

Appendix I

Traffic Impact Study

TRAFFIC IMPACT STUDY

RE SLATE

KINGS COUNTY, CALIFORNIA

LSA

September 2018

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EXECUTIVE SUMMARY

The purpose of the Traffic Impact Study (TIS) is to identify the potential traffic and circulation impacts associated with the proposed construction, operation and maintenance, and decommissioning of a photovoltaic (PV) electricity generating and energy storage facility with associated infrastructure for the Recurrent Energy (RE) Slate Solar Project (project) in unincorporated Kings County (County). The project would generate a total of 300 megawatts (MW) of alternating current energy on approximately 2,490 acres of privately-owned land.

This TIS assesses the construction, operation, and decommissioning of the proposed project. Construction is estimated to take approximately 14 months, putting the project opening year to 2021. The project is expected to operate for up to 40 years and then be decommissioned in the span of 6 months. This TIS examines the following six scenarios:

1. Existing
2. Existing Plus Construction
3. Existing Plus Operations
4. Cumulative (Year 2021) Baseline
5. Cumulative (Year 2021) Plus Operations
6. Cumulative (Year 2021) Plus Decommissioning

The TIS was prepared in accordance with the California Department of Transportation (Caltrans) Guide to the Preparation of Traffic Impact Studies (December 2002) and applicable provisions of the California Environmental Quality Act (CEQA). Based on the analysis in this report, with application of the recommended mitigation measures, the proposed project can be implemented without significantly affecting the circulation system under existing and cumulative horizon years.

Access to the project site will be provided through three access points. The first is located at Murphy Ranch Road, the second is at Kent Avenue, and the third is at Laurel Avenue, all of which will be accessed from Avenal Cutoff Road. Project access driveways were analyzed to ensure that the project will not create any operational issues or conflict with existing traffic along the surrounding circulation system.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADT	average daily traffic
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
County	Kings County
HCM	Highway Capacity Manual
LOS	level of service
mph	miles per hour
MW	megawatts
NDS	National Data and Surveying Services
PCE	passenger car equivalent
project	RE Slate Solar project
PV	photovoltaic
RE	Recurrent Energy
sf	square foot/feet
SR-198	State Route 198
TIS	Traffic Impact Study

TRAFFIC IMPACT STUDY RE SLATE

INTRODUCTION

The purpose of this Traffic Impact Study (TIS) is to identify the potential traffic and circulation impacts associated with the proposed construction, operation and maintenance, and decommissioning of a photovoltaic (PV) electricity generating and energy storage facility with associated infrastructure for the Recurrent Energy (RE) Slate Solar Project (project) in unincorporated Kings County (County). Prior to preparation of this TIS, LSA coordinated with Recurrent Energy on the anticipated construction, operations and maintenance, and decommissioning activities (including schedules, workers, and trucks).

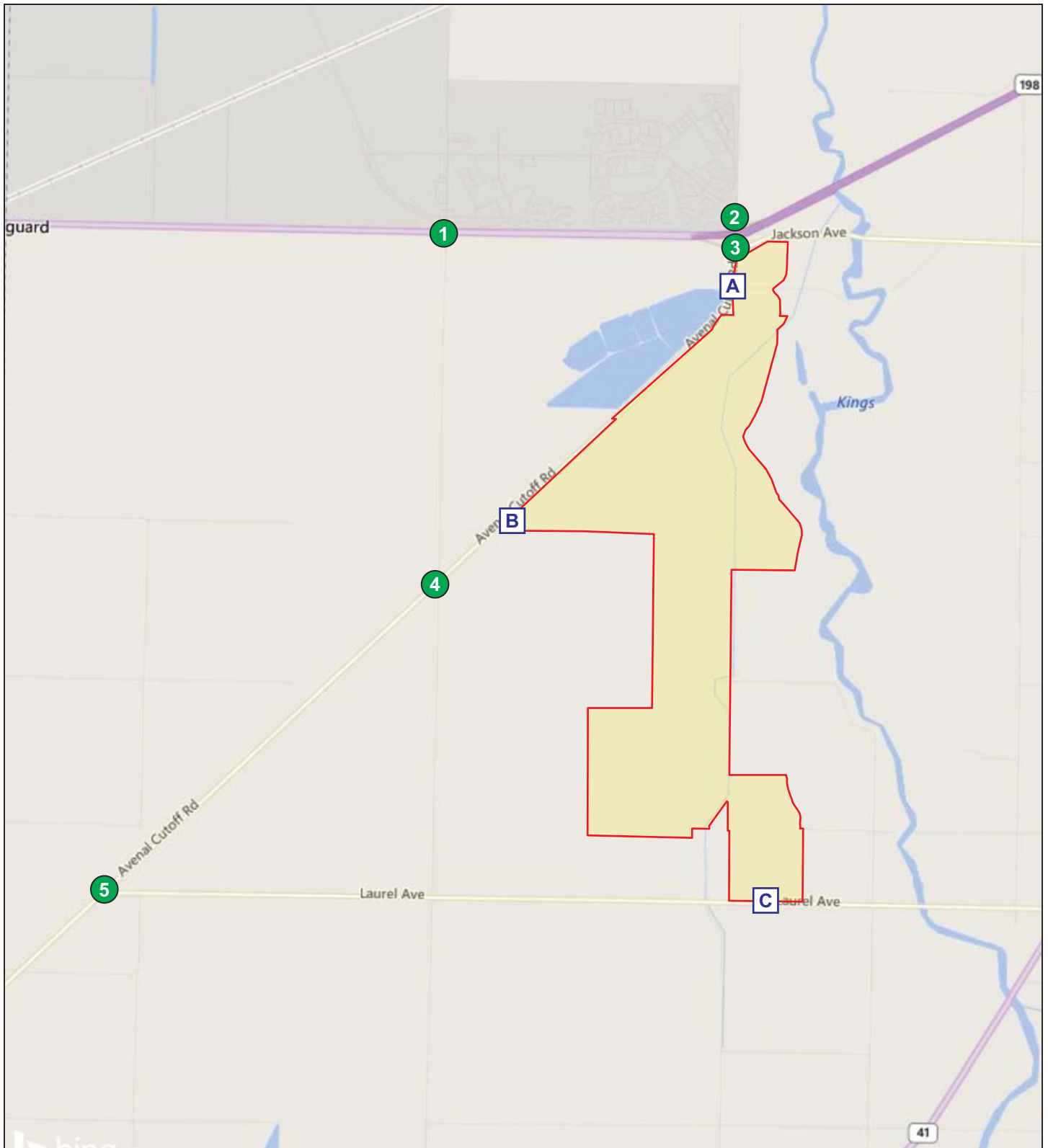
The project would generate a total of 300 megawatts (MW) of alternating current energy on approximately 2,490 acres of privately-owned land. According to the project description, the components of the project would include the following:

- Solar arrays including PV modules and steel support structures, electrical inverters, transformers, cabling, fencing, and other infrastructure;
- Electrical substation(s), switching station, and appurtenant equipment;
- Other necessary infrastructure, including one permanent operation and maintenance building, septic system and leach field, supervisory control and data acquisition system, meteorological data system, buried conduit for electrical wires, overhead collector lines, on-site access driveways, a shared busbar, other shared facilities, and security fencing;
- A 300-MW energy storage system with a 4-hour capacity or approximately 1,200 MW hours, consisting of battery or flywheel enclosures and electrical cabling and appurtenant equipment; and,
- A short gen-tie connection line consisting of power poles, conductors, insulators, optical fiber cables and safety equipment which would connect (“tie-in”) to a shared gen-tie interconnection line with the PG&E Mustang Switching Station, as described below.

Access to the project site will be provided through three access points. The first is located at Murphy Ranch Road, the second is at Kent Avenue and the third is at Laurel Avenue Road, all of which will be accessed from Avenal Cutoff Road.

A project vicinity map is presented on Figure 1.

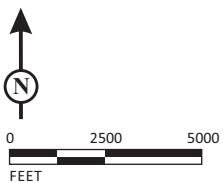
This TIS assesses the construction, operations and maintenance, and decommissioning of the proposed project. Construction is estimated to take approximately 14 months, putting the project opening year to 2021. The project is expected to operate for up to 40 years and then be decommissioned in the span of 6 months.



LSA

LEGEND

- Project Site
- # - Study Area Intersection
- A - Project Driveway



SOURCE: Bing Maps

I:\HLX1801\G\Location&Ints.cdr (6/27/2018)

FIGURE 1

RE Slate
**Project Location and
 Study Area Intersections**

The TIS examines the following six scenarios:

1. Existing
2. Existing Plus Construction
3. Existing Plus Project
4. Cumulative (Year 2021) Baseline
5. Cumulative (Year 2021) Plus Project
6. Cumulative (Year 2021) Plus Decommissioning

ANALYSIS METHODOLOGY

In accordance with the County’s General Plan Circulation Element (January 2010), this analysis has been prepared following the California Department of Transportation (Caltrans) Guide to the Preparation of Traffic Impact Studies (December 2002), the Kings County Association of Governments 2014 Regional Transportation Plan, and applicable provisions of the California Environmental Quality Act (CEQA), including disclosure of project impacts in both existing and cumulative horizon years.

Study Area

The following five study area intersections were selected in consultation with the County, as shown on Figure 1:

1. 25th Avenue/State Route 198 (SR-198)
2. Avenal Cutoff Road/SR-198 westbound ramps
3. Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue
4. 25th Avenue/Avenal Cutoff Road
5. Avenal Cutoff Road/Laurel Avenue

Intersection Level of Service Methodologies

In accordance with County guidelines, the *Highway Capacity Manual* (HCM 6th Edition, Transportation Resources Board 2016) methodology was used to determine the level of service (LOS) of the study area intersections. The HCM intersection methodology is based on delay (in seconds per vehicle), as opposed to capacity, as the measure of effectiveness. The resulting delay is expressed in terms of LOS. All HCM analysis for this study has been developed using Synchro (Version 10.1) software. The following table illustrates the relationship of delay to LOS for both signalized and unsignalized locations.

Level of Service	Signalized Intersection Delay (seconds)	Unsignalized Intersection Delay (seconds)
A	≤10.0	≤ 10.0
B	>10.0 and ≤20.0	> 10.0 and ≤ 15.0
C	>20.0 and ≤35.0	> 15.0 and ≤ 25.0
D	>35.0 and ≤55.0	> 25.0 and ≤ 35.0
E	>55.0 and ≤80.0	> 35.0 and ≤ 50.0
F	>80.0	> 50.0

Source: *Highway Capacity Manual* (Transportation Research Board 2016).

Caltrans coordinates with the Lead Agency on the appropriate target LOS, but aims to maintain LOS C at all State highway facilities. The County's threshold of significance for intersections and roadways in rural areas is LOS D. Project traffic impacts are considered significant if project traffic causes any intersection or roadway to deteriorate from satisfactory (LOS A through D) to unsatisfactory LOS (LOS E or F).

PROJECT DESCRIPTION

The project includes a PV electricity generating and energy storage facility with associated infrastructure. The project site is agricultural (vacant) land generally bounded by SR-198 and Jackson Avenue to the north, Laurel Avenue to the south, the Empire Westside Main Canal and Kings River to the east, and Avenal Cutoff Road to the west.

Access to the project site will be provided through three access points. The first is located at Murphy Ranch Road, the second is at Kent Avenue and the third is at Laurel Avenue, all of which will be accessed from Avenal Cutoff Road.

As mentioned previously, this TIS assesses the construction, operations and maintenance, and decommissioning of the proposed project. Construction is estimated to take approximately 14 months, putting the project opening year to 2021. The project is expected to operate for up to 40 years and then be decommissioned in the span of 6 months.

Trip Generation

In order to evaluate the project's effect on the surrounding circulation system, average daily traffic (ADT), a.m. peak hour (7:00 a.m. to 9:00 a.m.), and p.m. peak hour (4:00 p.m. to 6:00 p.m.) trips were generated for each stage of the project (i.e., construction, operations and maintenance, and decommissioning). The following assumptions and estimations were made based on information provided by Recurrent Energy.

The PV Solar Facility and the Energy Storage Facility will be constructed over 14 months. The PV Solar Facility requires 2 months for Site Preparation (PV Phase 1), 10 months for PV Module System Installation (PPV Phase 2), and 8 months for Inverters, Substation and Connection (PV Phase 3). The Energy Storage Facility requires 2 months for Site Preparation (Storage Phase 1), 8 months for Foundations, Structures, and DC System Installation (Storage Phase 2), and 3 months for Inverters, Substation, and Connection (Storage Phase 3).

According to the construction phase descriptions provided by Recurrent Energy, PV Phase 2 and Storage Phases 2 and 3 will overlap for up to 1 month; PV Phases 2 and 3 and Storage Phases 2 and 3 will overlap for up to 1 month; and PV Phases 2 and 3 and Storage Phase 2 will overlap for up to 5 months.

The project is anticipated to operate for up to 40 years and then be decommissioned over 6 months.

Based on information from Recurrent Energy, four types of trips will be generated by the construction, operations and maintenance, and decommissioning activities: (1) worker commute trips, (2) water truck trips, (3) construction truck trips, and (4) freight truck trips.

According to Kings County Ordinance 12.86.520 (Construction Sounds), permitted construction hours are as follows:

- 7:00 a.m. to 7:00 p.m. on weekdays and 9:00 a.m. to 7:00 p.m. on weekends for heavy equipment used on site (i.e., tractors, graders, backhoes, etc.);
- 8:00 a.m. to 5:00 p.m. on weekdays and 9:00 a.m. to 5:00 p.m. on weekends for impact equipment used on site (i.e., piledrivers, jackhammers, sandblasting tools, etc.); and
- 7:00 a.m. to 10:00 p.m. on weekdays and 9:00 a.m. to 8:00 p.m. on weekends for all other construction activities.

Construction activities are anticipated to occur between 7:00 a.m. and 7:00 p.m., Monday through Friday. Weekend construction work is not expected to be required, but may occur on occasion, depending on schedule considerations. In order to present a conservative analysis in which worker and truck trips would occur during both peak-hour periods, a typical day of construction is assumed to begin at 7:00 a.m. and end before 4:00 p.m., Monday through Friday.

Based on anticipated worker schedules, it is assumed that approximately 10 percent of workers will arrive during the a.m. peak hour, while 90 percent of workers will arrive before the a.m. peak hour. In addition, approximately 20 percent of workers will depart during the p.m. peak hour, while 80 percent of workers will depart before the p.m. peak hour.

The weekday hours of 7:00 a.m. to 4:00 p.m. and the worker peak-hour arrival and departure splits described above would also apply to decommissioning of the project.

During operations and maintenance, a typical day will begin between 7:00 a.m. and 9:00 a.m. and end between 4:00 p.m. and 6:00 p.m. Therefore, all staff will arrive during the a.m. peak hour and depart during the p.m. peak hour. The project description notes that concurrent panel washing and routine maintenance may result in up to 31 additional workers and 20 additional water trucks. Although these simultaneous tasks are not an everyday occurrence, they have been analyzed in this study.

During all three project stages (construction, operations and maintenance, and decommissioning), water trucks, construction trucks, and freight trucks will arrive and depart from the project site throughout the day. It is estimated that approximately 20 percent of truck trips will arrive in the a.m. peak hour, approximately 30 percent of truck trips will depart in the p.m. peak hour, and the remaining truck trips will arrive and depart outside of the peak hours.

Heavy equipment and large trucks have a greater effect on intersection operations than passenger vehicles. Therefore, the volume of heavy equipment and large trucks was converted to passenger vehicle equivalent (PCE) to account for their slower movement and lack of mobility. In order to convert the vehicle trip generation into PCE trip generation, HCM methodology suggests selection of PCE based on two conditions: extended freeway and multilane highway segment in general terrain, or specific upgrades or downgrades.

Based on the consistent terrain of the project area where no grade is long enough or steep enough to have a significant impact on the operation of the overall segment, a PCE was selected for the general terrain. HCM describes general terrain segments under two categories:

- **Level Terrain:** Any combination of grades and horizontal and vertical alignment that permits heavy vehicles to maintain the same speed as passenger cars. This type of terrain typically contains short grades of no more than 2%.
- **Rolling Terrain:** Any combination of grades and horizontal and vertical alignment that causes heavy vehicles to reduce their speed below those of passenger cars but that does not cause heavy vehicles to operate at crawl speeds for any significant length.

HCM suggests a PCE of 2.0 for level terrain and 3.0 for rolling terrain. Since the project area would be considered level, a PCE factor of 2.0 was applied to all trucks trips.

Table A summarizes the trip generation of each stage and phase of the project based on the maximum estimate of each trip type.

During construction, the period with the highest trip generation is the overlap between PV Phase 2 and Storage Phases 1 and 2. During this period, construction of the project is expected to generate 1,706 PCE ADT, 116 inbound a.m. peak-hour PCE trips, and 199 outbound p.m. peak-hour PCE trips.

During operations and maintenance, the project is expected to generate 142 PCE ADT, 39 inbound a.m. peak-hour PCE trips, and 43 outbound p.m. peak-hour PCE trips.

During decommissioning, the project is expected to generate 744 PCE ADT, 42 inbound a.m. peak-hour PCE trips, and 82 outbound p.m. peak-hour PCE trips.

Trip Distribution and Assignment

As with the trip generation, trip distribution for the project is based on information from Recurrent Energy. The majority of all trips (i.e., worker commute, water truck, construction truck, and freight truck) are assumed to travel primarily from larger cities east of the project site, including Fresno, Visalia, Hanford, Lemoore, etc. Additional trips may be generated from locations west of the site like Avenal, Coalinga, Cantua Creek, Tranquillity, etc. Considering this regional distribution of trips, it is assumed that project trips will be distributed 80 percent east on SR-198, 10 percent west on SR-198, and 10 percent south on Avenal Cutoff Road. Entering and exiting trips have been distributed equally between the project access points. Figures 2A, 2B, and 2C illustrate the project trip distribution and assignment for construction, operations and maintenance, and decommissioning traffic, respectively.

EXISTING CONDITIONS

The proposed project is surrounded by Avenal Cutoff Road, Kent Avenue, Laurel Avenue, and Murphy Ranch Road with access to and from regional locations via State Route 198 (SR-198). The following provides a description of the existing roadways in the vicinity of the project.

Table A: RE Slate Solar Trip Generation (Maximum Estimates)

Construction ¹		Maximum Daily Vehicles				Vehicle Trip Generation						PCE Trip Generation									
Phase Description	Duration	Description	Quantity	Type	PCE	ADT	AM Peak Hour			PM Peak Hour			ADT	AM Peak Hour			PM Peak Hour				
							In	Out	Total	In	Out	Total		In	Out	Total	In	Out	Total		
PV Solar Facility	1	Site Preparation	Up to 2 Months	Workers ¹	561	Passenger	1	1,122	56	0	56	0	112	112	1,122	56	0	56	0	112	112
				Water Truck ²	41	Medium Truck	2	82	8	0	8	0	12	12	164	16	0	16	0	24	24
				Construction Truck ³	48	Large Truck	2	96	10	0	10	0	14	14	192	20	0	20	0	28	28
				Freight Truck ⁴	25	Large Truck	2	50	5	0	5	0	8	8	100	10	0	10	0	16	16
	Total					1,350	79	0	79	0	146	146	1,578	102	0	102	0	180	180		
	2	PV Module System Installation	Up to 10 Months	Workers ¹	442	Passenger	1	884	44	0	44	0	88	88	884	44	0	44	0	88	88
				Water Truck ²	5	Medium Truck	2	10	1	0	1	0	2	2	20	2	0	2	0	4	4
				Construction Truck ³	26	Large Truck	2	52	5	0	5	0	8	8	104	10	0	10	0	16	16
				Freight Truck ⁴	3	Large Truck	2	6	1	0	1	0	1	1	12	2	0	2	0	2	2
	Total					952	51	0	51	0	99	99	1,020	58	0	58	0	110	110		
	3	Inverters, Substation, and Connection	Up to 8 Months	Workers ¹	23	Passenger	1	46	2	0	2	0	5	5	46	2	0	2	0	5	5
				Water Truck ²	5	Medium Truck	2	10	1	0	1	0	2	2	20	2	0	2	0	4	4
Construction Truck ³				6	Large Truck	2	12	1	0	1	0	2	2	24	2	0	2	0	4	4	
Freight Truck ⁴				0	Large Truck	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total					68	4	0	4	0	9	9	90	6	0	6	0	13	13			
Energy Storage Facility	1	Site Preparation	Up to 2 Months	Workers ¹	59	Passenger	1	118	6	0	6	0	12	12	118	6	0	6	0	12	12
				Water Truck ²	0	Medium Truck	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Construction Truck ³	9	Large Truck	2	18	2	0	2	0	3	3	36	4	0	4	0	6	6
				Freight Truck ⁴	43	Large Truck	2	86	9	0	9	0	13	13	172	18	0	18	0	26	26
	Total					222	17	0	17	0	28	28	326	28	0	28	0	44	44		
	2	Foundations, Structures, and DC System Installation	Up to 8 Months	Workers ¹	76	Passenger	1	152	8	0	8	0	15	15	152	8	0	8	0	15	15
				Water Truck ²	0	Medium Truck	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Construction Truck ³	8	Large Truck	2	16	2	0	2	0	2	2	32	4	0	4	0	4	4
				Freight Truck ⁴	44	Large Truck	2	88	9	0	9	0	13	13	176	18	0	18	0	26	26
	Total					256	19	0	19	0	30	30	360	30	0	30	0	45	45		
	3	Inverters, Substation, and Connection	Up to 3 Months	Workers ¹	71	Passenger	1	142	7	0	7	0	14	14	142	7	0	7	0	14	14
				Water Truck ²	0	Medium Truck	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Construction Truck ³				5	Large Truck	2	10	1	0	1	0	2	2	20	2	0	2	0	4	4	
Freight Truck ⁴				0	Large Truck	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total					152	8	0	8	0	16	16	162	9	0	9	0	18	18			
Overlapping Construction		Maximum Daily Vehicles				Vehicle Trip Generation						PCE Trip Generation									
Description	Duration	Description	Quantity	Type	PCE	ADT	AM Peak Hour			PM Peak Hour			ADT	AM Peak Hour			PM Peak Hour				
PV Phase 2 (100%) + Storage Phases 1 (100%) and 2 (100%)	Up to 1 Month	Workers ¹	577	Passenger	1	1,154	58	0	58	0	115	115	1,154	58	0	58	0	115	115		
		Water Truck ²	5	Medium Truck	2	10	1	0	1	0	2	2	20	2	0	2	0	4	4		
		Construction Truck ³	43	Large Truck	2	86	9	0	9	0	13	13	172	18	0	18	0	26	26		
		Freight Truck ⁴	90	Large Truck	2	180	19	0	19	0	27	27	360	38	0	38	0	54	54		
Total					1,430	87	0	87	0	157	157	1,706	116	0	116	0	199	199			
PV Phases 2 (100%) and 3 (100%) + Storage Phases 2 (100%) and 3 (100%)	Up to 1 Month	Workers ¹	612	Passenger	1	1,224	61	0	61	0	122	122	1,224	61	0	61	0	122	122		
		Water Truck ²	10	Medium Truck	2	20	2	0	2	0	4	4	40	4	0	4	0	8	8		
		Construction Truck ³	45	Large Truck	2	90	9	0	9	0	14	14	180	18	0	18	0	28	28		
		Freight Truck ⁴	47	Large Truck	2	94	10	0	10	0	14	14	188	20	0	20	0	28	28		
Total					1,428	82	0	82	0	154	154	1,632	103	0	103	0	186	186			
PV Phases 2 (100%) and 3 (100%) + Storage Phase 2 (100%)	Up to 5 Months	Workers ¹	541	Passenger	1	1,082	54	0	54	0	108	108	1,082	54	0	54	0	108	108		
		Water Truck ²	10	Medium Truck	2	20	2	0	2	0	4	4	40	4	0	4	0	8	8		
		Construction Truck ³	40	Large Truck	2	80	8	0	8	0	12	12	160	16	0	16	0	24	24		
		Freight Truck ⁴	47	Large Truck	2	94	10	0	10	0	14	14	188	20	0	20	0	28	28		
Total					1,276	74	0	74	0	138	138	1,470	94	0	94	0	168	168			
Operations and Maintenance ⁴		Maximum Daily Vehicles				Vehicle Trip Generation						PCE Trip Generation									
Description	Quantity	Type	PCE	ADT	AM Peak Hour			PM Peak Hour			ADT	AM Peak Hour			PM Peak Hour						
Staff ⁵	31	Passenger	1	62	31	0	31	0	31	31	62	31	0	31	0	31	31				
Water Truck ²	20	Medium Truck	2	40	4	0	4	0	6	6	80	8	0	8	0	12	12				
Total				102	35	0	35	0	37	37	142	39	0	39	0	43	43				
Decommissioning ⁶		Maximum Daily Vehicles				Vehicle Trip Generation						PCE Trip Generation									
Description	Quantity	Type	PCE	ADT	AM Peak Hour			PM Peak Hour			ADT	AM Peak Hour			PM Peak Hour						
Workers ¹	318	Passenger	1	636	32	0	32	0	64	64	636	32	0	32	0	64	64				
Water Truck ²	2	Medium Truck	2	4	0	0	0	0	1	1	8	0	0	0	0	2	2				
Construction Truck ³	25	Large Truck	2	50	5	0	5	0	8	8	100	10	0	10	0	16	16				
Freight Truck ⁴		Large Truck	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Total				690	37	0	37	0	73	73	744	42	0	42	0	82	82				

ADT = average daily traffic

PCE = passenger car equivalent

PV = photovoltaic

¹ Construction is anticipated to occur over 14 months. A typical day of construction will begin at 7:00 a.m. and end before 4:00 p.m.

