Lawrence Livermore National Laboratory East Avenue/Emergency Response Planning Traffic Study

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U.S. Department of Energy

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Lawrence Livermore National Laboratory

EAST AVENUE / EMERGENCY RESPONSE PLANNING TRAFFIC STUDY

Prepared for

Livermore, California

February 15, 2002

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Table of Contents

1.0	INTRODUCTION.....	1
1.1	Background	1
1.2	Purpose	1
2.0	EXISTING CONDITIONS.....	1
2.1	Study Area.....	1
2.2	Data Collection	3
2.3	Traffic Analysis	5
2.3.1	Site Traffic	5
2.3.2	Levels of Service	13
2.3.3	Required Left-turn Storage Lengths	16
2.3.4	Environmental Documentation Review.....	16
3.0	ADMINISTRATIVE CONTROL OF EAST AVENUE	17
3.1	New East Avenue Security Control Point at South Vasco Road	18
3.2	New East Avenue Security Control Point at Greenville Road	18
3.3	New Truck Inspection Facility – East Avenue at Greenville Road	19
4.0	RECOMMENDATIONS.....	21

List of Tables

Table 1	LLNL Entrances: 24-Hour Counts (5-Day Weekday Average)	8
Table 2	LLNL Entrances Peak Hour Volumes (5-Day Weekday Average)	8
Table 3	SNL Entrances 24-Hour Counts (5-Day Weekday Average)	12
Table 4	SNL Entrances Peak Hour Volumes (5-Day Weekday Average)	12
Table 5	East Avenue 24-Hour Counts (5-Day Weekday Average)	12
Table 6	East Avenue Peak Hour Volumes (5-Day Weekday Average)	13
Table 7	Intersection Level of Service Definitions	13
Table 8	Existing Conditions Level of Service – Signalized Intersection	14
Table 9	Existing Conditions Level of Service – Unsignalized Intersections	14
Table 10	2020 Conditions Level of Service – Signalized Intersection	15
Table 11	2020 Conditions Level of Service – Unsignalized Intersections	15
Table 12	Left-Turn Storage Length Requirements	16
Table 13	East Avenue Traffic Volume Comparison	17
Table 14	Calculation of Weekday Non Laboratory Traffic (5-Day Average)	17
Table 15	Existing Total Trucks - Location 7 (5-Day Weekday Average)	19
Table 16	Existing Total Trucks – Location 8 (5-Day Weekday Average)	19
Table 17	Combined Total Trucks - Locations 7 and 8 (5-Day Weekday Average)	20
Table 18	Truck Size Summary	20

List of Figures

Figure 1	Project Study Area	2
Figure 2	Count Locations and Movements Counted	4
Figure 3	Average 24-Hour Counts	6
Figure 4	Average Weekday Peak Hour Traffic Volumes	7
Figure 5	LLNL- Combined Entrances (5-Day Weekday Average)	9
Figure 6	LLNL - Westgate (#17) (5-Day Weekday Average)	10
Figure 7	SNL Combined Entrances (5-Day Weekday Average)	11
Figure 8	East Avenue Conceptual Plan - Recommendations	22

Technical Appendix

- A. 24-Hour Traffic Counts
- B. Intersection Traffic Counts
- C. Truck Counts
- D. Traffic Analysis – Existing Conditions
- E. Traffic Analysis – Future Conditions – Year 2020

1.0 INTRODUCTION

1.1 Background

The Lawrence Livermore National Laboratory (LLNL) and the Sandia National Laboratory (SNL) are located at the eastern end of the City of Livermore. Recently the research facilities have been placed on heightened security alerts due to the events of September 11. To respond to the security concerns, LLNL and SNL have proposed to place East Avenue between South Vasco Road and Greenville Road under administrative control. This type of control would require security check points at both ends of this segment of East Avenue, including a truck inspection facility west of the Greenville Road intersection. In this configuration, East Avenue would be closed to general public traffic. Figure 1 illustrates the project study area.

1.2 Purpose

The purpose of this traffic study is to determine the potential traffic impact of placing East Avenue under administrative control. The primary focus of the traffic study is to evaluate the proposed modifications to the geometry and operation of East Avenue between South Vasco Road and Greenville Road. The study also includes a review of a traffic study prepared for the closure of East Avenue in 1989 to determine if the assumptions and conclusions of that study remain valid.

2.0 EXISTING CONDITIONS

2.1 Study Area

The Lawrence Livermore National Laboratory (LLNL) is bounded by Patterson Pass Road to the north, Greenville Road to the east, East Avenue to the south, and Vasco Road to the west. As shown in Figure 1, there are currently five gated entrances to the LLNL, controlled by uniformed Protective Service Officers (PSO):

1. Westgate;
2. Eastgate;
3. Southwestgate;
4. Southgate; and
5. LLNL Shipping and Receiving.

The primary entrance is the Westgate at the signalized intersection of Vasco Road/Westgate Drive, which is also where the badge office is located. All visitors must obtain a visitor badge to enter the laboratory. The Eastgate is located west of the signalized intersection of Greenville Road and Eastgate Drive. The Visitors Center and Public Affairs Center are located next to the Eastgate. The other three LLNL entrances are located off of East Avenue at unsignalized intersections. The Southwestgate is located at the West Perimeter Road and the Southgate is situated at the Southgate Drive. The LLNL Shipping and Receiving entry point is located east of Southgate Drive and is restricted to delivery trucks only.

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The Sandia National Laboratory (SNL) is located across from the LLNL south of East Avenue. Two gated entry points off East Avenue are available for the SNL– the West Entrance and the East Entrance. Deliveries to SNL are required to use the East Entrance.

2.2 Data Collection

In order to better assess the circulation of traffic in and out of the two Laboratories, vehicle counts passing through given points of access have been collected and reviewed. Twenty-four hour, seven-day hose counts were conducted at the following locations:

1. Southbound left turn from South Vasco Road to East Avenue;
2. Northbound right turn from South Vasco Road to East Avenue;
3. Eastbound and westbound East Avenue, east of South Vasco Road;
4. LLNL Southwest Entrance – single inbound lane, outbound right turn and outbound left turn (counted separately);
5. SNL West Entrance – single inbound lane, outbound right turn and outbound left turn (counted separately);
6. LLNL Southgate Drive – two lanes inbound, outbound right turn and outbound left turn (counted separately);
7. LLNL post P-411 – one lane inbound, outbound right turn and outbound left turn (counted separately). Also, conduct five-day, 7 AM to 5 PM manual vehicle classification counts for inbound and outbound traffic (automobiles, single-unit trucks, 3-axle trucks, 4-axle trucks and 5+axle trucks);
8. SNL East Entrance – one lane inbound, outbound right turn and outbound left turn (counted separately). Also, conduct five-day, 7 AM to 4 PM manual vehicle classification counts for inbound and outbound traffic (automobiles, single-unit trucks, 3-axle trucks, 4-axle trucks and 5+axle trucks);
9. Southbound Greenville Road at East Avenue;
10. Northbound Greenville Road at East Avenue;
11. East Avenue west of Greenville Road (eastbound and westbound counted separately);
12. Greenville Road/LLNL Eastgate Drive – Southbound inbound right turn and northbound inbound left turn from Greenville Road;
13. LLNL Eastgate Drive west of Greenville Road at gate entrance, inbound – single left turn lane, single through lane and single right turn lane (counted separately);
14. LLNL Eastgate Drive west of Greenville Road – two outbound lanes;
15. Southbound left turn from South Vasco Road to Westgate Drive;
16. Northbound right turn from South Vasco Road to Westgate Drive; and
17. Westgate Drive east of South Vasco Road – inbound and outbound (counted separately).

Figure 2 depicts the counting locations. The traffic counts were summarized into fifteen-minute intervals and have been attached in the Technical Appendix. Weekday morning and evening peak hour turning movement counts were also collected at the intersections of South Vasco Road/East Avenue and Greenville Road/East Avenue. The traffic counts were collected during the week of December 6th to December 12th, 2001.

The average 2-day weekend and 5-day weekday 24-hour traffic volumes at these key locations and critical turning movements are illustrated in Figure 3. The average 5-day weekday peak hour volume for the main entrances and turning movements are depicted in Figure 4. As shown in Figure 3, since the weekend traffic volumes are extremely low compared to the weekday volumes, the traffic analysis is focused on the more critical weekday traffic volumes. Section 3.3 describes the analysis of truck data that was collected at locations 7 and 8.

2.3 Traffic Analysis

Using the data collected, the proposed modifications to East Avenue between South Vasco Road and Greenville Road were evaluated. Detailed technical analyses included the following:

- *East Avenue/South Vasco Road Intersection* – Existing and future levels of service and vehicular queue lengths.
- *East Avenue/Greenville Road Intersection* – Existing and future levels of service and vehicular queue lengths.
- *New East Avenue Security Control Point at South Vasco Road* – Required inbound and outbound lanes and lane widths and anticipated queue lengths.
- *New East Avenue Security Control Point at Greenville Road* – Required inbound and outbound lanes and lane widths and anticipated queue lengths.
- *New Truck Inspection Facility – East Avenue at Greenville Road* – Performance, required lanes and anticipated queue lengths.
- *East Avenue Intersections* – Levels of service and queue lengths at intersections along East Avenue – LLNL Southwest Entrance, LLNL South Entrance, SNL West Entrance and SNL Main Entrance.

For each study facility, geometry currently under consideration has been evaluated. An evaluation of future traffic conditions was also conducted. The evaluation took into account planned residential and commercial projects south of East Avenue along South Vasco Road, along with other developments under consideration throughout Livermore, through the use of the Alameda County Congestion Management Agency's travel demand model.

2.3.1 Site Traffic

LLNL Traffic

Table 1 summarizes the traffic volumes collected at the five entrances to LLNL. A total of 21,975 vehicles enter and exit the LLNL on a typical day. The counts indicate that the Westgate is the most utilized at 36.4 percent (8,005 veh/day), and the Southwestgate is the least used (4,000 veh/day or 18.2 percent). This is to be expected since the Westgate is the primary entrance to the facility. The Westgate and Eastgate combined for 57.4 percent of the traffic at LLNL while the East Avenue entrances constitute 42.6 percent of LLNL traffic.

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Figure 4
AVERAGE WEEKDAY PEAK HOUR TRAFFIC VOLUMES

Table 1 LLNL Entrances: 24-Hour Counts (5-Day Weekday Average)

Daily Total	Westgate (# 17)	Eastgate (# 13/14)	Southwest- gate (# 4)	Southgate (# 6)	Shipping (# 7)	Total
In	4,010	2,300	2,015	2,500	155	10,980
Out	3,995	2,325	1,985	2,535	155	10,995
Total	8,005	4,625	4,000	5,035	310	21,975
Percentage	36.4%	21.0%	18.2%	23%	1.4%	100%

The hourly distribution of total traffic entering and exiting the LLNL is illustrated in Figure 5. As shown in Figure 5 the total in-bound traffic peaks between 7:00 AM and 8:00 AM and the out-bound traffic peaks between 5:00 PM and 6:00 PM. The graph reflects a typical work day traffic pattern with distinctive inbound and outbound peaks in the morning and afternoon. The large spike in traffic volumes in the morning causes a surge in demand at the entry gates. The Westgate has the highest morning peak hour volume (1,010 vehicles per hour) and has been observed to queue traffic into the signalized intersection of Vasco Road regularly, causing delays and congestion. Figure 6 illustrates this sharp peaking characteristic of the Westgate as the traffic volume jumps sharply from 680 vph (7 to 8 AM) to 1,010 vph (8-9 AM).

Mid-day or non peak periods serve relatively low traffic levels and the entry gates are often reduced to one entry lane. Table 2 summarizes the average weekday peak hour volumes at the LLNL entrances.

Table 2 LLNL Entrances Peak Hour Volumes (5-Day Weekday Average)

	Westgate (# 17)		Eastgate (# 13/14)		Southwest- gate (# 4)		Southgate (# 6)		Shipping ¹ (# 7)		Total LLNL Entrance	
Peak Hour ²	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
7-8 AM	1,010	80	700	60	565	40	440	90	25	6	2,740	276
Mid-day (12-1 PM)	625	675	205	230	235	295	355	285	30	30	1,450	1,515
5-6 PM	130	930	80	720	75	535	220	405	15	26	520	2,616

1. Shipping and Receiving Traffic counts include passenger vehicles and trucks.

2. Peak Hour for specific movements fluctuates. Peak hour noted is for the entire LLNL facility.

SNL Traffic

Table 3 summarizes the average 5-day weekday 24-hour traffic volumes at the two entrances to SNL. A total of 3,960 vehicles enter and exit the SNL in a typical day. For comparison purposes this volume represents about 15 percent of the combined LLNL and SNL daily traffic volume. The results also indicate that the West Entrance to SNL is the most utilized out of the two at 66 percent (2610 veh/day). Figure 7 shows the traffic pattern for the SNL entrances. Table 4 summarizes the average 5-day weekday peak hour volumes at the SNL entrances.

**Figure 5: LLNL - Combined Entrances
(5-Day Weekday Average)**

Figure 6: LLNL - West Gate (#17)
(5-Day Weekday Average)

**Figure 7: SNL - Combined Entrances
(5-Day Weekday Average)**

Table 3 SNL Entrances 24-Hour Counts (5-Day Weekday Average)

Daily Total	West Entrance (# 5)	East Entrance (# 8)	Total
In	1,280	650	1,930
Out	1,330	700	2,030
Total	2,610	1,350	3,960
Percentage	66%	34%	100%

Table 4 SNL Entrances Peak Hour Volumes (5-Day Weekday Average)

Peak Hour ²	West Entrance (# 5)		East Entrance ¹ (# 8)		Total SNL Entrance	
	In	Out	In	Out	In	Out
7-8 AM	340	35	150	55	490	90
Mid-day (12-1 PM)	135	200	65	85	200	285
4-5 PM	45	280	30	130	75	410

1. East Entrance traffic counts include passenger vehicles and trucks.

2. Peak Hour for specific movements fluctuates. Peak hour noted is for the SNL facility.

East Avenue Traffic

Table 5 summarizes the traffic volumes on East Avenue. A total of 13,570 vehicles use East Avenue on a daily basis. The traffic counts indicate that 76 percent of the traffic on East Avenue is from the west. Table 6 summarizes the average weekday peak hour volumes at the western and eastern ends of East Avenue. The peak hour volumes are used to determine the vehicle storage length requirements for the new entry gates on East Avenue, as described in Section 3.0.

Table 5 East Avenue 24-Hour Counts (5-Day Weekday Average)

Daily Total	East Ave (Vasco Rd) Location # 3	East Ave (Greenville Rd) Location # 11	Total
In	5,165	1,600	6,765
Out	5,175	1,630	6,805
Total	10,340	3,230	13,570
Percentage	76%	24%	100%

Table 6 East Avenue Peak Hour Volumes (5-Day Weekday Average)

Peak Hour ¹	East Ave (Vasco Rd) Location # 3		East Ave (Greenville Rd) Location # 11		Total on East Avenue	
	In	Out	In	Out	In	Out
8-9 AM	905	160	310	65	1,215	225
Mid-day (12-1 PM)	565	580	100	105	665	685
4-5 PM	220	1,190	80	300	300	1,490

1. Peak Hour for specific movements fluctuates. Peak hour noted is for East Avenue.

2.3.2 Levels of Service

Existing Traffic Conditions

Traffic conditions in the study area are assessed through the evaluation of peak hour Levels of Service (LOS) at critical intersections. The LOS concept qualitatively characterizes traffic conditions associated with varying levels of traffic. A LOS determination is a measure of congestion, which is the principal measure of roadway service. Levels of Service for signalized and unsignalized intersections are illustrated in Table 7. Level of Service ranges from LOS A which indicates a free-flow condition to LOS F, which indicates a jammed condition. LOS A, B and C are generally considered to be satisfactory service levels while LOS D is marginally acceptable, LOS E is undesirable and LOS F conditions are unacceptable.

Table 7 Intersection Level of Service Definitions

Level of Service	Description	Average Total Delay (seconds/vehicle)	
		Unsignalized Intersections	Signalized Intersections
A	Little or no delay	< 10.0	< 10.0
B	Short traffic delay	> 10.0 and < 15.0	> 10.0 and < 20.0
C	Average traffic delay	> 15.0 and < 25.0	> 20.0 and < 35.0
D	Long traffic delay	> 25.0 and < 35.0	> 35.0 and < 55.0
E	Very long traffic delay	> 35.0 and < 50.0	> 55.0 and < 80.0
F	Extreme traffic delay	> 50.0	> 80.0

Source: *Highway Capacity Manual, Special Report 209, Transportation Research Board, 2000.*

Traffic conditions at study intersections are evaluated for the morning and evening peak hours using the methodology of the Transportation Research Board's *2000 Highway Capacity Manual*. With this methodology a level of service is assigned based on average total vehicle delay.

The following six intersections in the study area were evaluated:

1. East Avenue and Vasco Road (signalized intersection);
2. East Avenue and Southwest Entrance/West Perimeter Drive (stop control on West Perimeter

Road);

3. East Avenue and West Entrance to Sandia Labs (stop control on West Entrance);
4. East Avenue and Southgate (stop control on Southgate);
5. East Avenue and East Entrance to Sandia Labs (stop control on East Entrance); and
6. East Avenue and Greenville Road (stop control on East Avenue).

Traffic counts were conducted at two of the study intersections (the East Avenue and Vasco Road and the East Avenue and Greenville Road intersections) during the morning and evening peak hours on December 6th, 2001. Based on 24-hour counts, the turning movements were calculated for the other intersections. Summaries of these counts are attached in the report's technical appendix. Using these traffic counts along with lane geometry and signal phasing collected as part of this analysis, each of the six study intersections has been assessed using the methodology of the *2000 Highway Capacity Manual*. The results of this analysis are presented in Tables 8 and 9. Level of Service calculation worksheets for each intersection are also attached in the technical appendix.

Table 8 Existing Conditions Level of Service – Signalized Intersection

Signalized Intersection ¹	Peak Hour	Level of Service (Seconds/Vehicle)
		Overall Intersection
1. East Avenue & Vasco Road	AM	B (17.5)
	PM	C (21.9)

1. For signalized intersections, the overall intersection LOS and intersection delay in seconds per vehicle are presented.

Table 9 Existing Conditions Level of Service – Unsignalized Intersections

Unsignalized Intersection ¹	Peak Hour	Level of Service (Seconds/Vehicle)	
		Minor Street Approach	Worst Minor Street Movement
1. East Avenue & SW Entrance / West Perimeter Drive	AM	C (18.3)	E (45.9)
	PM	D (28.1)	D (28.8)
2. East Avenue & West Entrance to Sandia Labs	AM	B (12.6)	C (16.4)
	PM	B (10.3)	C (12.6)
3. East Avenue & Southgate	AM	B (12.6)	B (16.4)
	PM	C (15.6)	C (17.3)
4. East Avenue & East Entrance to Sandia Labs	AM	B (10.7)	B (12.4)
	PM	B (10.2)	B (10.7)
5. East Avenue & Greenville Road	AM	B (12.9)	B (12.9)
	PM	C (16.3)	C (16.3)

1. For unsignalized intersections, the LOS and delays in seconds per vehicle for the minor street approach and the worst minor street movement are presented.

Tables 8 and 9 presents summary of level of services at the six study intersections. LOS A through D are generally considered to be satisfactory service levels. The East Avenue/Southwest Entrance was found to be operating at LOS E during the morning peak hour for the minor street movement.

Future Traffic Conditions

To assess future traffic conditions in the Study Area, growth rates were obtained from the Alameda County Congestion Management Agency's travel demand model. This model predicts a 0.65 percent annual increase in traffic in the study area to the year 2020.

Tables 10 and 11 present the results of the existing and 2020 LOS analysis at the six study intersections. Level of Service calculation worksheets for each of the two scenarios are attached in the technical appendix.

Table 10 2020 Conditions Level of Service – Signalized Intersection

Signalized Intersection ¹	Peak Hour	Level of Service (Seconds/Vehicle) ¹	
		Existing 2001	Year 2020
		Overall Intersection	Overall Intersection
1. East Avenue & Vasco Road ¹	AM	B (17.5)	B (19.0)
	PM	C (21.9)	C (28.4)

1. For signalized intersections, the overall intersection LOS and intersection delay in seconds per vehicle are presented.

Table 11 2020 Conditions Level of Service – Unsignalized Intersections

Unsignalized Intersections ¹	Peak Hour	Level of Service (Seconds/Vehicle)			
		Existing 2001		Year 2020	
		Minor Street Approach	Worst Minor Street Movement	Minor Street Approach	Worst Minor Street Movement
1. East Ave & SW Entrance	AM	C (18.3)	E (45.9)	C (22.8)	F (64.9)
	PM	D (28.1)	D (28.8)	F (61.0)	F (64.1)
2. East Avenue & W Entrance to SNL	AM	B (12.6)	C (16.4)	B (14.2)	C (19.6)
	PM	B (10.3)	C (12.6)	B (13.2)	C (21.2)
3. East Avenue & Southgate	AM	B (12.6)	B (16.4)	C (15.3)	C (24.1)
	PM	C (15.6)	C (17.3)	C (18.6)	C (20.1)
4. East Avenue & E Entrance to SNL	AM	B (10.7)	B (12.4)	B (11.2)	B (13.1)
	PM	B (10.2)	B (10.7)	B (10.5)	B (11.1)
5. East Avenue & Greenville Road	AM	B (12.9)	B (12.9)	B (14.2)	B (14.2)
	PM	C (16.3)	C (16.3)	C (19.9)	C (19.9)

1. For unsignalized intersections, the LOS and delays in seconds per vehicle for the minor street approach and the worst minor street movement are presented.

As shown in Table 10, the signalized intersection of East Avenue and Vasco Road continues to perform at LOS B and C in 2020.

Minor approach movements have longer delays than the major approach movements since the major street approach does not have to stop; therefore, only the minor street approach and the worst minor street movements calculations are presented. As shown in Table 11, level of service for many of the minor street approaches and worst minor street movements is identified as LOS B or C. In 2020, the intersection of East Avenue and the Southwestgate was found to function at

LOS F for the minor street approach and minor street movement. The intersection was tested for signalization and the intersection would improve to LOS B during the AM and PM peak hours with a signal. Future monitoring of this intersection is required to determine when/if signalization is needed.

2.3.3 Required Left-turn Storage Lengths

At selected locations on East Avenue, left-turn lanes should be provided. Appropriate storage lengths at unsignalized intersections were determined based on the existing heaviest hour of traffic. Table 12 presents the calculated left turn storage requirements.

Table 12 Left-Turn Storage Length Requirements

Location	Storage Length (feet) ¹
Left-turn lane on East Avenue in westbound direction at Vasco Road	175
Left-turn lane on East Avenue in eastbound direction at the South West Entrance	350
Left turn lane on East Avenue in westbound direction at West Entrance to Sandia Lab	125
Left-turn lane on East Avenue in eastbound direction at Southgate	150

1. Left turn storage lengths are calculated based on existing 5-day weekday average peak hour volume

Three additional entrances to the SNL between Avenue D and Southgate are currently closed. When the LLNL and SNL do decide to reopen these entrances, new traffic counts and analysis are required to determine appropriate left-turn storage lengths for these intersections.

2.3.4 Environmental Documentation Review

In 1989, a detailed traffic study was prepared for the closure of East Avenue between South Vasco Road and Greenville Road. This study was prepared as environmental documentation for CEQA/NEPA clearance. Using the data collected in Section 2.2 and the analysis conducted in Section 2.3, the results of the 1989 study were reviewed to determine if its assumptions and conclusions remain valid. Since the combined LLNL and SNL employment has declined from approximately 11,000 in 1989 to a current level of approximately 10,000 (or 9 percent reduction), the previous study is likely conservative in its analysis. Table 13 compares the traffic volumes collected for the westbound movement at East Avenue and Vasco Road between the 1989 Study and this study. The reduction in the peak hour traffic volume is consistent with the reduction in the number of employees. The traffic westbound traffic volume on East Avenue is expected to increase to 1,337 vph. The current employment level is expected to be stable through year 2020.

Table 13 East Avenue Traffic Volume Comparison

Source	PM Peak Hour (vph) Westbound at East Ave/Vasco Rd	Employees (LLNL+SNL)
1989 East Avenue Report (1-Day Count)	1,420	11,000
2001 Traffic Count by KORVE (5-Day Average)	1,190	9,990
Percentage Reduction (Existing)	- 16%	- 9%
2020 Projection (CMA Model Growth Rate)	1,337	9,990 ¹

1. The current employment level of 9,990 is expected to be stable through year 2020.

The non-laboratory traffic volumes were also calculated in order to determine the amount of traffic that would be impacted by the closure of East Avenue. As shown in Table 14, the non-laboratory traffic currently using East Avenue is only two percent. This small percentage of traffic will be distributed to other roadways in the study area, such as Vasco Road, Greenville Road, Patterson Pass Road and Tesla Road to the south, with the closure of East Avenue.

Table 14 Calculation of Weekday Non Laboratory Traffic (5-Day Average)

	Location	Location #	Inbound	Outbound	TOTAL	% of East Ave
(A)	East Avenue	3+11	6,765	6,805	13,570	100%
(B)	LLNL Entrances on East Ave	4+6+7	4,670	4,675	9,345	69%
(C)	SNL Entrances on East Ave	5+8	1,930	2,030	3,960	29%
B + C	LLNL + SNL		6,600	6,705	13,305	98%
A-(B+C)	Non Lab Traffic		165	100	265	2%

3.0 Administrative Control of East Avenue

This section describes the analysis of implementing the following controls to support the administrative control of East Avenue:

- *New East Avenue Security Control Point at South Vasco Road;*
- *New East Avenue Security Control Point at Greenville Road; and*
- *New Truck Inspection Facility – East Avenue at Greenville Road.*

The required inbound and outbound lanes and lane widths and anticipated queue lengths for the three new facilities were determined.

