

Traffic Impact Study

Proposed Commercial Center

***Northeast of the Intersection of
McCall and Dinuba Avenues***

Selma, California

Prepared For:

V-5 Storage
525 West 4th Street
Selma, California 93230

Date:

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PETERS ENGINEERING GROUP

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1.0 INTRODUCTION

This report presents the results of a traffic impact study for a proposed commercial center in Selma, California. This analysis focuses on the anticipated effect of vehicle traffic resulting from the project.

2.0 PROJECT DESCRIPTION

The proposed Commercial Center (Project) is located northeast of the intersection of McCall and Dinuba Avenues in Selma, California. The net site area is 4.76 acres, including a 2.85-acre mini storage facility and 1.91 acres of commercial uses. Site access to the commercial sites is expected via driveways on both McCall and Dinuba Avenues. The mini storage facility will have access only to Dinuba Avenue. The Project site location is presented in the attached Figure 1, Site Vicinity Map, and a Project site plan is presented in the attached Figure 2, Site Plan.

The property is located in the McCall Specific Plan. Currently the property is in Fresno County and is zoned exclusive agriculture. Annexation to the City of Selma will change the zoning to R-2 (as part of the McCall Specific Plan). The Project proposes to amend the City of Selma General Plan and McCall Specific Plan to allow a proposed zoning change to C-2.

3.0 STUDY AREA AND TIME PERIOD

The study intersections were established by City of Selma staff in a letter dated August 8, 2013. The following intersections are included in the study:

1. McCall and Dinuba Avenues (City of Selma sphere of influence (SOI))
2. Highland and Dinuba Avenues (City of Selma SOI)
3. Golden State Boulevard and Dinuba Avenue (City of Selma SOI)
4. Dockery and Dinuba Avenues (City of Selma SOI)
5. McCall and Floral Avenues (City of Selma)
6. McCall and Manning Avenues (City of Selma SOI)
7. McCall and Parlier Avenues (County of Fresno)
8. Golden State Boulevard and Manning Avenue (City of Fowler jurisdiction)

The study time periods include the weekday a.m. and p.m. peak hours determined between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. on a typical weekday. The peak hours are analyzed for the following conditions:

- Existing Conditions;
- Existing-Plus-Project Conditions;
- Near-Term Conditions (Existing Plus Approved and Pending Project Plus Project);
- Cumulative (Year 2035) Conditions Without Project (assumes the site is vacant); and
- Cumulative (Year 2035) Conditions With Project.

4.0 LANE CONFIGURATIONS AND INTERSECTION CONTROL

The lane configurations and intersection control at the study intersections are illustrated in Figure 3, Existing Lane Configurations.

5.0 EXISTING TRAFFIC VOLUMES

Existing traffic volumes were determined by performing manual turning movement counts at the study intersections between 7:00 and 9:00 a.m. and between 4:00 and 6:00 p.m. The counts also included determination of truck percentages. The data sheets are attached in Appendix A and include the dates the counts were performed. The existing peak hour turning movement volumes are presented in Figure 4, Existing Peak Hour Traffic Volumes.

6.0 PROJECT TRAFFIC

6.1 Trip Generation

Data provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*, is typically used to estimate the number of trips anticipated to be generated by proposed projects. Table 6.1 presents the trip generation estimates for the Project assuming 25-percent floor area ratio for the commercial uses.

Table 6.1
Project Trip Generation

Land Use	Size	Daily		A.M. Peak Hour				P.M. Peak Hour					
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Mini-Warehouse 151	2.85 acres	35.43	102	2.58	45:55	4	4	8	3.57	50:50	6	5	11
Shopping Center 820	20,833 sq. ft.	FC1	2,450	FC2	62:38	37	23	60	FC3	48:52	101	109	210
TOTALS		-	2,552	-	-	41	27	68	-	-	107	114	221

Reference: *Trip Generation Manual, 9th Edition*, Institute of Transportation Engineers 2012

Rates are reported in trips per acre.

In:Out are percentages of the total.

FC1: Fitted curve: $\ln(T) = 0.65\ln(X) + 5.83$

FC2: Fitted curve: $\ln(T) = 0.61\ln(X) + 2.24$

FC3: Fitted curve: $\ln(T) = 0.67\ln(X) + 3.31$

T = Number of trips X = 1,000 square feet of building area

6.2 Internal Capture

Internally captured trips are not applicable to the proposed Project and captured-trip reductions were not applied in the analyses.

6.3 Pass-By and Diverted Linked Trips

The ITE *Trip Generation Handbook* dated June 2004 (TGH) presents information suggesting that the trips generated by the Project will include pass-by trips. The TGH states: “There are instances, however, when the total number of trips generated by a site is different from the amount of new traffic added to the street system by the generator. For example, retail-oriented developments such as shopping centers...are often located adjacent to busy streets in order to attract the motorists already on the street. These sites attract a portion of their trips from traffic passing the site... These retail trips may not add new traffic to the adjacent street system.”

The TGH states: “Pass-by trips are made as intermediate stops on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the generator. Pass-by trips are not diverted from another roadway.”

Data provided in Chapter 5 of the TGH suggest that pass-by trips will be generated by the shopping center portion of the Project.

Available data in the TGH indicate that at least 15 percent of the weekday p.m. peak hour trips generated by shopping centers are pass-by trips. Therefore, a pass-by reduction of 15 percent applied to the shopping center traffic volumes is considered appropriate, conservative, and feasible during the weekday p.m. peak hour, provided that the volumes on the adjacent streets are great enough to generate those volumes. The TGH does not present pass-by trip information for weekday a.m. peak hours.

Table 6.2 presents the pass-by trips for the project.

Table 6.2
Project P.M. Peak Hour Pass-By Trips

Trips Entering Site	Trips Exiting Site
15	15

The calculated pass-by trip volumes can be generated only if the baseline traffic volumes on the adjacent roadways are great enough to accommodate the calculated volumes. The existing traffic volumes on McCall Avenue and Dinuba Avenue are great enough to supply to the calculated pass-by trip volumes.

Table 6.3 presents the primary project traffic volumes (that is, the total number of new trips generated by the project within the study area).

Table 6.3
Project Primary Trips

Time Period	Trips Entering Site	Trips Exiting Site	Total Trips
Weekday	1,276	1,276	2,552
Weekday A.M. Peak Hour	41	27	68
Weekday P.M. Peak Hour	92	99	191

6.4 Project Trip Distribution

The Project trips were distributed to the adjacent road network using engineering judgment considering the distribution of existing traffic volumes and complementary land uses in the

Project vicinity. The anticipated percentage distribution of Project traffic volumes is presented in Figure 5, Project Trip Distribution Percentages. New Project traffic volumes at the study intersections are presented in Figure 6, Peak-Hour Primary Project Traffic Volumes.

6.5 Comparison of Project Trips to Current General Plan

The current land use designations on the Project site will allow R-2 zoning (multiple-family dwelling units) with a maximum residential lot size of 6,000 square feet for the first unit, 3,000 square feet for the second unit, and 5,700 square feet for all subsequent units. It is estimated that the site would yield 34 residential units. Table 6.4 presents the trip generation estimates associated with development of 34 apartment units at the site.

Table 6.4
Residential Trip Generation

Land Use	Size	Daily		A.M. Peak Hour				P.M. Peak Hour					
		Rate	Total	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
Low-Rise Apartment 221	34	6.59	224	0.46	21:79	3	13	16	0.58	65:35	13	7	20

Reference: *Trip Generation Manual, 9th Edition*, Institute of Transportation Engineers 2012
 Rates are reported in trips per dwelling unit. In:Out are percentages of the total.

A comparison of the values in Table 6.4 with the values in Table 6.3 indicates that the proposed Project is expected to generate more trips than would be likely to occur if the site were developed in accordance with the current General Plan.

7.0 EXISTING-PLUS-PROJECT TRAFFIC VOLUMES

Peak hour existing-plus-Project traffic volumes are presented in Figure 7, Existing-Plus-Project Peak Hour Traffic Volumes. These values are obtained by adding the values in Figures 4 and 6.

8.0 PENDING PROJECTS

The land uses associated with known pending projects were included in the analyses and are summarized in Table 8.1. Peak hour near-term traffic volumes (existing plus approved and pending projects plus Project) are presented in Figure 8, Near-Term Peak Hour Traffic Volumes.

Table 8.1
Pending Projects

Project	Location
Selma Crossings	Mountain View Avenue / SR 99
Gill Motel and Commercial	North of Floral, west of SR 99 SB off ramp
Bratton single-family residential	South of Rose, west of Highland
Comfort Suites	West of Whitson, north of Stillman
Raven Map 5296	South of Dinuba, east of Dockery
Valley View Map 5303	South of Valley View between Thompson and McCall
Canales Map 5217	East of Highland, south of Nebraska
Eye Q II	West of Whitson, north of Stillman
Graham Commercial	North of Rose, west of SR 99
Raven Commercial	Manning east of McCall
Amberwood Commercial	East of Orange Avenue between Floral and Dinuba
3-MD Industrial Park	Nebraska Avenue east of Dockery
Golden State Industrial Park	Park Street east of SR 99
Rockwell Pond	North side of Floral, west of SR 99
Brandywine	Southwest of Manning and McCall
Other Residential	Various locations – Cambridge, Country Rose, Heritage, Synergy, R.J. Hill, Amberwood, Hinesley, Merigian

9.0 CUMULATIVE TRAFFIC VOLUMES (YEAR 2035)

The Council of Fresno County Governments (COG) maintains a travel model that is typically used to forecast traffic volumes. The travel model assumptions utilized for the City of Selma General Plan Update were utilized in these analyses. The baseline traffic volumes for the year 2035 no-Project conditions were determined using the travel model data obtained from the COG and using the COG Increment Method, which is described in a document available from the COG entitled “*Model Steering Committee Recommended Procedures for Using Traffic Projections from the Fresno COG Travel Model*” dated December 2002. The Increment Method forecasts future traffic volumes by determining the growth projected by the model between the base year and the horizon year. This growth is then added to the existing traffic volumes.

Future turning movements were forecast based on the methods presented in Chapter 8 of the Transportation Research Board National Cooperative Highway Research Program Report 255 entitled “*Highway Traffic Data for Urbanized Area Project Planning and Design.*” The baseline 2035 no-Project traffic volumes are presented in Figure 9, 2035 No-Project Peak Hour Traffic Volumes. The 2035 with-Project traffic volumes are presented in Figure 10, 2035 With-Project Peak Hour Traffic Volumes.

10.0 SIGNIFICANCE CRITERIA

The Transportation Research Board *Highway Capacity Manual*, 2010, (HCM2010) defines level of service (LOS) as, “A quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler’s perspective and LOS F the worst.”

Automobile mode LOS characteristics for both unsignalized and signalized intersections are presented in Tables 10.1 and 10.2.

Table 10.1
Level of Service Characteristics for Unsignalized Intersections

Level of Service	Average Vehicle Delay (seconds)
A	0-10
B	>10-15
C	>15-25
D	>25-35
E	>35-50
F	>50

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

Table 10.2
Level of Service Characteristics for Signalized Intersections

Level of Service	Description	Average Vehicle Delay (seconds)
A	Volume-to-capacity ratio is low. Progression is exceptionally favorable or the cycle length is very short.	<10
B	Volume-to-capacity ratio is low. Progression is highly favorable or the cycle length is very short.	>10-20
C	Volume-to-capacity ratio is no greater than 1.0. Progression is favorable or cycle length is moderate.	>20-35
D	Volume-to-capacity ratio is high but no greater than 1.0. Progression is ineffective or cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	>35-55
E	Volume-to-capacity ratio is high but no greater than 1.0. Progression is unfavorable and cycle length is long. Individual cycle failures are frequent.	>55-80
F	Volume-to-capacity ratio is greater than 1.0. Progression is very poor and cycle length is long. Most cycles fail to clear the queue.	>80

Reference: *Highway Capacity Manual*, Transportation Research Board, 2010

The City of Selma General Plan Update requires LOS D at City intersections. The County of Fresno typically require that LOS C or better be maintained, however, within the sphere of influence of Selma it is assumed that LOS D is acceptable per the City of Selma General Plan. The City of Fowler requires LOS C.

A Project traffic impact will be recognized if the proposed Project will decrease the LOS below the target LOS compared to the no-Project condition. A Project traffic impact will also be recognized if the Project will exacerbate an intersection already operating below the target LOS by increasing the average delay at the intersection by 5.0 seconds or more.

Queues will be considered in the analyses, particularly to determine if excessive queues at signalized intersections are expected to block through lanes or adjacent intersections. Blocking typically results in congested conditions that may cause worse conditions at the blocked location than those identified by the LOS analyses alone.

11.0 INTERSECTION ANALYSES

11.1 Level of Service

The intersection levels of service (LOS) were determined using the computer program Synchro 8, which is based on *Highway Capacity Manual* procedures for calculating levels of service. The intersection analysis sheets are presented in Appendix B.

Tables 11.1 through 11.3 present the results of the intersection analyses. For signalized intersections and all-way-stop-controlled intersections, the overall intersection level of service and the average delay per vehicle are presented. For one-way and two-way stop-controlled intersections, an overall intersection level of service is not defined by the *Highway Capacity Manual*. Therefore, for one-way and two-way stop-controlled intersections the level of service and average delay per vehicle for the approach with the greatest delay is reported. For no-Project conditions, levels of service below the target level of service are presented in bold type. For Project scenarios, Project impacts are presented in bold type. For cumulative scenarios, cumulative impacts are shown in italics. Impacts shown in bold italics are cumulative impacts for which the project is partially responsible.

Table 11.1
Intersection Level of Service Summary
Existing and Existing-Plus-Project Conditions

Intersection	Control	Existing				Existing Plus Project			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
McCall / Parlier	OWS	10.7	B	11.0	B	10.7	B	11.0	B
Golden State / Manning	Signal	22.8	C	18.3	B	22.8	C	18.4	B
McCall / Manning	Signal	24.0	C	23.4	C	24.1	C	25.0	C
Golden State / Dinuba	TWS	16.4	C	20.3	C	16.5	C	20.5	C
Highland / Dinuba	OWS	12.2	B	14.3	B	12.3	B	14.6	B
McCall / Dinuba	AWS	48.3	E	52.9	F	61.1	F	91.4	F
Dockery / Dinuba	TWS	14.0	B	12.4	B	14.3	B	12.8	B
McCall / Floral	Signal	23.5	C	24.4	C	23.5	C	24.5	C

AWS: All-way stop

OWS: One-way stop

TWS: Two-way stop

Table 11.2
Intersection Level of Service Summary
Existing and Near-Term Conditions

Intersection	Control	Existing				Near-Term			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
McCall / Parlier	OWS	10.7	B	11.0	B	11.3	B	11.8	B
Golden State / Manning	Signal	22.8	C	18.3	B	32.1	C	22.5	C
McCall / Manning	Signal	24.0	C	23.4	C	30.6	C	29.2	C
Golden State / Dinuba	TWS	16.4	C	20.3	C	25.4	D	37.3	E
Highland / Dinuba	OWS	12.2	B	14.3	B	18.0	C	27.9	D
McCall / Dinuba	AWS	48.3	E	52.9	F	199.8	F	368.0	F
Dockery / Dinuba	TWS	14.0	B	12.4	B	39.5	E	97.5	F
McCall / Floral	Signal	23.5	C	24.4	C	44.8	D	46.4	D

AWS: All-way stop OWS: One-way stop TWS: Two-way stop

Table 11.3 presents the results of the intersection analyses based on year 2035 projections. Levels of service below the target level of service are presented in italic type, which signifies a cumulative impact as compared to existing conditions. For the with-Project scenario, cumulative impacts for which the project is partially responsible are presented in bold type.

Table 11.3
Intersection Level of Service Summary - Year 2035 Conditions

Intersection	Control	2035 No-Project				2035 With-Project			
		A.M.		P.M.		A.M.		P.M.	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
McCall / Parlier	OWS	12.7	B	16.4	C	12.7	B	16.5	C
Golden State / Manning	Signal	52.6	D	63.3	E	52.8	D	64.2	E
McCall / Manning	Signal	36.6	D	59.6	E	36.9	D	61.0	E
Golden State / Dinuba	TWS	*	F	*	F	*	F	*	F
Highland / Dinuba	OWS	205.1	F	599.1	F	210.6	F	629.9	F
McCall / Dinuba	AWS	344.0	F	469.8	F	357.9	F	520.6	F
Dockery / Dinuba	TWS	34.1	D	68.2	F	35.6	E	79.6	F
McCall / Floral	Signal	35.2	D	67.5	E	35.3	D	68.8	E

AWS: All-way stop OWS: One-way stop TWS: Two-way stop

* Delay exceeds calculable range.

11.2 Queuing

The 95th-percentile queues at signalized intersections were determined using Synchro 8. The queue analyses are included on the intersection analysis sheets presented in Appendix B. Queue lengths are reported only for signalized intersections to reveal possible deficiencies that would not be apparent based only on LOS results. For example, if a left-turn lane is not long enough to contain a queue, then the vehicles waiting to turn left will back up into the through traffic lanes and potentially block through traffic while the through traffic signal phase is being served with green time. This type of deficiency would not be apparent based on LOS calculations alone for signalized intersections. On the other hand, at stop-sign-controlled intersections a queuing analysis would not reveal any additional deficiencies that

are not already revealed in the LOS analysis. Therefore, queuing analyses are not presented for unsignalized intersections.

The queuing analysis results are presented in Tables 11.4 through 11.8. Calculated queues exceeding the storage length by 25 feet or more are indicated in bold type.

Table 11.4
Queuing Analysis Summary – Existing Conditions

Intersection		Storage and 95 th -Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	61	101	19	10	225	-	189	71	0	51	48	4
	P.M.	62	175	35	14	150	-	134	58	0	84	84	20
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	25	137	-	81	234	-	123	74	32	40	128	-
	P.M.	45	235	-	164	133	-	63	99	24	37	108	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	125	138	-	42	137	17	63	137	-	80	173	37
	P.M.	224	166	-	28	107	0	54	292	-	49	145	37

+ Greater than 1,000 feet

S: Shared movement, there is no separate lane at this location

Table 11.5
Queuing Analysis Summary – Existing-Plus-Project Conditions

Intersection		Storage and 95 th -Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	61	101	19	10	226	-	189	71	0	53	48	4
	P.M.	62	175	35	14	151	-	134	59	0	91	85	20
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	25	138	-	83	234	-	124	74	32	40	129	-
	P.M.	46	250	-	169	133	-	67	102	27	37	111	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	128	138	-	42	137	18	63	139	-	80	173	37
	P.M.	230	166	-	28	107	0	54	296	-	54	148	37

+ Greater than 1,000 feet

S: Shared movement, there is no separate lane at this location

Table 11.6
Queuing Analysis Summary – Near-Term Conditions

Intersection		Storage and 95 th -Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	62	107	20	10	247	-	314	90	0	72	50	4
	P.M.	62	182	39	14	156	-	210	78	0	188	88	20
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	25	151	-	104	291	-	205	82	34	53	130	-
	P.M.	46	312	-	193	148	-	121	103	36	68	119	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	128	271	-	42	369	27	63	140	-	115	178	40
	P.M.	230	532	-	28	356	27	54	304	-	127	150	39

+ Greater than 1,000 feet

S: Shared movement, there is no separate lane at this location

Table 11.7
Queuing Analysis Summary – 2035 No-Project Conditions

Intersection		Storage and 95 th -Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	275	168	39	16	663	-	380	258	0	230	272	262
	P.M.	317	423	68	28	510	-	337	626	29	549	403	114
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	35	251	-	211	513	-	236	125	102	99	372	-
	P.M.	117	738	-	476	332	-	211	452	196	181	326	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	222	263	-	72	405	48	85	196	-	190	414	60
	P.M.	598	602	-	51	557	59	101	739	-	255	300	64

+ Greater than 1,000 feet

S: Shared movement, there is no separate lane at this location

Table 11.8
Queuing Analysis Summary – 2035 With-Project Conditions

Intersection		Storage and 95 th -Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Golden State / Manning	Storage	220	600	610	225	+	S	200	645	50	260	+	200
	A.M.	275	168	39	16	664	-	380	259	0	236	272	262
	P.M.	317	423	68	28	515	-	337	628	29	557	403	114
McCall / Manning	Storage	200	+	S	175	+	S	105	+	25	95	+	S
	A.M.	35	252	-	215	513	-	239	126	103	99	376	-
	P.M.	117	741	-	484	332	-	220	463	203	184	332	-
McCall / Floral	Storage	125	+	S	100	+	360	65	+	S	125	+	260
	A.M.	225	263	-	72	405	49	85	198	-	192	416	60
	P.M.	605	607	-	51	557	60	101	749	-	265	307	64

+ Greater than 1,000 feet

S: Shared movement, there is no separate lane at this location

11.3 Traffic Signal Warrants

The California Department of Transportation *California Manual on Uniform Traffic Control Devices for Streets and Highways, 2012 Edition* (CMUTCD) presents various warrant analyses to assist in evaluating the need for traffic signals at an intersection. Traffic signal warrants are a series of standards that provide guidelines for determining whether a traffic signal is appropriate at a given intersection. If one or more of the signal warrants are met, signalization of the intersection may be appropriate. However, a signal likely should not be installed if none or few of the warrants are met since the installation of signals may increase delays on the previously uncontrolled major street and may contribute to an increase in accidents.

The potential need for a traffic signal is evaluated as a potential mitigation when a significant impact is identified at an unsignalized intersection. Since the analyses presented herein are based on peak hour traffic volumes, Figure 4C-4, Warrant 3, Peak Hour (70% Factor) as presented in the CMUTCD is utilized. For purposes of this study, traffic signals are not considered to be a feasible mitigation if the peak-hour traffic signal warrant is not met.

Caltrans typically utilizes other warrants, such as Warrant 1, Eight-Hour Vehicular Volume, and Warrant 2, Four-Hour Vehicular Volume, to determine whether traffic signals should be installed. However, these warrants are based on observation of existing conditions for several hours per day and are not useful with respect to future peak-hour conditions, including the conditions likely to occur after construction of the project. Therefore, other warrants, including Warrants 1 and 2, were not analyzed in this study.

12.0 DISCUSSION OF ANALYSES

12.1 Existing Conditions

The results of the Existing Conditions intersection analyses indicate that the study intersections are currently operating at acceptable levels of service, with the exception of the intersection of McCall and Dinuba Avenues. The intersection of McCall and Dinuba Avenues is currently operating at LOS E during the a.m. peak hour and LOS F during the p.m. peak hour.

The queue analyses at signalized intersections suggest that the 95th-percentile queues in the eastbound left-turn lane at the intersection of McCall and Floral Avenues exceed the storage capacity during the p.m. peak hour.

12.2 Existing-Plus-Project Conditions

The results of the Existing-Plus-Project Conditions intersection analyses indicate that the Project will exacerbate the existing substandard levels of service at the intersection of McCall and Dinuba Avenues by causing the LOS to drop from LOS E to LOS F during the a.m. peak hour and by increasing the delay by more than 5.0 seconds during the p.m. peak hour. This is a significant impact.

The other study intersections are expected to continue to operate at acceptable levels of service.

The queue analyses at signalized intersections suggest that the 95th-percentile queues will be similar to the existing conditions.

The significant impact and recommended mitigation are described below. Mitigated intersection analysis sheets are presented in Appendix C.

Impact E-1

The Project will cause a substandard LOS F at the intersection of McCall and Dinuba Avenues during the a.m. peak hour and will exacerbate a substandard LOS F during the p.m. peak hour.

Mitigation E-1

The California Environmental Quality Act (CEQA) requires that the Project mitigate its impacts such that the intersection will continue to operate no worse than the existing conditions.

Construction of dedicated left-turn lanes on the eastbound and westbound approaches of McCall Avenue while maintaining the existing all-way stop control will mitigate the Project's impacts. The Project would also be required to construct frontage improvements in accordance with City of Selma standards. With implementation of this mitigation the intersection would operate at LOS D with an average delay of 33.9 seconds per vehicle during the a.m. peak hour and LOS F with an average delay of 50.9 seconds per vehicle during the p.m. peak hour. These delays are less than the existing delays as presented in Table 11.1.

The Project is responsible for construction of this mitigation by opening day of the commercial portions of the Project. Construction of the mini-storage component of the Project creates a negligible volume of traffic that will not trigger the significant impact.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma’s *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) and the McCall Avenue street segment between Dinuba and Manning Avenues (Project ST-08) are included in the fee program. Therefore, the cost of the improvements to be constructed by the Project may be credited against payment of the Project’s development fees.

Table 12.1
Mitigated Intersection Level of Service Summary
Existing-Plus-Project Conditions

Intersection	Mitigation	Control	A.M.		P.M.	
			Delay (sec)	LOS	Delay (sec)	LOS
McCall / Dinuba	E-1	All-way stop	33.9*	D	50.9*	F

* Delay is less than the existing condition.

12.3 Near-Term Conditions

The results of the Near-Term Conditions intersection analyses, which assume that all of the pending projects plus the proposed Project have been constructed, indicate that cumulative impacts are expected to occur at the following locations:

- Golden State Boulevard / Dinuba Avenue (the cumulative projects cause a substandard LOS E during the p.m. peak hour)
- McCall Avenue / Dinuba Avenue (the cumulative projects cause a substandard LOS F during the a.m. peak hour and exacerbate a substandard LOS F during the p.m. peak hour)
- Dockery Avenue / Dinuba Avenue (the cumulative projects cause a substandard LOS E during the a.m. peak hour and a substandard LOS F during the p.m. peak hour)

Cumulative traffic impacts are not solely caused by the proposed Project, but are also the cumulative result of other new developments within the City of Selma and in the surrounding area over time.

Based on the results of the Existing-Plus-Project Conditions intersection analyses, the Project contributes significantly to the cumulative impact at the intersection of McCall and Dinuba Avenues, but the Project’s portion of the cumulative impact at the other locations is less than significant.

The queue analyses at signalized intersections suggest that the 95th-percentile queues will exceed the storage capacity at the following locations:

- Golden State Boulevard / Manning Avenue (northbound left-turn lane during the a.m. peak hour)
- McCall Avenue / Manning Avenue (northbound left-turn lane during the a.m. peak hour)
- McCall Avenue / Floral Avenue (eastbound left-turn lane during the p.m. peak hour)

Based on the results of the Existing-Plus-Project Conditions intersection analyses, the Project’s portion of the cumulative impact at these locations is less than significant.

The significant impact and recommended mitigation are described below. Mitigated intersection analysis sheets are presented in Appendix C.

Impact NT-1

The Project will contribute to a cumulative substandard LOS F at the intersection of McCall and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation NT-1

The intersection of McCall and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

- Eastbound: one left-turn lane and one through lane with a shared right turn;
- Westbound: one left-turn lane, one through lane, and one right-turn lane;
- Northbound: one left-turn lane, one through lane, and one right-turn lane;
- Southbound: one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues identified in Tables 12.3 and 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Construction of the turn lanes recommended in Mitigation E-1 mitigates the Project’s share of this near-term cumulative impact.

It should be noted that all-way stop control with widening of both McCall Avenue and Dinuba Avenue to four lanes in accordance with the arterial designation was investigated as a mitigation. However, widening alone will not mitigate the cumulative impact.

Table 12.2
Mitigated Intersection Level of Service Summary
Near-Term Conditions

Intersection	Mitigation	Control	A.M.		P.M.	
			Delay (sec)	LOS	Delay (sec)	LOS
McCall / Dinuba	NT-1	Signals	34.4	C	42.7	D

Table 12.3
Mitigated Queuing Analysis Summary – Near-Term Conditions

Intersection		Storage and 95 th -Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
McCall / Dinuba	A.M.	70	241	S	243	125	47	78	165	34	137	204	S
	P.M.	90	387	S	241	265	43	88	232	58	290	273	S

S: Shared movement

Note: New lanes to be constructed long enough to accommodate queues for all applicable scenarios

12.4 Year 2035 No-Project Conditions

The results of the Year 2035 No-Project Conditions analyses indicate that the following intersections are expected experience cumulative impacts even if the proposed Project is not constructed:

- Golden State Boulevard and Manning Avenue (the cumulative projects cause a substandard LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)
- McCall and Manning Avenues (the cumulative projects cause a substandard LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)
- Golden State Boulevard and Dinuba Avenue (the cumulative projects cause a substandard LOS F during the a.m. and p.m. peak hours)
- Highland and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the a.m. and p.m. peak hours)
- McCall and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the a.m. peak hour and exacerbate a substandard LOS F during the p.m. peak hour)
- Dockery and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the p.m. peak hour)
- McCall and Floral Avenues (the cumulative projects cause a substandard LOS E during the p.m. peak hour)

The queue analyses at signalized intersections suggest that the 95th-percentile queues will exceed the storage capacity at the following locations:

- Golden State Boulevard and Manning Avenue (eastbound left, northbound left, southbound left, and southbound right)
- McCall and Manning Avenues (westbound left, northbound left, northbound right, and southbound left)
- McCall and Floral Avenues (eastbound left, northbound left, and southbound left)

12.5 Year 2035 With-Project Conditions

The results of the Year 2035 With-Project Conditions intersection analyses indicate that cumulative impacts are expected to occur at the following locations:

- Golden State Boulevard and Manning Avenue (the cumulative projects cause a substandard LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)
- McCall and Manning Avenues (the cumulative projects cause a substandard LOS D during the a.m. peak hour and LOS E during the p.m. peak hour)
- Golden State Boulevard and Dinuba Avenue (the cumulative projects cause a substandard LOS F during the a.m. and p.m. peak hours)
- Highland and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the a.m. and p.m. peak hours)
- McCall and Dinuba Avenues (the cumulative projects cause a substandard LOS F during the a.m. peak hour and exacerbate a substandard LOS F during the p.m. peak hour)
- Dockery and Dinuba Avenues (the cumulative projects cause a substandard LOS E during the a.m. peak hour and LOS F during the p.m. peak hour)
- McCall and Floral Avenues (the cumulative projects cause a substandard LOS E during the p.m. peak hour)

Cumulative traffic impacts are not solely caused by the proposed Project, but are also the cumulative result of other new developments within the City of Selma and in the surrounding area over time.

Based on a comparison with the 2035 No-Project Conditions analyses, the Project contributes significantly to the cumulative impact at the following intersections by increasing the average delay by at least 5.0 seconds per vehicle:

- Highland and Dinuba Avenues
- McCall and Dinuba Avenues
- Dockery and Dinuba Avenues

The Project's portion of the cumulative impact at the other locations is less than significant.

The queue analyses at signalized intersections suggest that the 95th-percentile queues will exceed the storage capacity at the following locations:

- Golden State Boulevard and Manning Avenue (eastbound left, northbound left, southbound left, and southbound right)
- McCall and Manning Avenues (westbound left, northbound left, northbound right, and southbound left)
- McCall and Floral Avenues (eastbound left, northbound left, and southbound left)

The queue analyses indicate that the 95th-percentile queues will be similar to the 2035 No-Project conditions and will not be exacerbated by the proposed Project.

The significant impacts and recommended mitigations are described below. Mitigated intersection analysis sheets are presented in Appendix C.

Impact 2035-1

The Project and the cumulative projects will exacerbate a cumulative substandard LOS F at the intersection of Highland and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation 2035-1

The intersection of Highland and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

- Eastbound: two through lane with a shared right turn;
- Westbound: one left-turn lane and two through lanes;
- Northbound: one left-turn lane and one right-turn lane;
- Southbound: does not exist.