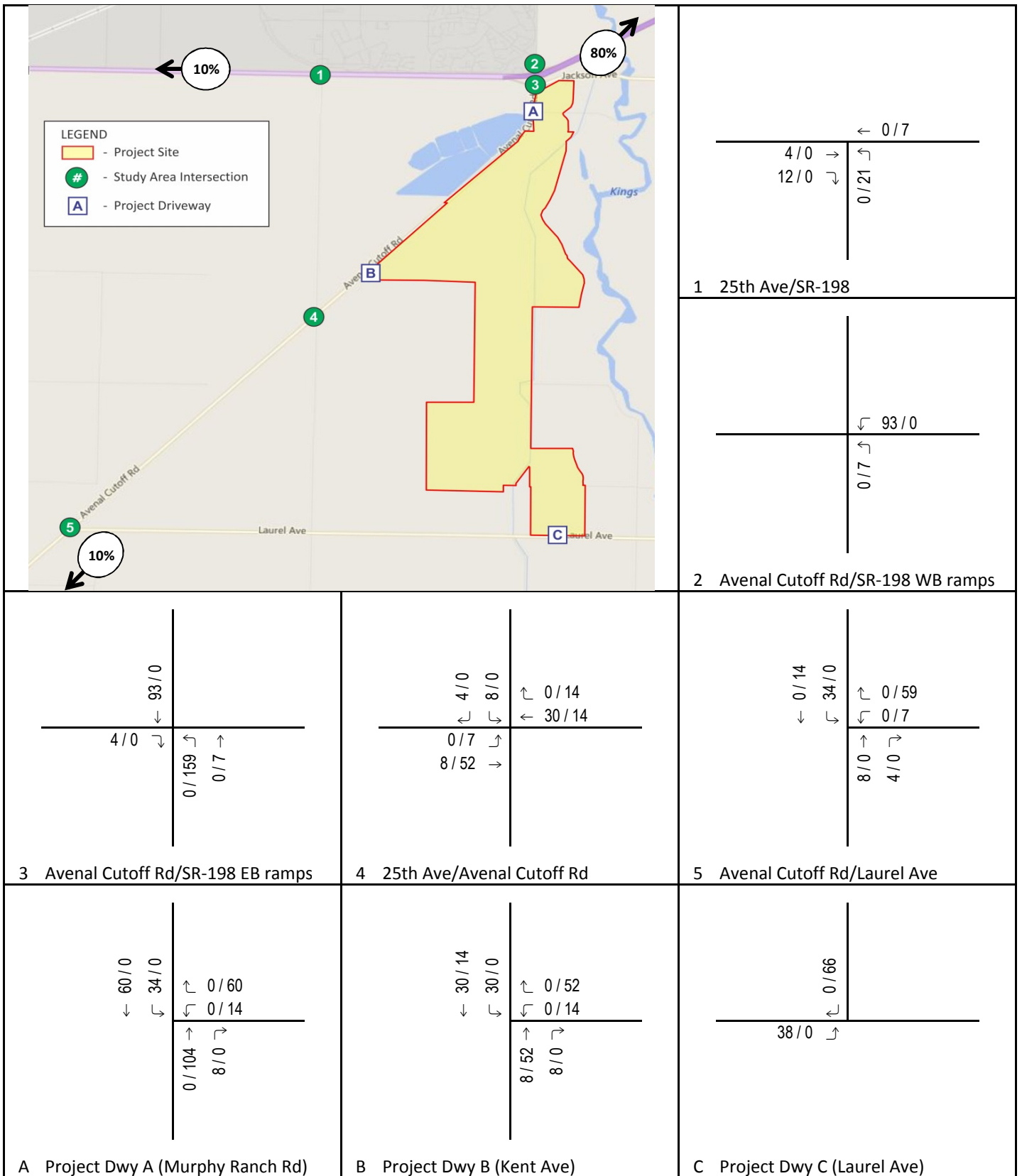
² Approximately 10% of workers will arrive during the a.m. peak hour (90% will arrive before the a.m. peak hour) and approximately 20% of workers will depart during the p.m. peak hour (80% will depart before the p.m. peak hour).

³ Approximately 20% of water, construction, and freight trucks will arrive in the a.m. peak hour, approximately 30% of water, construction, and freight trucks will depart in the p.m. peak hour, and the remaining water and construction trucks will arrive/depart outside of the peak-hour periods.

⁴ Typical day of operations and maintenance will begin 7:00-9:00 a.m. and end 4:00-6:00 p.m. Concurrent panel washing and routine maintenance may result in up to 31 workers and 20 water trucks; however, these simultaneous tasks are not an everyday occurrence.

⁵ All operations and maintenance staff are assumed to arrive during the a.m. peak hour and depart during the p.m. peak hour.

⁶ Decommissioning is anticipated to occur over 6 months. The peak 8-week period of workers, trucks, and trips has been provided.

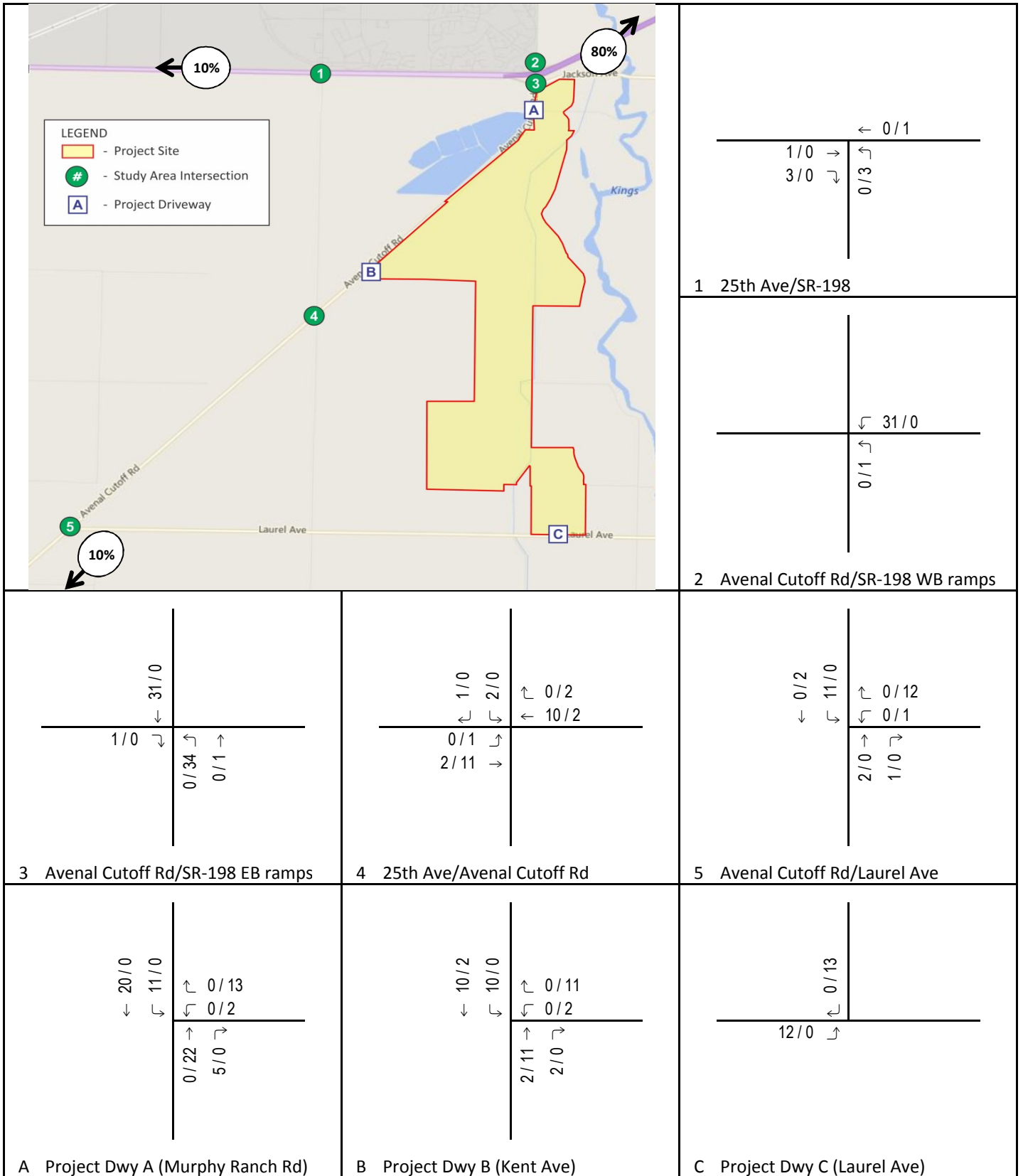


LSA

LEGEND
 XXX / YYY AM / PM Volume

FIGURE 2A

RE Slate
Construction Trip Distribution and Assignment



LSA

LEGEND
 XXX / YYY AM / PM Volume

FIGURE 2B

RE Slate
 Operation Trip Distribution and Assignment

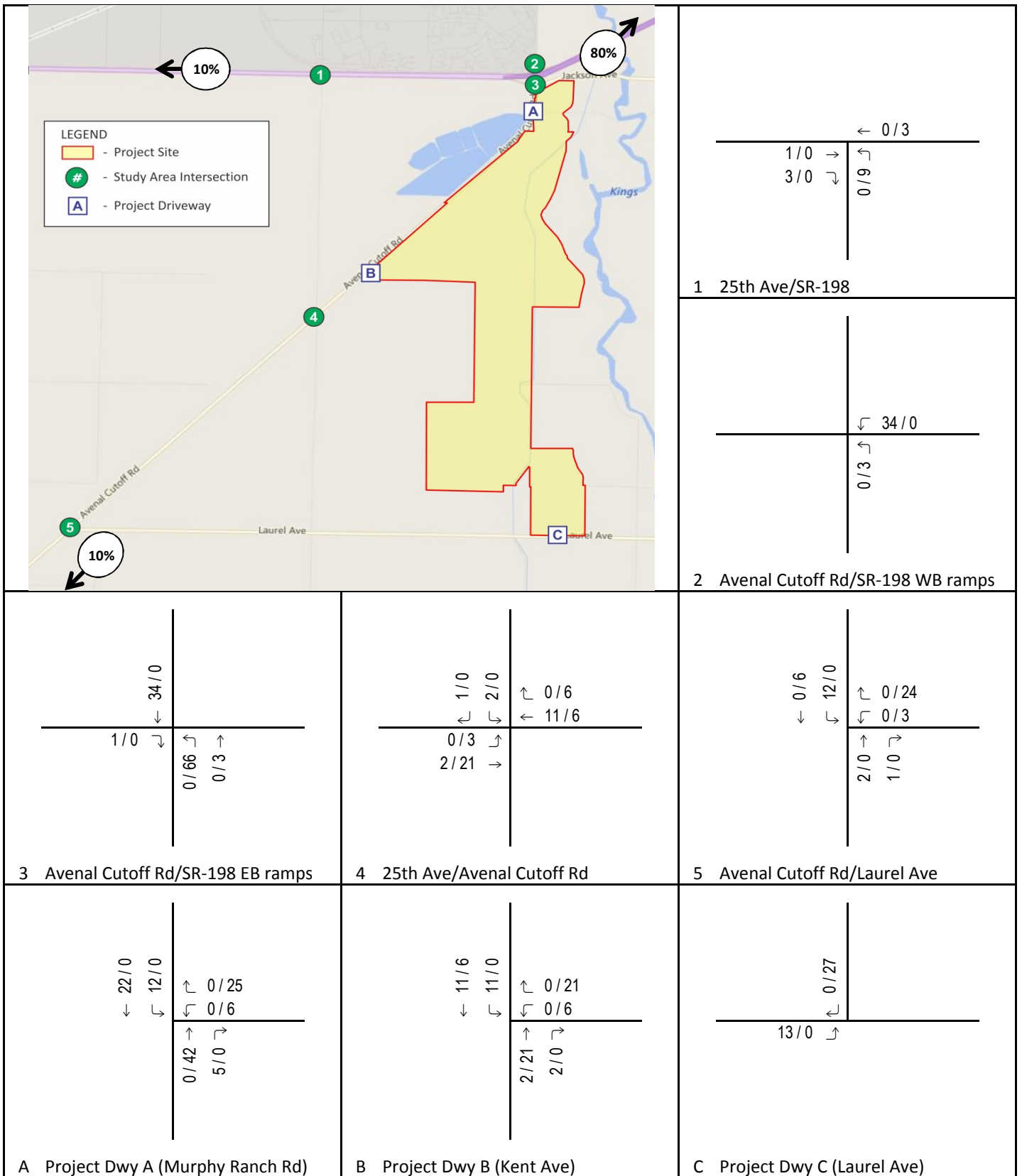


FIGURE 2C



LEGEND
XXX / YYY AM / PM Volume

RE Slate
Decommissioning Trip Distribution and Assignment

- **State Route 198** is a four-lane divided highway located north of the project site providing a regional connection between Interstate 5 and nearby cities, including Lemoore, Hanford, and Visalia. According to the County's General Plan Circulation Element, SR-198 is classified as a Principal Arterial.
- **Avenal Cutoff Road** is a two-lane undivided roadway located west of the project site, providing a regional connection between Interstate 5 and SR-198. According to the County's General Plan Circulation Element, Avenal Cutoff Road is classified as a Minor Arterial. In the vicinity of the project, the posted speed limit is 55 mph. No sidewalks or bicycle facilities are provided on this roadway.
- **Laurel Avenue** is a two-lane undivided local roadway located directly south of the project site that provides direct access to the project site. According to the County's General Plan Circulation Element, SR-198 is classified as a Major Collector. In the vicinity of the project, the posted speed limit is 55 mph. No sidewalks or bicycle facilities are provided on this roadway.
- **Murphy Ranch Road** is a two-lane local roadway that provides direct access to the project site. There is no posted speed limit. No sidewalks or bicycle facilities are provided on this roadway.
- **Kent Avenue** is a dirt road that will provide direct access to the project site.

Figure 3 shows the existing intersection geometrics and traffic control devices at the study area intersections.

Existing Baseline Level of Service

In order to establish existing conditions, existing intersection turning movement volumes were collected at the study area intersections by an independent data collection company, National Data and Surveying Services (NDS), on a typical weekday during the a.m. and p.m. peak hours on Tuesday, June 5, 2018. The existing baseline peak-hour traffic volumes at the study area intersections and project driveways (existing volumes extrapolated from adjacent intersections) are illustrated on Figure 4 and provided in Appendix A.

Table B summarizes the results of the existing peak-hour LOS analysis for the study area intersections. As shown in this table, all study area intersections currently operate at satisfactory LOS, with the exception of Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue (LOS F in the p.m. peak hour). The HCM analysis worksheets are provided in Appendix B.

Existing Plus Construction Level of Service

To determine the impact of the existing plus construction condition, traffic generated by the peak construction period was added to the existing baseline traffic volumes at the study area locations. Figure 5 shows the resulting existing plus construction peak-hour traffic volumes.

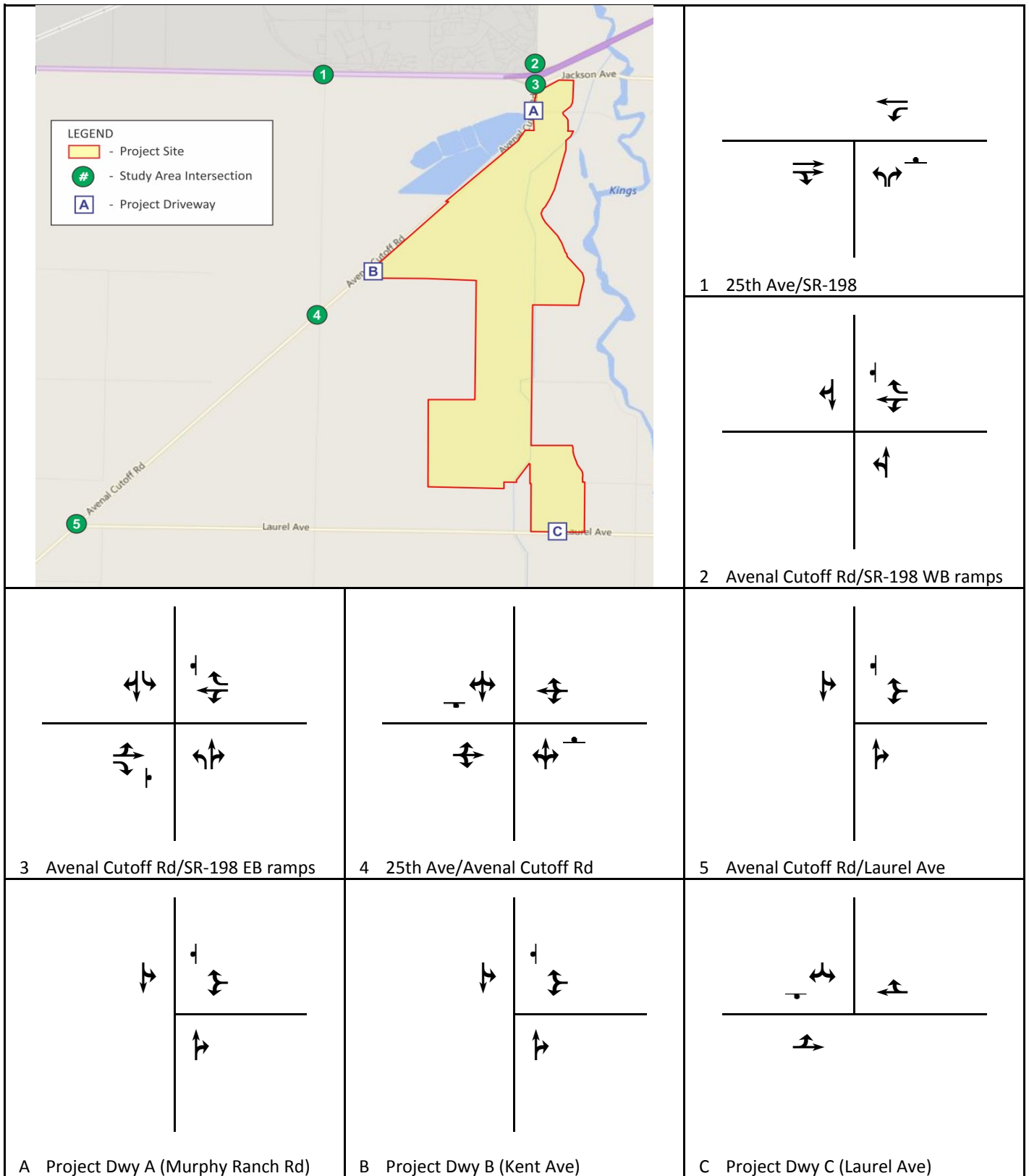


FIGURE 3



LEGEND
 - Stop Sign

RE Slate
 Existing Intersection Geometrics

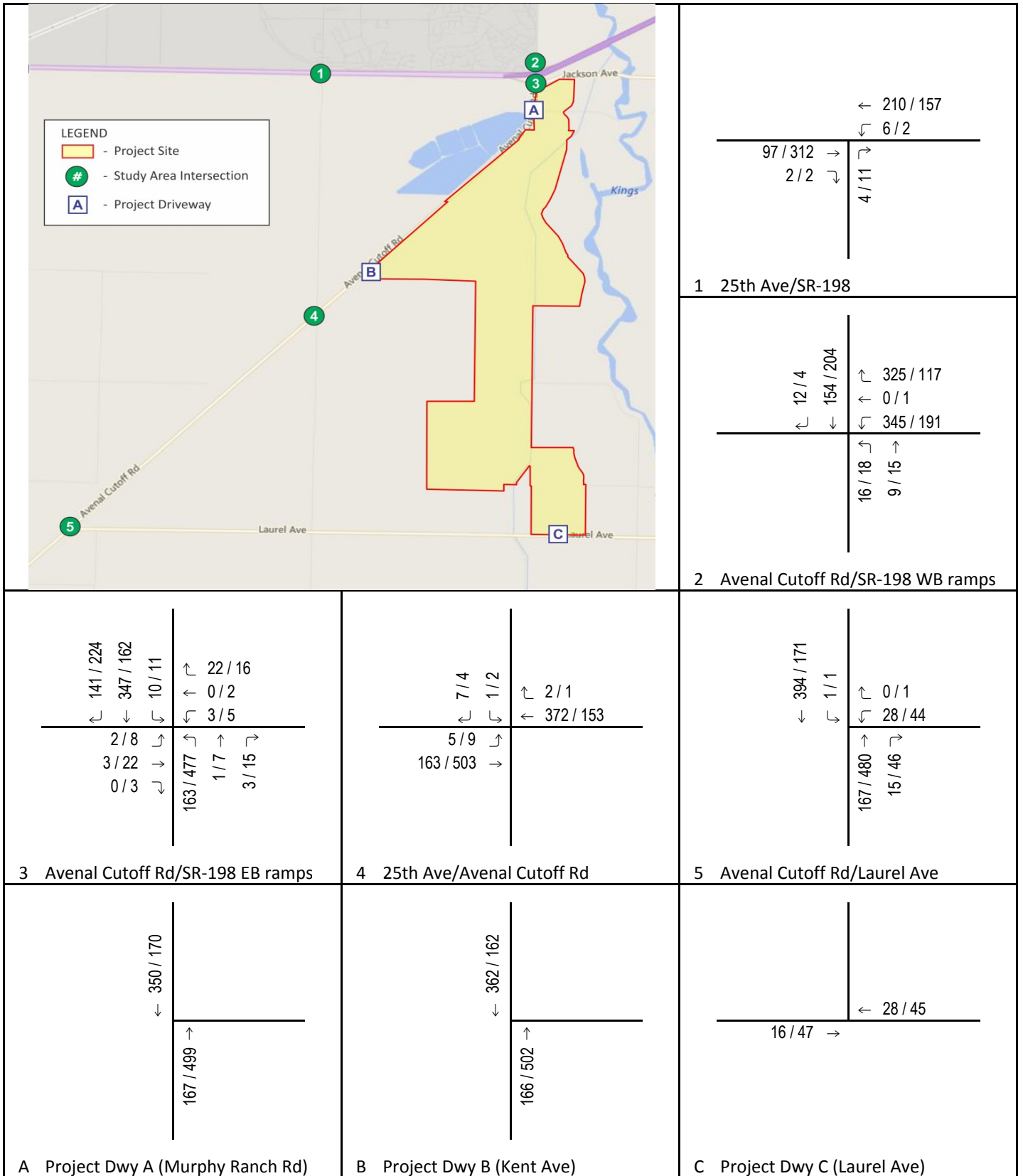


FIGURE 4




LEGEND
 XXX / YYY AM / PM Volume

RE Slate
 Existing Traffic Volumes

Table B: Existing Intersection Level of Service Summary

Study Area No.	Intersection	Baseline				Plus Construction				Plus Operations				Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1	25th Ave/SR-198	8.5	A	9.3	A	8.7	A	12.4	B	8.7	A	12.0	B	No
2	Avenal Cutoff Rd/SR-198 WB ramps	15.1	C	12.6	B	19.1	C	12.9	B	16.2	C	12.7	B	No
3	Avenal Cutoff Rd/SR-198 EB ramps	21.3	C	88.0	F	24.5	C	352.8	F	22.3	C	112.9	F	Yes
4	25th Ave/Avenal Cutoff Rd	11.7	B	11.9	B	13.8	B	12.7	B	12.4	B	12.1	B	No
5	Avenal Cutoff Rd/Laurel Ave	14.0	B	16.4	C	15.8	C	16.9	C	14.6	B	16.1	C	No

 = exceeds City's Level of Service (LOS) criteria

Delay is reported in seconds (sec).