3.1 New East Avenue Security Control Point at South Vasco Road

In order to determine the storage length required for the entry gate, the average service rate at the existing Westgate was measured. The Westgate was selected because it is currently congested and provides the maximum service rate at peak flow. The service rate was measured on Tuesday, January 22, 2002 and determined to be approximately 7.25 seconds/vehicle/lane or 497 vehicle/hour/lane (vphpl). The current eastbound AM peak hour demand on East Avenue is 905 vph. Assuming random arrivals (Poisson Distribution) a factor of 1.5 is applied to the demand to account for random arrival and peaking characteristics, which translates to a demand or arrival rate of 1,358 vph. Since the arrival rate is greater than the service rate, additional entry lanes are required to avoid traffic backing into Vasco Road, similar to the existing condition at the Westgate. The number of lanes required is determined by dividing the arrival rate by the service rate ($1,358 \text{ vph} / 497 \text{ vphpl} = 2.73 \text{ lanes}$ or 3 lanes (rounded up)). With three entry lanes, the new service rate would be 1,491 vph ($3 \text{ lanes} \times 497 \text{ vphpl}$).

The queue length is determined using the following formulas:

Given: λ = Arrival rate
 μ = Service rate

And arrival rate is less than service rate: $\lambda < \mu$

Equation 1 to determine the ratio of arrival rate over the service rate, r : $r = \lambda/\mu$
Equation 2 to determine the number of vehicles in the queue, L_q : $L_q = r^2 / (1-r)$

Source: *Fundamentals of Transportation Engineering*, C.S. Papacostas, 1987

Using the above equations, the number of vehicles expected in the queue at the East Avenue/Vasco Road Gate is approximately nine vehicles per lane. Assuming an average vehicle length of 25 feet, the storage length required is approximately 225 feet per lane. According to the preliminary design sketch (SK-1-11-14-01) provided by the LLNL staff, the available storage length is 360 feet per lane for only two lanes. Based on the above analysis, it is recommended that three entry lanes be provided with a minimum storage length of 225 feet per lane.

3.2 New East Avenue Security Control Point at Greenville Road

A new entry gate is also proposed for the westbound traffic on East Avenue at Greenville Road. The current westbound traffic demand at this location is 310 vph. Using the same methodology to determine the number of lanes required, which is described above, the potential maximum arrival rate is 465 vph ($1.5 \times 310 \text{ vph}$) and the estimated service rate remains the same at 497 vphpl. Since the service rate is greater than the arrival rate, one westbound lane is sufficient to serve the forecast demand.

Using equations 1 and 2 above, the number of vehicles expected in the queue is approximately 15 vehicles per lane. Assuming an average vehicle length of 25 feet, the storage length required is

approximately 375 feet per lane. Based on the preliminary design sketch (SK-1-11-14-01) provided by the LLNL staff, the proposed storage length was 315 feet. At this location the distance between the gate portal and the pop-up barrier is 454 feet, while at the Vasco Road, the distance is require only 300 feet. Therefore, the storage length could be gained by reducing the distance from the gate portal to the pop-up barrier.

3.3 New Truck Inspection Facility – East Avenue at Greenville Road

Weekday truck classification counts were conducted at Gate location #7 for LLNL and #8 for SNL concurrently as the other counts. Tables 15 and 16 summarize the average weekday trucks counted at locations 7 and 8 respectively. Table 17 summarizes the average combined trucks for the two gate locations. Tables 15, 16 and 17 show the average trucks counted for the peak period between 9 AM and 3 PM. Other non-peak hour truck counts are shown in the appendix. The combined maximum total trucks measured were 16 trucks per hour. Majority of the trucks are the smaller 2-axle type delivery trucks such as FedEx trucks. All the trucks entering the LLNL and SNL will be required to be inspected at the new truck inspection facility west of the intersection of East Avenue and Greenville Road.

Table 15 Existing Total Trucks - Location 7 (5-Day Weekday Average)

Time	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	Total Trucks
9am-10am	2	1	1	2	0	5
10am-11am	3	1	1	3	0	7
11am-12pm	4	0	0	2	0	7
12pm-1pm	5	0	0	2	0	7
1pm-2pm	4	0	0	2	0	6
2pm-3pm	2	0	0	1	0	3

Table 16 Existing Total Trucks – Location 8 (5-Day Weekday Average)

Time	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	Total Trucks
9am-10am	4	0	1	1	0	6
10am-11am	7	1	0	1	0	9
11am-12pm	7	0	0	1	0	9
12pm-1pm	6	0	0	1	0	7
1pm-2pm	3	0	0	0	0	4
2pm-3pm	4	0	0	0	0	4

Table 17 Combined Total Trucks - Locations 7 and 8 (5-Day Weekday Average)

Time	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	Total Trucks
9am-10am	6	1	2	3	0	11
10am-11am	10	1	1	4	0	16
11am-12pm	11	0	1	3	0	16
12pm-1pm	10	0	0	3	0	14
1pm-2pm	8	0	0	2	0	10
2pm-3pm	6	0	0	1	0	7

In order to determine the storage length required for the entry gate, the average service rate at the existing truck gate was measured. The average truck service rate was measured on Tuesday, January 22nd, 2002 at the LLNL Shipping and Receiving Gate and found to be approximately 3 minutes/truck/lane or 20 tphpl. The current westbound truck arrival rate is 16 trucks per hour.

In order to use equations 1 and 2 above, the arrival rate must be less than the service rate. Using an arrival rate of 16 trucks per hour and a factor (Poisson) of 2 to account for random arrivals, the maximum queue is expected to be six trucks total or three trucks per lane in two lanes. The weighted average truck length was determined to be 42 feet using the truck data collected shown in Table 17 and the design truck length for a given truck size as shown in Table 18. Since there is only one inspection lane available, storage lanes are required to avoid traffic spilling back onto East Avenue, which would block the new westbound entry at Greenville Road. If two lanes were provided, the storage length would be 135 feet/lane. This would accommodate one-5axle trucks and two-2axle trucks per lane (130 feet per lane = 70' + 30' + 30'), which is consistent with field observations.

Table 18 Truck Size Summary

Truck Type	AASHTO ¹ (feet)	CALTRANS ² (feet)	Description
2 - Axle	30	-	Single unit trucks
3 - Axle	-	40	N/A
4 - Axle	50	65	N/A
5 - Axle	55-65	68	N/A
6 - Axle	102-118	-	Three-trailers

Source:

1. A Policy on Geometric Design of Highway Streets, 1990, American Association of State Highway and Transportation Officials (ASSTHO), Chapter 2
2. Caltrans Highway Design Manual, Figure 404.2

Future Queue Lengths

The queue lengths calculated for the entry lanes and left turn lanes for East Avenue were based on existing traffic volumes. Although in Section 2, the future traffic growth in the general area was reported using the Alameda County Congestion Management Agency's Model, the design of East Avenue is contingent primarily on the size of LLNL and SNL.

4.0 RECOMMENDATIONS

Based on the traffic analysis described in Sections 2 and 3, KORVE has determined the geometric improvements required to facilitate the administrative control of East Avenue between Vasco Road and Greenville Road. Figure 8 illustrates the conceptual layout of East Avenue with the recommended geometric improvements. This includes the location of left turn lanes, required number of entry lanes, expected queue lengths, truck inspection area storage and laning requirements, bike lanes, and pedestrian crosswalks.

Other Improvements

- **Flexible Work Hours** – As discussed in the traffic pattern analysis in Section 2.3.1, and as shown in Figure 6, the sharp spike in traffic arriving to work at the same time can create congestion and delays at the entry gates. One effective Traffic Demand Management tool (TDM) is to implement a flexible work schedule so that not all the employees are arriving at 8-9 AM. This would reduce the peak hour congestion and would ‘flatten’ the sharp curve, which would spread the peak hour to more than one hour at a less intensive level. The current spike at LLNL and SNL is much more severe than those typically observed at other private facilities.
- **Changeable Message Sign (CMS)** – A CMS is recommended at the new entrance at the intersection of East Avenue and Vasco Road. Since East Avenue west of Vasco Road is a public street, the potential for vehicles mistakenly entering the laboratory is high. A CMS will minimize this occurrence, which can increase delay for laboratory-bound vehicles. The CMS would display informational messages, such as, welcoming messages, visitors must visit badge office, special events messages, and trucks must enter at Greenville Road.
- **Signal at East Avenue and South West Entrance** – Should traffic volumes rise, a signal may be necessary at this location to provide an acceptable service level.

NOT TO SCALE

LAWRENCE LIVERMORE NATIONAL LABORATORY
EAST AVENUE / EMERGENCY RESPONSE PLANNING - TRAFFIC STUDY

Figure 8 **EAST AVENUE CONCEPTUAL PLAN** **- RECOMMENDATIONS**

Korve
Engineering

1/25/02
Rev 2-14/02

TECHNICAL APPENDIX

BAYMETRICS TRAFFIC RESOURCES

Location 1: Southbound Left-Turn On Vasco North of East

TIME	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	SBL		SBL		SBL		SBL		SBL		SBL		SBL		SBL		SBL		SBL		SBL		SBL		SBL		SBL	
	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0
1215	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0	0
1245	0	1	0	0	1	6	0	0	0	0	0	0	1	1	0	0	0	0	2	4	0	0	2	3	0	0	2	5
1300	0	1	0	0	4	6	0	0	0	0	0	0	0	1	0	0	0	3	0	0	3	0	0	0	3	0	0	0
1315	2	3	0	0	4	9	0	0	0	0	0	0	0	1	0	0	0	3	0	0	3	0	0	0	3	0	0	0
1330	0	2	0	0	1	10	0	0	0	0	0	0	0	1	0	0	1	3	0	0	1	3	0	0	2	5	0	0
1345	1	3	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	0	0	0	3	0	0
1400	0	3	0	0	0	5	0	0	0	0	0	0	2	2	0	0	0	1	0	0	0	3	0	0	3	6	0	0
1415	2	3	0	0	0	7	0	0	0	0	0	0	0	2	0	0	1	2	0	0	3	6	0	0	2	7	0	0
1430	1	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	3	0	0	2	7	0	0	0	5	0	0
1445	0	3	0	0	2	2	0	0	0	0	0	0	1	3	0	0	0	3	0	0	0	5	0	0	1	6	0	0
1500	0	3	0	0	1	3	0	0	1	1	0	0	2	3	0	0	2	5	0	0	0	5	0	0	1	4	0	0
1515	1	2	0	0	0	3	0	0	0	1	0	0	0	3	0	0	1	5	0	0	1	3	0	0	2	4	0	0
1530	1	2	0	0	0	3	0	0	0	1	0	0	3	6	0	0	2	5	0	0	2	3	0	0	0	4	0	0
1545	3	5	0	0	2	3	0	0	0	1	0	0	0	5	0	0	0	5	0	0	4	7	0	0	0	3	0	0
1600	5	10	0	0	2	4	0	0	2	2	0	0	0	3	0	0	0	3	0	0	2	9	0	0	1	3	0	0
1615	8	17	0	0	6	10	0	0	0	2	0	0	1	4	0	0	0	2	0	0	0	8	0	0	2	5	0	0
1630	11	27	0	0	17	27	0	0	0	2	0	0	2	3	0	0	3	3	0	0	16	22	0	0	4	7	0	0
1645	12	36	0	0	9	34	0	0	1	3	0	0	2	5	0	0	9	12	0	0	9	27	0	0	14	21	0	0
1700	23	54	0	0	15	47	0	0	0	1	0	0	0	5	0	0	12	24	0	0	14	39	0	0	11	31	0	0
1715	28	74	0	0	19	60	0	0	1	2	0	0	0	4	0	0	16	40	0	0	22	61	0	0	15	44	0	0
1730	42	105	0	0	29	72	0	0	0	2	0	0	0	2	0	0	22	59	0	0	36	81	0	0	26	66	0	0
1745	48	141	0	0	50	113	0	0	0	1	0	0	1	1	0	0	38	88	0	0	65	137	0	0	37	89	0	0
1800	62	180	0	0	56	154	0	0	1	2	0	0	1	2	0	0	46	122	0	0	49	172	0	0	51	129	0	0
1815	68	220	0	0	49	184	0	0	0	1	0	0	0	2	0	0	55	161	0	0	61	211	0	0	56	170	0	0
1830	59	237	0	0	64	219	0	0	0	1	0	0	0	2	0	0	52	191	0	0	60	235	0	0	54	198	0	0
1845	68	257	0	0	62	231	0	0	1	2	0	0	2	3	0	0	64	217	0	0	60	230	0	0	66	227	0	0
1900	59	254	0	0	70	245	0	0	0	1	0	0	4	6	0	0	72	243	0	0	82	263	0	0	78	254	0	0
1915	73	259	0	0	62	258	0	0	6	7	0	0	2	8	0	0	78	266	0	0	84	286	0	0	63	261	0	0
1930	84	284	0	0	77	271	0	0	19	26	0	0	0	8	0	0	81	295	0	0	97	323	0	0	103	310	0	0
1945	99	315	0	0	89	298	0	0	18	43	0	0	3	9	0	0	90	321	0	0	105	368	0	0	86	330	0	0
2000	85	341	0	0	91	319	0	0	23	68	0	0	0	5	0	0	86	335	0	0	78	364	0	0	92	344	0	0
2015	82	350	0	0	84	341	0	0	36	96	0	0	2	5	0	0	77	334	0	0	72	352	0	0	82	363	0	0
2030	76	342	0	0	75	339	0	0	36	113	0	0	4	9	0	0	64	317	0	0	72	327	0	0	61	321	0	0
2045	70	313	0	0	69	319	0	0	55	150	0	0	2	8	0	0	72	299	0	0	61	283	0	0	69	304	0	0
2100	49	277	0	0	52	280	0	0	36	163	0	0	6	14	0	0	60	273	0	0	44	249	0	0	61	273	0	0
2115	48	243	0	0	46	242	0	0	25	152	0	0	2	14	0	0	43	239	0	0	34	211	0	0	52	243	0	0
2130	43	210	0	0	43	210	0	0	25	141	0	0	16	26	0	0	36	211	0	0	43	182	0	0	32	214	0	0
2145	51	191	0	0	38	179	0	0	17	103	0	0	10	34	0	0	41	180	0	0	37	158	0	0	29	174	0	0
2200	30	172	0	0	34	161	0	0	18	85	0	0	5	33	0	0	35	155	0	0	32	146	0	0	30	143	0	0
2215	28	152	0	0	29	144	0	0	15	75	0	0	8	39	0	0	25	137	0	0	27	139	0	0	25	116	0	0
2230	32	141	0	0	26	127	0	0	12	62	0	0	11	34	0	0	24	125	0	0	15	111	0	0	25	109	0	0
2245	20	110	0	0	40	129	0	0	13	58	0	0	5	29	0	0	28	112	0	0	25	99	0	0	22	102	0	0
2300	27	107	0	0	46	141	0	0	13	53	0	0	8	32	0	0	34	111	0	0	34	101	0	0	30	102	0	0
2315	22	101	0	0	34	146	0	0	20	58	0	0	7	31	0	0	40	126	0	0	24	98	0	0	26	103	0	0
2330	31	100	0	0	38	158	0	0	14	60	0	0	6	26	0	0	35	137	0	0	35	118	0	0	24	102	0	0
2345	22	102	0	0	35	153	0	0	10	57	0	0	5	26	0	0	32	141	0	0	40	133	0	0	29	109	0	0

BAYMETRICS TRAFFIC RESOURCES

Location 1: Southbound Left-Turn On Vasco North of East

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	SBL				SBL				SBL				SBL				SBL				SBL				SBL			
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	38	113	0	0	31	138	0	0	8	52	0	0	5	23	0	0	26	133	0	0	30	129	0	0	27	106	0	0
1215	40	131	0	0	52	156	0	0	11	43	0	0	3	19	0	0	44	137	0	0	36	141	0	0	30	110	0	0
1230	63	163	0	0	49	167	0	0	6	35	0	0	2	15	0	0	56	158	0	0	52	158	0	0	50	136	0	0
1245	48	189	0	0	53	185	0	0	6	31	0	0	8	18	0	0	62	188	0	0	63	181	0	0	49	156	0	0
1300	39	190	0	0	42	196	0	0	9	32	0	0	14	27	0	0	41	203	0	0	41	192	0	0	36	165	0	0
1315	23	173	0	0	26	170	0	0	10	31	0	0	5	29	0	0	38	197	0	0	38	194	0	0	34	169	0	0
1330	23	133	0	0	22	143	0	0	2	27	0	0	8	35	0	0	32	173	0	0	36	178	0	0	38	157	0	0
1345	20	105	0	0	28	118	0	0	2	23	0	0	12	39	0	0	26	137	0	0	32	147	0	0	26	134	0	0
1400	21	87	0	0	30	106	0	0	2	16	0	0	9	34	0	0	19	115	0	0	29	135	0	0	22	120	0	0
1415	30	94	0	0	34	114	0	0	1	7	0	0	6	35	0	0	24	101	0	0	21	118	0	0	18	104	0	0
1430	23	94	0	0	26	118	0	0	2	7	0	0	5	32	0	0	28	97	0	0	25	107	0	0	16	82	0	0
1445	21	95	0	0	22	112	0	0	2	7	0	0	2	22	0	0	19	90	0	0	19	94	0	0	24	80	0	0
1500	15	89	0	0	25	107	0	0	4	9	0	0	4	17	0	0	17	88	0	0	25	90	0	0	22	80	0	0
1515	13	72	0	0	19	92	0	0	4	12	0	0	7	18	0	0	20	84	0	0	24	93	0	0	15	77	0	0
1530	14	63	0	0	18	84	0	0	5	15	0	0	5	18	0	0	22	78	0	0	18	86	0	0	20	81	0	0
1545	14	56	0	0	17	79	0	0	6	19	0	0	5	21	0	0	16	75	0	0	13	80	0	0	11	68	0	0
1600	10	51	0	0	16	70	0	0	2	17	0	0	2	19	0	0	9	67	0	0	5	60	0	0	9	55	0	0
1615	8	46	0	0	12	63	0	0	8	21	0	0	3	15	0	0	14	61	0	0	8	44	0	0	14	54	0	0
1630	15	47	0	0	8	53	0	0	1	17	0	0	0	10	0	0	8	47	0	0	7	33	0	0	5	39	0	0
1645	9	42	0	0	9	45	0	0	1	12	0	0	0	5	0	0	10	41	0	0	11	31	0	0	8	36	0	0
1700	7	39	0	0	13	42	0	0	1	11	0	0	2	5	0	0	10	42	0	0	5	31	0	0	10	37	0	0
1715	7	38	0	0	9	39	0	0	1	4	0	0	4	6	0	0	5	33	0	0	8	31	0	0	5	28	0	0
1730	9	32	0	0	5	36	0	0	2	5	0	0	5	11	0	0	8	33	0	0	6	30	0	0	9	32	0	0
1745	8	31	0	0	7	34	0	0	0	4	0	0	6	17	0	0	7	30	0	0	7	26	0	0	13	37	0	0
1800	4	28	0	0	5	26	0	0	3	6	0	0	2	17	0	0	11	31	0	0	5	26	0	0	2	29	0	0
1815	7	28	0	0	6	23	0	0	2	7	0	0	2	15	0	0	5	31	0	0	2	20	0	0	5	29	0	0
1830	3	22	0	0	5	23	0	0	0	5	0	0	1	11	0	0	6	29	0	0	0	14	0	0	4	24	0	0
1845	5	19	0	0	4	20	0	0	0	5	0	0	2	7	0	0	5	27	0	0	3	10	0	0	6	17	0	0
1900	0	15	0	0	3	18	0	0	2	4	0	0	0	5	0	0	2	18	0	0	2	7	0	0	9	24	0	0
1915	2	10	0	0	2	14	0	0	2	4	0	0	2	5	0	0	1	14	0	0	1	6	0	0	8	27	0	0
1930	2	9	0	0	5	14	0	0	1	5	0	0	1	5	0	0	3	11	0	0	2	8	0	0	7	30	0	0
1945	1	5	0	0	4	14	0	0	1	6	0	0	3	6	0	0	2	8	0	0	4	9	0	0	5	29	0	0
2000	4	9	0	0	2	13	0	0	3	7	0	0	0	6	0	0	0	6	0	0	1	8	0	0	2	22	0	0
2015	1	8	0	0	3	14	0	0	0	5	0	0	1	5	0	0	1	6	0	0	2	9	0	0	0	14	0	0
2030	3	9	0	0	2	11	0	0	0	4	0	0	2	6	0	0	2	5	0	0	0	7	0	0	1	8	0	0
2045	4	12	0	0	1	8	0	0	0	3	0	0	0	3	0	0	0	3	0	0	2	5	0	0	2	5	0	0
2100	3	11	0	0	2	8	0	0	0	0	0	0	1	4	0	0	1	4	0	0	3	7	0	0	0	3	0	0
2115	0	10	0	0	2	7	0	0	0	0	0	0	2	5	0	0	2	5	0	0	2	7	0	0	2	5	0	0
2130	0	7	0	0	3	8	0	0	0	0	0	0	0	3	0	0	0	3	0	0	4	11	0	0	1	5	0	0
2145	5	8	0	0	2	9	0	0	0	0	0	0	1	4	0	0	2	5	0	0	2	11	0	0	0	3	0	0
2200	4	9	0	0	1	8	0	0	1	1	0	0	2	5	0	0	3	7	0	0	0	8	0	0	2	5	0	0
2215	0	9	0	0	0	6	0	0	1	2	0	0	0	3	0	0	0	5	0	0	1	7	0	0	1	4	0	0
2230	1	10	0	0	1	4	0	0	1	3	0	0	1	4	0	0	1	6	0	0	1	4	0	0	0	3	0	0
2245	0	5	0	0	2	4	0	0	1	4	0	0	0	3	0	0	2	6	0	0	2	4	0	0	2	5	0	0
2300	4	5	0	0	0	3	0	0	0	3	0	0	1	2	0	0	0	3	0	0	0	4	0	0	3	6	0	0
2315	1	6	0	0	1	4	0	0	3	5	0	0	0	2	0	0	0	3	0	0	1	4	0	0	2	7	0	0
2330	0	5	0	0	1	4	0	0	4	8	0	0	1	2	0	0	1	3	0	0	2	5	0	0	0	7	0	0
2345	1	6	0	0	0	2	0	0	3	10	0	0	0	2	0	0	2	3	0	0	0	3	0	0	1	6	0	0
TOTAL	2,050	N/A	0	N/A	2,106	N/A	0	N/A	542	N/A	0	N/A	271	N/A	0	N/A	1,996	N/A	0	N/A	2,054	N/A	0	N/A	1,949	N/A	0	N/A
AM	350		0		341		0		163		0		34		0		335		0		368		0		363		0	
NOON	190		0		196		0		85		0		39		0		203		0		194		0		169		0	
PM	89		0		107		0		21		0		21		0		88		0		93		0		81		0	
EVEN	12		0		14		0		10		0		6		0		7		0		11		0		22		0	