New turn lanes shall be designed to accommodate the queues identified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS B during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) is included in the fee program. Therefore, the Project will mitigate its equitable share of the cost of the intersection widening with payment of the Project's development fees.

The Project will be responsible for an equitable share of traffic signals. It is recommended that intersection signalization be added to the City of Selma development fee.

Impact 2035-2

The Project and the cumulative projects will exacerbate a cumulative substandard LOS F at the intersection of McCall and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation 2035-2

The intersection of McCall and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

- Eastbound: one left-turn lane and two through lanes with a shared right turn;
- Westbound: one left-turn lane and two through lanes with a shared right turn;
- Northbound: one left-turn lane and two through lanes with a shared right turn;
- Southbound: one left-turn lane and two through lanes with a shared right turn.

New turn lanes shall be designed to accommodate the queues identified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of*

Development Impact Fees for Circulation System (Streets, Signals and Bridges) dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) and the McCall Avenue street segment between Dinuba and Manning Avenues (Project ST-08) are included in the fee program. Therefore, the Project will mitigate its equitable share of the cost of the intersection widening with payment of the Project’s development fees.

The Project will be responsible for an equitable share of traffic signals. It is recommended that intersection signalization be added to the City of Selma development fee.

Impact 2035-3

The Project and the cumulative projects will contribute to a cumulative substandard LOS E during the a.m. peak hour and a cumulative substandard LOS F during the p.m. peak hour at the intersection of Dockery and Dinuba Avenues.

Mitigation 2035-3

The intersection of Dockery and Dinuba Avenues will require signalization with protected left-turn phasing and the following minimum lane configurations:

- Eastbound: one left-turn lane and two through lanes with a shared right turn;
- Westbound: one left-turn lane and two through lanes with a shared right turn;
- Northbound: one left-turn lane and one through lane with a shared right turn;
- Southbound: one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues identified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS B during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma’s *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) is included in the fee program. In addition, the intersection of Dockery and Dinuba Avenues is programmed for signalization (Project ST-29). Therefore, payment of the City’s fees will constitute mitigation of the Project’s equitable share of the impact.

Table 12.4
Mitigated Intersection Level of Service Summary
2035 With-Project Conditions

Intersection	Mitigation	Control	A.M.		P.M.	
			Delay (sec)	LOS	Delay (sec)	LOS
Highland / Dinuba	2035-1	Signal	12.1	B	16.0	B
McCall / Dinuba	2035-2	Signal	23.7	C	40.2	D
Dockery / Dinuba	2035-3	Signal	13.1	B	12.9	B

Table 12.5
Mitigated Queuing Analysis Summary – 2035 With-Project Conditions

Intersection		Storage and 95 th -Percentile Queue Length (feet)											
		EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Highland / Dinuba	A.M.		57	S	178	46		68		43			
	P.M.		158	S	227	37		64		62			
McCall / Dinuba	A.M.	90	90	S	213	97	S	112	104	S	118	184	S
	P.M.	241	166	S	229	156	S	149	291	S	292	178	S
Dockery / Dinuba	A.M.	9	108	S	27	118	S	63	24	S	13	15	S
	P.M.	15	182	S	25	103	S	66	21	S	10	7	S

S: Shared movement Shaded cells indicate movements that do not exist
 Note: New lanes to be constructed long enough to accommodate queues for all applicable scenarios

13.0 EQUITABLE SHARE CALCULATIONS

Where required cumulative mitigations are not included in a traffic impact fee, the Project’s financial responsibility for the mitigations can be determined based on equitable share calculations as presented in the Caltrans *Guide for the Preparation of Traffic Impact Studies* dated December 2002. Caltrans recommends the following equation to determine a project’s equitable share of the cost of improvements:

$$P = \frac{T}{T_B - T_E}$$

where:

- P = The equitable share of the project’s traffic impact;
- T = The project trips generated during the peak hour of the adjacent facility;
- T_B = The forecasted (future with project) traffic volume on the impacted facility;
- T_E = The existing traffic on the facility plus approved projects traffic (cumulative).

Table 13.1 presents equitable share responsibility calculations for the 2035 mitigations. These equitable shares would not be applicable if the mitigation is included in, or added to, a transportation impact fee paid by the Project. The equitable shares presented for Mitigations 2035-1 and 2035-2 apply only to the traffic signals; the lane widening improvements are included in the City’s development fees. Mitigation 2035-3 is not included in the table because road widening and signalization improvements are covered in the City’s development fees.

Table 13.1
Equitable Share Responsibility Calculations – Weekday P.M. Peak Hour

Location	Mitigation	Project Trips	Existing Traffic Volume	Future Traffic Volume	Equitable Share (Percent)
Highland / Dinuba	2035-1	18	791	1,767	1.84
McCall / Dinuba	2035-2	153	1,320	3,170	8.27

14.0 CONCLUSIONS

Standard traffic engineering principles and methods were employed to establish the existing conditions, to estimate the number of trips expected to be generated by the Project, and to analyze the traffic conditions expected to occur in the future.

The traffic impact study concludes that deficiencies are expected to occur at several of the study intersections and road segments without the Project as development progresses in the Selma area.

The Project is expected to generate more trips than would be likely to occur if the site were developed in accordance with the current General Plan land uses.

The Project is expected to cause an opening-day significant impact and contribute to cumulative long-term significant impacts at some of the intersections studied. The Project will be required to mitigate the significant impacts as described herein. A summary of the significant impacts and the recommended mitigations is presented below.

15.0 SUMMARY OF SIGNIFICANT IMPACTS AND RECOMMENDED MITIGATIONS

Impact E-1

The Project will cause a substandard LOS F at the intersection of McCall and Dinuba Avenues during the a.m. peak hour and will exacerbate a substandard LOS F during the p.m. peak hour.

Mitigation E-1

The California Environmental Quality Act (CEQA) requires that the Project mitigate its impacts such that the intersection will continue to operate no worse than the existing conditions.

Construction of dedicated left-turn lanes on the eastbound and westbound approaches of McCall Avenue while maintaining the existing all-way stop control will mitigate the Project's impacts. The Project would also be required to construct frontage improvements in accordance with City of Selma standards. With implementation of this mitigation the intersection would operate at LOS D with an average delay of 33.9 seconds per vehicle during the a.m. peak hour and LOS F with an average delay of 50.9 seconds per vehicle during the p.m. peak hour. These delays are less than the existing delays as presented in Table 11.1.

The Project is responsible for construction of this mitigation by opening day of the commercial portions of the Project. Construction of the mini-storage component of the Project creates a negligible volume of traffic that will not trigger the significant impact.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) and the McCall Avenue street segment between Dinuba and Manning Avenues (Project ST-08) are included in the fee program. Therefore, the cost of the improvements to be constructed by the Project may be credited against payment of the Project's development fees.

Impact NT-1

The Project will contribute to a cumulative substandard LOS F at the intersection of McCall and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation NT-1

The intersection of McCall and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

- Eastbound: one left-turn lane and one through lane with a shared right turn;
- Westbound: one left-turn lane, one through lane, and one right-turn lane;
- Northbound: one left-turn lane, one through lane, and one right-turn lane;
- Southbound: one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues identified in Tables 12.3 and 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Construction of the turn lanes recommended in Mitigation E-1 mitigates the Project's share of this near-term cumulative impact.

It should be noted that all-way stop control with widening of both McCall Avenue and Dinuba Avenue to four lanes in accordance with the arterial designation was investigated as a mitigation. However, widening alone will not mitigate the cumulative impact.

Impact 2035-1

The Project and the cumulative projects will exacerbate a cumulative substandard LOS F at the intersection of Highland and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation 2035-1

The intersection of Highland and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

- Eastbound: two through lane with a shared right turn;
- Westbound: one left-turn lane and two through lanes;
- Northbound: one left-turn lane and one right-turn lane;
- Southbound: does not exist.

New turn lanes shall be designed to accommodate the queues identified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS B during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) is included in the fee program. Therefore, the Project will mitigate its equitable share of the cost of the intersection widening with payment of the Project's development fees.

The Project will be responsible for an equitable share of traffic signals. It is recommended that intersection signalization be added to the City of Selma development fee.

Impact 2035-2

The Project and the cumulative projects will exacerbate a cumulative substandard LOS F at the intersection of McCall and Dinuba Avenues during both the a.m. and p.m. peak hours.

Mitigation 2035-2

The intersection of McCall and Dinuba Avenues should be signalized with protected left-turn phasing and the following minimum lane configurations:

- Eastbound: one left-turn lane and two through lanes with a shared right turn;
- Westbound: one left-turn lane and two through lanes with a shared right turn;
- Northbound: one left-turn lane and two through lanes with a shared right turn;
- Southbound: one left-turn lane and two through lanes with a shared right turn.

New turn lanes shall be designed to accommodate the queues identified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS D or better during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) and the McCall Avenue street segment between Dinuba and Manning Avenues (Project ST-08) are included in the fee program. Therefore, the Project will mitigate its equitable share of the cost of the intersection widening with payment of the Project's development fees.

The Project will be responsible for an equitable share of traffic signals. It is recommended that intersection signalization be added to the City of Selma development fee.

Impact 2035-3

The Project and the cumulative projects will contribute to a cumulative substandard LOS E during the a.m. peak hour and a cumulative substandard LOS F during the p.m. peak hour at the intersection of Dockery and Dinuba Avenues.

Mitigation 2035-3

The intersection of Dockery and Dinuba Avenues will require signalization with protected left-turn phasing and the following minimum lane configurations:

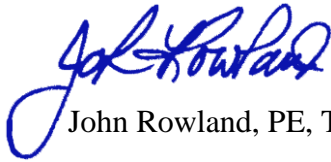
- Eastbound: one left-turn lane and two through lanes with a shared right turn;
- Westbound: one left-turn lane and two through lanes with a shared right turn;
- Northbound: one left-turn lane and one through lane with a shared right turn;
- Southbound: one left-turn lane and one through lane with a shared right turn.

New turn lanes shall be designed to accommodate the queues identified in Table 12.5 as applicable. With implementation of this mitigation the intersection will operate at LOS B during the peak hours.

Dinuba Avenue is classified as an arterial street in the City of Selma General Plan with an ultimate configuration of four lanes. According to the City of Selma's *Schedule of Development Impact Fees for Circulation System (Streets, Signals and Bridges)* dated February 1, 2008, the Dinuba Avenue street segment between Highland and Amber Avenues (Projects ST-01 and ST-02) is included in the fee program. In addition, the intersection of Dockery and Dinuba Avenues is programmed for signalization (Project ST-29). Therefore, payment of the City's fees will constitute mitigation of the Project's equitable share of the impact.

Thank you for the opportunity to perform this traffic impact study. Please feel free to call our office if you have any questions.

PETERS ENGINEERING GROUP



John Rowland, PE, TE

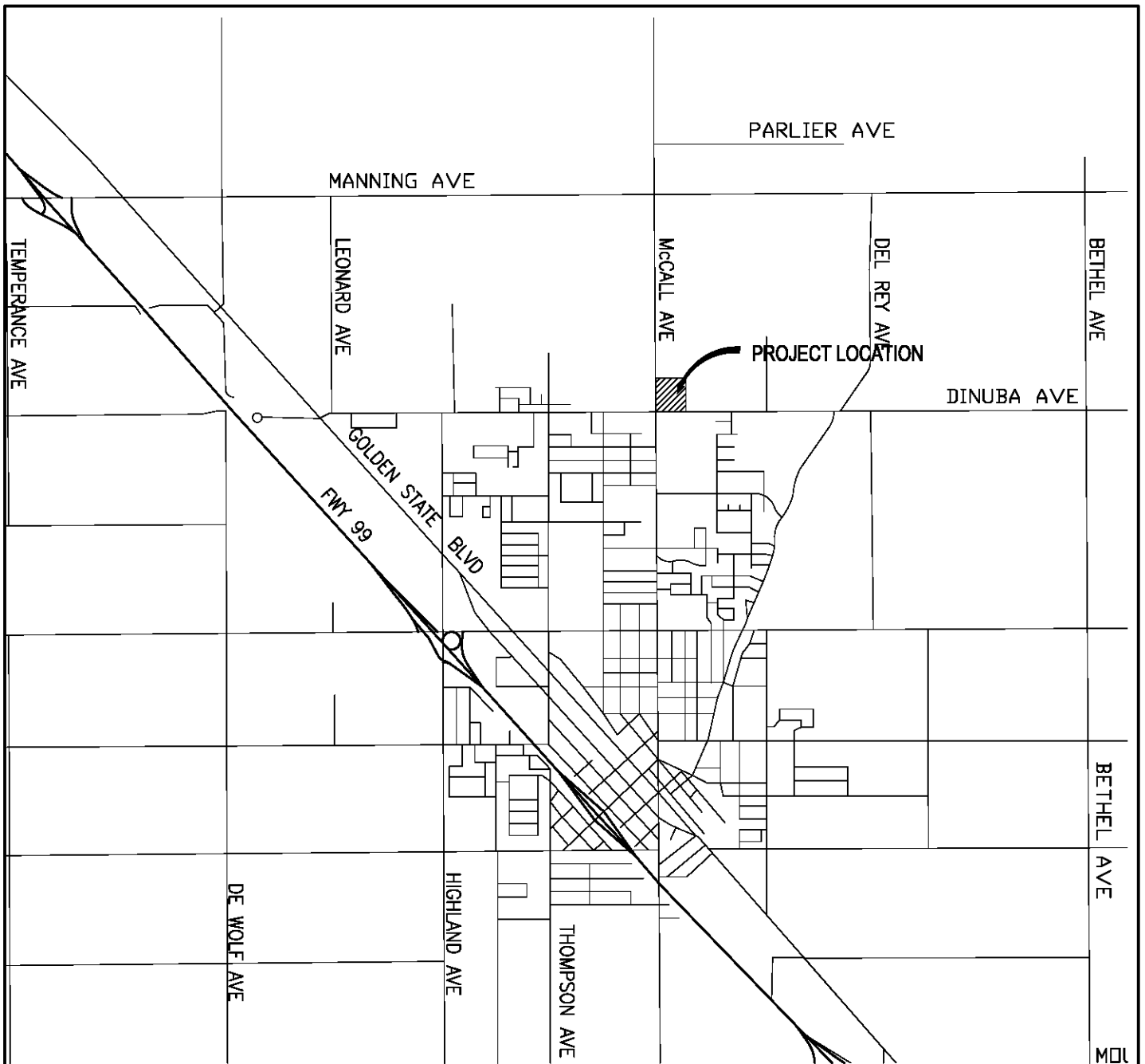


Signed: November 21, 2013

- Attachments: Figures 1 through 10
Appendix A - Traffic Count Data Sheets
Appendix B - Intersection Analysis Sheets
Appendix C - Mitigated Intersection Analyses