HCM = Highway Capacity Manual

LOS = level of service

SR-198 = State Route 198

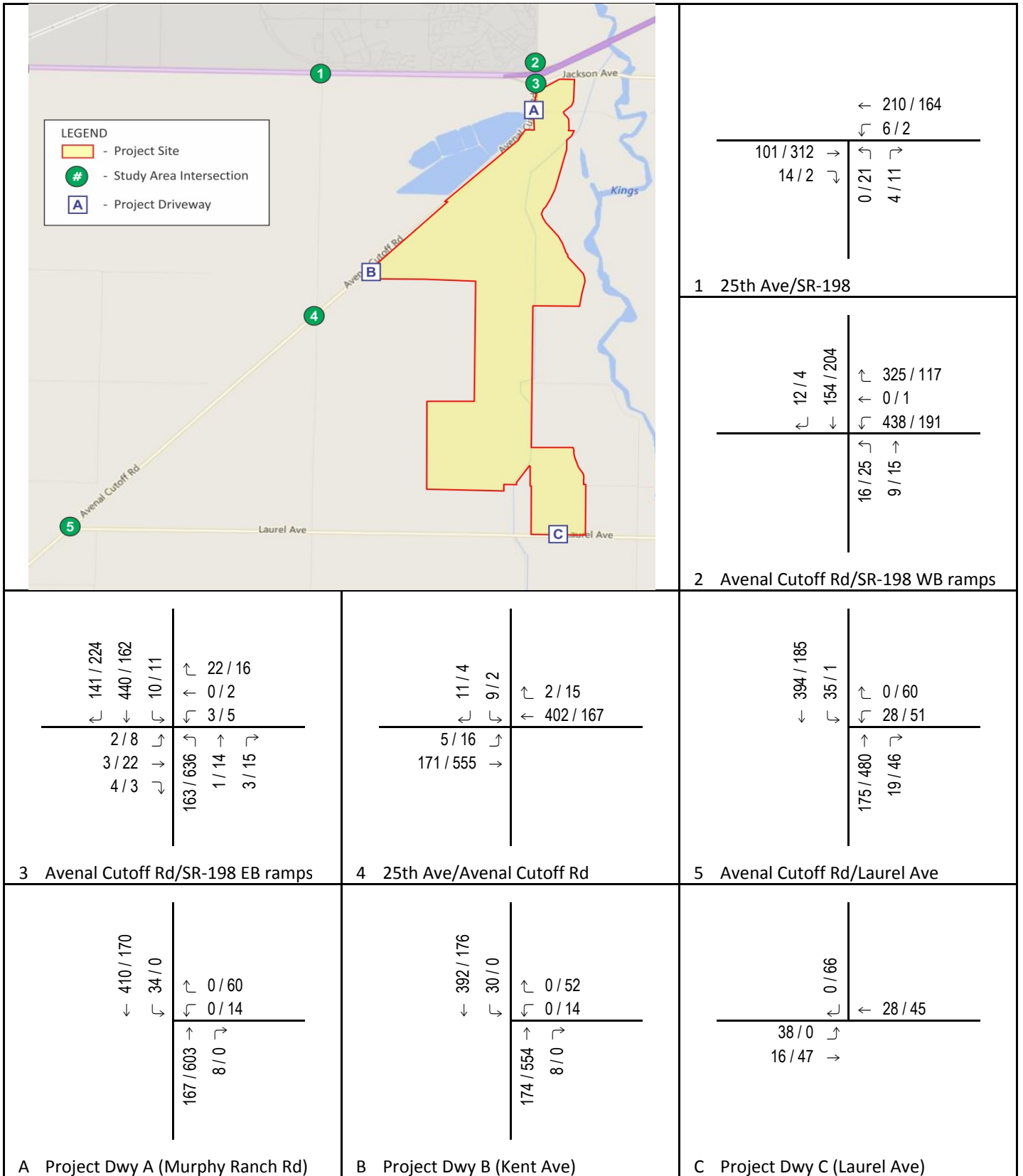


FIGURE 5



LEGEND
XXX / YYY AM / PM Volume

RE Slate
Existing Plus Construction Traffic Volumes

Table B also summarizes the results of the existing plus construction peak-hour LOS analysis for the study area intersections. With the construction of the project, all study area intersections are anticipated to continue to operate at satisfactory LOS, with the exception of Avenal Cutoff Road/SR-198 EB Ramps which will continue to operate at LOS F during the p.m. peak hour. The addition of construction traffic increasing delay at the already deficient intersection results in a significant project impact.

Existing Plus Operations Level of Service

To determine the impact of the existing plus operations condition, traffic generated by the operations of the project was added to the existing baseline traffic volumes at the study area locations. Figure 6 shows the resulting existing plus operations peak-hour traffic volumes.

Table B also summarizes the results of the existing plus operations peak-hour LOS analysis for the study area intersections. With the operations of the project, all study area intersections are anticipated to continue to operate at satisfactory LOS with the exception of Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue which will continue to operate at LOS F during the p.m. peak hour. The addition of operational traffic increasing delay at the already deficient intersection results in a significant project impact.

CUMULATIVE (YEAR 2021) CONDITIONS

Several solar projects similar to RE Slate are currently pending approval or have already been approved for construction and operation by the County. In order to determine whether implementation of the project during a period in which surrounding projects are either under construction or operational, a cumulative analysis has been conducted for the project opening year (2021).

The agricultural and vacant land uses surrounding the project site generate low volumes in the project vicinity. The high existing northbound left-turn volume at Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue during the p.m. peak hour suggests that a construction project could already be underway in the vicinity of the project. In order to present a conservative analysis, the existing volume had not been adjusted to account for any current construction activity.

Cumulative Projects

In coordination with County staff, approved and pending (cumulative) projects within 10 miles of the project site were identified and are illustrated on Figure 7. In the absence of detailed trip generation, distribution, and assignment information for each cumulative project, the County has approved an alternative methodology to estimate cumulative project traffic. Based on the construction and operational trips of the 300 MW RE Slate project, cumulative project trips will be developed in proportion to the size of each project. The cumulative projects, locations, and sizes (generating capacities) are summarized in Table C. Estimated trip generation, distribution, and assignment information used for the cumulative projects volume development is provided in Appendix C.

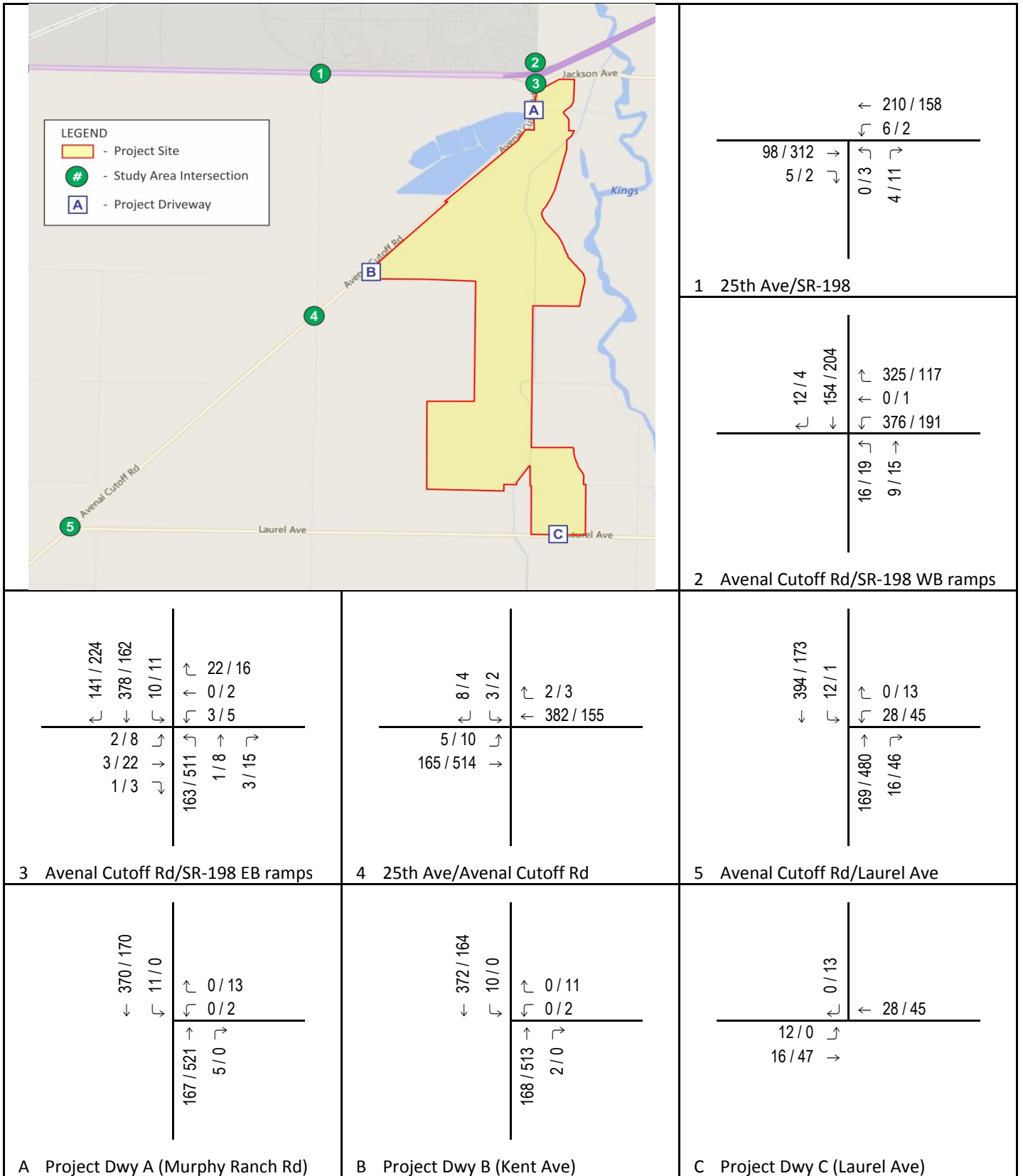


FIGURE 6



LEGEND
XXX / YYY AM / PM Volume

RE Slate
Existing Plus Operation Traffic Volumes

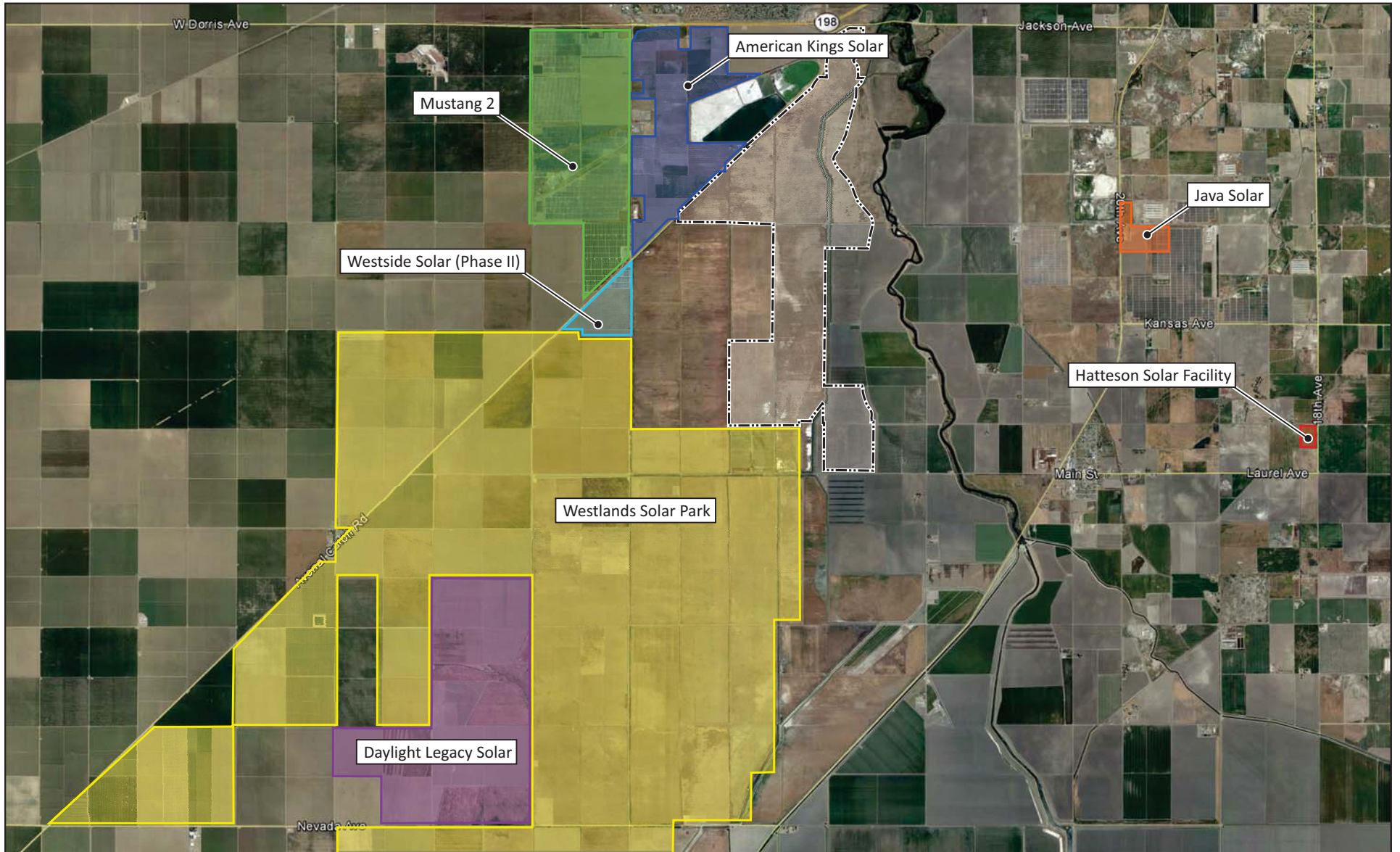


FIGURE 7

LSA



SOURCE: Google Earth

LEGEND

- Project Site

Table C: Cumulative Solar Projects in Kings County Within 10 Miles of Project

Conditional Use Permit No.	Project Title	Location	Generating Capacity	Cumulative Traffic Assumption	% of RE Slate (300 MW)
10-5	American Kings Solar	15383 25th Avenue, Lemoore	125 MW	Operational	42%
14-01	Westside Solar (Phase II)	Southwest Corner of 25th Ave & Avenal Cutoff	22 MW	Operational	7%
14-05	Hattesen Solar Facility	18077 Lansing Ave, Lemoore	1.88 MW	Operational	1%
15-03	Java Solar	19500 Kent Ave., Lemoore	15 MW	Operational	5%
15-05	Mustang 2	Southeast Corner of 25th Ave & Avenal Cutoff	150 MW	Operational	50%
17-04	Westlands Solar Park (Westlands Aquamarine)	South of SR-198, west of SR-41 and the Kings River, and east of the Fresno County Line	500 MW ¹	Construction	83%
Pending	Daylight Legacy Solar	26030 Nevada Ave and Stratford	300 MW	Construction	100%

¹ The Westlands Solar Master Plan project includes 2,000 MW; each planned solar project will be constructed individually. For the purpose of this analysis the largest individual project (Westlands Aquamarine; 250 MW) is assumed to temporarily overlap with one other 250 MW project, as analyzed in the Westlands Solar Park and Gen-Tie Corridors Plans Draft PEIR (October 2017).
MW = megawatt

The total trip generation for the cumulative projects was manually assigned to the existing traffic volumes of the project study area using the same trip distribution percentages as the proposed project. Figure 8 shows the resulting cumulative (Year 2021) baseline peak-hour traffic volumes.

The results of the cumulative peak-hour LOS analysis for the study area intersections are summarized in Table D. As shown in this table, all study area intersections currently operate at satisfactory LOS, with the exception of Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue (LOS F in the p.m. peak hour).

Cumulative (Year 2021) Plus Operations Level of Service

The project is expected to begin operations in 2021. To determine the impact of the cumulative plus operations condition, traffic generated by the operations of the proposed project was added to the cumulative baseline traffic volumes at the study area locations. Figure 9 shows the resulting cumulative (Year 2021) plus operations peak-hour traffic volumes.

Table D also summarizes the results of the cumulative plus operations peak-hour LOS analysis for the study area intersections. With the operations of the project, all study area intersections are anticipated to continue to operate at satisfactory LOS, with the exception of Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue which will continue to operate at LOS F during the p.m. peak hour. The addition of operational traffic increasing delay at the already deficient intersection results in a cumulative impact.

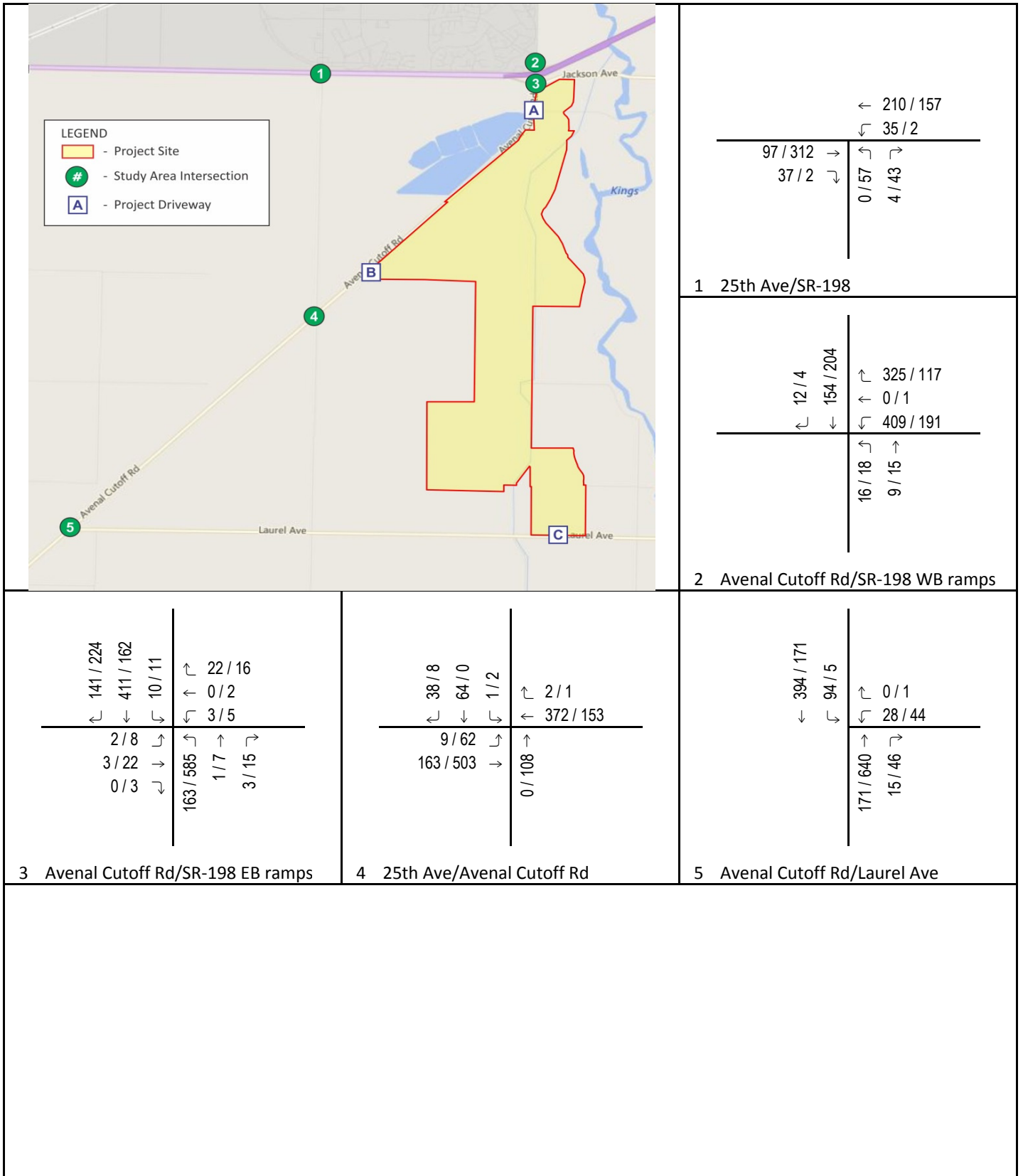


FIGURE 8




LEGEND
 XXX / YYY AM / PM Volume

RE Slate
 Cumulative Baseline Traffic Volumes

Table D: Cumulative (Year 2021) Intersection Level of Service Summary

Study Area No.	Intersection	Baseline				Plus Operations				Plus Decommissioning				Significant Impact?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1	25th Ave/SR-198	8.7	A	12.9	B	8.7	A	13.0	B	8.7	A	13.1	B	No
2	Avenal Cutoff Rd/SR-198 WB ramps	15.5	C	12.1	B	16.6	C	12.1	B	16.7	C	12.2	B	No
3	Avenal Cutoff Rd/SR-198 EB ramps	20.9	C	159.4	F	21.9	C	205.7	F	21.8	C	278.0	F	Yes
4	25th Ave/Avenal Cutoff Rd	14.6	B	25.3	D	14.9	B	26.1	D	14.9	B	27.4	D	No
5	Avenal Cutoff Rd/Laurel Ave	17.3	C	18.5	C	18.1	C	18.2	C	18.1	C	18.3	C	No

 = exceeds City's Level of Service (LOS) criteria

Delay is reported in seconds (sec).

HCM = Highway Capacity Manual

LOS = level of service

SR-198 = State Route 198

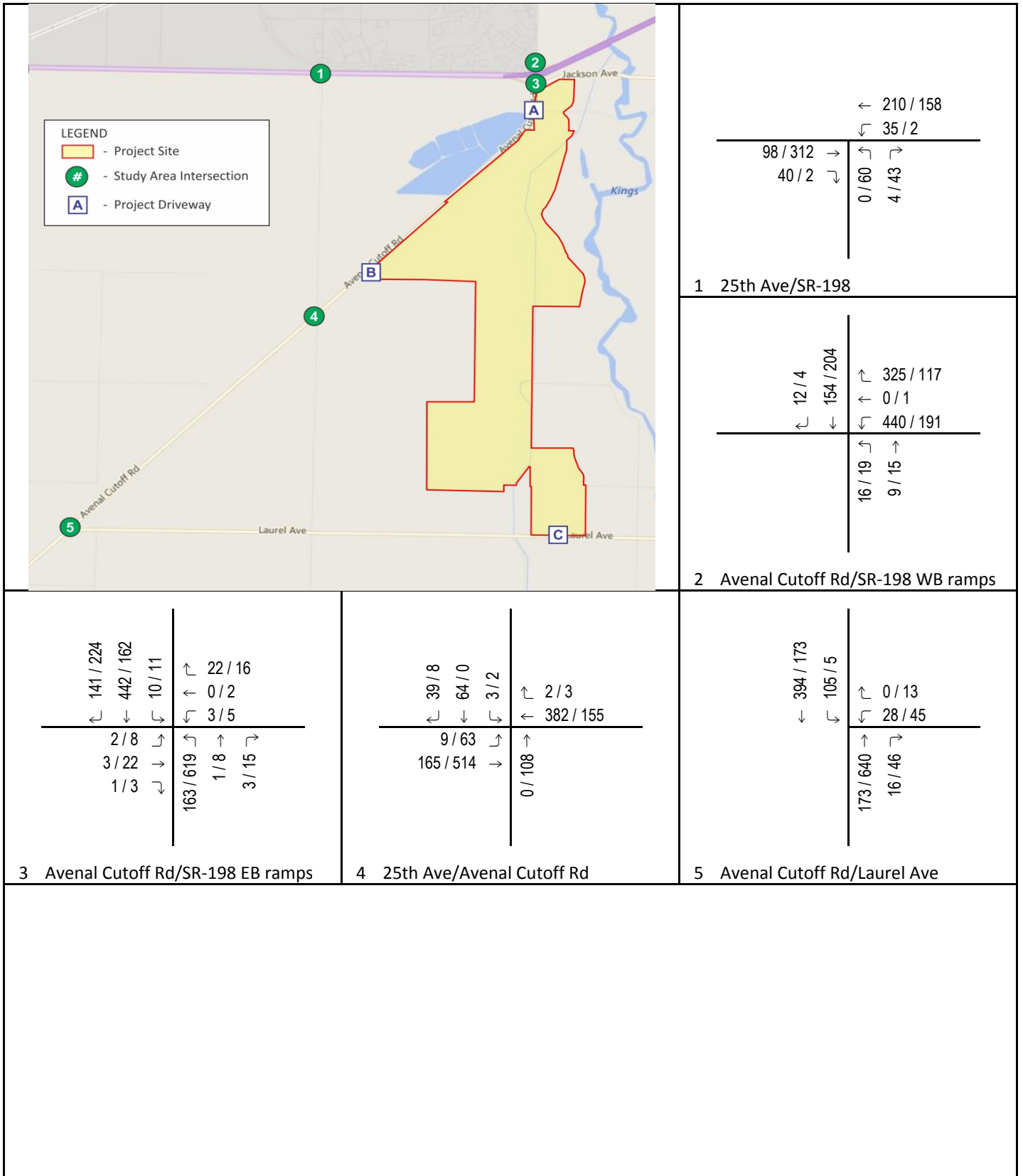


FIGURE 9



LEGEND
 XXX / YYY AM / PM Volume

RE Slate
 Cumulative Plus Operations Traffic Volumes

Cumulative (Year 2021) Plus Decommissioning Level of Service

Although the project is expected to operate for up to 40 years, the traffic associated with the decommissioning of the project has also been analyzed under cumulative (Year 2021) conditions. To determine the impacts of the cumulative plus decommissioning condition, traffic generated by the decommissioning of the project was added to cumulative baseline traffic volumes at the study area locations. Figure 10 shows the resulting cumulative (Year 2021) plus decommissioning peak-hour traffic volumes.

Table D also summarizes the results of the cumulative plus decommissioning peak-hour LOS analysis for the study area intersections. With the decommissioning of the project, all study area intersections are anticipated to continue to operate at satisfactory LOS, with the exception of Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue which will continue to operate at LOS F during the p.m. peak hour. The addition of decommissioning traffic increasing delay at the already deficient intersection results in a cumulative impact.

ACCESS ANALYSIS

As described previously, access to the project site will be provided through three access points. The first is located at Murphy Ranch Road, the second is at Kent Avenue and the third is at Laurel Avenue, all of which will be accessed from Avenal Cutoff Road. All access driveways will be stop-controlled on the minor approach and the major streets (i.e., Avenal Cutoff Road and Laurel Avenue) will be uncontrolled at each driveway.

Entering and exiting trips have been distributed equally between the project access points. The unsignalized driveways were analyzed using the HCM methodology. The driveways were analyzed under construction and operations because construction represents the highest trip generation of the project and operations represents the longest duration of the project.

Table E summarizes the results of the LOS analysis of the project driveways. As seen in this table, all three project driveways are expected to operate at satisfactory LOS during both peak hours with the addition of construction or operational traffic under existing conditions. Thus, it is not expected that the project will create any circulation issues at the proposed project driveways during any stage of the project.

