135	304			
07:30			177	245	422	19:30			158	128	286			
07:45			197	639	282	930	19:45		140	693	119	525	259	1218
08:00			170	250	420	20:00			113	102	215			
08:15			207	240	447	20:15			122	105	227			
08:30			173	253	426	20:30			113	89	202			
08:45			198	748	275	1018	20:45		96	444	69	365	165	809
09:00			148	225	373	21:00			88	88	176			
09:15			163	211	374	21:15			95	60	155			
09:30			156	207	363	21:30			68	42	110			
09:45			178	645	239	882	21:45		70	321	50	240	120	561
10:00			172	201	373	22:00			67	36	103			
10:15			154	227	381	22:15			63	42	105			
10:30			158	230	388	22:30			54	26	80			
10:45			171	655	220	878	22:45		55	239	26	130	81	369
11:00			168	218	386	23:00			36	29	65			
11:15			172	217	389	23:15			44	28	72			
11:30			206	214	420	23:30			30	30	60			
11:45			181	727	247	896	23:45		28	138	24	111	52	249
TOTALS			4435	6445	10880	TOTALS			8838	8277	17115			
SPLIT %			40.8%	59.2%	38.9%	SPLIT %			51.6%	48.4%	61.1%			

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	13,273	14,722	27,995		
AM Peak Hour			11:30	07:45	11:45	PM Peak Hour			16:30	15:45	16:15
AM Pk Volume			809	1025	1807	PM Pk Volume			1174	1206	2357
Pk Hr Factor			0.954	0.909	0.918	Pk Hr Factor			0.959	0.951	0.912
7 - 9 Volume	0	0	1387	1948	3335	4 - 6 Volume	0	0	2303	2168	4471
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			16:30	16:15	16:15
7 - 9 Pk Volume	0	0	751	1025	1772	4 - 6 Pk Volume	0	0	1174	1185	2357
Pk Hr Factor	0.000	0.000	0.907	0.909	0.925	Pk Hr Factor	0.000	0.000	0.959	0.871	0.912

VOLUME

Clinton Keith Rd Bet. George Ave & Inland Valley Dr

Day: Tuesday
Date: 11/10/2020

City: Wildomar
Project #: CA20_030155_002

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	13,147	14,117	27,264					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			30	20	50	12:00			216	234	450			
00:15			23	20	43	12:15			217	238	455			
00:30			24	26	50	12:30			215	235	450			
00:45			28	105	20	86	48	191	202	850	203	910	405	1760
01:00			12	12	24	13:00			200	206	406			
01:15			26	14	40	13:15			225	196	421			
01:30			13	11	24	13:30			244	241	485			
01:45			13	64	10	47	23	111	192	861	211	854	403	1715
02:00			9	19	28	14:00			240	222	462			
02:15			14	18	32	14:15			240	281	521			
02:30			10	7	17	14:30			254	344	598			
02:45			10	43	26	70	36	113	248	982	314	1161	562	2143
03:00			7	21	28	15:00			268	292	560			
03:15			8	29	37	15:15			266	278	544			
03:30			8	28	36	15:30			299	282	581			
03:45			14	37	42	120	56	157	213	1046	251	1103	464	2149
04:00			15	70	85	16:00			298	253	551			
04:15			13	79	92	16:15			270	231	501			
04:30			20	106	126	16:30			303	249	552			
04:45			46	94	98	353	144	447	283	1154	262	995	545	2149
05:00			45	97	142	17:00			297	299	596			
05:15			53	101	154	17:15			261	266	527			
05:30			49	110	159	17:30			281	243	524			
05:45			94	241	112	420	206	661	266	1105	228	1036	494	2141
06:00			84	141	225	18:00			275	210	485			
06:15			85	156	241	18:15			230	167	397			
06:30			119	164	283	18:30			209	153	362			
06:45			155	443	173	634	328	1077	252	966	175	705	427	1671
07:00			131	198	329	19:00			208	137	345			
07:15			134	186	320	19:15			179	110	289			
07:30			173	223	396	19:30			140	127	267			
07:45			198	636	233	840	431	1476	147	674	102	476	249	1150
08:00			164	245	409	20:00			106	105	211			
08:15			204	221	425	20:15			120	104	224			
08:30			168	246	414	20:30			125	85	210			
08:45			191	727	214	926	405	1653	104	455	72	366	176	821
09:00			140	172	312	21:00			85	91	176			
09:15			162	204	366	21:15			85	52	137			
09:30			143	188	331	21:30			74	64	138			
09:45			170	615	211	775	381	1390	66	310	71	278	137	588
10:00			159	232	391	22:00			64	35	99			
10:15			166	180	346	22:15			59	59	118			
10:30			161	202	363	22:30			46	44	90			
10:45			181	667	183	797	364	1464	59	228	44	182	103	410
11:00			160	206	366	23:00			30	22	52			
11:15			176	231	407	23:15			42	24	66			
11:30			196	212	408	23:30			28	32	60			
11:45			185	717	221	870	406	1587	27	127	35	113	62	240
TOTALS			4389	5938	10327	TOTALS			8758	8179	16937			
SPLIT %			42.5%	57.5%	37.9%	SPLIT %			51.7%	48.3%	62.1%			

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	13,147	14,117	27,264		
AM Peak Hour			11:45	07:45	11:45	PM Peak Hour			16:00	14:15	14:30
AM Pk Volume			833	945	1761	PM Pk Volume			1154	1231	2264
Pk Hr Factor			0.960	0.960	0.968	Pk Hr Factor			0.952	0.895	0.946
7 - 9 Volume	0	0	1363	1766	3129	4 - 6 Volume	0	0	2259	2031	4290
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			16:00	16:30	16:30
7 - 9 Pk Volume	0	0	739	945	1679	4 - 6 Pk Volume	0	0	1154	1076	2220
Pk Hr Factor	0.000	0.000	0.906	0.960	0.974	Pk Hr Factor	0.000	0.000	0.952	0.900	0.931

VOLUME

Clinton Keith Rd Bet. Inland Valley Dr & Smith Ranch Rd

Day: Tuesday
Date: 11/10/2020

City: Wildomar
Project #: CA20_030155_003

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	9,832	10,108	19,940			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			20	8	28	12:00			172	139	311	
00:15			16	13	29	12:15			139	145	284	
00:30			21	11	32	12:30			154	156	310	
00:45			22	79	14	46	12:45		150	615	143	583
01:00			13	7	20	13:00			144	141	285	
01:15			20	9	29	13:15			146	153	299	
01:30			14	12	26	13:30			162	154	316	
01:45			6	53	7	35	13:45		152	604	170	618
02:00			11	13	24	14:00			182	151	333	
02:15			11	12	23	14:15			163	183	346	
02:30			6	8	14	14:30			220	163	383	
02:45			5	33	12	45	14:45		178	743	152	649
03:00			6	21	27	15:00			164	198	362	
03:15			8	18	26	15:15			196	194	390	
03:30			11	28	39	15:30			236	158	394	
03:45			8	33	34	101	15:45		169	765	229	779
04:00			12	44	56	16:00			237	171	408	
04:15			18	57	75	16:15			226	207	433	
04:30			16	91	107	16:30			258	179	437	
04:45			23	69	80	272	16:45		265	986	167	724
05:00			38	73	111	17:00			263	182	445	
05:15			31	87	118	17:15			229	164	393	
05:30			42	98	140	17:30			235	166	401	
05:45			51	162	109	367	17:45		208	935	176	688
06:00			54	103	157	18:00			211	147	358	
06:15			68	125	193	18:15			188	151	339	
06:30			79	139	218	18:30			152	125	277	
06:45			89	290	153	520	18:45		173	724	122	545
07:00			63	161	224	19:00			163	100	263	
07:15			95	152	247	19:15			143	87	230	
07:30			139	184	323	19:30			121	80	201	
07:45			124	421	227	724	19:45		96	523	84	351
08:00			112	179	291	20:00			99	71	170	
08:15			132	175	307	20:15			94	59	153	
08:30			124	184	308	20:30			82	50	132	
08:45			116	484	216	754	20:45		68	343	43	223
09:00			96	152	248	21:00			71	25	96	
09:15			97	172	269	21:15			79	21	100	
09:30			109	143	252	21:30			44	36	80	
09:45			132	434	170	637	21:45		44	238	39	121
10:00			127	139	266	22:00			40	27	67	
10:15			119	135	254	22:15			41	26	67	
10:30			120	172	292	22:30			45	21	66	
10:45			122	488	142	588	22:45		38	164	15	89
11:00			132	145	277	23:00			24	17	41	
11:15			142	140	282	23:15			35	22	57	
11:30			144	145	289	23:30			26	20	46	
11:45			121	539	137	567	23:45		22	107	23	82
TOTALS			3085	4656	7741	TOTALS			6747	5452	12199	
SPLIT %			39.9%	60.1%	38.8%	SPLIT %			55.3%	44.7%	61.2%	

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	9,832	10,108	19,940		
AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			16:30	15:45	16:15
AM Pk Volume			586	765	1272	PM Pk Volume			1015	786	1747
Pk Hr Factor			0.852	0.843	0.906	Pk Hr Factor			0.958	0.858	0.981
7 - 9 Volume	0	0	905	1478	2383	4 - 6 Volume	0	0	1921	1412	3333
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:30	16:15	16:15
7 - 9 Pk Volume	0	0	507	765	1272	4 - 6 Pk Volume	0	0	1015	735	1747
Pk Hr Factor	0.000	0.000	0.912	0.843	0.906	Pk Hr Factor	0.000	0.000	0.958	0.888	0.981

VOLUME

Inland Valley Dr Bet. Clinton Keith Rd & Prielipp Rd

Day: Tuesday
Date: 11/10/2020

City: Wildomar
Project #: CA20_030155_004

DAILY TOTALS					NB	SB	EB	WB	Total		
					5,042	4,983	0	0	10,025		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	11	5			16	12:00	110	89			199
00:15	6	8			14	12:15	109	88			197
00:30	8	6			14	12:30	96	75			171
00:45	11	36	7	26	18 62	12:45	88	403	100	352	188 755
01:00	12	4			16	13:00	65	88			153
01:15	6	9			15	13:15	64	93			157
01:30	5	1			6	13:30	95	87			182
01:45	4	27	6	20	10 47	13:45	88	312	80	348	168 660
02:00	4	1			5	14:00	77	85			162
02:15	9	1			10	14:15	89	105			194
02:30	7	4			11	14:30	135	87			222
02:45	3	23	3	9	6 32	14:45	87	388	92	369	179 757
03:00	6	3			9	15:00	87	89			176
03:15	7	4			11	15:15	85	105			190
03:30	6	2			8	15:30	118	105			223
03:45	9	28	11	20	20 48	15:45	100	390	86	385	186 775
04:00	13	5			18	16:00	114	94			208
04:15	16	4			20	16:15	103	74			177
04:30	22	6			28	16:30	119	99			218
04:45	16	67	29	44	45 111	16:45	107	443	75	342	182 785
05:00	20	17			37	17:00	170	81			251
05:15	20	30			50	17:15	89	67			156
05:30	27	20			47	17:30	82	75			157
05:45	22	89	50	117	72 206	17:45	75	416	85	308	160 724
06:00	14	27			41	18:00	80	78			158
06:15	31	22			53	18:15	68	78			146
06:30	53	51			104	18:30	63	75			138
06:45	31	129	101	201	132 330	18:45	53	264	92	323	145 587
07:00	37	63			100	19:00	63	62			125
07:15	52	48			100	19:15	50	55			105
07:30	61	63			124	19:30	73	43			116
07:45	74	224	121	295	195 519	19:45	45	231	53	213	98 444
08:00	67	88			155	20:00	55	33			88
08:15	63	133			196	20:15	37	33			70
08:30	79	97			176	20:30	32	31			63
08:45	62	271	111	429	173 700	20:45	27	151	26	123	53 274
09:00	62	69			131	21:00	38	15			53
09:15	57	97			154	21:15	24	16			40
09:30	70	70			140	21:30	20	27			47
09:45	74	263	79	315	153 578	21:45	15	97	16	74	31 171
10:00	68	65			133	22:00	14	17			31
10:15	93	68			161	22:15	15	21			36
10:30	66	74			140	22:30	11	13			24
10:45	80	307	77	284	157 591	22:45	20	60	10	61	30 121
11:00	102	69			171	23:00	12	9			21
11:15	86	56			142	23:15	15	10			25
11:30	89	82			171	23:30	12	4			16
11:45	101	378	85	292	186 670	23:45	6	45	10	33	16 78
TOTALS	1842	2052			3894	TOTALS	3200	2931			6131
SPLIT %	47.3%	52.7%			38.8%	SPLIT %	52.2%	47.8%			61.2%

DAILY TOTALS					NB	SB	EB	WB	Total
					5,042	4,983	0	0	10,025
AM Peak Hour	11:45	07:45			11:30	PM Peak Hour	16:15	14:45	16:15
AM Pk Volume	416	439			753	PM Pk Volume	499	391	828
Pk Hr Factor	0.945	0.825			0.946	Pk Hr Factor	0.734	0.931	0.825
7 - 9 Volume	495	724	0	0	1219	4 - 6 Volume	859	650	0 0 1509
7 - 9 Peak Hour	07:45	07:45			07:45	4 - 6 Peak Hour	16:15	16:00	16:15
7 - 9 Pk Volume	283	439	0	0	722	4 - 6 Pk Volume	499	342	0 0 828
Pk Hr Factor	0.896	0.825	0.000	0.000	0.921	Pk Hr Factor	0.734	0.864	0.000 0.000 0.825

VOLUME

Prielipp Rd E/O Inland Valley Rd

Day: Tuesday
Date: 11/10/2020

City: Wildomar
Project #: CA20_030155_005

DAILY TOTALS					NB	SB	EB		WB	Total				
					0	0	3,136	3,194	6,330					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			4	6	10	12:00			58	63	121			
00:15			5	2	7	12:15			61	67	128			
00:30			0	4	4	12:30			46	66	112			
00:45			4	13	2	14	12:45		58	223	66	262	124	485
01:00			2	4	6	13:00			48	41	89			
01:15			9	2	11	13:15			51	41	92			
01:30			0	1	1	13:30			45	70	115			
01:45			3	14	3	10	13:45		43	187	56	208	99	395
02:00			1	1	2	14:00			48	54	102			
02:15			1	4	5	14:15			48	59	107			
02:30			0	3	3	14:30			64	84	148			
02:45			2	4	3	11	14:45		54	214	52	249	106	463
03:00			1	3	4	15:00			61	59	120			
03:15			3	4	7	15:15			66	52	118			
03:30			1	4	5	15:30			71	70	141			
03:45			4	9	5	16	15:45		62	260	55	236	117	496
04:00			6	14	20	16:00			72	75	147			
04:15			1	14	15	16:15			53	55	108			
04:30			2	20	22	16:30			76	67	143			
04:45			17	26	17	65	16:45		76	277	60	257	136	534
05:00			14	19	33	17:00			70	81	151			
05:15			22	14	36	17:15			46	57	103			
05:30			10	26	36	17:30			74	48	122			
05:45			29	75	22	81	17:45		65	255	39	225	104	480
06:00			15	9	24	18:00			73	49	122			
06:15			10	27	37	18:15			59	43	102			
06:30			13	40	53	18:30			52	41	93			
06:45			30	68	33	109	18:45		53	237	36	169	89	406
07:00			35	32	67	19:00			50	28	78			
07:15			28	42	70	19:15			47	23	70			
07:30			25	47	72	19:30			34	21	55			
07:45			56	144	59	180	19:45		49	180	28	100	77	280
08:00			51	59	110	20:00			37	24	61			
08:15			58	49	107	20:15			29	24	53			
08:30			47	58	105	20:30			33	25	58			
08:45			55	211	48	214	20:45		20	119	22	95	42	214
09:00			36	46	82	21:00			13	21	34			
09:15			56	33	89	21:15			14	17	31			
09:30			37	38	75	21:30			19	9	28			
09:45			29	158	44	161	21:45		11	57	11	58	22	115
10:00			29	45	74	22:00			13	7	20			
10:15			42	54	96	22:15			12	8	20			
10:30			35	38	73	22:30			9	6	15			
10:45			43	149	48	185	22:45		8	42	16	37	24	79
11:00			42	68	110	23:00			7	4	11			
11:15			41	47	88	23:15			8	3	11			
11:30			49	59	108	23:30			4	10	14			
11:45			57	189	59	233	23:45		6	25	2	19	8	44
TOTALS			1060	1279	2339	TOTALS			2076	1915	3991			
SPLIT %			45.3%	54.7%	37.0%	SPLIT %			52.0%	48.0%	63.0%			