FIGURES





LEGEND

 PROJECT SITE

VICINITY MAP

Proposed Commercial Center
Selma, California

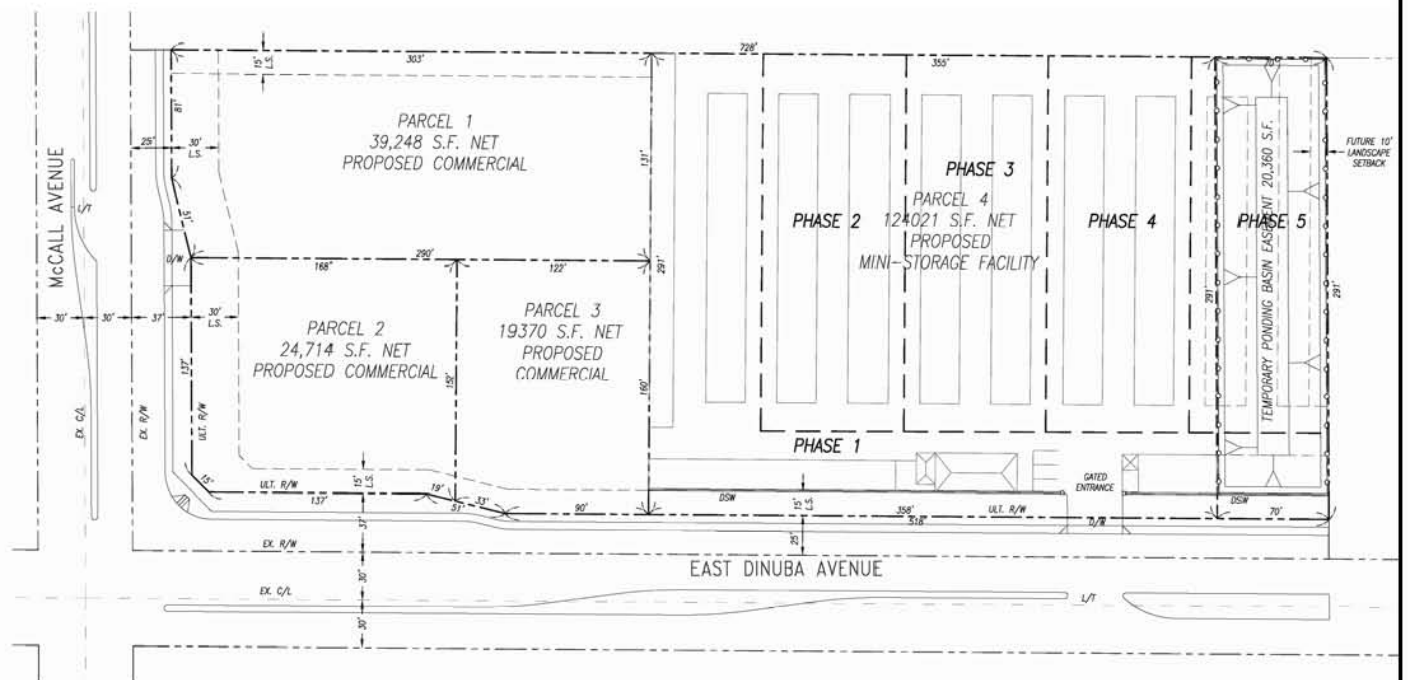


PETERS ENGINEERING GROUP



Not to Scale

Figure 1

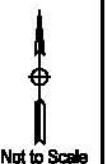


SITE PLAN

Proposed Commercial Center
Selma, California

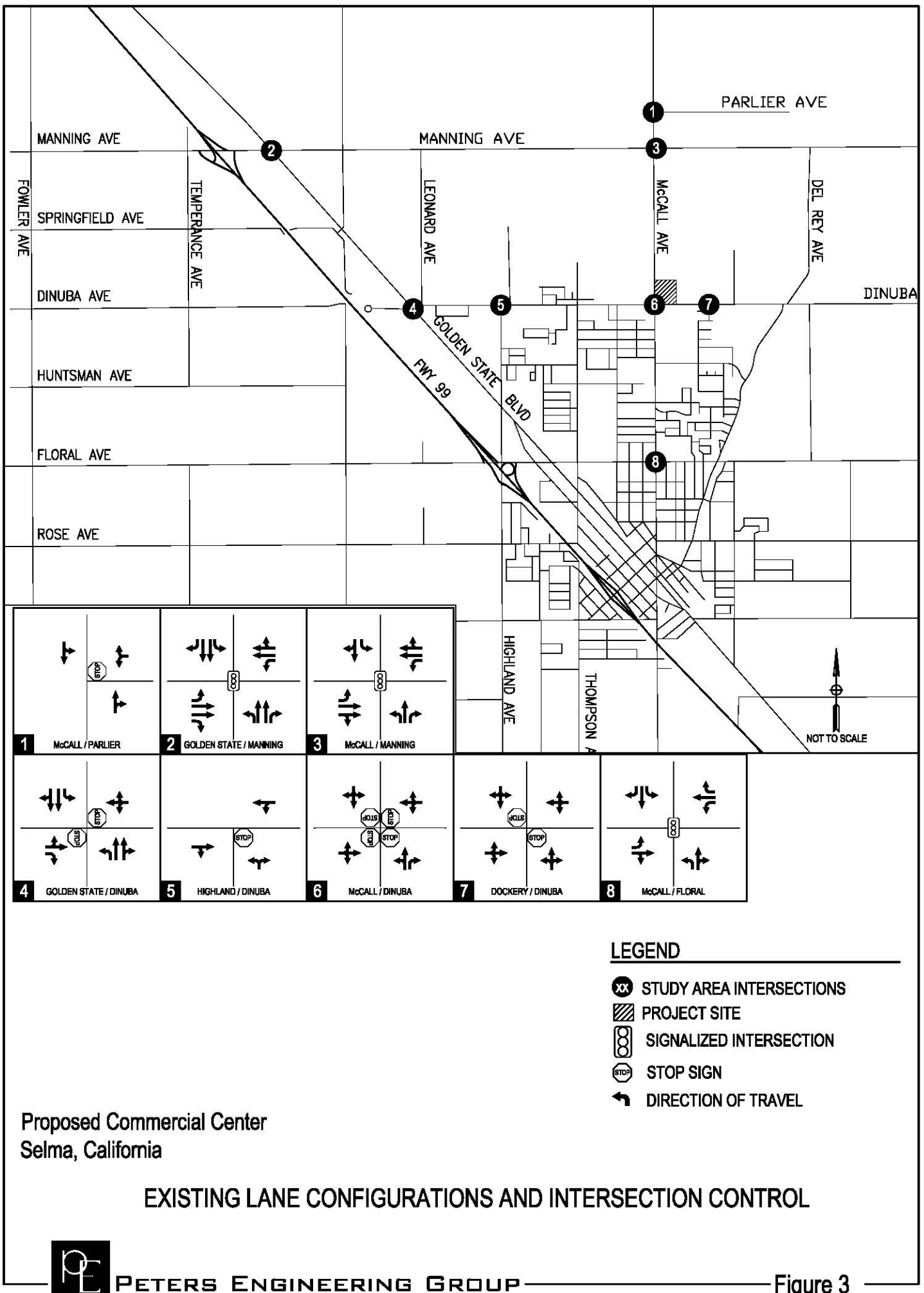


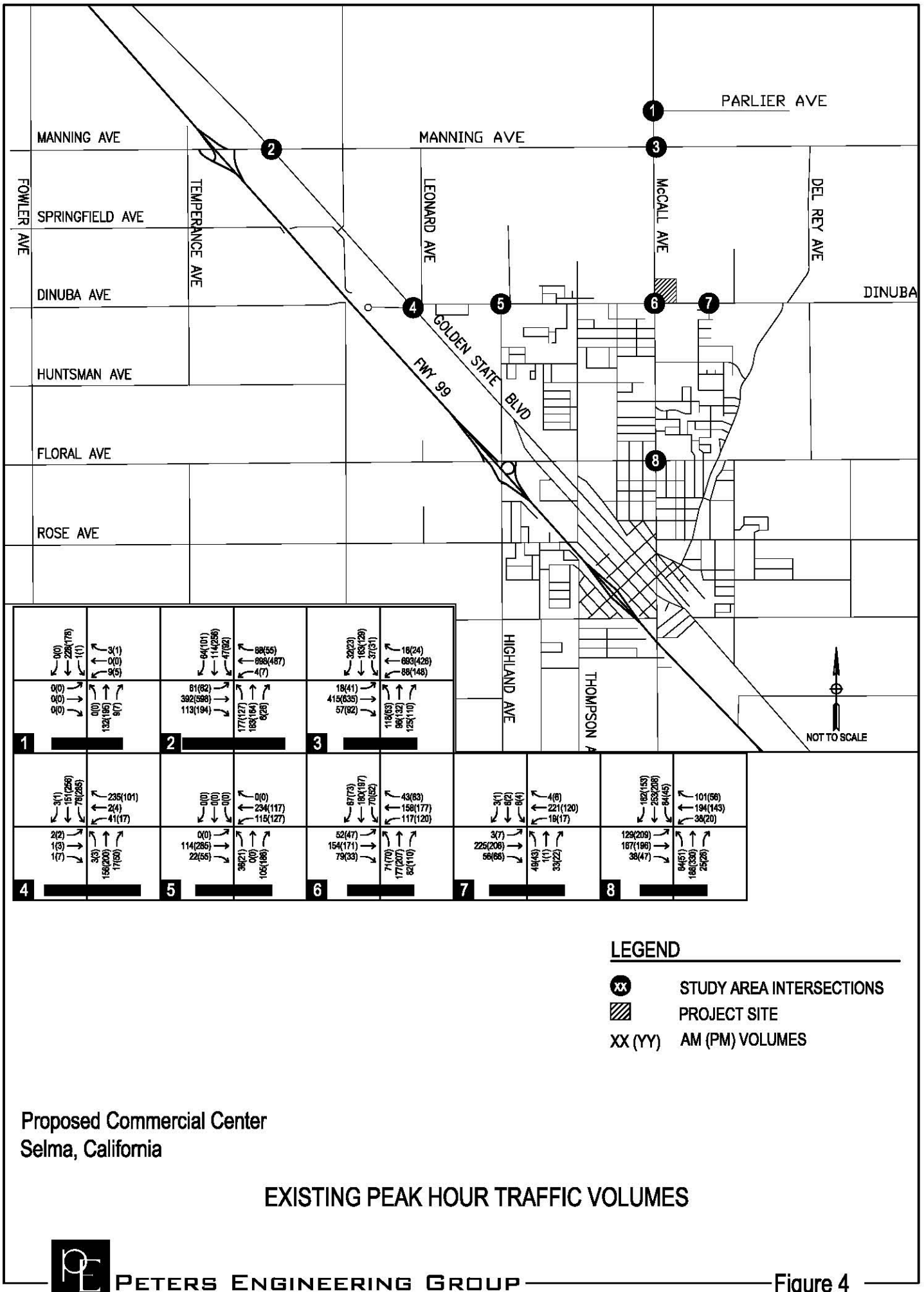
PETERS ENGINEERING GROUP

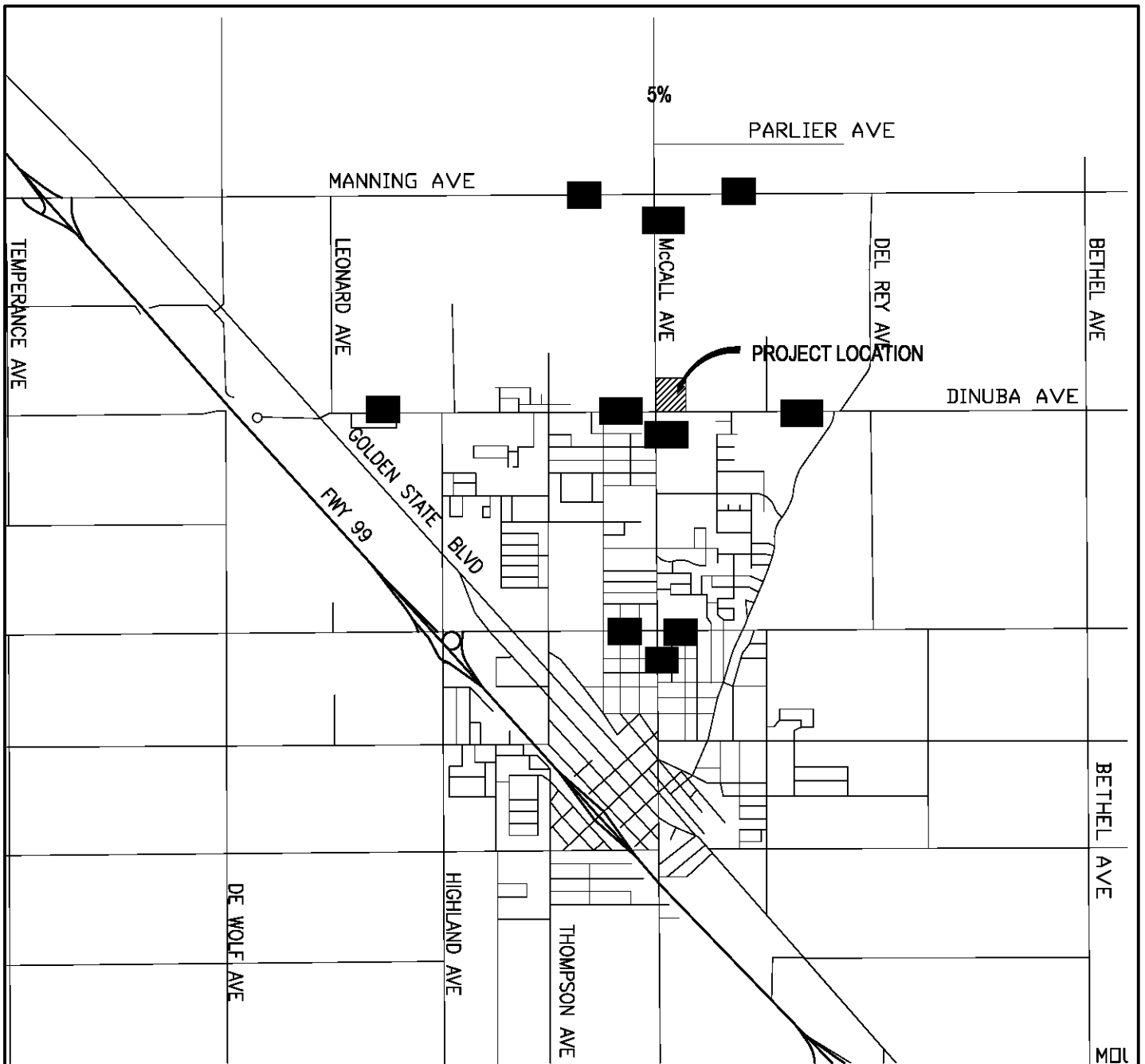


Not to Scale

Figure 2







LEGEND

▨ PROJECT SITE

PROJECT TRAFFIC DISTRIBUTION PERCENTAGES

Proposed Commercial Center
Selma, California

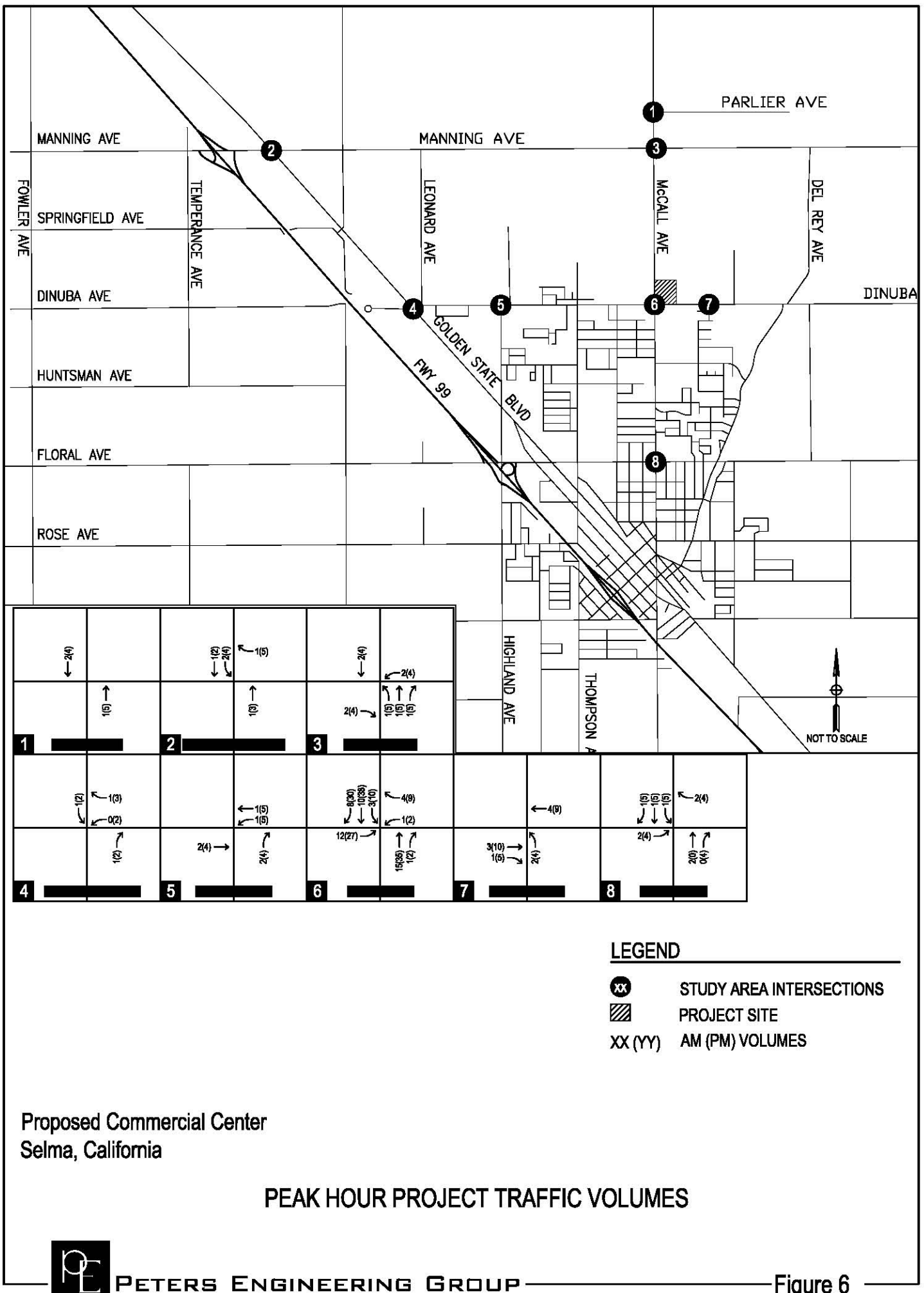


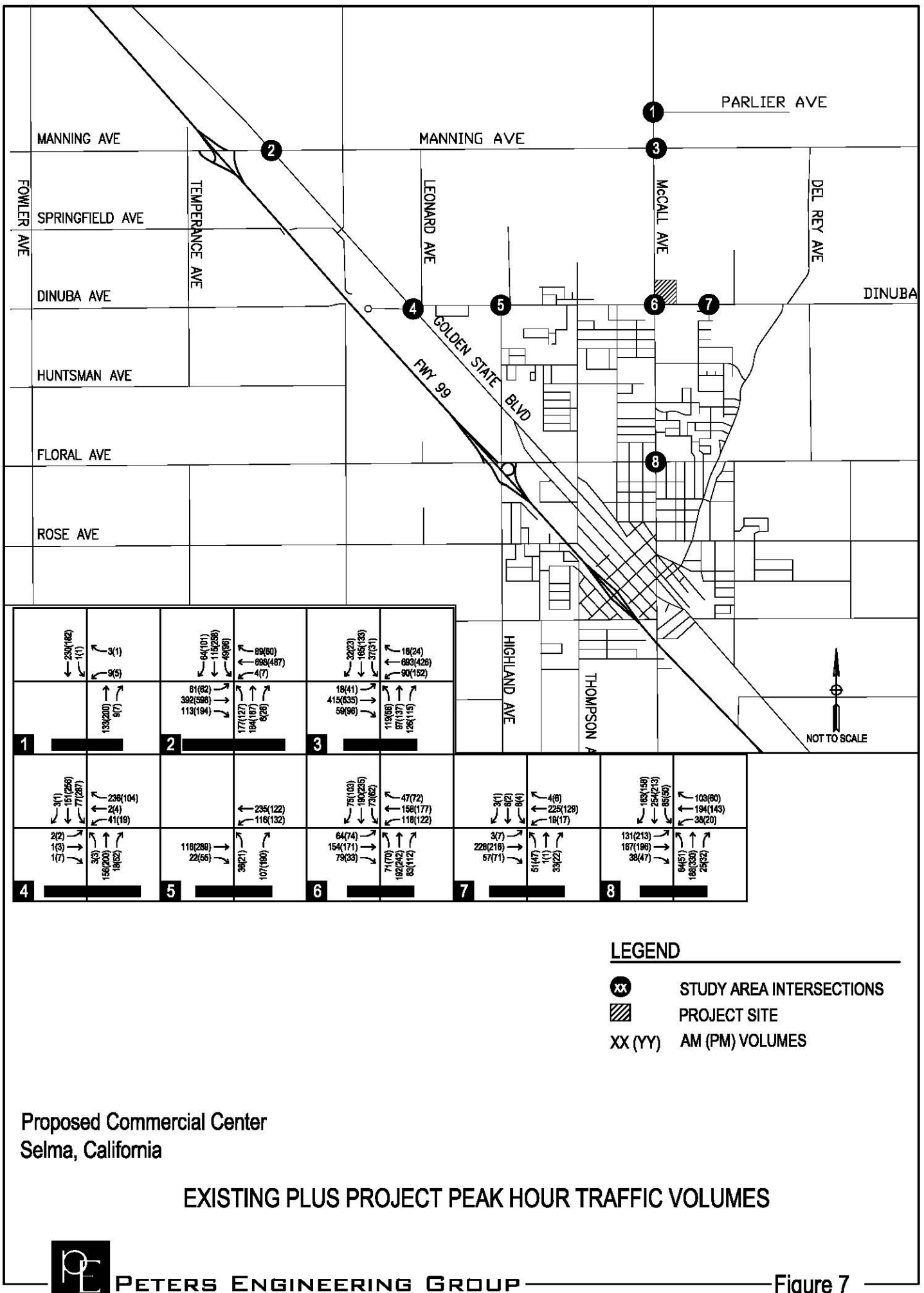
PETERS ENGINEERING GROUP

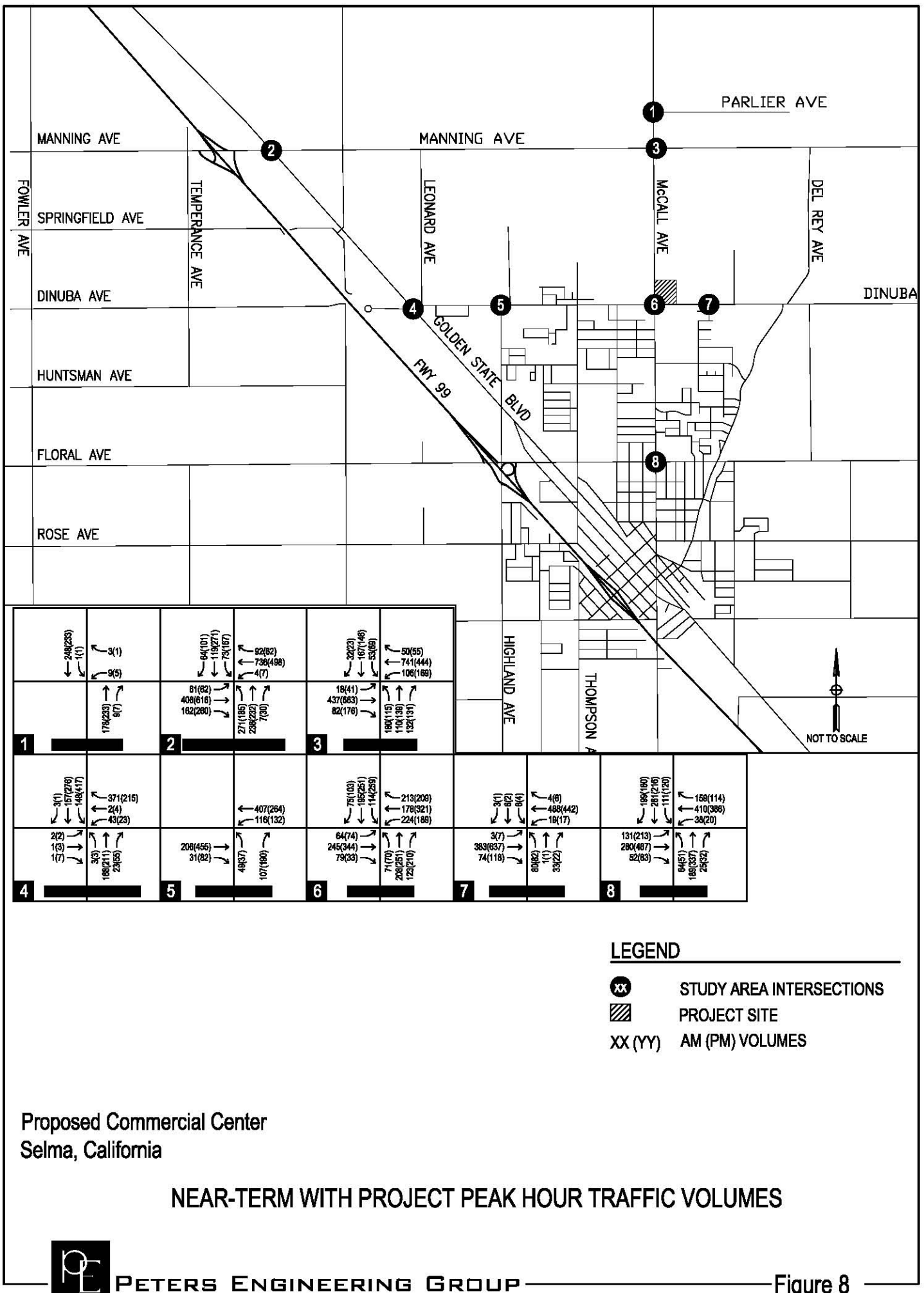


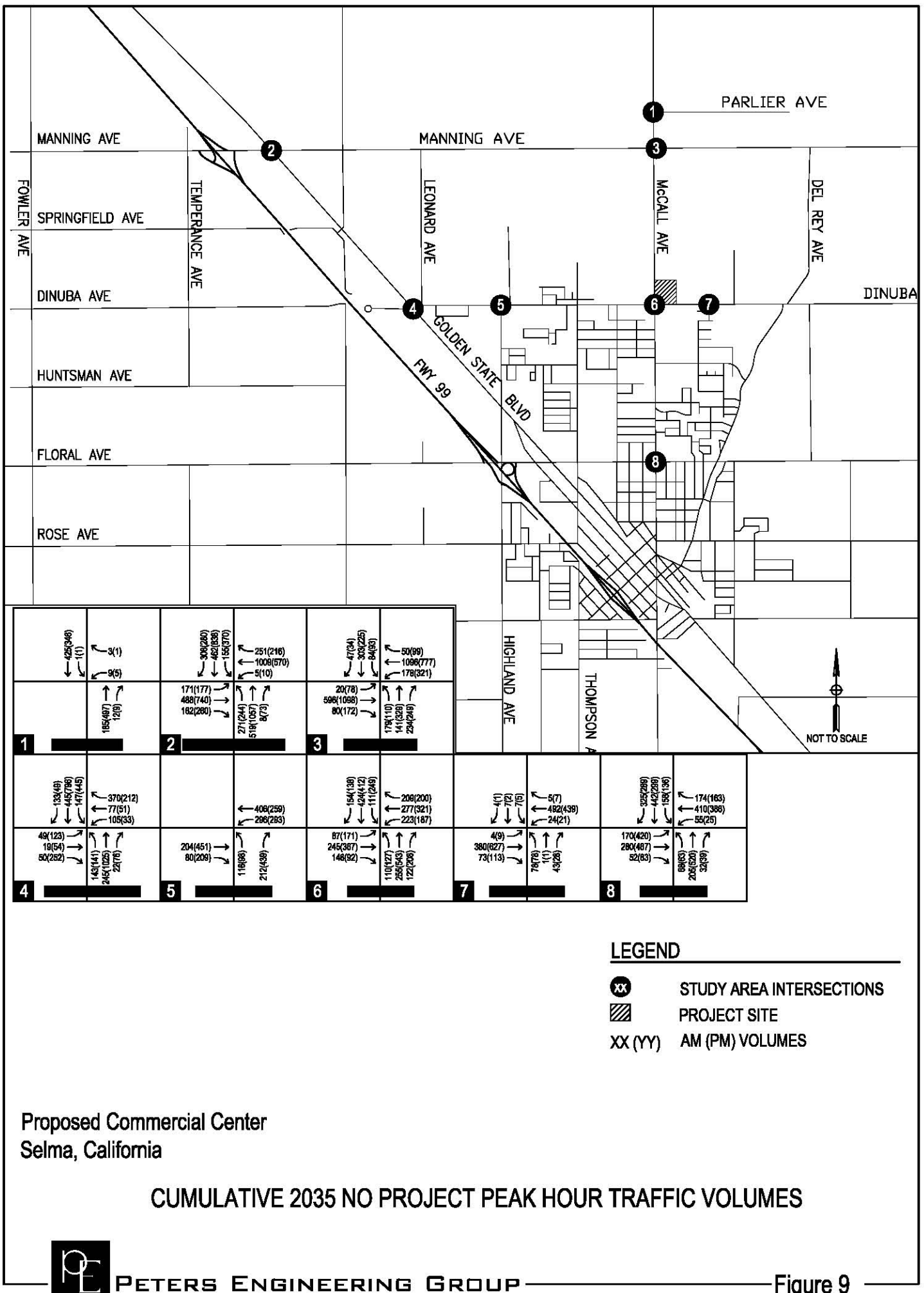
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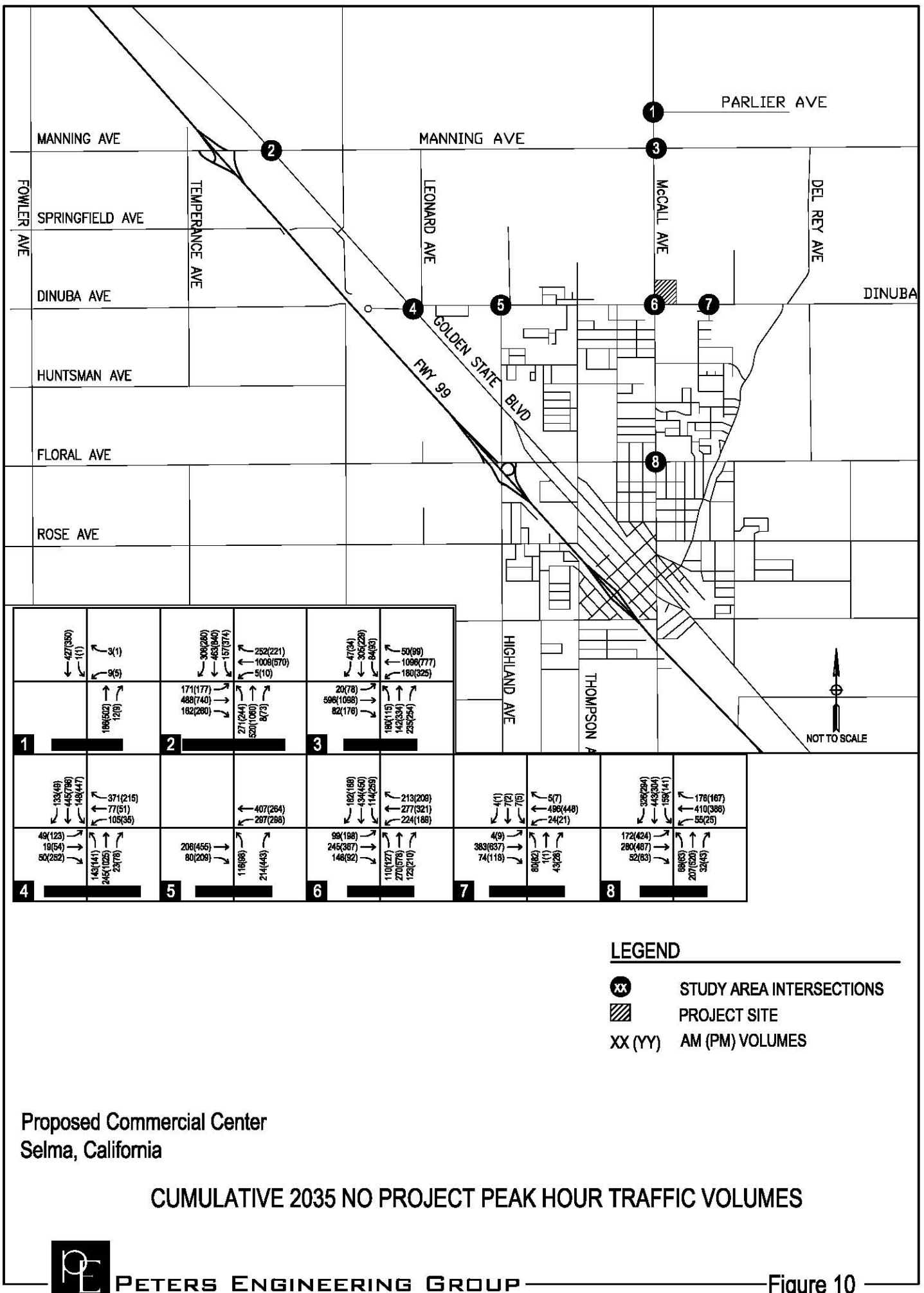
Figure 5











APPENDIX A
TRAFFIC COUNT DATA SHEETS

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-001

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

AM

NS/EW Streets:	McCall Ave			McCall Ave			Dinuba Ave			Dinuba Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	1	0	1	0	0	1	0	0	1	0	
7:00 AM	11	22	18	8	41	9	4	28	17	15	28	5	206
7:15 AM	9	36	21	12	37	11	7	20	17	29	26	8	233
7:30 AM	22	47	21	14	48	12	14	38	22	37	35	14	324
7:45 AM	25	57	19	19	43	22	23	52	15	31	48	6	360
8:00 AM	15	37	21	25	52	22	8	44	25	20	49	15	333
8:15 AM	5	32	21	9	29	5	12	20	15	12	40	7	207
8:30 AM	6	30	16	9	29	5	7	18	11	21	13	10	175
8:45 AM	5	24	22	5	17	11	6	15	7	14	12	10	148
TOTAL VOLUMES :	98	285	159	101	296	97	81	235	129	179	251	75	1986
APPROACH %'s :	18.08%	52.58%	29.34%	20.45%	59.92%	19.64%	18.20%	52.81%	28.99%	35.45%	49.70%	14.85%	
PEAK HR START TIME :	7:15 AM												TOTAL
PEAK HR VOL :	71	177	82	70	180	67	52	154	79	117	158	43	1250
PEAK HR FACTOR :	0.817			0.801			0.792			0.924			0.868

CONTROL : 4-Way Stop (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-001

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

PM

NS/EW Streets:	McCall Ave			McCall Ave			Dinuba Ave			Dinuba Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	1	0	1	0	0	1	0	0	1	0	
4:00 PM	10	45	28	17	49	14	17	33	17	17	19	15	281
4:15 PM	12	50	22	9	41	11	10	20	11	22	42	10	260
4:30 PM	13	37	20	13	42	17	6	28	10	31	33	12	262
4:45 PM	13	49	28	9	43	17	8	35	7	24	40	10	283
5:00 PM	18	51	38	11	66	22	12	41	11	30	34	16	350
5:15 PM	22	62	21	19	45	23	12	45	5	29	51	20	354
5:30 PM	17	45	23	13	43	11	15	50	10	37	52	17	333
5:45 PM	17	28	27	9	43	12	10	24	7	24	51	9	261
TOTAL VOLUMES :	122	367	207	100	372	127	90	276	78	214	322	109	2384
APPROACH %'s :	17.53%	52.73%	29.74%	16.69%	62.10%	21.20%	20.27%	62.16%	17.57%	33.18%	49.92%	16.90%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	70	207	110	52	197	73	47	171	33	120	177	63	1320
PEAK HR FACTOR :	0.904			0.813			0.837			0.849			0.932

CONTROL : 4-Way Stop (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-002

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

AM

NS/EW Streets:	Highland Ave			Highland Ave			Dinuba Ave			Dinuba Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	0	0	0	1	0	0	1	0	
7:00 AM	2	0	11	0	0	0	0	21	2	27	56	0	119
7:15 AM	9	0	21	0	0	0	0	25	3	28	41	0	127
7:30 AM	14	0	24	0	0	0	0	34	6	22	63	0	163
7:45 AM	8	0	33	0	0	0	0	33	5	35	66	0	180
8:00 AM	5	0	27	0	0	0	0	22	8	30	64	0	156
8:15 AM	4	0	15	0	0	0	0	13	6	31	42	0	111
8:30 AM	5	0	17	0	0	0	0	9	1	24	23	0	79
8:45 AM	5	0	13	0	0	0	0	13	3	23	24	0	81
TOTAL VOLUMES :	52	0	161	0	0	0	0	170	34	220	379	0	1016
APPROACH %'s :	24.41%	0.00%	75.59%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	83.33%	16.67%	36.73%	63.27%	0.00%	
PEAK HR START TIME :	7:15 AM												TOTAL
PEAK HR VOL :	36	0	105	0	0	0	0	114	22	115	234	0	626
PEAK HR FACTOR :	0.860		0.000			0.850			0.864			0.869	

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-002

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

PM

NS/EW Streets:	Highland Ave			Highland Ave			Dinuba Ave			Dinuba Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	0	0	0	1	0	0	1	0	
4:00 PM	7	0	33	0	0	0	0	48	12	35	22	0	157
4:15 PM	8	0	40	0	0	0	0	53	14	27	28	0	170
4:30 PM	10	0	42	0	0	0	1	58	18	33	27	0	189
4:45 PM	8	0	42	0	0	0	0	65	15	33	30	0	193
5:00 PM	7	0	52	0	0	0	0	66	13	35	28	0	201
5:15 PM	1	0	43	0	0	0	0	79	19	27	26	0	195
5:30 PM	5	0	49	0	0	0	0	75	8	32	33	0	202
5:45 PM	7	0	45	0	0	0	0	55	15	30	34	0	186
TOTAL VOLUMES :	53	0	346	0	0	0	1	499	114	252	228	0	1493
APPROACH %'s :	13.28%	0.00%	86.72%	#DIV/0!	#DIV/0!	#DIV/0!	0.16%	81.27%	18.57%	52.50%	47.50%	0.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	21	0	186	0	0	0	0	285	55	127	117	0	791
PEAK HR FACTOR :	0.877			0.000			0.867			0.938			0.979

CONTROL : 1-Way Stop (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-003

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

AM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Dinuba Ave			Dinuba Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	0	1	0	0	1	0	
7:00 AM	1	28	3	13	21	0	1	1	1	4	1	54	128
7:15 AM	1	31	4	17	19	0	1	1	0	11	1	43	129
7:30 AM	0	41	3	25	21	0	0	0	0	10	0	73	173
7:45 AM	1	45	6	17	53	1	1	0	1	15	1	66	207
8:00 AM	2	39	3	18	45	0	0	1	0	8	0	58	174
8:15 AM	0	31	5	16	32	2	1	0	0	8	1	38	134
8:30 AM	1	21	6	8	29	2	0	0	2	8	1	30	108
8:45 AM	1	26	4	11	38	2	0	0	1	4	1	27	115
TOTAL VOLUMES :	7	262	34	125	258	7	4	3	5	68	6	389	1168
APPROACH %'s :	2.31%	86.47%	11.22%	32.05%	66.15%	1.79%	33.33%	25.00%	41.67%	14.69%	1.30%	84.02%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	3	156	17	76	151	3	2	1	1	41	2	235	688
PEAK HR FACTOR :	0.846			0.810			0.500			0.837			0.831

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-003

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

PM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Dinuba Ave			Dinuba Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	0	1	0	0	1	0	
4:00 PM	1	33	6	49	73	1	0	1	1	11	0	19	195
4:15 PM	4	35	8	56	60	0	2	0	0	6	1	32	204
4:30 PM	0	51	11	59	63	0	0	1	2	2	3	24	216
4:45 PM	1	54	13	77	76	0	1	1	4	2	0	31	260
5:00 PM	2	48	18	62	61	0	1	0	1	9	0	22	224
5:15 PM	0	47	8	87	56	0	0	1	0	4	1	24	228
5:30 PM	0	40	11	70	39	0	0	1	0	8	0	25	194
5:45 PM	0	23	12	54	47	0	0	1	0	8	1	30	176
TOTAL VOLUMES :	8	331	87	514	475	1	4	6	8	50	6	207	1697
APPROACH %'s :	1.88%	77.70%	20.42%	51.92%	47.98%	0.10%	22.22%	33.33%	44.44%	19.01%	2.28%	78.71%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	3	200	50	285	256	0	2	3	7	17	4	101	928
PEAK HR FACTOR :	0.930			0.884			0.500			0.924			0.892

CONTROL : 2-Way Stop (EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-004

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

AM

NS/EW Streets:	Dockery Ave			Dockery Ave			Dinuba Ave			Dinuba Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	17	0	7	3	0	0	1	17	6	3	13	0	67
7:15 AM	4	0	5	2	0	1	0	38	11	1	19	0	81
7:30 AM	22	0	7	2	2	1	1	49	25	3	48	2	162
7:45 AM	10	1	13	2	3	0	0	73	13	5	77	1	198
8:00 AM	13	0	8	0	1	1	2	65	7	10	77	1	185
8:15 AM	5	0	4	2	0	0	0	23	3	1	35	0	73
8:30 AM	5	0	3	0	1	0	0	22	2	0	19	2	54
8:45 AM	5	1	5	0	0	0	0	22	4	0	11	0	48
TOTAL VOLUMES :	81	2	52	11	7	3	4	309	71	23	299	6	868
APPROACH %'s :	60.00%	1.48%	38.52%	52.38%	33.33%	14.29%	1.04%	80.47%	18.49%	7.01%	91.16%	1.83%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	49	1	33	6	6	3	3	225	56	19	221	4	626
PEAK HR FACTOR :	0.716			0.750			0.826			0.693			0.790

CONTROL : 2-Way Stop (NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-004

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

PM

NS/EW Streets:	Dockery Ave			Dockery Ave			Dinuba Ave			Dinuba Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	14	1	3	1	1	0	0	34	15	3	42	2	116
4:15 PM	7	2	1	1	1	0	1	32	13	3	28	1	90
4:30 PM	10	0	0	0	0	1	1	55	6	3	28	2	106
4:45 PM	8	0	5	0	0	0	0	46	14	3	32	1	109
5:00 PM	9	0	3	1	0	0	2	45	9	7	30	1	107
5:15 PM	9	0	6	1	1	1	1	50	14	10	25	1	119
5:30 PM	15	1	8	1	0	0	2	56	23	0	34	1	141
5:45 PM	10	0	5	1	1	0	2	55	20	0	31	3	128
TOTAL VOLUMES :	82	4	31	6	4	2	9	373	114	29	250	12	916
APPROACH %'s :	70.09%	3.42%	26.50%	50.00%	33.33%	16.67%	1.81%	75.20%	22.98%	9.97%	85.91%	4.12%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	43	1	22	4	2	1	7	206	66	17	120	6	495
PEAK HR FACTOR :	0.688			0.583			0.861			0.941			0.878

CONTROL : 2-Way Stop (NB/SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-005

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

AM

NS/EW Streets:	McCall Ave			McCall Ave			Floral Ave			Floral Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	1	1	1	0.5	0.5	1	1	1	
7:00 AM	1	19	0	6	31	29	9	12	5	0	27	5	144
7:15 AM	5	38	2	7	35	19	21	24	5	4	41	6	207
7:30 AM	19	57	10	17	58	35	20	55	12	6	38	17	344
7:45 AM	20	60	6	33	60	53	43	51	8	10	54	37	435
8:00 AM	15	40	8	31	65	41	32	45	13	15	63	33	401
8:15 AM	10	29	1	3	70	33	34	16	5	7	39	14	261
8:30 AM	4	32	5	4	47	27	19	11	12	6	27	5	199
8:45 AM	10	28	4	4	42	27	21	23	10	5	16	3	193
TOTAL VOLUMES :	NL 84	NT 303	NR 36	SL 105	ST 408	SR 264	EL 199	ET 237	ER 70	WL 53	WT 305	WR 120	TOTAL 2184
APPROACH %'s :	19.86%	71.63%	8.51%	13.51%	52.51%	33.98%	39.33%	46.84%	13.83%	11.09%	63.81%	25.10%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	64	186	25	84	253	162	129	167	38	38	194	101	1441
PEAK HR FACTOR :	0.799			0.854			0.819			0.750			0.828

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-005

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

PM

NS/EW Streets:	McCall Ave			McCall Ave			Floral Ave			Floral Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	0	1	1	1	1	0.5	0.5	1	1	1	
4:00 PM	14	66	7	10	53	40	51	42	8	6	29	12	338
4:15 PM	12	70	7	15	54	33	33	32	5	10	36	21	328
4:30 PM	15	50	8	12	61	45	34	41	5	10	41	15	337
4:45 PM	7	83	7	5	54	46	44	53	12	3	38	12	364
5:00 PM	16	87	8	17	55	47	57	56	13	6	27	17	406
5:15 PM	15	77	8	11	66	37	58	40	11	6	32	14	375
5:30 PM	13	83	5	12	33	23	50	47	11	5	46	13	341
5:45 PM	14	65	7	10	53	34	32	62	11	7	37	9	341
TOTAL VOLUMES :	106	581	57	92	429	305	359	373	76	53	286	113	2830
APPROACH %'s :	14.25%	78.09%	7.66%	11.14%	51.94%	36.92%	44.43%	46.16%	9.41%	11.73%	63.27%	25.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	51	330	28	45	208	153	209	196	47	20	143	56	1486
PEAK HR FACTOR :	0.921			0.853			0.897			0.855			0.915

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-006

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

NS/EW Streets:	AM												TOTAL
	McCall Ave			McCall Ave			Manning Ave			Manning Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	31	25	18	5	32	6	4	102	7	13	148	3	394
7:15 AM	19	22	36	9	31	9	4	100	12	22	155	2	421
7:30 AM	36	24	42	15	58	8	4	133	23	19	227	7	596
7:45 AM	32	25	29	8	42	9	6	80	15	34	163	6	449
8:00 AM	40	25	27	5	35	5	8	61	9	14	136	5	370
8:15 AM	25	14	20	5	27	4	4	79	9	20	134	2	343
8:30 AM	17	9	29	8	21	5	4	81	8	21	109	4	316
8:45 AM	8	18	17	1	22	9	7	87	6	18	89	6	288
TOTAL VOLUMES :	NL 208	NT 162	NR 218	SL 56	ST 268	SR 55	EL 41	ET 723	ER 89	WL 161	WT 1161	WR 35	TOTAL 3177
APPROACH %'s :	35.37%	27.55%	37.07%	14.78%	70.71%	14.51%	4.81%	84.76%	10.43%	11.86%	85.56%	2.58%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	118	96	125	37	163	32	18	415	57	88	693	18	1860
PEAK HR FACTOR :	0.831			0.716			0.766			0.790			0.780