BAYMETRICS TRAFFIC RESOURCES

Location 2: Northbound Right-Turn On Vasco South of East

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	NBR				NBR				NBR				NBR				NBR				NBR				NBR			
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
1230	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1245	1	5	0	0	0	1	0	0	0	2	0	0	2	3	0	0	0	1	0	0	0	1	0	0	0	3	0	0
100	0	4	0	0	1	1	0	0	0	1	0	0	0	3	0	0	1	2	0	0	1	1	0	0	0	1	0	0
115	1	5	0	0	0	1	0	0	1	2	0	0	0	2	0	0	0	2	0	0	0	1	0	0	1	1	0	0
130	0	2	0	0	0	1	0	0	0	1	0	0	0	2	0	0	1	2	0	0	1	2	0	0	0	1	0	0
145	2	3	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	3	0	0	0	2	0	0	0	1	0	0
200	1	4	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	2	0	0	1	2	0	0	1	2	0	0
215	1	4	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	2	0	0	0	2	0	0	1	2	0	0
230	0	4	0	0	0	0	0	0	1	2	0	0	0	1	0	0	2	3	0	0	0	1	0	0	0	2	0	0
245	0	2	0	0	1	1	0	0	0	2	0	0	0	1	0	0	1	3	0	0	1	2	0	0	2	4	0	0
300	1	2	0	0	0	1	0	0	1	2	0	0	0	1	0	0	0	3	0	0	1	2	0	0	0	3	0	0
315	1	2	0	0	0	1	0	0	0	2	0	0	1	1	0	0	1	4	0	0	0	2	0	0	0	2	0	0
330	0	2	0	0	2	3	0	0	3	4	0	0	0	1	0	0	0	2	0	0	2	4	0	0	0	2	0	0
345	0	2	0	0	0	2	0	0	0	4	0	0	0	1	0	0	0	1	0	0	1	4	0	0	1	1	0	0
400	3	4	0	0	2	4	0	0	1	4	0	0	0	1	0	0	2	3	0	0	1	4	0	0	2	3	0	0
415	0	3	0	0	1	5	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	4	0	0	0	3	0	0
430	2	5	0	0	1	4	0	0	1	2	0	0	0	0	0	0	2	4	0	0	2	4	0	0	2	5	0	0
445	3	8	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0	4	0	0	0	3	0	0	0	4	0	0
500	3	8	0	0	2	4	0	0	1	2	0	0	0	0	0	0	1	3	0	0	1	3	0	0	2	4	0	0
515	3	11	0	0	1	4	0	0	0	2	0	0	1	1	0	0	2	5	0	0	2	5	0	0	3	7	0	0
530	2	11	0	0	6	9	0	0	2	3	0	0	0	1	0	0	5	8	0	0	7	10	0	0	2	7	0	0
545	8	16	0	0	4	13	0	0	2	5	0	0	2	3	0	0	6	14	0	0	6	16	0	0	5	12	0	0
600	8	21	0	0	8	19	0	0	0	4	0	0	1	4	0	0	6	19	0	0	11	26	0	0	7	17	0	0
615	12	30	0	0	12	30	0	0	0	4	0	0	2	5	0	0	10	27	0	0	14	38	0	0	7	21	0	0
630	14	42	0	0	16	40	0	0	0	2	0	0	0	5	0	0	13	35	0	0	13	44	0	0	16	35	0	0
645	24	58	0	0	21	57	0	0	1	1	0	0	2	5	0	0	25	54	0	0	21	59	0	0	22	52	0	0
700	31	81	0	0	29	78	0	0	3	4	0	0	1	5	0	0	27	75	0	0	35	83	0	0	33	78	0	0
715	35	104	0	0	35	101	0	0	1	5	0	0	1	4	0	0	33	98	0	0	36	105	0	0	27	98	0	0
730	49	139	0	0	46	131	0	0	0	5	0	0	2	6	0	0	36	121	0	0	44	136	0	0	45	127	0	0
745	52	167	0	0	50	160	0	0	4	8	0	0	1	5	0	0	56	152	0	0	48	163	0	0	58	163	0	0
800	46	182	0	0	58	189	0	0	2	7	0	0	2	6	0	0	70	195	0	0	74	202	0	0	65	195	0	0
815	43	190	0	0	42	196	0	0	1	7	0	0	3	8	0	0	61	223	0	0	55	221	0	0	60	228	0	0
830	38	179	0	0	41	191	0	0	2	9	0	0	0	6	0	0	42	229	0	0	46	223	0	0	45	228	0	0
845	36	163	0	0	35	176	0	0	1	6	0	0	3	8	0	0	39	212	0	0	34	209	0	0	31	201	0	0
900	23	140	0	0	28	146	0	0	2	6	0	0	1	7	0	0	27	169	0	0	25	160	0	0	27	163	0	0
915	20	117	0	0	15	119	0	0	1	6	0	0	2	6	0	0	11	119	0	0	15	120	0	0	11	114	0	0
930	15	94	0	0	14	92	0	0	2	6	0	0	2	8	0	0	13	90	0	0	13	87	0	0	18	87	0	0
945	17	75	0	0	14	71	0	0	3	8	0	0	1	6	0	0	12	63	0	0	10	63	0	0	11	67	0	0
1000	19	71	0	0	10	53	0	0	1	7	0	0	2	7	0	0	5	41	0	0	9	47	0	0	13	53	0	0
1015	6	57	0	0	11	49	0	0	2	8	0	0	1	6	0	0	8	38	0	0	10	42	0	0	8	50	0	0
1030	7	49	0	0	5	40	0	0	2	8	0	0	0	4	0	0	5	30	0	0	5	34	0	0	4	36	0	0
1045	5	37	0	0	3	29	0	0	2	7	0	0	2	5	0	0	7	25	0	0	1	25	0	0	11	36	0	0
1100	3	21	0	0	2	21	0	0	1	7	0	0	0	3	0	0	6	26	0	0	4	20	0	0	2	25	0	0
1115	3	18	0	0	1	11	0	0	1	6	0	0	0	2	0	0	5	23	0	0	4	14	0	0	4	21	0	0
1130	6	17	0	0	7	13	0	0	0	4	0	0	1	3	0	0	5	23	0	0	3	12	0	0	5	22	0	0
1145	7	19	0	0	10	20	0	0	2	4	0	0	1	2	0	0	6	22	0	0	4	15	0	0	6	17	0	0

BAYMETRICS TRAFFIC RESOURCES

Location 2: Northbound Right-Turn On Vasco South of East

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	NBR				NBR				NBR				NBR				NBR				NBR				NBR			
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	9	25	0	0	5	23	0	0	2	5	0	0	1	3	0	0	2	18	0	0	4	15	0	0	4	19	0	0
1215	5	27	0	0	5	27	0	0	1	5	0	0	1	4	0	0	7	20	0	0	5	16	0	0	4	19	0	0
1230	9	30	0	0	6	26	0	0	1	6	0	0	0	3	0	0	4	19	0	0	5	18	0	0	7	21	0	0
1245	14	37	0	0	13	29	0	0	0	4	0	0	2	4	0	0	11	24	0	0	20	34	0	0	13	28	0	0
1300	29	57	0	0	17	41	0	0	0	2	0	0	2	5	0	0	21	43	0	0	23	53	0	0	14	38	0	0
1315	18	70	0	0	15	51	0	0	0	1	0	0	1	5	0	0	16	52	0	0	12	60	0	0	16	50	0	0
1330	14	75	0	0	16	61	0	0	2	2	0	0	0	5	0	0	13	61	0	0	14	69	0	0	7	50	0	0
1345	8	69	0	0	10	58	0	0	1	3	0	0	1	4	0	0	5	55	0	0	11	60	0	0	8	45	0	0
1400	5	45	0	0	6	47	0	0	3	6	0	0	1	3	0	0	7	41	0	0	8	45	0	0	9	40	0	0
1415	5	32	0	0	5	37	0	0	1	7	0	0	1	3	0	0	9	34	0	0	2	35	0	0	6	30	0	0
1430	3	21	0	0	6	27	0	0	1	6	0	0	1	4	0	0	3	24	0	0	2	23	0	0	5	28	0	0
1445	6	19	0	0	7	24	0	0	0	5	0	0	2	5	0	0	4	23	0	0	5	17	0	0	1	21	0	0
1500	3	17	0	0	4	22	0	0	2	4	0	0	0	4	0	0	2	18	0	0	9	18	0	0	7	19	0	0
1515	6	18	0	0	11	28	0	0	1	4	0	0	0	3	0	0	8	17	0	0	11	27	0	0	3	16	0	0
1530	2	17	0	0	2	24	0	0	3	6	0	0	1	3	0	0	5	19	0	0	4	29	0	0	7	18	0	0
1545	5	16	0	0	11	28	0	0	3	9	0	0	0	1	0	0	5	20	0	0	14	38	0	0	6	23	0	0
1600	9	22	0	0	7	31	0	0	0	7	0	0	0	1	0	0	14	32	0	0	7	36	0	0	13	29	0	0
1615	11	27	0	0	8	28	0	0	0	6	0	0	0	1	0	0	5	29	0	0	12	37	0	0	13	39	0	0
1630	6	31	0	0	3	29	0	0	0	3	0	0	0	0	0	0	12	36	0	0	3	36	0	0	4	36	0	0
1645	8	34	0	0	2	20	0	0	3	3	0	0	1	1	0	0	9	40	0	0	9	31	0	0	2	32	0	0
1700	5	30	0	0	5	18	0	0	0	3	0	0	0	1	0	0	5	31	0	0	11	35	0	0	6	25	0	0
1715	10	29	0	0	4	14	0	0	0	3	0	0	1	2	0	0	10	36	0	0	2	25	0	0	2	14	0	0
1730	5	28	0	0	2	13	0	0	1	4	0	0	2	4	0	0	7	31	0	0	8	30	0	0	4	14	0	0
1745	7	27	0	0	2	13	0	0	0	1	0	0	1	4	0	0	5	27	0	0	6	27	0	0	4	16	0	0
1800	4	26	0	0	0	8	0	0	1	2	0	0	1	5	0	0	6	28	0	0	6	22	0	0	1	11	0	0
1815	2	18	0	0	0	4	0	0	0	2	0	0	0	4	0	0	1	19	0	0	2	22	0	0	1	10	0	0
1830	1	14	0	0	1	3	0	0	1	2	0	0	0	2	0	0	1	13	0	0	2	16	0	0	1	7	0	0
1845	2	9	0	0	1	2	0	0	2	4	0	0	0	1	0	0	0	8	0	0	2	12	0	0	4	7	0	0
1900	1	6	0	0	0	2	0	0	2	5	0	0	2	2	0	0	0	2	0	0	0	6	0	0	1	7	0	0
1915	2	6	0	0	2	4	0	0	0	5	0	0	1	3	0	0	3	4	0	0	5	9	0	0	1	7	0	0
1930	0	5	0	0	0	3	0	0	3	7	0	0	0	3	0	0	2	5	0	0	2	9	0	0	0	6	0	0
1945	1	4	0	0	0	2	0	0	1	6	0	0	1	4	0	0	0	5	0	0	1	8	0	0	2	4	0	0
2000	1	4	0	0	2	4	0	0	1	5	0	0	0	2	0	0	1	6	0	0	1	9	0	0	0	3	0	0
2015	0	2	0	0	0	2	0	0	0	5	0	0	0	1	0	0	0	3	0	0	0	4	0	0	1	3	0	0
2030	1	3	0	0	0	2	0	0	1	3	0	0	1	2	0	0	1	2	0	0	0	2	0	0	0	3	0	0
2045	0	2	0	0	2	4	0	0	0	2	0	0	0	1	0	0	0	2	0	0	2	3	0	0	2	3	0	0
2100	2	3	0	0	0	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	0	2	0	0	3	6	0	0
2115	0	3	0	0	2	4	0	0	1	3	0	0	0	2	0	0	0	2	0	0	0	2	0	0	2	7	0	0
2130	1	3	0	0	0	4	0	0	1	3	0	0	1	2	0	0	1	2	0	0	1	3	0	0	0	7	0	0
2145	1	4	0	0	0	2	0	0	1	4	0	0	0	2	0	0	0	2	0	0	1	2	0	0	1	6	0	0
2200	0	2	0	0	2	4	0	0	0	3	0	0	0	1	0	0	1	2	0	0	0	2	0	0	1	4	0	0
2215	1	3	0	0	0	2	0	0	1	3	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0	2	0	0
2230	0	2	0	0	1	3	0	0	1	3	0	0	0	0	0	0	3	4	0	0	1	2	0	0	0	2	0	0
2245	2	3	0	0	0	3	0	0	0	2	0	0	1	1	0	0	0	4	0	0	1	2	0	0	1	2	0	0
2300	0	3	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	3	0	0	0	2	0	0	0	1	0	0
2315	1	3	0	0	1	2	0	0	1	2	0	0	1	2	0	0	0	3	0	0	0	2	0	0	0	1	0	0
2330	0	3	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	2	3	0	0	1	2	0	0
2345	1	2	0	0	3	4	0	0	1	2	0	0	1	2	0	0	1	1	0	0	0	2	0	0	0	1	0	0
TOTAL	781	N/A	0	N/A	724	N/A	0	N/A	95	N/A	0	N/A	69	N/A	0	N/A	765	N/A	0	N/A	798	N/A	0	N/A	749	N/A	0	N/A
AM	190		0		196		0		9		0		8		0		229		0		223		0		228		0	
NOON	75		0		61		0		8		0		7		0		61		0		69		0		53		0	
PM	34		0		31		0		9		0		5		0		40		0		38		0		39		0	
EVEN	4		0		4		0		5		0		2		0		6		0		9		0		7		0	

BAYMETRICS TRAFFIC RESOURCES

Location 3: East Avenue East of Vasco Road

	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	6	0	5	0	3	0	5	0	6	0	10	0	2	0
1215	0	0	6	0	1	0	11	0	4	0	13	0	4	0
1230	3	0	4	0	3	0	2	0	2	0	5	0	5	0
1245	2	11	2	17	2	9	2	20	1	13	2	28	4	12
100	3	8	1	13	4	10	4	19	4	11	3	21	2	12
115	1	9	0	7	2	11	5	13	3	10	2	10	3	11
130	3	9	1	4	2	10	5	16	1	9	3	10	1	10
145	2	9	1	3	0	8	5	19	1	9	1	9	2	8
200	2	8	2	4	0	4	2	17	0	5	1	7	1	7
215	2	9	0	4	0	2	0	12	1	3	0	5	3	7
230	2	8	0	3	3	3	2	9	2	4	1	3	1	7
245	3	9	4	6	4	7	1	5	1	4	3	5	1	6
300	1	8	3	7	1	8	6	9	2	6	3	7	1	6
315	2	8	1	8	2	10	2	11	-1	4	7	14	0	3
330	5	11	4	12	5	12	3	12	3	5	3	16	1	3
345	3	11	5	13	3	11	0	11	0	4	0	13	2	4
400	4	14	1	11	9	19	5	10	4	6	3	13	2	5
415	7	19	5	15	7	24	4	12	0	7	0	6	1	6
430	9	23	3	14	10	29	2	11	5	9	4	7	1	6
445	17	37	3	12	14	40	1	12	3	12	1	8	1	5
500	27	60	4	15	21	52	6	13	6	14	5	10	2	5
515	29	82	5	15	12	57	4	13	4	18	6	16	1	5
530	33	106	6	18	36	83	3	14	9	22	4	16	1	5
545	56	145	7	22	62	131	5	18	20	39	3	18	15	19
600	104	222	10	28	82	192	13	25	26	59	0	13	14	31
615	106	299	16	39	80	260	17	38	14	69	2	9	6	36
630	132	398	28	61	109	333	21	56	13	73	4	9	6	41
645	146	488	19	73	108	379	18	69	16	69	10	16	6	32
700	159	543	28	91	155	452	24	80	21	64	3	19	4	22
715	178	615	26	101	153	525	25	88	7	57	3	20	6	22
730	217	700	37	110	198	614	31	98	8	52	8	24	7	23
745	245	799	44	135	222	728	42	122	8	44	5	19	16	33
800	224	864	39	146	231	804	36	134	15	38	9	25	12	41
815	202	888	36	156	219	870	35	144	13	44	13	35	4	39
830	195	866	32	151	189	861	29	142	14	50	10	37	6	38
845	177	798	43	150	174	813	31	131	14	56	5	37	11	33
900	164	738	37	148	135	717	28	123	19	60	11	39	11	32
915	105	641	20	132	124	622	32	120	16	63	7	33	7	35
930	110	556	32	132	105	538	33	124	20	69	5	28	19	48
945	97	476	34	123	93	457	34	127	12	67	11	34	12	49
1000	93	405	34	120	70	392	28	127	20	68	6	29	11	49
1015	76	376	35	135	63	331	36	131	25	77	11	33	15	57
1030	50	316	39	142	74	300	27	125	26	83	8	36	16	54
1045	52	271	30	138	40	247	36	127	24	95	9	34	14	56
1100	44	222	44	148	65	242	38	137	16	91	20	48	8	53
1115	44	190	55	168	57	236	59	160	11	77	18	55	17	55
1130	44	184	90	219	54	216	91	224	10	61	9	56	10	49
1145	57	189	152	341	68	244	161	349	21	58	15	62	11	46

BAYMETRICS TRAFFIC RESOURCES

Location 3: East Avenue East of Vasco Road

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	EB		WB		EB		WB		EB		WB		EB		WB		EB		WB		EB		WB		EB		WB	
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	63	208	163	460	56	235	187	498	23	65	14	56	11	49	12	36	69	205	183	497	52	192	161	458	54	222	161	478
1215	62	226	146	551	68	246	156	595	13	67	24	62	10	42	11	40	62	220	160	602	66	213	155	561	71	241	158	558
1230	100	282	78	539	89	281	108	612	10	67	18	71	17	49	5	36	78	258	78	597	95	267	75	561	94	265	109	578
1245	132	357	72	459	128	341	68	519	25	71	19	75	13	51	5	33	134	343	54	475	117	330	80	471	126	345	78	506
1300	192	486	50	346	172	457	67	399	12	60	19	80	9	49	11	32	167	441	49	341	167	445	52	362	166	457	66	411
1315	177	601	46	246	170	559	78	321	15	62	22	78	11	50	14	35	144	523	50	231	149	528	46	253	143	529	50	303
1330	125	626	48	216	114	584	85	298	19	71	14	74	11	44	14	44	91	536	41	194	102	535	49	227	102	537	52	246
1345	69	563	60	204	110	566	78	308	16	62	20	75	18	49	13	52	90	492	38	178	73	491	61	208	95	506	49	217
1400	69	440	54	208	76	470	77	318	17	67	7	63	22	62	11	52	55	380	43	172	70	394	42	198	75	415	43	194
1415	72	335	52	214	74	374	53	293	26	78	29	70	11	62	13	51	62	298	48	170	53	298	62	214	54	326	40	184
1430	57	267	79	245	71	331	85	293	18	77	23	79	19	70	12	49	54	261	54	183	50	246	60	225	48	272	70	202
1445	60	258	84	269	50	271	79	294	19	80	28	87	22	74	11	47	42	213	50	195	43	216	81	245	46	223	90	243
1500	52	241	63	278	53	248	69	286	16	79	17	97	14	66	12	48	36	194	58	210	41	187	74	277	60	208	105	305
1515	49	218	69	295	41	215	90	323	17	70	18	86	18	73	11	46	40	172	71	233	36	170	72	287	52	206	83	348
1530	46	207	119	335	52	196	118	356	14	66	20	83	15	69	18	52	45	163	146	325	61	181	107	334	50	208	92	370
1545	52	199	183	434	51	197	179	456	12	59	18	73	16	63	13	54	41	162	172	447	47	185	201	454	51	213	175	455
1600	50	197	253	624	65	209	207	594	21	64	14	70	12	61	18	60	41	167	234	623	41	185	220	600	62	215	252	602
1615	63	211	249	804	65	233	255	759	8	55	16	68	21	64	20	69	56	183	250	802	51	200	225	753	35	198	240	759
1630	68	233	298	983	51	232	266	907	11	52	18	66	13	62	18	69	43	181	314	970	38	177	277	923	41	189	271	938
1645	50	231	328	1128	45	226	322	1050	8	48	18	66	14	60	19	75	49	189	296	1094	39	169	300	1022	42	180	286	1049
1700	54	235	319	1194	47	208	298	1141	12	39	12	64	16	64	14	71	56	204	326	1186	35	163	294	1096	54	172	292	1089
1715	56	228	317	1262	54	197	273	1159	5	36	19	67	11	54	14	65	57	205	328	1264	49	161	297	1168	41	178	253	1102
1730	60	220	287	1251	54	200	253	1146	12	37	20	69	14	55	18	65	45	207	295	1245	53	176	260	1151	43	180	266	1097
1745	57	227	237	1160	41	196	219	1043	9	38	12	63	7	48	10	56	36	194	251	1200	47	184	242	1093	31	169	241	1052
1800	38	211	173	1014	38	187	160	905	10	36	6	57	12	44	11	53	35	173	185	1059	27	176	167	966	28	143	174	934
1815	45	200	144	841	29	162	117	749	5	36	14	52	10	43	11	50	28	144	145	876	20	147	132	801	22	124	149	830
1830	25	165	103	657	20	128	69	565	9	33	12	44	7	36	18	50	21	120	125	706	15	109	126	667	12	93	113	677
1845	18	126	112	532	15	102	71	417	8	32	20	52	8	37	17	57	18	102	91	546	18	80	97	522	13	75	93	529
1900	15	103	73	432	20	84	48	305	9	31	9	55	8	33	9	55	18	85	81	442	17	70	92	447	12	59	69	424
1915	16	74	74	362	14	69	58	246	4	30	14	55	5	28	11	55	15	72	78	375	14	64	75	390	8	45	53	328
1930	10	59	68	327	17	66	40	217	7	28	6	49	6	27	14	51	16	67	68	318	12	61	59	323	13	46	68	283
1945	11	52	54	269	7	58	33	179	4	24	7	36	5	24	12	46	13	62	59	286	10	53	45	271	10	43	50	240
2000	4	41	42	238	14	52	44	175	3	18	5	32	7	23	8	45	10	54	54	259	17	53	35	214	9	40	37	208
2015	13	38	32	196	3	41	27	144	3	17	5	23	6	24	5	39	5	44	40	221	13	52	33	172	7	39	26	181
2030	6	34	28	156	7	31	13	117	3	13	6	23	4	22	5	30	5	33	29	182	8	48	23	136	5	31	20	133
2045	8	31	19	121	8	32	10	94	5	14	4	20	9	26	13	31	6	26	19	142	18	56	31	122	7	28	19	102
2100	9	36	18	97	6	24	21	71	4	15	4	19	9	28	9	32	6	22	9	97	10	49	26	113	12	31	15	80
2115	7	30	13	78	3	24	10	54	4	16	1	15	4	26	4	31	6	23	5	62	10	46	19	99	12	36	14	68
2130	17	41	20	70	5	22	12	53	8	21	7	16	5	27	10	36	7	25	4	37	6	44	17	93	4	35	9	57
2145	4	37	10	61	2	16	8	51	10	26	5	17	3	21	5	28	4	23	2	20	6	32	8	70	3	31	10	48
2200	5	33	13	56	9	19	9	39	3	25	5	18	6	18	4	23	6	23	3	14	9	31	4	48	8	27	5	38
2215	3	29	7	50	5	21	13	42	5	26	3	20	2	16	4	23	3	20	2	11	2	23	6	35	7	22	2	26
2230	9	21	4	34	3	19	10	40	3	21	5	18	6	17	6	19	5	18	5	12	4	21	3	21	4	22	2	19
2245	3	20	7	31	6	23	10	42	2	13	18	31	4	18	8	22	9	23	4	14	6	21	2	15	1	20	3	12
2300	2	17	4	22	1	15	10	43	3	13	7	33	1	13	6	24	12	29	2	13	0	12	2	13	4	16	2	9
2315	1	15	7	22	1	11	10	40	1	9	2	32	3	14	5	25	8	34	2	13	2	12	1	8	1	10	2	9
2330	4	10	4	22	3	11	18	48	1	7	4	31	2	10	11	30	4	33	2	10	2	10	2	7	5	11	1	8
2345	5	12	1	16	6	11	9	47	5	10	5	18	3	9	4	26	9	33	2	8	9	13	3	8	7	17	2	7
TOTAL	5,356	N/A	5,717	N/A	5,113	N/A	5,510	N/A	947	N/A	896	N/A	783	N/A	722	N/A	5,086	N/A	5,669	N/A	5,093	N/A	5,588	N/A	5,177	N/A	5,561	N/A
AM	888		156		870		144		73		39		49		29		911		172		905		174		947		155	
NOON	626		551		584		612		95		87		74		52		536		602		535		561		537		578	
PM	241		1,262		248		1,159		79		97		73		75		207		1,264		200		1,168		215		1,102	
EVEN	41		238		52		175		26		33		28		45		54		259		56		214		40		208	

BAYMETRICS TRAFFIC RESOURCES

Location 4: Driveway North of East Aevnue (NB - Inbounds)

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/13/2001 Wednesday			
	NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)		NB (IN)	
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1245	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1315	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1330	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
315	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
330	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
345	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
400	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
415	2	2	0	0	1	1	0	0	0	0	0	0	0	0	3	4	0	0	4	4	0	0	2	2	0	0	0	0
430	4	6	0	0	3	4	0	0	1	1	0	0	0	0	7	11	0	0	1	5	0	0	10	12	0	0	0	0
445	5	11	0	0	6	10	0	0	1	2	0	0	0	0	5	16	0	0	8	13	0	0	3	15	0	0	0	0
500	2	13	0	0	3	13	0	0	0	2	0	0	0	0	4	19	0	0	3	16	0	0	1	16	0	0	0	0
515	8	19	0	0	11	23	0	0	0	2	0	0	0	0	7	23	0	0	1	13	0	0	12	26	0	0	0	0
530	12	27	0	0	11	31	0	0	0	1	0	0	0	0	11	27	0	0	12	24	0	0	12	28	0	0	0	0
545	16	38	0	0	7	32	0	0	0	0	0	0	0	0	10	32	0	0	11	27	0	0	12	37	0	0	0	0
600	17	53	0	0	25	54	0	0	1	1	0	0	0	0	22	50	0	0	15	39	0	0	25	61	0	0	0	0
615	25	70	0	0	29	72	0	0	0	1	0	0	2	2	35	78	0	0	21	59	0	0	26	75	0	0	0	0
630	42	100	0	0	32	93	0	0	0	1	0	0	0	2	26	93	0	0	34	81	0	0	40	103	0	0	0	0
645	68	152	0	0	60	146	0	0	0	1	0	0	0	2	63	146	0	0	48	118	0	0	52	143	0	0	0	0
700	70	205	0	0	62	183	0	0	0	0	0	0	0	2	83	207	0	0	57	160	0	0	83	201	0	0	0	0
715	116	296	0	0	102	256	0	0	0	0	0	0	0	0	100	272	0	0	94	233	0	0	119	294	0	0	0	0
730	140	394	0	0	146	370	0	0	0	0	0	0	0	0	154	400	0	0	119	318	0	0	146	400	0	0	0	0
745	151	477	0	0	210	520	0	0	0	0	0	0	0	0	133	470	0	0	185	455	0	0	150	498	0	0	0	0
800	118	525	0	0	126	584	0	0	0	0	0	0	0	0	150	537	0	0	145	543	0	0	130	545	0	0	0	0
815	110	519	0	0	121	603	0	0	0	0	0	0	0	0	111	548	0	0	137	586	0	0	94	520	0	0	0	0
830	101	480	0	0	97	554	0	0	0	0	0	0	0	0	94	488	0	0	126	593	0	0	88	462	0	0	0	0
845	69	398	0	0	79	423	0	0	0	0	0	0	0	0	50	405	0	0	72	480	0	0	62	374	0	0	0	0
900	59	339	0	0	54	351	0	0	0	0	0	0	0	0	52	307	0	0	63	398	0	0	53	297	0	0	0	0
915	53	282	0	0	56	286	0	0	0	0	0	0	0	0	59	255	0	0	54	315	0	0	45	248	0	0	0	0
930	48	229	0	0	46	235	0	0	0	0	0	0	0	0	43	204	0	0	36	225	0	0	42	202	0	0	0	0
945	35	195	0	0	35	191	0	0	0	0	0	0	0	0	28	182	0	0	44	197	0	0	25	165	0	0	0	0
1000	27	163	0	0	26	163	0	0	0	0	0	0	0	0	23	153	0	0	33	167	0	0	32	144	0	0	0	0
1015	19	129	0	0	22	129	0	0	0	0	0	0	0	0	23	117	0	0	19	132	0	0	25	124	0	0	0	0
1030	17	98	0	0	14	97	0	0	1	1	0	0	0	0	18	92	0	0	22	118	0	0	22	104	0	0	0	0
1045	12	75	0	0	18	80	0	0	0	1	0	0	0	0	16	80	0	0	16	90	0	0	13	92	0	0	0	0
1100	19	67	0	0	15	69	0	0	0	1	0	0	0	0	30	87	0	0	18	75	0	0	29	89	0	0	0	0
1115	32	80	0	0	26	73	0	0	0	1	0	0	0	0	31	95	0	0	22	78	0	0	28	92	0	0	0	0
1130	35	98	0	0	31	90	0	0	1	1	0	0	0	0	36	113	0	0	29	85	0	0	27	97	0	0	0	0
1145	26	112	0	0	25	97	0	0	0	1	0	0	0	0	24	121	0	0	27	96	0	0	38	122	0	0	0	0