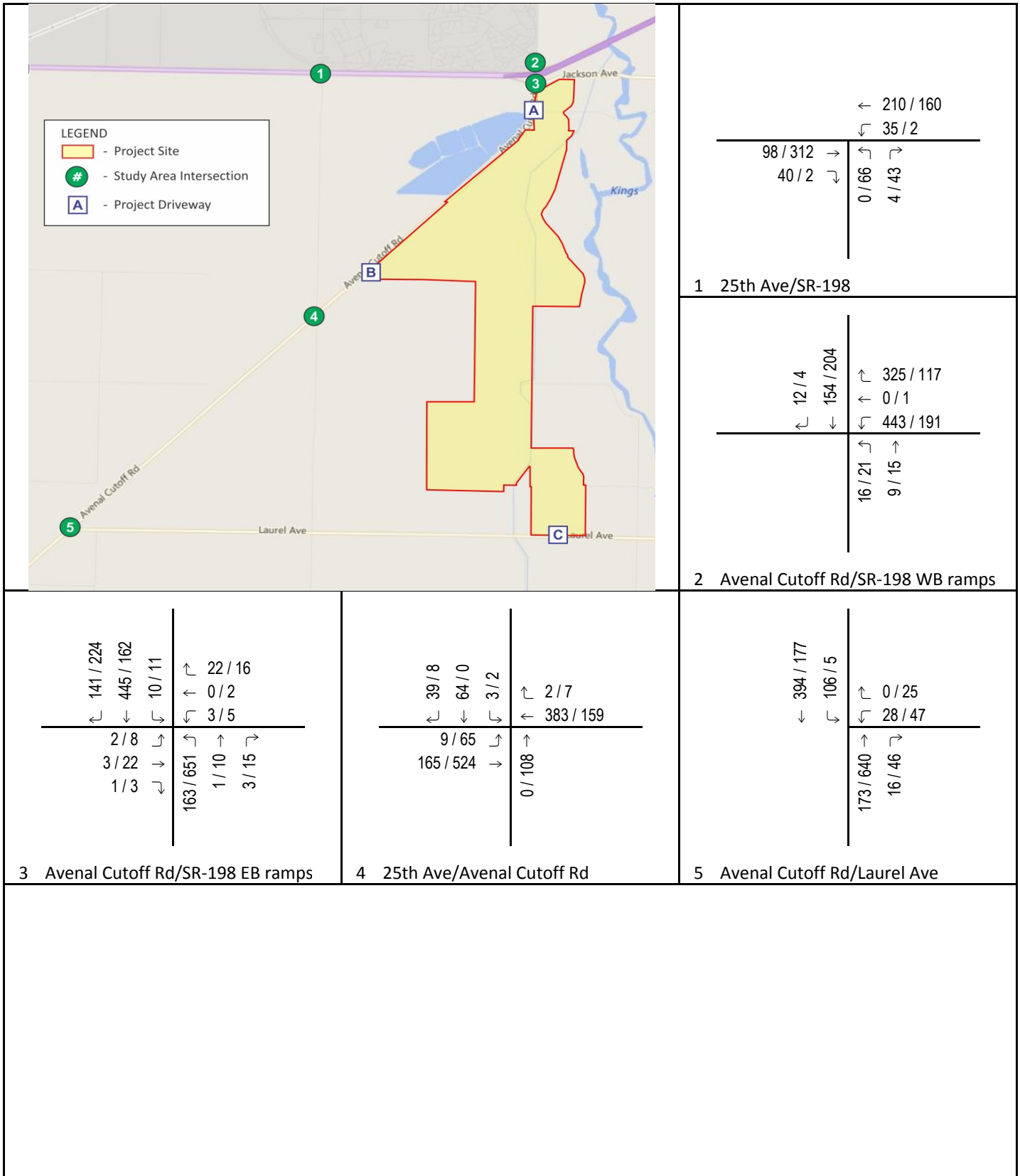


FIGURE 10



LEGEND
 XXX / YYY AM / PM Volume

RE Slate
 Cumulative Plus Decommissioning Traffic Volumes

Table E: Existing Driveway Level of Service Summary

Intersection	Plus Construction				Plus Operations			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Project Dwy A (Murphy Ranch Road)	7.7	A	15.2	C	7.6	A	12.5	B
Project Dwy B (Kent Avenue)	7.7	A	14.2	B	7.6	A	12.4	B
Project Dwy C (Laurel Avenue)	7.3	A	8.8	A	7.3	A	8.6	A

Delay is reported in seconds (sec).

LOS = level of service

RECOMMENDATIONS

According to the analysis conducted in this report, LSA has identified a significant impact at Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue with the addition of project traffic. Due to the existing p.m. peak-hour volume of 477 northbound left-turn vehicles at the intersection, Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue is currently operating below satisfactory LOS without the project (LOS F). In order to ensure that the project does not exacerbate any existing intersection deficiencies, LSA recommends the following measures to reduce the impact of project traffic on the surrounding circulation system.

Alternate Route

Construction, Operations and Maintenance, and Decommissioning

Based on the location of the RE Slate site in proximity to Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue, project trips (construction, operations and maintenance, and decommissioning) trips were distributed to this intersection to reach SR-198. In order to prevent exacerbating the existing p.m. peak-hour deficiency (LOS F) at this intersection, LSA recommends that project vehicles take an alternate route to and from the site during the p.m. peak hour and/or project vehicles avoid Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue during the p.m. peak hour.

As an alternate route to and from the project site via Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue, project vehicles may utilize Avenal Cutoff Road and 25th Avenue to and from SR-198. LSA conducted an LOS analysis to ensure that the addition of project trips to this alternate route will result in satisfactory LOS during the existing and cumulative conditions at all study area intersections, with the exception of Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue. The LOS analysis is summarized in Table F.

As Table F indicates, all study area intersections (except for Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue) will continue to operate at a satisfactory LOS during the p.m. peak hour with the addition of construction, operations and maintenance, and decommissioning trips on this alternate route. As such, the project would neither contribute to an existing deficiency nor create a significant impact at any study area intersections with this alternate route that avoids adding trips to Avenal Cutoff Road/SR-198 eastbound ramps–Jackson Avenue.

Table F: Alternative Route Intersection Level of Service Summary (PM Peak Hour)

Study Area No.	Intersection	Existing Conditions							Cumulative Conditions						
		Baseline		With Construction		With Operations		Significant Impact?	Baseline		With Operations		With Decommissioning		Significant Impact?
		Delay	LOS	Delay	LOS	Delay	LOS		Delay	LOS	Delay	LOS	Delay	LOS	
1	25th Ave/SR-198	9.3	A	12.4	B	12.0	B	No	12.9	B	13.0	B	13.1	B	No
2	Avenal Cutoff Rd/SR-198 WB ramps	12.6	B	12.6	B	12.6	B	No	12.1	B	12.1	B	12.1	B	No
3	Avenal Cutoff Rd/SR-198 EB ramps	88.0	F	88.0	F	88.0	F	No	159.4	F	159.4	F	159.4	F	No
4	25th Ave/Avenal Cutoff Rd	11.9	B	14.5	B	12.3	B	No	25.3	D	28.6	D	34.3	D	No
5	Avenal Cutoff Rd/Laurel Ave	16.4	C	16.9	C	16.1	C	No	18.5	C	18.2	C	18.3	C	No

= exceeds City's Level of Service (LOS) criteria

Delay is reported in seconds (sec).

HCM = Highway Capacity Manual

LOS = level of service

SR-198 = State Route 198

Traffic Management Plan

Construction and Decommissioning

The RE Slate project will generate the highest volumes during the temporary construction and decommissioning stages. As a condition of project approval, and prior to the issuance of encroachment permits, the applicant shall consult with Caltrans and/or the County prior to initiation of construction and decommissioning activities that may affect area traffic (such as equipment and supply delivery necessitating lane closures, trenching [if any], etc.) and shall implement appropriate traffic controls in accordance with the California Vehicle Code and other state and local requirements to avoid or minimize impacts on traffic. Traffic measures that shall be implemented during construction and decommissioning activities include the following:

- a. Construction traffic shall not block emergency equipment routes.
- b. Construction activities shall be designed to minimize work on, and delays to or safety concerns for other users of, local streets. As examples, this might include the following:
 - 1) Identify designated off-street parking areas for construction-related vehicles throughout the construction and decommissioning periods.
 - 2) Identify approved truck routes for the delivery of all construction-related equipment and materials.
 - 3) Limit the employee arrivals and departures, and the delivery of equipment and materials, to non-peak traffic periods.
 - 4) Provide for farm worker vehicle access and safe pedestrian and vehicle access.
 - 5) Provide advance warning and appropriate signage whenever road closures or detours are necessary.
- c. Construction shall comply with San Joaquin Valley Air Pollution Control District standards for unpaved roads, which include a requirement to keep vehicle speeds below 15 miles per hour.

With implementation of the traffic management plan during the construction and decommissioning, the project would not have a significant project impact to the adjacent roadway network.

CONCLUSIONS

Based on the results of this analysis, implementation of the proposed RE Slate project and the recommended measures would not result in any significant project-related impacts to the surrounding circulation system. The evaluation of the study area intersection LOS shows that the addition of project (construction, operations and maintenance, and decommissioning) traffic with the recommended measures would not create significant adverse impacts. The proposed access locations are expected to operate at satisfactory LOS during each phase of the proposed project.

APPENDIX A

EXISTING TRAFFIC VOLUMES

National Data & Surveying Services

Intersection Turning Movement Count

Location: 25th Ave & SR-198
 City: Lemoore
 Control: 1-Way Stop (NB)

Project ID: 18-02074-001
 Date: 6/5/2018

Total

NS/EW Streets:	25th Ave				25th Ave				SR-198				SR-198				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	1	0	0	0	0	0	0	20	0	0	2	48	0	0	71
7:15 AM	0	0	1	0	0	0	0	0	0	28	1	0	2	42	0	0	74
7:30 AM	0	0	1	0	0	0	0	0	0	28	1	0	2	71	0	0	103
7:45 AM	0	0	1	0	0	0	0	0	0	21	0	0	0	49	0	0	71
8:00 AM	0	0	2	0	0	0	0	0	0	27	1	0	0	35	0	0	65
8:15 AM	0	0	0	0	0	0	0	0	0	33	0	0	0	45	0	0	78
8:30 AM	0	0	0	0	0	0	0	0	0	32	0	0	2	39	0	0	73
8:45 AM	0	0	1	0	0	0	0	0	0	39	0	0	1	37	0	0	78
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	7	0	0	0	0	0	0	228	3	0	9	366	0	0	613
	0.00%	0.00%	100.00%	0.00%					0.00%	98.70%	1.30%	0.00%	2.40%	97.60%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	4	0	0	0	0	0	0	97	2	0	6	210	0	0	319
PEAK HR FACTOR :	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.866	0.500	0.000	0.750	0.739	0.000	0.000	0.774
			1.000							0.853				0.740			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	2	0	0	0	0	0	0	55	0	0	3	41	0	0	101
4:15 PM	0	0	3	0	0	0	0	0	0	79	0	0	0	39	0	0	121
4:30 PM	0	0	0	0	0	0	0	0	0	75	2	0	0	39	0	0	116
4:45 PM	0	0	2	0	0	0	0	0	0	87	0	0	1	37	0	0	127
5:00 PM	0	0	6	0	0	0	0	0	0	71	0	0	1	42	0	0	120
5:15 PM	0	0	2	0	0	0	0	0	0	52	1	0	0	36	0	0	91
5:30 PM	0	0	1	0	0	0	0	0	0	65	0	0	0	45	0	0	111
5:45 PM	0	0	0	0	0	0	0	0	0	47	0	0	1	39	0	0	87
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	16	0	0	0	0	0	0	531	3	0	6	318	0	0	874
	0.00%	0.00%	100.00%	0.00%					0.00%	99.44%	0.56%	0.00%	1.85%	98.15%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	11	0	0	0	0	0	0	312	2	0	2	157	0	0	484
PEAK HR FACTOR :	0.000	0.000	0.458	0.000	0.000	0.000	0.000	0.000	0.000	0.897	0.250	0.000	0.500	0.935	0.000	0.000	0.953
			0.458							0.902				0.924			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Avenal Cutoff Rd & SR-198 WB Ramps
 City: Lemoore
 Control: 1-Way Stop (WB)

Project ID: 18-02074-002
 Date: 6/5/2018

Total

NS/EW Streets:	Avenal Cutoff Rd				Avenal Cutoff Rd				SR-198 WB Ramps				SR-198 WB Ramps					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	4	3	0	0	0	22	7	0	0	0	0	0	98	0	70	0	204	
7:15 AM	6	2	0	0	0	28	4	0	0	0	0	0	118	0	90	0	248	
7:30 AM	5	2	0	0	0	40	0	0	0	0	0	0	74	0	104	0	225	
7:45 AM	1	2	0	0	0	64	1	0	0	0	0	0	55	0	61	0	184	
8:00 AM	2	0	0	0	0	49	1	0	0	0	0	0	47	0	27	0	126	
8:15 AM	5	4	0	0	0	35	1	0	0	0	0	0	40	0	25	0	110	
8:30 AM	1	2	0	0	0	24	1	0	0	0	0	0	33	0	10	0	71	
8:45 AM	2	2	0	0	0	22	1	0	0	0	0	0	27	0	6	0	60	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	26	17	0	0	0	284	16	0	0	0	0	0	492	0	393	0	1228	
	60.47%	39.53%	0.00%	0.00%	0.00%	94.67%	5.33%	0.00%	0.00%	0.00%	0.00%	0.00%	55.59%	0.00%	44.41%	0.00%		
PEAK HR :	07:00 AM - 08:00 AM																	
PEAK HR VOL :	16	9	0	0	0	154	12	0	0	0	0	0	345	0	325	0	861	
PEAK HR FACTOR :	0.667	0.750	0.000	0.000	0.000	0.602	0.429	0.000	0.000	0.000	0.000	0.000	0.731	0.000	0.781	0.000	0.868	
	0.781				0.638								0.805					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	1	2	0	0	0	59	0	0	0	0	0	0	40	0	22	0	124	
4:15 PM	3	2	0	0	0	57	2	0	0	0	0	0	35	0	19	0	118	
4:30 PM	8	7	0	0	0	64	0	0	0	0	0	0	46	0	31	0	156	
4:45 PM	4	2	0	0	0	55	3	0	0	0	0	0	39	0	24	0	127	
5:00 PM	3	4	0	0	0	38	0	0	0	0	0	0	49	1	32	0	127	
5:15 PM	3	2	0	0	0	47	1	0	0	0	0	0	57	0	30	0	140	
5:30 PM	0	2	0	0	0	53	0	0	0	0	0	0	54	0	25	0	134	
5:45 PM	1	2	0	0	0	26	0	0	0	0	0	0	40	0	22	0	91	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	23	23	0	0	0	399	6	0	0	0	0	0	360	1	205	0	1017	
	50.00%	50.00%	0.00%	0.00%	0.00%	98.52%	1.48%	0.00%	0.00%	0.00%	0.00%	0.00%	63.60%	0.18%	36.22%	0.00%		
PEAK HR :	04:30 PM - 05:30 PM																	
PEAK HR VOL :	18	15	0	0	0	204	4	0	0	0	0	0	191	1	117	0	550	
PEAK HR FACTOR :	0.563	0.536	0.000	0.000	0.000	0.797	0.333	0.000	0.000	0.000	0.000	0.000	0.838	0.250	0.914	0.000	0.881	
	0.550				0.813								0.888					

National Data & Surveying Services

Intersection Turning Movement Count

Location: Avenal Cutoff Rd & SR-198 EB Ramps/Jackson Ave
 City: Lemoore
 Control: 2-Way Stop (EB/WB)

Project ID: 18-02074-003
 Date: 6/5/2018

Total

NS/EW Streets:	Avenal Cutoff Rd				Avenal Cutoff Rd				SR-198 EB Ramps/Jackson Ave				SR-198 EB Ramps/Jackson Ave					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
	1	1	0	0	1	1	0	0	0.5	0.5	1	0	0	1	0	0	TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
	22	0	0	0	5	100	16	0	1	2	0	0	2	0	5	0	153	
	7:00 AM																	
	7:15 AM	45	1	1	0	2	118	26	0	1	0	0	0	0	0	7	0	200
	7:30 AM	59	0	1	0	1	73	39	0	1	0	0	0	0	0	7	0	181
	7:45 AM	37	0	1	0	2	56	60	0	0	1	0	0	1	0	3	0	161
	8:00 AM	30	1	1	0	9	46	41	0	0	1	0	0	3	0	0	0	132
	8:15 AM	27	2	1	0	0	41	34	0	0	0	1	0	0	0	7	0	113
	8:30 AM	39	0	1	0	0	32	24	0	0	0	0	0	0	0	3	0	99
	8:45 AM	32	0	0	0	2	27	20	0	2	4	0	0	1	0	2	0	90
	TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	291	4	6	0	21	493	260	0	4	8	1	0	7	0	34	0	1129	
	96.68%	1.33%	1.99%	0.00%	2.71%	63.70%	33.59%	0.00%	30.77%	61.54%	7.69%	0.00%	17.07%	0.00%	82.93%	0.00%		
PEAK HR :	07:00 AM - 08:00 AM																TOTAL	
PEAK HR VOL :	163	1	3	0	10	347	141	0	2	3	0	0	3	0	22	0	695	
PEAK HR FACTOR :	0.691	0.250	0.750	0.000	0.500	0.735	0.588	0.000	0.500	0.375	0.000	0.000	0.375	0.000	0.786	0.000	0.869	
	0.696				0.853				0.417				0.893					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
	1	1	0	0	1	1	0	0	0.5	0.5	1	0	0	1	0	0	TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
	98	2	3	0	1	40	59	0	3	4	0	0	0	0	2	0	212	
	4:00 PM																	
	4:15 PM	120	2	3	0	2	34	57	0	0	7	2	0	3	2	4	0	236
	4:30 PM	106	3	3	0	4	47	59	0	4	7	1	0	1	0	6	0	241
	4:45 PM	153	0	6	0	4	41	49	0	1	4	0	0	1	0	4	0	263
	5:00 PM	86	1	2	0	1	49	36	0	0	7	3	0	0	0	6	0	191
	5:15 PM	68	0	2	0	2	55	50	0	1	2	0	0	0	1	4	0	185
	5:30 PM	58	0	2	0	2	54	47	0	2	9	1	0	1	1	0	0	177
	5:45 PM	58	1	0	0	0	42	29	0	1	4	0	0	0	0	1	0	136
	TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	747	9	21	0	16	362	386	0	12	44	7	0	6	4	27	0	1641	
	96.14%	1.16%	2.70%	0.00%	2.09%	47.38%	50.52%	0.00%	19.05%	69.84%	11.11%	0.00%	16.22%	10.81%	72.97%	0.00%		
PEAK HR :	04:00 PM - 05:00 PM																TOTAL	
PEAK HR VOL :	477	7	15	0	11	162	224	0	8	22	3	0	5	2	16	0	952	
PEAK HR FACTOR :	0.779	0.583	0.625	0.000	0.688	0.862	0.949	0.000	0.500	0.786	0.375	0.000	0.417	0.250	0.667	0.000	0.905	
	0.785				0.902				0.688				0.639					

National Data & Surveying Services

Intersection Turning Movement Count

Location: 25th Ave & Avenal Cutoff Rd
 City: Lemoore
 Control: 1-Way Stop (SB)

Project ID: 18-02074-004
 Date: 6/5/2018

Total

NS/EW Streets:	25th Ave				25th Ave				Avenal Cutoff Rd				Avenal Cutoff Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	1	0	2	0	4	21	0	0	0	103	1	0	132
7:15 AM	0	0	0	0	0	0	0	0	0	52	0	0	0	119	0	0	171
7:30 AM	0	0	0	0	0	0	2	0	0	52	0	0	0	89	0	0	143
7:45 AM	0	0	0	0	0	0	3	0	1	38	0	0	0	61	1	0	104
8:00 AM	0	0	0	0	0	0	1	0	1	38	0	0	0	38	0	0	72
8:15 AM	0	0	0	0	0	0	4	0	1	32	0	1	0	50	0	0	88
8:30 AM	0	0	0	0	0	0	1	0	1	45	0	0	0	31	0	0	78
8:45 AM	0	0	0	0	0	0	0	0	0	27	0	0	0	23	0	0	50
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1	0	13	0	8	299	0	1	0	514	2	0	838
					7.14%	0.00%	92.86%	0.00%	2.60%	97.08%	0.00%	0.32%	0.00%	99.61%	0.39%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	7	0	5	163	0	0	0	372	2	0	550
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.583	0.000	0.313	0.784	0.000	0.000	0.000	0.782	0.500	0.000	0.804
							0.667			0.808				0.786			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	0	1	0	2	105	0	0	0	28	0	0	136
4:15 PM	0	0	0	0	0	0	1	0	4	122	0	0	0	42	1	0	170
4:30 PM	0	0	0	0	1	0	2	0	1	118	0	0	0	44	0	0	166
4:45 PM	0	0	0	0	1	0	0	0	2	158	0	0	0	39	0	0	200
5:00 PM	0	0	0	0	0	0	0	0	0	85	0	0	0	45	0	0	130
5:15 PM	0	0	0	0	0	0	1	0	0	65	0	0	0	49	0	0	115
5:30 PM	0	0	0	0	0	0	2	0	0	61	0	0	0	72	1	0	136
5:45 PM	0	0	0	0	0	0	0	0	3	50	0	0	0	34	0	0	87
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2	0	7	0	12	764	0	0	0	353	2	0	1140
					22.22%	0.00%	77.78%	0.00%	1.55%	98.45%	0.00%	0.00%	0.00%	99.44%	0.56%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	4	0	9	503	0	0	0	153	1	0	672
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.563	0.796	0.000	0.000	0.000	0.869	0.250	0.000	0.840
							0.500			0.800				0.875			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Avenal Cutoff Rd & Laurel Ave
 City: Lemoore
 Control: 1-Way Stop (WB)

Project ID: 18-02074-005
 Date: 6/5/2018

Total

NS/EW Streets:	Avenal Cutoff Rd				Avenal Cutoff Rd				Laurel Ave				Laurel Ave				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	134
7:15 AM	0	23	1	0	1	103	0	0	0	0	0	0	6	0	0	0	177
7:30 AM	0	57	3	0	0	108	0	0	0	0	0	0	9	0	0	0	172
7:45 AM	0	48	7	0	0	109	0	0	0	0	0	0	8	0	0	0	122
8:00 AM	0	39	4	0	0	74	0	0	0	0	0	0	5	0	0	0	74
8:15 AM	0	35	3	0	1	33	0	0	0	0	0	0	2	0	0	0	97
8:30 AM	0	34	1	0	0	54	0	0	0	0	0	0	8	0	0	0	85
8:45 AM	0	42	4	0	0	36	0	0	0	0	0	0	3	0	0	0	62
	0	27	5	0	0	26	0	0	0	0	0	0	4	0	0	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	305	28	0	2	543	0	0	0	0	0	0	45	0	0	0	923
	0.00%	91.59%	8.41%	0.00%	0.37%	99.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	167	15	0	1	394	0	0	0	0	0	0	28	0	0	0	605
PEAK HR FACTOR :	0.000	0.732	0.536	0.000	0.250	0.904	0.000	0.000	0.000	0.000	0.000	0.000	0.778	0.000	0.000	0.000	0.855
		0.758				0.906								0.778			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	137
4:15 PM	0	99	10	0	0	24	0	0	0	0	0	0	4	0	0	0	192
4:30 PM	0	126	12	0	0	45	0	0	0	0	0	0	8	0	1	0	214
4:45 PM	0	129	18	0	1	45	0	0	0	0	0	0	21	0	0	0	192
5:00 PM	0	137	10	0	0	36	0	0	0	0	0	0	9	0	0	0	145
5:15 PM	0	88	6	0	0	45	0	0	0	0	0	0	6	0	0	0	123
5:30 PM	0	62	3	0	0	52	0	0	0	0	0	0	6	0	0	0	140
5:45 PM	0	63	7	0	0	63	0	0	0	0	0	0	7	0	0	0	104
	0	49	6	0	0	45	0	0	0	0	0	0	4	0	0	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	753	72	0	1	355	0	0	0	0	0	0	65	0	1	0	1247
	0.00%	91.27%	8.73%	0.00%	0.28%	99.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	98.48%	0.00%	1.52%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	480	46	0	1	171	0	0	0	0	0	0	44	0	1	0	743
PEAK HR FACTOR :	0.000	0.876	0.639	0.000	0.250	0.950	0.000	0.000	0.000	0.000	0.000	0.000	0.524	0.000	0.250	0.000	0.868
		0.895				0.935								0.536			

APPENDIX B

HCM WORKSHEETS

HCM 6th TWSC
1: 25th Avenue & SR-198

06/26/2018

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔		↔	↔	↔	↔
Traffic Vol, veh/h	97	2	6	210	0	4
Future Vol, veh/h	97	2	6	210	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	3	8	273	0	5
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	129	0	417	65
Stage 1	-	-	-	-	128	-
Stage 2	-	-	-	-	289	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1456	-	578	986
Stage 1	-	-	-	-	885	-
Stage 2	-	-	-	-	759	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1456	-	575	986
Mov Cap-2 Maneuver	-	-	-	-	575	-
Stage 1	-	-	-	-	881	-
Stage 2	-	-	-	-	759	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0.2	8.7			
HCM LOS			A			
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	986	-	-	1456	-
HCM Lane V/C Ratio	-	0.005	-	-	0.005	-
HCM Control Delay (s)	0	8.7	-	-	7.5	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

