

**MEMORANDUM**

**TO:** Joy Forbes, City of Burbank  
**CC:** Tom Davies, Davies Properties  
**FROM:** Pat Gibson and Eric J. Haack  
**DATE:** January 10, 2007  
**SUBJECT:** Peer Review Summary of Traffic Impact Report  
for Proposed Burbank Whole Foods Market **Ref:** 2101

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Fehr & Peers/Kaku Associates, Inc. was asked to review a traffic impact study prepared by Parsons Brinckerhoff (*Whole Foods Market Traffic Impact Study – Final Technical Report*, Parsons Brinckerhoff, October 2, 2006) for a proposed Whole Foods Market to be constructed at the intersection of West Alameda Avenue and South Main Street in the City of Burbank.

Following our review of the Parsons Brinckerhoff traffic study, we find the report to be consistent with industry standards and conservative with respect to project impacts. It is our understanding that community concerns with the report have been expressed with respect to the number of trips that will be generated by the proposed project, the distribution of trips from the proposed project and the potential for neighborhood cut-through traffic being generated by the project.

This memorandum summarizes our office's review of the Parsons Brinckerhoff traffic impact study.

**PROPOSED PROJECT TRIP GENERATION**

The Parsons Brinckerhoff report predicted that the proposed project would generate trips similar to those generated by a supermarket and used *Trip Generation, 6<sup>th</sup> Edition* (Institute of Transportation Engineers [ITE], 1997) to estimate the future traffic to be generated by the proposed Whole Foods Market. *Trip Generation, 7<sup>th</sup> Editions* actually reports a lower trip generation rate for supermarkets but Parsons Brinckerhoff elected to use the higher rate to be conservative.

To document the appropriateness of the trip rate and the use of the supermarket land use category, Fehr & Peers/Kaku Associates conducted surveys of three existing Whole Foods Markets in the Los Angeles area to determine the number of trips to be generated by these stores. The results of these surveys are presented in the Appendix A of this memorandum.

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The three studies showed that the average trip rate of the three sites was lower than the rate used in the Parsons Brinckerhoff analysis. Bear in mind that the trade area of the Glendale and Pasadena stores are very large and that the proposed Burbank store will likely result in a lower trip generation at the Glendale store. These three trip generation surveys were also accomplished during the week before Christmas, a traditionally high grocery shopping season.

Based on the review of other Whole Foods Market sites, it can be concluded that the application of the ITE trip generation data for supermarkets to the proposed Whole Foods Market is appropriate.

### **TRIP GENERATION PASS-BY CREDIT**

An element associated with the proposed project's trip generation was the percentage of pass-by credit assigned to project trips. ITE as well as cities in Southern California permit certain land uses to assume that some trips will be pass-by trips. These trips would already be passing by on the street system bordering the project.

The Parsons Brinckerhoff report included a 20% pass-by credit in its estimation of project generated trips. ITE permits a range of pass-by credit percentages from 19% to 57% for supermarket land uses. The City of Los Angeles permits a pass-by credit of 20% for supermarket uses.

Upon reviewing industry standards, the 20% pass-by credit assumed in the Parsons Brinckerhoff report is a reasonable and conservative percentage that may be deducted from the total new trips generated by the proposed project. The estimate reflects industry standards drawn from surveys of multiple supermarket locations.

### **PROJECT TRIP DISTRIBUTION**

The Parsons Brinckerhoff traffic impact report presented a project trip distribution for the proposed Whole Foods Market. It predicted that the trips generated by the proposed project would be distributed as follows: 25% to the west, 25% to the east, 25% to the north and 25% to the south.

According to trade area and population data received by Fehr & Peers/Kaku Associates, there was a higher distribution of trips to the west and lower distribution to the south than had been predicted in the Parsons Brinckerhoff report. Based on the review of the Whole Foods Market trade area data and population numbers, it was estimated that trips generated by the proposed project would be distributed as follows: 41% to the west, 25% to the east, 27% to the north and 7% to the south.

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Using the revised trip distribution percentages as a foundation, project trips were assigned to the roadway network surrounding the proposed project site. Based on the Parsons Brinckerhoff findings that p.m. peak hour traffic would be impacted by the proposed project, our office focused its review on potential p.m. peak hour traffic impacts.

Table 1 shows the volume-to-capacity (V/C) ratios as well as the level of service (LOS) grades for the 13 study intersections for the p.m. peak hour. Reassigned project traffic according to the revised trip distribution percentages throughout the roadway network resulted in project impact conclusions the same as those presented in the Parsons Brinckerhoff report. Under both analyses, the intersection of North Buena Vista Street and West Alameda Avenue experienced a significant impact that would be mitigated to less than significant levels with the proposed restriping mitigation presented in the Parsons Brinckerhoff report.

The worksheets showing traffic volumes at each of the 13 study intersections both with and without the project are provided in Appendices B and C. The North Buena Vista Street and West Alameda Avenue with mitigation worksheet is in Appendix D at the end of this memorandum.

In addition, the project developer has offered further improvements at the intersection of South Main Street and West Alameda Avenue. Even though this intersection is not significantly impacted by project trips, the developer has offered roadway widening intended to keep the intersection at the current level of service. Appendix E shows the capacity calculation worksheet that confirms that this occurs even with the redistributed project traffic.

Following the reassignment of trips through the roadway network, the project impacts were the same as those presented in the earlier Parsons Brinckerhoff report. Thus, even with a substantial revision of the project traffic distribution, the conclusions of the Parsons Brinckerhoff study remain valid.

## **NEIGHBORHOOD IMPACTS**

Traffic diversion takes place when traffic leaves the arterial and collector street system and instead uses local residential streets to complete their trips. Most often, this diversion occurs because motorists believe that they can reduce their travel time by taking a short cut through the neighborhood.

Neighborhood diversion is usually a result of one of two conditions. First, the access for a new or existing development lines up directly opposite a residential street, thus encouraging project traffic to use the residential street for access to/from the project. Second, the project may add enough traffic to the arterial street system that some of the key intersections along that arterial street become congested and traffic diverts to parallel residential streets.

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The proposed Whole Foods Market is to be constructed at the northwestern corner of the intersection of Alameda Avenue and Main Street in the City of Burbank. Although the streets directly adjacent to the project site are not local neighborhood streets, the project site is near residential areas.