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-006

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

PM

NS/EW Streets:	McCall Ave			McCall Ave			Manning Ave			Manning Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	1	2	0	1	2	0	
4:00 PM	16	42	22	11	33	8	8	144	13	38	98	2	435
4:15 PM	23	32	20	6	30	8	8	169	22	24	136	7	485
4:30 PM	19	18	31	7	33	7	15	166	16	28	112	9	461
4:45 PM	14	33	30	7	29	4	2	137	23	38	95	3	415
5:00 PM	20	50	19	9	35	8	16	150	21	53	104	8	493
5:15 PM	10	31	30	8	32	4	8	182	32	29	115	4	485
5:30 PM	12	37	40	3	24	3	10	167	27	24	85	10	442
5:45 PM	11	29	28	4	30	1	2	137	14	26	91	6	379
TOTAL VOLUMES :	125	272	220	55	246	43	69	1252	168	260	836	49	3595
APPROACH %'s :	20.26%	44.08%	35.66%	15.99%	71.51%	12.50%	4.63%	84.08%	11.28%	22.71%	73.01%	4.28%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	63	132	110	31	129	23	41	635	92	148	426	24	1854
PEAK HR FACTOR :	0.857			0.880			0.865			0.906			0.940

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-007

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

AM

NS/EW Streets:	McCall Ave			McCall Ave			Parlier Ave			Parlier Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	0	28	3	0	39	0	0	0	0	3	0	0	73
7:15 AM	0	27	2	0	47	0	0	0	0	3	0	1	80
7:30 AM	0	33	1	0	75	0	0	0	0	4	0	1	114
7:45 AM	0	33	4	0	60	0	0	0	0	1	0	0	98
8:00 AM	0	39	2	0	46	0	0	0	0	1	0	1	89
8:15 AM	0	20	0	0	32	0	0	0	0	2	0	1	55
8:30 AM	0	13	1	0	32	0	0	0	0	1	0	0	47
8:45 AM	0	29	1	0	35	0	0	0	0	0	0	0	65
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
APPROACH %'s :	0	222	14	0	366	0	0	0	0	15	0	4	621
	0.00%	94.07%	5.93%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	78.95%	0.00%	21.05%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	132	9	0	228	0	0	0	0	9	0	3	381
PEAK HR FACTOR :	0.860			0.760			0.000			0.600			0.836

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-007

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

PM

NS/EW Streets:	McCall Ave			McCall Ave			Parlier Ave			Parlier Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	0	50	1	0	49	0	0	0	0	2	0	0	102
4:15 PM	0	45	4	1	44	0	0	0	0	0	0	0	94
4:30 PM	0	39	1	0	46	0	0	0	0	2	0	0	88
4:45 PM	0	39	1	0	38	0	0	0	0	3	0	0	81
5:00 PM	0	72	1	0	50	0	0	0	0	0	0	1	124
5:15 PM	0	45	1	0	45	0	0	0	0	2	0	0	93
5:30 PM	0	54	1	1	26	0	0	0	0	3	0	0	85
5:45 PM	0	33	2	0	32	0	0	0	0	0	0	0	67
TOTAL VOLUMES :	0	377	12	2	330	0	0	0	0	12	0	1	734
APPROACH %'s :	0.00%	96.92%	3.08%	0.60%	99.40%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	92.31%	0.00%	7.69%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	195	7	1	178	0	0	0	0	5	0	1	387
PEAK HR FACTOR :	0.692		0.895			0.000			0.500			0.780	

CONTROL : No Control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-008

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

AM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Manning Ave			Manning Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	1	1	2	1	
7:00 AM	47	25	2	6	13	15	14	102	17	2	155	22	420
7:15 AM	38	37	0	14	14	19	16	103	22	1	155	15	434
7:30 AM	46	47	1	13	20	11	14	142	35	1	227	26	583
7:45 AM	42	55	4	11	46	16	11	82	31	1	155	29	483
8:00 AM	51	44	1	9	34	18	20	65	25	1	161	18	447
8:15 AM	46	26	0	8	23	14	8	88	32	2	159	8	414
8:30 AM	28	19	3	11	25	17	8	78	14	3	117	13	336
8:45 AM	23	21	1	7	26	9	9	87	24	3	96	9	315
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
APPROACH %'s :	321	274	12	79	201	119	100	747	200	14	1225	140	3432
	52.88%	45.14%	1.98%	19.80%	50.38%	29.82%	9.55%	71.35%	19.10%	1.02%	88.83%	10.15%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	177	183	6	47	114	64	61	392	113	4	698	88	1947
PEAK HR FACTOR :	0.906			0.771			0.741			0.778			0.835

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 13-8090-008

Day: Tuesday

City: Selma

TOTALS

Date: 8/27/2013

PM

NS/EW Streets:	Golden State Blvd			Golden State Blvd			Manning Ave			Manning Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	1	1	2	1	
4:00 PM	20	32	0	8	63	28	18	156	34	4	104	9	476
4:15 PM	32	30	2	22	56	18	15	161	53	3	147	11	550
4:30 PM	36	45	7	21	53	17	11	138	48	3	119	16	514
4:45 PM	28	38	13	27	76	27	15	127	49	1	108	17	526
5:00 PM	35	42	4	21	64	36	14	146	50	1	128	14	555
5:15 PM	28	39	2	23	63	21	22	187	47	2	132	8	574
5:30 PM	22	37	0	16	46	22	14	173	45	2	98	9	484
5:45 PM	23	24	2	12	49	22	6	135	38	0	102	10	423
TOTAL VOLUMES :	224	287	30	150	470	191	115	1223	364	16	938	94	4102
APPROACH %'s :	41.40%	53.05%	5.55%	18.50%	57.95%	23.55%	6.76%	71.86%	21.39%	1.53%	89.50%	8.97%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	127	164	26	92	256	101	62	598	194	7	487	55	2169
PEAK HR FACTOR :	0.901			0.863			0.834			0.960			0.945

CONTROL : 4-Way Signalized (NB/SB/EB/WB)

APPENDIX B
INTERSECTION ANALYSIS SHEETS

HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Existing-AM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	132	9	1	228
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	3	150	10	1	259
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	416	155			160	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	416	155			160	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	592	891			1419	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	14	160	260
Volume Left	10	0	1
Volume Right	3	10	0
cSH	646	1700	1419
Volume to Capacity	0.02	0.09	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	10.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	10.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		22.8%	ICU Level of Service
Analysis Period (min)		15	A

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Existing-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	392	113	4	698	88	177	183	6	47	114	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Fr _t			0.850		0.983				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153		18				135			135
Link Speed (mph)		50		50			50		50		50	
Link Distance (ft)		1462		2360			3872		3389			
Travel Time (s)		19.9		32.2			52.8		46.2			
Peak Hour Factor	0.74	0.74	0.74	0.78	0.78	0.78	0.91	0.91	0.91	0.77	0.77	0.77
Heavy Vehicles (%)	15%	11%	6%	2%	4%	3%	2%	2%	2%	6%	2%	20%
Adj. Flow (vph)	82	530	153	5	895	113	195	201	7	61	148	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	530	153	5	1008	0	195	201	7	61	148	83
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12		12			12		12		12	
Link Offset(ft)		0		0			0		0		0	
Crosswalk Width(ft)		16		16			16		16		16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	31.0	31.0	12.0	31.0		14.0	25.0	25.0	12.0	23.0	23.0
Total Split (%)	15.0%	38.8%	38.8%	15.0%	38.8%		17.5%	31.3%	31.3%	15.0%	28.8%	28.8%
Maximum Green (s)	8.0	26.1	26.1	8.0	26.1		10.0	20.1	20.1	8.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Existing-AM
11/7/2013

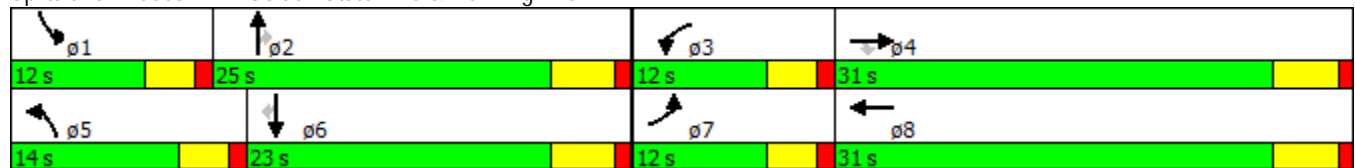


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	7.5	30.9	30.9	5.9	24.0		10.2	16.0	16.0	7.3	8.3	8.3
Actuated g/C Ratio	0.11	0.47	0.47	0.09	0.37		0.16	0.24	0.24	0.11	0.13	0.13
v/c Ratio	0.46	0.35	0.19	0.03	0.80		0.71	0.23	0.01	0.32	0.33	0.29
Control Delay	38.6	12.2	3.3	30.5	24.9		46.0	25.4	0.0	34.3	30.2	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	12.2	3.3	30.5	24.9		46.0	25.4	0.0	34.3	30.2	4.5
LOS	D	B	A	C	C		D	C	A	C	C	A
Approach Delay		13.2			25.0			34.9			23.8	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	34	60	0	2	195		83	42	0	25	31	0
Queue Length 95th (ft)	61	101	19	10	225		#189	71	0	51	48	4
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	197	1670	857	222	1412		278	1132	598	214	1007	479
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.32	0.18	0.02	0.71		0.70	0.18	0.01	0.29	0.15	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 65.5
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 22.8 Intersection LOS: C
 Intersection Capacity Utilization 53.5% ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Existing-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	415	57	88	693	18	118	96	125	37	163	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.996				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3525	0	1770	1863	1583	1770	1818	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3476	0	1770	3525	0	1770	1863	1583	1770	1818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			4				154			13
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.83	0.83	0.83	0.72	0.72	0.72
Adj. Flow (vph)	23	539	74	111	877	23	142	116	151	51	226	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	613	0	111	900	0	142	116	151	51	270	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.0		12.0	24.0		12.0	22.0	22.0	12.0	22.0	
Total Split (%)	17.1%	34.3%		17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	
Maximum Green (s)	8.0	19.1		8.0	19.1		8.0	17.1	17.1	8.0	17.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Existing-AM
11/7/2013

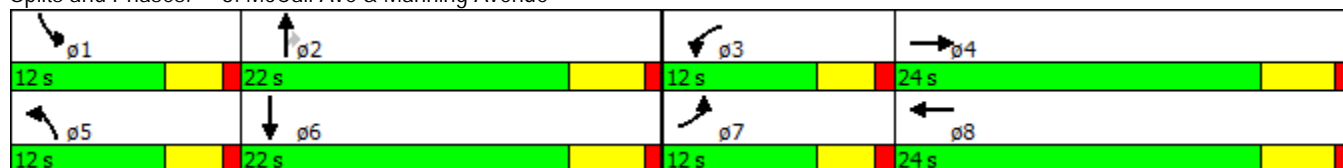


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.8	17.9		7.8	22.7		8.2	16.2	16.2	7.3	13.7	
Actuated g/C Ratio	0.11	0.30		0.13	0.38		0.14	0.27	0.27	0.12	0.23	
v/c Ratio	0.11	0.58		0.48	0.67		0.58	0.23	0.28	0.24	0.63	
Control Delay	29.4	22.3		36.0	22.4		41.0	21.5	5.8	30.7	29.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.4	22.3		36.0	22.4		41.0	21.5	5.8	30.7	29.2	
LOS	C	C		D	C		D	C	A	C	C	
Approach Delay		22.6			23.9			22.5			29.4	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	9	110		42	132		55	38	0	19	93	
Queue Length 95th (ft)	25	137		81	#234		#123	74	32	40	128	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	256	1217		256	1416		256	619	628	256	572	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.09	0.50		0.43	0.64		0.55	0.19	0.24	0.20	0.47	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 59.5
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 24.0
 Intersection LOS: C
 Intersection Capacity Utilization 55.0%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Existing-AM
11/7/2013



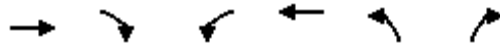
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔		↔	↕↔		↔	↕↔	
Volume (veh/h)	2	1	1	41	2	235	3	156	17	76	151	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.84	0.84	0.84	0.85	0.85	0.85	0.81	0.81	0.81
Hourly flow rate (vph)	2	1	1	49	2	280	4	184	20	94	186	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	756	587	95	482	578	102	190			204		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	756	587	95	482	578	102	190			204		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	89	99	70	100			93		
cM capacity (veh/h)	196	391	943	440	395	934	1381			1365		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	331	4	122	81	94	124	66
Volume Left	2	49	4	0	0	94	0	0
Volume Right	1	280	0	0	20	0	0	4
cSH	348	795	1381	1700	1700	1365	1700	1700
Volume to Capacity	0.01	0.42	0.00	0.07	0.05	0.07	0.07	0.04
Queue Length 95th (ft)	1	52	0	0	0	6	0	0
Control Delay (s)	16.4	12.7	7.6	0.0	0.0	7.8	0.0	0.0
Lane LOS	C	B	A			A		
Approach Delay (s)	16.4	12.7	0.1			2.6		
Approach LOS	C	B						

Intersection Summary		
Average Delay		6.1
Intersection Capacity Utilization	42.6%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Existing-AM
11/7/2013



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	→
Volume (veh/h)	114	22	115	234	36	105
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	134	26	134	272	42	122
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			160		687	147
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			160		687	147
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		89	86
cM capacity (veh/h)			1419		374	900

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	160	406	164
Volume Left	0	134	42
Volume Right	26	0	122
cSH	1700	1419	662
Volume to Capacity	0.09	0.09	0.25
Queue Length 95th (ft)	0	8	24
Control Delay (s)	0.0	3.2	12.2
Lane LOS		A	B
Approach Delay (s)	0.0	3.2	12.2
Approach LOS			B

Intersection Summary			
Average Delay		4.5	
Intersection Capacity Utilization	44.5%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Existing-AM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	52	154	79	117	158	43	71	177	82	70	180	67
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	66	195	100	127	172	47	87	216	100	88	225	84
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	361	346	302	100	396							
Volume Left (vph)	66	127	87	0	88							
Volume Right (vph)	100	47	0	100	84							
Hadj (s)	-0.10	0.03	0.18	-0.67	-0.05							
Departure Headway (s)	8.7	8.9	9.4	8.5	8.7							
Degree Utilization, x	0.88	0.86	0.79	0.24	0.96							
Capacity (veh/h)	399	397	376	411	408							
Control Delay (s)	49.0	46.6	38.6	12.9	65.4							
Approach Delay (s)	49.0	46.6	32.2		65.4							
Approach LOS	E	E	D		F							
Intersection Summary												
Delay			48.3									
Level of Service			E									
Intersection Capacity Utilization			72.8%	ICU Level of Service	C							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Existing-AM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	3	225	56	19	221	4	49	1	33	6	6	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	256	64	22	251	5	56	1	38	7	7	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	256			319			598	593	288	629	623	253
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	256			319			598	593	288	629	623	253
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			86	100	95	98	98	100
cM capacity (veh/h)	1309			1241			401	410	752	369	394	785

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	323	277	94	17
Volume Left	3	22	56	7
Volume Right	64	5	38	3
cSH	1309	1241	492	425
Volume to Capacity	0.00	0.02	0.19	0.04
Queue Length 95th (ft)	0	1	18	3
Control Delay (s)	0.1	0.8	14.0	13.8
Lane LOS	A	A	B	B
Approach Delay (s)	0.1	0.8	14.0	13.8
Approach LOS			B	B

Intersection Summary			
Average Delay		2.5	
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Existing-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	167	38	38	194	101	64	186	25	84	253	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972				0.850		0.982				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1811	0	1770	1863	1583	1770	1829	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1811	0	1770	1863	1583	1770	1829	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				154		9				191
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.82	0.82	0.82	0.75	0.75	0.75	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	157	204	46	51	259	135	80	232	31	99	298	191
Shared Lane Traffic (%)												
Lane Group Flow (vph)	157	250	0	51	259	135	80	263	0	99	298	191
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	13.0	22.0		12.0	21.0	21.0	12.0	24.0		12.0	24.0	24.0
Total Split (%)	18.6%	31.4%		17.1%	30.0%	30.0%	17.1%	34.3%		17.1%	34.3%	34.3%
Maximum Green (s)	9.0	17.1		8.0	16.1	16.1	8.0	19.1		8.0	19.1	19.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Existing-AM
11/7/2013

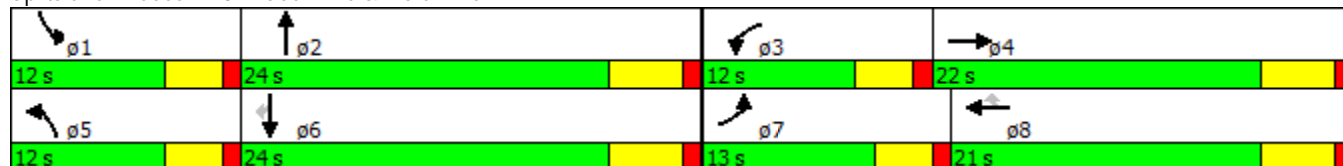


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.4	16.7		7.6	13.5	13.5	7.9	14.9		8.1	17.2	17.2
Actuated g/C Ratio	0.16	0.29		0.13	0.24	0.24	0.14	0.26		0.14	0.30	0.30
v/c Ratio	0.54	0.46		0.22	0.59	0.28	0.33	0.55		0.40	0.53	0.31
Control Delay	36.8	22.6		30.1	29.2	5.2	31.8	25.2		33.2	24.1	5.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	36.8	22.6		30.1	29.2	5.2	31.8	25.2		33.2	24.1	5.3
LOS	D	C		C	C	A	C	C		C	C	A
Approach Delay		28.0			22.0			26.7			19.5	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	59	79		19	92	0	29	88		37	105	0
Queue Length 95th (ft)	#125	138		42	137	17	63	137		80	173	37
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	321	680		286	605	618	286	711		286	742	745
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.49	0.37		0.18	0.43	0.22	0.28	0.37		0.35	0.40	0.26

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 57.3
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 23.5
 Intersection LOS: C
 Intersection Capacity Utilization 49.1%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Existing-PM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	195	7	1	178
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	1	222	8	1	202
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	430	226			230	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	430	226			230	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	582	814			1338	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	230	203
Volume Left	6	0	1
Volume Right	1	8	0
cSH	611	1700	1338
Volume to Capacity	0.01	0.14	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	11.0	0.0	0.1
Lane LOS	B		A
Approach Delay (s)	11.0	0.0	0.1
Approach LOS	B		

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	20.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Existing-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	598	194	7	487	55	127	164	26	92	256	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.985				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	3374	1524	1770	3358	0	1770	3539	1583	1687	3539	1369
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1421	3374	1524	1770	3358	0	1770	3539	1583	1687	3539	1369
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234		17				154			154
Link Speed (mph)		50			50			50				50
Link Distance (ft)		1462			2360			3872				3389
Travel Time (s)		19.9			32.2			52.8				46.2
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.90	0.90	0.90	0.86	0.86	0.86
Heavy Vehicles (%)	27%	7%	6%	2%	6%	5%	2%	2%	2%	7%	2%	18%
Adj. Flow (vph)	75	720	234	7	507	57	141	182	29	107	298	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	720	234	7	564	0	141	182	29	107	298	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	24.0	24.0	12.0	24.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	17.1%	34.3%	34.3%	17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	31.4%
Maximum Green (s)	8.0	19.1	19.1	8.0	19.1		8.0	17.1	17.1	8.0	17.1	17.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Existing-PM
11/7/2013

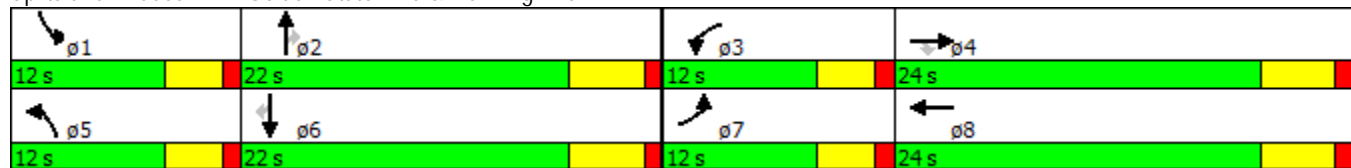


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	7.7	20.8	20.8	6.4	16.4		8.3	10.8	10.8	7.9	10.7	10.7
Actuated g/C Ratio	0.15	0.39	0.39	0.12	0.31		0.16	0.20	0.20	0.15	0.20	0.20
v/c Ratio	0.36	0.54	0.31	0.03	0.53		0.51	0.25	0.07	0.42	0.41	0.29
Control Delay	31.0	15.7	4.0	27.3	19.4		34.4	21.8	0.3	31.4	22.9	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	15.7	4.0	27.3	19.4		34.4	21.8	0.3	31.4	22.9	4.6
LOS	C	B	A	C	B		C	C	A	C	C	A
Approach Delay		14.2			19.5			25.0			20.5	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	25	86	0	2	91		48	30	0	35	50	0
Queue Length 95th (ft)	62	175	35	14	150		#134	58	0	84	84	20
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	237	1558	830	295	1348		295	1262	663	281	1262	587
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.46	0.28	0.02	0.42		0.48	0.14	0.04	0.38	0.24	0.20

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 52.8
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 18.3 Intersection LOS: B
 Intersection Capacity Utilization 48.8% ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Existing-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	635	92	148	426	24	63	132	110	31	129	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.992				0.850		0.977	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3472	0	1770	3511	0	1770	1863	1583	1770	1820	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3472	0	1770	3511	0	1770	1863	1583	1770	1820	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			8				154			12
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	47	730	106	163	468	26	73	153	128	35	147	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	836	0	163	494	0	73	153	128	35	173	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.5		12.0	24.5		12.0	21.5	21.5	12.0	21.5	
Total Split (%)	17.1%	35.0%		17.1%	35.0%		17.1%	30.7%	30.7%	17.1%	30.7%	
Maximum Green (s)	8.0	19.6		8.0	19.6		8.0	16.6	16.6	8.0	16.6	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Existing-PM
11/7/2013

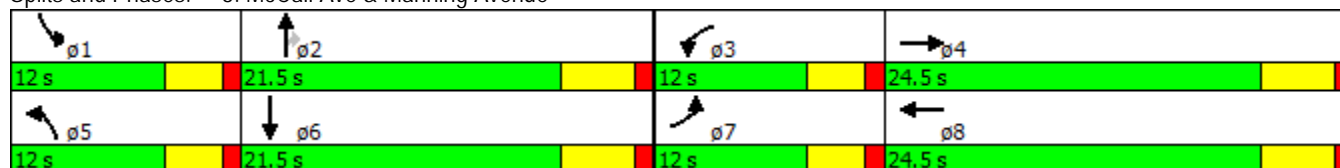


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	7.0	18.0		8.3	24.4		7.4	13.0	13.0	6.8	10.8	
Actuated g/C Ratio	0.12	0.31		0.14	0.42		0.13	0.22	0.22	0.12	0.19	
v/c Ratio	0.22	0.76		0.64	0.33		0.32	0.36	0.27	0.17	0.50	
Control Delay	29.4	24.8		42.5	16.2		30.9	23.4	4.8	28.9	26.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.4	24.8		42.5	16.2		30.9	23.4	4.8	28.9	26.7	
LOS	C	C		D	B		C	C	A	C	C	
Approach Delay		25.1			22.7			18.2			27.1	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	17	150		63	77		27	41	0	13	58	
Queue Length 95th (ft)	45	#235		#164	133		63	99	24	37	108	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	255	1245		255	1487		255	595	610	255	554	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.18	0.67		0.64	0.33		0.29	0.26	0.21	0.14	0.31	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 57.8
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 23.4
 Intersection LOS: C
 Intersection Capacity Utilization 55.2%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Existing-PM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↔		↖	↕		↖	↕	↗
Volume (veh/h)	2	3	7	17	4	101	3	200	50	285	256	1
Sign Control		Stop			Stop			Free				Free
Grade		0%			0%			0%				0%
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.93	0.93	0.93	0.88	0.88	0.88
Hourly flow rate (vph)	2	3	8	18	4	110	3	215	54	324	291	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1165	1214	146	1043	1188	134	292			269		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1165	1214	146	1043	1188	134	292			269		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	97	99	87	97	88	100			75		
cM capacity (veh/h)	103	135	875	144	140	890	1267			1292		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	14	133	3	143	125	324	194	98
Volume Left	2	18	3	0	0	324	0	0
Volume Right	8	110	0	0	54	0	0	1
cSH	293	468	1267	1700	1700	1292	1700	1700
Volume to Capacity	0.05	0.28	0.00	0.08	0.07	0.25	0.11	0.06
Queue Length 95th (ft)	4	29	0	0	0	25	0	0
Control Delay (s)	20.3	15.7	7.8	0.0	0.0	8.7	0.0	0.0
Lane LOS	C	C	A			A		
Approach Delay (s)	20.3	15.7	0.1			4.6		
Approach LOS	C	C						

Intersection Summary		
Average Delay		5.0
Intersection Capacity Utilization	47.0%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Existing-PM
11/7/2013



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↔	↔
Volume (veh/h)	285	55	127	117	21	186
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.94	0.94	0.88	0.88
Hourly flow rate (vph)	328	63	135	124	24	211
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			391		754	359
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			391		754	359
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		93	69
cM capacity (veh/h)			1168		333	685

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	391	260	235
Volume Left	0	135	24
Volume Right	63	0	211
cSH	1700	1168	619
Volume to Capacity	0.23	0.12	0.38
Queue Length 95th (ft)	0	10	44
Control Delay (s)	0.0	4.9	14.3
Lane LOS		A	B
Approach Delay (s)	0.0	4.9	14.3
Approach LOS			B

Intersection Summary			
Average Delay		5.3	
Intersection Capacity Utilization	54.2%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Existing-PM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	47	171	33	120	177	63	70	207	110	52	197	73
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Hourly flow rate (vph)	56	204	39	141	208	74	78	230	122	64	243	90
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	299	424	308	122	398							
Volume Left (vph)	56	141	78	0	64							
Volume Right (vph)	39	74	0	122	90							
Hadj (s)	-0.01	0.00	0.16	-0.67	-0.07							
Departure Headway (s)	9.0	8.7	9.2	8.4	8.6							
Degree Utilization, x	0.75	1.02	0.79	0.29	0.95							
Capacity (veh/h)	383	412	380	417	398							
Control Delay (s)	34.7	79.3	38.1	13.6	61.9							
Approach Delay (s)	34.7	79.3	31.2		61.9							
Approach LOS	D	F	D		F							
Intersection Summary												
Delay			52.9									
Level of Service			F									
Intersection Capacity Utilization			76.5%		ICU Level of Service				D			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Existing-PM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	206	66	17	120	6	43	1	22	4	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	234	75	19	136	7	49	1	25	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	143			309			468	469	272	491	503	140
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	143			309			468	469	272	491	503	140
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			90	100	97	99	100	100
cM capacity (veh/h)	1439			1251			495	482	767	463	461	908

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	317	162	75	8
Volume Left	8	19	49	5
Volume Right	75	7	25	1
cSH	1439	1251	561	497
Volume to Capacity	0.01	0.02	0.13	0.02
Queue Length 95th (ft)	0	1	11	1
Control Delay (s)	0.2	1.1	12.4	12.4
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.1	12.4	12.4
Approach LOS			B	B

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization	27.7%		ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Existing-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	196	47	20	143	56	51	330	28	45	208	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971				0.850		0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1809	0	1770	1863	1583	1770	1840	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1809	0	1770	1863	1583	1770	1840	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				154		6				180
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	232	218	52	23	166	65	55	359	30	53	245	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	232	270	0	23	166	65	55	389	0	53	245	180
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	14.0	22.9		12.0	20.9	20.9	12.0	23.1		12.0	23.1	23.1
Total Split (%)	20.0%	32.7%		17.1%	29.9%	29.9%	17.1%	33.0%		17.1%	33.0%	33.0%
Maximum Green (s)	10.0	18.0		8.0	16.0	16.0	8.0	18.2		8.0	18.2	18.2
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Existing-PM
11/7/2013

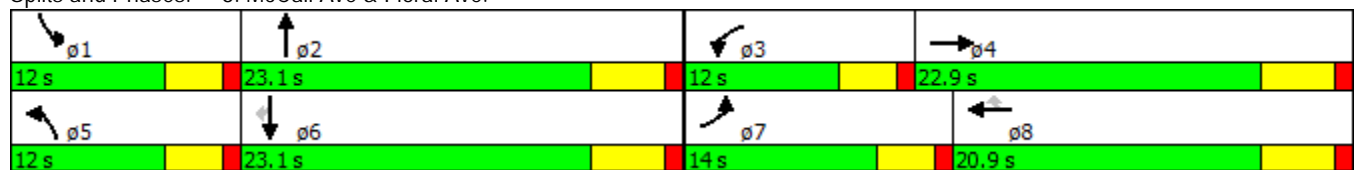


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	11.1	18.7		6.9	11.1	11.1	7.4	16.5		7.4	16.5	16.5
Actuated g/C Ratio	0.20	0.34		0.12	0.20	0.20	0.13	0.30		0.13	0.30	0.30
v/c Ratio	0.66	0.44		0.11	0.45	0.15	0.23	0.71		0.23	0.44	0.30
Control Delay	39.2	19.7		28.9	26.9	0.7	29.7	29.7		29.6	22.5	5.5
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	39.2	19.7		28.9	26.9	0.7	29.7	29.7		29.6	22.5	5.5
LOS	D	B		C	C	A	C	C		C	C	A
Approach Delay		28.7			20.4			29.7			16.9	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	89	68		8	60	0	20	135		19	79	0
Queue Length 95th (ft)	#224	166		28	107	0	54	#292		49	145	37
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	352	732		282	593	609	282	670		282	675	688
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.66	0.37		0.08	0.28	0.11	0.20	0.58		0.19	0.36	0.26

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 55.6
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 24.4
 Intersection LOS: C
 Intersection Capacity Utilization 56.3%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Existing Plus Project-AM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	133	9	1	230
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	3	151	10	1	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	420	156			161	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420	156			161	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	590	889			1418	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	14	161	262
Volume Left	10	0	1
Volume Right	3	10	0
cSH	644	1700	1418
Volume to Capacity	0.02	0.09	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	10.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	10.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization		22.9%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Existing Plus Project-AM

11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	392	113	4	698	89	177	184	6	49	115	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Fr _t			0.850		0.983				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153		18				135			135
Link Speed (mph)		50		50			50			50		50
Link Distance (ft)		1462		2360			3872			3389		
Travel Time (s)		19.9		32.2			52.8			46.2		
Peak Hour Factor	0.74	0.74	0.74	0.78	0.78	0.78	0.91	0.91	0.91	0.77	0.77	0.77
Heavy Vehicles (%)	15%	11%	6%	2%	4%	3%	2%	2%	2%	6%	2%	20%
Adj. Flow (vph)	82	530	153	5	895	114	195	202	7	64	149	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	530	153	5	1009	0	195	202	7	64	149	83
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12		12			12			12		12
Link Offset(ft)		0		0			0			0		0
Crosswalk Width(ft)		16		16			16			16		16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	31.0	31.0	12.0	31.0		14.0	25.0	25.0	12.0	23.0	23.0
Total Split (%)	15.0%	38.8%	38.8%	15.0%	38.8%		17.5%	31.3%	31.3%	15.0%	28.8%	28.8%
Maximum Green (s)	8.0	26.1	26.1	8.0	26.1		10.0	20.1	20.1	8.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Existing Plus Project-AM
11/7/2013