06/26/2018

Intersection												
Int Delay, s/veh	10											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔	↔		↔			↔	
Traffic Vol, veh/h	0	0	0	345	0	325	16	9	0	0	154	12
Future Vol, veh/h	0	0	0	345	0	325	16	9	0	0	154	12
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	-	-	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	397	0	374	18	10	0	0	177	14
Major/Minor	Minor1			Major1			Major2					
Conflicting Flow All	230	237	10	191	0	-	-	-	-	-	-	0
Stage 1	46	46	-	-	-	-	-	-	-	-	-	-
Stage 2	184	191	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	-	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	758	664	1071	1383	-	0	0	-	-	-	-	-
Stage 1	976	857	-	-	-	0	0	-	-	-	-	-
Stage 2	848	742	-	-	-	0	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	748	0	1071	1383	-	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	748	0	-	-	-	-	-	-	-	-	-	-
Stage 1	963	0	-	-	-	-	-	-	-	-	-	-
Stage 2	848	0	-	-	-	-	-	-	-	-	-	-
Approach	WB			NB			SB					
HCM Control Delay, s	12.7			4.9			0					
HCM LOS	B											
Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR						
Capacity (veh/h)	1383	-	748	1071	-	-						
HCM Lane V/C Ratio	0.013	-	0.53	0.349	-	-						
HCM Control Delay (s)	7.6	0	15.1	10.2	-	-						
HCM Lane LOS	A	A	C	B	-	-						
HCM 95th %tile Q(veh)	0	-	3.2	1.6	-	-						

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

06/26/2018

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	2	3	0	3	0	22	163	1	3	10	347	141
Future Vol, veh/h	2	3	0	3	0	22	163	1	3	10	347	141
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	3	0	3	0	25	187	1	3	11	399	162

Major/Minor	Minor2	Minor1	Major1	Major2										
Conflicting Flow All	891	880	480	881	960	3	561	0	0	4	0	0		
Stage 1	502	502	-	377	377	-	-	-	-	-	-	-		
Stage 2	389	378	-	504	583	-	-	-	-	-	-	-		
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	263	286	586	267	257	1081	1010	-	-	1618	-	-		
Stage 1	552	542	-	644	616	-	-	-	-	-	-	-		
Stage 2	635	615	-	550	499	-	-	-	-	-	-	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	219	231	586	225	208	1081	1010	-	-	1618	-	-		
Mov Cap-2 Maneuver	219	231	-	225	208	-	-	-	-	-	-	-		
Stage 1	450	538	-	525	502	-	-	-	-	-	-	-		
Stage 2	505	501	-	543	496	-	-	-	-	-	-	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.3	9.9	9.1	0.1
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1010	-	-	226	-	225	1081	1618	-	-
HCM Lane V/C Ratio	0.186	-	-	0.025	-	0.015	0.023	0.007	-	-
HCM Control Delay (s)	9.4	-	-	21.3	0	21.2	8.4	7.2	-	-
HCM Lane LOS	A	-	-	C	A	C	A	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-	0	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

06/26/2018

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔					↔	↔	
Traffic Vol, veh/h	5	163	0	0	372	2	0	0	0	1	0	7
Future Vol, veh/h	5	163	0	0	372	2	0	0	0	1	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	204	0	0	465	3	0	0	0	1	0	9

Major/Minor	Major1	Major2	Minor1	Minor2										
Conflicting Flow All	468	0	0	204	0	0	687	684	-	683	683	467		
Stage 1	-	-	-	-	-	-	216	216	-	467	467	-		
Stage 2	-	-	-	-	-	-	471	468	-	216	216	-		
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22		
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318		
Pot Cap-1 Maneuver	1094	-	-	1368	-	-	361	371	0	363	372	596		
Stage 1	-	-	-	-	-	-	786	724	0	576	562	-		
Stage 2	-	-	-	-	-	-	573	561	0	786	724	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	1094	-	-	1368	-	-	354	369	-	361	370	596		
Mov Cap-2 Maneuver	-	-	-	-	-	-	354	369	-	361	370	-		
Stage 1	-	-	-	-	-	-	781	720	-	573	562	-		
Stage 2	-	-	-	-	-	-	665	561	-	781	720	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	11.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1094	-	-	1368	-	-	551
HCM Lane V/C Ratio	-	0.006	-	-	-	-	-	0.018
HCM Control Delay (s)	0	8.3	0	-	0	-	-	11.7
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

06/26/2018

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	28	0	167	15	1	394
Future Vol, veh/h	28	0	167	15	1	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	0	192	17	1	453

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	656	201	0 0 209 0
Stage 1	201	-	- - - -
Stage 2	455	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	430	840	- - 1362 -
Stage 1	833	-	- - - -
Stage 2	639	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	430	840	- - 1362 -
Mov Cap-2 Maneuver	430	-	- - - -
Stage 1	832	-	- - - -
Stage 2	639	-	- - - -

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	430 1362	-
HCM Lane V/C Ratio	-	-	0.075 0.001	-
HCM Control Delay (s)	-	-	14 7.6	0
HCM Lane LOS	-	-	B A	A
HCM 95th %tile Q(veh)	-	-	0.2 0	-

HCM 6th TWSC
6: Avenal Cutoff Road & Murphy Ranch Road (Project Driveway A)

06/26/2018

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	0	167	0	0	350
Future Vol, veh/h	0	0	167	0	0	350
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	182	0	0	380

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	562	182	0 0 182 0
Stage 1	182	-	- - - -
Stage 2	380	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	488	861	- - 1393 -
Stage 1	849	-	- - - -
Stage 2	691	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	488	861	- - 1393 -
Mov Cap-2 Maneuver	488	-	- - - -
Stage 1	849	-	- - - -
Stage 2	691	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	- 1393	-
HCM Lane V/C Ratio	-	-	- - -	-
HCM Control Delay (s)	-	-	0 0	-
HCM Lane LOS	-	-	A A	-
HCM 95th %tile Q(veh)	-	-	- 0	-

HCM 6th TWSC
7: Avenal Cutoff Road & Kent Avenue (Project Driveway B)

06/26/2018

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	0	166	0	0	362
Future Vol, veh/h	0	0	166	0	0	362
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	180	0	0	393

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	573	180	0 0 180 0
Stage 1	180	-	- - - -
Stage 2	393	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	481	863	- - 1396 -
Stage 1	851	-	- - - -
Stage 2	682	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	481	863	- - 1396 -
Mov Cap-2 Maneuver	481	-	- - - -
Stage 1	851	-	- - - -
Stage 2	682	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1396	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	-

HCM 6th TWSC
8: Laurel Avenue & Project Driveway C

06/26/2018

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	16	28	0	0	0
Future Vol, veh/h	0	16	28	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	17	30	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	30	0 - 0	47 30
Stage 1	-	- - -	30 -
Stage 2	-	- - -	17 -
Critical Hdwy	4.12	- - -	6.42 6.22
Critical Hdwy Stg 1	-	- - -	5.42 -
Critical Hdwy Stg 2	-	- - -	5.42 -
Follow-up Hdwy	2.218	- - -	3.518 3.318
Pot Cap-1 Maneuver	1583	- - -	963 1044
Stage 1	-	- - -	993 -
Stage 2	-	- - -	1006 -
Platoon blocked, %	-	- - -	- - -
Mov Cap-1 Maneuver	1583	- - -	963 1044
Mov Cap-2 Maneuver	-	- - -	963 -
Stage 1	-	- - -	993 -
Stage 2	-	- - -	1006 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 6th TWSC
1: 25th Avenue & SR-198

06/29/2018

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	157	0	11
Future Vol, veh/h	312	2	2	157	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	165	0	12

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	330	0
Stage 1	-	-	-	329
Stage 2	-	-	-	169
Critical Hdwy	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	5.83
Critical Hdwy Stg 2	-	-	-	5.43
Follow-up Hdwy	-	-	2.219	-
Pot Cap-1 Maneuver	-	-	1228	-
Stage 1	-	-	-	702
Stage 2	-	-	-	860
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1228	-
Mov Cap-2 Maneuver	-	-	-	515
Stage 1	-	-	-	701
Stage 2	-	-	-	860

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	851	-	-	1228	-
HCM Lane V/C Ratio	-	0.014	-	-	0.002	-
HCM Control Delay (s)	0	9.3	-	-	7.9	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

06/29/2018

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕					↕	↕
Traffic Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	217	1	133	20	17	0	0	232	5

Major/Minor	Minor1	Major1	Major2	Minor2
Conflicting Flow All	292	294	17	237
Stage 1	57	57	-	-
Stage 2	235	237	-	-
Critical Hdwy	6.42	6.52	6.22	4.12
Critical Hdwy Stg 1	5.42	5.52	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218
Pot Cap-1 Maneuver	699	617	1062	1330
Stage 1	966	847	-	-
Stage 2	804	709	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	689	0	1062	1330
Mov Cap-2 Maneuver	689	0	-	-
Stage 1	952	0	-	-
Stage 2	804	0	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1330	-	689	1062	-	-
HCM Lane V/C Ratio	0.015	-	0.317	0.125	-	-
HCM Control Delay (s)	7.7	0	12.6	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.4	0.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

06/29/2018

Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	8	22	3	5	2	16	477	7	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	477	7	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	24	3	5	2	18	524	8	16	12	178	246

Major/Minor	Minor2	Minor1	Major1	Major2									
Conflicting Flow All	1399	1397	301	1403	1512	16	424	0	0	24	0	0	
Stage 1	325	325	-	1064	1064	-	-	-	-	-	-	-	
Stage 2	1074	1072	-	339	448	-	-	-	-	-	-	-	
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	118	141	739	117	120	1063	1135	-	-	1591	-	-	
Stage 1	687	649	-	270	300	-	-	-	-	-	-	-	
Stage 2	266	297	-	676	573	-	-	-	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	72	75	739	57	64	1063	1135	-	-	1591	-	-	
Mov Cap-2 Maneuver	72	75	-	57	64	-	-	-	-	-	-	-	
Stage 1	370	644	-	145	161	-	-	-	-	-	-	-	
Stage 2	139	160	-	643	568	-	-	-	-	-	-	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	80.9	28.7	10.4	0.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1135	-	-	74	739	59	1063	1591	-	-
HCM Lane V/C Ratio	0.462	-	-	0.446	0.004	0.13	0.017	0.008	-	-
HCM Control Delay (s)	10.9	-	-	88	9.9	75	8.4	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	2.5	-	-	1.8	0	0.4	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

06/29/2018

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕					↕	↕	
Traffic Vol, veh/h	9	503	0	0	153	1	0	0	0	2	0	4
Future Vol, veh/h	9	503	0	0	153	1	0	0	0	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	-	0
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	599	0	0	182	1	0	0	0	2	0	5

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	183	0	0	599	0	0	806	804	-	804	804	183
Stage 1	-	-	-	-	-	-	621	621	-	183	183	-
Stage 2	-	-	-	-	-	-	185	183	-	621	621	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1392	-	-	978	-	-	300	316	0	301	316	859
Stage 1	-	-	-	-	-	-	475	479	0	819	748	-
Stage 2	-	-	-	-	-	-	817	748	0	475	479	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1392	-	-	978	-	-	296	312	-	298	312	859
Mov Cap-2 Maneuver	-	-	-	-	-	-	296	312	-	298	312	-
Stage 1	-	-	-	-	-	-	469	473	-	809	748	-
Stage 2	-	-	-	-	-	-	812	748	-	469	473	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	11.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1392	-	-	978	-	-	528
HCM Lane V/C Ratio	-	0.008	-	-	-	-	-	0.014
HCM Control Delay (s)	0	7.6	0	-	0	-	-	11.9
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

06/29/2018

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	44	1	480	46	1	171
Future Vol, veh/h	44	1	480	46	1	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	1	552	53	1	197

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	778	579	0 0 605 0
Stage 1	579	-	- - - -
Stage 2	199	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	365	515	- - 973 -
Stage 1	560	-	- - - -
Stage 2	835	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	365	515	- - 973 -
Mov Cap-2 Maneuver	365	-	- - - -
Stage 1	559	-	- - - -
Stage 2	835	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	16.4	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	367	973
HCM Lane V/C Ratio	-	-	0.141	0.001
HCM Control Delay (s)	-	-	16.4	8.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.5	0

HCM 6th TWSC
6: Avenal Cutoff Road & Murphy Ranch Road (Project Driveway A)

06/29/2018

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	0	499	0	0	170
Future Vol, veh/h	0	0	499	0	0	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	542	0	0	185

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	727	542	0 0 542 0
Stage 1	542	-	- - - -
Stage 2	185	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	391	540	- - 1027 -
Stage 1	583	-	- - - -
Stage 2	847	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	391	540	- - 1027 -
Mov Cap-2 Maneuver	391	-	- - - -
Stage 1	583	-	- - - -
Stage 2	847	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1027
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 6th TWSC
7: Avenal Cutoff Road & Kent Avenue (Project Driveway B)

06/29/2018

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	0	502	0	0	162
Future Vol, veh/h	0	0	502	0	0	162
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	546	0	0	176

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	722	546	0
Stage 1	546	-	-
Stage 2	176	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	394	538	-
Stage 1	580	-	-
Stage 2	855	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	394	538	-
Mov Cap-2 Maneuver	394	-	-
Stage 1	580	-	-
Stage 2	855	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1023	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	0	-

HCM 6th TWSC
8: Laurel Avenue & Project Driveway C

06/29/2018

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	47	45	0	0	0
Future Vol, veh/h	0	47	45	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	51	49	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	49	0	0
Stage 1	-	-	49
Stage 2	-	-	51
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1558	-	-
Stage 1	-	-	973
Stage 2	-	-	971
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1558	-	-
Mov Cap-2 Maneuver	-	-	899
Stage 1	-	-	973
Stage 2	-	-	971

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1558	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 6th TWSC
1: 25th Avenue & SR-198

06/29/2018

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	101	14	6	210	0	4
Future Vol, veh/h	101	14	6	210	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	131	18	8	273	0	5

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	149	0
Stage 1	-	-	-	140
Stage 2	-	-	-	289
Critical Hdwy	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	5.83
Critical Hdwy Stg 2	-	-	-	5.43
Follow-up Hdwy	-	-	2.219	-
Pot Cap-1 Maneuver	-	-	1431	-
Stage 1	-	-	-	873
Stage 2	-	-	-	759
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1431	-
Mov Cap-2 Maneuver	-	-	-	565
Stage 1	-	-	-	868
Stage 2	-	-	-	759

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	972	-	-	1431	-
HCM Lane V/C Ratio	-	0.005	-	-	0.005	-
HCM Control Delay (s)	0	8.7	-	-	7.5	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

06/29/2018

Intersection												
Int Delay, s/veh	12.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕					↕	↕
Traffic Vol, veh/h	0	0	0	438	0	325	16	9	0	0	154	12
Future Vol, veh/h	0	0	0	438	0	325	16	9	0	0	154	12
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	-	-	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	503	0	374	18	10	0	0	177	14

Major/Minor	Minor1	Major1	Major2	Minor2
Conflicting Flow All	230	237	10	191
Stage 1	46	46	-	-
Stage 2	184	191	-	-
Critical Hdwy	6.42	6.52	6.22	4.12
Critical Hdwy Stg 1	5.42	5.52	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218
Pot Cap-1 Maneuver	758	664	1071	1383
Stage 1	976	857	-	-
Stage 2	848	742	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	748	0	1071	1383
Mov Cap-2 Maneuver	748	0	-	-
Stage 1	963	0	-	-
Stage 2	848	0	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.3	4.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1383	-	748	1071	-	-
HCM Lane V/C Ratio	0.013	-	0.673	0.349	-	-
HCM Control Delay (s)	7.6	0	19.1	10.2	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0	-	5.3	1.6	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

06/29/2018

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	2	3	4	3	0	22	163	1	3	10	440	141
Future Vol, veh/h	2	3	4	3	0	22	163	1	3	10	440	141
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	3	5	3	0	25	187	1	3	11	506	162

Major/Minor	Minor2	Minor1	Major1	Major2								
Conflicting Flow All	998	987	587	990	1067	3	668	0	0	4	0	0
Stage 1	609	609	-	377	377	-	-	-	-	-	-	-
Stage 2	389	378	-	613	690	-	-	-	-	-	-	-
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	223	247	510	225	222	1081	922	-	-	1618	-	-
Stage 1	482	485	-	644	616	-	-	-	-	-	-	-
Stage 2	635	615	-	480	446	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	183	195	510	185	176	1081	922	-	-	1618	-	-
Mov Cap-2 Maneuver	183	195	-	185	176	-	-	-	-	-	-	-
Stage 1	384	482	-	513	491	-	-	-	-	-	-	-
Stage 2	494	490	-	469	443	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19	10.4	9.7	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	922	-	-	190	510	185	1081	1618	-	-
HCM Lane V/C Ratio	0.203	-	-	0.03	0.009	0.019	0.023	0.007	-	-
HCM Control Delay (s)	9.9	-	-	24.5	12.1	24.8	8.4	7.2	-	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.8	-	-	0.1	0	0.1	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

06/29/2018

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	5	171	0	0	402	2	0	0	0	9	0	11
Future Vol, veh/h	5	171	0	0	402	2	0	0	0	9	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	214	0	0	503	3	0	0	0	11	0	14

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	506	0	0	214	0	0	738	732	-	731	731	505
Stage 1	-	-	-	-	-	226	226	-	505	505	-	-
Stage 2	-	-	-	-	-	512	506	-	226	226	-	-
Critical Hdwy	4.12	-	-	4.12	-	7.12	6.52	-	7.12	6.52	6.22	-
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	2.218	-	-	2.218	-	3.518	4.018	-	3.518	4.018	3.318	-
Pot Cap-1 Maneuver	1059	-	-	1356	-	334	348	0	337	349	567	-
Stage 1	-	-	-	-	-	777	717	0	549	540	-	-
Stage 2	-	-	-	-	-	545	540	0	777	717	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1059	-	-	1356	-	324	346	-	335	347	567	-
Mov Cap-2 Maneuver	-	-	-	-	-	324	346	-	335	347	-	-
Stage 1	-	-	-	-	-	772	713	-	546	540	-	-
Stage 2	-	-	-	-	-	532	540	-	772	713	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	13.8
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1059	-	-	1356	-	-	432
HCM Lane V/C Ratio	-	0.006	-	-	-	-	-	0.058
HCM Control Delay (s)	0	8.4	0	-	0	-	-	13.8
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.2

HCM 6th TWSC
5: Arenal Cutoff Road & Laurel Avenue

06/29/2018

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	28	0	175	19	35	394
Future Vol, veh/h	28	0	175	19	35	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	0	201	22	40	453

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	745	212	0 0 223 0
Stage 1	212	-	- - - -
Stage 2	533	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	382	828	- - 1346 -
Stage 1	823	-	- - - -
Stage 2	588	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	367	828	- - 1346 -
Mov Cap-2 Maneuver	367	-	- - - -
Stage 1	790	-	- - - -
Stage 2	588	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	367	1346
HCM Lane V/C Ratio	-	-	0.088	0.03
HCM Control Delay (s)	-	-	15.8	7.8 0
HCM Lane LOS	-	-	C	A A
HCM 95th %tile Q(veh)	-	-	0.3	0.1 -

HCM 6th TWSC
6: Arenal Cutoff Road & Murphy Ranch Road (Project Driveway A)

06/29/2018

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	0	167	8	34	410
Future Vol, veh/h	0	0	167	8	34	410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	182	9	37	446

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	707	187	0 0 191 0
Stage 1	187	-	- - - -
Stage 2	520	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	402	855	- - 1383 -
Stage 1	845	-	- - - -
Stage 2	597	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	388	855	- - 1383 -
Mov Cap-2 Maneuver	388	-	- - - -
Stage 1	815	-	- - - -
Stage 2	597	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1383	-
HCM Lane V/C Ratio	-	-	0.027	-
HCM Control Delay (s)	-	-	0	7.7 0
HCM Lane LOS	-	-	A	A A
HCM 95th %tile Q(veh)	-	-	-	0.1 -

HCM 6th TWSC
7: Arenal Cutoff Road & Kent Avenue (Project Driveway B)

06/29/2018

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	0	174	8	30	392
Future Vol, veh/h	0	0	174	8	30	392
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	189	9	33	426

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	686	194	0 0 198 0
Stage 1	194	-	- - - -
Stage 2	492	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	413	847	- - 1375 -
Stage 1	839	-	- - - -
Stage 2	615	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	400	847	- - 1375 -
Mov Cap-2 Maneuver	400	-	- - - -
Stage 1	813	-	- - - -
Stage 2	615	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1375	-
HCM Lane V/C Ratio	-	-	0.024	-
HCM Control Delay (s)	-	-	0 7.7	0
HCM Lane LOS	-	-	A A	A
HCM 95th %tile Q(veh)	-	-	0.1	-

HCM 6th TWSC
8: Laurel Avenue & Project Driveway C

06/29/2018

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	38	16	28	0	0	0
Future Vol, veh/h	38	16	28	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	17	30	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	30	0 - 0	129 30
Stage 1	-	- - -	30 -
Stage 2	-	- - -	99 -
Critical Hdwy	4.12	- - -	6.42 6.22
Critical Hdwy Stg 1	-	- - -	5.42 -
Critical Hdwy Stg 2	-	- - -	5.42 -
Follow-up Hdwy	2.218	- - -	3.518 3.318
Pot Cap-1 Maneuver	1583	- - -	865 1044
Stage 1	-	- - -	993 -
Stage 2	-	- - -	925 -
Platoon blocked, %	-	- - -	- - -
Mov Cap-1 Maneuver	1583	- - -	843 1044
Mov Cap-2 Maneuver	-	- - -	843 -
Stage 1	-	- - -	967 -
Stage 2	-	- - -	925 -

Approach	EB	WB	SB
HCM Control Delay, s	5.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	-
HCM Lane V/C Ratio	0.026	-	-	-	-
HCM Control Delay (s)	7.3	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

HCM 6th TWSC
1: 25th Avenue & SR-198

06/29/2018

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	164	21	11
Future Vol, veh/h	312	2	2	164	21	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	173	22	12

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	330
Stage 1	-	-	329
Stage 2	-	-	177
Critical Hdwy	-	4.13	6.63
Critical Hdwy Stg 1	-	-	5.83
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	-	2.219	3.519
Pot Cap-1 Maneuver	-	1228	511
Stage 1	-	-	702
Stage 2	-	-	853
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1228	510
Mov Cap-2 Maneuver	-	-	510
Stage 1	-	-	701
Stage 2	-	-	853

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	510	851	-	-	1228	-
HCM Lane V/C Ratio	0.043	0.014	-	-	0.002	-
HCM Control Delay (s)	12.4	9.3	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

06/29/2018

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕					↕	↕
Traffic Vol, veh/h	0	0	0	191	1	117	25	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	25	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	217	1	133	28	17	0	0	232	5

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	308	310	17
Stage 1	73	73	-
Stage 2	235	237	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	5.42	5.52	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	684	605	1062
Stage 1	950	834	-
Stage 2	804	709	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	670	0	1062
Mov Cap-2 Maneuver	670	0	-
Stage 1	930	0	-
Stage 2	804	0	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1330	-	670	1062	-	-
HCM Lane V/C Ratio	0.021	-	0.326	0.125	-	-
HCM Control Delay (s)	7.8	0	12.9	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.4	0.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

06/29/2018

Intersection												
Int Delay, s/veh	19.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	8	22	3	5	2	16	636	14	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	636	14	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	24	3	5	2	18	699	15	16	12	178	246

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	1756	1754	301	1760
Stage 1	325	325	-	1421
Stage 2	1431	1429	-	339
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	66	85	739	66
Stage 1	687	649	-	169
Stage 2	167	200	-	676
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	31	32	739	14
Mov Cap-2 Maneuver	31	32	-	14
Stage 1	264	644	-	65
Stage 2	61	77	-	643

Approach	EB	WB	NB	SB
HCM Control Delay, s	321.6	116.3	12.5	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1135	-	-	32	739	16	1054	1582	-	-
HCM Lane V/C Ratio	0.616	-	-	1.03	0.004	0.481	0.017	0.008	-	-
HCM Control Delay (s)	13.1	-	-	352.8	9.95	362.8	8.5	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	4.4	-	-	3.6	0	1.3	0.1	0	-	-

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

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

06/29/2018

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↕			↕			↕			↕
Traffic Vol, veh/h	16	555	0	0	167	15	0	0	0	2	0	4
Future Vol, veh/h	16	555	0	0	167	15	0	0	0	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	661	0	0	199	18	0	0	0	2	0	5

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	217	0	0	661
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1353	-	-	927
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1353	-	-	927
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	12.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1353	-	-	927	-	-	472
HCM Lane V/C Ratio	-	0.014	-	-	-	-	-	0.015
HCM Control Delay (s)	0	7.7	0	-	0	-	-	12.7
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

06/29/2018

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	51	60	480	46	1	185
Future Vol, veh/h	51	60	480	46	1	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	69	552	53	1	213