Figure 1 shows the project site and five local residential streets that were listed by the neighbors as possible cut-through traffic routes. The street segments are as follows:

- 1) South Glenwood Place, south of West Oak Street
- 2) West Valencia Avenue between South Main Street and Victory Boulevard
- 3) South Chavez Street between West Alameda Avenue and Riverside Drive
- 4) West Spazier Avenue between Victory Boulevard and South Main Street
- 5) West Elm Avenue between Victory Boulevard and South Main Street

Figure 1 also shows the LOS grades of the study intersections nearest to these residential streets.

Based on the LOS grades, the intersections along West Alameda Avenue and South Main Street would operate at acceptable levels when the proposed project is built and would have very little congestion necessitating a motorist to leave the corridors of West Alameda Avenue or South Main Street and cut through the streets either south of Alameda Avenue or parallel to South Main Street.

Additionally, the project's main driveway on West Alameda Avenue would be a right-in and left-in/right-out only driveway. The proposed project's driveway across from West Valencia Avenue, would offer full access driveway stop controls across from Valencia Avenue. The Parsons Brinckerhoff report performed a street segment analysis of West Valencia Avenue east of the project site and estimated that 1% of the traffic generated by the new project would use West Valencia Avenue over West Alameda Avenue or South Main Street to reach Victory Boulevard. This assignment seems reasonable because West Valencia Avenue is a less desirable route to take to the site. West Valencia Avenue runs parallel to the arterial of West Alameda Avenue where most project traffic would generally prefer to travel. In addition, West Valencia Avenue is a less desirable route because speed is restricted to 15 miles per hour. It also has speed humps, which further discourage neighborhood cut-through traffic.

To further reduce the possibility of cut-through traffic on Valencia Avenue, the developer has offered to redesign the driveway access from Valencia Avenue to permit left- and right-turn exits, but to prohibit through movements from the project site to eastbound Valencia Avenue. Motorists would still be able to make left and right turns onto the site from South Main Street and to enter straight from Valencia Avenue.

For these reasons, cut-through traffic along West Valencia Avenue would be expected to be limited as it is not a route that would provide time-savings.

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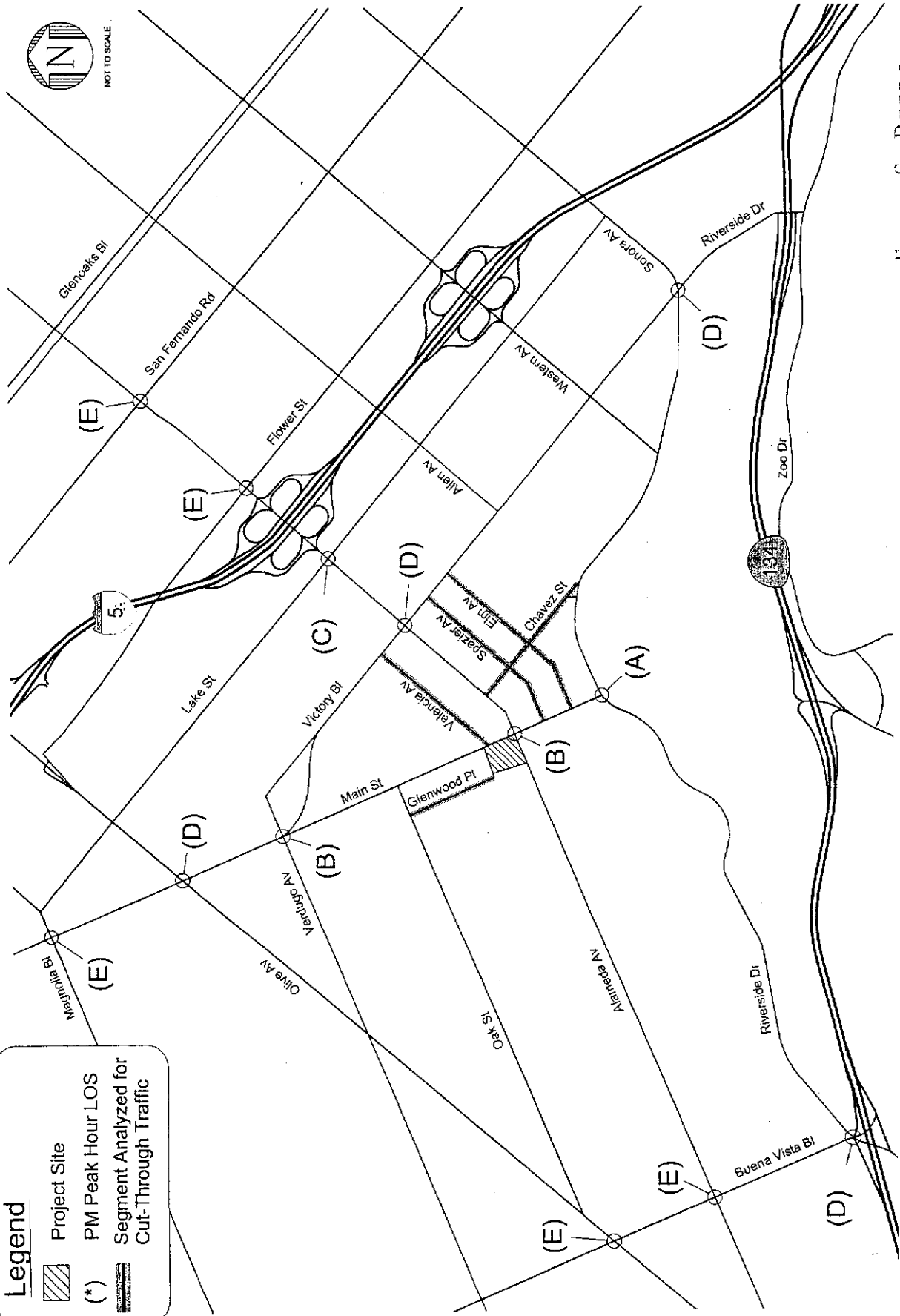
## **CONCLUSION**

Following the review of the Parsons Brinckerhoff report, we find that the report meets industry standards and accurately identifies the traffic and parking impacts of the project. We find the estimates of project traffic to be consistent with actual field data collected at nearby Whole Foods Markets and we concur with the report's conclusions that the project would not create significant impacts on nearby residential streets.