BAYMETRICS TRAFFIC RESOURCES

Location 4: Driveway North of East Aevnue (NB - Inbounds)

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)			
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	24	117	0	0	32	114	0	0	0	1	0	0	0	0	0	0	44	135	0	0	20	98	0	0	33	126	0	0
1215	64	149	0	0	38	126	0	0	0	1	0	0	0	0	0	0	52	156	0	0	54	130	0	0	73	171	0	0
1230	65	179	0	0	70	165	0	0	0	0	0	0	0	0	0	0	74	194	0	0	56	157	0	0	69	213	0	0
1245	71	224	0	0	61	201	0	0	0	0	0	0	1	1	0	0	50	220	0	0	76	206	0	0	43	218	0	0
1300	49	249	0	0	55	224	0	0	0	0	0	0	0	1	0	0	45	221	0	0	66	252	0	0	52	237	0	0
1315	25	210	0	0	38	224	0	0	0	0	0	0	0	1	0	0	30	199	0	0	32	230	0	0	40	204	0	0
1330	28	173	0	0	32	186	0	0	0	0	0	0	0	1	0	0	23	148	0	0	29	203	0	0	27	162	0	0
1345	20	122	0	0	17	142	0	0	0	0	0	0	0	0	0	0	17	115	0	0	20	147	0	0	18	137	0	0
1400	33	106	0	0	17	104	0	0	0	0	0	0	0	0	0	0	16	86	0	0	21	102	0	0	20	105	0	0
1415	46	127	0	0	12	78	0	0	0	0	0	0	0	0	0	0	12	68	0	0	17	87	0	0	32	97	0	0
1430	26	125	0	0	19	65	0	0	0	0	0	0	1	1	0	0	16	61	0	0	21	79	0	0	26	96	0	0
1445	20	125	0	0	11	59	0	0	0	0	0	0	1	2	0	0	14	58	0	0	15	74	0	0	16	94	0	0
1500	12	104	0	0	14	56	0	0	0	0	0	0	2	0	0	0	7	49	0	0	17	70	0	0	14	88	0	0
1515	11	69	0	0	7	51	0	0	0	0	0	0	2	0	0	0	8	45	0	0	8	61	0	0	10	66	0	0
1530	12	55	0	0	13	45	0	0	0	0	0	0	1	0	0	0	9	38	0	0	18	58	0	0	6	46	0	0
1545	13	48	0	0	8	42	0	0	0	0	0	0	0	0	0	0	13	37	0	0	14	57	0	0	18	48	0	0
1600	11	47	0	0	7	35	0	0	0	0	0	0	0	0	0	0	14	44	0	0	4	44	0	0	7	41	0	0
1615	6	42	0	0	12	40	0	0	0	0	0	0	0	0	0	0	17	53	0	0	12	48	0	0	14	45	0	0
1630	13	43	0	0	9	36	0	0	0	0	0	0	0	0	0	0	12	56	0	0	9	39	0	0	12	51	0	0
1645	17	47	0	0	8	36	0	0	0	0	0	0	0	0	0	0	13	56	0	0	10	35	0	0	4	37	0	0
1700	5	41	0	0	6	35	0	0	0	0	0	0	0	0	0	0	6	48	0	0	6	37	0	0	6	36	0	0
1715	1	36	0	0	2	25	0	0	1	1	0	0	2	2	0	0	4	35	0	0	8	33	0	0	0	22	0	0
1730	2	25	0	0	5	21	0	0	0	1	0	0	0	2	0	0	4	27	0	0	4	28	0	0	2	12	0	0
1745	6	14	0	0	5	18	0	0	0	1	0	0	0	2	0	0	7	21	0	0	0	18	0	0	2	10	0	0
1800	0	9	0	0	4	16	0	0	0	1	0	0	0	2	0	0	12	27	0	0	2	14	0	0	2	6	0	0
1815	2	10	0	0	3	17	0	0	1	1	0	0	0	0	0	0	3	26	0	0	1	7	0	0	0	6	0	0
1830	1	9	0	0	0	12	0	0	0	1	0	0	0	0	0	0	2	24	0	0	1	4	0	0	1	5	0	0
1845	0	3	0	0	1	8	0	0	0	1	0	0	0	0	0	0	0	17	0	0	4	8	0	0	0	3	0	0
1900	4	7	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	5	0	0	1	7	0	0	3	4	0	0
1915	1	6	0	0	3	4	0	0	0	0	0	0	0	0	0	0	1	3	0	0	1	7	0	0	1	5	0	0
1930	1	6	0	0	0	4	0	0	0	0	0	0	2	2	0	0	0	1	0	0	2	8	0	0	2	6	0	0
1945	1	7	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	1	0	0	2	6	0	0	0	6	0	0
2000	0	3	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	5	0	0	2	5	0	0
2015	1	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	5	0	0	0	4	0	0
2030	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	4	0	0	0	2	0	0
2045	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0
2100	2	3	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
2115	0	2	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
2130	0	2	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2145	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
2215	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
2230	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
2245	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0
2300	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
2315	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
2330	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
2345	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
TOTAL	2,052	N/A	0	N/A	2,014	N/A	0	N/A	8	N/A	0	N/A	10	N/A	0	N/A	1,979	N/A	0	N/A	2,030	N/A	0	N/A	2,003	N/A	0	N/A
AM	525	0			603	0			1	0			2	0			548	0			593	0			545	0		
NOON	249	0			224	0			1	0			2	0			221	0			252	0			237	0		
PM	104	0			56	0			1	0			2	0			56	0			70	0			88	0		
EVEN	3	0			3	0			1	0			2	0			1	0			5	0			5	0		

BAYMETRICS TRAFFIC RESOURCES

Location 4B: Driveway North of East Aevnue (SB - Outbounds)

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR
	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	1	0	1	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	1	0	1	0
1230	0	0	0	0	0	0	1	0	0	0	0	0	0	0
1245	0	0	0	0	0	1	0	2	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	1	0	1
1315	0	0	0	0	0	0	0	1	0	0	0	0	0	0
1330	2	2	0	0	0	0	0	0	0	0	0	0	0	0
1345	0	2	0	0	0	0	0	0	0	0	1	1	2	2
1400	1	3	0	0	0	0	0	0	0	0	0	1	3	0
1415	1	4	0	0	0	0	0	0	0	0	0	1	3	6
1430	0	2	0	0	0	0	0	0	0	0	0	1	7	0
1445	0	2	0	0	0	0	1	1	0	0	0	0	5	0
1500	0	1	0	0	0	0	0	1	0	0	1	1	0	4
1515	2	2	2	2	0	0	0	1	1	1	0	0	0	1
1530	0	2	0	2	0	0	0	1	0	1	0	0	1	1
1545	1	3	1	3	0	0	0	0	0	1	1	2	0	0
1600	0	3	0	3	0	0	0	0	0	0	0	2	1	1
1615	0	1	0	1	1	1	0	0	0	0	1	1	1	3
1630	2	3	0	1	2	3	0	0	0	0	0	1	0	2
1645	1	3	0	0	1	4	0	0	1	1	0	2	1	6
1700	0	3	0	0	2	6	0	0	1	2	0	2	0	1
1715	2	5	0	0	0	5	0	0	0	2	0	0	0	1
1730	0	3	0	0	4	7	1	1	0	2	0	0	0	0
1745	1	3	0	0	7	13	3	4	0	1	0	0	0	1
1800	3	6	2	2	1	12	0	4	0	0	1	1	2	3
1815	2	6	1	3	1	13	3	7	0	0	0	1	1	3
1830	5	11	1	4	2	11	1	7	0	0	0	1	3	6
1845	1	11	0	4	3	7	8	12	0	0	0	1	0	6
1900	3	11	1	3	4	10	8	20	0	0	0	0	0	1
1915	1	10	10	12	2	11	4	21	0	0	0	0	0	0
1930	3	8	8	19	2	11	2	22	0	0	0	0	1	1
1945	3	10	4	23	8	16	4	18	0	0	0	0	0	1
2000	2	9	4	26	4	16	4	14	0	0	0	0	0	1
2015	0	8	7	23	2	16	9	19	0	0	0	0	1	2
2030	2	7	10	25	3	17	9	26	0	0	0	0	2	3
2045	1	5	3	24	1	10	8	30	1	1	0	0	0	3
2100	3	6	7	27	5	11	3	29	0	1	0	0	4	7
2115	4	10	12	32	3	12	7	27	0	1	0	0	2	8
2130	4	12	5	27	5	14	5	23	0	1	0	0	0	6
2145	2	13	6	30	5	18	9	24	0	0	0	0	1	7
2200	4	14	5	28	11	24	11	32	0	0	0	0	4	7
2215	2	12	4	20	2	23	16	41	0	0	0	0	3	8
2230	3	11	13	28	3	21	19	55	1	1	0	0	5	13
2245	1	10	11	33	0	16	68	114	0	1	0	0	0	12
2300	3	9	33	61	0	5	85	188	0	1	0	0	2	10
2315	0	7	64	121	2	5	104	276	0	1	0	0	1	8
2330	1	5	66	174	0	2	62	319	1	1	0	0	0	3
2345	4	8	59	222	1	3	29	280	0	1	0	0	2	5

BAYMETRICS TRAFFIC RESOURCES

Location 4B: Driveway North of East Aevnue (SB - Outbounds)

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	SBL		SBR		SBL		SBR		SBL		SBR		SBL		SBR		SBL		SBR		SBL		SBR		SBL		SBR	
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	5	39	228	0	3	22	217	0	1	0	0	0	0	0	0	5	8	56	296	15	41	43	239	15	26	50	221
1215	5	10	16	180	5	6	45	158	1	2	0	0	0	0	0	0	5	12	43	261	9	42	45	218	12	35	26	199
1230	8	17	13	127	7	13	47	143	0	1	0	0	0	0	0	0	1	13	32	208	4	38	26	168	9	42	29	163
1245	5	18	21	89	18	30	13	127	0	1	0	0	1	1	0	0	5	16	18	149	6	34	32	146	12	48	22	127
1300	5	23	19	69	4	34	30	135	0	1	0	0	0	1	0	0	2	13	15	108	2	21	28	131	5	38	18	95
1315	0	18	21	74	5	34	24	114	0	0	0	0	0	1	0	0	2	10	24	89	0	12	29	115	4	30	25	94
1330	4	14	12	73	4	31	20	87	0	0	0	0	0	1	0	0	6	15	14	71	1	9	25	114	2	23	13	78
1345	5	14	23	75	1	14	19	93	0	0	0	0	0	0	0	0	3	13	13	66	2	5	22	104	6	17	37	93
1400	4	13	14	70	2	12	23	86	0	0	0	0	0	0	0	0	3	14	25	76	4	7	19	95	2	14	26	101
1415	4	17	20	69	3	10	35	97	0	0	0	0	0	0	0	0	0	12	24	76	2	9	32	98	2	12	12	88
1430	5	18	17	74	2	8	32	109	0	0	0	0	0	0	0	0	0	6	35	97	3	11	45	118	1	11	14	89
1445	0	13	29	80	2	9	28	118	0	0	0	0	1	1	1	1	1	4	43	127	2	11	30	126	0	5	15	67
1500	2	11	34	100	0	7	40	135	0	0	0	0	1	2	0	1	2	3	29	131	0	7	29	136	0	3	30	71
1515	9	16	54	134	3	7	59	159	0	0	0	0	0	2	0	1	0	3	53	160	1	6	45	149	4	5	38	97
1530	2	13	84	201	5	10	69	196	0	0	0	0	0	2	0	1	3	6	49	174	4	7	59	163	5	9	56	139
1545	6	19	92	264	2	10	78	246	0	0	0	0	0	1	0	0	2	7	83	214	2	7	77	210	0	9	84	208
1600	10	27	119	349	9	19	95	301	0	0	0	0	0	0	0	0	4	9	95	280	3	10	104	285	2	11	115	293
1615	6	24	135	430	7	23	102	344	0	0	0	0	0	0	0	0	2	11	112	339	16	25	95	335	4	11	126	381
1630	7	29	117	463	5	23	126	401	0	0	0	0	0	0	0	0	16	24	136	426	22	43	146	422	3	9	135	460
1645	6	29	172	543	0	21	145	468	0	0	0	0	0	0	0	0	11	33	125	468	10	51	137	482	11	20	114	490
1700	0	19	97	521	2	14	113	486	0	0	0	0	0	0	0	0	12	41	98	471	15	63	105	483	8	26	114	489
1715	2	15	73	459	0	7	82	466	2	2	0	0	0	0	0	0	5	44	44	403	18	65	73	461	12	34	112	475
1730	3	11	58	400	2	4	66	406	0	2	0	0	2	2	1	1	8	36	31	298	11	54	36	351	5	36	70	410
1745	1	6	34	262	0	4	40	301	0	2	0	0	0	2	0	1	7	32	24	197	5	49	22	236	4	29	38	334
1800	0	6	32	197	1	3	26	214	0	2	0	0	0	2	0	1	5	25	17	116	4	38	15	146	6	27	22	242
1815	0	4	24	148	0	3	22	154	1	1	0	0	0	2	0	1	6	26	11	83	6	26	13	86	5	20	12	142
1830	2	3	8	98	2	3	15	103	1	2	0	0	0	0	0	0	5	23	6	58	5	20	9	59	2	17	5	77
1845	3	5	15	79	0	3	7	70	0	2	0	0	0	0	0	0	2	18	7	41	2	17	5	42	9	22	8	47
1900	3	8	13	60	1	3	9	53	0	2	0	0	0	0	0	0	3	16	5	29	2	15	4	31	5	21	10	35
1915	1	9	10	46	0	3	3	34	0	1	0	0	0	0	0	0	3	13	7	25	1	10	7	25	4	20	5	28
1930	2	9	8	46	0	1	2	21	0	0	0	0	2	2	1	1	1	9	1	20	0	5	2	18	1	19	4	27
1945	0	6	11	42	0	1	5	19	0	0	0	0	0	2	0	1	3	10	3	16	0	3	11	24	1	11	2	21
2000	1	4	2	31	1	1	2	12	0	0	0	0	0	2	0	1	0	7	3	14	0	1	5	25	0	6	3	14
2015	1	4	3	24	1	2	1	10	0	0	0	0	0	2	0	1	0	4	0	7	0	0	4	22	0	2	2	11
2030	0	2	1	17	0	2	0	8	0	0	0	0	2	2	0	0	2	5	0	6	0	0	6	26	1	2	2	9
2045	0	2	0	6	0	2	0	3	0	0	0	0	0	2	0	0	0	2	0	3	0	0	2	17	0	1	4	11
2100	2	3	2	6	2	3	0	1	0	0	0	0	0	2	0	0	0	2	0	0	0	0	3	15	1	2	2	10
2115	1	3	0	3	0	2	0	0	0	0	0	0	0	2	1	1	1	3	0	0	0	0	2	13	2	4	3	11
2130	0	3	0	2	0	2	2	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	9	4	7	2	11
2145	0	3	0	2	0	2	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	8	2	9	2	9
2200	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	7	0	8	0	7
2215	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	1	7	1	5
2230	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	3	8	2	5	2	5
2245	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	3	0	1	0	0	2	9	0	3	0	3
2300	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	3	0	1	0	0	1	8	1	4	2	5
2315	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	6	0	3	1	5
2330	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	0	2	1	1	0	0	0	3	0	1	0	3
2345	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	3
TOTAL	185	N/A	1,781	N/A	186	N/A	1,932	N/A	11	N/A	3	N/A	10	N/A	5	N/A	175	N/A	1,736	N/A	229	N/A	1,756	N/A	209	N/A	1,725	N/A
AM	13		32		18		30		1		1		1		1		8		33		4		16		7		38	
NOON	23		228		34		319		2		0		1		1		16		296		42		248		48		221	
PM	29		543		23		486		2		0		2		1		44		471		65		483		36		490	
EVEN	4		31		3		12		0		1		2		1		7		14		1		26		9		14	

BAYMETRICS TRAFFIC RESOURCES

Location 5: Driveway North of East Aevnue (NB - Inbounds)

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	SB (IN)				SB (IN)				SB (IN)				SB (IN)				SB (IN)				SB (IN)				SB (IN)			
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	1	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1230	1	0	0	0	1	0	0	0	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
1245	0	2	0	0	0	2	0	0	0	3	0	0	0	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0
1300	1	2	0	0	0	1	0	0	0	2	0	0	0	2	0	0	1	2	0	0	1	2	0	0	0	1	0	0
1315	0	2	0	0	2	3	0	0	0	2	0	0	0	1	0	0	0	2	0	0	0	1	0	0	1	2	0	0
1330	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	2	0	0	2	3	0	0	1	2	0	0
1345	1	3	0	0	0	2	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	3	0	0	0	2	0	0
1400	1	3	0	0	0	2	0	0	0	0	0	0	1	0	0	2	3	0	0	0	2	0	0	1	3	0	0	0
1415	0	3	0	0	0	0	0	0	1	1	0	0	1	2	0	0	0	3	0	0	1	3	0	0	0	2	0	0
1430	1	3	0	0	1	1	0	0	2	3	0	0	0	2	0	0	2	4	0	0	2	3	0	0	1	2	0	0
1445	2	4	0	0	0	1	0	0	0	3	0	0	1	2	0	0	1	5	0	0	0	3	0	0	2	4	0	0
1500	0	3	0	0	2	3	0	0	1	4	0	0	2	4	0	0	1	4	0	0	2	5	0	0	2	5	0	0
1515	1	4	0	0	2	5	0	0	0	3	0	0	1	4	0	0	0	4	0	0	1	5	0	0	1	6	0	0
1530	5	8	0	0	3	7	0	0	2	3	0	0	1	5	0	0	2	4	0	0	2	5	0	0	2	7	0	0
1545	0	6	0	0	0	7	0	0	0	3	0	0	0	4	0	0	0	3	0	0	0	5	0	0	1	6	0	0
1600	1	7	0	0	0	5	0	0	3	5	0	0	2	4	0	0	0	2	0	0	1	4	0	0	1	5	0	0
1615	0	6	0	0	0	3	0	0	0	5	0	0	1	4	0	0	1	3	0	0	1	4	0	0	2	6	0	0
1630	2	3	0	0	0	0	0	0	1	4	0	0	0	3	0	0	1	2	0	0	2	4	0	0	1	5	0	0
1645	2	5	0	0	2	2	0	0	0	4	0	0	0	3	0	0	2	4	0	0	0	4	0	0	1	5	0	0
1700	3	7	0	0	2	4	0	0	3	4	0	0	0	1	0	0	2	6	0	0	3	6	0	0	4	8	0	0
1715	6	13	0	0	4	8	0	0	3	7	0	0	2	2	0	0	7	12	0	0	5	10	0	0	2	8	0	0
1730	7	18	0	0	7	15	0	0	2	8	0	0	0	2	0	0	8	19	0	0	6	14	0	0	4	11	0	0
1745	12	28	0	0	8	21	0	0	5	13	0	0	3	5	0	0	9	26	0	0	7	21	0	0	8	18	0	0
1800	13	38	0	0	13	32	0	0	11	21	0	0	2	7	0	0	18	42	0	0	23	41	0	0	10	24	0	0
1815	22	54	0	0	16	44	0	0	8	26	0	0	1	6	0	0	19	54	0	0	21	57	0	0	23	45	0	0
1830	31	78	0	0	10	47	0	0	4	28	0	0	3	9	0	0	32	78	0	0	33	84	0	0	30	71	0	0
1845	54	120	0	0	29	68	0	0	3	26	0	0	2	8	0	0	41	110	0	0	41	118	0	0	45	108	0	0
1900	86	193	0	0	30	85	0	0	3	18	0	0	0	6	0	0	72	164	0	0	75	170	0	0	61	159	0	0
1915	62	233	0	0	48	117	0	0	0	10	0	0	0	5	0	0	87	232	0	0	83	232	0	0	81	217	0	0
1930	121	323	0	0	40	147	0	0	1	7	0	0	1	3	0	0	66	266	0	0	81	280	0	0	74	261	0	0
1945	85	354	0	0	49	167	0	0	2	6	0	0	2	3	0	0	80	305	0	0	93	332	0	0	96	312	0	0
2000	102	370	0	0	65	202	0	0	2	5	0	0	0	3	0	0	83	316	0	0	108	365	0	0	118	369	0	0
2015	56	364	0	0	62	216	0	0	3	8	0	0	4	7	0	0	96	325	0	0	98	380	0	0	90	378	0	0
2030	82	325	0	0	65	241	0	0	1	8	0	0	0	6	0	0	71	330	0	0	77	376	0	0	42	346	0	0
2045	55	295	0	0	55	247	0	0	0	6	0	0	3	7	0	0	40	290	0	0	48	331	0	0	60	310	0	0
2100	36	229	0	0	26	208	0	0	3	7	0	0	0	7	0	0	31	238	0	0	43	266	0	0	33	225	0	0
2115	26	199	0	0	20	166	0	0	0	4	0	0	1	4	0	0	15	157	0	0	23	191	0	0	25	160	0	0
2130	20	137	0	0	15	116	0	0	1	4	0	0	2	6	0	0	12	98	0	0	28	142	0	0	32	150	0	0
2145	18	100	0	0	14	75	0	0	1	5	0	0	3	6	0	0	21	79	0	0	13	107	0	0	12	102	0	0
2200	17	81	0	0	19	68	0	0	1	3	0	0	0	6	0	0	19	67	0	0	17	81	0	0	10	79	0	0
2215	16	71	0	0	6	54	0	0	3	6	0	0	2	7	0	0	15	67	0	0	16	74	0	0	19	73	0	0
2230	13	64	0	0	8	47	0	0	4	9	0	0	0	5	0	0	9	64	0	0	14	60	0	0	18	59	0	0
2245	16	62	0	0	13	46	0	0	5	13	0	0	2	4	0	0	10	53	0	0	7	54	0	0	13	60	0	0
2300	5	50	0	0	12	39	0	0	2	14	0	0	1	5	0	0	12	46	0	0	14	51	0	0	9	59	0	0
2315	14	48	0	0	11	44	0	0	4	15	0	0	3	6	0	0	17	48	0	0	7	42	0	0	22	62	0	0
2330	13	48	0	0	4	40	0	0	3	14	0	0	1	7	0	0	8	47	0	0	11	39	0	0	15	59	0	0
2345	12	44	0	0	15	42	0	0	3	12	0	0	4	9	0	0	13	50	0	0	9	41	0	0	10	56	0	0

BAYMETRICS TRAFFIC RESOURCES

Location 5: Driveway North of East Aevnue (NB - Inbounds)