DAILY TOTALS					NB	SB	EB		WB	Total	
					0	0	3,136	3,194	6,330		
AM Peak Hour			11:30	11:45	11:45	PM Peak Hour			16:00	16:30	16:15
AM Pk Volume			225	255	477	PM Pk Volume			277	265	538
Pk Hr Factor			0.922	0.951	0.932	Pk Hr Factor			0.911	0.818	0.891
7 - 9 Volume	0	0	355	394	749	4 - 6 Volume	0	0	532	482	1014
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			16:00	16:30	16:15
7 - 9 Pk Volume	0	0	212	225	437	4 - 6 Pk Volume	0	0	277	265	538
Pk Hr Factor	0.000	0.000	0.914	0.953	0.950	Pk Hr Factor	0.000	0.000	0.911	0.818	0.891

APPENDIX B

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS - EXISTING

Existing AM
1: I-15 SB Ramps/1-15 SB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↗	↗↗
Traffic Volume (veh/h)	0	824	679	342	699	0	0	0	0	468	2	400
Future Volume (veh/h)	0	824	679	342	699	0	0	0	0	468	2	400
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	896	738	372	760	0				510	0	435
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2636	818	446	3555	0				623	0	554
Arrive On Green	0.00	0.52	0.52	0.17	0.93	0.00				0.17	0.00	0.17
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	896	738	372	760	0				510	0	435
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	9.3	37.9	9.4	1.2	0.0				12.4	0.0	11.8
Cycle Q Clear(g_c), s	0.0	9.3	37.9	9.4	1.2	0.0				12.4	0.0	11.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2636	818	446	3555	0				623	0	554
V/C Ratio(X)	0.00	0.34	0.90	0.83	0.21	0.00				0.82	0.00	0.78
Avail Cap(c_a), veh/h	0	2636	818	553	3555	0				800	0	712
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.92	0.92	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.8	19.7	36.4	1.1	0.0				35.8	0.0	35.5
Incr Delay (d2), s/veh	0.0	0.4	15.1	6.8	0.1	0.0				4.2	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	15.2	4.0	0.3	0.0				5.6	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.1	34.8	43.2	1.2	0.0				39.9	0.0	38.8
LnGrp LOS	A	B	C	D	A	A				D	A	D
Approach Vol, veh/h		1634			1132						945	
Approach Delay, s/veh		22.9			15.0						39.4	
Approach LOS		C			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	16.2	52.3		21.5		68.5						
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8						
Max Green Setting (Gmax), s	14.4	39.2		20.2		58.2						
Max Q Clear Time (g_c+I1), s	11.4	39.9		14.4		3.2						
Green Ext Time (p_c), s	0.2	0.0		1.3		3.4						

Intersection Summary

HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Existing AM
2: I-15 NB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↑ ↑			↑ ↑ ↑	↖ ↗	↖ ↗	↑	↖ ↗			
Traffic Volume (veh/h)	372	920	0	0	731	537	310	1	248	0	0	0
Future Volume (veh/h)	372	920	0	0	731	537	310	1	248	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	400	989	0	0	786	519	416	0	178			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	472	3657	0	0	2671	829	552	0	245			
Arrive On Green	0.14	0.72	0.00	0.00	0.52	0.52	0.15	0.00	0.15			
Sat Flow, veh/h	3456	5274	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	400	989	0	0	786	519	416	0	178			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.2	6.1	0.0	0.0	7.8	20.9	10.1	0.0	9.6			
Cycle Q Clear(g_c), s	10.2	6.1	0.0	0.0	7.8	20.9	10.1	0.0	9.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	472	3657	0	0	2671	829	552	0	245			
V/C Ratio(X)	0.85	0.27	0.00	0.00	0.29	0.63	0.75	0.00	0.73			
Avail Cap(c_a), veh/h	495	3657	0	0	2671	829	1029	0	458			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.89	0.89	0.00	0.00	0.90	0.90	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.9	4.5	0.0	0.0	12.1	15.2	36.4	0.0	36.2			
Incr Delay (d2), s/veh	11.3	0.2	0.0	0.0	0.3	3.2	2.1	0.0	4.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.8	1.5	0.0	0.0	2.7	7.2	4.5	0.0	3.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	4.7	0.0	0.0	12.4	18.4	38.5	0.0	40.3			
LnGrp LOS	D	A	A	A	B	B	D	A	D			
Approach Vol, veh/h		1389			1305			594				
Approach Delay, s/veh		17.5			14.8			39.0				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.3			17.4	52.9		19.7				
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8				
Max Green Setting (Gmax), s		52.4			12.9	34.4		26.0				
Max Q Clear Time (g_c+I1), s		8.1			12.2	22.9		12.1				
Green Ext Time (p_c), s		7.7			0.1	5.3		1.9				

Intersection Summary

HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Existing AM
3: Arya Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↑↑↑ ↗			↖ ↑↑↑ ↗				↖ ↑ ↗	↖ ↑ ↗		↖ ↗	
Traffic Volume (veh/h)	73	913	265	109	1047	62	221	5	85	24	8	60
Future Volume (veh/h)	73	913	265	109	1047	62	221	5	85	24	8	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	971	282	116	1114	66	235	5	90	26	9	64
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	99	1692	490	141	2237	132	229	4	523	39	29	52
Arrive On Green	0.06	0.43	0.43	0.16	0.91	0.91	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3930	1139	1781	4930	292	508	11	1585	0	87	158
Grp Volume(v), veh/h	78	841	412	116	769	411	240	0	90	99	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1665	1781	1702	1818	519	0	1585	245	0	0
Q Serve(g_s), s	5.0	21.7	21.7	7.3	4.4	4.4	0.0	0.0	4.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.0	21.7	21.7	7.3	4.4	4.4	38.3	0.0	4.7	38.3	0.0	0.0
Prop In Lane	1.00		0.68	1.00		0.16	0.98		1.00	0.26		0.65
Lane Grp Cap(c), veh/h	99	1466	717	141	1544	825	233	0	523	120	0	0
V/C Ratio(X)	0.78	0.57	0.57	0.82	0.50	0.50	1.03	0.00	0.17	0.82	0.00	0.00
Avail Cap(c_a), veh/h	198	1466	717	250	1544	825	233	0	523	120	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	54.1	25.0	25.0	48.1	3.1	3.1	43.9	0.0	27.6	32.3	0.0	0.0
Incr Delay (d2), s/veh	4.8	1.6	3.2	4.0	1.0	1.9	67.3	0.0	0.2	35.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	8.6	8.7	3.1	1.2	1.4	11.2	0.0	1.8	3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	26.6	28.2	52.0	4.1	5.0	111.2	0.0	27.7	67.6	0.0	0.0
LnGrp LOS	E	C	C	D	A	A	F	A	C	E	A	A
Approach Vol, veh/h	1331				1296		330				99	
Approach Delay, s/veh	29.0				8.7		88.4				67.6	
Approach LOS	C				A		F				E	
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	5.3	56.7	44.0		12.6	59.4	44.0					
Change Period (Y+Rc), s	6.1	6.8	* 5.7		6.1	6.8	* 5.7					
Max Green Setting (Gmax), s	10.3	42.8	* 38		12.9	46.2	* 38					
Max Q Clear Time (g_c+1), s	19.3	23.7	40.3		7.0	6.4	40.3					
Green Ext Time (p_c), s	0.1	13.2	0.0		0.0	19.6	0.0					

Intersection Summary

HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing AM
4: Wildomar Trail & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	788	9	84	935	23	65	14	43	83	23	249
Future Volume (veh/h)	130	788	9	84	935	23	65	14	43	83	23	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	838	10	89	995	24	69	15	46	88	24	265
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	2067	922	111	1963	875	257	77	235	275	355	301
Arrive On Green	0.18	1.00	1.00	0.12	1.00	1.00	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1090	405	1242	1341	1870	1585
Grp Volume(v), veh/h	138	838	10	89	995	24	69	0	61	88	24	265
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1090	0	1647	1341	1870	1585
Q Serve(g_s), s	8.7	0.0	0.0	5.6	0.0	0.0	6.4	0.0	3.6	6.9	1.2	18.9
Cycle Q Clear(g_c), s	8.7	0.0	0.0	5.6	0.0	0.0	7.7	0.0	3.6	10.5	1.2	18.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	163	2067	922	111	1963	875	257	0	312	275	355	301
V/C Ratio(X)	0.84	0.41	0.01	0.80	0.51	0.03	0.27	0.00	0.20	0.32	0.07	0.88
Avail Cap(c_a), veh/h	267	2067	922	192	1963	875	380	0	497	425	564	478
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.90	0.90	0.90	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	0.0	0.0	50.1	0.0	0.0	41.7	0.0	39.6	44.0	38.6	45.7
Incr Delay (d2), s/veh	5.3	0.5	0.0	4.5	0.8	0.1	0.6	0.0	0.3	0.7	0.1	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.1	0.0	2.5	0.2	0.0	1.8	0.0	1.5	2.3	0.6	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	0.5	0.0	54.6	0.8	0.1	42.3	0.0	39.9	44.6	38.7	56.8
LnGrp LOS	D	A	A	D	A	A	D	A	D	D	D	E
Approach Vol, veh/h		986			1108			130			377	
Approach Delay, s/veh		7.7			5.1			41.1			52.8	
Approach LOS		A			A			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.3	74.3		28.4	16.7	70.9		28.4				
Change Period (Y+Rc), s	6.1	6.8		6.4	6.1	6.8		6.4				
Max Green Setting (Gmax), s	12.5	49.2		35.0	17.4	44.3		35.0				
Max Q Clear Time (g_c+1), s	17.6	2.0		20.9	10.7	2.0		9.7				
Green Ext Time (p_c), s	0.0	15.3		1.1	0.1	16.9		0.6				

Intersection Summary

HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B

Existing AM
5: Inland Valley Dr & Clinton Keith Rd



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	0	572	458	108	765	248	32
Future Volume (veh/h)	0	572	458	108	765	248	32
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		622	448	117	832	270	35
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		2049	914	143	2522	308	274
Arrive On Green		1.00	1.00	0.08	0.71	0.17	0.17
Sat Flow, veh/h		3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h		622	448	117	832	270	35
Grp Sat Flow(s),veh/h/ln		1777	1585	1781	1777	1781	1585
Q Serve(g_s), s		0.0	0.0	7.5	10.3	17.1	2.2
Cycle Q Clear(g_c), s		0.0	0.0	7.5	10.3	17.1	2.2
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		2049	914	143	2522	308	274
V/C Ratio(X)		0.30	0.49	0.82	0.33	0.88	0.13
Avail Cap(c_a), veh/h		2049	914	275	2522	505	450
HCM Platoon Ratio		2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.93	0.93	0.94	0.94	1.00	1.00
Uniform Delay (d), s/veh		0.0	0.0	52.5	6.4	46.7	40.6
Incr Delay (d2), s/veh		0.4	1.7	4.0	0.3	10.8	0.3
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.1	0.4	3.4	3.3	8.3	0.8
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		0.4	1.7	56.5	6.7	57.5	40.8
LnGrp LOS		A	A	E	A	E	D
Approach Vol, veh/h		1070			949	305	
Approach Delay, s/veh		0.9			12.9	55.6	
Approach LOS		A			B	E	
Timer - Assigned Phs	1	2			6	8	
Phs Duration (G+Y+Rc), s	15.4	74.4			89.8	26.2	
Change Period (Y+Rc), s	6.1	7.5			7.5	6.1	
Max Green Setting (Gmax), s	45.5				57.4	32.9	
Max Q Clear Time (g_c+19), s	2.0				12.3	19.1	
Green Ext Time (p_c), s	0.0	4.7			4.9	0.9	

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Existing AM
6: Smith Ranch Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	29	536	13	11	707	21	48	0	4	60	3	79
Future Volume (veh/h)	29	536	13	11	707	21	48	0	4	60	3	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	31	576	14	12	760	23	52	0	4	65	3	85
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	1147	28	28	1068	32	95	0	176	110	7	184
Arrive On Green	0.04	0.32	0.32	0.02	0.30	0.30	0.05	0.00	0.11	0.06	0.12	0.12
Sat Flow, veh/h	1781	3546	86	1781	3521	107	1781	0	1585	1781	54	1539
Grp Volume(v), veh/h	31	288	302	12	383	400	52	0	4	65	0	88
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1851	1781	0	1585	1781	0	1593
Q Serve(g_s), s	0.8	5.9	5.9	0.3	8.6	8.6	1.3	0.0	0.1	1.6	0.0	2.3
Cycle Q Clear(g_c), s	0.8	5.9	5.9	0.3	8.6	8.6	1.3	0.0	0.1	1.6	0.0	2.3
Prop In Lane	1.00		0.05	1.00		0.06	1.00		1.00	1.00		0.97
Lane Grp Cap(c), veh/h	64	575	600	28	539	562	95	0	176	110	0	191
V/C Ratio(X)	0.49	0.50	0.50	0.44	0.71	0.71	0.55	0.00	0.02	0.59	0.00	0.46
Avail Cap(c_a), veh/h	198	788	823	198	788	821	198	0	738	277	0	813
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.3	12.3	12.3	22.0	13.9	14.0	20.8	0.0	17.9	20.6	0.0	18.5
Incr Delay (d2), s/veh	5.7	0.7	0.7	10.4	1.8	1.7	4.9	0.0	0.1	5.0	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.8	1.9	0.2	2.8	2.9	0.6	0.0	0.0	0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.0	13.0	13.0	32.4	15.7	15.6	25.7	0.0	17.9	25.6	0.0	20.2
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	C
Approach Vol, veh/h		621			795			56			153	
Approach Delay, s/veh		13.7			15.9			25.2			22.5	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	21.6	7.4	10.4	6.6	20.7	7.8	10.0				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	20.0	5.0	23.0	5.0	20.0	7.0	21.0				
Max Q Clear Time (g_c+1/3), s	12.3	7.9	3.3	4.3	2.8	10.6	3.6	2.1				
Green Ext Time (p_c), s	0.0	2.5	0.0	0.4	0.0	3.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay												16.0
HCM 6th LOS												B

Intersection

Intersection Delay, s/veh 10.6
Intersection LOS B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	6	8	218	259	50
Future Vol, veh/h	23	6	8	218	259	50
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	7	9	242	288	56
Number of Lanes	1	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left SB			WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	9.1	9.6	11.5
HCM LOS	A	A	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	84%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	6	8	218	309
LT Vol	23	0	0	0	259
Through Vol	0	6	8	0	0
RT Vol	0	0	0	218	50
Lane Flow Rate	26	7	9	242	343
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.044	0.01	0.013	0.318	0.446
Departure Headway (Hd)	6.158	5.652	5.431	4.724	4.68
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	579	631	658	758	769
Service Time	3.917	3.41	3.172	2.465	2.719
HCM Lane V/C Ratio	0.045	0.011	0.014	0.319	0.446
HCM Control Delay	9.2	8.5	8.2	9.7	11.5
HCM Lane LOS	A	A	A	A	B
HCM 95th-tile Q	0.1	0	0	1.4	2.3

Existing PM
1: I-15 SB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑↑
Traffic Volume (veh/h)	0	786	416	247	1039	0	0	0	0	519	2	426
Future Volume (veh/h)	0	786	416	247	1039	0	0	0	0	519	2	426
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	854	452	268	1129	0				565	0	463
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2599	807	351	3380	0				745	0	663
Arrive On Green	0.00	0.51	0.51	0.10	0.66	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	854	452	268	1129	0				565	0	463
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	8.9	17.6	6.8	8.6	0.0				13.4	0.0	12.2
Cycle Q Clear(g_c), s	0.0	8.9	17.6	6.8	8.6	0.0				13.4	0.0	12.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2599	807	351	3380	0				745	0	663
V/C Ratio(X)	0.00	0.33	0.56	0.76	0.33	0.00				0.76	0.00	0.70
Avail Cap(c_a), veh/h	0	2599	807	515	3380	0				1077	0	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.85	0.85	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.0	15.2	39.4	6.6	0.0				33.4	0.0	33.0
Incr Delay (d2), s/veh	0.0	0.3	2.8	3.4	0.2	0.0				1.9	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	6.1	2.9	2.4	0.0				5.9	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.4	18.0	42.7	6.8	0.0				35.3	0.0	34.3
LnGrp LOS	A	B	B	D	A	A				D	A	C
Approach Vol, veh/h		1306			1397						1028	
Approach Delay, s/veh		15.0			13.7						34.9	
Approach LOS		B			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.8	51.6		24.6		65.4						
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8						
Max Green Setting (Gmax), s	13.4	33.2		27.2		51.2						
Max Q Clear Time (g_c+I1), s	8.8	19.6		15.4		10.6						
Green Ext Time (p_c), s	0.4	6.0		3.4		9.1						