**Legend**

- Project Site
- PM Peak Hour LOS
- Segment Analyzed for Cut-Through Traffic



FEHR & PEERS  
K&K ASSOCIATES

FIGURE 1  
LEVELS OF SERVICE AT STUDY INTERSECTIONS - WITH PROJECT

TABLE 1  
FUTURE (2008) INTERSECTION LEVEL OF SERVICE ANALYSIS

Intersection	Peak Hour	Cumulative Base (Year 2008)		Cumulative plus Project (Year 2008)		Project Increase in V/C	Significant Project Impact	Cumulative plus Project with Mitigation		Project Increase in V/C	Significant Project Impact
		V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS		
1 North Buena Vista Street West Olive Avenue	P.M.	0.935	E	0.943	E	0.008	NO				
2 North Buena Vista Street West Alameda Avenue	P.M.	0.944	E	0.979	E	0.035	YES	0.921	E	-0.023	NO
3 North Buena Vista Street West Riverside Drive	P.M.	0.803	D	0.809	D	0.006	NO				
4 North Victory Boulevard West Magnolia Boulevard	P.M.	0.898	D	0.907	E	0.009	NO				
5 North Victory Boulevard West Olive Avenue	P.M.	0.883	D	0.893	D	0.010	NO				
6 South Victory Boulevard West Verdugo Avenue	P.M.	0.603	B	0.621	B	0.018	NO				
7[a] South Main Street West Alameda Avenue	P.M.	0.658	B	0.683	B	0.025	NO				
7[b] South Main Street West Alameda Avenue	P.M.	0.658	B	0.669	B	0.011	NO				
8 South Main Street West Riverside Drive	P.M.	0.566	A	0.571	A	0.005	NO				
9 South Victory Boulevard West Alameda Avenue	P.M.	0.867	D	0.880	D	0.013	NO				
10 Victory Boulevard Riverside Drive	P.M.	0.846	D	0.847	D	0.001	NO				
11 South Lake Street West Alameda Avenue	P.M.	0.775	C	0.786	C	0.011	NO				
12 Flower Street East Alameda Avenue	P.M.	0.967	E	0.976	E	0.009	NO				
13 South San Fernando Road East Alameda Avenue	P.M.	0.930	E	0.941	E	0.011	NO				

[a] With project V/C at South Main Street and West Alameda Avenue calculated using existing lane striping.  
[b] With project V/C at South Main Street and West Alameda Avenue calculated using developer's proposed lane improvements.

**APPENDIX A**

***ANALYSIS OF TRIP GENERATION RATES  
FOR PROPOSED BURBANK WHOLE FOODS MARKET  
(FEHR & PEERS/KAKU ASSOCIATES, INC., DECEMBER 27, 2006)***



**DRAFT**

**MEMORANDUM**

**TO:** Tom Davies, Davies Properties  
**FROM:** John Stutsman and Eric J. Haack  
**DATE:** December 27, 2006  
**SUBJECT:** Analysis of Trip Generation Rates for  
Proposed Burbank Whole Foods Market

**Ref:** 2101

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This memorandum presents the results of surveys conducted at three existing Whole Foods Markets in the Los Angeles area. The surveys were conducted to determine the number of afternoon peak hour trips generated by these land uses and whether the use of supermarket trip generation rates provided by the Institute of Transportation Engineers (ITE) provided similar trip generation rates as actually generated by Whole Foods Market stores.

This memorandum is a component of a peer review being performed on the traffic analysis by Parsons Brinckerhoff regarding a proposed Whole Foods Market to be constructed at the intersection of West Alameda Avenue and South Main Street in the City of Burbank.

**FIELD SURVEYS OF EXISTING WHOLE FOODS MARKETS**

The traffic analysis for the proposed Whole Foods Market performed by Parsons Brinckerhoff (*Whole Foods Market Traffic Impact Study, Final Technical Report*, Parsons Brinckerhoff, October 2, 2006) estimated the number of afternoon peak hour trips to be generated by the project. The supermarket trip rates from *Trip Generation, 6<sup>th</sup> Edition* (ITE, 1997) were used.

In order to determine the validity of ITE's supermarket rate as applied to Whole Foods Markets, surveys were conducted of three existing Whole Foods Market locations. Two of the sites were selected based on their close proximity to the proposed Burbank site. The third site, in Santa Monica, was selected for its urban location and provision of underground parking, both of which are similar to the proposed Burbank store.

The three surveyed locations were Whole Foods Markets in Glendale on Glendale Avenue, in Pasadena on Foothill Boulevard and in Santa Monica on Wilshire Boulevard. Surveys were conducted at all three locations from 4:00 to 6:00 p.m. on Wednesday, December 20, 2006.

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At the Glendale and Santa Monica store locations, cars were counted as they entered and left the market's parking facilities. At the Pasadena store, which shares its parking spaces with other neighboring commercial uses, people who entered and exited the store were counted. Individuals entering or exiting the store alone were counted as single trips. If two or more people entered and/or exited the store as a pair or group, it was assumed they had taken a single car to the site and were then counted as an entering or exiting single trip. The results of these surveys are included in the attachment to this report.

## **RESULTS OF SURVEYS OF EXISTING WHOLE FOODS MARKETS**

Table 1 summarizes the total number of trips that entered and exited the different Whole Foods Markets during the market's observed peak hour. In Table 2, the trips have been calculated to determine a percentage split for total ins and outs at each market as well as a total rate per thousand square feet.

The average rate and percentage split is presented in Table 2 along with the ITE rates for supermarket land uses used in the Parsons Brinckerhoff traffic study. As shown in Table 2, all three sites demonstrated rates comparable to or lower than those in *Trip Generation, 6<sup>th</sup> Edition*.

## **CONCLUSION**

Surveys conducted on December 20, 2006 at three Whole Foods Market locations showed only minor variation from the ITE trip generation rates for supermarkets. All three sites demonstrated rates comparable to or lower than those in *Trip Generation, 6<sup>th</sup> Edition*.

The use of the average rate would result in 30 fewer trips than were provided in the Parsons Brinckerhoff report. The use of the highest rate would result in 32 more trips than predicted in the traffic report. Neither estimate would change the conclusions of the traffic analysis.