	12/6/2001 Thursday			12/7/2001 Friday			12/8/2001 Saturday			12/9/2001 Sunday			12/10/2001 Monday			12/11/2001 Tuesday			12/12/2001 Wednesday			
	SB (IN)			SB (IN)			SB (IN)			SB (IN)			SB (IN)			SB (IN)			SB (IN)			
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	28	67	0	0	12	42	0	0	2	12	0	0	6	14	0	0	24	62	0	0	17	44
1215	17	70	0	0	14	45	0	0	2	10	0	0	0	11	0	0	23	68	0	0	10	47
1230	23	80	0	0	22	63	0	0	0	7	0	0	2	12	0	0	26	86	0	0	20	56
1245	42	110	0	0	39	87	0	0	1	5	0	0	0	8	0	0	55	128	0	0	44	91
1300	45	127	0	0	25	100	0	0	2	5	0	0	3	5	0	0	35	139	0	0	27	101
1315	57	167	0	0	26	112	0	0	1	4	0	0	3	8	0	0	18	134	0	0	23	114
1330	28	172	0	0	13	103	0	0	0	4	0	0	1	7	0	0	24	132	0	0	22	116
1345	10	140	0	0	25	89	0	0	2	5	0	0	2	9	0	0	9	86	0	0	18	90
1400	19	114	0	0	11	75	0	0	3	6	0	0	8	14	0	0	14	65	0	0	12	75
1415	18	75	0	0	13	62	0	0	2	7	0	0	1	12	0	0	16	63	0	0	6	58
1430	8	55	0	0	8	57	0	0	3	10	0	0	7	18	0	0	19	58	0	0	13	49
1445	16	61	0	0	6	38	0	0	6	14	0	0	4	20	0	0	5	54	0	0	8	39
1500	7	49	0	0	11	38	0	0	2	13	0	0	2	14	0	0	8	48	0	0	9	36
1515	15	46	0	0	8	33	0	0	2	13	0	0	1	14	0	0	8	40	0	0	3	33
1530	6	44	0	0	8	33	0	0	0	10	0	0	2	9	0	0	9	30	0	0	12	32
1545	10	38	0	0	7	34	0	0	2	6	0	0	4	9	0	0	5	30	0	0	2	26
1600	10	41	0	0	5	28	0	0	2	6	0	0	3	10	0	0	4	26	0	0	4	21
1615	6	32	0	0	2	22	0	0	2	6	0	0	2	11	0	0	4	22	0	0	6	24
1630	7	33	0	0	4	18	0	0	0	6	0	0	1	10	0	0	3	16	0	0	3	15
1645	5	28	0	0	4	15	0	0	2	6	0	0	3	9	0	0	4	15	0	0	1	14
1700	3	21	0	0	3	13	0	0	1	5	0	0	2	8	0	0	6	17	0	0	3	13
1715	4	19	0	0	2	13	0	0	0	3	0	0	2	8	0	0	5	18	0	0	5	12
1730	7	19	0	0	2	11	0	0	2	5	0	0	0	7	0	0	2	17	0	0	6	15
1745	3	17	0	0	3	10	0	0	0	3	0	0	0	4	0	0	1	14	0	0	4	18
1800	2	16	0	0	0	7	0	0	2	4	0	0	1	3	0	0	2	10	0	0	0	15
1815	2	14	0	0	1	6	0	0	2	6	0	0	1	2	0	0	3	8	0	0	3	13
1830	1	8	0	0	0	4	0	0	1	5	0	0	2	4	0	0	3	9	0	0	2	9
1845	1	6	0	0	3	4	0	0	2	7	0	0	0	4	0	0	2	10	0	0	1	6
1900	0	4	0	0	2	6	0	0	0	5	0	0	3	6	0	0	1	9	0	0	0	6
1915	1	3	0	0	2	7	0	0	0	3	0	0	0	5	0	0	2	8	0	0	0	3
1930	0	2	0	0	1	8	0	0	6	8	0	0	1	4	0	0	4	9	0	0	1	2
1945	0	1	0	0	0	5	0	0	1	7	0	0	0	4	0	0	1	8	0	0	1	2
2000	1	2	0	0	3	6	0	0	2	9	0	0	2	3	0	0	1	8	0	0	2	4
2015	3	4	0	0	0	4	0	0	0	9	0	0	0	3	0	0	0	6	0	0	1	5
2030	1	5	0	0	1	4	0	0	2	5	0	0	1	3	0	0	0	2	0	0	0	4
2045	0	5	0	0	1	5	0	0	0	4	0	0	1	4	0	0	1	2	0	0	0	3
2100	2	6	0	0	3	5	0	0	1	3	0	0	2	4	0	0	3	4	0	0	1	2
2115	0	3	0	0	0	5	0	0	1	4	0	0	0	4	0	0	2	6	0	0	1	2
2130	2	4	0	0	1	5	0	0	1	3	0	0	1	4	0	0	1	7	0	0	2	4
2145	1	5	0	0	1	5	0	0	2	5	0	0	1	4	0	0	0	6	0	0	0	4
2200	1	4	0	0	1	3	0	0	1	5	0	0	3	5	0	0	3	6	0	0	0	3
2215	2	6	0	0	2	5	0	0	3	7	0	0	3	8	0	0	2	6	0	0	0	2
2230	3	7	0	0	2	6	0	0	1	7	0	0	0	7	0	0	2	7	0	0	2	2
2245	3	9	0	0	2	7	0	0	1	6	0	0	2	8	0	0	2	9	0	0	2	4
2300	0	8	0	0	0	6	0	0	0	5	0	0	0	5	0	0	1	7	0	0	0	4
2315	0	6	0	0	0	4	0	0	1	3	0	0	0	2	0	0	1	6	0	0	0	4
2330	1	4	0	0	1	3	0	0	0	2	0	0	1	3	0	0	0	4	0	0	2	4
2345	2	3	0	0	0	1	0	0	1	2	0	0	0	1	0	0	1	3	0	0	1	3
TOTAL	1,446	N/A	0	N/A	980	N/A	0	N/A	164	N/A	0	N/A	138	N/A	0	N/A	1,294	N/A	0	N/A	1,320	N/A
AM	370	0			247	0			28	0			9	0			330	0		380	0	
NOON	172	0			112	0			15	0			20	0			139	0		116	0	
PM	49	0			38	0			13	0			14	0			48	0		36	0	
EVEN	9	0			7	0			9	0			8	0			9	0		5	0	

BAYMETRICS TRAFFIC RESOURCES

Location 5B: Driveway North of East Aevnue (SB - Outbounds)

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR
	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	4	0	5	0	0	0	0	0	1	0	0	0	1	0
1215	1	0	0	0	1	0	2	0	0	0	2	0	0	0
1230	0	0	2	0	1	0	0	0	0	0	1	0	0	0
1245	0	5	0	7	0	2	0	2	1	1	1	2	0	3
1300	0	1	1	3	2	4	0	2	0	0	1	2	0	1
1315	1	1	0	3	0	3	1	1	0	0	1	2	0	2
1330	0	1	1	2	0	2	0	1	0	0	1	3	2	4
1345	0	1	0	2	0	2	0	1	0	0	0	2	0	3
1400	0	1	2	3	1	1	0	0	1	3	0	2	0	2
1415	0	0	0	3	2	3	0	0	2	2	0	2	2	3
1430	0	0	2	4	0	3	3	3	0	2	0	1	0	0
1445	0	0	0	4	0	3	0	3	0	2	1	2	0	1
1500	-1	-1	3	5	0	2	0	3	-1	1	2	3	0	0
1515	2	1	0	5	0	0	0	3	0	-1	0	3	1	1
1530	0	1	1	4	0	0	1	1	-1	-2	2	5	2	3
1545	1	2	0	4	0	0	0	1	1	-1	3	7	0	3
1600	1	4	1	2	1	1	0	1	2	2	1	6	2	5
1615	0	2	4	6	0	1	0	1	0	2	1	7	1	5
1630	0	2	0	5	1	2	1	1	6	9	2	7	1	4
1645	0	1	1	6	2	4	0	1	3	11	1	5	-4	8
1700	1	1	0	5	0	3	3	4	1	10	3	7	0	6
1715	0	1	2	3	3	6	0	4	3	13	0	6	0	5
1730	2	3	0	3	4	9	0	3	0	7	1	5	1	5
1745	4	7	0	2	2	9	2	5	0	4	0	4	2	3
1800	4	10	0	2	0	9	0	2	3	6	1	2	0	3
1815	3	13	3	3	0	6	3	5	1	4	1	3	0	3
1830	7	18	0	3	1	3	5	10	0	4	3	5	1	3
1845	6	20	0	3	2	3	4	12	0	4	1	6	0	1
1900	2	18	7	10	2	5	3	15	0	1	1	6	1	2
1915	7	22	7	14	3	8	2	14	0	0	0	5	0	2
1930	3	18	9	23	2	9	4	13	2	2	2	4	1	2
1945	3	15	4	27	7	14	3	12	0	2	0	3	0	2
2000	6	19	0	20	10	22	3	12	0	2	2	4	2	3
2015	6	18	1	14	3	22	4	14	2	4	1	5	0	3
2030	8	23	3	8	2	22	6	16	1	3	1	4	0	2
2045	4	24	2	6	6	21	4	17	0	3	3	7	0	2
2100	5	23	5	11	5	16	4	18	0	3	1	6	2	2
2115	3	20	7	17	4	17	2	16	2	3	7	12	0	2
2130	8	20	1	15	2	17	5	15	2	4	0	11	1	3
2145	2	18	5	18	5	16	1	12	1	5	6	14	1	4
2200	8	21	1	14	7	18	1	9	3	8	0	13	3	5
2215	14	32	8	15	10	24	5	12	0	6	0	6	0	5
2230	6	30	11	25	12	34	4	11	2	6	2	8	0	4
2245	9	37	4	24	16	45	9	19	1	6	0	2	0	3
2300	19	48	11	34	20	58	4	22	1	4	3	5	2	2
2315	20	54	11	37	25	73	12	29	0	4	0	5	1	3
2330	33	81	8	34	38	99	9	34	2	4	0	3	0	3
2345	53	125	6	36	48	131	3	28	0	3	1	4	1	4

BAYMETRICS TRAFFIC RESOURCES
Location 6: Southgate Drive North of East Avenue (NB - Inbounds)

12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
NB (N)		NB (N)		NB (N)		NB (N)		NB (N)		NB (N)		NB (N)	
13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN	13 KMN 60 KMN
1200	28	96	0	0	11	58	0	0	11	43	0	0	31
1215	22	90	0	0	11	53	0	0	10	47	0	0	23
1230	21	93	0	0	6	43	0	0	14	49	0	0	23
1245	28	99	0	0	5	33	0	0	12	47	0	0	34
1300	36	107	0	0	18	40	0	0	3	39	0	0	23
1315	22	107	0	0	16	45	0	0	9	38	0	0	32
1330	48	134	0	0	9	48	0	0	7	31	0	0	23
1345	62	168	0	0	8	51	0	0	7	26	0	0	30
1400	79	211	0	0	17	50	0	0	5	28	0	0	49
1415	91	280	0	0	13	47	0	0	4	23	0	0	70
1430	58	290	0	0	10	48	0	0	5	21	0	0	72
1445	30	258	0	0	15	55	0	0	9	23	0	0	54
1500	27	206	0	0	6	44	0	0	9	27	0	0	21
1515	29	144	0	0	11	42	0	0	7	30	0	0	25
1530	24	110	0	0	12	44	0	0	7	32	0	0	20
1545	20	100	0	0	8	37	0	0	12	35	0	0	24
1600	16	89	0	0	11	42	0	0	8	34	0	0	20
1615	17	77	0	0	12	43	0	0	8	35	0	0	19
1630	14	67	0	0	9	40	0	0	11	39	0	0	15
1645	19	66	0	0	7	39	0	0	16	43	0	0	15
1700	37	87	0	0	7	35	0	0	6	41	0	0	16
1715	25	95	0	0	12	35	0	0	12	45	0	0	44
1730	17	98	0	0	4	30	0	0	7	41	0	0	19
1745	14	93	0	0	4	27	0	0	8	33	0	0	17
1800	21	77	0	0	4	24	0	0	10	37	0	0	20
1815	10	62	0	0	6	18	0	0	10	35	0	0	21
1830	7	52	0	0	4	18	0	0	9	37	0	0	11
1845	7	45	0	0	7	21	0	0	4	33	0	0	9
1900	9	33	0	0	5	22	0	0	7	30	0	0	10
1915	18	41	0	0	10	26	0	0	4	24	0	0	12
1930	5	39	0	0	1	23	0	0	10	25	0	0	13
1945	11	43	0	0	6	30	0	0	7	28	0	0	15
2000	4	38	0	0	8	25	0	0	6	19	0	0	8
2015	8	28	0	0	6	27	0	0	7	31	0	0	5
2030	5	28	0	0	8	28	0	0	9	24	0	0	8
2045	7	24	0	0	5	27	0	0	10	33	0	0	11
2100	2	22	0	0	5	24	0	0	6	32	0	0	5
2115	5	19	0	0	6	24	0	0	8	32	0	0	5
2130	8	22	0	0	5	21	0	0	7	31	0	0	3
2145	4	19	0	0	3	19	0	0	4	25	0	0	1
2200	3	20	0	0	2	16	0	0	14	33	0	0	6
2215	3	17	0	0	4	14	0	0	4	29	0	0	4
2230	4	13	0	0	4	13	0	0	2	24	0	0	10
2245	0	9	0	0	1	11	0	0	2	22	0	0	4
2300	1	7	0	0	3	12	0	0	7	15	0	0	3
2315	2	7	0	0	3	11	0	0	8	19	0	0	4
2330	3	6	0	0	5	12	0	0	0	17	0	0	5
2345	6	12	0	0	2	13	0	0	1	16	0	0	5
TOTAL	2,586	N/A	0	N/A	2,378	N/A	0	N/A	2,591	N/A	0	N/A	2,512
AM	463	0	0	0	115	0	0	0	433	0	0	445	0
NOON	290	0	0	0	60	0	0	0	366	0	0	379	0
PM	206	0	0	0	44	0	0	0	222	0	0	217	0
EVEN	28	0	0	0	20	0	0	0	37	0	0	38	0

BAYMETRICS TRAFFIC RESOURCES

Location 6: Southgate Drive North of East Aevnue (NB - Inbounds)

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)			
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	10	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	0	0	9	0	0	0	2	0	0	0
1215	1	0	0	0	1	0	0	0	1	0	0	0	5	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0
1230	2	0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
1245	0	13	0	0	3	6	0	0	1	2	0	0	2	15	0	0	2	8	0	0	2	12	0	0	1	5	0	0
1300	2	5	0	0	6	12	0	0	3	5	0	0	2	12	0	0	6	11	0	0	5	8	0	0	8	11	0	0
1315	1	5	0	0	3	14	0	0	4	8	0	0	0	7	0	0	3	13	0	0	7	14	0	0	4	13	0	0
1330	0	3	0	0	0	12	0	0	5	13	0	0	1	5	0	0	0	11	0	0	3	17	0	0	2	15	0	0
1345	0	3	0	0	1	10	0	0	1	13	0	0	3	6	0	0	1	10	0	0	0	15	0	0	2	16	0	0
1400	2	3	0	0	0	4	0	0	1	11	0	0	4	8	0	0	0	4	0	0	1	11	0	0	0	8	0	0
1415	0	2	0	0	3	4	0	0	3	10	0	0	1	9	0	0	1	2	0	0	0	4	0	0	0	4	0	0
1430	0	2	0	0	1	5	0	0	0	5	0	0	0	8	0	0	0	2	0	0	0	1	0	0	1	3	0	0
1445	7	9	0	0	1	5	0	0	0	4	0	0	1	6	0	0	3	4	0	0	0	1	0	0	1	2	0	0
1500	0	7	0	0	0	5	0	0	2	5	0	0	0	2	0	0	1	5	0	0	0	0	0	0	4	6	0	0
1515	1	8	0	0	0	2	0	0	0	2	0	0	0	1	0	0	0	4	0	0	2	2	0	0	0	6	0	0
1530	7	15	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	4	0	0	0	2	0	0	1	6	0	0
1545	5	13	0	0	3	3	0	0	0	2	0	0	0	0	0	0	0	1	0	0	1	3	0	0	0	5	0	0
1600	5	18	0	0	2	5	0	0	0	0	0	0	0	0	0	0	4	4	0	0	5	8	0	0	3	4	0	0
1615	8	25	0	0	1	6	0	0	1	1	0	0	0	0	0	0	3	7	0	0	2	8	0	0	1	5	0	0
1630	8	26	0	0	0	6	0	0	0	1	0	0	0	0	0	0	2	9	0	0	0	8	0	0	1	5	0	0
1645	10	31	0	0	3	6	0	0	0	1	0	0	1	1	0	0	2	11	0	0	4	11	0	0	1	6	0	0
1700	6	32	0	0	7	11	0	0	2	3	0	0	2	3	0	0	3	10	0	0	5	11	0	0	4	7	0	0
1715	12	36	0	0	19	29	0	0	0	2	0	0	2	5	0	0	14	21	0	0	10	19	0	0	11	17	0	0
1730	10	38	0	0	8	37	0	0	1	3	0	0	1	6	0	0	10	29	0	0	7	26	0	0	10	26	0	0
1745	14	42	0	0	15	49	0	0	3	6	0	0	0	5	0	0	12	39	0	0	18	40	0	0	15	40	0	0
1800	22	58	0	0	19	61	0	0	3	7	0	0	1	4	0	0	21	57	0	0	18	53	0	0	20	56	0	0
1815	25	71	0	0	29	71	0	0	6	13	0	0	0	2	0	0	20	63	0	0	32	75	0	0	28	73	0	0
1830	37	98	0	0	20	83	0	0	4	16	0	0	1	2	0	0	27	80	0	0	25	93	0	0	32	95	0	0
1845	50	134	0	0	64	132	0	0	17	30	0	0	0	2	0	0	41	109	0	0	50	125	0	0	46	126	0	0
1900	102	214	0	0	62	175	0	0	30	57	0	0	2	3	0	0	51	139	0	0	59	166	0	0	59	165	0	0
1915	89	278	0	0	74	220	0	0	36	87	0	0	2	5	0	0	95	214	0	0	106	240	0	0	90	227	0	0
1930	110	351	0	0	61	261	0	0	24	107	0	0	4	8	0	0	80	267	0	0	101	316	0	0	104	299	0	0
1945	112	413	0	0	101	298	0	0	25	115	0	0	20	28	0	0	83	309	0	0	105	371	0	0	89	342	0	0
2000	152	463	0	0	103	339	0	0	28	113	0	0	15	41	0	0	110	368	0	0	108	420	0	0	109	392	0	0
2015	66	440	0	0	128	393	0	0	26	103	0	0	6	45	0	0	157	430	0	0	148	462	0	0	143	445	0	0
2030	93	423	0	0	64	396	0	0	14	93	0	0	6	47	0	0	82	432	0	0	89	450	0	0	80	421	0	0
2045	85	396	0	0	75	370	0	0	7	75	0	0	4	31	0	0	84	433	0	0	72	417	0	0	74	406	0	0
2100	120	364	0	0	73	340	0	0	14	61	0	0	8	24	0	0	69	392	0	0	84	393	0	0	86	383	0	0
2115	111	409	0	0	131	343	0	0	16	51	0	0	7	25	0	0	114	349	0	0	127	372	0	0	121	361	0	0
2130	66	382	0	0	109	388	0	0	11	48	0	0	6	25	0	0	118	385	0	0	105	388	0	0	124	405	0	0
2145	64	361	0	0	70	383	0	0	12	53	0	0	9	30	0	0	73	374	0	0	69	385	0	0	77	408	0	0
2200	47	288	0	0	58	368	0	0	12	51	0	0	17	39	0	0	61	366	0	0	66	367	0	0	57	379	0	0
2215	25	202	0	0	48	285	0	0	14	49	0	0	5	37	0	0	43	295	0	0	42	282	0	0	44	302	0	0
2230	24	160	0	0	35	211	0	0	15	53	0	0	8	39	0	0	42	219	0	0	31	208	0	0	36	214	0	0
2245	43	139	0	0	26	167	0	0	15	56	0	0	11	41	0	0	27	173	0	0	27	166	0	0	31	168	0	0
2300	28	120	0	0	21	130	0	0	13	57	0	0	9	33	0	0	24	136	0	0	29	129	0	0	28	139	0	0
2315	28	123	0	0	25	107	0	0	16	59	0	0	6	34	0	0	26	119	0	0	35	122	0	0	30	125	0	0
2330	18	117	0	0	18	90	0	0	16	60	0	0	12	38	0	0	18	95	0	0	36	127	0	0	14	103	0	0
2345	22	96	0	0	32	96	0	0	15	60	0	0	14	41	0	0	21	89	0	0	24	124	0	0	15	87	0	0

BAYMETRICS TRAFFIC RESOURCES

Location 6B: Southgate Drive North of East Aevnue (SB - Outbounds)

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	SBL		SBR		SBL		SBR		SBL		SBR		SBL		SBR		SBL		SBR		SBL		SBR		SBL		SBR	
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	9	0	0	0	4	0	0	0	9	0	0	0	2	0	1	0	1	0	0	0	6	0	2	0	9	0
1215	3	0	8	0	2	0	5	0	1	0	6	0	0	0	3	0	2	0	2	0	0	0	3	0	1	0	1	0
1230	0	0	2	0	1	0	1	0	1	0	2	0	0	0	3	0	0	0	5	0	1	0	4	0	1	0	3	0
1245	0	3	2	21	1	4	0	10	0	2	1	18	1	1	2	10	0	3	1	9	0	1	1	14	0	4	1	14
100	0	3	2	14	0	4	2	8	0	2	2	11	0	1	0	8	0	2	1	9	0	1	1	9	0	2	2	7
115	0	0	1	7	0	2	6	9	0	1	2	7	1	2	0	5	0	0	4	11	0	1	1	7	0	1	0	6
130	0	0	0	5	3	4	3	11	1	1	1	6	1	3	0	2	1	1	3	9	0	0	0	3	1	1	5	8
145	0	0	1	4	1	4	3	14	0	1	1	6	0	2	0	0	0	1	0	8	0	0	0	2	0	1	1	8
200	0	0	1	3	1	5	1	13	0	1	1	5	0	2	2	2	0	1	1	8	0	0	0	1	0	1	1	7
215	1	1	1	3	0	5	0	7	0	1	0	3	0	1	0	2	0	1	0	4	1	1	4	4	0	1	1	8
230	1	2	0	3	1	3	1	5	0	0	1	3	0	0	3	5	0	0	0	1	0	1	1	5	0	0	3	6
245	0	2	1	3	0	2	0	2	0	0	2	4	0	0	1	6	0	0	0	1	0	1	0	5	0	0	1	6
300	2	4	4	6	2	3	5	6	1	1	3	6	0	0	0	4	0	0	0	0	0	1	5	10	0	0	5	10
315	0	3	0	5	0	3	1	7	0	1	2	8	1	1	2	6	0	0	1	1	3	3	0	6	3	3	2	11
330	0	2	9	14	1	3	3	9	0	1	1	8	0	1	1	4	0	0	1	2	1	4	4	9	1	4	2	10
345	1	3	4	17	1	4	0	9	1	2	0	6	0	1	0	3	0	0	0	2	0	4	3	12	1	5	1	10
400	0	1	1	14	1	3	4	8	0	1	0	3	0	1	0	3	1	1	1	3	0	4	0	7	0	5	2	7
415	0	1	2	16	1	4	2	9	0	1	0	1	0	0	0	1	1	2	4	6	0	1	1	8	1	3	3	8
430	0	1	4	11	1	4	1	7	1	2	4	4	0	0	0	0	0	2	2	7	0	0	9	13	0	2	2	8
445	0	0	0	7	0	3	1	8	0	1	0	4	0	0	1	1	1	3	4	11	2	2	1	11	0	1	1	8
500	1	1	4	10	1	3	4	8	0	1	2	6	0	0	0	1	0	2	1	11	0	2	2	13	2	3	4	10
515	2	3	3	11	1	3	2	8	3	4	4	10	0	0	1	2	1	2	2	9	1	3	4	16	0	2	0	7
530	3	6	1	8	0	2	0	7	0	3	2	8	0	0	1	3	3	5	3	10	1	4	2	9	0	2	1	6
545	-1	5	3	11	0	2	7	13	2	5	2	10	0	0	0	2	0	4	8	14	0	2	6	14	0	2	3	8
600	1	5	7	14	0	1	4	13	1	6	1	9	0	0	0	2	1	5	3	16	0	2	5	17	2	2	5	9
615	-1	2	4	15	2	2	4	15	0	3	1	6	0	0	0	1	2	6	1	15	3	4	6	19	1	3	5	14
630	3	2	16	30	5	7	12	27	1	4	8	12	1	1	10	10	3	6	4	16	0	3	7	24	2	5	6	19
645	1	4	3	30	5	12	6	26	2	4	10	20	1	2	10	20	7	13	8	16	2	5	10	28	4	9	8	24
700	4	7	6	29	5	17	5	27	1	4	3	22	0	2	4	24	7	19	8	21	10	15	6	29	2	9	3	22
715	4	12	11	36	7	22	8	31	0	4	3	24	1	3	3	27	6	23	8	28	6	18	7	30	4	12	12	29
730	5	14	9	29	4	21	4	23	0	3	1	17	0	2	2	19	2	22	5	29	4	22	16	39	6	16	14	37
745	7	20	16	42	7	23	9	26	0	1	6	13	0	1	3	12	10	25	12	33	8	28	12	41	4	16	9	38
800	5	21	20	56	5	23	12	33	3	3	5	15	3	4	3	11	4	22	11	36	1	19	14	49	8	22	16	51
815	0	17	13	58	8	24	16	41	5	8	7	19	0	3	6	14	9	25	20	48	4	17	21	63	13	31	19	58
830	4	16	13	62	7	27	15	52	2	10	8	26	1	4	2	14	5	28	16	59	3	16	15	62	6	31	8	52
845	5	14	8	54	8	28	6	49	0	10	4	24	1	5	8	19	3	21	13	60	3	11	14	64	2	29	12	55
900	16	25	22	56	8	31	17	54	0	7	7	26	0	2	3	19	4	21	11	60	0	10	17	67	5	26	13	52
915	3	28	8	51	5	28	10	48	1	3	4	23	2	4	3	16	5	17	9	49	2	8	18	64	2	15	17	50
930	10	34	7	45	7	28	8	41	1	2	4	19	2	5	3	17	6	18	12	45	6	11	14	63	1	10	11	53
945	5	34	15	52	10	30	15	50	6	8	6	21	2	6	6	15	8	23	6	38	10	18	7	56	6	14	12	53
1000	3	21	25	55	10	32	5	38	1	9	4	18	1	7	5	17	9	28	13	40	2	20	15	54	2	11	16	50
1015	6	24	13	60	9	36	13	41	4	12	11	25	0	5	0	14	2	25	16	47	5	23	9	45	6	15	13	46
1030	2	16	13	66	9	38	12	45	0	11	7	28	1	4	4	15	3	22	14	49	8	25	10	41	5	19	12	47
1045	4	15	8	59	8	36	13	43	1	6	5	27	-1	1	15	24	3	17	11	54	3	18	15	49	1	14	15	50
1100	5	17	18	52	14	40	19	57	4	9	10	33	0	0	5	24	3	11	8	49	9	25	24	58	6	18	13	53
1115	1	12	18	57	11	42	18	62	2	7	11	33	1	1	4	28	4	13	19	52	13	33	20	69	4	16	22	62
1130	11	21	40	84	6	39	38	88	2	9	6	32	2	2	7	31	11	21	31	69	8	33	39	98	6	17	23	73
1145	7	24	69	145	6	37	90	165	1	9	11	38	1	4	6	22	7	25	68	126	4	34	71	154	6	22	60	118