Intersection Summary

HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Existing PM
2: I-15 NB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↘	↑↑↑			↑↑↑	↗	↘	↕	↗			
Traffic Volume (veh/h)	326	979	0	0	687	540	599	2	396	0	0	0
Future Volume (veh/h)	326	979	0	0	687	540	599	2	396	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	351	1053	0	0	739	523	777	0	285			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	429	3126	0	0	2203	684	922	0	410			
Arrive On Green	0.12	0.61	0.00	0.00	0.43	0.43	0.26	0.00	0.26			
Sat Flow, veh/h	3456	5274	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	351	1053	0	0	739	523	777	0	285			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	8.9	9.1	0.0	0.0	8.7	25.2	18.6	0.0	14.6			
Cycle Q Clear(g_c), s	8.9	9.1	0.0	0.0	8.7	25.2	18.6	0.0	14.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	429	3126	0	0	2203	684	922	0	410			
V/C Ratio(X)	0.82	0.34	0.00	0.00	0.34	0.76	0.84	0.00	0.69			
Avail Cap(c_a), veh/h	495	3126	0	0	2203	684	1116	0	497			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.89	0.89	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.4	8.5	0.0	0.0	17.0	21.7	31.6	0.0	30.1			
Incr Delay (d2), s/veh	8.3	0.3	0.0	0.0	0.3	6.5	5.1	0.0	3.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.1	2.8	0.0	0.0	3.1	9.5	8.4	0.0	5.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	8.8	0.0	0.0	17.3	28.2	36.7	0.0	33.4			
LnGrp LOS	D	A	A	A	B	C	D	A	C			
Approach Vol, veh/h		1404			1262			1062				
Approach Delay, s/veh		18.3			21.8			35.8				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.9			16.3	44.6		29.1				
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8				
Max Green Setting (Gmax), s		50.2			12.9	32.2		28.2				
Max Q Clear Time (g_c+I1), s		11.1			10.9	27.2		20.6				
Green Ext Time (p_c), s		8.2			0.3	2.8		2.7				

Intersection Summary

HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Existing PM
3: Arya Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕		↖	↕			↕↕	
Traffic Volume (veh/h)	52	1034	371	94	936	48	341	12	118	37	4	51
Future Volume (veh/h)	52	1034	371	94	936	48	341	12	118	37	4	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	1136	408	103	1029	53	375	13	130	41	4	56
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1648	592	127	2317	119	465	48	477	195	34	230
Arrive On Green	0.05	0.44	0.44	0.09	0.62	0.62	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3705	1330	1781	4973	256	1343	146	1461	465	103	707
Grp Volume(v), veh/h	57	1044	500	103	704	378	375	0	143	101	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1631	1781	1702	1824	1343	0	1607	1275	0	0
Q Serve(g_s), s	3.7	29.0	29.0	6.7	12.8	12.8	24.3	0.0	7.8	2.9	0.0	0.0
Cycle Q Clear(g_c), s	3.7	29.0	29.0	6.7	12.8	12.8	34.9	0.0	7.8	10.6	0.0	0.0
Prop In Lane	1.00		0.82	1.00		0.14	1.00		0.91	0.41		0.55
Lane Grp Cap(c), veh/h	89	1514	726	127	1586	850	465	0	524	459	0	0
V/C Ratio(X)	0.64	0.69	0.69	0.81	0.44	0.44	0.81	0.00	0.27	0.22	0.00	0.00
Avail Cap(c_a), veh/h	140	1514	726	180	1586	850	554	0	631	554	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.89	0.89	0.89	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	55.0	26.2	26.2	52.6	14.4	14.4	39.7	0.0	29.4	30.1	0.0	0.0
Incr Delay (d2), s/veh	2.6	2.4	4.8	10.3	0.8	1.5	7.3	0.0	0.3	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	11.5	11.6	3.2	4.3	4.8	11.4	0.0	3.1	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.5	28.6	31.1	62.9	15.2	15.9	47.0	0.0	29.7	30.3	0.0	0.0
LnGrp LOS	E	C	C	E	B	B	D	A	C	C	A	A
Approach Vol, veh/h		1601			1185			518				101
Approach Delay, s/veh		30.4			19.6			42.2				30.3
Approach LOS		C			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.5	59.3		44.2	12.0	61.8		44.2				
Change Period (Y+Rc), s	6.1	6.8		* 5.7	6.1	6.8		* 5.7				
Max Green Setting (Gmax), s	11.9	41.2		* 46	9.3	43.8		* 46				
Max Q Clear Time (g_c+I1), s	8.7	31.0		12.6	5.7	14.8		36.9				
Green Ext Time (p_c), s	0.0	8.8		0.6	0.0	15.0		1.5				

Intersection Summary

HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing PM
4: Wildomar Trail & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	1036	17	106	915	48	67	37	107	59	29	95
Future Volume (veh/h)	148	1036	17	106	915	48	67	37	107	59	29	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	157	1102	18	113	973	51	71	39	114	63	31	101
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	2138	953	137	2047	913	242	66	194	150	295	250
Arrive On Green	0.20	1.00	1.00	0.15	1.00	1.00	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1258	420	1229	1234	1870	1585
Grp Volume(v), veh/h	157	1102	18	113	973	51	71	0	153	63	31	101
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1258	0	1649	1234	1870	1585
Q Serve(g_s), s	10.0	0.0	0.0	7.3	0.0	0.0	6.0	0.0	10.2	5.9	1.7	6.8
Cycle Q Clear(g_c), s	10.0	0.0	0.0	7.3	0.0	0.0	7.7	0.0	10.2	16.1	1.7	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	182	2138	953	137	2047	913	242	0	261	150	295	250
V/C Ratio(X)	0.86	0.52	0.02	0.82	0.48	0.06	0.29	0.00	0.59	0.42	0.10	0.40
Avail Cap(c_a), veh/h	285	2138	953	229	2047	913	416	0	489	321	555	470
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.83	0.83	0.83	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	0.0	49.1	0.0	0.0	45.8	0.0	46.1	53.6	42.5	44.7
Incr Delay (d2), s/veh	6.0	0.6	0.0	3.9	0.7	0.1	0.7	0.0	2.1	1.9	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.2	0.0	3.1	0.2	0.0	1.9	0.0	4.3	1.9	0.8	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	0.6	0.0	53.1	0.7	0.1	46.5	0.0	48.2	55.4	42.7	45.7
LnGrp LOS	D	A	A	D	A	A	D	A	D	E	D	D
Approach Vol, veh/h		1277			1137			224			195	
Approach Delay, s/veh		6.9			5.8			47.7			48.4	
Approach LOS		A			A			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	77.8		25.0	18.2	74.8		25.0				
Change Period (Y+Rc), s	6.1	6.8		6.4	6.1	6.8		6.4				
Max Green Setting (Gmax), s	15.2	48.5		35.0	18.9	44.8		35.0				
Max Q Clear Time (g_c+I1), s	9.3	2.0		18.1	12.0	2.0		12.2				
Green Ext Time (p_c), s	0.1	22.2		0.6	0.1	16.8		1.1				

Intersection Summary

HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Existing PM
5: Inland Valley Dr & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰	↕	↱	↰	↕	↱	↱
Traffic Volume (veh/h)	0	874	331	36	659	419	109
Future Volume (veh/h)	0	874	331	36	659	419	109
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		930	317	38	701	446	116
Peak Hour Factor		0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1872	835	54	2163	492	438
Arrive On Green		1.00	1.00	0.03	0.61	0.28	0.28
Sat Flow, veh/h		3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h		930	317	38	701	446	116
Grp Sat Flow(s),veh/h/ln		1777	1585	1781	1777	1781	1585
Q Serve(g_s), s		0.0	0.0	2.5	11.3	28.5	6.7
Cycle Q Clear(g_c), s		0.0	0.0	2.5	11.3	28.5	6.7
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1872	835	54	2163	492	438
V/C Ratio(X)		0.50	0.38	0.71	0.32	0.91	0.27
Avail Cap(c_a), veh/h		1872	835	104	2163	693	617
HCM Platoon Ratio		2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.85	0.85	0.98	0.98	1.00	1.00
Uniform Delay (d), s/veh		0.0	0.0	56.7	11.3	41.2	33.4
Incr Delay (d2), s/veh		0.8	1.1	6.1	0.4	12.9	0.4
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.2	0.3	1.2	4.2	13.8	2.6
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		0.8	1.1	62.8	11.6	54.1	33.7
LnGrp LOS		A	A	E	B	D	C
Approach Vol, veh/h		1247			739	562	
Approach Delay, s/veh		0.9			14.3	49.9	
Approach LOS		A			B	D	
Timer - Assigned Phs	1	2			6	8	
Phs Duration (G+Y+Rc), s	9.7	69.7			79.3	38.7	
Change Period (Y+Rc), s	6.1	7.5			7.5	6.1	
Max Green Setting (Gmax), s	6.9	45.5			46.4	45.9	
Max Q Clear Time (g_c+I1), s	4.5	2.0			13.3	30.5	
Green Ext Time (p_c), s	0.0	6.7			3.8	2.1	

Intersection Summary

HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Existing PM
6: Smith Ranch Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	52	796	21	33	605	37	18	1	2	44	0	35
Future Volume (veh/h)	52	796	21	33	605	37	18	1	2	44	0	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	812	21	34	617	38	18	1	2	45	0	36
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	1179	30	69	1079	66	40	38	77	86	0	150
Arrive On Green	0.05	0.33	0.33	0.04	0.32	0.32	0.02	0.07	0.07	0.05	0.00	0.09
Sat Flow, veh/h	1781	3539	92	1781	3400	209	1781	557	1113	1781	0	1585
Grp Volume(v), veh/h	53	408	425	34	322	333	18	0	3	45	0	36
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	1781	1777	1833	1781	0	1670	1781	0	1585
Q Serve(g_s), s	1.2	8.5	8.6	0.8	6.5	6.5	0.4	0.0	0.1	1.1	0.0	0.9
Cycle Q Clear(g_c), s	1.2	8.5	8.6	0.8	6.5	6.5	0.4	0.0	0.1	1.1	0.0	0.9
Prop In Lane	1.00		0.05	1.00		0.11	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	97	592	617	69	564	581	40	0	115	86	0	150
V/C Ratio(X)	0.55	0.69	0.69	0.49	0.57	0.57	0.45	0.00	0.03	0.52	0.00	0.24
Avail Cap(c_a), veh/h	207	825	861	207	825	851	207	0	853	248	0	847
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	12.4	12.4	20.3	12.3	12.3	20.8	0.0	18.7	20.0	0.0	18.1
Incr Delay (d2), s/veh	1.8	1.7	1.7	2.0	1.1	1.1	2.9	0.0	0.1	1.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	2.7	0.3	2.0	2.0	0.2	0.0	0.0	0.4	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.6	14.2	14.1	22.3	13.4	13.3	23.7	0.0	18.8	21.8	0.0	18.7
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		886			689			21				81
Approach Delay, s/veh		14.6			13.8			23.0				20.4
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	21.3	6.0	9.1	7.3	20.7	7.1	8.0				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	20.0	5.0	23.0	5.0	20.0	6.0	22.0				
Max Q Clear Time (g_c+I1), s	2.8	10.6	2.4	2.9	3.2	8.5	3.1	2.1				
Green Ext Time (p_c), s	0.0	3.8	0.0	0.1	0.0	3.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	14.6
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↑	↗	↖	
Traffic Vol, veh/h	29	4	3	264	275	5
Future Vol, veh/h	29	4	3	264	275	5
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	5	3	307	320	6
Number of Lanes	1	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	9.3	10.7	12
HCM LOS	A	B	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	98%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	4	3	264	280
LT Vol	29	0	0	0	275
Through Vol	0	4	3	0	0
RT Vol	0	0	0	264	5
Lane Flow Rate	34	5	3	307	326
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.058	0.007	0.005	0.403	0.448
Departure Headway (Hd)	6.213	5.707	5.436	4.729	4.949
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	573	623	656	758	726
Service Time	3.988	3.481	3.186	2.479	3.001
HCM Lane V/C Ratio	0.059	0.008	0.005	0.405	0.449
HCM Control Delay	9.4	8.5	8.2	10.7	12
HCM Lane LOS	A	A	A	B	B
HCM 95th-tile Q	0.2	0	0	2	2.3

APPENDIX C

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – NEAR-TERM OPENING YEAR 2026

Existing+Growth (Year 2026) AM
1: I-15 SB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↗	↘↗
Traffic Volume (veh/h)	0	1124	765	484	917	0	0	0	0	670	2	450
Future Volume (veh/h)	0	1124	765	484	917	0	0	0	0	670	2	450
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1222	832	526	997	0				729	0	489
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2121	658	592	3257	0				831	0	739
Arrive On Green	0.00	0.42	0.42	0.23	0.85	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1222	832	526	997	0				729	0	489
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	16.6	37.4	13.3	3.6	0.0				17.8	0.0	12.6
Cycle Q Clear(g_c), s	0.0	16.6	37.4	13.3	3.6	0.0				17.8	0.0	12.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2121	658	592	3257	0				831	0	739
V/C Ratio(X)	0.00	0.58	1.26	0.89	0.31	0.00				0.88	0.00	0.66
Avail Cap(c_a), veh/h	0	2121	658	630	3257	0				918	0	817
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.80	0.80	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.2	26.3	33.9	2.7	0.0				33.3	0.0	31.3
Incr Delay (d2), s/veh	0.0	1.1	130.5	11.0	0.2	0.0				8.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.1	36.3	5.8	0.9	0.0				8.4	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.4	156.9	44.9	2.9	0.0				41.6	0.0	32.5
LnGrp LOS	A	C	F	D	A	A				D	A	C
Approach Vol, veh/h		2054			1523						1218	
Approach Delay, s/veh		76.2			17.4						38.0	
Approach LOS		E			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	20.0	43.2		26.8		63.2						
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8						
Max Green Setting (Gmax), s	16.4	34.2		23.2		55.2						
Max Q Clear Time (g_c+I1), s	15.3	39.4		19.8		5.6						
Green Ext Time (p_c), s	0.2	0.0		1.2		4.7						

Intersection Summary

HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Existing+Growth (Year 2026) AM
2: I-15 NB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑↑			↑↑↑	↖	↖	↕	↖			
Traffic Volume (veh/h)	419	1373	0	0	1053	737	349	1	411	0	0	0
Future Volume (veh/h)	419	1373	0	0	1053	737	349	1	411	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	451	1476	0	0	1132	712	523	0	284			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	532	3384	0	0	2308	717	742	0	330			
Arrive On Green	0.15	0.66	0.00	0.00	0.45	0.45	0.21	0.00	0.21			
Sat Flow, veh/h	3456	5274	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	451	1476	0	0	1132	712	523	0	284			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	11.4	12.3	0.0	0.0	14.0	40.2	12.3	0.0	15.6			
Cycle Q Clear(g_c), s	11.4	12.3	0.0	0.0	14.0	40.2	12.3	0.0	15.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	532	3384	0	0	2308	717	742	0	330			
V/C Ratio(X)	0.85	0.44	0.00	0.00	0.49	0.99	0.70	0.00	0.86			
Avail Cap(c_a), veh/h	611	3384	0	0	2308	717	839	0	373			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.69	0.69	0.00	0.00	0.29	0.29	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.0	7.2	0.0	0.0	17.4	24.5	33.1	0.0	34.4			
Incr Delay (d2), s/veh	6.9	0.3	0.0	0.0	0.2	16.7	2.3	0.0	16.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.1	3.5	0.0	0.0	5.0	16.5	5.4	0.0	7.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	7.5	0.0	0.0	17.6	41.2	35.4	0.0	50.9			
LnGrp LOS	D	A	A	A	B	D	D	A	D			
Approach Vol, veh/h		1927			1844			807				
Approach Delay, s/veh		16.0			26.7			40.8				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		65.4			19.0	46.5		24.6				
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8				
Max Green Setting (Gmax), s		57.2			15.9	36.2		21.2				
Max Q Clear Time (g_c+I1), s		14.3			13.4	42.2		17.6				
Green Ext Time (p_c), s		13.7			0.4	0.0		1.2				