According to the results of the field studies, using the supermarket trip generation rates provided in *Trip Generation, 6<sup>th</sup> Edition* is appropriate for predicting the trips to be generated by the proposed Whole Foods Market.

**TABLE 1**  
**SUMMARY OF DRIVEWAY COUNTS**  
**WHOLE FOODS MARKETS**

Whole Foods Locations	Size	P.M. Peak Hour Trips	
		In	Out
Pasadena	48 ksf	266	274
Santa Monica	28 ksf	128	100
Glendale	48 ksf	280	256
			<b>Total</b>
			540
			228
			536

Notes: Data collected on Wednesday, December 20, 2006

**TABLE 2**  
**SUMMARY OF WHOLE FOODS TRIP GENERATION RATES**

Whole Foods Locations (1)	Size	P.M. Peak Hour Trips		P.M. Peak Hour Trips	
		In	Out	In	Out
Pasadena	48 ksf	49%	51%	266	274
Santa Monica	28 ksf	56%	44%	128	100
Glendale	48 ksf	52%	48%	280	256
<b>Average Rates</b>		53%	47%		
ITE (6th Ed.) Supermarket Rate		51%	49%		
					<b>Total</b>
					540
					228
					536

Notes:

- (1) Data from Whole Foods Markets collected on Wednesday, December 20, 2006
- (2) Trips per 1,000 sf of store area

**ATTACHMENT**  
**PARKING SURVEY RESULTS**

**WILTEC**

TRIP GENERATION SURVEYS

Phone: (626) 564-1944 Fax: (626) 564-0969

CLIENT: FEHR AND PEERS / KAKU  
 PROJECT: WHOLE FOODS MARKETS  
 LOCATION: 3751 E. FOOTHILL BLVD., PASADENA  
 DATE: WEDNESDAY DECEMBER 20, 2006  
 PERIOD: 4:00 PM - 6:00 PM

DESCRIPTION: COUNT OF PEDESTRIANS ENTERING AND LEAVING - TAKEN AT THE STORE DOORS

PERIOD 15 MIN COUNTS	MAIN DOOR				SECOND DOOR				TOTAL OF BOTH DOORS				
	GROUPS OF 1 PED	GROUPS OF 2 PEDS	GROUPS OF 3 PEDS	GROUPS OF 4 OR MORE	GROUPS OF 1 PED	GROUPS OF 2 PEDS	GROUPS OF 3 PEDS	GROUPS OF 4 OR MORE	GROUPS OF 1 PED	GROUPS OF 2 PEDS	GROUPS OF 3 PEDS	GROUPS OF 4 OR MORE	TOTAL GROUPS
400-415	44	8	3	0	3	5	1	0	47	13	4	0	64
415-430	53	6	1	0	7	1	0	0	60	7	1	0	68
430-445	47	12	2	3	5	1	1	0	52	13	3	3	71
445-500	46	7	1	0	6	3	0	0	52	10	0	0	63
500-515	48	3	3	0	2	1	0	0	50	4	3	0	57
515-530	46	9	1	1	14	3	1	0	60	12	2	1	75
530-545	41	6	1	2	3	0	0	0	44	6	1	2	53
545-600	23	1	1	1	1	1	0	0	24	2	1	1	28
<b>HOUR TOTALS</b>													
400-500	190	33	7	3	21	10	2	0	211	43	9	3	266
415-515	194	28	7	3	20	6	1	0	214	34	8	3	259
430-530	187	31	7	4	27	8	2	0	214	39	9	4	266
445-545	181	25	6	3	25	7	1	0	206	32	7	3	248
500-600	158	19	6	4	20	5	1	0	178	24	7	4	213

PERIOD 15 MIN COUNTS	MAIN DOOR				SECOND DOOR				TOTAL OF BOTH DOORS				
	GROUPS OF 1 PED	GROUPS OF 2 PEDS	GROUPS OF 3 PEDS	GROUPS OF 4 OR MORE	GROUPS OF 1 PED	GROUPS OF 2 PEDS	GROUPS OF 3 PEDS	GROUPS OF 4 OR MORE	GROUPS OF 1 PED	GROUPS OF 2 PEDS	GROUPS OF 3 PEDS	GROUPS OF 4 OR MORE	TOTAL GROUPS
400-415	18	6	1	0	26	13	1	0	44	19	2	0	65
415-430	23	6	2	0	27	3	1	0	50	9	3	0	62
430-445	35	6	0	0	23	8	1	0	58	14	1	0	73
445-500	32	3	0	0	18	7	3	0	50	10	3	0	63
500-515	32	4	1	0	24	6	2	1	56	10	3	1	70
515-530	31	5	1	0	20	7	2	2	51	12	3	2	68
530-545	24	7	0	3	19	6	0	0	43	13	0	3	59
545-600	18	7	0	0	16	3	1	1	34	10	1	1	46
<b>HOUR TOTALS</b>													
400-500	108	21	3	0	94	31	6	0	202	52	9	0	263
415-515	122	19	3	0	92	24	7	1	214	43	10	1	268
430-530	130	18	2	0	85	28	8	3	215	46	10	3	274
445-545	119	19	2	3	81	26	7	3	200	45	9	6	260
500-600	105	23	2	3	79	22	5	4	184	45	7	7	243

# WILTEC

Phone: (626) 564-1944 Fax: (626) 564-0969

## TRIP GENERATION SURVEYS

CLIENT: FEHR AND PEERS / KAKU  
PROJECT: WHOLE FOODS MARKETS  
LOCATION: 2201 WILSHIRE BOULEVARD, SANTA MONICA  
DATE: WEDNESDAY DECEMBER 20, 2006  
PERIOD: 4:00 PM - 6:00 PM

DESCRIPTION: COUNT OF VEHICLES ENTERING AND DEPARTING - TAKEN AT ENTRANCE TO SUBTERRANEAN GARAGE

15 MIN COUNTS	INBOUND	OUTBOUND
400-415	26	30
415-430	23	25
430-445	21	28
445-500	37	21
500-515	26	26
515-530	22	30
530-545	43	23
545-600	25	31
<b>HOURLY TOTALS</b>		
400-500	107	104
415-515	107	100
430-530	106	105
445-545	128	100
500-600	116	110