BAYMETRICS TRAFFIC RESOURCES

Location 7: Shipping Entrance North of East Aevnue (NB - Inbounds)

	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)				NB (IN)			
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
430	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
515	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
545	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0
600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	7	7	0	0	0	0
645	5	5	0	0	3	3	0	0	0	0	0	0	0	0	2	2	0	0	4	4	0	0	6	13	0	0	0	0
700	3	8	0	0	0	3	0	0	0	0	0	0	0	0	3	5	0	0	1	5	0	0	2	15	0	0	0	0
715	4	12	0	0	4	7	0	0	1	1	0	0	0	0	2	7	0	0	2	7	0	0	1	16	0	0	0	0
730	8	20	0	0	2	9	0	0	0	1	0	0	0	0	4	11	0	0	8	15	0	0	2	11	0	0	0	0
745	1	16	0	0	0	6	0	0	0	1	0	0	0	0	1	10	0	0	2	13	0	0	3	8	0	0	0	0
800	2	15	0	0	5	11	0	0	0	1	0	0	0	0	2	9	0	0	9	21	0	0	5	11	0	0	0	0
815	8	19	0	0	7	14	0	0	0	0	0	0	0	0	0	7	0	0	2	21	0	0	5	15	0	0	0	0
830	9	20	0	0	6	18	0	0	0	0	0	0	0	0	1	4	0	0	8	21	0	0	4	17	0	0	0	0
845	1	20	0	0	4	22	0	0	0	0	0	0	0	0	4	7	0	0	8	27	0	0	9	23	0	0	0	0
900	2	20	0	0	3	20	0	0	0	0	0	0	0	0	13	18	0	0	4	22	0	0	6	24	0	0	0	0
915	7	19	0	0	5	18	0	0	0	0	0	0	0	0	5	23	0	0	13	33	0	0	3	22	0	0	0	0
930	2	12	0	0	10	22	0	0	0	0	0	0	0	0	2	24	0	0	4	29	0	0	5	23	0	0	0	0
945	2	13	0	0	9	27	0	0	0	0	0	0	0	0	2	22	0	0	5	26	0	0	7	21	0	0	0	0
1000	6	17	0	0	8	32	0	0	0	0	0	0	0	0	3	12	0	0	5	27	0	0	8	23	0	0	0	0
1015	2	12	0	0	3	30	0	0	0	0	0	0	0	0	4	11	0	0	4	18	0	0	8	28	0	0	0	0
1030	3	13	0	0	1	21	0	0	0	0	0	0	0	0	2	11	0	0	4	18	0	0	3	26	0	0	0	0
1045	3	14	0	0	2	14	0	0	0	0	0	0	0	0	0	9	0	0	9	22	0	0	7	26	0	0	0	0
1100	2	10	0	0	5	11	0	0	0	0	0	0	0	0	5	11	0	0	3	20	0	0	6	24	0	0	0	0
1115	4	12	0	0	5	13	0	0	0	0	0	0	0	0	4	11	0	0	4	20	0	0	5	21	0	0	0	0
1130	4	13	0	0	10	22	0	0	0	0	0	0	0	0	3	12	0	0	4	20	0	0	0	18	0	0	0	0
1145	3	13	0	0	3	23	0	0	1	1	0	0	0	0	5	17	0	0	6	17	0	0	4	15	0	0	0	0

BAYMETRICS TRAFFIC RESOURCES

Location 7B: Shipping Entrance North of East Aevnue (SB - Outbounds)

	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1415	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1545	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	2	2	0	0	0	0	0	0	0	0	0	0
1715	0	0	0	2	0	0	0	0	0	0	0	0	0	0
1730	1	1	0	2	0	0	0	0	0	0	0	0	0	0
1745	0	1	1	3	0	0	0	0	0	0	0	0	0	0
1800	8	9	1	2	0	0	0	0	0	0	0	0	0	0
1815	2	11	0	2	0	0	0	0	0	0	0	0	0	0
1830	1	11	2	4	1	1	1	1	0	0	0	0	1	1
1845	1	12	1	4	0	1	0	1	0	0	0	0	0	1
1900	3	7	0	3	0	1	0	1	0	0	0	0	0	1
1915	1	6	0	3	2	3	1	2	0	0	0	0	0	1
1930	2	7	2	3	2	4	1	2	0	0	0	0	0	0
1945	1	7	1	3	7	11	0	2	0	0	0	0	0	0
2000	1	5	1	4	2	13	0	2	0	0	0	0	3	3
2015	6	10	0	4	1	12	2	3	0	0	0	0	1	4
2030	3	11	0	2	2	12	1	3	0	0	0	0	3	7
2045	1	11	1	2	7	12	0	3	0	0	0	0	3	7
2100	6	16	2	3	0	10	3	6	0	0	0	0	0	1
2115	2	12	2	5	3	12	2	6	0	0	0	0	1	11
2130	3	12	0	5	5	15	1	6	0	0	0	0	0	10
2145	6	17	0	4	0	8	0	6	0	0	0	0	2	9

BAYMETRICS TRAFFIC RESOURCES

Location 7B: Shipping Entrance North of East Avenue (SB - Outbounds)

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday													
	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL	SBR	SBL												
1200	2	13	2	4	2	10	1	4	0	0	0	0	3	10	0	2	6	11	1	2	4	7	0	4		
1215	3	14	1	3	5	12	2	4	0	0	0	0	2	12	1	3	5	15	2	4	5	11	1	4		
1230	1	12	0	3	5	12	1	4	0	0	0	0	3	11	0	2	2	16	2	6	6	17	2	4		
1245	5	11	2	5	9	21	2	6	0	0	0	0	6	14	0	1	7	20	2	7	3	18	1	4		
1300	2	11	3	6	9	28	3	8	0	0	0	0	7	18	0	1	5	19	0	6	1	15	1	5		
1315	3	11	1	6	4	27	2	8	2	2	0	0	0	16	0	0	3	17	0	4	2	12	2	6		
1330	5	15	2	8	6	28	2	9	0	2	0	0	4	17	0	0	3	18	1	3	3	9	0	4		
1345	5	15	1	7	5	24	1	8	0	2	0	0	0	11	1	1	3	14	2	3	4	10	2	5		
1400	3	16	1	5	3	18	1	6	0	2	0	0	1	5	1	2	2	11	1	4	6	15	0	4		
1415	6	19	1	5	5	19	2	6	0	0	0	0	3	8	2	4	2	10	1	5	3	16	1	3		
1430	7	21	2	5	2	15	1	5	0	0	0	0	7	11	1	5	7	14	4	8	6	19	3	6		
1445	4	20	0	4	4	14	2	6	0	0	0	0	3	14	0	4	3	14	1	7	6	21	4	8		
1500	2	19	2	5	10	21	0	5	0	0	0	0	1	14	0	3	2	14	1	7	3	18	0	8		
1515	2	15	0	4	3	19	0	3	0	0	0	0	4	15	2	3	1	13	1	7	0	15	2	9		
1530	3	11	1	3	5	22	1	3	0	0	0	0	3	11	1	3	1	7	1	4	5	14	0	6		
1545	2	9	1	4	4	22	0	1	0	0	0	0	2	10	1	4	8	12	1	4	3	11	0	2		
1600	4	11	0	2	3	15	0	1	0	0	0	0	0	9	2	6	5	15	0	3	2	10	2	4		
1615	3	12	0	2	4	16	0	1	0	0	0	0	3	8	0	4	4	18	2	4	1	11	0	2		
1630	3	12	1	2	4	15	2	2	0	0	0	0	1	6	1	4	1	18	1	4	10	16	2	4		
1645	0	10	0	1	2	13	3	5	0	0	0	0	2	6	0	3	7	17	1	4	2	15	3	7		
1700	0	6	0	1	0	10	0	5	0	0	0	0	1	1	1	1	5	11	0	1	1	13	0	4		
1715	0	3	0	1	1	7	0	5	0	0	0	0	0	1	0	1	0	8	0	1	1	10	0	2		
1730	0	0	0	0	2	5	0	3	0	0	0	0	0	1	0	1	6	13	2	2	8	17	0	1		
1745	0	0	0	0	1	4	1	1	0	0	0	0	0	1	0	1	6	17	1	3	2	12	0	0		
1800	0	0	0	0	0	4	0	1	0	0	0	0	5	17	1	4	5	16	1	1	3	21	2	4		
1815	0	0	0	0	0	3	0	1	0	0	0	0	1	18	0	4	6	21	2	3	1	17	2	6		
1830	0	0	0	0	0	1	0	1	0	0	0	0	4	16	2	4	1	14	1	4	2	14	0	6		
1845	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	3	1	13	0	4	2	8	1	5		
1900	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	2	0	8	0	3	1	6	1	4		
1915	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	2	0	1	1	6	0	2		
1930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	2		
1945	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1		
2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		
2015	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2045	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2330	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2345	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TOTAL	113	N/A	37	N/A	130	N/A	39	N/A	2	N/A	0	N/A	3	N/A	1	N/A	101	N/A	23	N/A	120	N/A	32	N/A	124	N/A
AM	12		4		11		2		0		0		1		0		3		1		0		0		0	
NOON	21		8		28		9		2		0		18		5		20		8		21		8		8	
PM	19		5		22		5		0		0		18		6		21		7		22		9		9	
EVEN	0		0		0		0		0		0		0		0		0		0		1		0		0	

BAYMETRICS TRAFFIC RESOURCES

Location 8: Southbound Onto Driveway East To Sandia Lab

TIME	12/6/2001 Thursday				12/7/2001 Friday				12/8/2001 Saturday				12/9/2001 Sunday				12/10/2001 Monday				12/11/2001 Tuesday				12/12/2001 Wednesday			
	SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)		SB (IN)			
	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1315	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1330	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1345	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
200	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
215	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
245	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	
300	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	
315	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	
330	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	
345	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	
415	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
430	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
445	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
500	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
515	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
530	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
545	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	
600	5	5	0	0	0	0	0	2	0	0	0	0	0	0	6	6	0	0	3	5	0	0	7	7	0	0	0	
615	12	17	0	0	10	10	0	0	3	5	0	0	0	0	7	13	0	0	6	11	0	0	10	17	0	0	0	
630	8	25	0	0	11	21	0	0	0	4	0	0	0	0	14	27	0	0	25	36	0	0	21	38	0	0	0	
645	23	48	0	0	17	38	0	0	0	3	0	0	0	0	23	50	0	0	15	49	0	0	24	62	0	0	0	
700	37	80	0	0	27	65	0	0	0	3	0	0	0	0	37	81	0	0	54	100	0	0	41	96	0	0	0	
715	46	114	0	0	37	92	0	0	0	0	0	0	0	0	38	112	0	0	46	140	0	0	33	119	0	0	0	
730	35	141	0	0	30	111	0	0	0	0	0	0	0	0	44	142	0	0	40	155	0	0	41	139	0	0	0	
745	32	150	0	0	31	125	0	0	0	0	0	0	2	2	0	0	38	157	0	0	35	175	0	0	19	134	0	0
800	32	145	0	0	27	125	0	0	0	0	0	0	-1	1	0	0	44	164	0	0	38	159	0	0	39	132	0	0
815	24	123	0	0	23	111	0	0	2	2	0	0	0	1	0	0	25	151	0	0	34	147	0	0	28	127	0	0
830	15	103	0	0	22	103	0	0	0	2	0	0	0	1	0	0	24	131	0	0	13	120	0	0	27	113	0	0
845	18	89	0	0	17	89	0	0	0	2	0	0	0	-1	0	0	24	117	0	0	19	104	0	0	10	104	0	0
900	24	81	0	0	22	84	0	0	0	2	0	0	2	2	0	0	26	99	0	0	14	80	0	0	26	91	0	0
915	11	68	0	0	22	83	0	0	0	0	0	0	0	2	0	0	9	83	0	0	14	60	0	0	13	76	0	0
930	22	75	0	0	20	81	0	0	0	0	0	0	0	2	0	0	10	69	0	0	17	64	0	0	16	65	0	0
945	17	74	0	0	12	76	0	0	0	0	0	0	0	2	0	0	8	53	0	0	16	61	0	0	17	72	0	0
1000	16	66	0	0	13	67	0	0	1	1	0	0	3	3	0	0	12	39	0	0	12	59	0	0	10	56	0	0
1015	17	72	0	0	8	53	0	0	0	1	0	0	0	3	0	0	10	40	0	0	14	59	0	0	11	54	0	0
1030	10	60	0	0	13	46	0	0	2	3	0	0	0	3	0	0	10	40	0	0	3	45	0	0	7	45	0	0
1045	15	58	0	0	16	50	0	0	0	3	0	0	0	3	0	0	11	43	0	0	12	41	0	0	9	37	0	0
1100	13	55	0	0	14	51	0	0	0	2	0	0	2	2	0	0	10	41	0	0	10	39	0	0	5	32	0	0
1115	9	47	0	0	12	55	0	0	1	3	0	0	0	2	0	0	6	37	0	0	6	31	0	0	4	25	0	0
1130	13	50	0	0	11	53	0	0	0	1	0	0	0	2	0	0	8	35	0	0	5	33	0	0	7	25	0	0
1145	10	45	0	0	10	47	0	0	0	1	0	0	2	4	0	0	8	32	0	0	12	33	0	0	11	27	0	0

BAYMETRICS TRAFFIC RESOURCES

Location 8b: Northbound Onto East Street From Sandia Lab

	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR
TIME	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	1	1	0	0	0	0	0	0
115	0	0	0	0	0	0	0	1	0	0	0	0	0	0
130	0	0	0	0	0	0	0	1	0	0	0	0	0	0
145	0	0	0	0	0	0	0	1	0	0	0	0	0	0
200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
245	4	4	1	1	0	0	0	0	0	0	1	1	0	0
300	0	4	0	1	0	0	0	0	0	0	0	1	0	0
315	0	4	0	1	0	0	0	0	0	0	0	1	0	0
330	0	4	0	1	0	0	0	0	0	0	0	1	0	0
345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	0	0	0	0	0	0	0	0	0	0	0	0	0	0
415	0	0	0	0	0	0	0	0	0	0	0	0	0	0
430	1	1	0	0	0	0	0	0	0	0	0	0	0	0
445	0	1	0	0	0	0	0	0	0	0	0	0	0	0
500	0	1	0	0	0	0	0	0	0	0	0	0	0	0
515	0	1	0	0	0	0	0	0	0	0	0	0	0	0
530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
545	0	0	0	0	0	0	0	0	1	1	0	0	7	7
600	0	0	7	7	5	5	3	3	0	0	0	1	3	3
615	1	1	2	9	2	7	5	8	0	0	2	2	4	7
630	1	2	0	9	0	7	3	11	0	0	0	2	4	6
645	3	5	9	18	5	12	2	13	0	0	0	2	1	1
700	4	9	0	11	10	17	4	14	0	0	0	2	6	18
715	7	15	5	14	0	15	5	14	0	0	0	1	7	24
730	6	20	4	18	0	15	6	17	0	0	0	0	1	21
745	2	19	8	17	6	16	3	18	0	0	0	0	4	18
800	7	22	2	19	3	9	2	16	1	1	2	2	3	15
815	10	25	0	14	2	11	2	13	0	1	5	7	0	2
830	6	25	5	15	5	16	3	10	0	1	0	7	4	7
845	3	26	7	14	5	15	7	14	0	1	0	7	0	2
900	3	22	3	15	1	13	6	18	0	0	0	5	6	18
915	1	13	0	15	7	18	1	17	0	0	0	0	0	4
930	9	16	3	13	9	22	5	19	0	0	0	0	9	30
945	5	18	7	13	7	24	4	16	0	0	0	0	16	44
1000	6	21	0	10	4	27	0	10	4	4	1	1	7	45
1015	3	23	9	19	5	25	7	16	0	0	0	4	4	36
1030	2	16	2	18	2	18	0	11	0	0	2	6	5	32
1045	3	14	7	18	2	13	5	12	0	0	2	8	1	2
1100	4	12	7	25	0	9	6	18	0	0	0	4	0	1
1115	14	23	6	22	20	24	6	17	0	0	2	6	0	1
1130	26	47	1	21	10	32	3	20	0	0	0	4	0	1
1145	29	73	11	25	20	50	2	17	0	0	0	2	3	3

BAYMETRICS TRAFFIC RESOURCES

Location 8b: Northbound Onto East Street From Sandia Lab

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday															
	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR	NBL	NBR														
1200	12 81	11 29	11 61	6 17	2 2	0 2	2 5	1 7	10 47	2 16	18 59	3 14	10 53	0 11														
1215	11 78	2 25	9 50	3 14	0 2	0 0	0 5	0 7	8 47	4 19	5 51	3 16	7 56	3 12														
1230	8 60	2 26	10 50	4 15	0 2	0 0	0 5	0 1	6 43	5 19	3 48	2 16	6 41	4 12														
1245	6 37	0 15	5 35	4 17	0 2	0 0	1 3	0 1	12 36	2 13	9 35	0 8	5 28	5 12														
1300	5 30	6 10	5 29	2 13	0 0	2 2	0 1	0 0	9 35	2 13	7 24	1 6	5 23	0 12														
1315	7 26	3 11	2 22	4 14	1 1	0 2	0 1	0 0	5 32	6 15	1 20	0 3	4 20	2 11														
1330	4 22	9 18	2 14	6 16	0 1	0 2	0 1	0 0	2 28	0 10	0 17	5 6	3 17	3 10														
1345	0 16	7 25	11 20	2 14	0 1	2 4	0 0	0 0	8 24	2 10	9 17	9 15	2 14	8 13														
1400	8 19	3 22	5 20	0 12	0 1	0 2	1 1	0 0	4 19	0 8	5 15	5 19	5 14	2 15														
1415	3 15	2 21	7 25	4 12	0 0	0 0	3 4	0 0	4 18	4 6	10 24	3 22	0 10	7 20														
1430	6 17	3 15	5 28	9 15	0 0	0 2	0 4	0 0	0 16	6 12	9 33	2 19	7 14	9 26														
1445	4 21	11 19	0 17	12 25	0 0	8 8	2 6	0 0	2 10	8 18	5 29	2 12	6 18	9 27														
1500	8 21	6 22	4 16	6 31	0 0	0 8	3 8	0 0	2 8	4 22	4 28	4 11	6 19	2 27														
1515	7 25	9 29	8 17	10 37	1 1	0 8	0 5	0 0	6 10	5 23	7 25	2 10	0 19	8 28														
1530	3 22	18 44	10 22	12 40	5 6	0 8	3 8	0 0	1 11	10 27	5 21	8 16	5 17	11 30														
1545	0 18	7 40	2 24	21 49	2 8	0 0	0 6	0 0	3 12	15 34	4 20	15 29	6 17	14 35														
1600	3 13	10 44	1 21	27 70	2 10	0 0	3 6	0 0	4 14	16 46	6 22	13 38	1 12	10 43														
1615	8 14	18 53	9 22	18 78	0 9	0 0	0 6	0 0	6 14	19 60	17 32	10 46	12 24	8 43														
1630	11 22	19 54	8 20	13 79	1 5	0 0	0 3	0 0	8 21	26 76	5 32	22 60	9 28	14 46														
1645	3 25	30 77	8 26	8 66	3 6	0 0	2 5	1 1	10 28	41 102	3 31	37 82	4 26	36 68														
1700	4 26	16 83	7 32	8 47	0 4	1 1	0 2	0 1	4 28	20 106	2 27	15 84	15 40	17 75														
1715	4 22	10 75	2 25	10 39	0 4	2 3	0 2	0 1	9 31	16 103	3 13	26 100	12 40	15 82														
1730	3 14	15 71	13 30	7 33	1 4	0 3	0 2	0 1	9 32	10 87	8 16	17 95	17 48	4 72														
1745	2 13	13 54	8 30	2 27	0 1	0 3	0 0	2 2	2 24	18 64	14 27	15 73	6 50	10 46														
1800	6 15	8 46	8 31	9 28	0 1	0 2	1 1	0 2	7 27	9 53	8 33	7 65	9 44	2 31														
1815	3 14	0 36	14 43	3 21	0 1	0 0	2 3	0 2	10 28	10 47	7 37	10 49	11 43	2 18														
1830	9 20	6 27	8 38	5 19	0 0	0 0	0 3	0 2	5 24	5 42	9 38	6 38	2 28	3 17														
1845	6 24	7 21	2 32	6 23	0 0	0 0	0 3	0 0	1 23	6 30	1 25	8 31	8 30	8 15														
1900	7 25	5 18	6 30	5 19	2 2	0 0	0 2	2 2	2 18	3 24	8 25	2 26	9 30	9 22														
1915	2 24	4 22	0 16	6 22	0 2	1 1	0 0	0 2	2 10	2 16	4 22	5 21	7 26	2 22														
1930	1 16	0 16	2 10	4 21	0 2	0 1	3 3	0 2	2 7	2 13	2 15	11 26	3 27	2 21														
1945	2 12	0 9	0 8	0 15	0 2	5 6	0 3	0 2	0 6	2 9	2 16	10 28	5 24	0 13														
2000	4 9	3 7	0 2	2 12	0 0	0 6	2 5	2 2	0 4	2 8	1 9	0 26	3 18	0 4														
2015	0 7	2 5	3 5	3 9	0 0	2 7	0 5	0 2	0 2	3 9	0 5	1 22	3 14	2 4														
2030	0 6	0 5	0 3	0 5	0 0	0 7	0 2	0 2	1 1	2 9	0 3	0 11	0 11	2 4														
2045	1 5	1 6	0 3	0 5	0 0	1 3	0 2	0 2	0 1	0 7	0 1	0 1	6 12	0 4														
2100	0 1	0 3	1 4	0 3	0 0	0 3	0 0	0 0	2 3	0 5	0 0	2 3	1 10	0 4														
2115	1 2	1 2	1 2	0 0	0 0	0 1	0 0	2 2	0 3	0 2	0 0	5 7	0 7	0 2														
2130	0 2	0 2	0 2	0 0	0 0	0 1	0 0	0 2	3 5	0 0	1 1	4 11	0 7	0 0														
2145	0 1	0 1	0 2	0 0	0 0	0 0	3 3	0 2	0 5	0 0	0 1	2 13	0 1	4 4														
2200	0 1	0 1	0 1	0 0	0 0	0 0	0 3	0 2	1 4	2 2	0 1	0 11	1 1	6 10														
2215	0 0	0 0	0 0	0 0	0 0	0 0	0 3	0 0	0 4	2 4	0 1	0 6	0 1	3 13														
2230	0 0	0 0	0 0	0 0	1 1	0 0	0 3	1 1	0 1	0 4	0 0	0 2	0 1	0 13														
2245	0 0	0 0	0 0	0 0	0 1	0 0	1 1	0 1	0 1	0 4	1 1	0 0	0 1	0 9														
2300	0 0	0 0	1 1	0 0	0 1	0 0	0 1	0 1	0 0	0 2	0 1	2 2	0 0	0 3														
2315	0 0	0 0	0 1	0 0	0 1	0 0	0 1	0 1	0 0	0 0	0 1	1 3	0 0	0 0														
2330	1 1	1 1	0 1	0 0	0 0	0 0	0 1	0 0	0 0	0 0	1 2	0 3	0 0	0 0														
2345	0 1	0 1	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 3	1 1	0 0														
TOTAL	333	N/A	374	N/A	328	N/A	331	N/A	23	N/A	43	N/A	40	N/A	25	N/A	320	N/A	407	N/A	330	N/A	395	N/A	346	N/A	343	N/A
AM	26	19	24	19	1	7	2	7	44	29	21	23	25	26														
NOON	81	29	61	25	2	8	6	7	47	20	59	22	56	27														
PM	26	83	43	79	10	8	8	2	32	106	38	100	50	82														
EVEN	9	7	5	12	1	7	5	2	5	9	9	26	18	13														