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	794	579	0 0 605 0
Stage 1	579	-	- - - -
Stage 2	215	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3,518	3,318	- - 2,218 -
Pot Cap-1 Maneuver	357	515	- - 973 -
Stage 1	560	-	- - - -
Stage 2	821	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	357	515	- - 973 -
Mov Cap-2 Maneuver	357	-	- - - -
Stage 1	559	-	- - - -
Stage 2	821	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 428	973	-
HCM Lane V/C Ratio	-	- 0.298	0.001	-
HCM Control Delay (s)	-	- 16.9	8.7	0
HCM Lane LOS	-	- C	A	A
HCM 95th %tile Q(veh)	-	- 1.2	0	-

HCM 6th TWSC
6: Avenal Cutoff Road & Murphy Ranch Road (Project Driveway A)

06/29/2018

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	14	60	603	0	0	170
Future Vol, veh/h	14	60	603	0	0	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	65	655	0	0	185

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	840	655	0 0 655 0
Stage 1	655	-	- - - -
Stage 2	185	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3,518	3,318	- - 2,218 -
Pot Cap-1 Maneuver	335	466	- - 932 -
Stage 1	517	-	- - - -
Stage 2	847	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	335	466	- - 932 -
Mov Cap-2 Maneuver	335	-	- - - -
Stage 1	517	-	- - - -
Stage 2	847	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 434	932	-
HCM Lane V/C Ratio	-	- 0.185	-	-
HCM Control Delay (s)	-	- 15.2	0	-
HCM Lane LOS	-	- C	A	-
HCM 95th %tile Q(veh)	-	- 0.7	0	-

HCM 6th TWSC
7: Arenal Cutoff Road & Kent Avenue (Project Driveway B)

06/29/2018

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	14	52	554	0	0	176
Future Vol, veh/h	14	52	554	0	0	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	57	602	0	0	191

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	793	602	0
Stage 1	602	-	-
Stage 2	191	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	358	500	-
Stage 1	547	-	-
Stage 2	841	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	358	500	-
Mov Cap-2 Maneuver	358	-	-
Stage 1	547	-	-
Stage 2	841	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	461	975
HCM Lane V/C Ratio	-	-	0.156	-
HCM Control Delay (s)	-	-	14.2	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

HCM 6th TWSC
8: Laurel Avenue & Project Driveway C

06/29/2018

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	47	45	0	0	66
Future Vol, veh/h	0	47	45	0	0	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	51	49	0	0	72

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	49	0	0
Stage 1	-	-	49
Stage 2	-	-	51
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1558	-	-
Stage 1	-	-	973
Stage 2	-	-	971
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1558	-	-
Mov Cap-2 Maneuver	-	-	899
Stage 1	-	-	973
Stage 2	-	-	971

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1558	-	-	-	1020
HCM Lane V/C Ratio	-	-	-	-	0.07
HCM Control Delay (s)	0	-	-	-	8.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

HCM 6th TWSC
1: 25th Avenue & SR-198

06/29/2018

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔↔		↔	↔	↔	↔
Traffic Vol, veh/h	98	5	6	210	0	4
Future Vol, veh/h	98	5	6	210	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	-	-	-	-
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	6	8	273	0	5
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	133	0	419	67
Stage 1	-	-	-	130	-	-
Stage 2	-	-	-	289	-	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	5.83	-	-
Critical Hdwy Stg 2	-	-	-	5.43	-	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1451	-	576	983
Stage 1	-	-	-	883	-	-
Stage 2	-	-	-	759	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1451	-	573	983
Mov Cap-2 Maneuver	-	-	-	573	-	-
Stage 1	-	-	-	878	-	-
Stage 2	-	-	-	759	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0.2	8.7			
HCM LOS			A			
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	983	-	-	1451	-
HCM Lane V/C Ratio	-	0.005	-	-	0.005	-
HCM Control Delay (s)	0	8.7	-	-	7.5	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

06/29/2018

Intersection												
Int Delay, s/veh	10.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔	↔					↔	↔
Traffic Vol, veh/h	0	0	0	376	0	325	16	9	0	0	154	12
Future Vol, veh/h	0	0	0	376	0	325	16	9	0	0	154	12
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	-	-	-	-	-	-	-	-	-	-	-	-
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	432	0	374	18	10	0	0	177	14
Major/Minor	Minor1		Major1		Major2							
Conflicting Flow All	230	237	10	191	0	-	-	-	-	-	-	0
Stage 1	46	46	-	-	-	-	-	-	-	-	-	-
Stage 2	184	191	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	-	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	758	664	1071	1383	-	0	0	-	-	-	-	-
Stage 1	976	857	-	-	-	0	0	-	-	-	-	-
Stage 2	848	742	-	-	-	0	0	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	748	0	1071	1383	-	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	748	0	-	-	-	-	-	-	-	-	-	-
Stage 1	963	0	-	-	-	-	-	-	-	-	-	-
Stage 2	848	0	-	-	-	-	-	-	-	-	-	-
Approach	WB		NB		SB							
HCM Control Delay, s	13.4		4.9		0							
HCM LOS			B									
Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR						
Capacity (veh/h)	1383	-	748	1071	-	-						
HCM Lane V/C Ratio	0.013	-	0.578	0.349	-	-						
HCM Control Delay (s)	7.6	0	16.2	10.2	-	-						
HCM Lane LOS	A	A	C	B	-	-						
HCM 95th %tile Q(veh)	0	-	3.7	1.6	-	-						

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

06/29/2018

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	2	3	1	3	0	22	163	1	3	10	378	141
Future Vol, veh/h	2	3	1	3	0	22	163	1	3	10	378	141
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	3	1	3	0	25	187	1	3	11	434	162

Major/Minor	Minor2	Minor1	Major1	Major2										
Conflicting Flow All	926	915	515	916	995	3	596	0	0	4	0	0		
Stage 1	537	537	-	377	377	-	-	-	-	-	-	-		
Stage 2	389	378	-	539	618	-	-	-	-	-	-	-		
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	249	273	560	253	245	1081	980	-	-	1618	-	-		
Stage 1	528	523	-	644	616	-	-	-	-	-	-	-		
Stage 2	635	615	-	527	481	-	-	-	-	-	-	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	206	219	560	212	197	1081	980	-	-	1618	-	-		
Mov Cap-2 Maneuver	206	219	-	212	197	-	-	-	-	-	-	-		
Stage 1	427	519	-	521	498	-	-	-	-	-	-	-		
Stage 2	502	498	-	519	478	-	-	-	-	-	-	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.5	10.1	9.3	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	980	-	-	214	560	212	1081	1618	-	-
HCM Lane V/C Ratio	0.191	-	-	0.027	0.002	0.016	0.023	0.007	-	-
HCM Control Delay (s)	9.5	-	-	22.3	11.4	22.3	8.4	7.2	-	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	0	0.1	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

06/29/2018

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔					↔	↔	
Traffic Vol, veh/h	5	165	0	0	382	2	0	0	0	3	0	8
Future Vol, veh/h	5	165	0	0	382	2	0	0	0	3	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	206	0	0	478	3	0	0	0	4	0	10

Major/Minor	Major1	Major2	Minor1	Minor2										
Conflicting Flow All	481	0	0	206	0	0	703	699	-	698	698	480		
Stage 1	-	-	-	-	-	-	218	218	-	480	480	-		
Stage 2	-	-	-	-	-	-	485	481	-	218	218	-		
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22		
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318		
Pot Cap-1 Maneuver	1082	-	-	1365	-	-	352	364	0	355	364	586		
Stage 1	-	-	-	-	-	-	784	723	0	567	554	-		
Stage 2	-	-	-	-	-	-	563	554	0	784	723	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	1082	-	-	1365	-	-	344	362	-	353	362	586		
Mov Cap-2 Maneuver	-	-	-	-	-	-	344	362	-	353	362	-		
Stage 1	-	-	-	-	-	-	779	719	-	564	554	-		
Stage 2	-	-	-	-	-	-	553	554	-	779	719	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0	0	12.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1082	-	-	1365	-	-	497
HCM Lane V/C Ratio	-	0.006	-	-	-	-	-	0.028
HCM Control Delay (s)	0	8.3	0	-	0	-	-	12.4
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

HCM 6th TWSC
5: Arenal Cutoff Road & Laurel Avenue

06/29/2018

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	28	0	169	16	12	394
Future Vol, veh/h	28	0	169	16	12	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	0	194	18	14	453

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	684	203	0 212 0
Stage 1	203	-	- - -
Stage 2	481	-	- - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	414	838	- - 1358 -
Stage 1	831	-	- - - -
Stage 2	622	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	408	838	- - 1358 -
Mov Cap-2 Maneuver	408	-	- - - -
Stage 1	819	-	- - - -
Stage 2	622	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	14.6	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	408	1358
HCM Lane V/C Ratio	-	-	0.079	0.01
HCM Control Delay (s)	-	-	14.6	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

HCM 6th TWSC
6: Arenal Cutoff Road & Murphy Ranch Road (Project Driveway A)

06/29/2018

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	0	0	167	5	11	370
Future Vol, veh/h	0	0	167	5	11	370
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	182	5	12	402

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	611	185	0 187 0
Stage 1	185	-	- - - -
Stage 2	426	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	457	857	- - 1387 -
Stage 1	847	-	- - - -
Stage 2	659	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	452	857	- - 1387 -
Mov Cap-2 Maneuver	452	-	- - - -
Stage 1	838	-	- - - -
Stage 2	659	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1387
HCM Lane V/C Ratio	-	-	-	0.009
HCM Control Delay (s)	-	-	0	7.6
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 6th TWSC
7: Arenal Cutoff Road & Kent Avenue (Project Driveway B)

06/29/2018

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Vol, veh/h	0	0	168	2	10	372
Future Vol, veh/h	0	0	168	2	10	372
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	183	2	11	404

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	610	184	0 0 185 0
Stage 1	184	-	- - - -
Stage 2	426	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	458	858	- - 1390 -
Stage 1	848	-	- - - -
Stage 2	659	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	453	858	- - 1390 -
Mov Cap-2 Maneuver	453	-	- - - -
Stage 1	840	-	- - - -
Stage 2	659	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	1390	-
HCM Lane V/C Ratio	-	-	0.008	-
HCM Control Delay (s)	-	-	0 7.6	0
HCM Lane LOS	-	-	A A	A
HCM 95th %tile Q(veh)	-	-	0	-

HCM 6th TWSC
8: Laurel Avenue & Project Driveway C

06/29/2018

Intersection						
Int Delay, s/veh	1.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	12	16	28	0	0	0
Future Vol, veh/h	12	16	28	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	17	30	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	30	0 - 0	73 30
Stage 1	-	- - -	30 -
Stage 2	-	- - -	43 -
Critical Hdwy	4.12	- - -	6.42 6.22
Critical Hdwy Stg 1	-	- - -	5.42 -
Critical Hdwy Stg 2	-	- - -	5.42 -
Follow-up Hdwy	2.218	- - -	3.518 3.318
Pot Cap-1 Maneuver	1583	- - -	931 1044
Stage 1	-	- - -	993 -
Stage 2	-	- - -	979 -
Platoon blocked, %	-	- - -	- - -
Mov Cap-1 Maneuver	1583	- - -	924 1044
Mov Cap-2 Maneuver	-	- - -	924 -
Stage 1	-	- - -	985 -
Stage 2	-	- - -	979 -

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1583	-	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-	-
HCM Control Delay (s)	7.3	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 6th TWSC
1: 25th Avenue & SR-198

07/20/2018

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	158	3	11
Future Vol, veh/h	312	2	2	158	3	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	166	3	12

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	330	0	499	165
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	170	-
Critical Hdwy	-	-	4.13	-	6.63	6.93
Critical Hdwy Stg 1	-	-	-	-	5.83	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	1228	-	516	851
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1228	-	515	851
Mov Cap-2 Maneuver	-	-	-	-	515	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	859	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	515	851	-	-	1228	-
HCM Lane V/C Ratio	0.006	0.014	-	-	0.002	-
HCM Control Delay (s)	12	9.3	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/20/2018

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕		↕			↕	
Traffic Vol, veh/h	0	0	0	191	1	117	19	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	19	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	217	1	133	22	17	0	0	232	5

Major/Minor	Minor1	Major1	Major2						
Conflicting Flow All	296	298	17	237	0	-	-	-	0
Stage 1	61	61	-	-	-	-	-	-	-
Stage 2	235	237	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	-	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	695	614	1062	1330	-	0	0	-	-
Stage 1	962	844	-	-	-	0	0	-	-
Stage 2	804	709	-	-	-	0	0	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	683	0	1062	1330	-	-	-	-	-
Mov Cap-2 Maneuver	683	0	-	-	-	-	-	-	-
Stage 1	946	0	-	-	-	-	-	-	-
Stage 2	804	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	4.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1330	-	683	1062	-	-
HCM Lane V/C Ratio	0.016	-	0.319	0.125	-	-
HCM Control Delay (s)	7.8	0	12.7	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.4	0.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/20/2018

Intersection												
Int Delay, s/veh	10.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	8	22	3	5	2	16	511	8	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	511	8	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	24	3	5	2	18	562	9	16	12	178	246

Major/Minor	Minor2	Minor1	Major1	Major2									
Conflicting Flow All	1476	1474	301	1480	1589	17	424	0	0	25	0	0	
Stage 1	325	325	-	1141	1141	-	-	-	-	-	-	-	
Stage 2	1151	1149	-	339	448	-	-	-	-	-	-	-	
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	104	127	739	104	108	1062	1135	-	-	1589	-	-	
Stage 1	687	649	-	244	275	-	-	-	-	-	-	-	
Stage 2	241	273	-	676	573	-	-	-	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	60	64	739	46	54	1062	1135	-	-	1589	-	-	
Mov Cap-2 Maneuver	60	64	-	46	54	-	-	-	-	-	-	-	
Stage 1	347	644	-	123	139	-	-	-	-	-	-	-	
Stage 2	118	138	-	643	568	-	-	-	-	-	-	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	103.5	34.4	10.8	0.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1135	-	-	63	739	48	1062	1589	-	-
HCM Lane V/C Ratio	0.495	-	-	0.523	0.004	0.16	0.017	0.008	-	-
HCM Control Delay (s)	11.2	-	-	112.9	9.9	93.8	8.4	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	2.8	-	-	2.1	0	0.5	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

07/20/2018

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔		
Traffic Vol, veh/h	10	514	0	0	155	3	0	0	0	2	0	4
Future Vol, veh/h	10	514	0	0	155	3	0	0	0	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	612	0	0	185	4	0	0	0	2	0	5

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	189	0	0	612	0	0	826	825	-	823	823	187
Stage 1	-	-	-	-	-	-	636	636	-	187	187	-
Stage 2	-	-	-	-	-	-	190	189	-	636	636	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1385	-	-	967	-	-	291	308	0	292	309	855
Stage 1	-	-	-	-	-	-	466	472	0	815	745	-
Stage 2	-	-	-	-	-	-	812	744	0	466	472	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1385	-	-	967	-	-	287	304	-	289	305	855
Mov Cap-2 Maneuver	-	-	-	-	-	-	287	304	-	289	305	-
Stage 1	-	-	-	-	-	-	460	466	-	804	745	-
Stage 2	-	-	-	-	-	-	807	744	-	460	466	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	0	12.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1385	-	-	967	-	-	517
HCM Lane V/C Ratio	-	0.009	-	-	-	-	-	0.014
HCM Control Delay (s)	0	7.6	0	-	0	-	-	12.1
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

HCM 6th TWSC
5: Arenal Cutoff Road & Laurel Avenue

07/20/2018

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	45	13	480	46	1	173
Future Vol, veh/h	45	13	480	46	1	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	15	552	53	1	199

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	780	579	0 0 605 0
Stage 1	579	-	- - - -
Stage 2	201	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	364	515	- - 973 -
Stage 1	560	-	- - - -
Stage 2	833	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	364	515	- - 973 -
Mov Cap-2 Maneuver	364	-	- - - -
Stage 1	559	-	- - - -
Stage 2	833	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	16.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	390	973
HCM Lane V/C Ratio	-	-	0.171	0.001
HCM Control Delay (s)	-	-	16.1	8.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.6	0

HCM 6th TWSC
6: Arenal Cutoff Road & Murphy Ranch Road (Project Driveway A)

07/20/2018

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	2	13	521	0	0	170
Future Vol, veh/h	2	13	521	0	0	170
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	14	566	0	0	185

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	751	566	0 0 566 0
Stage 1	566	-	- - - -
Stage 2	185	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	378	524	- - 1006 -
Stage 1	568	-	- - - -
Stage 2	847	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	378	524	- - 1006 -
Mov Cap-2 Maneuver	378	-	- - - -
Stage 1	568	-	- - - -
Stage 2	847	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	12.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	498	1006
HCM Lane V/C Ratio	-	-	0.033	-
HCM Control Delay (s)	-	-	12.5	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
7: Arenal Cutoff Road & Kent Avenue (Project Driveway B)

07/20/2018

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	2	11	513	0	0	164
Future Vol, veh/h	2	11	513	0	0	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	12	558	0	0	178

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	736	558	0
Stage 1	558	-	-
Stage 2	178	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3,518	3,318	-
Pot Cap-1 Maneuver	386	529	-
Stage 1	573	-	-
Stage 2	853	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	386	529	-
Mov Cap-2 Maneuver	386	-	-
Stage 1	573	-	-
Stage 2	853	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	500	1013
HCM Lane V/C Ratio	-	-	0.028	-
HCM Control Delay (s)	-	-	12.4	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

HCM 6th TWSC
8: Laurel Avenue & Project Driveway C

07/20/2018

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Traffic Vol, veh/h	0	47	45	0	0	13
Future Vol, veh/h	0	47	45	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	51	49	0	0	14

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	49	0	0
Stage 1	-	-	49
Stage 2	-	-	51
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2,218	-	-
Pot Cap-1 Maneuver	1558	-	-
Stage 1	-	-	973
Stage 2	-	-	971
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1558	-	-
Mov Cap-2 Maneuver	-	-	899
Stage 1	-	-	973
Stage 2	-	-	971

Approach	EB	WB	SB
HCM Control Delay, s	0	0	8.6
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1558	-	-	-	1020
HCM Lane V/C Ratio	-	-	-	-	0.014
HCM Control Delay (s)	0	-	-	-	8.6
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 6th TWSC
1: 25th Avenue & SR-198

07/18/2018

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	97	37	35	210	0	4
Future Vol, veh/h	97	37	35	210	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	39	37	221	0	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	417
Stage 1	-	-	122
Stage 2	-	-	295
Critical Hdwy	-	4.13	6.63
Critical Hdwy Stg 1	-	-	5.83
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	-	2.219	3.319
Pot Cap-1 Maneuver	-	1441	578
Stage 1	-	-	891
Stage 2	-	-	755
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1441	563
Mov Cap-2 Maneuver	-	-	563
Stage 1	-	-	868
Stage 2	-	-	755

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	977	-	-	1441	-
HCM Lane V/C Ratio	-	0.004	-	-	0.026	-
HCM Control Delay (s)	0	8.7	-	-	7.6	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0.1	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/18/2018

Intersection												
Int Delay, s/veh	10.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕					↕	↕
Traffic Vol, veh/h	0	0	0	409	0	325	16	9	0	0	154	12
Future Vol, veh/h	0	0	0	409	0	325	16	9	0	0	154	12
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	431	0	342	17	9	0	0	162	13

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	212	218	9
Stage 1	43	43	-
Stage 2	169	175	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	5.42	5.52	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	776	680	1073
Stage 1	979	859	-
Stage 2	861	754	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	767	0	1073
Mov Cap-2 Maneuver	767	0	-
Stage 1	967	0	-
Stage 2	861	0	-

Approach	WB	NB	SB
HCM Control Delay, s	13	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1401	-	767	1073	-	-
HCM Lane V/C Ratio	0.012	-	0.561	0.319	-	-
HCM Control Delay (s)	7.6	0	15.5	9.9	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	3.5	1.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/18/2018

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	2	3	0	3	0	22	163	1	3	10	411	141
Future Vol, veh/h	2	3	0	3	0	22	163	1	3	10	411	141
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	3	0	3	0	23	172	1	3	11	433	148

Major/Minor	Minor2	Minor1	Major1	Major2										
Conflicting Flow All	887	877	507	878	950	3	581	0	0	4	0	0		
Stage 1	529	529	-	347	347	-	-	-	-	-	-	-		
Stage 2	358	348	-	531	603	-	-	-	-	-	-	-		
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	265	287	566	268	260	1081	993	-	-	1618	-	-		
Stage 1	533	527	-	669	635	-	-	-	-	-	-	-		
Stage 2	660	634	-	532	488	-	-	-	-	-	-	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	224	236	566	229	213	1081	993	-	-	1618	-	-		
Mov Cap-2 Maneuver	224	236	-	229	213	-	-	-	-	-	-	-		
Stage 1	441	523	-	553	525	-	-	-	-	-	-	-		
Stage 2	534	524	-	525	485	-	-	-	-	-	-	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.9	9.9	9.2	0.1
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	993	-	-	231	-	229	1081	1618	-	-
HCM Lane V/C Ratio	0.173	-	-	0.023	-	0.014	0.021	0.007	-	-
HCM Control Delay (s)	9.4	-	-	20.9	0	20.9	8.4	7.2	-	-
HCM Lane LOS	A	-	-	C	A	C	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-	0	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

07/18/2018

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕					↕	↕	
Traffic Vol, veh/h	9	163	0	0	372	2	0	0	0	1	64	38
Future Vol, veh/h	9	163	0	0	372	2	0	0	0	1	64	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	172	0	0	392	2	0	0	0	1	67	40

Major/Minor	Major1	Major2	Minor1	Minor2										
Conflicting Flow All	394	0	0	172	0	0	637	584	-	583	583	393		
Stage 1	-	-	-	-	-	-	190	190	-	393	393	-		
Stage 2	-	-	-	-	-	-	447	394	-	190	190	-		
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22		
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318		
Pot Cap-1 Maneuver	1165	-	-	1405	-	-	390	423	0	424	424	656		
Stage 1	-	-	-	-	-	-	812	743	0	632	606	-		
Stage 2	-	-	-	-	-	-	591	605	0	812	743	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	1165	-	-	1405	-	-	319	419	-	421	420	656		
Mov Cap-2 Maneuver	-	-	-	-	-	-	319	419	-	421	420	-		
Stage 1	-	-	-	-	-	-	805	736	-	626	606	-		
Stage 2	-	-	-	-	-	-	493	605	-	805	736	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	0	14.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1165	-	-	1405	-	-	484
HCM Lane V/C Ratio	-	0.008	-	-	-	-	-	0.224
HCM Control Delay (s)	0	8.1	0	-	0	-	-	14.6
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.9

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/18/2018

Intersection						
Int Delay, s/veh	1.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	28	0	171	15	94	394
Future Vol, veh/h	28	0	171	15	94	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	0	180	16	99	415
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	801	188	0	0	196	0
Stage 1	188	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3,518	3,318	-	-	2,218	-
Pot Cap-1 Maneuver	354	854	-	-	1377	-
Stage 1	844	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	321	854	-	-	1377	-
Mov Cap-2 Maneuver	321	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	17.3	0	1.5			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	321	1377		
HCM Lane V/C Ratio	-	-	0.092	0.072		
HCM Control Delay (s)	-	-	17.3	7.8	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0.2		

Intersection						
Int Delay, s/veh	2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	157	57	43
Future Vol, veh/h	312	2	2	157	57	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	165	60	45

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	330	0
Stage 1	-	-	-	329
Stage 2	-	-	-	169
Critical Hdwy	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	5.83
Critical Hdwy Stg 2	-	-	-	5.43
Follow-up Hdwy	-	-	2.219	-
Pot Cap-1 Maneuver	-	-	1228	-
Stage 1	-	-	-	702
Stage 2	-	-	-	860
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1228	-
Mov Cap-2 Maneuver	-	-	-	515
Stage 1	-	-	-	701
Stage 2	-	-	-	860

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	515	851	-	-	1228	-
HCM Lane V/C Ratio	0.117	0.053	-	-	0.002	-
HCM Control Delay (s)	12.9	9.5	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0	-

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	0	0	0	191	1	117	18	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	201	1	123	19	16	0	0	215	4

Major/Minor	Minor1	Minor2	Major1	Major2
Conflicting Flow All	271	273	16	219
Stage 1	54	54	-	-
Stage 2	217	219	-	-
Critical Hdwy	6.42	6.52	6.22	4.12
Critical Hdwy Stg 1	5.42	5.52	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218
Pot Cap-1 Maneuver	718	634	1063	1350
Stage 1	969	850	-	-
Stage 2	819	722	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	708	0	1063	1350
Mov Cap-2 Maneuver	708	0	-	-
Stage 1	955	0	-	-
Stage 2	819	0	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1350	-	708	1063	-	-
HCM Lane V/C Ratio	0.014	-	0.285	0.116	-	-
HCM Control Delay (s)	7.7	0	12.1	8.8	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.2	0.4	-	-

HCM 6th TWSC
3: Avenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/18/2018

Intersection												
Int Delay, s/veh	12											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	8	22	3	5	2	16	585	7	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	585	7	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	23	3	5	2	17	616	7	16	12	171	236