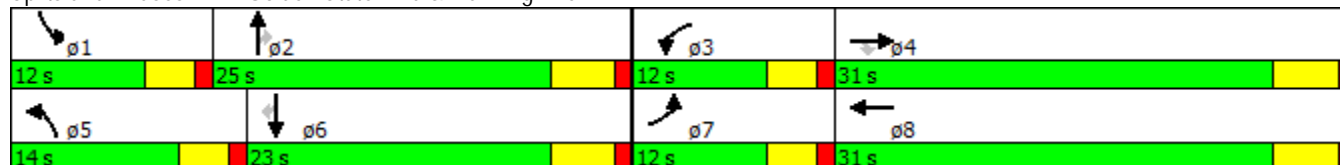


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	7.5	31.0	31.0	5.9	24.0		10.2	15.9	15.9	7.3	8.3	8.3
Actuated g/C Ratio	0.11	0.47	0.47	0.09	0.37		0.16	0.24	0.24	0.11	0.13	0.13
v/c Ratio	0.46	0.34	0.19	0.03	0.80		0.71	0.23	0.01	0.34	0.33	0.29
Control Delay	38.7	12.2	3.3	30.5	24.9		46.0	25.4	0.0	34.6	30.2	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	12.2	3.3	30.5	24.9		46.0	25.4	0.0	34.6	30.2	4.5
LOS	D	B	A	C	C		D	C	A	C	C	A
Approach Delay		13.2			25.0			34.9			24.0	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	34	60	0	2	195		83	42	0	26	31	0
Queue Length 95th (ft)	61	101	19	10	226		#189	71	0	53	48	4
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	197	1669	857	222	1411		278	1131	597	213	1006	479
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.32	0.18	0.02	0.72		0.70	0.18	0.01	0.30	0.15	0.17

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 65.5
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 22.8
 Intersection LOS: C
 Intersection Capacity Utilization 53.5%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Existing Plus Project-AM

11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	415	59	90	693	18	119	97	126	37	165	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.996				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3472	0	1770	3525	0	1770	1863	1583	1770	1818	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3472	0	1770	3525	0	1770	1863	1583	1770	1818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			4				154			13
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.83	0.83	0.83	0.72	0.72	0.72
Adj. Flow (vph)	23	539	77	114	877	23	143	117	152	51	229	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	616	0	114	900	0	143	117	152	51	273	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.0		12.0	24.0		12.0	22.0	22.0	12.0	22.0	
Total Split (%)	17.1%	34.3%		17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	
Maximum Green (s)	8.0	19.1		8.0	19.1		8.0	17.1	17.1	8.0	17.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

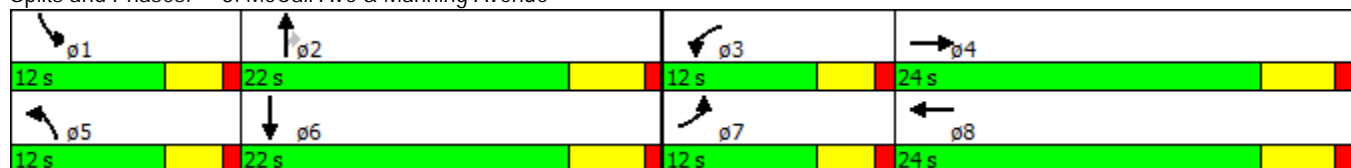


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.8	18.0		7.9	22.8		8.2	16.3	16.3	7.3	13.7	
Actuated g/C Ratio	0.11	0.30		0.13	0.38		0.14	0.27	0.27	0.12	0.23	
v/c Ratio	0.11	0.58		0.49	0.67		0.59	0.23	0.28	0.24	0.64	
Control Delay	29.4	22.4		36.4	22.4		41.3	21.5	5.9	30.8	29.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.4	22.4		36.4	22.4		41.3	21.5	5.9	30.8	29.4	
LOS	C	C		D	C		D	C	A	C	C	
Approach Delay		22.6			23.9			22.6			29.6	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	9	111		44	133		56	38	0	19	95	
Queue Length 95th (ft)	25	138		83	#234		#124	74	32	40	129	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	255	1212		255	1415		255	617	627	255	570	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.09	0.51		0.45	0.64		0.56	0.19	0.24	0.20	0.48	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 59.7
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 24.1
 Intersection LOS: C
 Intersection Capacity Utilization 55.1%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Existing Plus Project-AM
11/7/2013



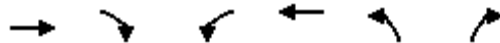
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔		↔	↕		↔	↕	
Volume (veh/h)	2	1	1	41	2	236	3	156	18	77	151	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.84	0.84	0.84	0.85	0.85	0.85	0.81	0.81	0.81
Hourly flow rate (vph)	2	1	1	49	2	281	4	184	21	95	186	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	759	590	95	485	581	102	190			205		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	759	590	95	485	581	102	190			205		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	89	99	70	100			93		
cM capacity (veh/h)	194	388	943	438	393	933	1381			1364		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	332	4	122	82	95	124	66
Volume Left	2	49	4	0	0	95	0	0
Volume Right	1	281	0	0	21	0	0	4
cSH	345	793	1381	1700	1700	1364	1700	1700
Volume to Capacity	0.01	0.42	0.00	0.07	0.05	0.07	0.07	0.04
Queue Length 95th (ft)	1	52	0	0	0	6	0	0
Control Delay (s)	16.5	12.8	7.6	0.0	0.0	7.8	0.0	0.0
Lane LOS	C	B	A			A		
Approach Delay (s)	16.5	12.8	0.1			2.6		
Approach LOS	C	B						

Intersection Summary		
Average Delay		6.1
Intersection Capacity Utilization	42.8%	ICU Level of Service
Analysis Period (min)		15
		A

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Existing Plus Project-AM
11/7/2013




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	116	22	116	235	36	107
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	136	26	135	273	42	124
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			162		692	149
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			162		692	149
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			90		89	86
cM capacity (veh/h)			1416		371	897

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	162	408	166
Volume Left	0	135	42
Volume Right	26	0	124
cSH	1700	1416	661
Volume to Capacity	0.10	0.10	0.25
Queue Length 95th (ft)	0	8	25
Control Delay (s)	0.0	3.2	12.3
Lane LOS		A	B
Approach Delay (s)	0.0	3.2	12.3
Approach LOS			B

Intersection Summary			
Average Delay		4.5	
Intersection Capacity Utilization	44.8%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Existing Plus Project-AM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	154	79	118	158	47	71	192	83	73	190	75
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	81	195	100	128	172	51	87	234	101	91	238	94
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	376	351	321	101	423							
Volume Left (vph)	81	128	87	0	91							
Volume Right (vph)	100	51	0	101	94							
Hadj (s)	-0.08	0.02	0.17	-0.67	-0.06							
Departure Headway (s)	8.9	9.1	9.5	8.6	9.1							
Degree Utilization, x	0.93	0.88	0.84	0.24	1.07							
Capacity (veh/h)	402	391	365	405	387							
Control Delay (s)	58.1	51.4	45.8	13.2	95.0							
Approach Delay (s)	58.1	51.4	38.0		95.0							
Approach LOS	F	F	E		F							
Intersection Summary												
Delay			61.1									
Level of Service			F									
Intersection Capacity Utilization			72.5%		ICU Level of Service				C			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Existing Plus Project-AM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	3	228	57	19	225	4	51	1	33	6	6	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	259	65	22	256	5	58	1	38	7	7	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	260			324			606	602	291	638	632	258
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	260			324			606	602	291	638	632	258
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			85	100	95	98	98	100
cM capacity (veh/h)	1304			1236			396	405	748	364	390	781

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	327	282	97	17
Volume Left	3	22	58	7
Volume Right	65	5	38	3
cSH	1304	1236	484	420
Volume to Capacity	0.00	0.02	0.20	0.04
Queue Length 95th (ft)	0	1	18	3
Control Delay (s)	0.1	0.8	14.3	13.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.1	0.8	14.3	13.9
Approach LOS			B	B

Intersection Summary			
Average Delay		2.6	
Intersection Capacity Utilization	38.6%		ICU Level of Service
Analysis Period (min)		15	A

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Existing Plus Project-AM

11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	167	38	38	194	103	64	188	25	85	254	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972				0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1811	0	1770	1863	1583	1770	1831	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1811	0	1770	1863	1583	1770	1831	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				154		9				192
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.82	0.82	0.82	0.75	0.75	0.75	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	160	204	46	51	259	137	80	235	31	100	299	192
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	250	0	51	259	137	80	266	0	100	299	192
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	13.0	22.0		12.0	21.0	21.0	12.0	24.0		12.0	24.0	24.0
Total Split (%)	18.6%	31.4%		17.1%	30.0%	30.0%	17.1%	34.3%		17.1%	34.3%	34.3%
Maximum Green (s)	9.0	17.1		8.0	16.1	16.1	8.0	19.1		8.0	19.1	19.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

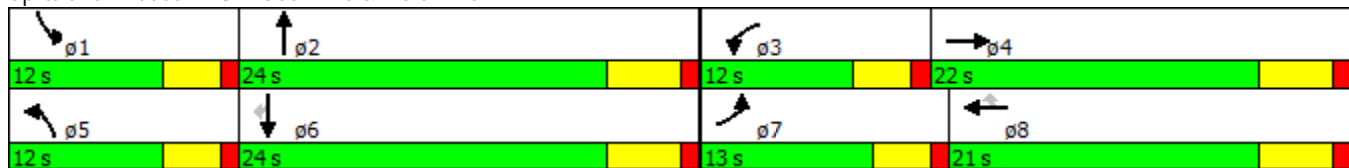


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	9.4	16.7		7.6	13.5	13.5	7.9	14.9		8.1	17.2	17.2
Actuated g/C Ratio	0.16	0.29		0.13	0.24	0.24	0.14	0.26		0.14	0.30	0.30
v/c Ratio	0.55	0.46		0.22	0.59	0.28	0.33	0.55		0.40	0.53	0.31
Control Delay	37.2	22.6		30.1	29.2	5.4	31.8	25.3		33.3	24.1	5.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	37.2	22.6		30.1	29.2	5.4	31.8	25.3		33.3	24.1	5.3
LOS	D	C		C	C	A	C	C		C	C	A
Approach Delay		28.3			22.0			26.8			19.5	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	60	80		19	92	0	29	89		37	106	0
Queue Length 95th (ft)	#128	138		42	137	18	63	139		80	173	37
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	321	680		285	605	618	285	711		285	742	746
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.50	0.37		0.18	0.43	0.22	0.28	0.37		0.35	0.40	0.26

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 57.3
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 23.5
 Intersection LOS: C
 Intersection Capacity Utilization 49.2%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Existing Plus Project-PM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	200	7	1	182
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	1	227	8	1	207
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	440	231			235	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	440	231			235	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	574	808			1332	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	235	208
Volume Left	6	0	1
Volume Right	1	8	0
cSH	603	1700	1332
Volume to Capacity	0.01	0.14	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	11.0	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	11.0	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		21.0%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Existing Plus Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	598	194	7	487	60	127	167	26	96	258	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.984				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	3374	1524	1770	3355	0	1770	3539	1583	1687	3539	1369
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1421	3374	1524	1770	3355	0	1770	3539	1583	1687	3539	1369
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234		19				154			154
Link Speed (mph)		50			50			50				50
Link Distance (ft)		1462			2360			3872				3389
Travel Time (s)		19.9			32.2			52.8				46.2
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.90	0.90	0.90	0.86	0.86	0.86
Heavy Vehicles (%)	27%	7%	6%	2%	6%	5%	2%	2%	2%	7%	2%	18%
Adj. Flow (vph)	75	720	234	7	507	62	141	186	29	112	300	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	720	234	7	569	0	141	186	29	112	300	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	24.0	24.0	12.0	24.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	17.1%	34.3%	34.3%	17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	31.4%
Maximum Green (s)	8.0	19.1	19.1	8.0	19.1		8.0	17.1	17.1	8.0	17.1	17.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Existing Plus Project-PM
11/7/2013

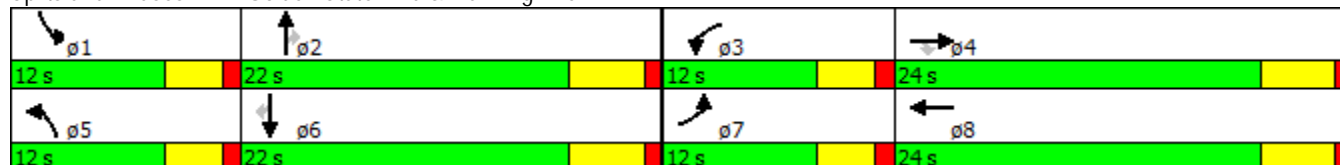


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	7.7	21.1	21.1	6.4	16.7		8.4	10.9	10.9	8.1	10.8	10.8
Actuated g/C Ratio	0.14	0.40	0.40	0.12	0.31		0.16	0.20	0.20	0.15	0.20	0.20
v/c Ratio	0.37	0.54	0.31	0.03	0.53		0.51	0.26	0.07	0.44	0.42	0.29
Control Delay	31.2	15.7	4.0	27.3	19.3		34.6	21.9	0.3	32.2	23.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	15.7	4.0	27.3	19.3		34.6	21.9	0.3	32.2	23.0	4.5
LOS	C	B	A	C	B		C	C	A	C	C	A
Approach Delay		14.2			19.4			25.2			20.9	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)	25	87	0	2	92		49	31	0	38	52	0
Queue Length 95th (ft)	62	175	35	14	151		#134	59	0	#91	85	20
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	236	1563	831	293	1341		293	1256	661	280	1256	585
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.46	0.28	0.02	0.42		0.48	0.15	0.04	0.40	0.24	0.20

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 53.2
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 18.4
 Intersection LOS: B
 Intersection Capacity Utilization 48.9%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Existing Plus Project-PM

11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	635	96	152	426	24	68	137	115	31	133	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.992				0.850		0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3511	0	1770	1863	1583	1770	1822	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3468	0	1770	3511	0	1770	1863	1583	1770	1822	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			8				154			12
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	47	730	110	167	468	26	79	159	134	35	151	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	840	0	167	494	0	79	159	134	35	177	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.5		12.0	24.5		12.0	21.5	21.5	12.0	21.5	
Total Split (%)	17.1%	35.0%		17.1%	35.0%		17.1%	30.7%	30.7%	17.1%	30.7%	
Maximum Green (s)	8.0	19.6		8.0	19.6		8.0	16.6	16.6	8.0	16.6	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

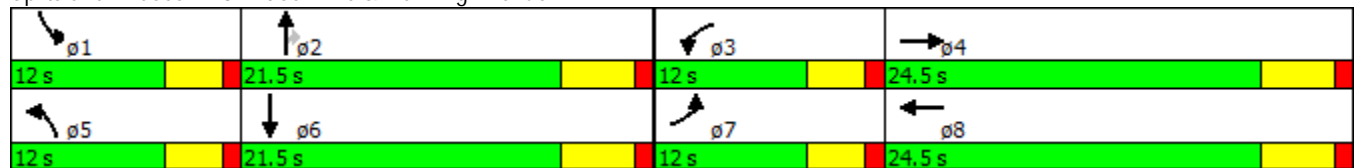


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	7.0	18.0		8.3	24.1		7.4	15.5	15.5	6.8	11.0	
Actuated g/C Ratio	0.12	0.30		0.14	0.40		0.12	0.26	0.26	0.11	0.18	
v/c Ratio	0.23	0.80		0.69	0.35		0.37	0.33	0.26	0.17	0.52	
Control Delay	30.0	27.4		46.3	17.0		32.5	22.4	5.0	29.4	28.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	30.0	27.4		46.3	17.0		32.5	22.4	5.0	29.4	28.0	
LOS	C	C		D	B		C	C	A	C	C	
Approach Delay		27.5			24.4			18.3			28.3	
Approach LOS		C			C			B			C	
Queue Length 50th (ft)	17	152		65	78		29	43	0	13	60	
Queue Length 95th (ft)	46	#250		#169	133		67	102	27	37	111	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	244	1189		244	1408		244	593	609	244	530	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.19	0.71		0.68	0.35		0.32	0.27	0.22	0.14	0.33	

Intersection Summary






















Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 60.3
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 25.0
 Intersection LOS: C
 Intersection Capacity Utilization 56.0%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



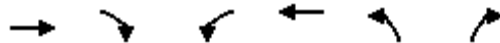
HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Existing Plus Project-PM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	3	7	19	4	104	3	200	52	287	256	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.93	0.93	0.93	0.88	0.88	0.88
Hourly flow rate (vph)	2	3	8	21	4	113	3	215	56	326	291	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1173	1221	146	1049	1194	135	292			271		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1173	1221	146	1049	1194	135	292			271		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	97	99	85	97	87	100			75		
cM capacity (veh/h)	101	133	875	142	138	888	1267			1289		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	14	138	3	143	128	326	194	98				
Volume Left	2	21	3	0	0	326	0	0				
Volume Right	8	113	0	0	56	0	0	1				
cSH	288	454	1267	1700	1700	1289	1700	1700				
Volume to Capacity	0.05	0.30	0.00	0.08	0.08	0.25	0.11	0.06				
Queue Length 95th (ft)	4	32	0	0	0	25	0	0				
Control Delay (s)	20.5	16.4	7.8	0.0	0.0	8.7	0.0	0.0				
Lane LOS	C	C	A			A						
Approach Delay (s)	20.5	16.4	0.1			4.6						
Approach LOS	C	C										
Intersection Summary												
Average Delay			5.2									
Intersection Capacity Utilization			47.4%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.


















Existing Plus Project-PM
11/7/2013



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	289	55	132	122	21	190
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.94	0.94	0.88	0.88
Hourly flow rate (vph)	332	63	140	130	24	216
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			395		774	364
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			395		774	364
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			88		93	68
cM capacity (veh/h)			1163		322	681
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	395	270	240			
Volume Left	0	140	24			
Volume Right	63	0	216			
cSH	1700	1163	613			
Volume to Capacity	0.23	0.12	0.39			
Queue Length 95th (ft)	0	10	46			
Control Delay (s)	0.0	5.0	14.6			
Lane LOS		A	B			
Approach Delay (s)	0.0	5.0	14.6			
Approach LOS			B			
Intersection Summary						
Average Delay			5.3			
Intersection Capacity Utilization			55.2%	ICU Level of Service	B	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Existing Plus Project-PM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	74	171	33	122	177	72	70	242	112	62	235	103
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Hourly flow rate (vph)	88	204	39	144	208	85	78	269	124	77	290	127
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	331	436	347	124	494							
Volume Left (vph)	88	144	78	0	77							
Volume Right (vph)	39	85	0	124	127							
Hadj (s)	0.02	-0.02	0.15	-0.67	-0.09							
Departure Headway (s)	9.4	9.0	9.5	8.7	9.0							
Degree Utilization, x	0.86	1.09	0.92	0.30	1.24							
Capacity (veh/h)	371	399	370	408	403							
Control Delay (s)	48.8	101.6	57.8	14.2	153.9							
Approach Delay (s)	48.8	101.6	46.3		153.9							
Approach LOS	E	F	E		F							
Intersection Summary												
Delay			91.4									
Level of Service			F									
Intersection Capacity Utilization			78.2%	ICU Level of Service	D							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Existing Plus Project-PM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	216	71	17	129	6	47	1	22	4	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	245	81	19	147	7	53	1	25	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	153			326			493	494	286	516	531	150
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	153			326			493	494	286	516	531	150
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			89	100	97	99	99	100
cM capacity (veh/h)	1427			1234			476	466	753	446	445	896

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	334	173	80	8
Volume Left	8	19	53	5
Volume Right	81	7	25	1
cSH	1427	1234	538	480
Volume to Capacity	0.01	0.02	0.15	0.02
Queue Length 95th (ft)	0	1	13	1
Control Delay (s)	0.2	1.0	12.8	12.6
Lane LOS	A	A	B	B
Approach Delay (s)	0.2	1.0	12.8	12.6
Approach LOS			B	B

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization	28.9%		ICU Level of Service
Analysis Period (min)	15		A

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Existing Plus Project-PM

11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	213	196	47	20	143	60	51	330	32	50	213	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971				0.850		0.987				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1809	0	1770	1863	1583	1770	1839	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1809	0	1770	1863	1583	1770	1839	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				154		7				186
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	237	218	52	23	166	70	55	359	35	59	251	186
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	270	0	23	166	70	55	394	0	59	251	186
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	14.0	22.9		12.0	20.9	20.9	12.0	23.1		12.0	23.1	23.1
Total Split (%)	20.0%	32.7%		17.1%	29.9%	29.9%	17.1%	33.0%		17.1%	33.0%	33.0%
Maximum Green (s)	10.0	18.0		8.0	16.0	16.0	8.0	18.2		8.0	18.2	18.2
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

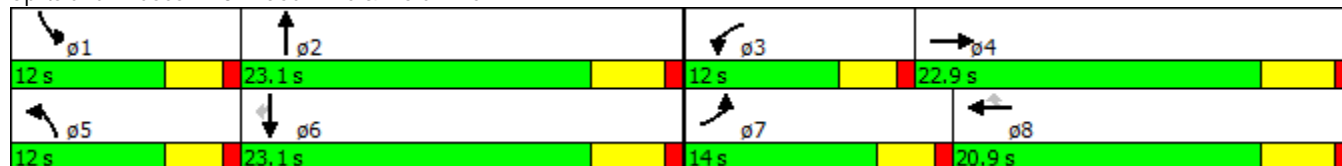


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	11.1	18.7		6.9	11.1	11.1	7.4	16.6		7.4	16.6	16.6
Actuated g/C Ratio	0.20	0.34		0.12	0.20	0.20	0.13	0.30		0.13	0.30	0.30
v/c Ratio	0.68	0.44		0.11	0.45	0.16	0.24	0.71		0.25	0.45	0.31
Control Delay	40.2	19.8		28.9	27.0	0.8	29.7	29.9		30.0	22.6	5.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	40.2	19.8		28.9	27.0	0.8	29.7	29.9		30.0	22.6	5.4
LOS	D	B		C	C	A	C	C		C	C	A
Approach Delay		29.3			20.1			29.9			17.0	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	92	68		8	60	0	20	137		22	81	0
Queue Length 95th (ft)	#230	166		28	107	0	54	#296		54	148	37
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	351	729		281	591	607	281	668		281	673	691
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.68	0.37		0.08	0.28	0.12	0.20	0.59		0.21	0.37	0.27

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 55.7
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 24.5
 Intersection LOS: C
 Intersection Capacity Utilization 56.8%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Near-Term With Project-AM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	178	9	1	248
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	3	202	10	1	282
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	491	207			212	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	491	207			212	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	536	833			1358	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	14	212	283
Volume Left	10	0	1
Volume Right	3	10	0
cSH	588	1700	1358
Volume to Capacity	0.02	0.13	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	11.3	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	11.3	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Near-Term With Project-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	408	162	4	736	92	271	238	7	73	119	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.983				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1570	3252	1524	1770	3416	0	1770	3539	1583	1703	3539	1346
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			219		18				135			135
Link Speed (mph)		50			50			50				50
Link Distance (ft)		1462			2360			3872				3389
Travel Time (s)		19.9			32.2			52.8				46.2
Peak Hour Factor	0.74	0.74	0.74	0.78	0.78	0.78	0.91	0.91	0.91	0.77	0.77	0.77
Heavy Vehicles (%)	15%	11%	6%	2%	4%	3%	2%	2%	2%	6%	2%	20%
Adj. Flow (vph)	82	551	219	5	944	118	298	262	8	95	155	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	551	219	5	1062	0	298	262	8	95	155	83
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	31.0	31.0	12.0	31.0		14.0	25.0	25.0	12.0	23.0	23.0
Total Split (%)	15.0%	38.8%	38.8%	15.0%	38.8%		17.5%	31.3%	31.3%	15.0%	28.8%	28.8%
Maximum Green (s)	8.0	26.1	26.1	8.0	26.1		10.0	20.1	20.1	8.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Near-Term With Project-AM
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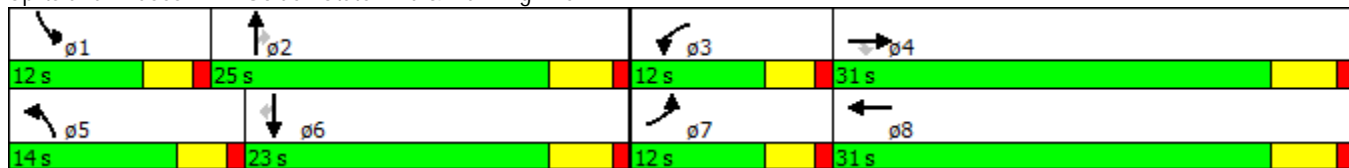


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	7.4	32.1	32.1	5.9	25.0		10.2	13.8	13.8	7.6	8.6	8.6
Actuated g/C Ratio	0.11	0.48	0.48	0.09	0.37		0.15	0.21	0.21	0.11	0.13	0.13
v/c Ratio	0.47	0.35	0.26	0.03	0.82		1.10	0.36	0.02	0.49	0.34	0.29
Control Delay	39.6	12.4	3.1	31.0	26.5		119.2	27.6	0.1	39.5	30.1	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	12.4	3.1	31.0	26.5		119.2	27.6	0.1	39.5	30.1	4.4
LOS	D	B	A	C	C		F	C	A	D	C	A
Approach Delay		12.6			26.5			75.3			26.4	
Approach LOS		B			C			E			C	
Queue Length 50th (ft)	34	63	0	2	211		~159	55	0	39	33	0
Queue Length 95th (ft)	62	107	20	10	247		#314	90	0	72	50	4
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	191	1639	877	216	1372		270	1087	580	207	978	469
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.34	0.25	0.02	0.77		1.10	0.24	0.01	0.46	0.16	0.18

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 66.8
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.10
 Intersection Signal Delay: 32.1
 Intersection LOS: C
 Intersection Capacity Utilization 59.8%
 ICU Level of Service B
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Near-Term With Project-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	437	82	106	741	50	180	110	132	53	167	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.991				0.850		0.976	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3507	0	1770	1863	1583	1770	1818	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3454	0	1770	3507	0	1770	1863	1583	1770	1818	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			10				159			13
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.77	0.77	0.77	0.79	0.79	0.79	0.83	0.83	0.83	0.72	0.72	0.72
Adj. Flow (vph)	23	568	106	134	938	63	217	133	159	74	232	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	23	674	0	134	1001	0	217	133	159	74	276	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.0		12.0	24.0		12.0	22.0	22.0	12.0	22.0	
Total Split (%)	17.1%	34.3%		17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	
Maximum Green (s)	8.0	19.1		8.0	19.1		8.0	17.1	17.1	8.0	17.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Near-Term With Project-AM
11/7/2013

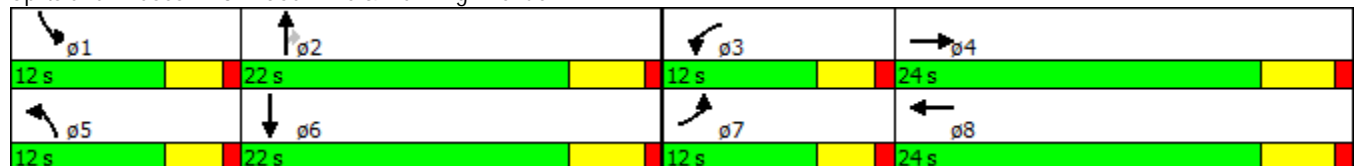


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.5	18.4		7.8	23.3		8.1	19.2	19.2	7.2	13.6	
Actuated g/C Ratio	0.10	0.29		0.12	0.37		0.13	0.30	0.30	0.11	0.21	
v/c Ratio	0.13	0.66		0.62	0.77		0.96	0.24	0.27	0.37	0.69	
Control Delay	29.9	23.9		43.3	26.2		84.4	21.7	5.7	33.6	32.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.9	23.9		43.3	26.2		84.4	21.7	5.7	33.6	32.1	
LOS	C	C		D	C		F	C	A	C	C	
Approach Delay		24.1			28.2			43.4			32.4	
Approach LOS		C			C			D			C	
Queue Length 50th (ft)	9	123		53	154		-94	46	0	28	99	
Queue Length 95th (ft)	25	151		#104	#291		#205	82	34	53	130	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	227	1081		227	1299		227	578	600	227	509	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.10	0.62		0.59	0.77		0.96	0.23	0.27	0.33	0.54	

Intersection Summary






















Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 63.3
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 30.6
 Intersection LOS: C
 Intersection Capacity Utilization 60.9%
 ICU Level of Service B
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



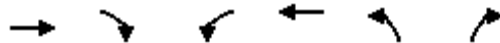
HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Near-Term With Project-AM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1	1	43	2	371	3	168	23	148	157	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.84	0.84	0.84	0.85	0.85	0.85	0.81	0.81	0.81
Hourly flow rate (vph)	2	1	1	51	2	442	4	198	27	183	194	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			1									
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1110	793	99	681	781	112	198			225		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1110	793	99	681	781	112	198			225		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	100	83	99	52	100			86		
cM capacity (veh/h)	76	275	938	299	280	919	1372			1341		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	5	495	4	132	93	183	129	68				
Volume Left	2	51	4	0	0	183	0	0				
Volume Right	1	442	0	0	27	0	0	4				
cSH	190	750	1372	1700	1700	1341	1700	1700				
Volume to Capacity	0.02	0.66	0.00	0.08	0.05	0.14	0.08	0.04				
Queue Length 95th (ft)	2	126	0	0	0	12	0	0				
Control Delay (s)	25.4	18.6	7.6	0.0	0.0	8.1	0.0	0.0				
Lane LOS	D	C	A			A						
Approach Delay (s)	25.4	18.6	0.1			3.9						
Approach LOS	D	C										
Intersection Summary												
Average Delay			9.8									
Intersection Capacity Utilization			55.7%	ICU Level of Service	B							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Near-Term With Project-AM
11/7/2013




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	←	→
Volume (veh/h)	206	31	116	407	49	107
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	242	36	135	473	57	124
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			279	1004	261	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			279	1004	261	
tC, single (s)			4.1	6.4	6.2	
tC, 2 stage (s)						
tF (s)			2.2	3.5	3.3	
p0 queue free %			89	76	84	
cM capacity (veh/h)			1284	240	778	

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	279	608	181
Volume Left	0	135	57
Volume Right	36	0	124
cSH	1700	1284	457
Volume to Capacity	0.16	0.11	0.40
Queue Length 95th (ft)	0	9	47
Control Delay (s)	0.0	2.7	18.0
Lane LOS		A	C
Approach Delay (s)	0.0	2.7	18.0
Approach LOS			C

Intersection Summary			
Average Delay		4.6	
Intersection Capacity Utilization	59.9%		ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Near-Term With Project-AM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	64	245	79	224	178	213	71	208	123	114	195	75
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	81	310	100	243	193	232	87	254	150	142	244	94
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	491	668	340	150	480							
Volume Left (vph)	81	243	87	0	143							
Volume Right (vph)	100	232	0	150	94							
Hadj (s)	-0.06	-0.10	0.16	-0.67	-0.02							
Departure Headway (s)	9.3	9.3	9.8	9.0	9.5							
Degree Utilization, x	1.27	1.72	0.93	0.38	1.26							
Capacity (veh/h)	392	392	360	396	386							
Control Delay (s)	169.1	358.8	61.6	16.1	165.2							
Approach Delay (s)	169.1	358.8	47.7		165.2							
Approach LOS	F	F	E		F							
Intersection Summary												
Delay			199.8									
Level of Service			F									
Intersection Capacity Utilization			105.4%	ICU Level of Service	G							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Near-Term With Project-AM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	3	383	74	19	488	4	80	1	33	6	6	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	3	435	84	22	555	5	91	1	38	7	7	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	559			519			1091	1086	477	1122	1126	557
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	559			519			1091	1086	477	1122	1126	557
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			50	99	94	96	97	99
cM capacity (veh/h)	1012			1047			183	211	588	168	200	530