Intersection Summary

HCM 6th Ctrl Delay	24.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Existing+Growth (Year 2026) AM
3: Arya Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗			↖	↗		↖↗	
Traffic Volume (veh/h)	218	1362	298	124	1442	188	249	16	102	110	17	167
Future Volume (veh/h)	218	1362	298	124	1442	188	249	16	102	110	17	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	1449	317	132	1534	200	265	17	109	117	18	178
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	1805	394	156	1704	222	281	14	510	43	20	26
Arrive On Green	0.15	0.43	0.43	0.18	0.75	0.75	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	4195	915	1781	4572	595	688	44	1585	0	62	81
Grp Volume(v), veh/h	232	1175	591	132	1142	592	282	0	109	313	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1706	1781	1702	1763	732	0	1585	143	0	0
Q Serve(g_s), s	14.8	34.8	35.0	8.3	30.1	30.2	0.0	0.0	5.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.8	34.8	35.0	8.3	30.1	30.2	37.3	0.0	5.8	37.3	0.0	0.0
Prop In Lane	1.00		0.54	1.00		0.34	0.94		1.00	0.37		0.57
Lane Grp Cap(c), veh/h	259	1465	734	156	1269	657	296	0	510	89	0	0
V/C Ratio(X)	0.90	0.80	0.81	0.84	0.90	0.90	0.95	0.00	0.21	3.53	0.00	0.00
Avail Cap(c_a), veh/h	269	1465	734	164	1269	657	296	0	510	89	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.52	0.52	0.52	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.7	28.7	28.8	47.1	13.1	13.1	42.4	0.0	28.7	39.5	0.0	0.0
Incr Delay (d2), s/veh	25.5	4.2	8.2	16.7	5.9	10.5	39.9	0.0	0.2	1167.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	14.1	15.0	4.0	5.5	6.5	11.5	0.0	2.2	31.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.2	32.9	37.0	63.8	18.9	23.6	82.4	0.0	28.9	1207.1	0.0	0.0
LnGrp LOS	E	C	D	E	B	C	F	A	C	F	A	A
Approach Vol, veh/h		1998			1866			391			313	
Approach Delay, s/veh		38.9			23.6			67.5			1207.1	
Approach LOS		D			C			E			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.3	56.7		43.0	23.0	50.0		43.0				
Change Period (Y+Rc), s	6.1	6.8		* 5.7	6.1	6.8		* 5.7				
Max Green Setting (Gmax), s	10.7	49.4		* 37	17.5	42.6		* 37				
Max Q Clear Time (g_c+I1), s	10.3	37.0		39.3	16.8	32.2		39.3				
Green Ext Time (p_c), s	0.0	11.1		0.0	0.0	9.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	115.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing+Growth (Year 2026) AM
4: Wildomar Trail & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1229	10	102	1346	47	73	17	56	177	28	373
Future Volume (veh/h)	154	1229	10	102	1346	47	73	17	56	177	28	373
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	164	1307	11	109	1432	50	78	18	60	188	30	397
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	1737	775	133	1626	725	310	103	342	371	506	429
Arrive On Green	0.21	0.98	0.98	0.15	0.91	0.91	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	961	379	1264	1321	1870	1585
Grp Volume(v), veh/h	164	1307	11	109	1432	50	78	0	78	188	30	397
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	961	0	1643	1321	1870	1585
Q Serve(g_s), s	10.3	3.6	0.0	6.9	20.5	0.3	7.6	0.0	4.2	14.7	1.4	28.3
Cycle Q Clear(g_c), s	10.3	3.6	0.0	6.9	20.5	0.3	9.0	0.0	4.2	19.0	1.4	28.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	188	1737	775	133	1626	725	310	0	444	371	506	429
V/C Ratio(X)	0.87	0.75	0.01	0.82	0.88	0.07	0.25	0.00	0.18	0.51	0.06	0.93
Avail Cap(c_a), veh/h	198	1737	775	155	1626	725	340	0	496	413	564	478
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	0.70	0.70	0.70	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	0.7	0.7	48.6	3.5	2.7	34.7	0.0	32.4	39.7	31.4	41.2
Incr Delay (d2), s/veh	18.1	1.7	0.0	16.5	5.2	0.1	0.4	0.0	0.2	1.1	0.0	22.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.8	0.0	3.4	2.8	0.1	1.8	0.0	1.7	4.9	0.6	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	2.4	0.7	65.1	8.8	2.8	35.1	0.0	32.6	40.7	31.4	64.1
LnGrp LOS	E	A	A	E	A	A	D	A	C	D	C	E
Approach Vol, veh/h		1482			1591			156			615	
Approach Delay, s/veh		9.1			12.4			33.9			55.4	
Approach LOS		A			B			C			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.7	63.5		37.8	18.4	59.9		37.8				
Change Period (Y+Rc), s	6.1	6.8		6.4	6.1	6.8		6.4				
Max Green Setting (Gmax), s	10.1	51.6		35.0	12.9	48.8		35.0				
Max Q Clear Time (g_c+I1), s	8.9	5.6		30.3	12.3	22.5		11.0				
Green Ext Time (p_c), s	0.0	27.3		1.1	0.0	19.3		0.8				

Intersection Summary

HCM 6th Ctrl Delay	18.9
HCM 6th LOS	B

Existing+Growth (Year 2026) AM
5: Inland Valley Dr & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰	↕	↱	↰	↕	↱	↱
Traffic Volume (veh/h)	0	1003	588	132	1078	434	66
Future Volume (veh/h)	0	1003	588	132	1078	434	66
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		1090	575	143	1172	472	72
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1600	714	170	2126	507	451
Arrive On Green		0.90	0.90	0.10	0.60	0.28	0.28
Sat Flow, veh/h		3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h		1090	575	143	1172	472	72
Grp Sat Flow(s),veh/h/ln		1777	1585	1781	1777	1781	1585
Q Serve(g_s), s		9.2	15.3	9.2	22.9	29.9	3.9
Cycle Q Clear(g_c), s		9.2	15.3	9.2	22.9	29.9	3.9
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1600	714	170	2126	507	451
V/C Ratio(X)		0.68	0.81	0.84	0.55	0.93	0.16
Avail Cap(c_a), veh/h		1600	714	213	2126	567	504
HCM Platoon Ratio		2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.66	0.66	0.70	0.70	1.00	1.00
Uniform Delay (d), s/veh		3.6	3.9	51.6	14.0	40.4	31.1
Incr Delay (d2), s/veh		1.6	6.4	13.0	0.7	21.5	0.2
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		1.8	2.8	4.6	8.4	15.6	1.5
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		5.2	10.4	64.6	14.7	61.9	31.3
LnGrp LOS		A	B	E	B	E	C
Approach Vol, veh/h		1665			1315	544	
Approach Delay, s/veh		7.0			20.1	57.8	
Approach LOS		A			C	E	
Timer - Assigned Phs	1	2			6	8	
Phs Duration (G+Y+Rc), s	17.2	59.7			76.9	39.1	
Change Period (Y+Rc), s	6.1	7.5			7.5	6.1	
Max Green Setting (Gmax), s	13.9	45.5			53.4	36.9	
Max Q Clear Time (g_c+I1), s	11.2	17.3			24.9	31.9	
Green Ext Time (p_c), s	0.0	8.9			7.3	1.1	

Intersection Summary

HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Existing+Growth (Year 2026) AM
6: Smith Ranch Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	45	769	20	16	1082	24	64	0	8	68	3	111
Future Volume (veh/h)	45	769	20	16	1082	24	64	0	8	68	3	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	827	22	17	1163	26	69	0	9	73	3	119
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	1386	37	37	1297	29	107	0	180	110	5	180
Arrive On Green	0.05	0.39	0.39	0.02	0.37	0.37	0.06	0.00	0.11	0.06	0.12	0.12
Sat Flow, veh/h	1781	3536	94	1781	3553	79	1781	0	1585	1781	39	1552
Grp Volume(v), veh/h	48	416	433	17	581	608	69	0	9	73	0	122
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	1781	1777	1856	1781	0	1585	1781	0	1591
Q Serve(g_s), s	1.4	9.9	9.9	0.5	16.5	16.5	2.0	0.0	0.3	2.1	0.0	3.9
Cycle Q Clear(g_c), s	1.4	9.9	9.9	0.5	16.5	16.5	2.0	0.0	0.3	2.1	0.0	3.9
Prop In Lane	1.00		0.05	1.00		0.04	1.00		1.00	1.00		0.98
Lane Grp Cap(c), veh/h	85	696	726	37	649	678	107	0	180	110	0	184
V/C Ratio(X)	0.57	0.60	0.60	0.46	0.90	0.90	0.65	0.00	0.05	0.66	0.00	0.66
Avail Cap(c_a), veh/h	167	696	726	167	665	695	167	0	563	300	0	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.9	12.9	12.9	25.9	16.0	16.0	24.6	0.0	21.1	24.5	0.0	22.6
Incr Delay (d2), s/veh	5.8	1.4	1.3	8.5	14.7	14.2	6.4	0.0	0.1	6.6	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.2	3.4	0.3	7.7	8.0	1.0	0.0	0.1	1.0	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	14.3	14.2	34.4	30.7	30.2	31.0	0.0	21.2	31.1	0.0	26.7
LnGrp LOS	C	B	B	C	C	C	C	A	C	C	A	C
Approach Vol, veh/h		897			1206			78				195
Approach Delay, s/veh		15.1			30.5			29.8				28.4
Approach LOS		B			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	27.9	8.2	11.2	7.5	26.5	8.3	11.1				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	20.0	5.0	23.0	5.0	20.0	9.0	19.0				
Max Q Clear Time (g_c+I1), s	2.5	11.9	4.0	5.9	3.4	18.5	4.1	2.3				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.6	0.0	1.0	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			24.5									
HCM 6th LOS			C									

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	↘
Traffic Vol, veh/h	26	7	9	354	349	56
Future Vol, veh/h	26	7	9	354	349	56
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	8	10	385	379	61
Number of Lanes	1	1	1	1	1	0

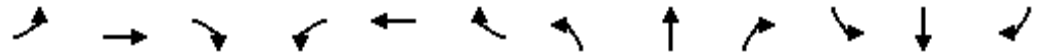
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	9.7	13.6	16.3
HCM LOS	A	B	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	86%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	7	9	354	405
LT Vol	26	0	0	0	349
Through Vol	0	7	9	0	0
RT Vol	0	0	0	354	56
Lane Flow Rate	28	8	10	385	440
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.054	0.013	0.016	0.539	0.621
Departure Headway (Hd)	6.833	6.323	5.752	5.042	5.078
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	527	569	616	708	704
Service Time	4.533	4.023	3.542	2.832	3.169
HCM Lane V/C Ratio	0.053	0.014	0.016	0.544	0.625
HCM Control Delay	9.9	9.1	8.6	13.7	16.3
HCM Lane LOS	A	A	A	B	C
HCM 95th-tile Q	0.2	0	0	3.2	4.3

Existing+Growth (Year 2026) PM
1: I-15 SB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↗	↗↘
Traffic Volume (veh/h)	0	1153	468	435	1406	0	0	0	0	775	2	480
Future Volume (veh/h)	0	1153	468	435	1406	0	0	0	0	775	2	480
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1253	509	473	1528	0				843	0	522
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1944	604	557	3028	0				991	0	882
Arrive On Green	0.00	0.38	0.38	0.05	0.20	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1253	509	473	1528	0				843	0	522
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	18.1	26.4	12.2	24.0	0.0				20.1	0.0	12.8
Cycle Q Clear(g_c), s	0.0	18.1	26.4	12.2	24.0	0.0				20.1	0.0	12.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1944	604	557	3028	0				991	0	882
V/C Ratio(X)	0.00	0.64	0.84	0.85	0.50	0.00				0.85	0.00	0.59
Avail Cap(c_a), veh/h	0	1944	604	599	3028	0				1100	0	979
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.60	0.60	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.9	25.4	41.5	24.4	0.0				30.7	0.0	28.1
Incr Delay (d2), s/veh	0.0	1.7	13.5	6.7	0.4	0.0				6.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.9	11.2	6.0	10.8	0.0				9.2	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.5	38.9	48.2	24.8	0.0				36.7	0.0	28.9
LnGrp LOS	A	C	D	D	C	A				D	A	C
Approach Vol, veh/h		1762			2001						1365	
Approach Delay, s/veh		28.7			30.3						33.7	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.1	40.1		30.8		59.2						
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8						
Max Green Setting (Gmax), s	15.6	30.4		27.8		50.6						
Max Q Clear Time (g_c+I1), s	14.2	28.4		22.1		26.0						
Green Ext Time (p_c), s	0.3	1.6		2.9		11.6						

Intersection Summary

HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Existing+Growth (Year 2026) PM
 2: I-15 NB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔	↔			
Traffic Volume (veh/h)	367	1560	0	0	1165	785	675	2	604	0	0	0
Future Volume (veh/h)	367	1560	0	0	1165	785	675	2	604	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	395	1677	0	0	1253	759	929	0	433			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	457	2909	0	0	1945	604	1074	0	478			
Arrive On Green	0.13	0.57	0.00	0.00	0.38	0.38	0.30	0.00	0.30			
Sat Flow, veh/h	3456	5274	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	395	1677	0	0	1253	759	929	0	433			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.1	18.9	0.0	0.0	18.1	34.3	22.2	0.0	23.6			
Cycle Q Clear(g_c), s	10.1	18.9	0.0	0.0	18.1	34.3	22.2	0.0	23.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	457	2909	0	0	1945	604	1074	0	478			
V/C Ratio(X)	0.86	0.58	0.00	0.00	0.64	1.26	0.87	0.00	0.91			
Avail Cap(c_a), veh/h	457	2909	0	0	1945	604	1116	0	497			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.60	0.60	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.3	12.4	0.0	0.0	22.9	27.9	29.7	0.0	30.2			
Incr Delay (d2), s/veh	10.2	0.5	0.0	0.0	0.2	117.1	7.1	0.0	19.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	6.1	0.0	0.0	6.6	31.3	10.2	0.0	11.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.4	12.9	0.0	0.0	23.0	144.9	36.8	0.0	50.1			
LnGrp LOS	D	B	A	A	C	F	D	A	D			
Approach Vol, veh/h		2072			2012			1362				
Approach Delay, s/veh		19.7			69.0			41.0				
Approach LOS		B			E			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		57.1			17.0	40.1		32.9				
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8				
Max Green Setting (Gmax), s		50.2			11.9	33.2		28.2				
Max Q Clear Time (g_c+I1), s		20.9			12.1	36.3		25.6				
Green Ext Time (p_c), s		14.3			0.0	0.0		1.5				