Major/Minor	Minor2	Minor1	Major1	Major2									
Conflicting Flow All	1570	1568	289	1573	1678	15	407	0	0	23	0	0	
Stage 1	313	313	-	1247	1247	-	-	-	-	-	-	-	
Stage 2	1257	1255	-	326	431	-	-	-	-	-	-	-	
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	90	111	750	89	95	1065	1152	-	-	1592	-	-	
Stage 1	698	657	-	213	245	-	-	-	-	-	-	-	
Stage 2	210	243	-	687	583	-	-	-	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	49	51	750	34	44	1065	1152	-	-	1592	-	-	
Mov Cap-2 Maneuver	49	51	-	34	44	-	-	-	-	-	-	-	
Stage 1	325	652	-	99	114	-	-	-	-	-	-	-	
Stage 2	94	113	-	655	578	-	-	-	-	-	-	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	145.8	45.1	11.2	0.2
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	50	750	36	1065	1592	-	-
HCM Lane V/C Ratio	0.535	-	-	0.632	0.004	0.205	0.016	0.007	-	-
HCM Control Delay (s)	11.7	-	-	159.4	9.8	129.1	8.4	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	3.3	-	-	2.5	0	0.7	0	0	-	-

HCM 6th TWSC
4: 25th Avenue & Avenal Cutoff Road

07/18/2018

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔		
Traffic Vol, veh/h	62	503	0	0	153	1	0	108	0	2	0	8
Future Vol, veh/h	62	503	0	0	153	1	0	108	0	2	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	529	0	0	161	1	0	114	0	2	0	8

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	162	0	0	529	0	0	825	821	-	878	821	162
Stage 1	-	-	-	-	-	-	659	659	-	162	162	-
Stage 2	-	-	-	-	-	-	166	162	-	716	659	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1417	-	-	1038	-	-	292	309	0	268	309	883
Stage 1	-	-	-	-	-	-	453	461	0	840	764	-
Stage 2	-	-	-	-	-	-	836	764	0	421	461	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1417	-	-	1038	-	-	275	289	-	177	289	883
Mov Cap-2 Maneuver	-	-	-	-	-	-	275	289	-	177	289	-
Stage 1	-	-	-	-	-	-	424	431	-	785	764	-
Stage 2	-	-	-	-	-	-	828	764	-	290	431	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	25.3	12.5
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	289	1417	-	-	1038	-	-	491
HCM Lane V/C Ratio	0.393	0.046	-	-	-	-	-	0.021
HCM Control Delay (s)	25.3	7.7	0	-	0	-	-	12.5
HCM Lane LOS	D	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0	-	-	0.1

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/18/2018

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	44	1	640	46	5	171
Future Vol, veh/h	44	1	640	46	5	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	1	674	48	5	180
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	888	698	0	0	722	0
Stage 1	698	-	-	-	-	-
Stage 2	190	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	314	440	-	-	880	-
Stage 1	494	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	312	440	-	-	880	-
Mov Cap-2 Maneuver	312	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.5	0	0.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	314	880	-	
HCM Lane V/C Ratio	-	-	0.151	0.006	-	
HCM Control Delay (s)	-	-	18.5	9.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.5	0	-	

HCM 6th TWSC
1: 25th Avenue & SR-198

07/18/2018

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	98	40	35	210	0	4
Future Vol, veh/h	98	40	35	210	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	42	37	221	0	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	145	0
Stage 1	-	-	-	124
Stage 2	-	-	-	295
Critical Hdwy	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	5.83
Critical Hdwy Stg 2	-	-	-	5.43
Follow-up Hdwy	-	-	2.219	-
Pot Cap-1 Maneuver	-	-	1436	-
Stage 1	-	-	-	889
Stage 2	-	-	-	755
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1436	-
Mov Cap-2 Maneuver	-	-	-	561
Stage 1	-	-	-	866
Stage 2	-	-	-	755

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	975	-	-	1436	-
HCM Lane V/C Ratio	-	0.004	-	-	0.026	-
HCM Control Delay (s)	0	8.7	-	-	7.6	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0.1	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/18/2018

Intersection												
Int Delay, s/veh	11.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕					↕	↕
Traffic Vol, veh/h	0	0	0	440	0	325	16	9	0	0	154	12
Future Vol, veh/h	0	0	0	440	0	325	16	9	0	0	154	12
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	463	0	342	17	9	0	0	162	13

Major/Minor	Minor1	Minor2	Major1	Major2
Conflicting Flow All	212	218	9	175
Stage 1	43	43	-	-
Stage 2	169	175	-	-
Critical Hdwy	6.42	6.52	6.22	4.12
Critical Hdwy Stg 1	5.42	5.52	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218
Pot Cap-1 Maneuver	776	680	1073	1401
Stage 1	979	859	-	-
Stage 2	861	754	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	767	0	1073	1401
Mov Cap-2 Maneuver	767	0	-	-
Stage 1	967	0	-	-
Stage 2	861	0	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1401	-	767	1073	-	-
HCM Lane V/C Ratio	0.012	-	0.604	0.319	-	-
HCM Control Delay (s)	7.6	0	16.6	9.9	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	4.1	1.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/18/2018

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	2	3	1	3	0	22	163	1	3	10	442	141
Future Vol, veh/h	2	3	1	3	0	22	163	1	3	10	442	141
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	3	1	3	0	23	172	1	3	11	465	148

Major/Minor	Minor2	Minor1	Major1	Major2												
Conflicting Flow All	919	909	539	910	982	3	613	0	0	4	0	0				
Stage 1	561	561	-	347	347	-	-	-	-	-	-	-				
Stage 2	358	348	-	563	635	-	-	-	-	-	-	-				
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	252	275	542	255	249	1081	966	-	-	1618	-	-				
Stage 1	512	510	-	669	635	-	-	-	-	-	-	-				
Stage 2	660	634	-	511	472	-	-	-	-	-	-	-				
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-				
Mov Cap-1 Maneuver	212	224	542	216	203	1081	966	-	-	1618	-	-				
Mov Cap-2 Maneuver	212	224	-	216	203	-	-	-	-	-	-	-				
Stage 1	421	506	-	550	522	-	-	-	-	-	-	-				
Stage 2	531	521	-	503	469	-	-	-	-	-	-	-				

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.1	10	9.3	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	966	-	-	219	542	216	1081	1618	-	-
HCM Lane V/C Ratio	0.178	-	-	0.024	0.002	0.015	0.021	0.007	-	-
HCM Control Delay (s)	9.5	-	-	21.8	11.7	21.9	8.4	7.2	-	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	0	0	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

07/18/2018

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	9	165	0	0	382	2	0	0	0	3	64	39
Future Vol, veh/h	9	165	0	0	382	2	0	0	0	3	64	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	174	0	0	402	2	0	0	0	3	67	41

Major/Minor	Major1	Major2	Minor1	Minor2												
Conflicting Flow All	404	0	0	174	0	0	649	596	-	595	595	403				
Stage 1	-	-	-	-	-	-	192	192	-	403	403	-				
Stage 2	-	-	-	-	-	-	457	404	-	192	192	-				
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22				
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318				
Pot Cap-1 Maneuver	1155	-	-	1403	-	-	383	417	0	416	417	647				
Stage 1	-	-	-	-	-	-	810	742	0	624	600	-				
Stage 2	-	-	-	-	-	-	583	599	0	810	742	-				
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-				
Mov Cap-1 Maneuver	1155	-	-	1403	-	-	312	413	-	413	413	647				
Mov Cap-2 Maneuver	-	-	-	-	-	-	312	413	-	413	413	-				
Stage 1	-	-	-	-	-	-	803	735	-	618	600	-				
Stage 2	-	-	-	-	-	-	485	599	-	803	735	-				

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	0	14.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1155	-	-	1403	-	-	476
HCM Lane V/C Ratio	-	0.008	-	-	-	-	-	0.234
HCM Control Delay (s)	0	8.1	0	-	0	-	-	14.9
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.9

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/18/2018

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	28	0	173	16	105	394
Future Vol, veh/h	28	0	173	16	105	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	0	182	17	111	415
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	828	191	0	0	199	0
Stage 1	191	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3,518	3,318	-	-	2,218	-
Pot Cap-1 Maneuver	341	851	-	-	1373	-
Stage 1	841	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	305	851	-	-	1373	-
Mov Cap-2 Maneuver	305	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.1	0	1.7			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	305	1373		
HCM Lane V/C Ratio	-	-	0.097	0.08		
HCM Control Delay (s)	-	-	18.1	7.9	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0.3		

HCM 6th TWSC
1: 25th Avenue & SR-198

07/18/2018

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	158	60	43
Future Vol, veh/h	312	2	2	158	60	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	166	63	45

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	330
Stage 1	-	-	329
Stage 2	-	-	170
Critical Hdwy	-	4.13	6.63
Critical Hdwy Stg 1	-	-	5.83
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	-	2.219	3.319
Pot Cap-1 Maneuver	-	1228	516
Stage 1	-	-	702
Stage 2	-	-	859
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1228	515
Mov Cap-2 Maneuver	-	-	515
Stage 1	-	-	701
Stage 2	-	-	859

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	515	851	-	-	1228	-
HCM Lane V/C Ratio	0.123	0.053	-	-	0.002	-
HCM Control Delay (s)	13	9.5	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/18/2018

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	0	0	0	191	1	117	19	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	19	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	201	1	123	20	16	0	0	215	4

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	273	275	16
Stage 1	56	56	-
Stage 2	217	219	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	5.42	5.52	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	716	632	1063
Stage 1	967	848	-
Stage 2	819	722	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	705	0	1063
Mov Cap-2 Maneuver	705	0	-
Stage 1	952	0	-
Stage 2	819	0	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	4.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1350	-	705	1063	-	-
HCM Lane V/C Ratio	0.015	-	0.287	0.116	-	-
HCM Control Delay (s)	7.7	0	12.1	8.8	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.2	0.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/18/2018

Intersection												
Int Delay, s/veh	13.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	8	22	3	5	2	16	619	8	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	619	8	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	23	3	5	2	17	652	8	16	12	171	236

Major/Minor	Minor2	Minor1	Major1	Major2									
Conflicting Flow All	1643	1641	289	1646	1751	16	407	0	0	24	0	0	
Stage 1	313	313	-	1320	1320	-	-	-	-	-	-	-	
Stage 2	1330	1328	-	326	431	-	-	-	-	-	-	-	
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	80	100	750	79	86	1063	1152	-	-	1591	-	-	
Stage 1	698	657	-	193	226	-	-	-	-	-	-	-	
Stage 2	191	224	-	687	583	-	-	-	-	-	-	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	42	43	750	26	37	1063	1152	-	-	1591	-	-	
Mov Cap-2 Maneuver	42	43	-	26	37	-	-	-	-	-	-	-	
Stage 1	303	652	-	84	98	-	-	-	-	-	-	-	
Stage 2	80	97	-	655	578	-	-	-	-	-	-	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	187.9	59	11.7	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	43	750	28	1063	1591	-	-
HCM Lane V/C Ratio	0.566	-	-	0.734	0.004	0.263	0.016	0.007	-	-
HCM Control Delay (s)	12.1	-	-	205.7	9.8	174.5	8.4	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	3.7	-	-	2.8	0	0.8	0	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

07/18/2018

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Vol, veh/h	63	514	0	0	155	3	0	108	0	2	0	8
Future Vol, veh/h	63	514	0	0	155	3	0	108	0	2	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	541	0	0	163	3	0	114	0	2	0	8

Major/Minor	Major1	Major2	Minor1	Minor2									
Conflicting Flow All	166	0	0	541	0	0	842	839	-	895	838	165	
Stage 1	-	-	-	-	-	-	673	673	-	165	165	-	
Stage 2	-	-	-	-	-	-	169	166	-	730	673	-	
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22	
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318	
Pot Cap-1 Maneuver	1412	-	-	1028	-	-	284	302	0	261	302	879	
Stage 1	-	-	-	-	-	-	445	454	0	837	762	-	
Stage 2	-	-	-	-	-	-	833	761	0	414	454	-	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1412	-	-	1028	-	-	267	282	-	170	282	879	
Mov Cap-2 Maneuver	-	-	-	-	-	-	267	282	-	170	282	-	
Stage 1	-	-	-	-	-	-	415	424	-	781	762	-	
Stage 2	-	-	-	-	-	-	825	761	-	283	424	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	26.1	12.7
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	282	1412	-	-	1028	-	-	479
HCM Lane V/C Ratio	0.403	0.047	-	-	-	-	-	0.022
HCM Control Delay (s)	26.1	7.7	0	-	0	-	-	12.7
HCM Lane LOS	D	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0	-	-	0.1

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/18/2018

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	T	T	T	T	T
Traffic Vol, veh/h	45	13	640	46	5	173
Future Vol, veh/h	45	13	640	46	5	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	14	674	48	5	182
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	890	698	0	0	722	0
Stage 1	698	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	313	440	-	-	880	-
Stage 1	494	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	311	440	-	-	880	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.2	0	0.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	333	880		
HCM Lane V/C Ratio	-	-	0.183	0.006		
HCM Control Delay (s)	-	-	18.2	9.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.7	0		

HCM 6th TWSC
1: 25th Avenue & SR-198

07/18/2018

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	98	40	35	210	0	4
Future Vol, veh/h	98	40	35	210	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	103	42	37	221	0	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	145	0
Stage 1	-	-	-	124
Stage 2	-	-	-	295
Critical Hdwy	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	5.83
Critical Hdwy Stg 2	-	-	-	5.43
Follow-up Hdwy	-	-	2.219	-
Pot Cap-1 Maneuver	-	-	1436	-
Stage 1	-	-	-	889
Stage 2	-	-	-	755
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1436	-
Mov Cap-2 Maneuver	-	-	-	561
Stage 1	-	-	-	866
Stage 2	-	-	-	755

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	975	-	-	1436	-
HCM Lane V/C Ratio	-	0.004	-	-	0.026	-
HCM Control Delay (s)	0	8.7	-	-	7.6	-
HCM Lane LOS	A	A	-	-	A	-
HCM 95th %tile Q(veh)	-	0	-	-	0.1	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/18/2018

Intersection												
Int Delay, s/veh	11.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕					↕	↕
Traffic Vol, veh/h	0	0	0	443	0	325	16	9	0	0	154	12
Future Vol, veh/h	0	0	0	443	0	325	16	9	0	0	154	12
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	466	0	342	17	9	0	0	162	13

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	212	218	9
Stage 1	43	43	-
Stage 2	169	175	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	5.42	5.52	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	776	680	1073
Stage 1	979	859	-
Stage 2	861	754	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	767	0	1073
Mov Cap-2 Maneuver	767	0	-
Stage 1	967	0	-
Stage 2	861	0	-

Approach	WB	NB	SB
HCM Control Delay, s	13.8	4.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1401	-	767	1073	-	-
HCM Lane V/C Ratio	0.012	-	0.608	0.319	-	-
HCM Control Delay (s)	7.6	0	16.7	9.9	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0	-	4.2	1.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/18/2018

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	2	3	1	3	0	22	163	1	3	10	445	141
Future Vol, veh/h	2	3	1	3	0	22	163	1	3	10	445	141
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	3	1	3	0	23	172	1	3	11	468	148

Major/Minor	Minor2	Minor1	Major1	Major2										
Conflicting Flow All	922	912	542	913	985	3	616	0	0	4	0	0		
Stage 1	564	564	-	347	347	-	-	-	-	-	-	-	-	-
Stage 2	358	348	-	566	638	-	-	-	-	-	-	-	-	-
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	251	274	540	254	248	1081	964	-	-	1618	-	-	-	-
Stage 1	510	508	-	669	635	-	-	-	-	-	-	-	-	-
Stage 2	660	634	-	509	471	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	211	224	540	215	202	1081	964	-	-	1618	-	-	-	-
Mov Cap-2 Maneuver	211	224	-	215	202	-	-	-	-	-	-	-	-	-
Stage 1	419	504	-	550	522	-	-	-	-	-	-	-	-	-
Stage 2	531	521	-	501	468	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.1	10	9.3	0.1
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	964	-	-	219	540	215	1081	1618	-	-
HCM Lane V/C Ratio	0.178	-	-	0.024	0.002	0.015	0.021	0.007	-	-
HCM Control Delay (s)	9.5	-	-	21.8	11.7	22	8.4	7.2	-	-
HCM Lane LOS	A	-	-	C	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	0	0	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

07/18/2018

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕					↕	↕	
Traffic Vol, veh/h	9	165	0	0	383	2	0	0	0	3	64	39
Future Vol, veh/h	9	165	0	0	383	2	0	0	0	3	64	39
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	174	0	0	403	2	0	0	0	3	67	41

Major/Minor	Major1	Major2	Minor1	Minor2										
Conflicting Flow All	405	0	0	174	0	0	650	597	-	596	596	404		
Stage 1	-	-	-	-	-	-	192	192	-	404	404	-	-	-
Stage 2	-	-	-	-	-	-	458	405	-	192	192	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22	-	-
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318	-	-
Pot Cap-1 Maneuver	1154	-	-	1403	-	-	382	416	0	415	417	647	-	-
Stage 1	-	-	-	-	-	-	810	742	0	623	599	-	-	-
Stage 2	-	-	-	-	-	-	583	598	0	810	742	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1154	-	-	1403	-	-	311	412	-	412	413	647	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	311	412	-	412	413	-	-	-
Stage 1	-	-	-	-	-	-	803	735	-	617	599	-	-	-
Stage 2	-	-	-	-	-	-	485	598	-	803	735	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0	0	14.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1154	-	-	1403	-	-	476
HCM Lane V/C Ratio	-	0.008	-	-	-	-	-	0.234
HCM Control Delay (s)	0	8.1	0	-	0	-	-	14.9
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.9

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/18/2018

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Vol, veh/h	28	0	173	16	106	394
Future Vol, veh/h	28	0	173	16	106	394
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	0	182	17	112	415
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	830	191	0	0	199	0
Stage 1	191	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	340	851	-	-	1373	-
Stage 1	841	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	304	851	-	-	1373	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	752	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.1	0	1.7			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	304	1373		
HCM Lane V/C Ratio	-	-	0.097	0.081		
HCM Control Delay (s)	-	-	18.1	7.9	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.3	0.3		

HCM 6th TWSC
1: 25th Avenue & SR-198

07/18/2018

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	160	66	43
Future Vol, veh/h	312	2	2	160	66	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	168	69	45

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	330	0 501 165
Stage 1	-	-	-	329 -
Stage 2	-	-	-	172 -
Critical Hdwy	-	-	4.13	- 6.63 6.93
Critical Hdwy Stg 1	-	-	-	5.83 -
Critical Hdwy Stg 2	-	-	-	5.43 -
Follow-up Hdwy	-	-	2.219	- 3.519 3.319
Pot Cap-1 Maneuver	-	-	1228	- 514 851
Stage 1	-	-	-	702 -
Stage 2	-	-	-	857 -
Platoon blocked, %	-	-	-	- -
Mov Cap-1 Maneuver	-	-	1228	- 513 851
Mov Cap-2 Maneuver	-	-	-	513 -
Stage 1	-	-	-	701 -
Stage 2	-	-	-	857 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	513	851	-	-	1228	-
HCM Lane V/C Ratio	0.135	0.053	-	-	0.002	-
HCM Control Delay (s)	13.1	9.5	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/18/2018

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	0	0	0	191	1	117	21	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	21	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	201	1	123	22	16	0	0	215	4

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	277	279	16	219 0 - - - 0
Stage 1	60	60	-	- - - - -
Stage 2	217	219	-	- - - - -
Critical Hdwy	6.42	6.52	6.22	4.12 - - - - -
Critical Hdwy Stg 1	5.42	5.52	-	- - - - -
Critical Hdwy Stg 2	5.42	5.52	-	- - - - -
Follow-up Hdwy	3.518	4.018	3.318	2.218 - - - - -
Pot Cap-1 Maneuver	713	629	1063	1350 - 0 0 - -
Stage 1	963	845	-	- - 0 0 - -
Stage 2	819	722	-	- - 0 0 - -
Platoon blocked, %	-	-	-	- - - - -
Mov Cap-1 Maneuver	702	0	1063	1350 - - - - -
Mov Cap-2 Maneuver	702	0	-	- - - - -
Stage 1	948	0	-	- - - - -
Stage 2	819	0	-	- - - - -

Approach	WB	NB	SB
HCM Control Delay, s	10.9	4.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1350	-	702	1063	-	-
HCM Lane V/C Ratio	0.016	-	0.288	0.116	-	-
HCM Control Delay (s)	7.7	0	12.2	8.8	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	0.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/18/2018

Intersection												
Int Delay, s/veh	16.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	8	22	3	5	2	16	651	10	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	651	10	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	-	-	0	-	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	23	3	5	2	17	685	11	16	12	171	236

Major/Minor	Minor2	Minor1	Major1	Major2										
Conflicting Flow All	1712	1710	289	1715	1820	19	407	0	0	27	0	0		
Stage 1	313	313	-	1389	1389	-	-	-	-	-	-	-		
Stage 2	1399	1397	-	326	431	-	-	-	-	-	-	-		
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	71	91	750	71	78	1059	1152	-	-	1587	-	-		
Stage 1	698	657	-	176	210	-	-	-	-	-	-	-		
Stage 2	174	208	-	687	583	-	-	-	-	-	-	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	35	37	750	20	31	1059	1152	-	-	1587	-	-		
Mov Cap-2 Maneuver	35	37	-	20	31	-	-	-	-	-	-	-		
Stage 1	283	652	-	71	85	-	-	-	-	-	-	-		
Stage 2	68	84	-	655	578	-	-	-	-	-	-	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	253.6	77.7	12.1	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	36	750	22	1059	1587	-	-
HCM Lane V/C Ratio	0.595	-	-	0.877	0.004	0.335	0.016	0.007	-	-
HCM Control Delay (s)	12.6	-	-	278	9.8	235.9	8.5	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	4.1	-	-	3.2	0	1	0	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

07/18/2018

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕					↕	↕	
Traffic Vol, veh/h	65	524	0	0	159	7	0	108	0	2	0	8
Future Vol, veh/h	65	524	0	0	159	7	0	108	0	2	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	68	552	0	0	167	7	0	114	0	2	0	8

Major/Minor	Major1	Major2	Minor1	Minor2										
Conflicting Flow All	174	0	0	552	0	0	863	862	-	916	859	171		
Stage 1	-	-	-	-	-	-	688	688	-	171	171	-		
Stage 2	-	-	-	-	-	-	175	174	-	745	688	-		
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22		
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318		
Pot Cap-1 Maneuver	1403	-	-	1018	-	-	275	293	0	253	294	873		
Stage 1	-	-	-	-	-	-	436	447	0	831	757	-		
Stage 2	-	-	-	-	-	-	827	755	0	406	447	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	1403	-	-	1018	-	-	258	272	-	162	273	873		
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	272	-	162	273	-		
Stage 1	-	-	-	-	-	-	405	416	-	773	757	-		
Stage 2	-	-	-	-	-	-	819	755	-	274	416	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	27.4	12.9
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	272	1403	-	-	1018	-	-	465
HCM Lane V/C Ratio	0.418	0.049	-	-	-	-	-	0.023
HCM Control Delay (s)	27.4	7.7	0	-	0	-	-	12.9
HCM Lane LOS	D	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	2	0.2	-	-	0	-	-	0.1

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/18/2018

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	47	25	640	46	5	177
Future Vol, veh/h	47	25	640	46	5	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	26	674	48	5	186
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	894	698	0	0	722	0
Stage 1	698	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3,518	3,318	-	-	2,218	-
Pot Cap-1 Maneuver	312	440	-	-	880	-
Stage 1	494	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	310	440	-	-	880	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.3	0	0.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	345	880		
HCM Lane V/C Ratio	-	-	0.22	0.006		
HCM Control Delay (s)	-	-	18.3	9.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.8	0		

HCM 6th TWSC
1: 25th Avenue & SR-198

07/20/2018

Intersection							
Int Delay, s/veh	3.1						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↕↔		↕	↕	↕	↕	
Traffic Vol, veh/h	312	2	2	164	21	175	
Future Vol, veh/h	312	2	2	164	21	175	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	575	-	0	25	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	95	95	95	95	95	95	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	328	2	2	173	22	184	

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	330	0 506 165
Stage 1	-	-	-	329 -
Stage 2	-	-	-	177 -
Critical Hdwy	-	-	4.13	- 6.63 6.93
Critical Hdwy Stg 1	-	-	-	5.83 -
Critical Hdwy Stg 2	-	-	-	5.43 -
Follow-up Hdwy	-	-	2.219	- 3.519 3.319
Pot Cap-1 Maneuver	-	-	1228	- 511 851
Stage 1	-	-	-	702 -
Stage 2	-	-	-	853 -
Platoon blocked, %	-	-	-	- -
Mov Cap-1 Maneuver	-	-	1228	- 510 851
Mov Cap-2 Maneuver	-	-	-	510 -
Stage 1	-	-	-	701 -
Stage 2	-	-	-	853 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	10.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	510	851	-	-	1228	-
HCM Lane V/C Ratio	0.043	0.216	-	-	0.002	-
HCM Control Delay (s)	12.4	10.4	-	-	7.9	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.8	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/20/2018

Intersection													
Int Delay, s/veh	6.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations					↕	↕							↕
Traffic Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4	
Future Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4	
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	-	-	-	-	-	0	-	-	-	-	-	-	
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	0	0	217	1	133	20	17	0	0	232	5	