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	523	581	130	17
Volume Left	3	22	91	7
Volume Right	84	5	38	3
cSH	1012	1047	229	210
Volume to Capacity	0.00	0.02	0.57	0.08
Queue Length 95th (ft)	0	2	78	7
Control Delay (s)	0.1	0.6	39.5	23.7
Lane LOS	A	A	E	C
Approach Delay (s)	0.1	0.6	39.5	23.7
Approach LOS			E	C

Intersection Summary			
Average Delay		4.7	
Intersection Capacity Utilization		56.6%	ICU Level of Service
Analysis Period (min)		15	B

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Near-Term With Project-AM

11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	280	52	38	410	159	64	189	25	111	261	199
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.983				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1820	0	1770	1863	1583	1770	1831	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1820	0	1770	1863	1583	1770	1831	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				212		9				234
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.82	0.82	0.82	0.75	0.75	0.75	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	160	341	63	51	547	212	80	236	31	131	307	234
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	404	0	51	547	212	80	267	0	131	307	234
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	13.0	22.0		12.0	21.0	21.0	12.0	24.0		12.0	24.0	24.0
Total Split (%)	18.6%	31.4%		17.1%	30.0%	30.0%	17.1%	34.3%		17.1%	34.3%	34.3%
Maximum Green (s)	9.0	17.1		8.0	16.1	16.1	8.0	19.1		8.0	19.1	19.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Near-Term With Project-AM
11/7/2013

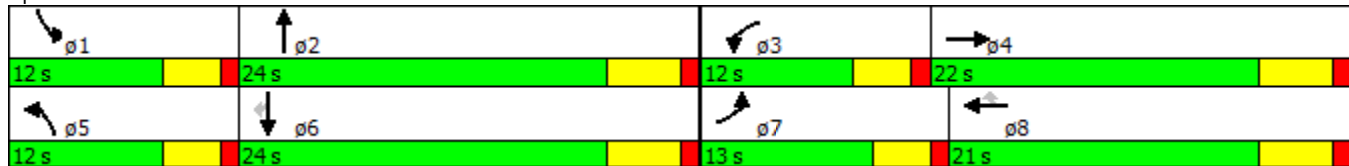


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	8.7	22.8		7.0	16.5	16.5	7.3	14.8		7.8	15.0	15.0
Actuated g/C Ratio	0.14	0.36		0.11	0.26	0.26	0.12	0.23		0.12	0.24	0.24
v/c Ratio	0.66	0.61		0.26	1.13	0.37	0.39	0.61		0.60	0.69	0.42
Control Delay	43.7	27.4		31.7	108.3	6.0	34.4	28.1		42.8	31.6	5.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	43.7	27.4		31.7	108.3	6.0	34.4	28.1		42.8	31.6	5.9
LOS	D	C		C	F	A	C	C		D	C	A
Approach Delay		32.1			76.7			29.5			24.8	
Approach LOS		C			E			C			C	
Queue Length 50th (ft)	63	150		20	-282	0	31	94		52	115	0
Queue Length 95th (ft)	#128	#271		42	#369	27	63	140		#115	178	40
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	258	666		230	486	570	230	574		230	577	652
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.62	0.61		0.22	1.13	0.37	0.35	0.47		0.57	0.53	0.36

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 63.2
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 44.8
 Intersection LOS: D
 Intersection Capacity Utilization 61.3%
 ICU Level of Service B
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Near-Term With Project-PM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	233	7	1	233
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	1	265	8	1	265
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	536	269			273	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	536	269			273	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	505	770			1291	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	273	266
Volume Left	6	0	1
Volume Right	1	8	0
cSH	536	1700	1291
Volume to Capacity	0.01	0.16	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	11.8	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	11.8	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		23.1%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Near-Term With Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	616	260	7	498	62	185	232	30	167	271	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Fr _t			0.850		0.983				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1421	3374	1524	1770	3351	0	1770	3539	1583	1687	3539	1369
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1421	3374	1524	1770	3351	0	1770	3539	1583	1687	3539	1369
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			313		19				154			154
Link Speed (mph)		50			50			50				50
Link Distance (ft)		1462			2360			3872				3389
Travel Time (s)		19.9			32.2			52.8				46.2
Peak Hour Factor	0.83	0.83	0.83	0.96	0.96	0.96	0.90	0.90	0.90	0.86	0.86	0.86
Heavy Vehicles (%)	27%	7%	6%	2%	6%	5%	2%	2%	2%	7%	2%	18%
Adj. Flow (vph)	75	742	313	7	519	65	206	258	33	194	315	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	742	313	7	584	0	206	258	33	194	315	117
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	12.0	24.0	24.0	12.0	24.0		12.0	22.0	22.0	12.0	22.0	22.0
Total Split (%)	17.1%	34.3%	34.3%	17.1%	34.3%		17.1%	31.4%	31.4%	17.1%	31.4%	31.4%
Maximum Green (s)	8.0	19.1	19.1	8.0	19.1		8.0	17.1	17.1	8.0	17.1	17.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Near-Term With Project-PM
11/7/2013

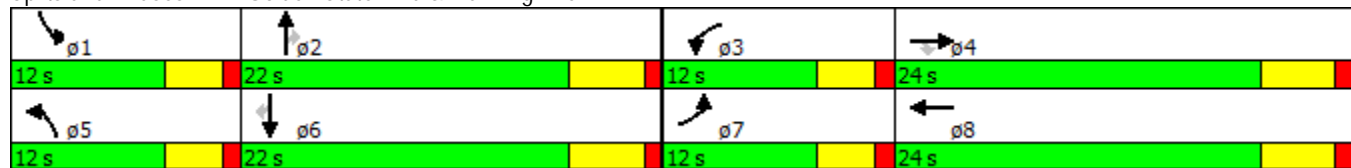


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effect Green (s)	7.4	21.1	21.1	6.0	16.5		8.3	10.8	10.8	8.3	10.8	10.8
Actuated g/C Ratio	0.13	0.38	0.38	0.11	0.29		0.15	0.19	0.19	0.15	0.19	0.19
v/c Ratio	0.40	0.59	0.41	0.04	0.59		0.79	0.38	0.08	0.78	0.46	0.30
Control Delay	32.9	17.1	4.2	27.7	20.6		52.8	23.0	0.4	53.1	24.0	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.9	17.1	4.2	27.7	20.6		52.8	23.0	0.4	53.1	24.0	4.7
LOS	C	B	A	C	C		D	C	A	D	C	A
Approach Delay		14.5			20.7			33.9			29.4	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)	26	92	0	2	95		75	44	0	71	55	0
Queue Length 95th (ft)	62	182	39	14	156		#210	78	0	#188	88	20
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	209	1420	822	261	1192		261	1116	604	248	1116	537
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.52	0.38	0.03	0.49		0.79	0.23	0.05	0.78	0.28	0.22

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 56.2
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 22.5 Intersection LOS: C
 Intersection Capacity Utilization 52.9% ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Near-Term With Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	663	176	169	444	55	115	139	131	69	146	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.984				0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3429	0	1770	3483	0	1770	1863	1583	1770	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3429	0	1770	3483	0	1770	1863	1583	1770	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			19				154			11
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.86	0.86	0.86	0.88	0.88	0.88
Adj. Flow (vph)	47	762	202	186	488	60	134	162	152	78	166	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	964	0	186	548	0	134	162	152	78	192	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	24.5		12.0	24.5		12.0	21.5	21.5	12.0	21.5	
Total Split (%)	17.1%	35.0%		17.1%	35.0%		17.1%	30.7%	30.7%	17.1%	30.7%	
Maximum Green (s)	8.0	19.6		8.0	19.6		8.0	16.6	16.6	8.0	16.6	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Near-Term With Project-PM
11/7/2013

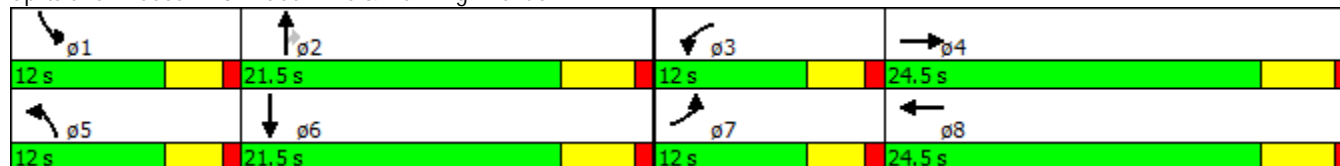


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	7.0	19.6		8.2	25.4		7.8	11.7	11.7	7.3	11.5	
Actuated g/C Ratio	0.11	0.31		0.13	0.41		0.12	0.19	0.19	0.12	0.18	
v/c Ratio	0.24	0.87		0.81	0.38		0.61	0.47	0.36	0.38	0.56	
Control Delay	30.7	31.8		58.0	17.2		42.4	28.1	7.1	33.3	29.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	30.7	31.8		58.0	17.2		42.4	28.1	7.1	33.3	29.2	
LOS	C	C		E	B		D	C	A	C	C	
Approach Delay		31.8			27.5			25.2			30.4	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	17	182		74	87		51	58	0	29	66	
Queue Length 95th (ft)	46	#312		#193	148		#121	103	36	68	119	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	231	1132		231	1426		231	506	542	231	504	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.20	0.85		0.81	0.38		0.58	0.32	0.28	0.34	0.38	

Intersection Summary






















Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 62.4
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 29.2
 Intersection LOS: C
 Intersection Capacity Utilization 63.6%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



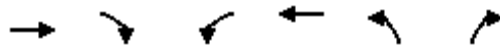
HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Near-Term With Project-PM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	3	7	23	4	215	3	211	55	417	276	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.92	0.92	0.92	0.93	0.93	0.93	0.88	0.88	0.88
Hourly flow rate (vph)	2	3	8	25	4	234	3	227	59	474	314	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1618	1554	157	1369	1525	143	315			286		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1618	1554	157	1369	1525	143	315			286		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	95	99	65	94	73	100			63		
cM capacity (veh/h)	34	70	860	72	73	879	1242			1273		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	14	263	3	151	135	474	209	106				
Volume Left	2	25	3	0	0	474	0	0				
Volume Right	8	234	0	0	59	0	0	1				
cSH	134	390	1242	1700	1700	1273	1700	1700				
Volume to Capacity	0.10	0.67	0.00	0.09	0.08	0.37	0.12	0.06				
Queue Length 95th (ft)	8	120	0	0	0	44	0	0				
Control Delay (s)	37.3	31.4	7.9	0.0	0.0	9.5	0.0	0.0				
Lane LOS	E	D	A			A						
Approach Delay (s)	37.3	31.4	0.1			5.7						
Approach LOS	E	D										
Intersection Summary												
Average Delay			9.8									
Intersection Capacity Utilization			62.1%	ICU Level of Service	B							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Near-Term With Project-PM
11/7/2013




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	455	82	132	264	37	190
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.94	0.94	0.88	0.88
Hourly flow rate (vph)	523	94	140	281	42	216
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			617	1132		570
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			617	1132		570
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			85	78		59
cM capacity (veh/h)			963	192		521

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	617	421	258
Volume Left	0	140	42
Volume Right	94	0	216
cSH	1700	963	407
Volume to Capacity	0.36	0.15	0.63
Queue Length 95th (ft)	0	13	106
Control Delay (s)	0.0	4.2	27.9
Lane LOS		A	D
Approach Delay (s)	0.0	4.2	27.9
Approach LOS			D

Intersection Summary			
Average Delay			6.9
Intersection Capacity Utilization	73.9%		ICU Level of Service
Analysis Period (min)			15

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Near-Term With Project-PM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	74	344	33	189	321	209	70	251	210	259	251	103
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Hourly flow rate (vph)	88	410	39	222	378	246	78	279	233	320	310	127
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	537	846	357	233	757							
Volume Left (vph)	88	222	78	0	320							
Volume Right (vph)	39	246	0	233	127							
Hadj (s)	0.02	-0.09	0.14	-0.67	0.02							
Departure Headway (s)	9.5	9.4	9.8	9.0	9.6							
Degree Utilization, x	1.42	2.20	0.97	0.58	2.01							
Capacity (veh/h)	389	391	357	390	382							
Control Delay (s)	227.4	570.8	71.0	22.7	487.4							
Approach Delay (s)	227.4	570.8	51.9		487.4							
Approach LOS	F	F	F		F							
Intersection Summary												
Delay			368.0									
Level of Service			F									
Intersection Capacity Utilization			125.7%		ICU Level of Service				H			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Near-Term With Project-PM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	637	118	17	442	6	82	1	22	4	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	724	134	19	502	7	93	1	25	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	509			858			1353	1355	791	1377	1418	506
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	509			858			1353	1355	791	1377	1418	506
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			24	99	94	96	98	100
cM capacity (veh/h)	1056			783			122	145	390	111	132	567

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	866	528	119	8
Volume Left	8	19	93	5
Volume Right	134	7	25	1
cSH	1056	783	143	132
Volume to Capacity	0.01	0.02	0.84	0.06
Queue Length 95th (ft)	1	2	135	5
Control Delay (s)	0.2	0.7	97.5	33.9
Lane LOS	A	A	F	D
Approach Delay (s)	0.2	0.7	97.5	33.9
Approach LOS			F	D

Intersection Summary			
Average Delay		8.2	
Intersection Capacity Utilization	58.3%		ICU Level of Service
Analysis Period (min)		15	B

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Near-Term With Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	213	467	83	20	386	114	51	337	32	120	216	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.987				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1820	0	1770	1863	1583	1770	1839	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1820	0	1770	1863	1583	1770	1839	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				154		7				212
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.90	0.90	0.90	0.86	0.86	0.86	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	237	519	92	23	449	133	55	366	35	141	254	212
Shared Lane Traffic (%)												
Lane Group Flow (vph)	237	611	0	23	449	133	55	401	0	141	254	212
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	14.0	22.9		12.0	20.9	20.9	12.0	23.1		12.0	23.1	23.1
Total Split (%)	20.0%	32.7%		17.1%	29.9%	29.9%	17.1%	33.0%		17.1%	33.0%	33.0%
Maximum Green (s)	10.0	18.0		8.0	16.0	16.0	8.0	18.2		8.0	18.2	18.2
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Near-Term With Project-PM
11/7/2013

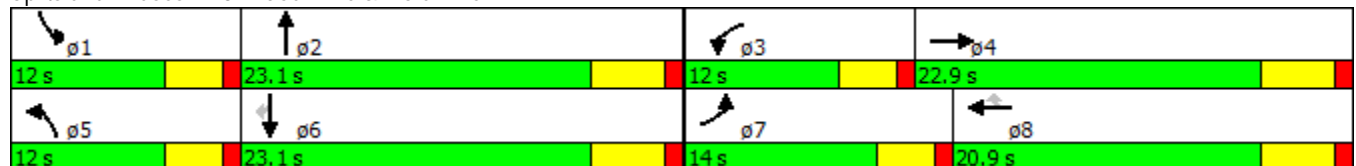


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	10.0	25.5		6.5	16.0	16.0	7.1	17.3		7.8	22.1	22.1
Actuated g/C Ratio	0.15	0.37		0.09	0.23	0.23	0.10	0.25		0.11	0.32	0.32
v/c Ratio	0.93	0.90		0.14	1.04	0.27	0.30	0.86		0.70	0.43	0.33
Control Delay	73.2	43.5		30.6	83.7	4.9	33.4	44.6		51.0	23.0	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	73.2	43.5		30.6	83.7	4.9	33.4	44.6		51.0	23.0	5.1
LOS	E	D		C	F	A	C	D		D	C	A
Approach Delay		51.8			64.4			43.2			23.3	
Approach LOS		D			E			D			C	
Queue Length 50th (ft)	103	212		9	-217	0	22	160		60	93	0
Queue Length 95th (ft)	#230	#532		28	#356	27	54	#304		#127	150	39
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	256	680		205	432	486	205	491		205	596	651
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.93	0.90		0.11	1.04	0.27	0.27	0.82		0.69	0.43	0.33

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 68.9
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 46.4
 Intersection LOS: D
 Intersection Capacity Utilization 74.1%
 ICU Level of Service D
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Cumulative 2035 No Project-AM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	185	12	1	425
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	3	201	13	1	462
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	672	208			214	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	672	208			214	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	421	833			1356	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	214	463
Volume Left	10	0	1
Volume Right	3	13	0
cSH	480	1700	1356
Volume to Capacity	0.03	0.13	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	12.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	12.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization		33.2%	ICU Level of Service
Analysis Period (min)		15	A

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Cumulative 2035 No Project-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	488	162	5	1009	251	271	519	8	155	462	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.970				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3433	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3433	0	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			176		33				98			174
Link Speed (mph)		50			50			50				50
Link Distance (ft)		1462			2360			3872				3389
Travel Time (s)		19.9			32.2			52.8				46.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	530	176	5	1097	273	295	564	9	168	502	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	530	176	5	1370	0	295	564	9	168	502	333
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	16.0	52.0	52.0	12.0	48.0		23.0	29.0	29.0	17.0	23.0	23.0
Total Split (%)	14.5%	47.3%	47.3%	10.9%	43.6%		20.9%	26.4%	26.4%	15.5%	20.9%	20.9%
Maximum Green (s)	12.0	47.1	47.1	8.0	43.1		19.0	24.1	24.1	13.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Cumulative 2035 No Project-AM
11/7/2013

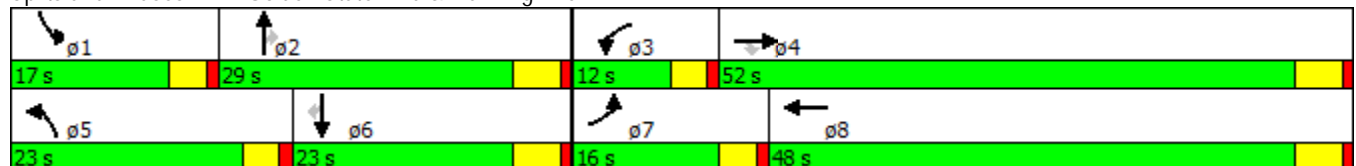


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.0	57.0	57.0	5.9	43.1		19.0	24.1	24.1	12.6	17.7	17.7
Actuated g/C Ratio	0.11	0.52	0.52	0.05	0.39		0.17	0.22	0.22	0.11	0.16	0.16
v/c Ratio	0.96	0.29	0.19	0.05	1.00		0.96	0.72	0.02	0.83	0.88	0.83
Control Delay	105.0	16.1	3.1	50.2	57.5		89.0	45.9	0.1	79.0	62.6	39.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.0	16.1	3.1	50.2	57.5		89.0	45.9	0.1	79.0	62.6	39.5
LOS	F	B	A	D	E		F	D	A	E	E	D
Approach Delay		32.0			57.4			60.1			57.7	
Approach LOS		C			E			E			E	
Queue Length 50th (ft)	133	102	0	3	-497		209	195	0	117	183	111
Queue Length 95th (ft)	#275	168	39	16	#663		#380	258	0	#230	#272	#262
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	194	1839	907	128	1370		306	779	425	210	584	406
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.29	0.19	0.04	1.00		0.96	0.72	0.02	0.80	0.86	0.82

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 109.6
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 52.6
 Intersection LOS: D
 Intersection Capacity Utilization 88.0%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Cumulative 2035 No Project-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	596	80	178	1096	50	179	141	234	84	303	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.993				0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3514	0	1770	1863	1583	1770	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3476	0	1770	3514	0	1770	1863	1583	1770	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			6				178			8
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	648	87	193	1191	54	195	153	254	91	329	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	735	0	193	1245	0	195	153	254	91	380	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	32.4		17.0	37.4		15.0	27.6	27.6	13.0	25.6	
Total Split (%)	13.3%	36.0%		18.9%	41.6%		16.7%	30.7%	30.7%	14.4%	28.4%	
Maximum Green (s)	8.0	27.5		13.0	32.5		11.0	22.7	22.7	9.0	20.7	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Cumulative 2035 No Project-AM
11/7/2013

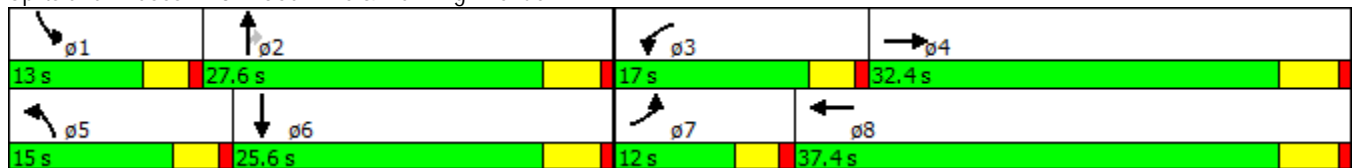


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.6	23.1		12.2	34.9		11.1	25.0	25.0	8.2	19.7	
Actuated g/C Ratio	0.08	0.28		0.15	0.42		0.13	0.30	0.30	0.10	0.23	
v/c Ratio	0.16	0.76		0.75	0.85		0.84	0.28	0.43	0.53	0.88	
Control Delay	40.8	33.1		55.5	30.7		68.2	27.4	11.7	49.5	54.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	40.8	33.1		55.5	30.7		68.2	27.4	11.7	49.5	54.0	
LOS	D	C		E	C		E	C	B	D	D	
Approach Delay		33.4			34.0			34.0			53.1	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	11	187		101	277		105	66	32	47	193	
Queue Length 95th (ft)	35	251		#211	#513		#236	125	102	99	#372	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	169	1157		275	1486		233	553	595	191	459	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.13	0.64		0.70	0.84		0.84	0.28	0.43	0.48	0.83	

Intersection Summary






















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 84
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 36.6
 Intersection LOS: D
 Intersection Capacity Utilization 78.8%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



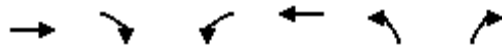
HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Cumulative 2035 No Project-AM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	19	50	105	77	370	143	245	22	147	445	133
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	21	54	114	84	402	155	266	24	160	484	145
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
			1									
Median type												
								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1764	1477	314	1161	1537	145	628			290		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1764	1477	314	1161	1537	145	628			290		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	77	92	0	0	54	84			87		
cM capacity (veh/h)	1	91	682	91	84	876	950			1268		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	128	600	155	178	113	160	322	306				
Volume Left	53	114	155	0	0	160	0	0				
Volume Right	54	402	0	0	24	0	0	145				
cSH	4	222	950	1700	1700	1268	1700	1700				
Volume to Capacity	33.76	2.70	0.16	0.10	0.07	0.13	0.19	0.18				
Queue Length 95th (ft)	Err	1291	15	0	0	11	0	0				
Control Delay (s)	Err	813.3	9.5	0.0	0.0	8.2	0.0	0.0				
Lane LOS	F	F	A			A						
Approach Delay (s)	Err	813.3	3.3			1.7						
Approach LOS	F	F										
Intersection Summary												
Average Delay			903.8									
Intersection Capacity Utilization			73.7%	ICU Level of Service							D	
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Cumulative 2035 No Project-AM
11/7/2013



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	
Volume (veh/h)	204	80	296	406	116	212
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	222	87	322	441	126	230
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			309		1350	265
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			309		1350	265
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			74		0	70
cM capacity (veh/h)			1252		123	773

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	309	763	357
Volume Left	0	322	126
Volume Right	87	0	230
cSH	1700	1252	270
Volume to Capacity	0.18	0.26	1.32
Queue Length 95th (ft)	0	26	454
Control Delay (s)	0.0	5.5	205.1
Lane LOS		A	F
Approach Delay (s)	0.0	5.5	205.1
Approach LOS			F

Intersection Summary			
Average Delay		54.2	
Intersection Capacity Utilization	82.8%		ICU Level of Service E
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Cumulative 2035 No Project-AM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↗		↕	
Sign Control		Stop			Stop			Stop	↗		Stop	
Volume (vph)	87	245	146	223	277	209	110	255	122	111	424	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	95	266	159	242	301	227	120	277	133	121	461	167

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total (vph)	520	771	397	133	749
Volume Left (vph)	95	242	120	0	121
Volume Right (vph)	159	227	0	133	167
Hadj (s)	-0.11	-0.08	0.18	-0.67	-0.07
Departure Headway (s)	9.4	9.4	9.8	9.0	9.6
Degree Utilization, x	1.36	2.02	1.09	0.33	1.99
Capacity (veh/h)	391	387	373	396	382
Control Delay (s)	204.1	490.7	102.8	15.2	476.0
Approach Delay (s)	204.1	490.7	80.9		476.0
Approach LOS	F	F	F		F

Intersection Summary

Delay	344.0
Level of Service	F
Intersection Capacity Utilization	134.4%
ICU Level of Service	H
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Cumulative 2035 No Project-AM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	4	380	73	24	492	5	78	1	43	7	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	413	79	26	535	5	85	1	47	8	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	540			492			1059	1054	453	1098	1091	538
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	540			492			1059	1054	453	1098	1091	538
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			56	100	92	96	96	99
cM capacity (veh/h)	1028			1071			191	220	607	171	209	544

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	497	566	133	20
Volume Left	4	26	85	8
Volume Right	79	5	47	4
cSH	1028	1071	252	220
Volume to Capacity	0.00	0.02	0.53	0.09
Queue Length 95th (ft)	0	2	70	7
Control Delay (s)	0.1	0.7	34.1	23.0
Lane LOS	A	A	D	C
Approach Delay (s)	0.1	0.7	34.1	23.0
Approach LOS			D	C

Intersection Summary			
Average Delay		4.5	
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Cumulative 2035 No Project-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	280	52	55	410	174	68	205	32	158	442	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976				0.850		0.980				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1818	0	1770	1863	1583	1770	1825	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1818	0	1770	1863	1583	1770	1825	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				189		9				353
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	304	57	60	446	189	74	223	35	172	480	353
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	361	0	60	446	189	74	258	0	172	480	353
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	15.0	33.0		12.0	30.0	30.0	12.0	29.0		16.0	33.0	33.0
Total Split (%)	16.7%	36.7%		13.3%	33.3%	33.3%	13.3%	32.2%		17.8%	36.7%	36.7%
Maximum Green (s)	11.0	28.1		8.0	25.1	25.1	8.0	24.1		12.0	28.1	28.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Cumulative 2035 No Project-AM
11/7/2013

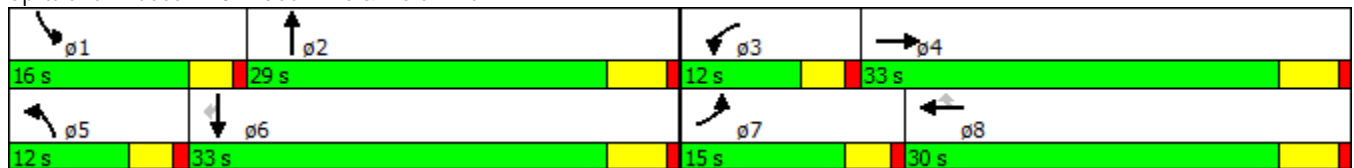


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	10.9	29.1		7.3	22.9	22.9	7.5	20.1		11.3	26.5	26.5
Actuated g/C Ratio	0.13	0.35		0.09	0.27	0.27	0.09	0.24		0.14	0.32	0.32
v/c Ratio	0.80	0.56		0.39	0.87	0.33	0.47	0.58		0.72	0.81	0.47
Control Delay	64.5	28.2		46.3	49.3	5.8	49.2	32.8		55.1	40.2	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	64.5	28.2		46.3	49.3	5.8	49.2	32.8		55.1	40.2	5.1
LOS	E	C		D	D	A	D	C		E	D	A
Approach Delay		40.5			37.2			36.5			30.4	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	105	169		33	240	0	41	120		95	251	0
Queue Length 95th (ft)	#222	263		72	#405	48	85	196		#190	#414	60
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	238	643		173	573	617	173	545		260	641	777
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.78	0.56		0.35	0.78	0.31	0.43	0.47		0.66	0.75	0.45

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 83.4
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 35.2 Intersection LOS: D
 Intersection Capacity Utilization 72.9% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Cumulative 2035 No Project-PM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	497	9	1	346
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	540	10	1	376
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	923	545			550	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	923	545			550	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	299	538			1020	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	550	377
Volume Left	5	0	1
Volume Right	1	10	0
cSH	323	1700	1020
Volume to Capacity	0.02	0.32	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	16.4	0.0	0.0
Lane LOS	C		A
Approach Delay (s)	16.4	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		36.7%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Cumulative 2035 No Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	177	740	260	10	570	216	244	1057	73	370	838	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.959				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3394	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3394	0	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			283		42				90			229
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	804	283	11	620	235	265	1149	79	402	911	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	804	283	11	855	0	265	1149	79	402	911	304
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	16.0	35.4	35.4	12.0	31.4		26.0	43.6	43.6	29.0	46.6	46.6
Total Split (%)	13.3%	29.5%	29.5%	10.0%	26.2%		21.7%	36.3%	36.3%	24.2%	38.8%	38.8%
Maximum Green (s)	12.0	30.5	30.5	8.0	26.5		22.0	38.7	38.7	25.0	41.7	41.7
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

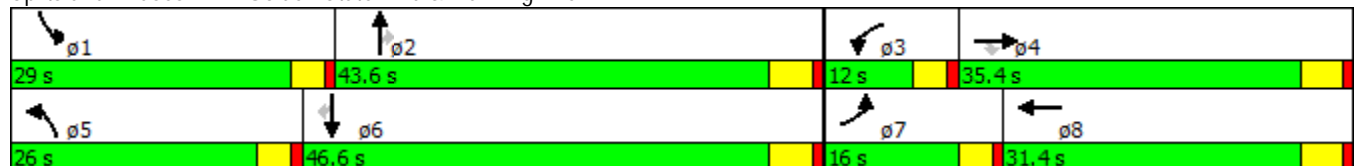


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.0	40.2	40.2	6.3	26.5		20.7	38.7	38.7	25.0	43.0	43.0
Actuated g/C Ratio	0.10	0.34	0.34	0.05	0.22		0.17	0.32	0.32	0.21	0.36	0.36
v/c Ratio	1.08	0.68	0.39	0.12	1.09		0.87	1.01	0.14	1.09	0.72	0.43
Control Delay	142.5	38.6	5.5	56.4	102.4		75.6	69.1	5.2	118.7	37.5	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	142.5	38.6	5.5	56.4	102.4		75.6	69.1	5.2	118.7	37.5	9.8
LOS	F	D	A	E	F		E	E	A	F	D	A
Approach Delay		46.9			101.8			66.9			52.5	
Approach LOS		D			F			E			D	
Queue Length 50th (ft)	~167	272	0	8	-380		199	~473	0	~351	324	40
Queue Length 95th (ft)	#317	#423	68	28	#510		#337	#626	29	#549	403	114
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	177	1184	718	118	782		324	1141	571	368	1268	714
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.68	0.39	0.09	1.09		0.82	1.01	0.14	1.09	0.72	0.43