BAYMETRICS TRAFFIC RESOURCES

Location 11: East Avenue West of Greenville Road

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
1200	3	0	1	0	1	0	4	0	3	0	1	0	2	0
1215	5	0	1	0	2	0	0	0	2	0	0	0	1	0
1230	2	0	2	0	3	0	3	0	3	0	0	0	3	0
1245	2	12	1	5	2	8	2	9	2	10	0	1	1	7
1300	0	9	1	5	1	8	0	2	3	8	0	0	2	7
1315	2	6	1	5	0	6	0	1	1	9	0	2	0	6
1330	0	4	2	5	4	7	0	0	1	7	1	1	3	6
1345	2	4	1	5	0	5	0	0	1	2	0	5	0	5
1400	1	5	0	4	1	5	0	0	0	2	1	3	0	3
1415	4	7	0	3	0	5	0	0	1	2	0	3	0	5
1430	1	8	1	2	1	2	1	1	0	1	0	2	1	1
1445	0	6	2	3	1	3	0	1	2	3	1	2	0	1
1500	2	7	0	3	0	2	4	5	1	4	0	1	2	3
1515	2	5	2	5	4	6	1	6	1	4	7	8	1	4
1530	2	6	2	6	0	5	6	11	1	5	0	8	3	6
1545	1	7	1	5	1	5	4	15	0	3	3	10	1	7
1600	1	6	6	11	3	8	7	18	1	3	2	12	2	7
1615	2	6	5	14	1	5	3	20	3	5	2	7	1	7
1630	2	6	9	21	0	5	11	25	1	5	0	7	3	7
1645	0	5	11	31	0	4	14	35	3	8	2	6	4	10
1700	0	4	16	41	1	2	14	42	1	8	6	10	2	10
1715	2	4	20	56	3	4	19	58	3	8	7	15	1	10
1730	3	5	18	65	1	5	35	82	4	11	13	28	1	8
1745	2	7	30	84	2	7	21	89	1	9	18	44	0	4
1800	6	13	28	96	2	8	22	97	2	10	17	55	11	13
1815	5	16	46	122	9	14	47	125	0	7	10	58	7	19
1830	15	28	63	167	9	22	40	130	2	5	5	50	12	30
1845	14	40	83	220	16	36	55	164	4	8	11	43	23	53
1900	12	46	70	262	14	48	66	208	0	6	5	31	16	58
1915	14	55	82	298	10	49	62	223	2	8	7	28	6	57
1930	22	62	75	310	13	53	54	237	3	9	7	30	17	62
1945	16	64	77	304	11	48	70	252	2	7	7	26	8	47
2000	15	67	68	302	9	43	82	268	6	13	9	30	13	44
2015	14	67	62	282	6	39	53	259	7	18	6	29	15	53
2030	12	57	49	256	15	41	43	248	7	22	4	26	11	47
2045	17	58	45	224	10	40	49	227	5	25	5	24	17	56
2100	19	62	31	187	12	43	25	170	7	26	7	22	14	57
2115	11	59	23	148	8	45	26	143	6	25	4	20	13	55
2130	13	60	13	112	22	52	14	114	8	26	4	20	11	55
2145	10	53	15	82	15	57	22	87	6	27	3	18	13	51
2200	23	57	18	69	10	55	17	79	9	29	3	14	11	48
2215	16	62	27	73	17	64	12	65	12	35	4	14	17	52
2230	13	62	5	65	10	52	14	65	6	33	3	13	10	51
2245	12	64	13	63	15	52	16	59	9	36	7	17	16	54
2300	14	55	9	54	25	67	15	57	9	36	3	17	16	59
2315	13	52	21	48	22	72	22	67	7	31	2	15	20	62
2330	21	60	20	63	23	85	25	78	7	32	9	21	22	74
2345	16	64	27	77	21	91	24	86	10	33	8	22	14	72

BAYMETRICS TRAFFIC RESOURCES

Location 11: East Avenue West of Greenville Road

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	24	74	22	90	21	87	30	101	8	32	9	28	7	25
1215	20	81	24	93	23	88	29	108	9	34	1	27	7	23
1230	15	75	15	88	21	86	29	112	10	37	4	22	9	28
1245	19	78	20	81	23	88	27	115	9	36	4	18	8	31
1300	24	78	17	76	20	87	31	116	6	34	9	18	5	29
1315	18	76	15	67	26	90	26	113	9	34	3	20	3	25
1330	23	84	21	73	30	99	24	108	17	41	8	24	10	26
1345	15	80	14	67	34	110	13	94	13	45	5	25	6	24
1400	24	80	19	69	27	117	12	75	16	55	4	20	9	28
1415	28	90	18	72	28	119	13	62	23	69	8	25	4	29
1430	25	92	15	66	33	122	14	52	22	74	9	26	6	25
1445	29	106	13	65	25	113	14	53	11	72	6	27	10	29
1500	23	105	20	66	39	125	10	51	10	66	8	31	5	25
1515	41	118	19	67	49	146	16	54	12	55	6	29	11	32
1530	44	137	16	68	60	173	8	48	11	44	6	26	11	37
1545	52	160	12	67	61	209	23	57	9	42	10	30	6	33
1600	70	207	20	67	70	240	15	62	11	43	2	24	7	35
1615	84	250	12	60	64	255	16	62	2	33	5	23	10	34
1630	75	281	18	62	65	260	19	73	13	35	9	26	10	33
1645	83	312	16	66	68	267	20	70	8	34	9	25	7	34
1700	68	310	22	68	65	262	19	74	6	29	3	26	9	36
1715	64	290	16	72	52	250	18	76	5	32	0	21	9	35
1730	52	267	23	77	44	229	16	73	5	24	7	19	5	30
1745	48	232	19	80	51	212	17	70	4	20	2	12	5	28
1800	52	216	8	66	44	191	13	64	7	21	4	13	7	26
1815	43	195	6	56	34	173	5	51	8	24	5	18	2	19
1830	33	176	1	34	27	156	0	35	10	29	0	11	8	22
1845	27	155	4	19	21	126	0	18	7	32	1	10	7	24
1900	15	118	0	11	21	103	3	8	2	27	1	7	6	23
1915	24	99	4	9	13	82	2	5	4	23	2	4	3	24
1930	22	88	1	9	13	68	1	6	6	19	1	5	5	21
1945	14	75	2	7	8	55	0	6	3	15	4	8	3	17
2000	14	74	0	7	10	44	4	7	3	16	2	9	0	11
2015	13	63	4	7	9	40	5	10	6	18	1	8	4	12
2030	4	45	1	7	6	33	0	9	1	13	1	8	2	9
2045	8	39	1	6	10	35	3	12	3	13	3	7	5	11
2100	4	29	2	8	5	30	3	11	3	13	1	6	4	15
2115	7	23	3	7	3	24	2	8	2	9	3	8	1	12
2130	7	26	4	10	3	21	5	13	3	11	2	9	3	13
2145	1	19	2	11	4	15	5	15	6	14	3	9	1	9
2200	5	20	1	10	3	13	3	15	2	13	3	11	2	7
2215	2	15	4	11	3	13	7	20	1	12	1	9	1	7
2230	7	15	0	7	2	12	4	19	5	14	5	12	4	8
2245	2	16	1	6	5	13	1	15	1	9	10	19	2	9
2300	3	14	1	6	3	13	2	14	0	7	2	18	0	7
2315	1	13	2	4	4	14	0	7	0	6	0	17	2	8
2330	3	9	0	4	4	16	2	5	2	3	1	13	0	4
2345	2	9	1	4	4	15	3	7	1	3	2	5	1	3
TOTAL	1,665	N/A	1,582	N/A	1,614	N/A	1,550	N/A	508	N/A	416	N/A	359	N/A
AM	67		310		57		268		27		58		22	
NOON	106		93		122		116		74		28		31	
PM	312		80		267		76		66		31		37	
EVEN	74		11		44		20		18		19		15	

BAYMETRICS TRAFFIC RESOURCES

Location 12: NB LT & SB RT Onto Eastgate From Greenville

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	NBL	SBR	NBL	SBR	NBL	SBR	NBL	SBR	NBL	SBR	NBL	SBR	NBL	SBR
	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	7	39	23	71	10	34	20	45	0	2	0	0	0	2
1215	17	48	30	88	12	33	43	74	0	2	0	0	0	1
1230	10	47	41	115	10	37	36	107	1	3	0	0	0	1
1245	14	48	22	116	16	48	22	121	0	1	0	0	1	1
1300	22	63	20	113	22	60	28	129	0	1	0	0	0	1
1315	20	66	18	101	36	84	9	95	0	1	0	0	0	1
1330	13	69	10	70	28	102	1	60	0	0	0	0	0	1
1345	9	64	6	54	13	99	22	60	1	1	0	0	1	1
1400	9	51	8	42	8	85	20	52	0	1	0	0	0	1
1415	9	40	11	35	11	60	14	57	0	1	0	0	0	1
1430	7	34	16	41	18	50	3	59	1	2	0	0	1	2
1445	7	32	4	39	11	48	14	51	0	1	0	0	0	1
1500	13	36	7	38	7	47	7	38	0	1	3	3	0	1
1515	6	33	14	41	13	49	10	34	1	2	0	3	0	1
1530	6	32	12	37	11	42	11	42	0	1	0	3	0	0
1545	4	29	11	44	7	38	5	33	0	1	0	3	1	1
1600	7	23	8	45	4	35	9	35	0	1	2	2	0	1
1615	5	22	10	41	1	23	8	33	1	1	0	2	0	1
1630	7	23	8	37	10	22	0	22	1	2	0	2	0	1
1645	3	22	8	34	7	22	4	21	0	2	0	2	0	0
1700	2	17	10	36	3	21	4	16	1	3	0	0	2	2
1715	8	20	2	28	3	23	2	10	0	2	0	0	0	2
1730	2	15	5	25	2	15	7	17	0	1	1	1	1	3
1745	3	15	6	23	6	14	0	13	0	1	0	1	0	3
1800	0	13	0	13	1	12	0	9	0	0	0	1	0	1
1815	0	5	3	14	2	11	0	7	0	0	0	1	1	2
1830	1	4	0	9	0	9	0	0	0	0	0	1	0	0
1845	2	3	1	4	1	4	0	0	0	0	0	1	0	0
1900	1	4	3	7	2	5	0	0	0	0	0	1	0	0
1915	1	5	0	4	0	3	0	0	1	1	0	0	0	0
1930	0	4	0	4	1	4	0	0	0	1	0	0	0	0
1945	2	4	0	3	1	4	0	0	1	2	0	0	0	0
2000	0	3	0	0	0	2	0	0	1	3	0	0	0	0
2015	0	2	2	2	0	2	2	2	0	2	0	0	0	0
2030	0	2	0	2	0	1	0	2	0	2	0	0	0	2
2045	0	0	0	2	0	0	2	4	0	1	0	0	0	0
2100	0	0	0	2	0	0	1	5	0	0	0	0	0	0
2115	1	1	0	0	1	1	2	5	1	1	0	0	1	1
2130	0	1	0	0	0	1	2	7	0	1	0	0	0	1
2145	0	1	0	0	1	2	0	5	0	1	0	0	1	2
2200	1	2	0	0	1	3	0	4	0	1	3	3	0	2
2215	0	1	0	0	0	2	0	2	0	0	0	3	0	1
2230	0	1	0	0	1	3	0	0	0	0	0	3	0	1
2245	0	1	0	0	0	2	0	0	0	0	0	3	0	0
2300	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2315	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2330	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2345	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	646	N/A	2,505	N/A	636	N/A	2,543	N/A	32	N/A	21	N/A	19	N/A
AM	133		751		122		791		2		9		5	
NOON	69		116		102		129		10		2		2	
PM	36		45		49		42		3		3		3	
EVEN	3		2		3		7		3		3		2	

BAYMETRICS TRAFFIC RESOURCES

Location 13: WBLT & WBR On Eastgate From Greenville

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	WBLT	WBR	WBLT	WBR	WBLT	WBR	WBLT	WBR	WBLT	WBR	WBLT	WBR	WBLT	WBR
	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1330	0	0	0	0	1	1	0	0	0	0	0	0	0	0
1345	0	0	0	0	0	1	0	0	0	0	0	0	0	0
1400	0	0	0	0	0	1	0	0	0	0	0	0	0	0
1415	0	0	0	0	0	1	0	0	0	0	0	0	0	0
1430	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1545	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	10	10	0	0	6	6	0	0	0	0	14	14	0	0
1715	58	68	0	0	51	57	0	0	0	0	42	56	0	0
1730	97	165	0	0	80	137	0	0	0	0	82	138	3	3
1745	116	281	0	0	111	248	0	0	0	0	117	255	0	3
1800	150	421	1	1	152	394	0	0	0	0	177	418	2	5
1815	207	570	23	24	218	561	15	15	0	0	208	584	6	11
1830	195	668	9	33	179	660	25	40	0	0	184	686	51	59
1845	134	686	0	33	139	688	12	52	0	0	130	699	6	65
1900	171	707	0	32	134	670	9	61	0	0	167	689	5	68
1915	193	693	0	9	190	642	9	55	0	0	187	668	3	65
1930	248	746	0	0	241	704	25	55	0	0	221	705	0	14
1945	221	833	2	2	230	795	14	57	1	1	223	798	10	18
2000	134	796	0	2	124	785	8	56	0	1	145	776	0	13
2015	107	710	0	2	102	697	6	53	0	1	99	688	0	10
2030	73	535	0	2	73	529	2	30	0	1	64	531	1	11
2045	55	369	0	0	45	344	0	16	0	0	56	364	0	1
2100	44	279	0	0	48	268	0	8	1	1	40	259	0	1
2115	28	200	0	0	44	210	0	2	0	1	49	209	1	2
2130	26	153	0	0	40	177	0	0	0	1	34	179	0	1
2145	28	126	0	0	21	153	0	0	0	1	35	158	1	2
2200	21	103	0	0	30	135	0	0	3	3	32	150	0	2
2215	23	98	0	0	27	118	0	0	0	3	34	135	0	1
2230	28	100	0	0	23	101	0	0	0	3	26	127	0	1
2245	18	90	2	2	26	106	0	0	0	3	28	120	0	0
2300	22	91	0	2	25	101	0	0	0	0	21	109	3	3
2315	21	89	0	2	27	101	0	0	0	0	23	98	0	3
2330	19	80	0	2	16	94	0	0	0	0	34	106	0	3
2345	30	92	0	0	13	81	0	0	0	0	31	109	0	3

BAYMETRICS TRAFFIC RESOURCES

Location 16: Northbound Right-Turn On Vasco South of Westgate

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	NBR		NBR		NBR		NBR		NBR		NBR		NBR	
	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN	15 MIN	60 MIN
1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0
200	0	0	0	0	0	0	0	0	0	0	0	0	0	0
215	0	0	0	0	0	0	0	0	0	0	0	0	0	0
230	0	0	0	0	0	0	0	0	0	0	0	0	0	0
245	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300	0	0	0	0	0	0	0	0	0	0	0	0	0	0
315	0	0	0	0	0	0	1	1	0	0	0	0	0	0
330	0	0	0	0	0	0	0	1	0	0	0	0	0	0
345	1	1	0	0	0	0	0	1	0	0	0	0	0	0
400	0	1	0	0	0	0	0	1	0	0	0	0	0	0
415	0	1	0	0	0	0	0	0	0	0	0	0	0	0
430	0	1	0	0	0	0	0	0	0	0	0	0	0	0
445	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0	0	0	0
515	0	0	0	0	0	0	0	0	0	0	0	0	0	0
530	0	0	0	0	0	0	0	0	0	0	0	0	0	0
545	1	1	0	0	0	0	0	0	0	0	0	1	1	0
600	0	1	0	0	0	0	0	0	0	0	0	0	1	0
615	3	4	0	0	0	0	0	0	0	0	0	0	1	2
630	6	10	0	0	5	5	0	0	0	0	0	0	6	8
645	25	34	0	0	23	28	0	0	0	0	0	0	22	29
700	48	82	0	0	50	78	0	0	1	1	0	0	43	72
715	49	128	0	0	39	117	0	0	0	1	0	0	64	135
730	65	187	0	0	48	160	0	0	0	1	0	0	56	185
745	64	226	0	0	60	197	0	0	0	1	0	0	59	222
800	82	260	0	0	76	223	0	0	0	0	0	0	84	233
815	72	283	0	0	87	271	0	0	0	0	0	0	77	262
830	63	281	0	0	54	277	0	0	1	1	0	0	62	281
845	71	288	0	0	67	284	0	0	1	2	0	0	79	302
900	49	255	0	0	41	249	0	0	0	2	0	0	50	268
915	36	219	0	0	44	206	0	0	0	2	0	0	38	229
930	38	194	0	0	32	184	0	0	0	1	0	0	21	188
945	20	143	0	0	16	133	0	0	0	0	0	0	27	136
1000	8	102	0	0	15	107	0	0	0	0	0	0	19	105
1015	15	81	0	0	14	77	0	0	0	0	0	0	16	83
1030	15	58	0	0	17	62	0	0	0	0	0	0	9	71
1045	8	46	0	0	8	54	0	0	0	0	0	0	10	54
1100	8	46	0	0	14	53	0	0	0	0	0	0	15	50
1115	9	40	0	0	8	47	0	0	0	0	0	0	9	43
1130	12	37	0	0	12	42	0	0	0	0	0	0	19	53
1145	10	39	0	0	14	48	0	0	0	0	0	0	20	63

BAYMETRICS TRAFFIC RESOURCES

Location 17: Westgate Drive East of Vasco Road

TIME	12/6/2001 Thursday		12/7/2001 Friday		12/8/2001 Saturday		12/9/2001 Sunday		12/10/2001 Monday		12/11/2001 Tuesday		12/12/2001 Wednesday	
	EB (IN)	WB (OUT)	EB (IN)	WB (OUT)	EB (IN)	WB (OUT)	EB (IN)	WB (OUT)	EB (IN)	WB (OUT)	EB (IN)	WB (OUT)	EB (IN)	WB (OUT)
1200	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
1215	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
1230	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
1245	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
100	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1 1	1 1	0 0	0 0
115	0 0	0 0	1 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 1	0 0	0 0
130	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1 2	1 2	0 0	0 0
145	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 2	0 2	0 0	0 0
200	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 1	0 0	0 0
215	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 1	0 0	0 0
230	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
245	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
300	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
315	0 0	0 0	0 0	0 0	1 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
330	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
345	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
400	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
415	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
430	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0
445	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1 1	1 1
500	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1 1	0 0	0 0	0 1	0 1
515	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 1	0 1
530	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 1	0 1
545	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1	0 0	0 0	0 0	0 0
600	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	1 1	1 1	0 0	0 0	1 1	0 0
615	0 0	2 2	2 2	0 0	0 0	0 0	0 0	0 0	2 3	3 4	7 7	3 3	4 5	0 0
630	8 8	3 5	3 5	2 2	0 0	0 0	2 2	1 1	17 20	6 10	15 22	9 12	17 22	3 3
645	65 73	4 9	48 53	6 8	0 0	0 0	0 2	1 2	89 109	8 18	95 117	9 21	78 100	7 10
700	144 217	9 18	143 196	13 21	1 1	0 0	1 3	0 2	150 258	10 27	149 266	10 31	170 269	13 23
715	174 391	4 20	145 339	8 29	2 3	0 0	0 3	0 2	158 414	4 28	188 447	11 39	142 407	5 28
730	177 560	7 24	170 506	14 41	0 3	0 0	0 1	1 2	156 553	5 27	168 600	5 35	171 561	5 30
745	210 705	5 25	178 636	15 50	0 3	0 0	1 2	0 1	192 656	11 30	194 699	10 36	233 716	10 33
800	250 811	7 23	226 719	23 60	2 4	0 0	0 1	0 1	283 789	13 33	294 844	13 39	287 833	16 36
815	286 923	10 29	280 854	11 63	0 2	0 0	0 1	0 1	250 881	15 44	302 958	14 42	272 963	17 48
830	256 1002	20 42	211 895	13 62	2 4	0 0	0 1	0 0	223 948	18 57	263 1053	16 53	247 1039	22 65
845	223 1015	14 51	220 937	18 65	1 5	1 1	0 0	0 0	209 965	18 64	220 1079	17 60	214 1020	19 74
900	200 965	10 54	160 871	22 64	0 3	1 2	0 0	0 0	168 850	15 66	179 964	18 65	193 926	22 80
915	133 812	16 60	145 736	23 76	0 3	0 2	0 0	0 0	145 745	22 73	126 788	18 69	143 797	19 82
930	140 696	25 65	137 662	17 80	1 2	0 2	0 0	0 0	100 622	27 82	115 640	19 72	106 656	22 82
945	73 546	13 64	97 539	35 97	2 3	0 1	0 0	0 0	88 501	15 79	95 515	21 76	82 524	20 83
1000	75 421	15 69	75 454	29 104	0 3	0 0	0 0	0 0	67 400	22 86	42 378	35 93	70 401	21 82
1015	48 336	34 87	61 370	18 99	0 3	2 2	0 0	0 0	70 325	14 78	52 304	22 97	59 317	33 96
1030	48 244	22 84	51 284	25 107	0 2	1 3	0 0	0 0	48 273	20 71	59 248	19 97	42 253	27 101
1045	30 201	21 92	38 225	27 99	0 0	0 3	0 0	0 0	46 231	42 98	50 203	29 105	34 205	31 112
1100	22 148	38 115	36 186	35 105	0 0	0 3	0 0	0 0	58 222	29 105	60 221	40 110	50 185	36 127
1115	40 140	53 134	30 155	53 140	0 0	0 1	0 0	0 0	34 186	39 130	42 211	61 149	32 158	73 167
1130	41 133	64 176	33 137	97 212	1 1	1 1	0 0	0 0	46 184	83 193	41 193	92 222	38 154	107 247
1145	21 124	150 305	45 144	188 373	0 1	1 2	0 0	0 0	54 192	157 308	36 179	159 352	43 163	174 390

B. INTERSECTION TRAFFIC COUNTS

- East Avenue and Vasco Road
- East Avenue and Greenville Road

December 6, 2001

BAYMETRICS TRAFFIC RESOURCES

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: 12/6/2001				DAY: THURSDAY			
N-S Approach: VASCO				SURVEY TIME: 7:00 AM				TO 9:00 AM			
E-W Approach: EAST				CITY: LIVERMORE				FILE: VCEALVAM			

PEAK HOUR
07:30 AM TO 08:30 AM

TOTAL
1,996

VASCO

ARRIVAL / DEPARTURE VOLUMES

PHF= 0.90

801 500

PHF= 0.77

371 144

625 846

PHF= 0.88

279 426

PHF= 0.90

TIME PERIOD			NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA															
07:00 AM	---	07:15 AM	3	43	28	54	42	34	52	63	7	4	15	7	352
07:15 AM	---	07:30 AM	8	94	64	123	95	75	109	133	13	9	28	15	766
07:30 AM	---	07:45 AM	18	157	109	208	155	131	169	218	23	13	49	25	1,275
07:45 AM	---	08:00 AM	27	211	159	302	210	204	239	311	37	20	71	34	1,825
08:00 AM	---	08:15 AM	41	261	201	384	257	266	301	396	49	25	87	48	2,316
08:15 AM	---	08:30 AM	48	303	241	459	311	324	359	466	55	30	110	56	2,762
08:30 AM	---	08:45 AM	53	334	278	539	359	375	416	548	60	34	130	70	3,196
08:45 AM	---	09:00 AM	56	360	312	612	399	429	470	615	64	40	154	87	3,598
TOTAL BY PERIOD															
07:00 AM	---	07:15 AM	3	43	28	54	42	34	52	63	7	4	15	7	352
07:15 AM	---	07:30 AM	5	51	36	69	53	41	57	70	6	5	13	8	414
07:30 AM	---	07:45 AM	10	63	45	85	60	56	60	85	10	4	21	10	509
07:45 AM	---	08:00 AM	9	54	50	94	55	73	70	93	14	7	22	9	550
08:00 AM	---	08:15 AM	14	50	42	82	47	62	62	85	12	5	16	14	491
08:15 AM	---	08:30 AM	7	42	40	75	54	58	58	70	6	5	23	8	446
08:30 AM	---	08:45 AM	5	31	37	80	48	51	57	82	5	4	20	14	434
08:45 AM	---	09:00 AM	3	26	34	73	40	54	54	67	4	6	24	17	402
HOURLY TOTALS															
07:00 AM	---	08:00 AM	27	211	159	302	210	204	239	311	37	20	71	34	1,825
07:15 AM	---	08:15 AM	38	218	173	330	215	232	249	333	42	21	72	41	1,964
07:30 AM	---	08:30 AM	40	209	177	336	216	249	250	333	42	21	82	41	1,996
07:45 AM	---	08:45 AM	35	177	169	331	204	244	247	330	37	21	81	45	1,921
08:00 AM	---	09:00 AM	29	149	153	310	189	225	231	304	27	20	83	53	1,773

Contra Costa County: (510) 232-1271
SF/Peninsula: (415) 750-1317
Alameda County: (510) 233-2292

BAYMETRICS TRAFFIC RESOURCES

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: 12/6/2001				DAY: THURSDAY			
N-S Approach: VASCO				SURVEY TIME: 4:00 PM				TO 6:00 PM			
E-W Approach: EAST				CITY: LIVERMORE				FILE: VCEALVPM			

PEAK HOUR
04:45 PM TO 05:45 PM

TOTAL
2,814

Vasco

ARRIVAL / DEPARTURE VOLUMES

PHF = 0.93

PHF = 0.97

PHF = 0.96

PHF = 0.97

TIME PERIOD			NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA															
04:00 PM	---	04:15 PM	4	56	8	10	45	63	50	33	8	40	129	90	536
04:15 PM	---	04:30 PM	7	107	18	18	86	133	111	73	18	73	260	191	1,095
04:30 PM	---	04:45 PM	11	170	25	32	139	216	166	118	27	124	415	303	1,746
04:45 PM	---	05:00 PM	16	245	35	40	207	328	236	154	33	188	590	399	2,471
05:00 PM	---	05:15 PM	20	327	42	47	284	431	294	204	40	242	750	519	3,200
05:15 PM	---	05:30 PM	25	401	50	53	354	523	361	247	48	304	894	632	3,892
05:30 PM	---	05:45 PM	30	481	55	60	418	607	416	296	54	362	1,047	734	4,560
05:45 PM	---	06:00 PM	33	556	63	68	488	697	476	338	60	415	1,188	825	5,207
TOTAL BY PERIOD															
04:00 PM	---	04:15 PM	4	56	8	10	45	63	50	33	8	40	129	90	536
04:15 PM	---	04:30 PM	3	51	10	8	41	70	61	40	10	33	131	101	559
04:30 PM	---	04:45 PM	4	63	7	14	53	83	55	45	9	51	155	112	651
04:45 PM	---	05:00 PM	5	75	10	8	68	112	70	36	6	64	175	96	725
05:00 PM	---	05:15 PM	4	82	7	7	77	103	58	50	7	54	160	120	729
05:15 PM	---	05:30 PM	5	74	8	6	70	92	67	43	8	62	144	113	692
05:30 PM	---	05:45 PM	5	80	5	7	64	84	55	49	6	58	153	102	668
05:45 PM	---	06:00 PM	3	75	8	8	70	90	60	42	6	53	141	91	647
HOURLY TOTALS															
04:00 PM	---	05:00 PM	16	245	35	40	207	328	236	154	33	188	590	399	2,471
04:15 PM	---	05:15 PM	16	271	34	37	239	368	244	171	32	202	621	429	2,664
04:30 PM	---	05:30 PM	18	294	32	35	268	390	250	174	30	231	634	441	2,797
04:45 PM	---	05:45 PM	19	311	30	28	279	391	250	178	27	238	632	431	2,814
05:00 PM	---	06:00 PM	17	311	28	28	281	369	240	184	27	227	598	426	2,736