**WILTEC**

Phone: (626) 564-1944 Fax: (626) 564-0969

TRIP GENERATION SURVEYS

CLIENT: FEHR AND PEERS / KAKU  
 PROJECT: WHOLE FOODS MARKETS  
 LOCATION: 321 N. GLENDALE BOULEVARD, GLENDALE  
 DATE: WEDNESDAY DECEMBER 20, 2006  
 PERIOD: 4:00 PM - 6:00 PM

DESCRIPTION: COUNT OF VEHICLES ENTERING AND DEPARTING FROM SURFACE LOT DRIVEWAYS

PERIOD	DVWY 1		DVWY 2		DVWY 3		DVWY 4		DVWY 5		ALL DVWYS TOTALS	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
400-415	30	39	26	9	2	7	8	3	6	9	72	67
415-430	25	39	21	14	1	8	12	2	4	11	63	74
430-445	25	22	30	7	5	3	15	2	3	9	78	43
445-500	23	42	19	12	2	4	17	2	6	12	67	72
500-515	14	37	23	18	4	3	11	1	7	15	59	74
515-530	12	21	25	7	8	5	15	6	15	13	75	52
530-545	20	18	17	11	4	8	11	6	9	14	61	57
545-600	24	30	26	16	4	4	13	3	6	7	73	60
<b>HOURLY TOTALS</b>												
400-600	103	142	96	42	10	22	52	9	19	41	280	256
415-515	87	140	93	51	12	18	55	7	20	47	267	263
430-530	74	122	97	44	19	15	58	11	31	49	279	241
445-545	69	118	84	48	18	20	54	15	37	54	262	255
500-600	70	106	91	52	20	20	50	16	37	49	266	243



**APPENDIX B**

**LOS WORKSHEETS WITHOUT PROJECT**

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #1 #1 N Buena Vista St & W Olive Av

Cycle (sec): 100 Critical Vol./Cap.(X): 0.935
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name (N Buena Vista St, W Olive Av), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various movement categories.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for different movement types.

Capacity Analysis Module table showing Vol/Sat, Crit Vol, and Crit Moves for various movements.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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Intersection #2 #2 N Buena Vista Street & W Alameda Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.944  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: E  
 \*\*\*\*\*

Street Name:	North Buena Vista Street				West Alameda Avenue										
Approach:	North Bound		South Bound		East Bound		West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Prot+Permit		Prot+Permit		Protected		Protected								
Rights:	Include		Include		Include		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	2	0	1	1	0	2	0	1	2	0	2	0	1

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Volume Module:

Base Vol:	146	938	169	214	557	135	363	946	249	258	472	234
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	938	169	214	557	135	363	946	249	258	472	234
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	938	169	214	557	135	363	946	249	258	472	234
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	938	169	214	557	135	363	946	249	258	472	234
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	146	938	169	214	557	135	399	946	249	284	472	234

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Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	2750	2750	1375	2750	2750	1375

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Capacity Analysis Module:

Vol/Sat:	0.11	0.34	0.12	0.16	0.20	0.10	0.15	0.34	0.18	0.10	0.17	0.17
Crit Vol:	469		214		473		142					
Crit Moves:	****		****		****		****					

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #3 #3 N Buena Vista St & W Riverside Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.803
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 95 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Buena Vista Street and West Riverside Drive with various movement details.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across multiple lanes.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values for different lane configurations.

Capacity Analysis Module table showing Vol/Sat, Crit Vol, and Crit Moves for various lane and movement combinations.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #4 #4 N Victory Bl & W Magnolia Bl  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.898  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: D  
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Street Name:	North Victory Boulevard					West Magnolia Boulevard									
Approach:	North Bound		South Bound			East Bound		West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Prot+Permit		Prot+Permit			Prot+Permit		Prot+Permit			Prot+Permit				
Rights:	Include		Include			Include		Include			Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	188	880	145	195	901	135	153	803	141	185	887	181
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	188	880	145	195	901	135	153	803	141	185	887	181
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	188	880	145	195	901	135	153	803	141	185	887	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	880	145	195	901	135	153	803	141	185	887	181
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	188	880	145	195	901	135	153	803	141	185	887	181

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.14	0.32	0.11	0.14	0.33	0.10	0.11	0.29	0.10	0.13	0.32	0.13
Crit Vol:	188		450			153		443				
Crit Moves:	****		****			****		****				

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #5 #5 North Victory Boulevard & West Olive Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.883
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Victory Boulevard and West Olive Avenue with North and South bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various movement categories.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for different movement types.

Capacity Analysis Module table showing Vol/Sat, Crit Vol, and Crit Moves for various movements.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #6 #6 South Victory Boulevard & West Verdugo Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.603  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 36 Level Of Service: B  
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Street Name:	North Victory Boulevard					West Verdugo Avenue												
Approach:	North Bound		South Bound			East Bound			West Bound									
Movement:	L	T	R	L	T	R	L	T	R	L	T	R						
Control:	Permitted					Permitted					Permitted							
Rights:	Include					Include					Include							
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0						
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	1	0	1	0	0	1

Volume Module:

Base Vol:	113	1232	40	44	1101	69	115	124	147	24	102	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	113	1232	40	44	1101	69	115	124	147	24	102	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	1232	40	44	1101	69	115	124	147	24	102	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	1232	40	44	1101	69	115	124	147	24	102	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	113	1232	40	44	1101	69	115	124	147	24	102	56

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.19	0.81	1.00
Final Sat.:	1500	3000	1500	1500	3000	1500	1500	1500	1500	286	1214	1500

Capacity Analysis Module:

Vol/Sat:	0.08	0.41	0.03	0.03	0.37	0.05	0.08	0.08	0.10	0.08	0.08	0.04
Crit Vol:	113			551			115			126		
Crit Moves:	****			****			****			****		

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Level of Service Computation Report  
Circular 212 Planning Method (Base Volume Alternative)

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Intersection #7 #7 South Main Street & West Alameda Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.658  
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
Optimal Cycle: 42 Level Of Service: B  
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Street Name:	South Main Street						West Alameda Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:

Base Vol:	113	101	103	100	100	127	103	1091	103	50	799	71
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	113	101	103	100	100	127	103	1091	103	50	799	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	101	103	100	100	127	103	1091	103	50	799	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	101	103	100	100	127	103	1091	103	50	799	71
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	113	101	103	100	100	127	103	1091	103	50	799	71