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 63.3
 Intersection LOS: E
 Intersection Capacity Utilization 97.0%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Cumulative 2035 No Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	1098	172	321	777	99	110	329	249	93	225	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.983				0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3479	0	1770	1863	1583	1770	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3468	0	1770	3479	0	1770	1863	1583	1770	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			16				126			6
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	1193	187	349	845	108	120	358	271	101	245	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	1380	0	349	953	0	120	358	271	101	282	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	16.0	51.0		27.0	62.0		13.0	30.0	30.0	12.0	29.0	
Total Split (%)	13.3%	42.5%		22.5%	51.7%		10.8%	25.0%	25.0%	10.0%	24.2%	
Maximum Green (s)	12.0	46.1		23.0	57.1		9.0	25.1	25.1	8.0	24.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

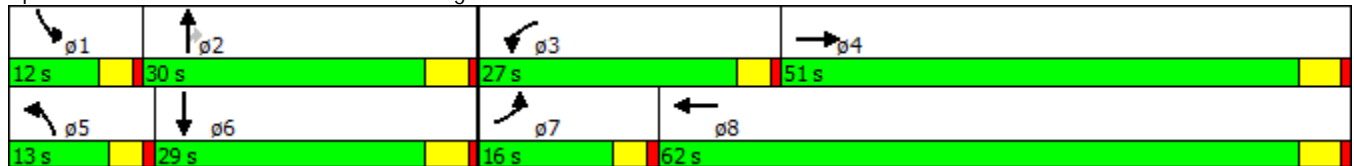


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	10.2	46.1		23.0	61.1		9.0	24.5	24.5	8.0	23.5	
Actuated g/C Ratio	0.09	0.39		0.19	0.51		0.08	0.21	0.21	0.07	0.20	
v/c Ratio	0.56	1.02		1.02	0.53		0.90	0.94	0.64	0.86	0.77	
Control Delay	66.8	66.8		103.0	21.6		111.5	79.8	30.3	106.1	59.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	66.8	66.8		103.0	21.6		111.5	79.8	30.3	106.1	59.9	
LOS	E	E		F	C		F	E	C	F	E	
Approach Delay		66.8			43.4			67.0			72.1	
Approach LOS		E			D			E			E	
Queue Length 50th (ft)	64	-596		-289	263		94	274	102	79	204	
Queue Length 95th (ft)	117	#738		#476	332		#211	#452	196	#184	#326	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	178	1348		341	1786		133	391	432	118	373	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.48	1.02		1.02	0.53		0.90	0.92	0.63	0.86	0.76	

Intersection Summary





















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 119.4
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 59.6
 Intersection LOS: E
 Intersection Capacity Utilization 90.9%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Cumulative 2035 No Project-PM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	54	252	33	51	212	141	1025	76	445	796	49
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	134	59	274	36	55	230	153	1114	83	484	865	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2981	3362	459	2891	3348	598	918			1197		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2981	3362	459	2891	3348	598	918			1197		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	50	0	0	48	79			16		
cM capacity (veh/h)	0	1	549	0	1	445	739			579		
Direction, Lane #												
	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	466	322	153	743	454	484	577	342				
Volume Left	134	36	153	0	0	484	0	0				
Volume Right	274	230	0	0	83	0	0	53				
cSH	0	0	739	1700	1700	579	1700	1700				
Volume to Capacity	Err	Err	0.21	0.44	0.27	0.84	0.34	0.20				
Queue Length 95th (ft)	Err	Err	19	0	0	219	0	0				
Control Delay (s)	Err	Err	11.1	0.0	0.0	35.1	0.0	0.0				
Lane LOS	F	F	B			E						
Approach Delay (s)	Err	Err	1.3			12.1						
Approach LOS	F	F										
Intersection Summary												
Average Delay			Err									
Intersection Capacity Utilization			95.9%		ICU Level of Service			F				
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Cumulative 2035 No Project-PM
11/7/2013




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	451	209	293	259	98	439
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	490	227	318	282	107	477
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			717		1522	604
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			717		1522	604
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			64		0	4
cM capacity (veh/h)			884		83	498

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	717	600	584
Volume Left	0	318	107
Volume Right	227	0	477
cSH	1700	884	261
Volume to Capacity	0.42	0.36	2.24
Queue Length 95th (ft)	0	41	1130
Control Delay (s)	0.0	8.3	599.1
Lane LOS		A	F
Approach Delay (s)	0.0	8.3	599.1
Approach LOS			F

Intersection Summary			
Average Delay		186.6	
Intersection Capacity Utilization		108.8%	ICU Level of Service G
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Cumulative 2035 No Project-PM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	171	367	92	187	321	200	127	543	208	249	412	138
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	186	399	100	203	349	217	138	590	226	271	448	150
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	685	770	728	226	868							
Volume Left (vph)	186	203	138	0	271							
Volume Right (vph)	100	217	0	226	150							
Hadj (s)	0.00	-0.08	0.13	-0.67	-0.01							
Departure Headway (s)	9.5	9.4	9.8	9.0	9.6							
Degree Utilization, x	1.81	2.02	1.98	0.57	2.32							
Capacity (veh/h)	383	387	373	389	382							
Control Delay (s)	398.4	489.2	472.0	21.9	623.5							
Approach Delay (s)	398.4	489.2	365.3		623.5							
Approach LOS	F	F	F		F							
Intersection Summary												
Delay			469.8									
Level of Service			F									
Intersection Capacity Utilization			141.4%	ICU Level of Service	H							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Cumulative 2035 No Project-PM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	9	627	113	21	439	7	78	1	28	5	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	682	123	23	477	8	85	1	30	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	485			804			1291	1293	743	1320	1351	481
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	485			804			1291	1293	743	1320	1351	481
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			37	99	93	95	98	100
cM capacity (veh/h)	1078			820			134	157	415	120	145	585

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	814	508	116	9
Volume Left	10	23	85	5
Volume Right	123	8	30	1
cSH	1078	820	164	140
Volume to Capacity	0.01	0.03	0.71	0.06
Queue Length 95th (ft)	1	2	107	5
Control Delay (s)	0.2	0.8	68.2	32.5
Lane LOS	A	A	F	D
Approach Delay (s)	0.2	0.8	68.2	32.5
Approach LOS			F	D

Intersection Summary			
Average Delay		6.1	
Intersection Capacity Utilization		57.3%	ICU Level of Service
Analysis Period (min)		15	B

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Cumulative 2035 No Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	420	467	83	25	386	163	63	520	39	136	299	289
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.990				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1820	0	1770	1863	1583	1770	1844	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1820	0	1770	1863	1583	1770	1844	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				177		3				314
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	457	508	90	27	420	177	68	565	42	148	325	314
Shared Lane Traffic (%)												
Lane Group Flow (vph)	457	598	0	27	420	177	68	607	0	148	325	314
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	33.0	51.6		12.0	30.6	30.6	13.0	42.4		14.0	43.4	43.4
Total Split (%)	27.5%	43.0%		10.0%	25.5%	25.5%	10.8%	35.3%		11.7%	36.2%	36.2%
Maximum Green (s)	29.0	46.7		8.0	25.7	25.7	9.0	37.5		10.0	38.5	38.5
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Cumulative 2035 No Project-PM
11/7/2013

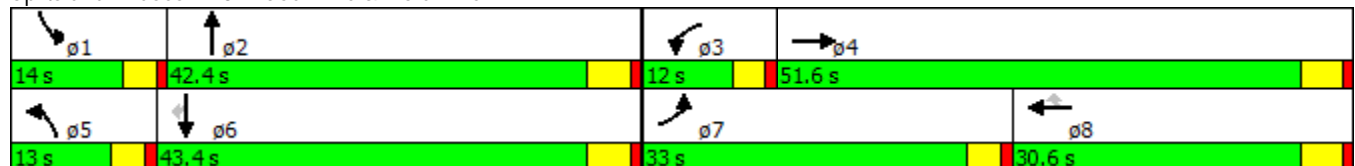


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	29.0	51.7		7.0	25.7	25.7	8.3	37.5		10.0	41.2	41.2
Actuated g/C Ratio	0.24	0.43		0.06	0.21	0.21	0.07	0.31		0.08	0.34	0.34
v/c Ratio	1.07	0.76		0.26	1.06	0.37	0.56	1.05		1.01	0.51	0.42
Control Delay	107.2	37.3		60.0	106.0	8.0	71.6	91.5		131.1	35.8	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	107.2	37.3		60.0	106.0	8.0	71.6	91.5		131.1	35.8	5.1
LOS	F	D		E	F	A	E	F		F	D	A
Approach Delay		67.6			76.2			89.5			41.5	
Approach LOS		E			E			F			D	
Queue Length 50th (ft)	~392	405		20	~355	0	52	~511		~117	206	0
Queue Length 95th (ft)	#598	#607		51	#557	59	101	#739		#255	300	64
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	427	788		118	398	478	132	578		147	639	750
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	1.07	0.76		0.23	1.06	0.37	0.52	1.05		1.01	0.51	0.42

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 67.5 Intersection LOS: E
 Intersection Capacity Utilization 95.7% ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Cumulative 2035 With Project-AM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	3	186	12	1	427
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	3	202	13	1	464
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	675	209			215	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	675	209			215	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	419	832			1355	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	13	215	465
Volume Left	10	0	1
Volume Right	3	13	0
cSH	478	1700	1355
Volume to Capacity	0.03	0.13	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	12.7	0.0	0.0
Lane LOS	B		A
Approach Delay (s)	12.7	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.3	
Intersection Capacity Utilization		33.3%	ICU Level of Service
Analysis Period (min)		15	A

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Cumulative 2035 With Project-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	488	162	5	1009	252	271	520	8	157	463	306
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.970				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3433	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3433	0	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			176		33				98			174
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	530	176	5	1097	274	295	565	9	171	503	333
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	530	176	5	1371	0	295	565	9	171	503	333
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	16.0	52.0	52.0	12.0	48.0		23.0	29.0	29.0	17.0	23.0	23.0
Total Split (%)	14.5%	47.3%	47.3%	10.9%	43.6%		20.9%	26.4%	26.4%	15.5%	20.9%	20.9%
Maximum Green (s)	12.0	47.1	47.1	8.0	43.1		19.0	24.1	24.1	13.0	18.1	18.1
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Cumulative 2035 With Project-AM
11/7/2013

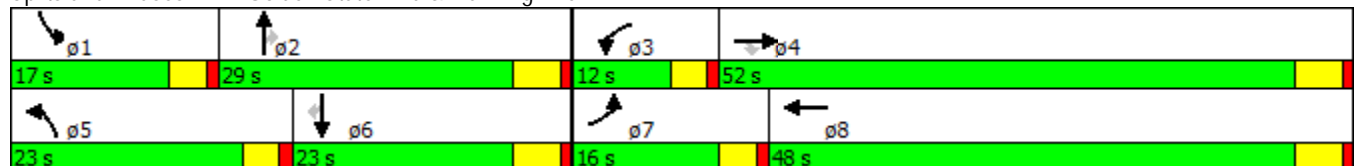


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.0	56.9	56.9	5.9	43.1		19.0	24.1	24.1	12.6	17.7	17.7
Actuated g/C Ratio	0.11	0.52	0.52	0.05	0.39		0.17	0.22	0.22	0.11	0.16	0.16
v/c Ratio	0.96	0.29	0.19	0.05	1.00		0.96	0.73	0.02	0.84	0.88	0.83
Control Delay	105.0	16.1	3.1	50.2	57.7		89.2	46.0	0.1	80.6	62.7	39.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.0	16.1	3.1	50.2	57.7		89.2	46.0	0.1	80.6	62.7	39.5
LOS	F	B	A	D	E		F	D	A	F	E	D
Approach Delay		32.1			57.6			60.2			58.1	
Approach LOS		C			E			E			E	
Queue Length 50th (ft)	133	102	0	3	-498		209	196	0	120	184	111
Queue Length 95th (ft)	#275	168	39	16	#664		#380	259	0	#236	#272	#262
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	194	1839	906	128	1369		306	778	424	210	584	406
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.29	0.19	0.04	1.00		0.96	0.73	0.02	0.81	0.86	0.82

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 109.6
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 52.8
 Intersection LOS: D
 Intersection Capacity Utilization 88.1%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Cumulative 2035 With Project-AM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	596	82	180	1096	50	180	142	235	84	305	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.993				0.850			0.980
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3476	0	1770	3514	0	1770	1863	1583	1770	1825	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3476	0	1770	3514	0	1770	1863	1583	1770	1825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			6				177			8
Link Speed (mph)		55			55			50				50
Link Distance (ft)		2641			5169			5277				2634
Travel Time (s)		32.7			64.1			72.0				35.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	648	89	196	1191	54	196	154	255	91	332	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	737	0	196	1245	0	196	154	255	91	383	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	32.4		17.0	37.4		15.0	27.6	27.6	13.0	25.6	
Total Split (%)	13.3%	36.0%		18.9%	41.6%		16.7%	30.7%	30.7%	14.4%	28.4%	
Maximum Green (s)	8.0	27.5		13.0	32.5		11.0	22.7	22.7	9.0	20.7	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Cumulative 2035 With Project-AM
11/7/2013

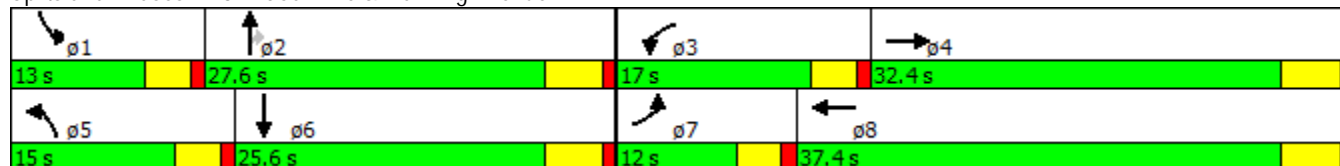


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	6.6	23.1		12.3	35.0		11.1	25.1	25.1	8.2	19.8	
Actuated g/C Ratio	0.08	0.27		0.15	0.42		0.13	0.30	0.30	0.10	0.24	
v/c Ratio	0.16	0.76		0.76	0.85		0.84	0.28	0.43	0.53	0.88	
Control Delay	40.8	33.3		56.1	30.7		69.2	27.4	11.9	49.6	54.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	40.8	33.3		56.1	30.7		69.2	27.4	11.9	49.6	54.6	
LOS	D	C		E	C		E	C	B	D	D	
Approach Delay		33.5			34.1			34.4			53.7	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	11	188		103	277		106	67	33	47	195	
Queue Length 95th (ft)	35	252		#215	#513		#239	126	103	99	#376	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	169	1154		275	1484		232	554	595	190	457	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.13	0.64		0.71	0.84		0.84	0.28	0.43	0.48	0.84	

Intersection Summary






















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 84.2
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 36.9
 Intersection LOS: D
 Intersection Capacity Utilization 78.9%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Cumulative 2035 With Project-AM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	19	50	105	77	371	143	245	23	148	445	133
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	21	54	114	84	403	155	266	25	161	484	145
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
			1									
Median type												
								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1767	1480	314	1164	1540	146	628			291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1767	1480	314	1164	1540	146	628			291		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	77	92	0	0	54	84			87		
cM capacity (veh/h)	0	91	682	91	84	875	950			1267		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	128	601	155	178	114	161	322	306				
Volume Left	53	114	155	0	0	161	0	0				
Volume Right	54	403	0	0	25	0	0	145				
cSH	2	221	950	1700	1700	1267	1700	1700				
Volume to Capacity	72.78	2.72	0.16	0.10	0.07	0.13	0.19	0.18				
Queue Length 95th (ft)	Err	1296	15	0	0	11	0	0				
Control Delay (s)	Err	820.1	9.5	0.0	0.0	8.3	0.0	0.0				
Lane LOS	F	F	A			A						
Approach Delay (s)	Err	820.1	3.3			1.7						
Approach LOS	F	F										
Intersection Summary												
Average Delay			904.8									
Intersection Capacity Utilization			73.8%	ICU Level of Service						D		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Cumulative 2035 With Project-AM
11/7/2013




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	→			←	↔	↔
Volume (veh/h)	206	80	297	407	116	214
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	224	87	323	442	126	233
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			311	1355		267
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			311	1355		267
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			74	0		70
cM capacity (veh/h)			1250	122		771

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	311	765	359
Volume Left	0	323	126
Volume Right	87	0	233
cSH	1700	1250	269
Volume to Capacity	0.18	0.26	1.33
Queue Length 95th (ft)	0	26	463
Control Delay (s)	0.0	5.5	210.6
Lane LOS		A	F
Approach Delay (s)	0.0	5.5	210.6
Approach LOS			F

Intersection Summary			
Average Delay			55.6
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)			15

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Cumulative 2035 With Project-AM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	99	245	146	224	277	213	110	270	123	114	434	162
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	108	266	159	243	301	232	120	293	134	124	472	176
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	533	776	413	134	772							
Volume Left (vph)	108	243	120	0	124							
Volume Right (vph)	159	232	0	134	176							
Hadj (s)	-0.10	-0.08	0.18	-0.67	-0.07							
Departure Headway (s)	9.4	9.4	9.8	9.0	9.6							
Degree Utilization, x	1.39	2.04	1.13	0.33	2.05							
Capacity (veh/h)	391	387	378	396	383							
Control Delay (s)	218.6	496.8	117.2	15.3	502.6							
Approach Delay (s)	218.6	496.8	92.3		502.6							
Approach LOS	F	F	F		F							
Intersection Summary												
Delay			357.9									
Level of Service			F									
Intersection Capacity Utilization			133.5%	ICU Level of Service	H							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Cumulative 2035 With Project-AM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	4	383	74	24	496	5	80	1	43	7	7	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	416	80	26	539	5	87	1	47	8	8	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	545			497			1067	1062	457	1107	1099	542
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	545			497			1067	1062	457	1107	1099	542
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			54	99	92	95	96	99
cM capacity (veh/h)	1024			1067			188	217	604	169	206	540

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	501	571	135	20
Volume Left	4	26	87	8
Volume Right	80	5	47	4
cSH	1024	1067	248	217
Volume to Capacity	0.00	0.02	0.54	0.09
Queue Length 95th (ft)	0	2	74	7
Control Delay (s)	0.1	0.7	35.6	23.2
Lane LOS	A	A	E	C
Approach Delay (s)	0.1	0.7	35.6	23.2
Approach LOS			E	C

Intersection Summary			
Average Delay		4.7	
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Cumulative 2035 With Project-AM
11/7/2013

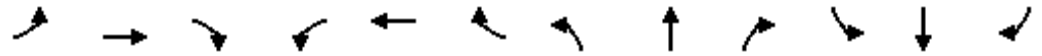


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	172	280	52	55	410	176	68	207	32	159	443	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976				0.850		0.980				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1818	0	1770	1863	1583	1770	1825	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1818	0	1770	1863	1583	1770	1825	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				191		8				354
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	304	57	60	446	191	74	225	35	173	482	354
Shared Lane Traffic (%)												
Lane Group Flow (vph)	187	361	0	60	446	191	74	260	0	173	482	354
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	15.0	33.0		12.0	30.0	30.0	12.0	29.0		16.0	33.0	33.0
Total Split (%)	16.7%	36.7%		13.3%	33.3%	33.3%	13.3%	32.2%		17.8%	36.7%	36.7%
Maximum Green (s)	11.0	28.1		8.0	25.1	25.1	8.0	24.1		12.0	28.1	28.1
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Cumulative 2035 With Project-AM

11/7/2013

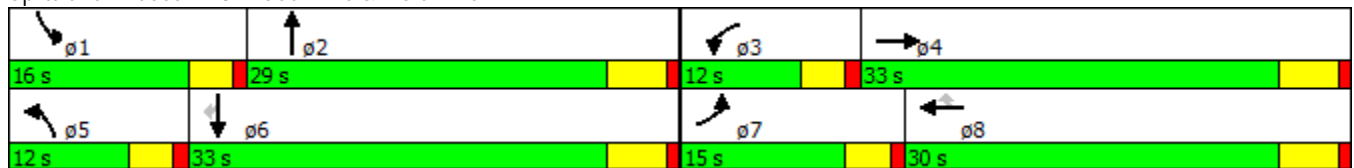


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	10.9	29.1		7.3	22.9	22.9	7.4	20.1		11.3	26.6	26.6
Actuated g/C Ratio	0.13	0.35		0.09	0.27	0.27	0.09	0.24		0.14	0.32	0.32
v/c Ratio	0.81	0.56		0.39	0.87	0.33	0.47	0.58		0.72	0.81	0.48
Control Delay	65.1	28.2		46.4	49.4	5.8	49.2	33.1		55.4	40.4	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	65.1	28.2		46.4	49.4	5.8	49.2	33.1		55.4	40.4	5.1
LOS	E	C		D	D	A	D	C		E	D	A
Approach Delay		40.8			37.2			36.7			30.6	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	106	169		33	240	0	41	122		96	253	0
Queue Length 95th (ft)	#225	263		72	#405	49	85	198		#192	#416	60
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	238	643		173	572	618	173	543		260	640	776
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.79	0.56		0.35	0.78	0.31	0.43	0.48		0.67	0.75	0.46

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 83.5
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 35.3
 Intersection LOS: D
 Intersection Capacity Utilization 73.0%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.



HCM Unsignalized Intersection Capacity Analysis
 1: McCall Ave & Parlier Ave.

Cumulative 2035 With Project-PM
 11/7/2013



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	5	1	502	9	1	350
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	1	546	10	1	380
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	933	551			555	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	933	551			555	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	295	534			1015	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	555	382
Volume Left	5	0	1
Volume Right	1	10	0
cSH	319	1700	1015
Volume to Capacity	0.02	0.33	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	16.5	0.0	0.0
Lane LOS	C		A
Approach Delay (s)	16.5	0.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay			0.1
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)			15

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Cumulative 2035 With Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	177	740	260	10	570	221	244	1060	73	374	840	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	220		610	225		0	200		50	260		200
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.958				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3391	0	1770	3539	1583	1770	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3539	1583	1770	3391	0	1770	3539	1583	1770	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			283		43				90			229
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1462			2360			3872			3389	
Travel Time (s)		19.9			32.2			52.8			46.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	804	283	11	620	240	265	1152	79	407	913	304
Shared Lane Traffic (%)												
Lane Group Flow (vph)	192	804	283	11	860	0	265	1152	79	407	913	304
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4						2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9
Total Split (s)	16.0	35.4	35.4	12.0	31.4		26.0	43.6	43.6	29.0	46.6	46.6
Total Split (%)	13.3%	29.5%	29.5%	10.0%	26.2%		21.7%	36.3%	36.3%	24.2%	38.8%	38.8%
Maximum Green (s)	12.0	30.5	30.5	8.0	26.5		22.0	38.7	38.7	25.0	41.7	41.7
Yellow Time (s)	3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		None	Min	Min	None	Min	Min
Walk Time (s)		5.0	5.0		5.0			5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0		11.0	11.0

Lanes, Volumes, Timings
2: Golden State Blvd & Manning Ave.

Cumulative 2035 With Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0	0		0			0	0		0	0
Act Effct Green (s)	12.0	40.2	40.2	6.3	26.5		20.7	38.7	38.7	25.0	43.0	43.0
Actuated g/C Ratio	0.10	0.34	0.34	0.05	0.22		0.17	0.32	0.32	0.21	0.36	0.36
v/c Ratio	1.08	0.68	0.39	0.12	1.10		0.87	1.01	0.14	1.11	0.72	0.43
Control Delay	142.5	38.6	5.5	56.4	104.5		75.6	69.7	5.2	122.8	37.5	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	142.5	38.6	5.5	56.4	104.5		75.6	69.7	5.2	122.8	37.5	9.8
LOS	F	D	A	E	F		E	E	A	F	D	A
Approach Delay		46.9			103.9			67.3			53.7	
Approach LOS		D			F			E			D	
Queue Length 50th (ft)	~167	272	0	8	~384		199	~476	0	~359	325	40
Queue Length 95th (ft)	#317	#423	68	28	#515		#337	#628	29	#557	403	114
Internal Link Dist (ft)		1382			2280			3792			3309	
Turn Bay Length (ft)	220		610	225			200		50	260		200
Base Capacity (vph)	177	1184	718	118	782		324	1141	571	368	1268	714
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.68	0.39	0.09	1.10		0.82	1.01	0.14	1.11	0.72	0.43

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.11
 Intersection Signal Delay: 64.2
 Intersection LOS: E
 Intersection Capacity Utilization 97.5%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Golden State Blvd & Manning Ave.



Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Cumulative 2035 With Project-PM
11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	1098	176	325	777	99	115	334	254	93	229	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	175		0	105		25	95		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.983				0.850		0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3465	0	1770	3479	0	1770	1863	1583	1770	1827	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3465	0	1770	3479	0	1770	1863	1583	1770	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			16				126		6	
Link Speed (mph)		55			55			50			50	
Link Distance (ft)		2641			5169			5277			2634	
Travel Time (s)		32.7			64.1			72.0			35.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	1193	191	353	845	108	125	363	276	101	249	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	1384	0	353	953	0	125	363	276	101	286	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9	20.9	12.0	20.9	
Total Split (s)	16.0	51.0		27.0	62.0		13.0	30.0	30.0	12.0	29.0	
Total Split (%)	13.3%	42.5%		22.5%	51.7%		10.8%	25.0%	25.0%	10.0%	24.2%	
Maximum Green (s)	12.0	46.1		23.0	57.1		9.0	25.1	25.1	8.0	24.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0			5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	

Lanes, Volumes, Timings
3: McCall Ave & Manning Avenue

Cumulative 2035 With Project-PM
11/7/2013

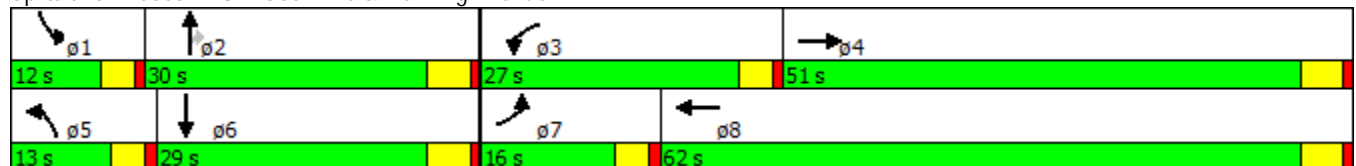


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	10.2	46.1		23.0	61.1		9.0	24.7	24.7	8.0	23.7	
Actuated g/C Ratio	0.09	0.39		0.19	0.51		0.08	0.21	0.21	0.07	0.20	
v/c Ratio	0.56	1.03		1.04	0.53		0.95	0.95	0.65	0.86	0.78	
Control Delay	66.8	68.4		106.4	21.7		120.1	81.2	31.0	106.4	60.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	66.8	68.4		106.4	21.7		120.1	81.2	31.0	106.4	60.3	
LOS	E	E		F	C		F	F	C	F	E	
Approach Delay		68.3			44.6			69.4			72.4	
Approach LOS		E			D			E			E	
Queue Length 50th (ft)	64	-601		-296	263		98	278	106	79	207	
Queue Length 95th (ft)	117	#741		#484	332		#220	#463	203	#184	#332	
Internal Link Dist (ft)		2561			5089			5197			2554	
Turn Bay Length (ft)	200			175			105		25	95		
Base Capacity (vph)	177	1345		340	1783		132	390	431	118	372	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.48	1.03		1.04	0.53		0.95	0.93	0.64	0.86	0.77	

Intersection Summary





















Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 119.6
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 61.0
 Intersection LOS: E
 Intersection Capacity Utilization 91.5%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: McCall Ave & Manning Avenue



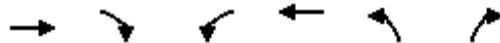
HCM Unsignalized Intersection Capacity Analysis
4: Golden State Blvd & Dinuba Ave.

Cumulative 2035 With Project-PM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	123	54	252	35	51	215	141	1025	78	447	796	49
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	134	59	274	38	55	234	153	1114	85	486	865	53
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2989	3369	459	2897	3353	599	918			1199		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2989	3369	459	2897	3353	599	918			1199		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	50	0	0	47	79			16		
cM capacity (veh/h)	0	1	549	0	1	444	739			578		
Direction, Lane #												
	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3				
Volume Total	466	327	153	743	456	486	577	342				
Volume Left	134	38	153	0	0	486	0	0				
Volume Right	274	234	0	0	85	0	0	53				
cSH	0	0	739	1700	1700	578	1700	1700				
Volume to Capacity	Err	Err	0.21	0.44	0.27	0.84	0.34	0.20				
Queue Length 95th (ft)	Err	Err	19	0	0	223	0	0				
Control Delay (s)	Err	Err	11.1	0.0	0.0	35.7	0.0	0.0				
Lane LOS	F	F	B			E						
Approach Delay (s)	Err	Err	1.3			12.4						
Approach LOS	F	F										
Intersection Summary												
Average Delay			Err									
Intersection Capacity Utilization			96.4%		ICU Level of Service			F				
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
5: Highland Ave. & Dinuba Ave.

Cumulative 2035 With Project-PM
11/7/2013




















Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	455	209	298	264	98	443
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	495	227	324	287	107	482
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			722	1543		608
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			722	1543		608
tC, single (s)			4.1	6.4		6.2
tC, 2 stage (s)						
tF (s)			2.2	3.5		3.3
p0 queue free %			63	0		3
cM capacity (veh/h)			880	80		496

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	722	611	588
Volume Left	0	324	107
Volume Right	227	0	482
cSH	1700	880	255
Volume to Capacity	0.42	0.37	2.30
Queue Length 95th (ft)	0	43	1159
Control Delay (s)	0.0	8.5	629.9
Lane LOS		A	F
Approach Delay (s)	0.0	8.5	629.9
Approach LOS			F

Intersection Summary			
Average Delay	195.5		
Intersection Capacity Utilization	109.8%	ICU Level of Service	H
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Cumulative 2035 With Project-PM
11/7/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	198	367	92	189	321	209	127	578	210	259	450	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	215	399	100	205	349	227	138	628	228	282	489	183
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	714	782	766	228	953							
Volume Left (vph)	215	205	138	0	282							
Volume Right (vph)	100	227	0	228	183							
Hadj (s)	0.01	-0.09	0.12	-0.67	-0.02							
Departure Headway (s)	9.5	9.4	9.8	9.0	9.6							
Degree Utilization, x	1.89	2.05	2.08	0.57	2.54							
Capacity (veh/h)	383	388	374	389	384							
Control Delay (s)	433.4	502.6	517.3	22.1	722.8							
Approach Delay (s)	433.4	502.6	403.6		722.8							
Approach LOS	F	F	F		F							
Intersection Summary												
Delay			520.6									
Level of Service			F									
Intersection Capacity Utilization			146.4%	ICU Level of Service	H							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: Dockery Ave. & Dinuba Ave.