Intersection Summary

HCM 6th Ctrl Delay	43.2
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Existing+Growth (Year 2026) PM
3: Arya Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑↑		↖	↑↑↑			↑	↗		↖	
Traffic Volume (veh/h)	278	1560	418	108	1433	266	384	24	137	235	11	249
Future Volume (veh/h)	278	1560	418	108	1433	266	384	24	137	235	11	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	302	1696	454	117	1558	289	417	26	149	255	12	271
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1167	306	134	1108	205	470	26	756	45	1	1
Arrive On Green	0.11	0.29	0.29	0.02	0.08	0.08	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1781	4027	1057	1781	4331	800	861	54	1585	0	2	2
Grp Volume(v), veh/h	302	1429	721	117	1223	624	443	0	149	538	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1680	1781	1702	1726	915	0	1585	4	0	0
Q Serve(g_s), s	12.9	34.2	34.2	7.7	30.2	30.2	0.0	0.0	6.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.9	34.2	34.2	7.7	30.2	30.2	56.3	0.0	6.4	56.3	0.0	0.0
Prop In Lane	1.00		0.63	1.00		0.46	0.94		1.00	0.47		0.50
Lane Grp Cap(c), veh/h	195	987	487	134	871	442	496	0	756	47	0	0
V/C Ratio(X)	1.55	1.45	1.48	0.87	1.40	1.41	0.89	0.00	0.20	11.44	0.00	0.00
Avail Cap(c_a), veh/h	195	987	487	134	871	442	496	0	756	47	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	0.31	0.31	0.31	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.5	41.9	41.9	57.0	54.0	54.0	31.3	0.0	17.8	56.6	0.0	0.0
Incr Delay (d2), s/veh	265.6	205.8	224.8	16.6	184.0	189.5	18.4	0.0	0.1	4741.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.0	41.9	43.9	4.2	36.0	37.2	14.8	0.0	2.4	63.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	318.2	247.7	266.7	73.6	238.1	243.5	49.6	0.0	17.9	4798.3	0.0	0.0
LnGrp LOS	F	F	F	E	F	F	D	A	B	F	A	A
Approach Vol, veh/h		2452			1964			592			538	
Approach Delay, s/veh		261.9			230.0			41.7			4798.3	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	41.0		62.0	19.0	37.0		62.0				
Change Period (Y+Rc), s	6.1	6.8		* 5.7	6.1	6.8		* 5.7				
Max Green Setting (Gmax), s	8.9	34.2		* 56	12.9	30.2		* 56				
Max Q Clear Time (g_c+I1), s	9.7	36.2		58.3	14.9	32.2		58.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	667.2
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing+Growth (Year 2026) PM
4: Wildomar Trail & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗	↖	↖	↗↗	↖	↖	↗		↖	↗	↖
Traffic Volume (veh/h)	193	1655	19	125	1529	111	75	44	130	153	34	206
Future Volume (veh/h)	193	1655	19	125	1529	111	75	44	130	153	34	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	205	1761	20	133	1627	118	80	47	138	163	36	219
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	1796	801	142	1720	767	327	105	309	249	470	399
Arrive On Green	0.03	0.17	0.17	0.11	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1125	419	1230	1199	1870	1585
Grp Volume(v), veh/h	205	1761	20	133	1627	118	80	0	185	163	36	219
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1125	0	1649	1199	1870	1585
Q Serve(g_s), s	11.9	58.2	1.2	8.7	49.2	3.5	6.9	0.0	11.2	15.7	1.7	14.2
Cycle Q Clear(g_c), s	11.9	58.2	1.2	8.7	49.2	3.5	8.6	0.0	11.2	26.8	1.7	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	180	1796	801	142	1720	767	327	0	415	249	470	399
V/C Ratio(X)	1.14	0.98	0.02	0.94	0.95	0.15	0.24	0.00	0.45	0.65	0.08	0.55
Avail Cap(c_a), veh/h	180	1796	801	142	1720	767	378	0	489	303	555	470
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.47	0.47	0.47	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	48.6	24.8	52.5	19.6	11.5	37.0	0.0	37.2	48.5	33.7	38.4
Incr Delay (d2), s/veh	70.1	3.3	0.0	35.1	6.7	0.2	0.4	0.0	0.8	3.7	0.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	28.3	0.4	5.1	16.0	1.2	1.9	0.0	4.6	4.9	0.8	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.2	51.9	24.8	87.6	26.3	11.7	37.4	0.0	38.0	52.2	33.8	39.5
LnGrp LOS	F	D	C	F	C	B	D	A	D	D	C	D
Approach Vol, veh/h		1986			1878			265			418	
Approach Delay, s/veh		59.4			29.7			37.8			44.0	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.5	66.4		36.1	18.0	63.9		36.1				
Change Period (Y+Rc), s	6.1	6.8		6.4	6.1	6.8		6.4				
Max Green Setting (Gmax), s	9.4	54.3		35.0	11.9	51.8		35.0				
Max Q Clear Time (g_c+I1), s	10.7	60.2		28.8	13.9	51.2		13.2				
Green Ext Time (p_c), s	0.0	0.0		0.9	0.0	0.6		1.4				

Intersection Summary

HCM 6th Ctrl Delay	44.5
HCM 6th LOS	D

Existing+Growth (Year 2026) PM
5: Inland Valley Dr & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	0	1369	570	69	1183	644	143
Future Volume (veh/h)	0	1369	570	69	1183	644	143
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		1456	545	73	1259	685	152
Peak Hour Factor		0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1394	622	75	1728	710	632
Arrive On Green		0.78	0.78	0.04	0.49	0.40	0.40
Sat Flow, veh/h		3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h		1456	545	73	1259	685	152
Grp Sat Flow(s),veh/h/ln		1777	1585	1781	1777	1781	1585
Q Serve(g_s), s		46.3	28.0	4.8	33.3	44.4	7.5
Cycle Q Clear(g_c), s		46.3	28.0	4.8	33.3	44.4	7.5
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1394	622	75	1728	710	632
V/C Ratio(X)		1.04	0.88	0.97	0.73	0.97	0.24
Avail Cap(c_a), veh/h		1394	622	75	1728	723	643
HCM Platoon Ratio		2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.23	0.23	0.80	0.80	1.00	1.00
Uniform Delay (d), s/veh		12.7	10.8	56.4	24.1	34.7	23.6
Incr Delay (d2), s/veh		25.6	4.4	81.2	2.2	25.0	0.2
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		9.6	4.4	3.8	13.5	22.9	2.8
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		38.3	15.1	137.7	26.3	59.6	23.8
LnGrp LOS		F	B	F	C	E	C
Approach Vol, veh/h		2001			1332	837	
Approach Delay, s/veh		32.0			32.4	53.1	
Approach LOS		C			C	D	
Timer - Assigned Phs	1	2			6	8	
Phs Duration (G+Y+Rc), s	11.1	53.8			64.9	53.1	
Change Period (Y+Rc), s	6.1	7.5			7.5	6.1	
Max Green Setting (Gmax), s	5.0	45.4			44.4	47.9	
Max Q Clear Time (g_c+I1), s	6.8	48.3			35.3	46.4	
Green Ext Time (p_c), s	0.0	0.0			4.6	0.7	

Intersection Summary

HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

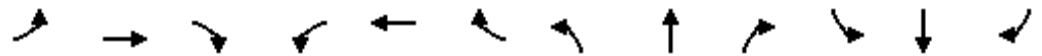
Notes

User approved ignoring U-Turning movement.

Existing+Growth (Year 2026) PM
6: Smith Ranch Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	84	1188	32	42	1000	42	29	2	7	50	1	69
Future Volume (veh/h)	84	1188	32	42	1000	42	29	2	7	50	1	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	1212	33	43	1020	43	30	2	7	51	1	70
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1353	37	80	1246	53	60	34	118	90	2	171
Arrive On Green	0.07	0.38	0.38	0.04	0.36	0.36	0.03	0.09	0.09	0.05	0.11	0.11
Sat Flow, veh/h	1781	3534	96	1781	3474	146	1781	365	1276	1781	22	1566
Grp Volume(v), veh/h	86	609	636	43	522	541	30	0	9	51	0	71
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	1781	1777	1844	1781	0	1641	1781	0	1588
Q Serve(g_s), s	2.4	16.5	16.5	1.2	13.7	13.7	0.8	0.0	0.3	1.4	0.0	2.1
Cycle Q Clear(g_c), s	2.4	16.5	16.5	1.2	13.7	13.7	0.8	0.0	0.3	1.4	0.0	2.1
Prop In Lane	1.00		0.05	1.00		0.08	1.00		0.78	1.00		0.99
Lane Grp Cap(c), veh/h	123	680	710	80	637	662	60	0	152	90	0	173
V/C Ratio(X)	0.70	0.90	0.90	0.54	0.82	0.82	0.50	0.00	0.06	0.57	0.00	0.41
Avail Cap(c_a), veh/h	174	694	723	174	694	720	174	0	672	243	0	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	14.8	14.8	24.0	14.9	14.9	24.3	0.0	21.2	23.8	0.0	21.3
Incr Delay (d2), s/veh	2.7	14.2	13.8	2.1	7.4	7.1	2.3	0.0	0.1	2.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	7.5	7.8	0.5	5.4	5.6	0.4	0.0	0.1	0.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	29.1	28.7	26.1	22.3	22.1	26.6	0.0	21.3	25.9	0.0	22.4
LnGrp LOS	C	C	C	C	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1331			1106			39				122
Approach Delay, s/veh		28.7			22.3			25.4				23.9
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	26.6	6.7	10.6	8.5	25.4	7.6	9.7				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	20.0	5.0	23.0	5.0	20.0	7.0	21.0				
Max Q Clear Time (g_c+I1), s	3.2	18.5	2.8	4.1	4.4	15.7	3.4	2.3				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.2	0.0	2.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				25.7								
HCM 6th LOS				C								

Intersection	
Intersection Delay, s/veh	23.3
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↑	↗	↘	
Traffic Vol, veh/h	33	5	3	440	462	6
Future Vol, veh/h	33	5	3	440	462	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	5	3	478	502	7
Number of Lanes	1	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	10.6	21.1	26.4
HCM LOS	B	C	D

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	99%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	5	3	440	468
LT Vol	33	0	0	0	462
Through Vol	0	5	3	0	0
RT Vol	0	0	0	440	6
Lane Flow Rate	36	5	3	478	509
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.073	0.01	0.006	0.724	0.79
Departure Headway (Hd)	7.366	6.853	6.161	5.448	5.589
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	484	520	580	665	646
Service Time	5.142	4.628	3.906	3.193	3.628
HCM Lane V/C Ratio	0.074	0.01	0.005	0.719	0.788
HCM Control Delay	10.7	9.7	8.9	21.2	26.4
HCM Lane LOS	B	A	A	C	D
HCM 95th-tile Q	0.2	0	0	6.2	7.7

APPENDIX D

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – NEAR-TERM OPENING YEAR 2026 + PROJECT

Existing+Growth+Project (Year 2026) AM
1: I-15 SB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑↑					↑	↑	↑↑
Traffic Volume (veh/h)	0	1135	765	495	921	0	0	0	0	697	2	450
Future Volume (veh/h)	0	1135	765	495	921	0	0	0	0	697	2	450
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1234	832	538	1001	0				759	0	489
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2073	643	603	3224	0				854	0	760
Arrive On Green	0.00	0.41	0.41	0.23	0.84	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1234	832	538	1001	0				759	0	489
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	17.0	36.5	13.6	3.8	0.0				18.5	0.0	12.5
Cycle Q Clear(g_c), s	0.0	17.0	36.5	13.6	3.8	0.0				18.5	0.0	12.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2073	643	603	3224	0				854	0	760
V/C Ratio(X)	0.00	0.60	1.29	0.89	0.31	0.00				0.89	0.00	0.64
Avail Cap(c_a), veh/h	0	2073	643	630	3224	0				918	0	817
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.79	0.79	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.9	26.7	33.7	3.0	0.0				33.1	0.0	30.8
Incr Delay (d2), s/veh	0.0	1.3	143.2	11.6	0.2	0.0				9.6	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.4	37.8	6.0	0.9	0.0				8.9	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.2	170.0	45.3	3.2	0.0				42.7	0.0	31.9
LnGrp LOS	A	C	F	D	A	A				D	A	C
Approach Vol, veh/h		2066			1539						1248	
Approach Delay, s/veh		81.7			17.9						38.5	
Approach LOS		F			B						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	20.3	42.3		27.4		62.6						
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8						
Max Green Setting (Gmax), s	16.4	34.2		23.2		55.2						
Max Q Clear Time (g_c+I1), s	15.6	38.5		20.5		5.8						
Green Ext Time (p_c), s	0.1	0.0		1.0		4.7						

Intersection Summary

HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Existing+Growth+Project (Year 2026) AM
 2: I-15 NB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↔	↔			
Traffic Volume (veh/h)	419	1410	0	0	1068	748	349	1	438	0	0	0
Future Volume (veh/h)	419	1410	0	0	1068	748	349	1	438	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	451	1516	0	0	1148	723	537	0	298			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	532	3349	0	0	2273	706	767	0	341			
Arrive On Green	0.15	0.66	0.00	0.00	0.45	0.45	0.22	0.00	0.22			
Sat Flow, veh/h	3456	5274	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	451	1516	0	0	1148	723	537	0	298			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	11.4	13.1	0.0	0.0	14.5	40.1	12.5	0.0	16.4			
Cycle Q Clear(g_c), s	11.4	13.1	0.0	0.0	14.5	40.1	12.5	0.0	16.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	532	3349	0	0	2273	706	767	0	341			
V/C Ratio(X)	0.85	0.45	0.00	0.00	0.51	1.02	0.70	0.00	0.87			
Avail Cap(c_a), veh/h	611	3349	0	0	2273	706	839	0	373			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.67	0.67	0.00	0.00	0.26	0.26	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.0	7.6	0.0	0.0	17.9	25.0	32.6	0.0	34.1			
Incr Delay (d2), s/veh	6.7	0.3	0.0	0.0	0.2	23.9	2.3	0.0	18.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.1	3.7	0.0	0.0	5.1	17.8	5.5	0.0	7.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	7.9	0.0	0.0	18.1	48.9	35.0	0.0	52.9			
LnGrp LOS	D	A	A	A	B	F	C	A	D			
Approach Vol, veh/h		1967			1871			835				
Approach Delay, s/veh		16.1			30.0			41.4				
Approach LOS		B			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		64.8			19.0	45.9		25.2				
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8				
Max Green Setting (Gmax), s		57.2			15.9	36.2		21.2				
Max Q Clear Time (g_c+I1), s		15.1			13.4	42.1		18.4				
Green Ext Time (p_c), s		14.2			0.4	0.0		1.0				

Intersection Summary

HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Existing+Growth+Project (Year 2026) AM
3: Arya Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↖↗		↖	↗↖↗			↖	↗		↖↗	
Traffic Volume (veh/h)	218	1426	298	124	1467	188	249	16	102	110	17	167
Future Volume (veh/h)	218	1426	298	124	1467	188	249	16	102	110	17	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	1517	317	132	1561	200	265	17	109	117	18	178
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	1822	379	156	1708	218	281	14	510	43	20	26
Arrive On Green	0.15	0.43	0.43	0.18	0.75	0.75	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	4235	881	1781	4583	586	688	44	1585	0	62	81
Grp Volume(v), veh/h	232	1218	616	132	1159	602	282	0	109	313	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1712	1781	1702	1765	732	0	1585	143	0	0
Q Serve(g_s), s	14.8	36.8	37.1	8.3	31.5	31.7	0.0	0.0	5.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.8	36.8	37.1	8.3	31.5	31.7	37.3	0.0	5.8	37.3	0.0	0.0
Prop In Lane	1.00		0.51	1.00		0.33	0.94		1.00	0.37		0.57
Lane Grp Cap(c), veh/h	259	1465	737	156	1269	658	296	0	510	89	0	0
V/C Ratio(X)	0.90	0.83	0.84	0.84	0.91	0.92	0.95	0.00	0.21	3.53	0.00	0.00
Avail Cap(c_a), veh/h	269	1465	737	164	1269	658	296	0	510	89	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.50	0.50	0.50	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.7	29.3	29.4	47.1	13.3	13.3	42.4	0.0	28.7	39.5	0.0	0.0
Incr Delay (d2), s/veh	25.3	5.0	9.6	16.2	6.4	11.4	39.9	0.0	0.2	1167.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	15.0	16.2	4.0	5.7	6.8	11.5	0.0	2.2	31.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.0	34.3	39.0	63.3	19.7	24.7	82.4	0.0	28.9	1207.1	0.0	0.0
LnGrp LOS	E	C	D	E	B	C	F	A	C	F	A	A
Approach Vol, veh/h		2066			1893			391				313
Approach Delay, s/veh		40.1			24.3			67.5				1207.1
Approach LOS		D			C			E				F
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.3	56.7		43.0	23.0	50.0		43.0				
Change Period (Y+Rc), s	6.1	6.8		* 5.7	6.1	6.8		* 5.7				
Max Green Setting (Gmax), s	10.7	49.4		* 37	17.5	42.6		* 37				
Max Q Clear Time (g_c+I1), s	10.3	39.1		39.3	16.8	33.7		39.3				
Green Ext Time (p_c), s	0.0	9.4		0.0	0.0	8.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	114.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing+Growth+Project (Year 2026) AM
4: Wildomar Trail & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1293	10	102	1371	47	73	17	56	177	28	373
Future Volume (veh/h)	154	1293	10	102	1371	47	73	17	56	177	28	373
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	164	1376	11	109	1459	50	78	18	60	188	30	397
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	1735	774	134	1626	725	310	103	342	371	506	429
Arrive On Green	0.21	0.98	0.98	0.10	0.61	0.61	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	961	379	1264	1321	1870	1585
Grp Volume(v), veh/h	164	1376	11	109	1459	50	78	0	78	188	30	397
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	961	0	1643	1321	1870	1585
Q Serve(g_s), s	10.3	4.7	0.0	7.0	41.1	1.5	7.6	0.0	4.2	14.7	1.4	28.3
Cycle Q Clear(g_c), s	10.3	4.7	0.0	7.0	41.1	1.5	9.0	0.0	4.2	19.0	1.4	28.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	188	1735	774	134	1626	725	310	0	444	371	506	429
V/C Ratio(X)	0.87	0.79	0.01	0.82	0.90	0.07	0.25	0.00	0.18	0.51	0.06	0.93
Avail Cap(c_a), veh/h	198	1735	774	155	1626	725	340	0	496	413	564	478
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	0.68	0.68	0.68	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	0.8	0.7	51.4	20.4	12.6	34.7	0.0	32.4	39.7	31.4	41.2
Incr Delay (d2), s/veh	16.7	1.9	0.0	15.5	5.9	0.1	0.4	0.0	0.2	1.1	0.0	22.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.9	0.0	3.5	14.0	0.5	1.8	0.0	1.7	4.9	0.6	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.7	2.7	0.7	66.9	26.2	12.7	35.1	0.0	32.6	40.7	31.4	64.1
LnGrp LOS	E	A	A	E	C	B	D	A	C	D	C	E
Approach Vol, veh/h		1551			1618			156			615	
Approach Delay, s/veh		8.9			28.5			33.9			55.4	
Approach LOS		A			C			C			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	63.4		37.8	18.4	59.9		37.8				
Change Period (Y+Rc), s	6.1	6.8		6.4	6.1	6.8		6.4				
Max Green Setting (Gmax), s	10.1	51.6		35.0	12.9	48.8		35.0				
Max Q Clear Time (g_c+I1), s	9.0	6.7		30.3	12.3	43.1		11.0				
Green Ext Time (p_c), s	0.0	28.6		1.1	0.0	5.1		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				25.2								
HCM 6th LOS				C								