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.50	0.50	1.00	0.44	0.56	1.00	1.83	0.17	1.00	1.84	0.16
Final Sat.:	1500	743	757	1500	661	839	1500	2741	259	1500	2755	245

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.07	0.15	0.15	0.07	0.40	0.40	0.03	0.29	0.29
Crit Vol:	113			227			597			50		
Crit Moves:	****			****			****			****		

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Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

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 Intersection #8 #8 South Main Street & West Riverside Drive  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.566  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 43 Level Of Service: A  
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Street Name:	South Main Street						West Riverside Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	0	1	0	1	0	1	0	1

Volume Module:

Base Vol:	14	23	20	121	5	124	124	507	14	35	259	92
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	23	20	121	5	124	124	507	14	35	259	92
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	23	20	121	5	124	124	507	14	35	259	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	23	20	121	5	124	124	507	14	35	259	92
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	14	23	20	121	5	124	124	507	14	35	259	92

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	0.48	0.02	0.50	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1425	1425	1425	690	29	707	1425	1425	1425	1425	1425	1425

Capacity Analysis Module:

Vol/Sat:	0.01	0.02	0.01	0.18	0.18	0.18	0.09	0.36	0.01	0.02	0.18	0.06
Crit Vol:	14			250			507			35		
Crit Moves:	****			****			****			****		

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

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Intersection #9 #9 South Victory Boulevard & West Alameda Avenue
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.867
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 140 Level Of Service: D
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Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include South Victory Boulevard (North and South Bound) and West Alameda Avenue (East and West Bound).

Volume Module: Table showing traffic volume adjustments including Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol.

Saturation Flow Module: Table showing saturation flow values for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table showing capacity analysis values for Vol/Sat, Crit Vol, and Crit Moves.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #10 #10 Victory Boulevard & Riverside Drive  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.846  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 121 Level Of Service: D  
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Street Name:	Victory Boulevard						Riverside Drive									
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Permitted			Permitted			Split Phase			Split Phase						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	1	1	0	1	1	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	73	732	332	152	540	5	25	165	128	357	160	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	73	732	332	152	540	5	25	165	128	357	160	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	73	732	332	152	540	5	25	165	128	357	160	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	732	332	152	540	5	25	165	128	357	160	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	73	732	332	152	540	5	25	165	128	357	160	139

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.38	0.62	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	1425	1961	889	1425	2850	1425	1425	1425	1425	1425	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.05	0.37	0.37	0.11	0.19	0.00	0.02	0.12	0.09	0.25	0.06	0.10
Crit Vol:	532			152			165			357		
Crit Moves:	****			****			****			****		

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #11 #11 South Lake Street & West Alameda Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.775
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: C

Table with columns for Street Name (South Lake Street, West Alameda Avenue), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Permitted), Rights (Include), Min. Green, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol across various movements.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Vol, and Crit Moves for various movements.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #12 #12 Flower Street & East Alameda Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.967  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: E  
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Street Name:	Flower Street						East Alameda Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	2	1	0	2

Volume Module:	Flower Street			Flower Street			East Alameda Avenue			East Alameda Avenue		
Base Vol:	340	107	105	46	62	261	73	1425	143	64	1013	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	107	105	46	62	261	73	1425	143	64	1013	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	107	105	46	62	261	73	1425	143	64	1013	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	107	105	46	62	261	73	1425	143	64	1013	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	340	107	105	46	62	261	73	1425	143	64	1013	44

Saturation Flow Module:	Flower Street			Flower Street			East Alameda Avenue			East Alameda Avenue		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	0.43	0.57	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1425	1425	1425	607	818	1425	1425	2850	1425	1425	2850	1425

Capacity Analysis Module:	Flower Street			Flower Street			East Alameda Avenue			East Alameda Avenue		
Vol/Sat:	0.24	0.08	0.07	0.08	0.08	0.18	0.05	0.50	0.10	0.04	0.36	0.03
Crit Vol:	340			261			713			64		
Crit Moves:	****			****			****			****		

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #13 #13 South San Fernando Road & East Alameda Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.930  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: E  
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Street Name:	South San Fernando Road						East Alameda Avenue								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0

Volume Module:

Base Vol:	348	698	87	106	392	185	336	867	218	70	513	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	348	698	87	106	392	185	336	867	218	70	513	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	348	698	87	106	392	185	336	867	218	70	513	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	348	698	87	106	392	185	336	867	218	70	513	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	348	698	87	106	392	185	336	867	218	70	513	100

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.78	0.22	1.00	1.36	0.64	1.00	1.60	0.40	1.00	1.67	0.33
Final Sat.:	1375	2445	305	1375	1868	882	1375	2197	553	1375	2301	449

Capacity Analysis Module:

Vol/Sat:	0.25	0.29	0.29	0.08	0.21	0.21	0.24	0.39	0.39	0.05	0.22	0.22
Crit Vol:	348			289			336			307		
Crit Moves:	****			****			****			****		

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**APPENDIX C**

**LOS WORKSHEETS WITH PROJECT**

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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Intersection #1 #1 N Buena Vista St & W Olive Av

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 Cycle (sec): 100 Critical Vol./Cap.(X): 0.943  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: E  
 \*\*\*\*\*

Street Name:	N Buena Vista St						W Olive Av					
	North Bound			South Bound			East Bound			West Bound		
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Prot+Permit			Prot+Permit			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	1	1	0	2

Volume Module:

Base Vol:	62	969	220	213	659	162	233	832	96	135	520	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	62	969	220	213	659	162	233	832	96	135	520	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	62	969	220	213	659	162	233	832	96	135	520	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	969	220	213	659	162	233	832	96	135	520	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	62	969	220	213	659	162	233	832	96	135	520	52

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.79	0.21	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	2466	284	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.05	0.35	0.16	0.15	0.24	0.12	0.17	0.34	0.34	0.10	0.19	0.04
Crit Vol:	485			213			464			135		
Crit Moves:	****			****			****			****		

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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\*\*\*\*\*  
 Intersection #2 #2 N Buena Vista Street & W Alameda Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.979  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: E  
 \*\*\*\*\*