Cumulative 2035 With Project-PM
11/7/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	9	637	118	21	448	7	82	1	28	5	2	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	692	128	23	487	8	89	1	30	5	2	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	495			821			1315	1316	757	1343	1377	491
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	495			821			1315	1316	757	1343	1377	491
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			97			31	99	93	95	98	100
cM capacity (veh/h)	1069			808			129	152	408	115	140	578

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	830	517	121	9
Volume Left	10	23	89	5
Volume Right	128	8	30	1
cSH	1069	808	157	135
Volume to Capacity	0.01	0.03	0.77	0.06
Queue Length 95th (ft)	1	2	121	5
Control Delay (s)	0.2	0.8	79.6	33.6
Lane LOS	A	A	F	D
Approach Delay (s)	0.2	0.8	79.6	33.6
Approach LOS			F	D

Intersection Summary

Average Delay		7.1		
Intersection Capacity Utilization		58.5%	ICU Level of Service	B
Analysis Period (min)		15		

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Cumulative 2035 With Project-PM

11/7/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	424	467	83	25	386	167	63	520	43	141	304	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	100		360	65		0	125		260
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977				0.850		0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1820	0	1770	1863	1583	1770	1840	0	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1820	0	1770	1863	1583	1770	1840	0	1770	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				182		4				320
Link Speed (mph)		40			40			50				50
Link Distance (ft)		1360			2660			1896				5353
Travel Time (s)		23.2			45.3			25.9				73.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	461	508	90	27	420	182	68	565	47	153	330	320
Shared Lane Traffic (%)												
Lane Group Flow (vph)	461	598	0	27	420	182	68	612	0	153	330	320
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						6
Detector Phase	7	4		3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9		12.0	20.9	20.9
Total Split (s)	33.0	51.6		12.0	30.6	30.6	13.0	42.4		14.0	43.4	43.4
Total Split (%)	27.5%	43.0%		10.0%	25.5%	25.5%	10.8%	35.3%		11.7%	36.2%	36.2%
Maximum Green (s)	29.0	46.7		8.0	25.7	25.7	9.0	37.5		10.0	38.5	38.5
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9		3.0	3.9	3.9
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9		4.0	4.9	4.9
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		5.0			5.0	5.0		5.0			5.0	5.0
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	11.0

Lanes, Volumes, Timings
8: McCall Ave & Floral Ave.

Cumulative 2035 With Project-PM
11/7/2013

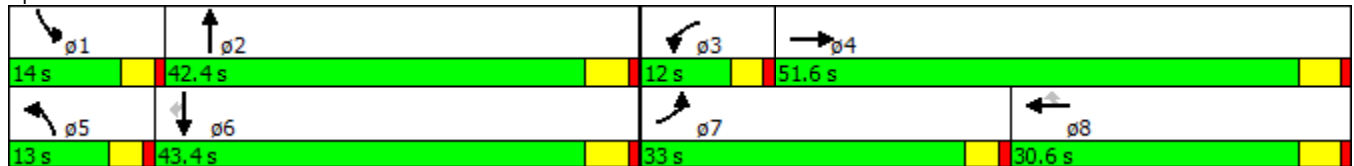


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0			0	0
Act Effct Green (s)	29.0	51.7		7.0	25.7	25.7	8.3	37.5		10.0	41.2	41.2
Actuated g/C Ratio	0.24	0.43		0.06	0.21	0.21	0.07	0.31		0.08	0.34	0.34
v/c Ratio	1.08	0.76		0.26	1.06	0.38	0.56	1.06		1.04	0.52	0.42
Control Delay	109.9	37.3		60.0	106.0	8.0	71.6	94.5		138.8	36.0	5.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	109.9	37.3		60.0	106.0	8.0	71.6	94.5		138.8	36.0	5.1
LOS	F	D		E	F	A	E	F		F	D	A
Approach Delay		68.9			75.7			92.2			43.3	
Approach LOS		E			E			F			D	
Queue Length 50th (ft)	~398	405		20	~355	0	52	~520		~128	210	0
Queue Length 95th (ft)	#605	#607		51	#557	60	101	#749		#265	307	64
Internal Link Dist (ft)		1280			2580			1816			5273	
Turn Bay Length (ft)	125			100		360	65			125		260
Base Capacity (vph)	427	788		118	398	482	132	577		147	639	754
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	1.08	0.76		0.23	1.06	0.38	0.52	1.06		1.04	0.52	0.42

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 68.8
 Intersection LOS: E
 Intersection Capacity Utilization 96.4%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: McCall Ave & Floral Ave.























APPENDIX C
MITIGATED INTERSECTION ANALYSES

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Existing Plus Project-AM-Mitigated





















11/8/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop				Stop			Stop	
Volume (vph)	64	154	79	118	158	47	71	192	83	73	190	75
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Hourly flow rate (vph)	81	195	100	128	172	51	87	234	101	91	238	94
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1					
Volume Total (vph)	81	295	128	223	321	101	423					
Volume Left (vph)	81	0	128	0	87	0	91					
Volume Right (vph)	0	100	0	51	0	101	94					
Hadj (s)	0.53	-0.20	0.53	-0.13	0.17	-0.67	-0.06					
Departure Headway (s)	9.3	8.5	9.4	8.7	8.6	7.8	8.1					
Degree Utilization, x	0.21	0.70	0.34	0.54	0.77	0.22	0.95					
Capacity (veh/h)	387	418	381	404	404	454	423					
Control Delay (s)	13.5	27.8	15.9	20.3	34.0	11.8	60.0					
Approach Delay (s)	24.7		18.7		28.7		60.0					
Approach LOS	C		C		D		F					
Intersection Summary												
Delay			33.9									
Level of Service			D									
Intersection Capacity Utilization			65.4%		ICU Level of Service			C				
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
6: McCall Ave & Dinuba Ave.

Existing Plus Project-PM-Mitigated

11/8/2013

															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR			
Lane Configurations															
Sign Control		Stop			Stop			Stop				Stop			
Volume (vph)	74	171	33	122	177	72	70	242	112	62	235	103			
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81			
Hourly flow rate (vph)	88	204	39	144	208	85	78	269	124	77	290	127			
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1								
Volume Total (vph)	88	243	144	293	347	124	494								
Volume Left (vph)	88	0	144	0	78	0	77								
Volume Right (vph)	0	39	0	85	0	124	127								
Hadj (s)	0.53	-0.08	0.53	-0.17	0.15	-0.67	-0.09								
Departure Headway (s)	9.4	8.8	9.2	8.5	8.6	7.8	8.3								
Degree Utilization, x	0.23	0.59	0.37	0.69	0.83	0.27	1.13								
Capacity (veh/h)	374	395	384	413	413	452	439								
Control Delay (s)	13.9	22.5	16.1	27.0	40.3	12.5	112.9								
Approach Delay (s)	20.2		23.5		33.0		112.9								
Approach LOS	C		C		D		F								
Intersection Summary															
Delay			50.9												
Level of Service			F												
Intersection Capacity Utilization			69.8%				ICU Level of Service				C				
Analysis Period (min)			15												

Lanes, Volumes, Timings
6: McCall Ave & Dinuba Ave.

Near-Term With Project-AM-Mitigated

11/8/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	245	79	224	178	213	71	208	123	114	195	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		150	200		0	200		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963				0.850			0.850		0.958	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1794	0	1770	1863	1583	1770	1863	1583	1770	1785	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1794	0	1770	1863	1583	1770	1863	1583	1770	1785	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20				232			150			23
Link Speed (mph)		50			50			50				50
Link Distance (ft)		5257			2597			5353				5277
Travel Time (s)		71.7			35.4			73.0				72.0
Peak Hour Factor	0.79	0.79	0.79	0.92	0.92	0.92	0.82	0.82	0.82	0.80	0.80	0.80
Adj. Flow (vph)	81	310	100	243	193	232	87	254	150	142	244	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	81	410	0	243	193	232	87	254	150	142	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9	12.0	20.9	
Total Split (s)	13.0	26.6		17.0	30.6	30.6	12.0	24.4	24.4	12.0	24.4	
Total Split (%)	16.3%	33.3%		21.3%	38.3%	38.3%	15.0%	30.5%	30.5%	15.0%	30.5%	
Maximum Green (s)	9.0	21.7		13.0	25.7	25.7	8.0	19.5	19.5	8.0	19.5	
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	

Lanes, Volumes, Timings
6: McCall Ave & Dinuba Ave.

Near-Term With Project-AM-Mitigated

11/8/2013

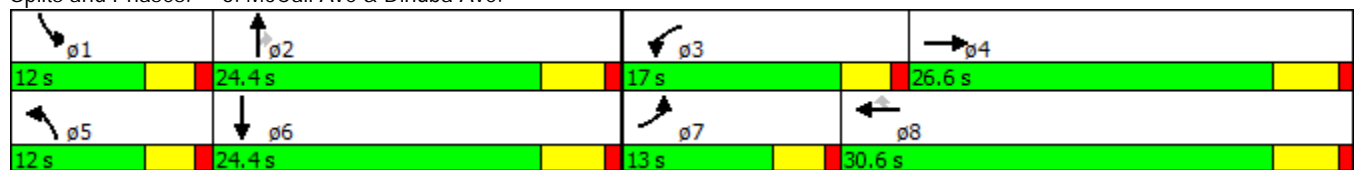


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	7.9	19.4		12.6	26.5	26.5	7.5	16.4	16.4	8.1	19.5	
Actuated g/C Ratio	0.11	0.26		0.17	0.36	0.36	0.10	0.22	0.22	0.11	0.26	
v/c Ratio	0.43	0.85		0.82	0.29	0.33	0.49	0.62	0.32	0.74	0.70	
Control Delay	40.5	43.9		55.0	21.2	4.5	44.0	33.9	6.8	59.5	34.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	40.5	43.9		55.0	21.2	4.5	44.0	33.9	6.8	59.5	34.4	
LOS	D	D		E	C	A	D	C	A	E	C	
Approach Delay		43.3			27.7			27.4			41.9	
Approach LOS		D			C			C			D	
Queue Length 50th (ft)	38	183		119	72	0	42	111	0	71	146	
Queue Length 95th (ft)	70	241		#243	125	47	78	165	34	#137	204	
Internal Link Dist (ft)		5177			2517			5273			5197	
Turn Bay Length (ft)	200			200		150	200			200		
Base Capacity (vph)	217	544		313	666	715	193	494	530	193	500	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.37	0.75		0.78	0.29	0.32	0.45	0.51	0.28	0.74	0.68	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 74.5
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 34.4
 Intersection LOS: C
 Intersection Capacity Utilization 63.7%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: McCall Ave & Dinuba Ave.



Lanes, Volumes, Timings
6: McCall Ave & Dinuba Ave.

Near-Term With Project-PM-Mitigated

11/8/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	344	33	189	321	209	70	251	210	259	251	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		150	200		0	200		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987				0.850			0.850		0.956	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1839	0	1770	1863	1583	1770	1863	1583	1770	1781	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1839	0	1770	1863	1583	1770	1863	1583	1770	1781	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				246			233		24	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		5257			2597			5353			5277	
Travel Time (s)		71.7			35.4			73.0			72.0	
Peak Hour Factor	0.84	0.84	0.84	0.85	0.85	0.85	0.90	0.90	0.90	0.81	0.81	0.81
Adj. Flow (vph)	88	410	39	222	378	246	78	279	233	320	310	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	88	449	0	222	378	246	78	279	233	320	437	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9	20.9	12.0	20.9	20.9	12.0	20.9	
Total Split (s)	12.0	28.0		16.0	32.0	32.0	12.0	25.0	25.0	21.0	34.0	
Total Split (%)	13.3%	31.1%		17.8%	35.6%	35.6%	13.3%	27.8%	27.8%	23.3%	37.8%	
Maximum Green (s)	8.0	23.1		12.0	27.1	27.1	8.0	20.1	20.1	17.0	29.1	
Yellow Time (s)	3.0	3.9		3.0	3.9	3.9	3.0	3.9	3.9	3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9	4.9	4.0	4.9	4.9	4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None	None	None	Min	Min	None	Min	
Walk Time (s)		5.0			5.0	5.0		5.0	5.0		5.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0	11.0		11.0	

Lanes, Volumes, Timings
6: McCall Ave & Dinuba Ave.

Near-Term With Project-PM-Mitigated

11/8/2013

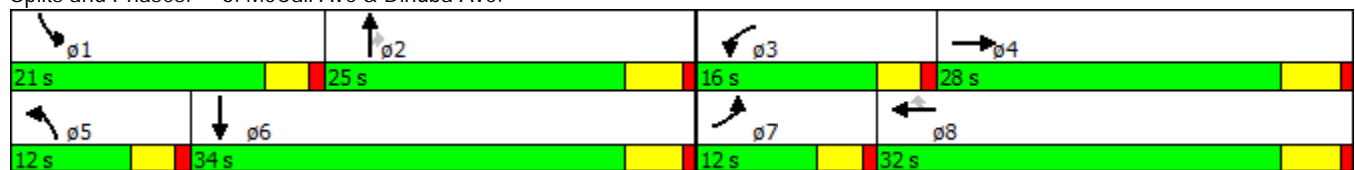


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	7.6	22.7		12.0	29.3	29.3	7.5	16.9	16.9	17.0	28.6	
Actuated g/C Ratio	0.09	0.26		0.14	0.34	0.34	0.09	0.20	0.20	0.20	0.33	
v/c Ratio	0.57	0.93		0.90	0.60	0.35	0.51	0.77	0.47	0.92	0.72	
Control Delay	53.9	59.2		76.8	30.5	4.9	51.2	47.6	7.6	68.4	33.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	53.9	59.2		76.8	30.5	4.9	51.2	47.6	7.6	68.4	33.1	
LOS	D	E		E	C	A	D	D	A	E	C	
Approach Delay		58.3			35.2			32.3			48.0	
Approach LOS		E			D			C			D	
Queue Length 50th (ft)	48	241		124	181	0	42	146	0	177	208	
Queue Length 95th (ft)	90	#387		#241	265	43	88	232	58	#290	273	
Internal Link Dist (ft)		5177			2517			5273			5197	
Turn Bay Length (ft)	200			200		150	200			200		
Base Capacity (vph)	164	496		246	630	698	164	434	547	348	631	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.54	0.91		0.90	0.60	0.35	0.48	0.64	0.43	0.92	0.69	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 86.5
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 42.7
 Intersection LOS: D
 Intersection Capacity Utilization 73.0%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: McCall Ave & Dinuba Ave.



Lanes, Volumes, Timings
5: Highland Ave. & Dinuba Ave.

Cumulative 2035 With Project-AM-Mitigated

11/8/2013



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↙	↗
Volume (vph)	206	80	297	407	116	214
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			90		90	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.958					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	3391	0	1770	3539	1770	1583
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	3391	0	1770	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	87					233
Link Speed (mph)	50			50	40	
Link Distance (ft)	1082			4218	1359	
Travel Time (s)	14.8			57.5	23.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	224	87	323	442	126	233
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	0	323	442	126	233
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	NA	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Detector Phase	4		3	8	2	2
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.9		12.0	20.9	20.9	20.9
Total Split (s)	20.9		18.0	38.9	21.1	21.1
Total Split (%)	34.8%		30.0%	64.8%	35.2%	35.2%
Maximum Green (s)	16.0		14.0	34.0	16.2	16.2
Yellow Time (s)	3.9		3.0	3.9	3.9	3.9
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9		4.0	4.9	4.9	4.9
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0

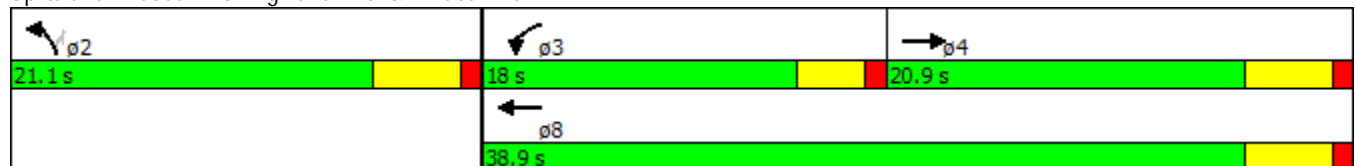


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Pedestrian Calls (#/hr)	0			0	0	0
Act Effct Green (s)	8.4		12.4	24.9	8.5	8.5
Actuated g/C Ratio	0.19		0.29	0.57	0.20	0.20
v/c Ratio	0.43		0.64	0.22	0.36	0.47
Control Delay	13.6		21.7	5.0	19.3	6.6
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	13.6		21.7	5.0	19.3	6.6
LOS	B		C	A	B	A
Approach Delay	13.6			12.1	11.0	
Approach LOS	B			B	B	
Queue Length 50th (ft)	26		67	22	28	0
Queue Length 95th (ft)	57		#178	46	68	43
Internal Link Dist (ft)	1002			4138	1279	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1329		582	2829	674	747
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.23		0.55	0.16	0.19	0.31

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 43.4
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 12.1
 Intersection LOS: B
 Intersection Capacity Utilization 42.6%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Highland Ave. & Dinuba Ave.



Lanes, Volumes, Timings
6: McCall Ave & Dinuba Ave.

Cumulative 2035 With Project-AM-Mitigated

11/8/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	245	146	224	277	213	110	270	123	114	434	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		150	200		150	200		150	200		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.944			0.935			0.953			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3341	0	1770	3309	0	1770	3373	0	1770	3394	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3341	0	1770	3309	0	1770	3373	0	1770	3394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		159			232			99			71	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1039			1271			979			1941	
Travel Time (s)		14.2			17.3			13.4			26.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	266	159	243	301	232	120	293	134	124	472	176
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	425	0	243	533	0	120	427	0	124	648	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9		12.0	20.9	
Total Split (s)	13.0	20.9		16.0	23.9		12.0	21.1		12.0	21.1	
Total Split (%)	18.6%	29.9%		22.9%	34.1%		17.1%	30.1%		17.1%	30.1%	
Maximum Green (s)	9.0	16.0		12.0	19.0		8.0	16.2		8.0	16.2	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9		4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	

Lanes, Volumes, Timings
6: McCall Ave & Dinuba Ave.

Cumulative 2035 With Project-AM-Mitigated

11/8/2013

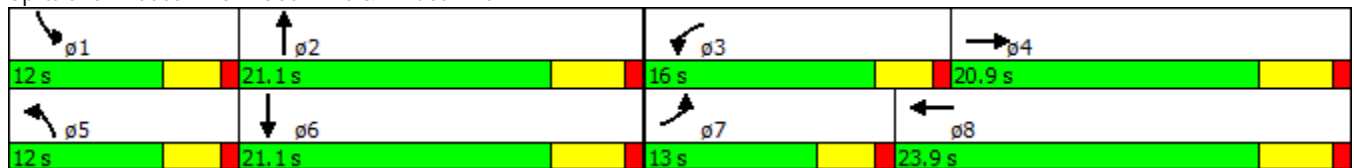


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	8.1	10.7		11.5	17.1		7.8	14.5		7.8	14.5	
Actuated g/C Ratio	0.14	0.18		0.19	0.28		0.13	0.24		0.13	0.24	
v/c Ratio	0.45	0.59		0.71	0.48		0.52	0.48		0.54	0.74	
Control Delay	33.5	18.3		39.9	13.5		37.6	18.1		38.3	26.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	33.5	18.3		39.9	13.5		37.6	18.1		38.3	26.2	
LOS	C	B		D	B		D	B		D	C	
Approach Delay		21.4			21.8			22.4			28.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	40	50		91	54		45	56		47	108	
Queue Length 95th (ft)	90	90		#213	97		#112	104		#118	#184	
Internal Link Dist (ft)		959			1191			899			1861	
Turn Bay Length (ft)	200			200			200			200		
Base Capacity (vph)	278	1048		371	1255		247	1025		247	1011	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.39	0.41		0.65	0.42		0.49	0.42		0.50	0.64	

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 60
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 23.7
 Intersection LOS: C
 Intersection Capacity Utilization 62.0%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: McCall Ave & Dinuba Ave.



Lanes, Volumes, Timings
7: Dockery Ave. & Dinuba Ave.

Cumulative 2035 With Project-AM-Mitigated

11/8/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	383	74	24	496	5	80	1	43	7	7	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	0		0	0		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.976			0.999			0.853				0.950
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3454	0	1770	3536	0	1770	1589	0	1770	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3454	0	1770	3536	0	1770	1589	0	1770	1770	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			1			47				4
Link Speed (mph)		50			50			40				40
Link Distance (ft)		1326			1693			756				463
Travel Time (s)		18.1			23.1			12.9				7.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	416	80	26	539	5	87	1	47	8	8	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	4	496	0	26	544	0	87	48	0	8	12	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9		12.0	20.9	
Total Split (s)	12.0	22.0		12.0	22.0		13.0	24.0		12.0	23.0	
Total Split (%)	17.1%	31.4%		17.1%	31.4%		18.6%	34.3%		17.1%	32.9%	
Maximum Green (s)	8.0	17.1		8.0	17.1		9.0	19.1		8.0	18.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9		4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	

Lanes, Volumes, Timings
7: Dockery Ave. & Dinuba Ave.

Cumulative 2035 With Project-AM-Mitigated

11/8/2013

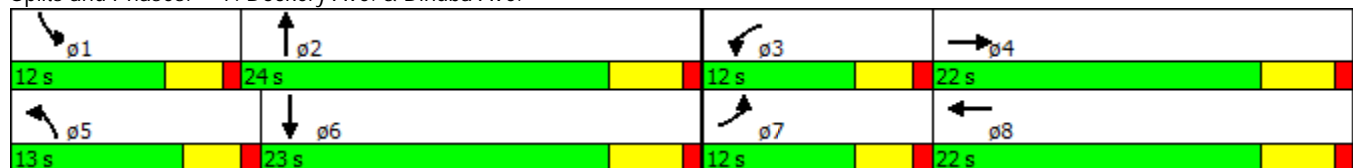


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.3	12.3		6.9	12.5		7.9	11.3		6.5	6.5	
Actuated g/C Ratio	0.17	0.33		0.18	0.33		0.21	0.30		0.17	0.17	
v/c Ratio	0.01	0.43		0.08	0.46		0.23	0.09		0.03	0.04	
Control Delay	20.5	12.4		19.5	12.9		18.6	7.2		20.0	17.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.5	12.4		19.5	12.9		18.6	7.2		20.0	17.5	
LOS	C	B		B	B		B	A		B	B	
Approach Delay		12.4			13.2			14.5			18.5	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)	1	41		5	48		16	0		2	2	
Queue Length 95th (ft)	9	108		27	118		63	24		13	15	
Internal Link Dist (ft)		1246			1613			676			383	
Turn Bay Length (ft)	200			200								
Base Capacity (vph)	426	1794		426	1842		480	934		426	967	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.01	0.28		0.06	0.30		0.18	0.05		0.02	0.01	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	37.5
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.46
Intersection Signal Delay:	13.1
Intersection LOS:	B
Intersection Capacity Utilization:	39.2%
ICU Level of Service:	A
Analysis Period (min):	15

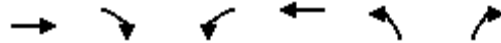
Splits and Phases: 7: Dockery Ave. & Dinuba Ave.



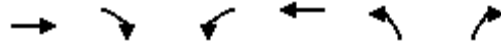
Lanes, Volumes, Timings
5: Highland Ave. & Dinuba Ave.

Cumulative 2035 With Project-PM-Mitigated

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↙	↗
Volume (vph)	455	209	298	264	98	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	1
Taper Length (ft)			90		90	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Fr _t	0.953					0.850
Fl _t Protected			0.950		0.950	
Satd. Flow (prot)	3373	0	1770	3539	1770	1583
Fl _t Permitted			0.950		0.950	
Satd. Flow (perm)	3373	0	1770	3539	1770	1583
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	121					482
Link Speed (mph)	50			50	40	
Link Distance (ft)	1062			4218	1359	
Travel Time (s)	14.5			57.5	23.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	495	227	324	287	107	482
Shared Lane Traffic (%)						
Lane Group Flow (vph)	722	0	324	287	107	482
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type	NA		Prot	NA	NA	Perm
Protected Phases	4		3	8	2	
Permitted Phases						2
Detector Phase	4		3	8	2	2
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.9		12.0	20.9	20.9	20.9
Total Split (s)	20.9		18.0	38.9	21.1	21.1
Total Split (%)	34.8%		30.0%	64.8%	35.2%	35.2%
Maximum Green (s)	16.0		14.0	34.0	16.2	16.2
Yellow Time (s)	3.9		3.0	3.9	3.9	3.9
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9		4.0	4.9	4.9	4.9
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		None	None	Min	Min
Walk Time (s)	5.0			5.0	5.0	5.0
Flash Dont Walk (s)	11.0			11.0	11.0	11.0

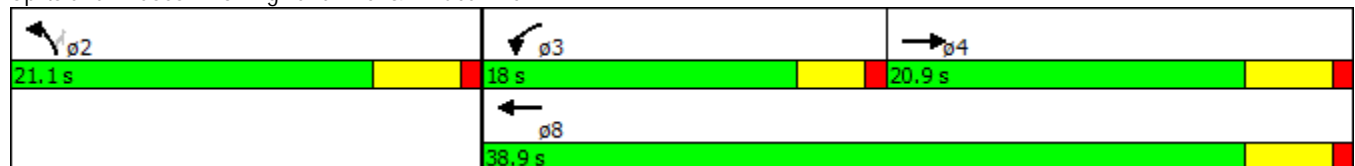


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Pedestrian Calls (#/hr)	0			0	0	0
Act Effect Green (s)	13.8		12.8	30.7	9.1	9.1
Actuated g/C Ratio	0.28		0.26	0.62	0.18	0.18
v/c Ratio	0.71		0.71	0.13	0.33	0.71
Control Delay	18.4		29.8	4.7	21.4	8.7
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	18.4		29.8	4.7	21.4	8.7
LOS	B		C	A	C	A
Approach Delay	18.4			18.0	11.0	
Approach LOS	B			B	B	
Queue Length 50th (ft)	81		87	14	29	0
Queue Length 95th (ft)	158		#227	37	64	62
Internal Link Dist (ft)	982			4138	1279	
Turn Bay Length (ft)			200			
Base Capacity (vph)	1189		508	2470	588	848
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.61		0.64	0.12	0.18	0.57

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 49.9
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 16.0
 Intersection LOS: B
 Intersection Capacity Utilization 54.9%
 ICU Level of Service A
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 5: Highland Ave. & Dinuba Ave.



Lanes, Volumes, Timings
6: McCall Ave & Dinuba Ave.

Cumulative 2035 With Project-PM-Mitigated

11/8/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	198	367	92	189	321	209	127	578	210	259	450	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		150	200		150	200		150	200		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.970			0.941			0.960			0.959	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3433	0	1770	3330	0	1770	3398	0	1770	3394	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3433	0	1770	3330	0	1770	3398	0	1770	3394	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			168			65			73	
Link Speed (mph)		50			50			50			50	
Link Distance (ft)		1039			1251			1039			2551	
Travel Time (s)		14.2			17.1			14.2			34.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	215	399	100	205	349	227	138	628	228	282	489	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	499	0	205	576	0	138	856	0	282	672	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9		12.0	20.9	
Total Split (s)	14.0	21.0		14.0	21.0		13.0	28.0		17.0	32.0	
Total Split (%)	17.5%	26.3%		17.5%	26.3%		16.3%	35.0%		21.3%	40.0%	
Maximum Green (s)	10.0	16.1		10.0	16.1		9.0	23.1		13.0	27.1	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9		4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	

Lanes, Volumes, Timings
6: McCall Ave & Dinuba Ave.

Cumulative 2035 With Project-PM-Mitigated

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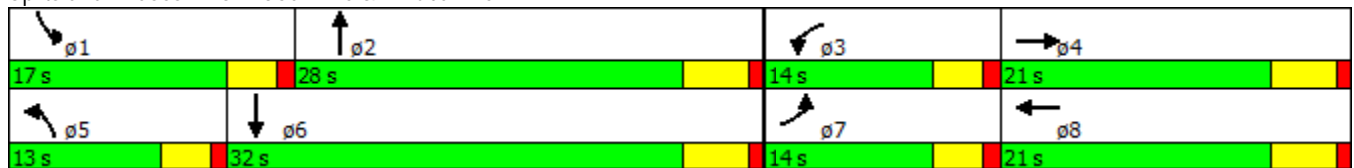


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	10.0	14.5		10.0	14.5		8.6	21.7		13.0	26.1	
Actuated g/C Ratio	0.13	0.19		0.13	0.19		0.11	0.28		0.17	0.34	
v/c Ratio	0.93	0.74		0.89	0.75		0.70	0.86		0.94	0.56	
Control Delay	82.3	34.9		73.9	27.9		54.1	34.3		75.4	20.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	82.3	34.9		73.9	27.9		54.1	34.3		75.4	20.8	
LOS	F	C		E	C		D	C		E	C	
Approach Delay		49.2			40.0			37.0			37.0	
Approach LOS		D			D			D			D	
Queue Length 50th (ft)	109	114		103	100		68	195		142	125	
Queue Length 95th (ft)	#241	166		#229	156		#149	#291		#292	178	
Internal Link Dist (ft)		959			1171			959			2471	
Turn Bay Length (ft)	200			200			200			200		
Base Capacity (vph)	230	746		230	830		207	1066		299	1243	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.93	0.67		0.89	0.69		0.67	0.80		0.94	0.54	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 77.1
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 40.2
 Intersection LOS: D
 Intersection Capacity Utilization 78.4%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 6: McCall Ave & Dinuba Ave.



Lanes, Volumes, Timings
7: Dockery Ave. & Dinuba Ave.

Cumulative 2035 With Project-PM-Mitigated

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	637	118	21	448	7	82	1	28	5	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			90			90			90		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.998			0.855			0.950	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3532	0	1770	1593	0	1770	1770	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3458	0	1770	3532	0	1770	1593	0	1770	1770	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			2			30			1	
Link Speed (mph)		50			50			40			40	
Link Distance (ft)		1346			1693			756			463	
Travel Time (s)		18.4			23.1			12.9			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	692	128	23	487	8	89	1	30	5	2	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	820	0	23	495	0	89	31	0	5	3	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	12.0	20.9		12.0	20.9		12.0	20.9		12.0	20.9	
Total Split (s)	12.0	24.4		12.0	24.4		12.0	21.6		12.0	21.6	
Total Split (%)	17.1%	34.9%		17.1%	34.9%		17.1%	30.9%		17.1%	30.9%	
Maximum Green (s)	8.0	19.5		8.0	19.5		8.0	16.7		8.0	16.7	
Yellow Time (s)	3.0	3.9		3.0	3.9		3.0	3.9		3.0	3.9	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.9		4.0	4.9		4.0	4.9		4.0	4.9	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		5.0			5.0			5.0			5.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	

Lanes, Volumes, Timings
7: Dockery Ave. & Dinuba Ave.

Cumulative 2035 With Project-PM-Mitigated

11/8/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	6.4	16.3		6.7	16.4		7.6	10.7		6.3	6.2	
Actuated g/C Ratio	0.16	0.40		0.16	0.40		0.19	0.26		0.15	0.15	
v/c Ratio	0.04	0.59		0.08	0.35		0.27	0.07		0.02	0.01	
Control Delay	21.1	12.9		20.9	10.8		21.3	9.2		21.4	20.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.1	12.9		20.9	10.8		21.3	9.2		21.4	20.0	
LOS	C	B		C	B		C	A		C	B	
Approach Delay		13.0			11.3			18.2			20.9	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)	2	78		5	43		20	0		1	1	
Queue Length 95th (ft)	15	182		25	103		66	21		10	7	
Internal Link Dist (ft)		1266			1613			676			383	
Turn Bay Length (ft)	200			200			200			200		
Base Capacity (vph)	383	1841		383	1877		383	746		383	801	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.45		0.06	0.26		0.23	0.04		0.01	0.00	

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	40.8
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.59
Intersection Signal Delay:	12.9
Intersection LOS:	B
Intersection Capacity Utilization:	40.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Dockery Ave. & Dinuba Ave.