Existing+Growth+Project (Year 2026) AM
5: Inland Valley Dr & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	0	1003	652	169	1078	459	81
Future Volume (veh/h)	0	1003	652	169	1078	459	81
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		1090	638	184	1172	499	88
Peak Hour Factor		0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1461	652	211	2070	535	476
Arrive On Green		0.82	0.82	0.12	0.58	0.30	0.30
Sat Flow, veh/h		3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h		1090	638	184	1172	499	88
Grp Sat Flow(s),veh/h/ln		1777	1585	1781	1777	1781	1585
Q Serve(g_s), s		16.3	42.5	11.8	23.8	31.6	4.8
Cycle Q Clear(g_c), s		16.3	42.5	11.8	23.8	31.6	4.8
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1461	652	211	2070	535	476
V/C Ratio(X)		0.75	0.98	0.87	0.57	0.93	0.18
Avail Cap(c_a), veh/h		1461	652	246	2070	597	532
HCM Platoon Ratio		2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.62	0.62	0.67	0.67	1.00	1.00
Uniform Delay (d), s/veh		7.5	9.8	50.2	15.1	39.5	30.1
Incr Delay (d2), s/veh		2.2	23.1	16.1	0.8	21.0	0.2
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		3.2	7.5	6.0	8.9	16.3	1.8
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		9.7	32.9	66.3	15.8	60.4	30.3
LnGrp LOS		A	C	E	B	E	C
Approach Vol, veh/h		1728			1356	587	
Approach Delay, s/veh		18.3			22.7	55.9	
Approach LOS		B			C	E	
Timer - Assigned Phs	1	2			6	8	
Phs Duration (G+Y+Rc), s	19.9	55.2			75.1	40.9	
Change Period (Y+Rc), s	6.1	7.5			7.5	6.1	
Max Green Setting (Gmax), s	16.0	41.4			51.4	38.9	
Max Q Clear Time (g_c+I1), s	13.8	44.5			25.8	33.6	
Green Ext Time (p_c), s	0.0	0.0			7.1	1.2	

Intersection Summary

HCM 6th Ctrl Delay			25.9				
HCM 6th LOS			C				

Notes

User approved ignoring U-Turning movement.

Existing+Growth+Project (Year 2026) AM
6: Smith Ranch Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	45	784	20	16	1119	24	64	0	8	68	3	111
Future Volume (veh/h)	45	784	20	16	1119	24	64	0	8	68	3	111
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	48	843	22	17	1203	26	69	0	9	73	3	119
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	1398	36	37	1310	28	107	0	180	110	5	179
Arrive On Green	0.05	0.40	0.40	0.02	0.37	0.37	0.06	0.00	0.11	0.06	0.12	0.12
Sat Flow, veh/h	1781	3538	92	1781	3557	77	1781	0	1585	1781	39	1552
Grp Volume(v), veh/h	48	423	442	17	601	628	69	0	9	73	0	122
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	1781	1777	1857	1781	0	1585	1781	0	1591
Q Serve(g_s), s	1.4	10.2	10.2	0.5	17.4	17.4	2.0	0.0	0.3	2.2	0.0	4.0
Cycle Q Clear(g_c), s	1.4	10.2	10.2	0.5	17.4	17.4	2.0	0.0	0.3	2.2	0.0	4.0
Prop In Lane	1.00		0.05	1.00		0.04	1.00		1.00	1.00		0.98
Lane Grp Cap(c), veh/h	85	702	732	37	654	684	107	0	180	110	0	184
V/C Ratio(X)	0.57	0.60	0.60	0.46	0.92	0.92	0.65	0.00	0.05	0.66	0.00	0.66
Avail Cap(c_a), veh/h	166	702	732	166	660	690	166	0	560	298	0	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.1	12.9	12.9	26.0	16.2	16.2	24.7	0.0	21.3	24.7	0.0	22.8
Incr Delay (d2), s/veh	5.8	1.5	1.4	8.5	17.8	17.3	6.5	0.0	0.1	6.7	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.3	3.5	0.3	8.6	8.9	1.0	0.0	0.1	1.1	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	14.4	14.3	34.6	34.1	33.6	31.2	0.0	21.4	31.4	0.0	26.9
LnGrp LOS	C	B	B	C	C	C	C	A	C	C	A	C
Approach Vol, veh/h		913			1246			78				195
Approach Delay, s/veh		15.2			33.8			30.1				28.6
Approach LOS		B			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	28.3	8.2	11.2	7.6	26.8	8.3	11.1				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	20.0	5.0	23.0	5.0	20.0	9.0	19.0				
Max Q Clear Time (g_c+I1), s	2.5	12.2	4.0	6.0	3.4	19.4	4.2	2.3				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.6	0.0	0.4	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				26.3								
HCM 6th LOS				C								

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↑	↗	↖	↗
Traffic Vol, veh/h	34	7	9	359	351	77
Future Vol, veh/h	34	7	9	359	351	77
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	8	10	390	382	84
Number of Lanes	1	1	1	1	1	0

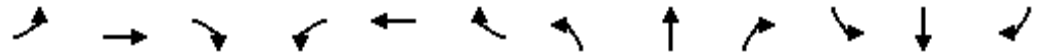
Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	10	14.5	18.2
HCM LOS	A	B	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	82%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	34	7	9	359	428
LT Vol	34	0	0	0	351
Through Vol	0	7	9	0	0
RT Vol	0	0	0	359	77
Lane Flow Rate	37	8	10	390	465
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.071	0.014	0.016	0.566	0.671
Departure Headway (Hd)	6.939	6.428	5.934	5.223	5.19
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	516	557	604	691	698
Service Time	4.682	4.17	3.663	2.952	3.213
HCM Lane V/C Ratio	0.072	0.014	0.017	0.564	0.666
HCM Control Delay	10.2	9.3	8.8	14.6	18.2
HCM Lane LOS	B	A	A	B	C
HCM 95th-tile Q	0.2	0	0	3.6	5.2

Existing+Growth+Project (Year 2026) PM
1: I-15 SB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↑↑↑					↘	↗	↘↗
Traffic Volume (veh/h)	0	1157	468	463	1417	0	0	0	0	786	2	480
Future Volume (veh/h)	0	1157	468	463	1417	0	0	0	0	786	2	480
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1258	509	503	1540	0				855	0	522
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	1896	589	581	3016	0				999	0	889
Arrive On Green	0.00	0.37	0.37	0.06	0.19	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	5274	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1258	509	503	1540	0				855	0	522
Grp Sat Flow(s),veh/h/ln	0	1702	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	18.5	26.8	13.0	24.3	0.0				20.4	0.0	12.8
Cycle Q Clear(g_c), s	0.0	18.5	26.8	13.0	24.3	0.0				20.4	0.0	12.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1896	589	581	3016	0				999	0	889
V/C Ratio(X)	0.00	0.66	0.86	0.87	0.51	0.00				0.86	0.00	0.59
Avail Cap(c_a), veh/h	0	1896	589	599	3016	0				1100	0	979
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.58	0.58	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.6	26.2	41.5	24.6	0.0				30.7	0.0	27.9
Incr Delay (d2), s/veh	0.0	1.8	15.6	7.7	0.4	0.0				6.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.1	11.7	6.5	10.9	0.0				9.4	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	25.4	41.8	49.2	25.0	0.0				37.0	0.0	28.7
LnGrp LOS	A	C	D	D	C	A				D	A	C
Approach Vol, veh/h		1767			2043						1377	
Approach Delay, s/veh		30.2			30.9						33.8	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.7	39.2		31.0		59.0						
Change Period (Y+Rc), s	4.6	5.8		5.8		5.8						
Max Green Setting (Gmax), s	15.6	30.4		27.8		50.6						
Max Q Clear Time (g_c+I1), s	15.0	28.8		22.4		26.3						
Green Ext Time (p_c), s	0.1	1.3		2.8		11.7						

Intersection Summary

HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Existing+Growth+Project (Year 2026) PM
 2: I-15 NB Ramps & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	367	1575	0	0	1204	813	675	2	615	0	0	0
Future Volume (veh/h)	367	1575	0	0	1204	813	675	2	615	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	395	1694	0	0	1295	787	932	0	441			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	457	2895	0	0	1930	599	1084	0	482			
Arrive On Green	0.13	0.57	0.00	0.00	0.38	0.38	0.30	0.00	0.30			
Sat Flow, veh/h	3456	5274	0	0	5274	1585	3563	0	1585			
Grp Volume(v), veh/h	395	1694	0	0	1295	787	932	0	441			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1702	1585	1781	0	1585			
Q Serve(g_s), s	10.1	19.3	0.0	0.0	19.0	34.0	22.2	0.0	24.1			
Cycle Q Clear(g_c), s	10.1	19.3	0.0	0.0	19.0	34.0	22.2	0.0	24.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	457	2895	0	0	1930	599	1084	0	482			
V/C Ratio(X)	0.86	0.59	0.00	0.00	0.67	1.31	0.86	0.00	0.91			
Avail Cap(c_a), veh/h	457	2895	0	0	1930	599	1116	0	497			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.59	0.59	0.00	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.3	12.6	0.0	0.0	23.3	28.0	29.5	0.0	30.2			
Incr Delay (d2), s/veh	10.0	0.5	0.0	0.0	0.2	142.1	6.8	0.0	21.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	6.3	0.0	0.0	6.9	35.2	10.2	0.0	11.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	13.1	0.0	0.0	23.5	170.1	36.3	0.0	51.4			
LnGrp LOS	D	B	A	A	C	F	D	A	D			
Approach Vol, veh/h		2089			2082			1373				
Approach Delay, s/veh		19.8			78.9			41.2				
Approach LOS		B			E			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		56.8			17.0	39.8		33.2				
Change Period (Y+Rc), s		5.8			5.1	5.8		5.8				
Max Green Setting (Gmax), s		50.2			11.9	33.2		28.2				
Max Q Clear Time (g_c+I1), s		21.3			12.1	36.0		26.1				
Green Ext Time (p_c), s		14.4			0.0	0.0		1.2				

Intersection Summary

HCM 6th Ctrl Delay	47.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕↕↕		↖	↕↕↕			↕	↗		↕↕	
Traffic Volume (veh/h)	278	1586	418	108	1500	266	384	24	137	235	11	249
Future Volume (veh/h)	278	1586	418	108	1500	266	384	24	137	235	11	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	302	1724	454	117	1630	289	417	26	149	255	12	271
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	1172	302	134	1117	197	470	26	756	45	1	1
Arrive On Green	0.11	0.29	0.29	0.02	0.08	0.08	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1781	4044	1043	1781	4366	770	861	54	1585	0	2	2
Grp Volume(v), veh/h	302	1446	732	117	1269	650	443	0	149	538	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1683	1781	1702	1732	915	0	1585	4	0	0
Q Serve(g_s), s	12.9	34.2	34.2	7.7	30.2	30.2	0.0	0.0	6.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.9	34.2	34.2	7.7	30.2	30.2	56.3	0.0	6.4	56.3	0.0	0.0
Prop In Lane	1.00		0.62	1.00		0.44	0.94		1.00	0.47		0.50
Lane Grp Cap(c), veh/h	195	987	488	134	871	443	496	0	756	47	0	0
V/C Ratio(X)	1.55	1.47	1.50	0.87	1.46	1.47	0.89	0.00	0.20	11.44	0.00	0.00
Avail Cap(c_a), veh/h	195	987	488	134	871	443	496	0	756	47	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	0.22	0.22	0.22	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.5	41.9	41.9	57.0	54.0	54.0	31.3	0.0	17.8	56.6	0.0	0.0
Incr Delay (d2), s/veh	265.4	213.4	233.5	12.5	206.8	213.0	18.4	0.0	0.1	4741.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.0	42.9	45.1	4.0	38.7	40.2	14.8	0.0	2.4	63.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	317.9	255.3	275.4	69.4	260.8	267.0	49.6	0.0	17.9	4798.3	0.0	0.0
LnGrp LOS	F	F	F	E	F	F	D	A	B	F	A	A
Approach Vol, veh/h		2480			2036			592			538	
Approach Delay, s/veh		268.9			251.8			41.7			4798.3	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	41.0		62.0	19.0	37.0		62.0				
Change Period (Y+Rc), s	6.1	6.8		* 5.7	6.1	6.8		* 5.7				
Max Green Setting (Gmax), s	8.9	34.2		* 56	12.9	30.2		* 56				
Max Q Clear Time (g_c+I1), s	9.7	36.2		58.3	14.9	32.2		58.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	670.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing+Growth+Project (Year 2026) PM
4: Wildomar Trail & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	1681	19	125	1596	111	75	44	130	153	34	206
Future Volume (veh/h)	193	1681	19	125	1596	111	75	44	130	153	34	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	205	1788	20	133	1698	118	80	47	138	163	36	219
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	1796	801	142	1720	767	327	105	309	249	470	399
Arrive On Green	0.03	0.17	0.17	0.11	0.64	0.64	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1125	419	1230	1199	1870	1585
Grp Volume(v), veh/h	205	1788	20	133	1698	118	80	0	185	163	36	219
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1125	0	1649	1199	1870	1585
Q Serve(g_s), s	11.9	59.3	1.2	8.7	55.1	3.5	6.9	0.0	11.2	15.7	1.7	14.2
Cycle Q Clear(g_c), s	11.9	59.3	1.2	8.7	55.1	3.5	8.6	0.0	11.2	26.8	1.7	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	180	1796	801	142	1720	767	327	0	415	249	470	399
V/C Ratio(X)	1.14	1.00	0.02	0.94	0.99	0.15	0.24	0.00	0.45	0.65	0.08	0.55
Avail Cap(c_a), veh/h	180	1796	801	142	1720	767	378	0	489	303	555	470
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.39	0.39	0.39	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.0	49.0	24.8	52.5	20.7	11.5	37.0	0.0	37.2	48.5	33.7	38.4
Incr Delay (d2), s/veh	70.1	5.5	0.0	31.1	10.9	0.2	0.4	0.0	0.8	3.7	0.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	29.4	0.4	4.9	18.7	1.2	1.9	0.0	4.6	4.9	0.8	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.2	54.5	24.8	83.6	31.5	11.6	37.4	0.0	38.0	52.2	33.8	39.5
LnGrp LOS	F	D	C	F	C	B	D	A	D	D	C	D
Approach Vol, veh/h		2013			1949			265			418	
Approach Delay, s/veh		61.6			33.9			37.8			44.0	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.5	66.4		36.1	18.0	63.9		36.1				
Change Period (Y+Rc), s	6.1	6.8		6.4	6.1	6.8		6.4				
Max Green Setting (Gmax), s	9.4	54.3		35.0	11.9	51.8		35.0				
Max Q Clear Time (g_c+I1), s	10.7	61.3		28.8	13.9	57.1		13.2				
Green Ext Time (p_c), s	0.0	0.0		0.9	0.0	0.0		1.4				