Street Name:	North Buena Vista Street					West Alameda Avenue									
Approach:	North Bound		South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Prot+Permit		Prot+Permit			Protected			Protected						
Rights:	Include		Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	2	0	1	1	0	2	0	1	2	0	2	0	1

Volume Module:

Base Vol:	146	938	174	244	557	135	363	979	249	262	497	257
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	938	174	244	557	135	363	979	249	262	497	257
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	938	174	244	557	135	363	979	249	262	497	257
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	938	174	244	557	135	363	979	249	262	497	257
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.10	1.00	1.00	1.10	1.00	1.00
Final Vol.:	146	938	174	244	557	135	399	979	249	288	497	257

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	2750	2750	1375	2750	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.11	0.34	0.13	0.18	0.20	0.10	0.15	0.36	0.18	0.10	0.18	0.19
Crit Vol:	469		244			489			144			
Crit Moves:	****		****			****			****			

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

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Intersection #3 #3 N Buena Vista St & W Riverside Dr

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Cycle (sec): 100 Critical Vol./Cap.(X): 0.809
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 97 Level Of Service: D

\*\*\*\*\*

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, Lanes. Rows include North Buena Vista Street and West Riverside Drive with various lane configurations and control types like Split Phase and Permitted.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol. across multiple lanes.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, Final Sat. for various lane configurations.

Capacity Analysis Module table showing Vol/Sat, Crit Vol, Crit Moves for different lane setups.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #4 #4 N Victory Bl & W Magnolia Bl  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.907  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: E  
 \*\*\*\*\*

Street Name:	North Victory Boulevard					West Magnolia Boulevard									
Approach:	North Bound		South Bound			East Bound		West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Prot+Permit		Prot+Permit			Prot+Permit		Prot+Permit			Prot+Permit				
Rights:	Include		Include			Include		Include			Include				
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	192	901	147	195	928	135	153	803	145	189	887	181
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	192	901	147	195	928	135	153	803	145	189	887	181
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	192	901	147	195	928	135	153	803	145	189	887	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	192	901	147	195	928	135	153	803	145	189	887	181
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	192	901	147	195	928	135	153	803	145	189	887	181

Saturation Flow Module:

Sat/Lane:	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375	1375
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1375	2750	1375	1375	2750	1375	1375	2750	1375	1375	2750	1375

Capacity Analysis Module:

Vol/Sat:	0.14	0.33	0.11	0.14	0.34	0.10	0.11	0.29	0.11	0.14	0.32	0.13
Crit Vol:	192				464			402		189		
Crit Moves:	****				****			****		****		

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

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Intersection #5 #5 North Victory Boulevard & West Olive Avenue

\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.893
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: D

\*\*\*\*\*

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Victory Boulevard and West Olive Avenue with sub-rows for North Bound, South Bound, East Bound, and West Bound.

Volume Module:

Table with 12 columns and 11 rows showing volume adjustments: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Vol.

Saturation Flow Module:

Table with 12 columns and 4 rows showing saturation flow: Sat/Lane, Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table with 12 columns and 3 rows showing capacity analysis: Vol/Sat, Crit Vol, Crit Moves.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #6 #6 South Victory Boulevard & West Verdugo Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.621  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 38 Level Of Service: B  
 \*\*\*\*\*

Street Name:	North Victory Boulevard						West Verdugo Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	2	0	1	1	1	0	1	0	1	0

Volume Module:

Base Vol:	117	1271	41	44	1145	69	115	124	156	25	102	56
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	117	1271	41	44	1145	69	115	124	156	25	102	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	117	1271	41	44	1145	69	115	124	156	25	102	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	117	1271	41	44	1145	69	115	124	156	25	102	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	117	1271	41	44	1145	69	115	124	156	25	102	56

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	0.20	0.80	1.00
Final Sat.:	1500	3000	1500	1500	3000	1500	1500	1500	1500	295	1205	1500

Capacity Analysis Module:

Vol/Sat:	0.08	0.42	0.03	0.03	0.38	0.05	0.08	0.08	0.10	0.08	0.08	0.04
Crit Vol:	117			572		115			127			
Crit Moves:	****			****		****			****			

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

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Intersection #7 #7 South Main Street & West Alameda Avenue
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.683
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include South Main Street and West Alameda Avenue with North, South, East, and West bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various movement categories.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. for different movement types.

Capacity Analysis Module table showing Vol/Sat, Crit Vol, and Crit Moves for various movements.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #8 #8 South Main Street & West Riverside Drive  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.571  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 43 Level Of Service: A  
 \*\*\*\*\*

Street Name:	South Main Street						West Riverside Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Prot+Permit			Prot+Permit		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	0	1	1	0	1	1	0	1

Volume Module:

Base Vol:	14	23	20	125	5	128	129	507	14	35	259	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	23	20	125	5	128	129	507	14	35	259	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	14	23	20	125	5	128	129	507	14	35	259	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	23	20	125	5	128	129	507	14	35	259	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	14	23	20	125	5	128	129	507	14	35	259	97

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	0.48	0.02	0.50	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1425	1425	1425	690	28	707	1425	1425	1425	1425	1425	1425

Capacity Analysis Module:

Vol/Sat:	0.01	0.02	0.01	0.18	0.18	0.18	0.09	0.36	0.01	0.02	0.18	0.07
Crit Vol:	14					258	507		35			
Crit Moves:	****					****	****		****			

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #9 #9 South Victory Boulevard & West Alameda Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.880  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 156 Level Of Service: D  
 \*\*\*\*\*

Street Name:	South Victory Boulevard						West Alameda Avenue								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Protected			Protected			Permitted			Permitted					
Rights:	Include			Include			Include			Include					
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0			
Lanes:	1	0	1	1	0	2	0	1	1	0	1	0	2	0	1

Volume Module:

Base Vol:	125	483	210	354	491	71	95	1173	125	127	753	296
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	483	210	354	491	71	95	1173	125	127	753	296
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	483	210	354	491	71	95	1173	125	127	753	296
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	483	210	354	491	71	95	1173	125	127	753	296
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	125	483	210	389	491	71	95	1173	125	127	753	296

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.39	0.61	2.00	1.75	0.25	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1425	1986	864	2850	2490	360	1425	2850	1425	1425	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.09	0.24	0.24	0.14	0.20	0.20	0.07	0.41	0.09	0.09	0.26	0.21
Crit Vol:			347	195			587		127			
Crit Moves:			****	****			****		****			