Major/Minor	Minor1	Major1	Major2	
Conflicting Flow All	292	294	17 237	0 - - - 0
Stage 1	57	57	- - -	- - - -
Stage 2	235	237	- - -	- - - -
Critical Hdwy	6.42	6.52	6.22 4.12	- - - -
Critical Hdwy Stg 1	5.42	5.52	- - -	- - - -
Critical Hdwy Stg 2	5.42	5.52	- - -	- - - -
Follow-up Hdwy	3.518	4.018	3.318 2.218	- - - -
Pot Cap-1 Maneuver	699	617	1062 1330	- 0 0 - -
Stage 1	966	847	- - -	0 0 - -
Stage 2	804	709	- - -	0 0 - -
Platoon blocked, %	-	-	-	- -
Mov Cap-1 Maneuver	689	0	1062 1330	- - - -
Mov Cap-2 Maneuver	689	0	- - -	- - - -
Stage 1	952	0	- - -	- - - -
Stage 2	804	0	- - -	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	11.2	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1330	-	689	1062	-	-
HCM Lane V/C Ratio	0.015	-	0.317	0.125	-	-
HCM Control Delay (s)	7.7	0	12.6	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.4	0.4	-	-

HCM 6th TWSC
3: Avenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/20/2018

Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	8	22	3	5	2	16	477	7	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	477	7	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	24	3	5	2	18	524	8	16	12	178	246

Major/Minor	Minor2	Minor1	Major1	Major2										
Conflicting Flow All	1399	1397	301	1403	1512	16	424	0	0	24	0	0		
Stage 1	325	325	-	1064	1064	-	-	-	-	-	-	-	-	-
Stage 2	1074	1072	-	339	448	-	-	-	-	-	-	-	-	-
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	118	141	739	117	120	1063	1135	-	-	1591	-	-	-	-
Stage 1	687	649	-	270	300	-	-	-	-	-	-	-	-	-
Stage 2	266	297	-	676	573	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	72	75	739	57	64	1063	1135	-	-	1591	-	-	-	-
Mov Cap-2 Maneuver	72	75	-	57	64	-	-	-	-	-	-	-	-	-
Stage 1	370	644	-	145	161	-	-	-	-	-	-	-	-	-
Stage 2	139	160	-	643	568	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	80.9	28.7	10.4	0.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1135	-	-	74	739	59	1063	1591	-	-
HCM Lane V/C Ratio	0.462	-	-	0.446	0.004	0.13	0.017	0.008	-	-
HCM Control Delay (s)	10.9	-	-	88	9.9	75	8.4	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	2.5	-	-	1.8	0	0.4	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Avenal Cutoff Road

07/20/2018

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕					↕	↕	
Traffic Vol, veh/h	68	503	0	0	167	127	0	0	0	2	0	4
Future Vol, veh/h	68	503	0	0	167	127	0	0	0	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	599	0	0	199	151	0	0	0	2	0	5

Major/Minor	Major1	Major2	Minor1	Minor2										
Conflicting Flow All	350	0	0	599	0	0	1038	1111	-	1036	1036	275		
Stage 1	-	-	-	-	-	-	761	761	-	275	275	-	-	-
Stage 2	-	-	-	-	-	-	277	350	-	761	761	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22		
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318		
Pot Cap-1 Maneuver	1209	-	-	978	-	-	209	209	0	210	232	764		
Stage 1	-	-	-	-	-	-	398	414	0	731	683	-	-	-
Stage 2	-	-	-	-	-	-	729	633	0	398	414	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1209	-	-	978	-	-	192	188	-	194	209	764		
Mov Cap-2 Maneuver	-	-	-	-	-	-	192	188	-	194	209	-	-	-
Stage 1	-	-	-	-	-	-	358	373	-	658	683	-	-	-
Stage 2	-	-	-	-	-	-	724	633	-	358	373	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	0	14.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1209	-	-	978	-	-	386
HCM Lane V/C Ratio	-	0.067	-	-	-	-	-	0.019
HCM Control Delay (s)	0	8.2	0	-	0	-	-	14.5
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	0.1

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/20/2018

Intersection						
Int Delay, s/veh	2.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	51	60	480	46	1	185
Future Vol, veh/h	51	60	480	46	1	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	69	552	53	1	213
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	794	579	0	0	605	0
Stage 1	579	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	357	515	-	-	973	-
Stage 1	560	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	357	515	-	-	973	-
Mov Cap-2 Maneuver	357	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	821	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16.9	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	428	973		
HCM Lane V/C Ratio	-	-	0.298	0.001		
HCM Control Delay (s)	-	-	16.9	8.7	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	1.2	0		

HCM 6th TWSC
1: 25th Avenue & SR-198

07/20/2018

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	158	3	46
Future Vol, veh/h	312	2	2	158	3	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	166	3	48

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	330
Stage 1	-	-	329
Stage 2	-	-	170
Critical Hdwy	-	4.13	6.63
Critical Hdwy Stg 1	-	-	5.83
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	-	2.219	3.319
Pot Cap-1 Maneuver	-	1228	516
Stage 1	-	-	702
Stage 2	-	-	859
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1228	515
Mov Cap-2 Maneuver	-	-	515
Stage 1	-	-	701
Stage 2	-	-	859

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	515	851	-	-	1228	-
HCM Lane V/C Ratio	0.006	0.057	-	-	0.002	-
HCM Control Delay (s)	12	9.5	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0	0.2	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/20/2018

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕	↕					↕	↕
Traffic Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	217	1	133	20	17	0	0	232	5

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	292	294	17
Stage 1	57	57	-
Stage 2	235	237	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	5.42	5.52	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	699	617	1062
Stage 1	966	847	-
Stage 2	804	709	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	689	0	1062
Mov Cap-2 Maneuver	689	0	-
Stage 1	952	0	-
Stage 2	804	0	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1330	-	689	1062	-	-
HCM Lane V/C Ratio	0.015	-	0.317	0.125	-	-
HCM Control Delay (s)	7.7	0	12.6	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.4	0.4	-	-

HCM 6th TWSC
3: Arenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/20/2018

Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕	↕	↕		↕	↕	
Traffic Vol, veh/h	8	22	3	5	2	16	477	7	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	477	7	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	24	3	5	2	18	524	8	16	12	178	246

Major/Minor	Minor2	Minor1	Major1	Major2										
Conflicting Flow All	1399	1397	301	1403	1512	16	424	0	0	24	0	0		
Stage 1	325	325	-	1064	1064	-	-	-	-	-	-	-	-	-
Stage 2	1074	1072	-	339	448	-	-	-	-	-	-	-	-	-
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	118	141	739	117	120	1063	1135	-	-	1591	-	-	-	-
Stage 1	687	649	-	270	300	-	-	-	-	-	-	-	-	-
Stage 2	266	297	-	676	573	-	-	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	72	75	739	57	64	1063	1135	-	-	1591	-	-	-	-
Mov Cap-2 Maneuver	72	75	-	57	64	-	-	-	-	-	-	-	-	-
Stage 1	370	644	-	145	161	-	-	-	-	-	-	-	-	-
Stage 2	139	160	-	643	568	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	80.9	28.7	10.4	0.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1135	-	-	74	739	59	1063	1591	-	-
HCM Lane V/C Ratio	0.462	-	-	0.446	0.004	0.13	0.017	0.008	-	-
HCM Control Delay (s)	10.9	-	-	88	9.9	75	8.4	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	2.5	-	-	1.8	0	0.4	0.1	0	-	-

HCM 6th TWSC
4: 25th Avenue & Arenal Cutoff Road

07/20/2018

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕					↕	↕	
Traffic Vol, veh/h	21	503	0	0	155	27	0	0	0	2	0	4
Future Vol, veh/h	21	503	0	0	155	27	0	0	0	2	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	599	0	0	185	32	0	0	0	2	0	5

Major/Minor	Major1	Major2	Minor1	Minor2										
Conflicting Flow All	217	0	0	599	0	0	853	866	-	850	850	201		
Stage 1	-	-	-	-	-	-	649	649	-	201	201	-	-	-
Stage 2	-	-	-	-	-	-	204	217	-	649	649	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22	-	-
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318	-	-
Pot Cap-1 Maneuver	1353	-	-	978	-	-	279	291	0	280	298	840	-	-
Stage 1	-	-	-	-	-	-	458	466	0	801	735	-	-	-
Stage 2	-	-	-	-	-	-	798	723	0	458	466	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1353	-	-	978	-	-	271	283	-	274	290	840	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	271	283	-	274	290	-	-	-
Stage 1	-	-	-	-	-	-	445	453	-	779	735	-	-	-
Stage 2	-	-	-	-	-	-	793	723	-	445	453	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	0	12.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1353	-	-	978	-	-	497
HCM Lane V/C Ratio	-	0.018	-	-	-	-	-	0.014
HCM Control Delay (s)	0	7.7	0	-	0	-	-	12.3
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/20/2018

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	45	13	480	46	1	173
Future Vol, veh/h	45	13	480	46	1	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	15	552	53	1	199
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	780	579	0	0	605	0
Stage 1	579	-	-	-	-	-
Stage 2	201	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3,518	3,318	-	-	2,218	-
Pot Cap-1 Maneuver	364	515	-	-	973	-
Stage 1	560	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	364	515	-	-	973	-
Mov Cap-2 Maneuver	364	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	833	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16.1	0	0.1			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	390	973		
HCM Lane V/C Ratio	-	-	0.171	0.001		
HCM Control Delay (s)	-	-	16.1	8.7	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.6	0		

HCM 6th TWSC
1: 25th Avenue & SR-198

07/20/2018

Intersection						
Int Delay, s/veh	2.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	158	60	78
Future Vol, veh/h	312	2	2	158	60	78
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	166	63	82

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	330
Stage 1	-	-	329
Stage 2	-	-	170
Critical Hdwy	-	4.13	6.63
Critical Hdwy Stg 1	-	-	5.83
Critical Hdwy Stg 2	-	-	5.43
Follow-up Hdwy	-	2.219	3.319
Pot Cap-1 Maneuver	-	1228	516
Stage 1	-	-	702
Stage 2	-	-	859
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1228	515
Mov Cap-2 Maneuver	-	-	515
Stage 1	-	-	701
Stage 2	-	-	859

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	515	851	-	-	1228	-
HCM Lane V/C Ratio	0.123	0.096	-	-	0.002	-
HCM Control Delay (s)	13	9.7	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/20/2018

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	0	0	0	191	1	117	18	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	201	1	123	19	16	0	0	215	4

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	271	273	16
Stage 1	54	54	-
Stage 2	217	219	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	5.42	5.52	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	718	634	1063
Stage 1	969	850	-
Stage 2	819	722	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	708	0	1063
Mov Cap-2 Maneuver	708	0	-
Stage 1	955	0	-
Stage 2	819	0	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1350	-	708	1063	-	-
HCM Lane V/C Ratio	0.014	-	0.285	0.116	-	-
HCM Control Delay (s)	7.7	0	12.1	8.8	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.2	0.4	-	-

HCM 6th TWSC
3: Avenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/20/2018

Intersection												
Int Delay, s/veh	12											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↕	↕	↕	↕	↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	8	22	3	5	2	16	585	7	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	585	7	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	23	3	5	2	17	616	7	16	12	171	236

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	1570	1568	289	1573
Stage 1	313	313	-	1247
Stage 2	1257	1255	-	326
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	90	111	750	89
Stage 1	698	657	-	213
Stage 2	210	243	-	687
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	49	51	750	34
Mov Cap-2 Maneuver	49	51	-	34
Stage 1	325	652	-	99
Stage 2	94	113	-	655

Approach	EB	WB	NB	SB
HCM Control Delay, s	145.8	45.1	11.2	0.2
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	50	750	36	1065	1592	-	-
HCM Lane V/C Ratio	0.535	-	-	0.632	0.004	0.205	0.016	0.007	-	-
HCM Control Delay (s)	11.7	-	-	159.4	9.8	129.1	8.4	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	3.3	-	-	2.5	0	0.7	0	0	-	-

HCM 6th TWSC
4: 25th Avenue & Avenal Cutoff Road

07/20/2018

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↕			↕			↕			↕
Traffic Vol, veh/h	74	503	0	0	155	27	0	108	0	2	0	8
Future Vol, veh/h	74	503	0	0	155	27	0	108	0	2	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	78	529	0	0	163	28	0	114	0	2	0	8

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	191	0	0	529
Stage 1	-	-	-	685
Stage 2	-	-	-	181
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	6.12
Critical Hdwy Stg 2	-	-	-	6.12
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1383	-	-	1038
Stage 1	-	-	-	438
Stage 2	-	-	-	821
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1383	-	-	1038
Mov Cap-2 Maneuver	-	-	-	255
Stage 1	-	-	-	403
Stage 2	-	-	-	813

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	28.6	13.1
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	264	1383	-	-	1038	-	-	457
HCM Lane V/C Ratio	0.431	0.056	-	-	-	-	-	0.023
HCM Control Delay (s)	28.6	7.8	0	-	0	-	-	13.1
HCM Lane LOS	D	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	2	0.2	-	-	0	-	-	0.1

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/20/2018

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	T	T	T	T	T
Traffic Vol, veh/h	45	13	640	46	5	173
Future Vol, veh/h	45	13	640	46	5	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	14	674	48	5	182
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	890	698	0	0	722	0
Stage 1	698	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	313	440	-	-	880	-
Stage 1	494	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	311	440	-	-	880	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.2	0	0.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	333	880		
HCM Lane V/C Ratio	-	-	0.183	0.006		
HCM Control Delay (s)	-	-	18.2	9.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.7	0		

HCM 6th TWSC
1: 25th Avenue & SR-198

07/20/2018

Intersection						
Int Delay, s/veh	3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↕	↕	↕	↕
Traffic Vol, veh/h	312	2	2	160	66	110
Future Vol, veh/h	312	2	2	160	66	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	575	-	0	25
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	328	2	2	168	69	116

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	330	0
Stage 1	-	-	-	329
Stage 2	-	-	-	172
Critical Hdwy	-	-	4.13	-
Critical Hdwy Stg 1	-	-	-	5.83
Critical Hdwy Stg 2	-	-	-	5.43
Follow-up Hdwy	-	-	2.219	-
Pot Cap-1 Maneuver	-	-	1228	-
Stage 1	-	-	-	702
Stage 2	-	-	-	857
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1228	-
Mov Cap-2 Maneuver	-	-	-	513
Stage 1	-	-	-	701
Stage 2	-	-	-	857

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	513	851	-	-	1228	-
HCM Lane V/C Ratio	0.135	0.136	-	-	0.002	-
HCM Control Delay (s)	13.1	9.9	-	-	7.9	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.5	-	-	0	-

HCM 6th TWSC
2: Arenal Cutoff Road & SR-198 WB Ramps

07/20/2018

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	0	0	0	191	1	117	18	15	0	0	204	4
Future Vol, veh/h	0	0	0	191	1	117	18	15	0	0	204	4
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	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	2	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	201	1	123	19	16	0	0	215	4

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	271	273	16
Stage 1	54	54	-
Stage 2	217	219	-
Critical Hdwy	6.42	6.52	6.22
Critical Hdwy Stg 1	5.42	5.52	-
Critical Hdwy Stg 2	5.42	5.52	-
Follow-up Hdwy	3.518	4.018	3.318
Pot Cap-1 Maneuver	718	634	1063
Stage 1	969	850	-
Stage 2	819	722	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	708	0	1063
Mov Cap-2 Maneuver	708	0	-
Stage 1	955	0	-
Stage 2	819	0	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	WBLn1	WBLn2	SBT	SBR
Capacity (veh/h)	1350	-	708	1063	-	-
HCM Lane V/C Ratio	0.014	-	0.285	0.116	-	-
HCM Control Delay (s)	7.7	0	12.1	8.8	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.2	0.4	-	-

HCM 6th TWSC
3: Avenal Cutoff Road & SR-198 EB Ramps/Jackson Ave

07/20/2018

Intersection												
Int Delay, s/veh	12											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔		↔	↔	
Traffic Vol, veh/h	8	22	3	5	2	16	585	7	15	11	162	224
Future Vol, veh/h	8	22	3	5	2	16	585	7	15	11	162	224
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	-	-	0	-	-	25	130	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	23	3	5	2	17	616	7	16	12	171	236

Major/Minor	Minor2	Minor1	Major1	Major2										
Conflicting Flow All	1570	1568	289	1573	1678	15	407	0	0	23	0	0		
Stage 1	313	313	-	1247	1247	-	-	-	-	-	-	-		
Stage 2	1257	1255	-	326	431	-	-	-	-	-	-	-		
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	90	111	750	89	95	1065	1152	-	-	1592	-	-		
Stage 1	698	657	-	213	245	-	-	-	-	-	-	-		
Stage 2	210	243	-	687	583	-	-	-	-	-	-	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	49	51	750	34	44	1065	1152	-	-	1592	-	-		
Mov Cap-2 Maneuver	49	51	-	34	44	-	-	-	-	-	-	-		
Stage 1	325	652	-	99	114	-	-	-	-	-	-	-		
Stage 2	94	113	-	655	578	-	-	-	-	-	-	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	145.8	45.1	11.2	0.2
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1152	-	-	50	750	36	1065	1592	-	-
HCM Lane V/C Ratio	0.535	-	-	0.632	0.004	0.205	0.016	0.007	-	-
HCM Control Delay (s)	11.7	-	-	159.4	9.8	129.1	8.4	7.3	-	-
HCM Lane LOS	B	-	-	F	A	F	A	A	-	-
HCM 95th %tile Q(veh)	3.3	-	-	2.5	0	0.7	0	0	-	-

HCM 6th TWSC
4: 25th Avenue & Avenal Cutoff Road

07/20/2018

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔		
Traffic Vol, veh/h	86	503	0	0	159	74	0	108	0	2	0	8
Future Vol, veh/h	86	503	0	0	159	74	0	108	0	2	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	529	0	0	167	78	0	114	0	2	0	8

Major/Minor	Major1	Major2	Minor1	Minor2										
Conflicting Flow All	245	0	0	529	0	0	921	956	-	974	917	206		
Stage 1	-	-	-	-	-	-	711	711	-	206	206	-		
Stage 2	-	-	-	-	-	-	210	245	-	768	711	-		
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	-	7.12	6.52	6.22		
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	2.218	-	-	2.218	-	-	3.518	4.018	-	3.518	4.018	3.318		
Pot Cap-1 Maneuver	1321	-	-	1038	-	-	251	258	0	231	272	835		
Stage 1	-	-	-	-	-	-	424	436	0	796	731	-		
Stage 2	-	-	-	-	-	-	792	703	0	394	436	-		
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-		
Mov Cap-1 Maneuver	1321	-	-	1038	-	-	230	233	-	133	245	835		
Mov Cap-2 Maneuver	-	-	-	-	-	-	230	233	-	133	245	-		
Stage 1	-	-	-	-	-	-	382	393	-	718	731	-		
Stage 2	-	-	-	-	-	-	784	703	-	253	393	-		

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0	34.3	14.1
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	233	1321	-	-	1038	-	-	406
HCM Lane V/C Ratio	0.488	0.069	-	-	-	-	-	0.026
HCM Control Delay (s)	34.3	7.9	0	-	0	-	-	14.1
HCM Lane LOS	D	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	2.5	0.2	-	-	0	-	-	0.1

HCM 6th TWSC
5: Avenal Cutoff Road & Laurel Avenue

07/20/2018

Intersection						
Int Delay, s/veh	1.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔			↔
Traffic Vol, veh/h	47	25	640	46	5	177
Future Vol, veh/h	47	25	640	46	5	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	26	674	48	5	186
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	894	698	0	0	722	0
Stage 1	698	-	-	-	-	-
Stage 2	196	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3,518	3,318	-	-	2,218	-
Pot Cap-1 Maneuver	312	440	-	-	880	-
Stage 1	494	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	310	440	-	-	880	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	837	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.3	0	0.3			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	345	880		
HCM Lane V/C Ratio	-	-	0.22	0.006		
HCM Control Delay (s)	-	-	18.3	9.1	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	0.8	0		

APPENDIX C

CUMULATIVE PROJECTS INFORMATION



Appendix C: Cumulative Projects Trip Generation

Project Name	Phase	% of RE Slate Trip Generation	ADT	PCE Trip Generation						
				AM Peak Hour			PM Peak Hour			
				In	Out	Total	In	Out	Total	
Proposed Project										
RE Slate (300 MW)	Construction	100%	1,706	116	0	116	0	199	199	
RE Slate (300 MW)	Operations and Maintenance	100%	142	39	0	39	0	43	43	
Cumulative Project¹										
1	American Kings (125 MW)	Operations and Maintenance	42%	59	16	0	16	0	18	18
2	Westside Solar Phase II (22 MW)	Operations and Maintenance	7%	10	3	0	3	0	3	3
3	2275 Hattesen (1.88 MW)	Operations and Maintenance	1%	1	0	0	0	0	0	0
4	Java Solar (15 MW)	Operations and Maintenance	5%	7	2	0	2	0	2	2
5	Mustang 2 (150 MW)	Operations and Maintenance	50%	71	20	0	20	0	22	22
6	Westlands Aquamarine (500 MW)	Construction	167%	2,849	194	0	194	0	332	332
7	Daylight Solar (300 MW)	Construction	100%	1,706	116	0	116	0	199	199

ADT = average daily traffic

MW = megawatts

PCE = passenger car equivalent

¹The list of cumulative projects was developed in coordination with Kings County staff and consists of approved and pending projects within a 10-mile radius.

A cumulative traffic analysis was conducted for RE Slate opening year (2021) conditions, which includes the 7 cumulative projects listed above.

Cumulative projects 1-5 are anticipated to be constructed prior to 2021. As such, the operations and maintenance phase for these 5 projects have been assumed in the cumulative traffic analysis.

Cumulative projects 6 and 7 are anticipated to be constructed in or after 2021. As such, the construction phase for these 2 projects have been assumed in the cumulative traffic analysis.

Because the environmental documentation for the 7 cumulative projects does not include detailed ADT and peak-hour trip generation, distribution, and assignment information, Kings County staff approved an alternative methodology to estimate the cumulative project trip generation. Based on the size (MW) of each cumulative project, the construction and operations and maintenance trips (in PCEs) were developed in proportion to those of the 300 MW RE Slate project.

Appendix C: Approved and Cumulative Projects Trip Assignment - AM Peak Hour

	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>Total</u>
1 25th Ave/SR-198													
American Kings	0		0						2	13			15
Westside Solar (Phase II)	0								0				0
2275 Hattesen								0			0		0
Java Solar								0			0		0
Mustang 2	0		0						2	16			18
Westlands Solar	0								19				19
Daylight Solar	0								12				12
Total	0	0	0	0	0	0	0	0	35	29	0	0	64
2 Avenal Cutoff Rd/SR-198 WB ramps													
American Kings													0
Westside Solar (Phase II)										2			2
2275 Hattesen													0
Java Solar													0
Mustang 2													0
Westlands Solar										39			39
Daylight Solar										23			23
Total	0	0	0	0	0	0	0	0	0	64	0	0	64
3 Avenal Cutoff Rd/SR-198 EB ramps													
American Kings													0
Westside Solar (Phase II)	0				2								2
2275 Hattesen													0
Java Solar													0
Mustang 2													0
Westlands Solar	0				39								39
Daylight Solar	0				23								23
Total	0	0	0	0	64	0	0	0	0	0	0	0	64
4 25th Ave/Avenal Cutoff Rd													
American Kings						0	2						2
Westside Solar (Phase II)		0			2	0	0						2
2275 Hattesen													0
Java Solar													0
Mustang 2						0	2						2
Westlands Solar		0			39	19	0						58
Daylight Solar		0			23	12	0						35
Total	0	0	0	0	64	31	4	0	0	0	0	0	99
5 Avenal Cutoff Rd/Laurel Ave													
American Kings		2		0									2
Westside Solar (Phase II)		0		0									0
2275 Hattesen													0
Java Solar													0
Mustang 2		2		0									2
Westlands Solar		0		58									58
Daylight Solar		0		35									35
Total	0	4	0	93	0	0	0	0	0	0	0	0	97

Appendix C: Approved and Cumulative Projects Trip Assignment - PM Peak Hour

	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>Total</u>
1 25th Ave/SR-198													
American Kings	2		14						0	0			16
Westside Solar (Phase II)	0								0				0
2275 Hattesen								0			0		0
Java Solar								0			0		0
Mustang 2	2		18						0	0			20
Westlands Solar	33								0				33
Daylight Solar	20								0				20
Total	57	0	32	0	0	0	0	0	0	0	0	0	89
2 Avenal Cutoff Rd/SR-198 WB ramps													
American Kings													0
Westside Solar (Phase II)										0			0
2275 Hattesen													0
Java Solar													0
Mustang 2													0
Westlands Solar										0			0
Daylight Solar										0			0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
3 Avenal Cutoff Rd/SR-198 EB ramps													
American Kings													0
Westside Solar (Phase II)	2				0								2
2275 Hattesen													0
Java Solar													0
Mustang 2													0
Westlands Solar	66				0								66
Daylight Solar	40				0								40
Total	108	0	0	0	0	0	0	0	0	0	0	0	108
4 25th Ave/Avenal Cutoff Rd													
American Kings						2	0						2
Westside Solar (Phase II)		2			0	0	0						2
2275 Hattesen													0
Java Solar													0
Mustang 2						2	0						2
Westlands Solar		66			0	0	33						99
Daylight Solar		40			0	0	20						60
Total	0	108	0	0	0	4	53	0	0	0	0	0	165
5 Avenal Cutoff Rd/Laurel Ave													
American Kings		0		2									2
Westside Solar (Phase II)		0		0									0
2275 Hattesen													0
Java Solar													0
Mustang 2		0		2									2
Westlands Solar		100		0									100
Daylight Solar		60		0									60
Total	0	160	0	4	0	0	0	0	0	0	0	0	164