Intersection Summary

HCM 6th Ctrl Delay	47.0
HCM 6th LOS	D



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↑↑	↗	↖	↑↑	↖	↗
Traffic Volume (veh/h)	0	1369	596	84	1183	711	182
Future Volume (veh/h)	0	1369	596	84	1183	711	182
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No	No	
Adj Sat Flow, veh/h/ln		1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		1456	570	89	1259	756	194
Peak Hour Factor		0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %		2	2	2	2	2	2
Cap, veh/h		1373	613	95	1747	700	623
Arrive On Green		0.77	0.77	0.05	0.49	0.39	0.39
Sat Flow, veh/h		3647	1585	1781	3647	1781	1585
Grp Volume(v), veh/h		1456	570	89	1259	756	194
Grp Sat Flow(s),veh/h/ln		1777	1585	1781	1777	1781	1585
Q Serve(g_s), s		45.6	34.3	5.9	32.9	46.4	10.0
Cycle Q Clear(g_c), s		45.6	34.3	5.9	32.9	46.4	10.0
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		1373	613	95	1747	700	623
V/C Ratio(X)		1.06	0.93	0.94	0.72	1.08	0.31
Avail Cap(c_a), veh/h		1373	613	95	1747	700	623
HCM Platoon Ratio		2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)		0.20	0.20	0.79	0.79	1.00	1.00
Uniform Delay (d), s/veh		13.4	12.1	55.6	23.6	35.8	24.8
Incr Delay (d2), s/veh		31.1	6.5	61.5	2.1	57.4	0.3
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		10.8	5.1	4.2	13.3	30.0	3.7
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh		44.5	18.6	117.1	25.7	93.2	25.1
LnGrp LOS		F	B	F	C	F	C
Approach Vol, veh/h		2026			1348	950	
Approach Delay, s/veh		37.2			31.7	79.3	
Approach LOS		D			C	E	
Timer - Assigned Phs	1	2			6	8	
Phs Duration (G+Y+Rc), s	12.4	53.1			65.5	52.5	
Change Period (Y+Rc), s	6.1	7.5			7.5	6.1	
Max Green Setting (Gmax), s	6.3	45.6			45.9	46.4	
Max Q Clear Time (g_c+I1), s	7.9	47.6			34.9	48.4	
Green Ext Time (p_c), s	0.0	0.0			5.2	0.0	

Intersection Summary

HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

Existing+Growth+Project (Year 2026) PM
6: Smith Ranch Rd & Clinton Keith Rd

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	84	1227	32	42	1015	42	29	2	7	50	1	69
Future Volume (veh/h)	84	1227	32	42	1015	42	29	2	7	50	1	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	1252	33	43	1036	43	30	2	7	51	1	70
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	1364	36	79	1257	52	60	34	118	90	2	170
Arrive On Green	0.07	0.39	0.39	0.04	0.36	0.36	0.03	0.09	0.09	0.05	0.11	0.11
Sat Flow, veh/h	1781	3537	93	1781	3477	144	1781	365	1276	1781	22	1566
Grp Volume(v), veh/h	86	629	656	43	529	550	30	0	9	51	0	71
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	1781	1777	1844	1781	0	1641	1781	0	1588
Q Serve(g_s), s	2.4	17.3	17.3	1.2	14.0	14.0	0.9	0.0	0.3	1.4	0.0	2.1
Cycle Q Clear(g_c), s	2.4	17.3	17.3	1.2	14.0	14.0	0.9	0.0	0.3	1.4	0.0	2.1
Prop In Lane	1.00		0.05	1.00		0.08	1.00		0.78	1.00		0.99
Lane Grp Cap(c), veh/h	122	685	715	79	642	667	60	0	152	90	0	173
V/C Ratio(X)	0.70	0.92	0.92	0.54	0.82	0.82	0.50	0.00	0.06	0.57	0.00	0.41
Avail Cap(c_a), veh/h	173	690	720	173	690	716	173	0	669	242	0	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	15.0	15.1	24.1	15.0	15.0	24.4	0.0	21.3	23.9	0.0	21.4
Incr Delay (d2), s/veh	2.7	17.3	16.9	2.1	7.8	7.6	2.3	0.0	0.1	2.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	8.4	8.7	0.5	5.6	5.8	0.4	0.0	0.1	0.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	32.4	31.9	26.2	22.8	22.5	26.8	0.0	21.5	26.0	0.0	22.6
LnGrp LOS	C	C	C	C	C	C	C	A	C	C	A	C
Approach Vol, veh/h		1371			1122			39				122
Approach Delay, s/veh		31.8			22.8			25.6				24.0
Approach LOS		C			C			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	26.9	6.7	10.6	8.5	25.6	7.6	9.8				
Change Period (Y+Rc), s	5.0	7.0	5.0	5.0	5.0	7.0	5.0	5.0				
Max Green Setting (Gmax), s	5.0	20.0	5.0	23.0	5.0	20.0	7.0	21.0				
Max Q Clear Time (g_c+I1), s	3.2	19.3	2.9	4.1	4.4	16.0	3.4	2.3				
Green Ext Time (p_c), s	0.0	0.5	0.0	0.2	0.0	2.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				27.5								
HCM 6th LOS				C								

Intersection	
Intersection Delay, s/veh	25.8
Intersection LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑	↑	↗	↘	
Traffic Vol, veh/h	55	5	3	442	468	15
Future Vol, veh/h	55	5	3	442	468	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	5	3	480	509	16
Number of Lanes	1	1	1	1	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	11.2	22.8	30.3
HCM LOS	B	C	D

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	97%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	5	3	442	483
LT Vol	55	0	0	0	468
Through Vol	0	5	3	0	0
RT Vol	0	0	0	442	15
Lane Flow Rate	60	5	3	480	525
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.124	0.011	0.006	0.744	0.828
Departure Headway (Hd)	7.473	6.959	6.286	5.572	5.678
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	477	511	568	649	635
Service Time	5.262	4.747	4.044	3.33	3.725
HCM Lane V/C Ratio	0.126	0.01	0.005	0.74	0.827
HCM Control Delay	11.3	9.8	9.1	22.9	30.3
HCM Lane LOS	B	A	A	C	D
HCM 95th-tile Q	0.4	0	0	6.6	8.8

APPENDIX E
SITE ACCESS INTERSECTION ANALYSIS WORKSHEETS

Existing + Project AM
8: Inland Valley Dr & N. Project Driveway

Inland Valley Medical Center Expansion

05/07/2021

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	57	1	7	2	0	11	17	239	2	55	418	147
Future Vol, veh/h	57	1	7	2	0	11	17	239	2	55	418	147
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	1	8	2	0	13	20	278	2	64	486	171

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	940	934	486	1023	1104	279	657	0	0	280	0	0
Stage 1	614	614	-	319	319	-	-	-	-	-	-	-
Stage 2	326	320	-	704	785	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	244	266	581	214	211	760	931	-	-	1283	-	-
Stage 1	479	483	-	693	653	-	-	-	-	-	-	-
Stage 2	687	652	-	428	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	227	247	581	199	196	760	931	-	-	1283	-	-
Mov Cap-2 Maneuver	227	247	-	302	290	-	-	-	-	-	-	-
Stage 1	469	459	-	678	639	-	-	-	-	-	-	-
Stage 2	661	638	-	400	384	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	26.4		11		0.6		0.7	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	931	-	-	243	616	1283	-
HCM Lane V/C Ratio	0.021	-	-	0.311	0.025	0.05	-
HCM Control Delay (s)	9	-	-	26.4	11	8	-
HCM Lane LOS	A	-	-	D	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.3	0.1	0.2	-

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	156	1	15	2	0	40	6	417	1	14	281	65
Future Vol, veh/h	156	1	15	2	0	40	6	417	1	14	281	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	163	1	16	2	0	42	6	434	1	15	293	68

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	791	770	293	813	838	435	361	0	0	435	0	0
Stage 1	323	323	-	447	447	-	-	-	-	-	-	-
Stage 2	468	447	-	366	391	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	307	331	746	297	302	621	1198	-	-	1125	-	-
Stage 1	689	650	-	591	573	-	-	-	-	-	-	-
Stage 2	575	573	-	653	607	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	282	325	746	286	297	621	1198	-	-	1125	-	-
Mov Cap-2 Maneuver	282	325	-	407	401	-	-	-	-	-	-	-
Stage 1	686	642	-	588	570	-	-	-	-	-	-	-
Stage 2	534	570	-	630	599	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	33.7		11.4		0.1		0.3	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1198	-	-	298	606	1125	-
HCM Lane V/C Ratio	0.005	-	-	0.601	0.072	0.013	-
HCM Control Delay (s)	8	-	-	33.7	11.4	8.2	-
HCM Lane LOS	A	-	-	D	B	A	-
HCM 95th %tile Q(veh)	0	-	-	3.6	0.2	0	-

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	61	1	8	2	0	12	19	376	2	62	524	157
Future Vol, veh/h	61	1	8	2	0	12	19	376	2	62	524	157
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	1	9	2	0	13	21	409	2	67	570	171

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1163	1157	570	1247	1327	410	741	0	0	411	0	0
Stage 1	704	704	-	452	452	-	-	-	-	-	-	-
Stage 2	459	453	-	795	875	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	172	196	521	150	155	642	866	-	-	1148	-	-
Stage 1	428	440	-	587	570	-	-	-	-	-	-	-
Stage 2	582	570	-	381	367	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	158	180	521	138	142	642	866	-	-	1148	-	-
Mov Cap-2 Maneuver	158	180	-	248	245	-	-	-	-	-	-	-
Stage 1	418	414	-	573	556	-	-	-	-	-	-	-
Stage 2	556	556	-	352	346	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	41.6		12.1		0.4		0.7	
HCM LOS	E		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	866	-	-	172	523	1148	-
HCM Lane V/C Ratio	0.024	-	-	0.442	0.029	0.059	-
HCM Control Delay (s)	9.3	-	-	41.6	12.1	8.3	-
HCM Lane LOS	A	-	-	E	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2	0.1	0.2	-

Intersection												
Int Delay, s/veh	27.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	166	1	16	2	0	45	7	608	1	16	467	70
Future Vol, veh/h	166	1	16	2	0	45	7	608	1	16	467	70
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	100
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	173	1	17	2	0	47	7	633	1	17	486	73

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1191	1168	486	1214	1241	634	559	0	0	634	0	0
Stage 1	520	520	-	648	648	-	-	-	-	-	-	-
Stage 2	671	648	-	566	593	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 164	193	581	158	175	479	1012	-	-	949	-	-
Stage 1	539	532	-	459	466	-	-	-	-	-	-	-
Stage 2	446	466	-	509	493	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 145	188	581	150	171	479	1012	-	-	949	-	-
Mov Cap-2 Maneuver	~ 145	188	-	281	292	-	-	-	-	-	-	-
Stage 1	535	522	-	456	463	-	-	-	-	-	-	-
Stage 2	400	463	-	485	484	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	204.6		13.7		0.1		0.3	
HCM LOS	F		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1012	-	-	155	465	949	-
HCM Lane V/C Ratio	0.007	-	-	1.23	0.105	0.018	-
HCM Control Delay (s)	8.6	-	-	204.6	13.7	8.9	-
HCM Lane LOS	A	-	-	F	B	A	-
HCM 95th %tile Q(veh)	0	-	-	11	0.4	0.1	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Year 2026+Project AM Improvements
8: Inland Valley Dr & N. Project Driveway

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	61	1	8	2	0	12	19	376	2	62	524	157
Future Volume (veh/h)	61	1	8	2	0	12	19	376	2	62	524	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	66	1	9	2	0	13	21	409	2	67	570	171
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	2	15	154	3	129	48	718	4	127	805	683
Arrive On Green	0.09	0.09	0.09	0.09	0.00	0.09	0.03	0.39	0.39	0.07	0.43	0.43
Sat Flow, veh/h	1268	19	173	185	39	1456	1781	1860	9	1781	1870	1585
Grp Volume(v), veh/h	76	0	0	15	0	0	21	0	411	67	570	171
Grp Sat Flow(s),veh/h/ln	1461	0	0	1680	0	0	1781	0	1869	1781	1870	1585
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	5.2	1.1	7.4	2.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.3	0.0	0.0	0.3	0.0	5.2	1.1	7.4	2.0
Prop In Lane	0.87		0.12	0.13		0.87	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	356	0	0	286	0	0	48	0	721	127	805	683
V/C Ratio(X)	0.21	0.00	0.00	0.05	0.00	0.00	0.44	0.00	0.57	0.53	0.71	0.25
Avail Cap(c_a), veh/h	1092	0	0	1091	0	0	299	0	1476	299	1477	1252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	0.0	0.0	12.5	0.0	0.0	14.3	0.0	7.2	13.3	6.9	5.4
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.1	0.0	0.0	6.3	0.0	0.7	3.3	1.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.9	0.4	1.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	0.0	0.0	12.5	0.0	0.0	20.5	0.0	7.9	16.7	8.1	5.6
LnGrp LOS	B	A	A	B	A	A	C	A	A	B	A	A
Approach Vol, veh/h		76			15			432			808	
Approach Delay, s/veh		13.3			12.5			8.5			8.3	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	16.0		7.1	5.3	17.3		7.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	23.5		18.0	5.0	23.5		18.0				
Max Q Clear Time (g_c+I1), s	3.1	7.2		3.5	2.3	9.4		2.3				
Green Ext Time (p_c), s	0.0	2.0		0.2	0.0	3.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				8.7								
HCM 6th LOS				A								

Year 2026 + Project PM Improvements
8: Inland Valley Dr & N. Project Driveway

Inland Valley Medical Center Expansion

05/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	166	1	16	2	0	45	7	608	1	16	467	70
Future Volume (veh/h)	166	1	16	2	0	45	7	608	1	16	467	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	173	1	17	2	0	47	7	633	1	17	486	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	424	1	23	107	7	278	17	797	1	39	822	697
Arrive On Green	0.18	0.18	0.18	0.18	0.00	0.18	0.01	0.43	0.43	0.02	0.44	0.44
Sat Flow, veh/h	1302	8	128	25	41	1538	1781	1867	3	1781	1870	1585
Grp Volume(v), veh/h	191	0	0	49	0	0	7	0	634	17	486	73
Grp Sat Flow(s),veh/h/ln	1437	0	0	1603	0	0	1781	0	1870	1781	1870	1585
Q Serve(g_s), s	3.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	10.7	0.3	7.2	1.0
Cycle Q Clear(g_c), s	4.5	0.0	0.0	0.9	0.0	0.0	0.1	0.0	10.7	0.3	7.2	1.0
Prop In Lane	0.91		0.09	0.04		0.96	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	448	0	0	393	0	0	17	0	799	39	822	697
V/C Ratio(X)	0.43	0.00	0.00	0.12	0.00	0.00	0.42	0.00	0.79	0.44	0.59	0.10
Avail Cap(c_a), veh/h	879	0	0	885	0	0	244	0	1205	244	1205	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	0.0	12.6	0.0	0.0	18.0	0.0	9.1	17.6	7.7	6.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.0	15.8	0.0	2.2	7.7	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	0.3	0.0	0.0	0.1	0.0	2.6	0.2	1.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	0.0	0.0	12.8	0.0	0.0	33.8	0.0	11.2	25.3	8.4	6.1
LnGrp LOS	B	A	A	B	A	A	C	A	B	C	A	A
Approach Vol, veh/h		191			49			641				576
Approach Delay, s/veh		14.6			12.8			11.5				8.6
Approach LOS		B			B			B				A
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	20.1		11.1	4.8	20.5		11.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	23.5		18.0	5.0	23.5		18.0				
Max Q Clear Time (g_c+I1), s	2.3	12.7		6.5	2.1	9.2		2.9				
Green Ext Time (p_c), s	0.0	2.9		0.8	0.0	2.6		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				10.8								
HCM 6th LOS				B								