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Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)

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Intersection #10 #10 Victory Boulevard & Riverside Drive

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Cycle (sec): 100 Critical Vol./Cap.(X): 0.847  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 122 Level Of Service: D

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Street Name:	Victory Boulevard						Riverside Drive									
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Permitted			Permitted			Split Phase			Split Phase						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	1	0	1	1	0	1	1	0	2	0	1	1	0	2	0	1

Volume Module:

Base Vol:	78	735	332	152	542	5	25	165	132	357	160	139
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	78	735	332	152	542	5	25	165	132	357	160	139
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	78	735	332	152	542	5	25	165	132	357	160	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	78	735	332	152	542	5	25	165	132	357	160	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	78	735	332	152	542	5	25	165	132	357	160	139

Saturation Flow Module:

Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.38	0.62	1.00	2.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00
Final Sat.:	1425	1963	887	1425	2850	1425	1425	1425	1425	1425	2850	1425

Capacity Analysis Module:

Vol/Sat:	0.05	0.37	0.37	0.11	0.19	0.00	0.02	0.12	0.09	0.25	0.06	0.10
Crit Vol:	534			152			165			357		
Crit Moves:	****			****			****			****		

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #11 #11 South Lake Street & West Alameda Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.786
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 67 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include South Lake Street and West Alameda Avenue with North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various movement categories.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat. across various movement categories.

Capacity Analysis Module table with columns for Vol/Sat, Crit Vol, and Crit Moves across various movement categories.

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #12 #12 Flower Street & East Alameda Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.976  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 180 Level Of Service: E  
 \*\*\*\*\*

Street Name:	Flower Street						East Alameda Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	1	0	1	0	1	0	2	1	0	2

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Volume Module:	Flower Street			Flower Street			East Alameda Avenue			East Alameda Avenue		
Base Vol:	343	107	105	46	62	264	75	1439	146	64	1032	44
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	343	107	105	46	62	264	75	1439	146	64	1032	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	343	107	105	46	62	264	75	1439	146	64	1032	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	343	107	105	46	62	264	75	1439	146	64	1032	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	343	107	105	46	62	264	75	1439	146	64	1032	44

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Saturation Flow Module:	Flower Street			Flower Street			East Alameda Avenue			East Alameda Avenue		
Sat/Lane:	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425	1425
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	0.43	0.57	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1425	1425	1425	607	818	1425	1425	2850	1425	1425	2850	1425

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Capacity Analysis Module:	Flower Street			Flower Street			East Alameda Avenue			East Alameda Avenue		
Vol/Sat:	0.24	0.08	0.07	0.08	0.08	0.19	0.05	0.50	0.10	0.04	0.36	0.03
Crit Vol:	343			264			720			64		
Crit Moves:	****			****			****			****		

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Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

Intersection #13 #13 South San Fernando Road & East Alameda Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.941
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include South San Fernando Road and East Alameda Avenue with North and West Bound approaches.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Vol. across various lanes.

Saturation Flow Module table showing Sat/Lane, Adjustment, Lanes, and Final Sat. values.

Capacity Analysis Module table showing Vol/Sat, Crit Vol, and Crit Moves for different lanes.

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**APPENDIX D**

**LOS WORKSHEET**

**NORTH BUENA VISTA STREET AND WEST ALAMEDA AVENUE WITH MITIGATION**

Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)

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Intersection #2 #2 N Buena Vista Street & W Alameda Avenue

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Cycle (sec): 100 Critical Vol./Cap.(X): 0.921
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

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Street Name: North Buena Vista Street West Alameda Avenue
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Prot+Permit Prot+Permit Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 2 0 2 1 0

Volume Module:

Base Vol: 146 938 174 244 557 135 363 979 249 262 497 257
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 146 938 174 244 557 135 363 979 249 262 497 257
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 146 938 174 244 557 135 363 979 249 262 497 257
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 146 938 174 244 557 135 363 979 249 262 497 257
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.10 1.00 1.00 1.10 1.00 1.00
Final Vol.: 146 938 174 244 557 135 399 979 249 288 497 257

Saturation Flow Module:

Sat/Lane: 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375 1375
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 2.00 2.39 0.61 2.00 2.00 1.00
Final Sat.: 1375 2750 1375 1375 2750 1375 2750 3289 836 2750 2750 1375

Capacity Analysis Module:

Vol/Sat: 0.11 0.34 0.13 0.18 0.20 0.10 0.15 0.30 0.30 0.10 0.18 0.19
Crit Vol: 469 244 409 144
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

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**APPENDIX E**

**LOS WORKSHEET  
SOUTH MAIN STREET AND WEST ALAMEDA AVENUE RESTRIPIING**

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 Level Of Service Computation Report  
 Circular 212 Planning Method (Base Volume Alternative)  
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 Intersection #7 #7 South Main Street & West Alameda Avenue  
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Cycle (sec): 100 Critical Vol./Cap.(X): 0.669  
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx  
 Optimal Cycle: 44 Level Of Service: B  
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Street Name:	South Main Street				West Alameda Avenue					
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Permitted		Permitted		Permitted		Permitted			
Rights:	Include		Include		Include		Include			
Min. Green:	0	0	0	0	0	0	0	0	0	
Lanes:	1	0	0	1	0	1	0	1	1	0

Volume Module:

Base Vol:	118	106	103	148	108	152	103	1091	103	50	834	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	118	106	103	148	108	152	103	1091	103	50	834	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	118	106	103	148	108	152	103	1091	103	50	834	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	118	106	103	148	108	152	103	1091	103	50	834	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	118	106	103	148	108	152	103	1091	103	50	834	101

Saturation Flow Module:

Sat/Lane:	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.51	0.49	1.00	1.00	1.00	1.00	1.83	0.17	1.00	1.78	0.22
Final Sat.:	1500	761	739	1500	1500	1500	1500	2741	259	1500	2676	324

Capacity Analysis Module:

Vol/Sat:	0.08	0.14	0.14	0.10	0.07	0.10	0.07	0.40	0.40	0.03	0.31	0.31
Crit Vol:	209		148		597		50					
Crit Moves:	****		****		****		****					

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