APPENDIX F

SIGNAL WARRANT ANALYSIS WORKSHEETS

Warrant 3 Part A - Peak Hour Delay Warrant

Inland Valley Dr / N. Project Driveway
Existing + Project AM

Intersection Information

Delay on stop-controlled approach:	26.4 sec/veh
Total entering volumes:	954 vehicles
Vehicles on stop-controlled approach:	65 vehicles
Number of lanes on stop-controlled approach:	1 Lanes
Total number of approaches:	4 approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	0.5 hours
Part Satisfied?	No

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	65 vehicles
Part Satisfied?	No

PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	954 vehicles
Part Satisfied?	Yes

Warrant Satisfied? No

Warrant 3 Part A - Peak Hour Delay Warrant

Inland Valley Dr / N. Project Driveway
Existing + Project PM

Intersection Information

Delay on stop-controlled approach:	33.7 sec/veh
Total entering volumes:	998 vehicles
Vehicles on stop-controlled approach:	172 vehicles
Number of lanes on stop-controlled approach:	1 Lanes
Total number of approaches:	4 approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	1.6 hours
Part Satisfied?	No

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	172 vehicles
Part Satisfied?	Yes

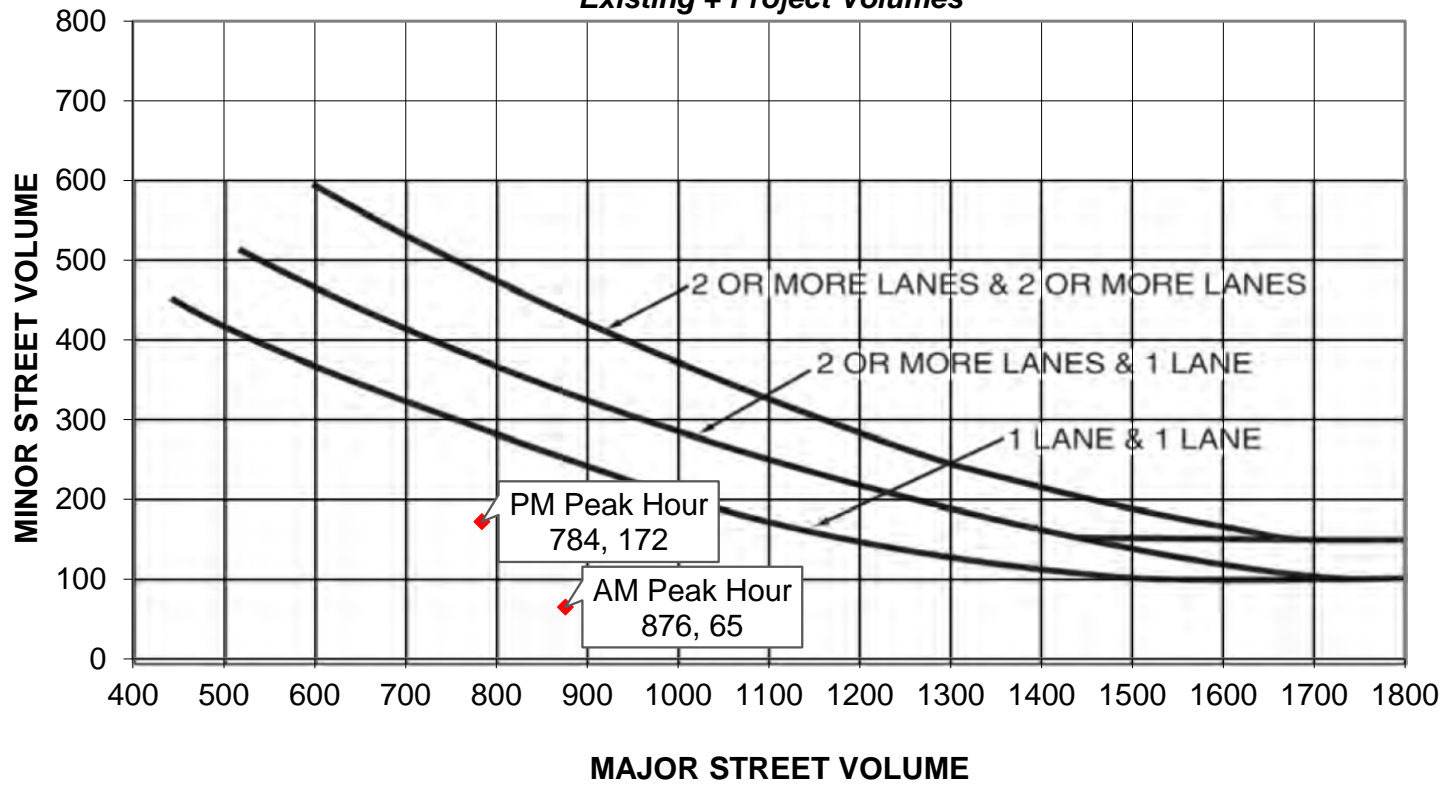
PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	998 vehicles
Part Satisfied?	Yes

Warrant Satisfied? No

Inland Valley Drive / N. Project Driveway
Figure 4C-3, Warrant 3, Peak Hour
Existing + Project Volumes



Warrant 3 Part A - Peak Hour Delay Warrant

Inland Valley Dr / N. Project Driveway
Opening Year 2026 + Project AM

Intersection Information

Delay on stop-controlled approach:	41.6 sec/veh
Total entering volumes:	1224 vehicles
Vehicles on stop-controlled approach:	70 vehicles
Number of lanes on stop-controlled approach:	1 Lanes
Total number of approaches:	4 approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	0.8 hours
Part Satisfied?	No

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	70 vehicles
Part Satisfied?	No

PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	1224 vehicles
Part Satisfied?	Yes

Warrant Satisfied? No

Warrant 3 Part A - Peak Hour Delay Warrant

Inland Valley Dr / N. Project Driveway
Opening Year 2026 + Project PM

Intersection Information

Delay on stop-controlled approach:	204.6 sec/veh
Total entering volumes:	1399 vehicles
Vehicles on stop-controlled approach:	183 vehicles
Number of lanes on stop-controlled approach:	1 Lanes
Total number of approaches:	4 approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	10.4 hours
Part Satisfied?	Yes

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	183 vehicles
Part Satisfied?	Yes

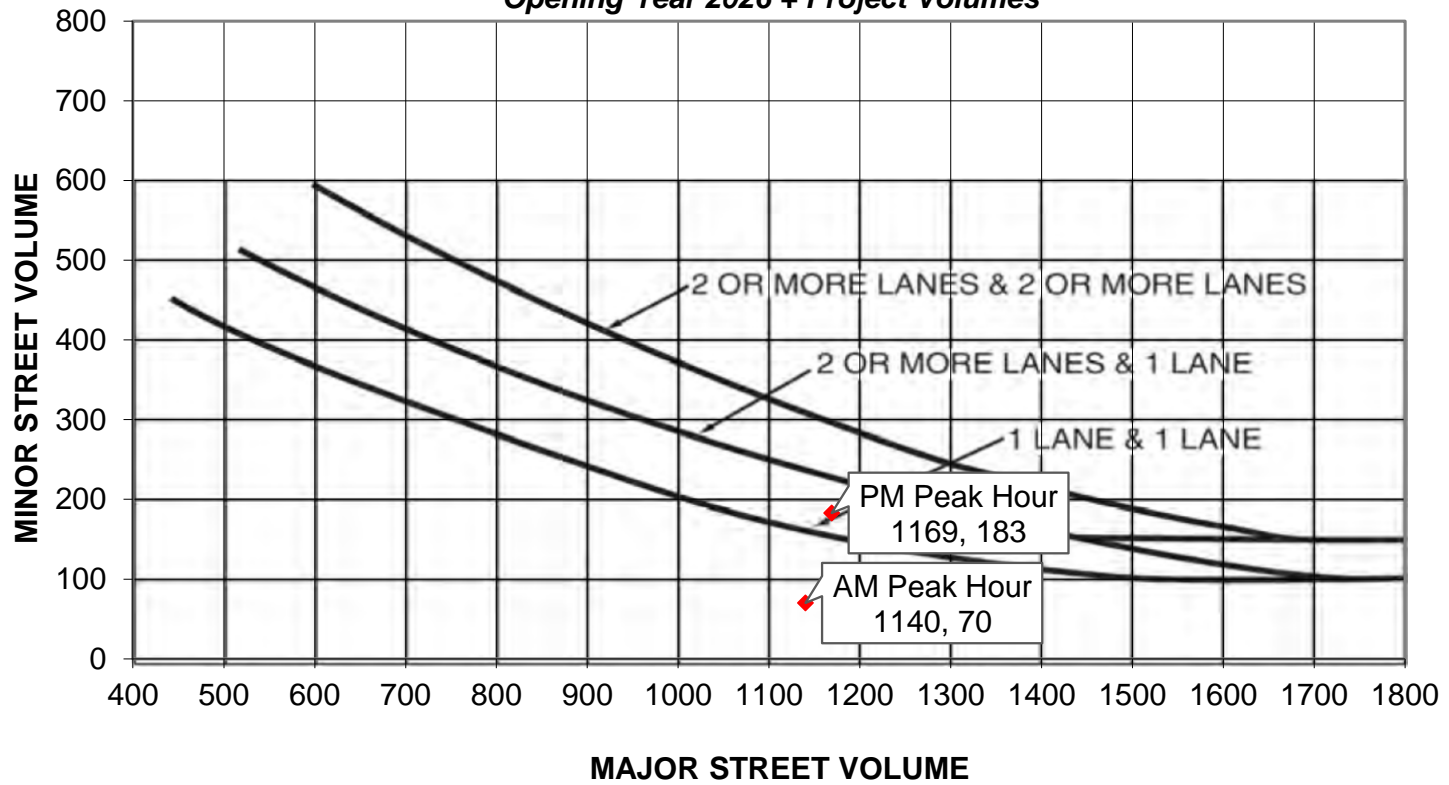
PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	1399 vehicles
Part Satisfied?	Yes

Warrant Satisfied? Yes

Inland Valley Drive / N. Project Driveway
Figure 4C-3, Warrant 3, Peak Hour
Opening Year 2026 + Project Volumes



Warrant 3 Part A - Peak Hour Delay Warrant

Inland Valley Dr / Prielipp Rd
Existing + Project AM

Intersection Information

Delay on stop-controlled approach:	11 sec/veh
Total entering volumes:	600 vehicles
Vehicles on stop-controlled approach:	37 vehicles
Number of lanes on stop-controlled approach:	1 Lanes
Total number of approaches:	3 approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	0.1 hours
Part Satisfied?	No

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	37 vehicles
Part Satisfied?	No

PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	600 vehicles
Part Satisfied?	No

Warrant Satisfied? No

Warrant 3 Part A - Peak Hour Delay Warrant

Inland Valley Dr / Prielipp Rd
Existing + Project PM

Intersection Information

Delay on stop-controlled approach:	11.6 sec/veh
Total entering volumes:	619 vehicles
Vehicles on stop-controlled approach:	55 vehicles
Number of lanes on stop-controlled approach:	1 Lanes
Total number of approaches:	3 approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	0.2 hours
Part Satisfied?	No

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	55 vehicles
Part Satisfied?	No

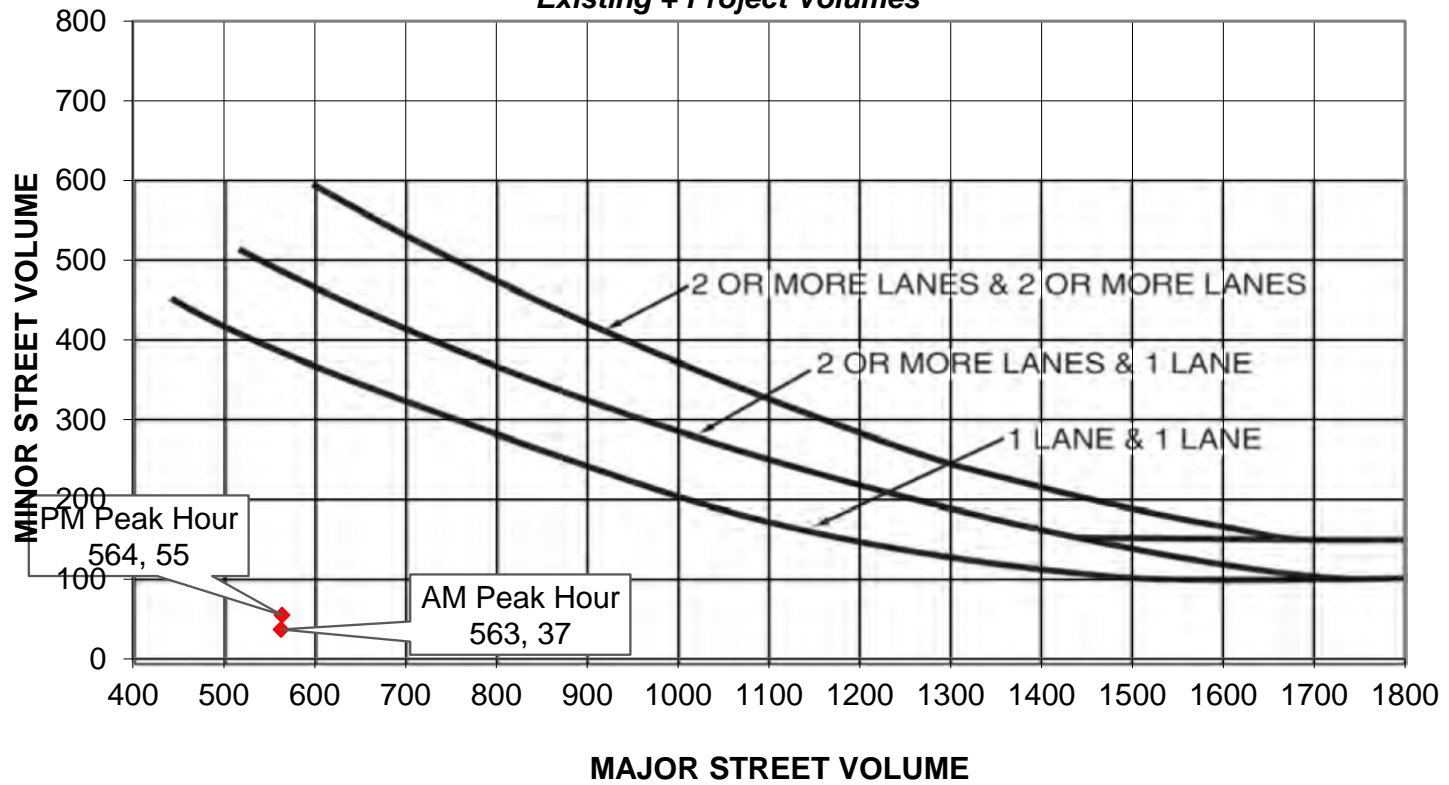
PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	619 vehicles
Part Satisfied?	No

Warrant Satisfied? No

Inland Valley Drive / Prielipp Road
Figure 4C-3, Warrant 3, Peak Hour
Existing + Project Volumes



Warrant 3 Part A - Peak Hour Delay Warrant

Inland Valley Dr / Prielipp Rd
Opening Year 2026 + Project AM

Intersection Information

Delay on stop-controlled approach:	16.2 sec/veh
Total entering volumes:	837 vehicles
Vehicles on stop-controlled approach:	41 vehicles
Number of lanes on stop-controlled approach:	1 Lanes
Total number of approaches:	3 approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	0.2 hours
Part Satisfied?	No

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	41 vehicles
Part Satisfied?	No

PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	837 vehicles
Part Satisfied?	Yes

Warrant Satisfied? No

Warrant 3 Part A - Peak Hour Delay Warrant

Inland Valley Dr / Prielipp Rd
Opening Year 2026 + Project PM

Intersection Information

Delay on stop-controlled approach:	25.8 sec/veh
Total entering volumes:	988 vehicles
Vehicles on stop-controlled approach:	60 vehicles
Number of lanes on stop-controlled approach:	1 Lanes
Total number of approaches:	3 approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	0.4 hours
Part Satisfied?	No

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	60 vehicles
Part Satisfied?	No

PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	988 vehicles
Part Satisfied?	Yes

Warrant Satisfied? No

Inland Valley Drive / Prielipp Road
Figure 4C-3, Warrant 3, Peak Hour
Opening Year 2026 + Project Volumes