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BAYMETRICS TRAFFIC RESOURCES

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS			SURVEY DATE: 12/6/2001			DAY: THURSDAY		
N-S Approach: GREENVILLE			SURVEY TIME: 7:00 AM			TO 9:00 AM		
E-W Approach: EAST			CITY: LIVERMORE			FILE: GVEALVAM		

PEAK HOUR
07:15 AM TO 08:15 AM

TOTAL
671

GREENVILLE

ARRIVAL / DEPARTURE VOLUMES

PHF= 0.48

394 183

PHF= ERR

321 67

PHF= 0.84

167 210

PHF= 0.92

TIME PERIOD		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
		From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left		Thru
SURVEY DATA															
07:00 AM	---	07:15 AM	11	26	0	0	35	50	8	0	2	0	0	0	132
07:15 AM	---	07:30 AM	26	56	0	0	75	112	18	0	5	0	0	0	292
07:30 AM	---	07:45 AM	46	90	0	0	109	171	33	0	10	0	0	0	459
07:45 AM	---	08:00 AM	68	122	0	0	150	227	42	0	18	0	0	0	627
08:00 AM	---	08:15 AM	85	162	0	0	182	297	55	0	22	0	0	0	803
08:15 AM	---	08:30 AM	94	195	0	0	210	350	65	0	26	0	0	0	940
08:30 AM	---	08:45 AM	100	224	0	0	243	402	73	0	30	0	0	0	1,072
08:45 AM	---	09:00 AM	105	258	0	0	271	450	84	0	35	0	0	0	1,203
TOTAL BY PERIOD															
07:00 AM	---	07:15 AM	11	26	0	0	35	50	8	0	2	0	0	0	132
07:15 AM	---	07:30 AM	15	30	0	0	40	62	10	0	3	0	0	0	160
07:30 AM	---	07:45 AM	20	34	0	0	34	59	15	0	5	0	0	0	167
07:45 AM	---	08:00 AM	22	32	0	0	41	56	9	0	8	0	0	0	168
08:00 AM	---	08:15 AM	17	40	0	0	32	70	13	0	4	0	0	0	176
08:15 AM	---	08:30 AM	9	33	0	0	28	53	10	0	4	0	0	0	137
08:30 AM	---	08:45 AM	6	29	0	0	33	52	8	0	4	0	0	0	132
08:45 AM	---	09:00 AM	5	34	0	0	28	48	11	0	5	0	0	0	131
HOURLY TOTALS															
07:00 AM	---	08:00 AM	68	122	0	0	150	227	42	0	18	0	0	0	627
07:15 AM	---	08:15 AM	74	136	0	0	147	247	47	0	20	0	0	0	671
07:30 AM	---	08:30 AM	68	139	0	0	135	238	47	0	21	0	0	0	648
07:45 AM	---	08:45 AM	54	134	0	0	134	231	40	0	20	0	0	0	613
08:00 AM	---	09:00 AM	37	136	0	0	121	223	42	0	17	0	0	0	576

Contra Costa County: (510) 232-1271
SF/Peninsula: (415) 750-1317
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BAYMETRICS TRAFFIC RESOURCES

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: 12/6/2001		DAY: THURSDAY	
N-S Approach: GREENVILLE		SURVEY TIME: 4:00 PM		TO 6:00 PM	
E-W Approach: EAST		CITY: LIVERMORE		FILE: GVEALVPM	

PEAK HOUR
04:15 PM TO 05:15 PM

TOTAL
746

GREENVILLE

ARRIVAL/DEPARTURE VOLUMES

PHF= 0.32

249 439

PHF= ERR

86 302 0 0

PHF= 0.91

221 195

PHF= 0.89

TIME PERIOD		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
		From	To	Left Thru Right	Left Thru Right	Left Thru Right	Left Thru Right	Left Thru Right							
SURVEY DATA															
04:00 PM	---	04:15 PM	1	34	0	0	32	17	61	0	7	0	0	0	152
04:15 PM	---	04:30 PM	4	79	0	0	77	37	133	0	18	0	0	0	348
04:30 PM	---	04:45 PM	7	131	0	0	127	52	192	0	32	0	0	0	541
04:45 PM	---	05:00 PM	9	179	0	0	170	74	258	0	46	0	0	0	736
05:00 PM	---	05:15 PM	11	219	0	0	205	93	315	0	55	0	0	0	898
05:15 PM	---	05:30 PM	14	265	0	0	243	109	363	0	65	0	0	0	1,059
05:30 PM	---	05:45 PM	16	303	0	0	273	127	404	0	72	0	0	0	1,195
05:45 PM	---	06:00 PM	20	345	0	0	310	141	446	0	76	0	0	0	1,338
TOTAL BY PERIOD															
04:00 PM	---	04:15 PM	1	34	0	0	32	17	61	0	7	0	0	0	152
04:15 PM	---	04:30 PM	3	45	0	0	45	20	72	0	11	0	0	0	196
04:30 PM	---	04:45 PM	3	52	0	0	50	15	59	0	14	0	0	0	193
04:45 PM	---	05:00 PM	2	48	0	0	43	22	66	0	14	0	0	0	195
05:00 PM	---	05:15 PM	2	40	0	0	35	19	57	0	9	0	0	0	162
05:15 PM	---	05:30 PM	3	46	0	0	38	16	48	0	10	0	0	0	161
05:30 PM	---	05:45 PM	2	38	0	0	30	18	41	0	7	0	0	0	136
05:45 PM	---	06:00 PM	4	42	0	0	37	14	42	0	4	0	0	0	143
HOURLY TOTALS															
04:00 PM	---	05:00 PM	9	179	0	0	170	74	258	0	46	0	0	0	736
04:15 PM	---	05:15 PM	10	185	0	0	173	76	254	0	48	0	0	0	746
04:30 PM	---	05:30 PM	10	186	0	0	166	72	230	0	47	0	0	0	711
04:45 PM	---	05:45 PM	9	172	0	0	146	75	212	0	40	0	0	0	654
05:00 PM	---	06:00 PM	11	166	0	0	140	67	188	0	30	0	0	0	602

Contra Costa County: (510) 232-1271
SF/Peninsula: (415) 750-1317
Alameda County: (510) 233-2292

C. TRUCK COUNTS

Truck Counts
Locations 7 and 8

Thursday, December 6, 2001

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS			SURVEY DATE: DECEMBER 6, 2002			DAY: THURSDAY								
N-S Approach: DRIVEWAY 7			SURVEY TIME: 7:00 AM TO 5:00 PM			WEATHER: SUNNY								
E-W Approach: EAST AVENUE			JURISDICTION: LIVERMORE			FILENAME: EA07LVT								
PEAK HOUR: 07:00 AM TO 08:00 AM														
TOTAL VEHICLES			1 0 3			ARRIVAL / DEPARTURE VOLUMES								
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	2	0	0	3	39	0	0	76	0	120
07:15 AM	07:30 AM	0	0	0	2	0	0	7	82	0	0	143	0	234
07:30 AM	07:45 AM	0	0	0	2	0	1	15	120	0	0	214	0	352
07:45 AM	08:00 AM	0	0	0	3	0	1	16	143	0	0	267	0	430
08:00 AM	08:15 AM	0	0	0	4	0	9	17	175	0	0	323	1	529
08:15 AM	08:30 AM	0	0	0	4	0	11	25	206	0	0	375	1	622
08:30 AM	08:45 AM	0	0	0	6	0	12	34	221	0	0	419	1	693
08:45 AM	09:00 AM	0	0	0	7	0	13	34	241	0	0	445	2	742
09:00 AM	09:15 AM	0	0	0	7	0	16	35	273	0	0	463	3	797
09:15 AM	09:30 AM	0	0	0	7	0	17	41	292	0	0	474	4	835
09:30 AM	09:45 AM	0	0	0	9	0	19	41	315	0	0	489	6	879
09:45 AM	10:00 AM	0	0	0	10	0	20	43	338	0	0	509	6	926
10:00 AM	10:15 AM	0	0	0	11	0	21	47	365	0	0	528	8	980
10:15 AM	10:30 AM	0	0	0	11	0	27	48	386	0	0	541	9	1,022
10:30 AM	10:45 AM	0	0	0	11	0	30	50	399	0	0	548	10	1,048
10:45 AM	11:00 AM	0	0	0	12	0	31	50	415	0	0	556	13	1,077
11:00 AM	11:15 AM	0	0	0	14	0	37	52	428	0	0	574	13	1,118
11:15 AM	11:30 AM	0	0	0	16	0	39	54	444	0	0	603	15	1,171
11:30 AM	11:45 AM	0	0	0	16	0	42	57	466	0	0	650	16	1,247
11:45 AM	12:00 PM	0	0	0	16	0	48	57	479	0	0	699	19	1,318
12:00 PM	12:15 PM	0	0	0	18	0	50	60	493	0	0	729	19	1,369
12:15 PM	12:30 PM	0	0	0	19	0	53	62	513	0	0	754	22	1,423
12:30 PM	12:45 PM	0	0	0	19	0	54	63	529	0	0	772	23	1,460
12:45 PM	01:00 PM	0	0	0	21	0	59	68	553	0	0	787	25	1,513
01:00 PM	01:15 PM	0	0	0	24	0	61	79	580	0	0	802	25	1,571
01:15 PM	01:30 PM	0	0	0	25</									

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:		LAWRENCE LIVERMORE LAB TIS						SURVEY DATE: DECEMBER 6, 2002						DAY: THURSDAY	
N-S Approach:		DRIVEWAY 7						SURVEY TIME: 7:00 AM TO 5:00 PM						WEATHER: SUNNY	
E-W Approach:		EAST AVENUE						JURISDICTION: LIVERMORE						FILENAME: EA07LVT	
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES	
TOTAL BY PERIOD															
07:00 AM	07:15 AM	0	0	0	2	0	0	3	39	0	0	76	0	724	
07:15 AM	07:30 AM	0	0	0	0	0	0	4	43	0	0	67	0	114	
07:30 AM	07:45 AM	0	0	0	0	0	1	8	38	0	0	71	0	118	
07:45 AM	08:00 AM	0	0	0	1	0	0	1	23	0	0	53	0	78	
08:00 AM	08:15 AM	0	0	0	1	0	0	1	32	0	0	56	1	99	
08:15 AM	08:30 AM	0	0	0	0	0	2	8	31	0	0	52	0	93	
08:30 AM	08:45 AM	0	0	0	2	0	1	9	15	0	0	44	0	71	
08:45 AM	09:00 AM	0	0	0	1	0	1	0	20	0	0	26	1	49	
09:00 AM	09:15 AM	0	0	0	0	0	3	1	32	0	0	18	1	55	
09:15 AM	09:30 AM	0	0	0	0	0	1	6	19	0	0	11	1	38	
09:30 AM	09:45 AM	0	0	0	2	0	2	0	23	0	0	15	2	44	
09:45 AM	10:00 AM	0	0	0	1	0	1	2	23	0	0	20	0	47	
10:00 AM	10:15 AM	0	0	0	1	0	1	4	27	0	0	19	2	54	
10:15 AM	10:30 AM	0	0	0	0	0	6	1	21	0	0	13	1	42	
10:30 AM	10:45 AM	0	0	0	0	0	3	2	13	0	0	7	1	26	
10:45 AM	11:00 AM	0	0	0	1	0	1	0	16	0	0	8	3	29	
11:00 AM	11:15 AM	0	0	0	2	0	0	2	13	0	0	18	0	41	
11:15 AM	11:30 AM	0	0	0	2	0	2	2	16	0	0	29	2	53	
11:30 AM	11:45 AM	0	0	0	0	0	3	3	22	0	0	47	1	76	
11:45 AM	12:00 PM	0	0	0	0	0	6	0	13	0	0	49	3	71	
12:00 PM	12:15 PM	0	0	0	2	0	2	3	15	0	0	30	0	51	
12:15 PM	12:30 PM	0	0	0	1	0	3	2	20	0	0	25	3	54	
12:30 PM	12:45 PM	0	0	0	0	0	1	1	16	0	0	18	1	37	
12:45 PM	01:00 PM	0	0	0	2	0	5	5	24	0	0	13	2	53	
01:00 PM	01:15 PM	0	0	0	3	0	2	11	27	0	0	15	0	58	
01:15 PM	01:30 PM	0	0	0	1	0	3	1	23	0	0	17	4	49	
01:30 PM	01:45 PM	0	0	0	2	0	5	3	22	0	0	15	1	48	
01:45 PM	02:00 PM	0	0	0	1	0	5	2	15	0	0	13	0	41	
02:00 PM	02:15 PM	0	0	0	1	0	3	6	19	0	0	20	1	50	
02:15 PM	02:30 PM	0	0	0	1	0	6	4	33	0	0	13	1	58	
02:30 PM	02:45 PM	0	0	0	2	0	7	5	28	0	0	16	0	58	
02:45 PM	03:00 PM	0	0	0	0	0	4	5	19	0	0	15	0	43	
03:00 PM	03:15 PM	0	0	0	2	0	2	0	18	0	0	27	1	50	
03:15 PM	03:30 PM	0	0	0	0	0	2	1	33	0	0	21	1	58	
03:30 PM	03:45 PM	0	0	0	1	0	3	1	28	0	0	16	1	50	
03:45 PM	04:00 PM	0	0	0	1	0	2	2	47	0	0	14	0	65	
04:00 PM	04:15 PM	0	0	0	0	0	4	0	62	0	0	11	1	78	
04:15 PM	04:30 PM	0	0	0	0	0	3	0	68	0	0	22	0	93	
04:30 PM	04:45 PM	0	0	0	1	0	3	0	65	0	0	25	0	94	
04:45 PM	05:00 PM	0	0	0	0	0	0	0	56	0	0	23	0	79	
HOURLY TOTALS															
07:00 AM	08:00 AM	0	0	0	3	0	1	16	143	0	0	267	0	430	
07:15 AM	08:15 AM	0	0	0	2	0	9	14	136	0	0	247	1	409	
07:30 AM	08:30 AM	0	0	0	2	0	11	18	124	0	0	232	1	380	
07:45 AM	08:45 AM	0	0	0	4	0	11	19	101	0	0	205	1	341	
08:00 AM	09:00 AM	0	0	0	4	0	12	18	98	0	0	178	2	312	
08:15 AM	09:15 AM	0	0	0	3	0	7	18	98	0	0	140	2	268	
08:30 AM	09:30 AM	0	0	0	3	0	6	16	86	0	0	99	3	213	
08:45 AM	09:45 AM	0	0	0	3	0	7	7	94	0	0	70	5	186	
09:00 AM	10:00 AM	0	0	0	3	0	7	9	97	0	0	64	4	184	
09:15 AM	10:15 AM	0	0	0	4	0	5	12	92	0	0	63	5	183	
09:30 AM	10:30 AM	0	0	0	4	0	10	7	94	0	0	67	5	187	
09:45 AM	10:45 AM	0	0	0	2	0	11	9	84	0	0	59	4	169	
10:00 AM	11:00 AM	0	0	0	2	0	11	7	77	0	0	47	7	151	
10:15 AM	11:15 AM	0	0	0	3	0	16	5	63	0	0	46	5	138	
10:30 AM	11:30 AM	0	0	0	5	0	12	6	58	0	0	42	6	148	
10:45 AM	11:45 AM	0	0	0	5	0	12	7	67	0	0	102	6	199	
11:00 AM	12:00 PM	0	0	0	4	0	17	7	64	0	0	143	6	241	
11:15 AM	12:15 PM	0	0	0	4	0	13	8	65	0	0	155	6	251	
11:30 AM	12:30 PM	0	0	0	3	0	14	8	60	0	0	151	7	253	
11:45 AM	12:45 PM	0	0	0	3	0	12	6	63	0	0	122	7	213	
12:00 PM	01:00 PM	0	0	0	5	0	11	11	74	0	0	88	6	195	
12:15 PM	01:15 PM	0	0	0	6	0	11	19	87	0	0	73	6	262	
12:30 PM	01:30 PM	0	0	0	6	0	11	18	90	0	0	65	7	197	
12:45 PM	01:45 PM	0	0	0	8	0	15	20	96	0	0	62	7	208	
01:00 PM	02:00 PM	0	0	0	7	0	15	22	87	0	0	60	5	196	
01:15 PM	02:15 PM	0	0	0	5	0	16	17	79	0	0	65	6	188	
01:30 PM	02:30 PM	0	0	0	5	0	19	20	89	0	0	61	3	197	
01:45 PM	02:45 PM	0	0	0	5	0	21	25	95	0	0	62	2	207	
02:00 PM	03:00 PM	0	0	0	4	0	20	20	99	0	0	64	2	209	
02:15 PM	03:15 PM	0	0	0	5	0	19	14	98	0	0	71	2	209	
02:30 PM	03:30 PM	0	0	0	4	0	15	11	98	0	0	79	2	209	
02:45 PM	03:45 PM	0	0	0	3	0	11	7	98	0	0	79	3	201	
03:00 PM	04:00 PM	0	0	0	4	0	9	4	126	0	0	78	3	224	
03:15 PM	04:15 PM	0	0	0	2	0	11	4	170	0	0	62	3	252	
03:30 PM	04:30 PM	0	0	0	2	0	12	3	205	0	0	63	2	287	
03:45 PM	04:45 PM	0	0	0	2	0	12	2	242	0	0	72	1	331	
04:00 PM	05:00 PM	0	0	0	1	0	10	0	251	0	0	81	1	344	
SF/PENINSULA: (415) 750-1317 ALAMEDA: (510) 233-2292 CONTRA COSTA: (510) 232-1271															

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 6, 2002				DAY: THURSDAY						
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY						
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV A						
PEAK HOUR: 07:00 AM TO 08:00 AM														
AUTO ONLY				103				ARRIVAL / DEPARTURE VOLUMES
NORTH
EAST AVENUE				000				DRIVEWAY 7						
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	2	0	0	2	39	0	0	76	0	119
07:15 AM	07:30 AM	0	0	0	2	0	0	6	82	0	0	142	0	232
07:30 AM	07:45 AM	0	0	0	2	0	1	14	120	0	0	213	0	350
07:45 AM	08:00 AM	0	0	0	3	0	1	15	141	0	0	264	0	424
08:00 AM	08:15 AM	0	0	0	4	0	7	16	173	0	0	319	1	520
08:15 AM	08:30 AM	0	0	0	4	0	9	24	201	0	0	371	1	610
08:30 AM	08:45 AM	0	0	0	5	0	10	32	215	0	0	413	1	676
08:45 AM	09:00 AM	0	0	0	6	0	10	32	235	0	0	439	1	723
09:00 AM	09:15 AM	0	0	0	6	0	13	32	262	0	0	455	2	770
09:15 AM	09:30 AM	0	0	0	6	0	14	38	279	0	0	462	3	802
09:30 AM	09:45 AM	0	0	0	8	0	15	38	296	0	0	475	5	837
09:45 AM	10:00 AM	0	0	0	8	0	15	38	318	0	0	493	5	877
10:00 AM	10:15 AM	0	0	0	9	0	16	42	343	0	0	511	6	927
10:15 AM	10:30 AM	0	0	0	9	0	22	43	360	0	0	521	6	961
10:30 AM	10:45 AM	0	0	0	9	0	23	43	366	0	0	526	7	974
10:45 AM	11:00 AM	0	0	0	10	0	24	43	380	0	0	532	10	999
11:00 AM	11:15 AM	0	0	0	12	0	28	44	387	0	0	550	10	1,031
11:15 AM	11:30 AM	0	0	0	13	0	28	44	398	0	0	578	11	1,072
11:30 AM	11:45 AM	0	0	0	13	0	30	44	410	0	0	621	12	1,130
11:45 AM	12:00 PM	0	0	0	13	0	35	44	420	0	0	665	15	1,192
12:00 PM	12:15 PM	0	0	0	15	0	35	45	425	0	0	691	15	1,226
12:15 PM	12:30 PM	0	0	0	15	0	36	45	440	0	0	715	17	1,268
12:30 PM	12:45 PM	0	0	0	15	0	36	45	454	0	0	728	18	1,296
12:45 PM	01:00 PM	0	0	0	17	0	39	48	478	0	0	743	19	1,344
01:00 PM	01:15 PM	0	0	0	19	0	39	57	503	0	0	752	19	1,389
01:15 PM	01:30 PM	0	0	0	20	0	39	57	523	0	0	765	23	1,427
01:30 PM	01:45 PM	0	0	0	21	0	43	60	540	0	0	778	23	1,465
01:45 PM	02:00 PM	0	0	0	22	0	47	66	552	0	0	787	23	1,497
02:00 PM	02:15 PM	0	0	0	23	0	49	71	569	0	0	804	24	1,540
02:15 PM	02:30 PM	0	0	0	23	0	55	75	601	0	0	815	24	1,593
02:30 PM	02:45 PM	0	0	0	25	0	61	79	625	0	0	828	24	1,642
02:45 PM	03:00 PM	0	0	0	25	0	65	84	642	0	0	842	24	1,682
03:00 PM	03:15 PM	0	0	0	27	0	67	84	655	0	0	868	25	1,726
03:15 PM	03:30 PM	0	0	0	27	0	68	85	687	0	0	887	25	1,779
03:30 PM	03:45 PM	0	0	0	28	0	71	86	714	0	0	901	26	1,826
03:45 PM	04:00 PM	0	0	0	29	0	73	88	759	0	0	913	26	1,888
04:00 PM	04:15 PM	0	0	0	29	0	77	88	820	0	0	922	27	1,963
04:15 PM	04:30 PM	0	0	0	29	0	80	88	886	0	0	944	27	2,054
04:30 PM	04:45 PM	0	0	0	30	0	83	88	948	0	0	967	27	2,143
04:45 PM	05:00 PM	0	0	0	30	0	83	88	1,003	0	0	990	27	2,221
SF/PENINSULA: (415) 750-1317					ALAMEDA: (510) 233-2292					CONTRA COSTA: (510) 232-1271				

Baymetrics Traffic Resources INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:		LAWRENCE LIVERMORE LAB TIS					SURVEY DATE: DECEMBER 6, 2002					DAY: THURSDAY				
N-S Approach:		DRIVEWAY 7					SURVEY TIME: 7:00 AM TO 5:00 PM					WEATHER: SUNNY				
E-W Approach:		EAST AVENUE					JURISDICTION: LIVERMORE					FILENAME: EA07LV A				
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL		
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES		
TOTAL BY PERIOD																
07:00 AM	07:15 AM	0	0	0	2	0	0	2	39	0	0	76	0	119		
07:15 AM	07:30 AM	0	0	0	0	0	0	4	43	0	0	66	0	113		
07:30 AM	07:45 AM	0	0	0	0	0	1	8	38	0	0	71	0	118		
07:45 AM	08:00 AM	0	0	0	1	0	0	1	21	0	0	51	0	74		
08:00 AM	08:15 AM	0	0	0	1	0	6	1	32	0	0	55	1	96		
08:15 AM	08:30 AM	0	0	0	0	0	2	8	28	0	0	52	0	90		
08:30 AM	08:45 AM	0	0	0	1	0	1	8	14	0	0	42	0	66		
08:45 AM	09:00 AM	0	0	0	1	0	0	0	20	0	0	26	0	47		
09:00 AM	09:15 AM	0	0	0	0	0	3	0	27	0	0	16	1	47		
09:15 AM	09:30 AM	0	0	0	0	0	1	6	17	0	0	7	1	32		
09:30 AM	09:45 AM	0	0	0	2	0	1	0	17	0	0	13	2	35		
09:45 AM	10:00 AM	0	0	0	0	0	0	0	22	0	0	18	0	40		
10:00 AM	10:15 AM	0	0	0	1	0	1	4	25	0	0	18	1	50		
10:15 AM	10:30 AM	0	0	0	0	0	6	1	17	0	0	10	0	34		
10:30 AM	10:45 AM	0	0	0	0	0	1	0	6	0	0	5	1	13		
10:45 AM	11:00 AM	0	0	0	1	0	1	0	14	0	0	6	3	25		
11:00 AM	11:15 AM	0	0	0	2	0	4	1	7	0	0	18	0	32		
11:15 AM	11:30 AM	0	0	0	1	0	0	0	11	0	0	28	1	41		
11:30 AM	11:45 AM	0	0	0	0	0	2	0	12	0	0	43	1	58		
11:45 AM	12:00 PM	0	0	0	0	0	5	0	10	0	0	44	2	62		
12:00 PM	12:15 PM	0	0	0	2	0	0	1	5	0	0	26	0	34		
12:15 PM	12:30 PM	0	0	0	0	0	1	0	15	0	0	24	2	42		
12:30 PM	12:45 PM	0	0	0	0	0	0	0	14	0	0	13	1	28		
12:45 PM	01:00 PM	0	0	0	2	0	3	3	24	0	0	15	1	48		
01:00 PM	01:15 PM	0	0	0	2	0	0	9	25	0	0	9	0	43		
01:15 PM	01:30 PM	0	0	0	1	0	0	0	20	0	0	13	0	38		
01:30 PM	01:45 PM	0	0	0	1	0	4	3	17	0	0	13	0	38		
01:45 PM	02:00 PM	0	0	0	1	0	4	6	12	0	0	9	0	32		
02:00 PM	02:15 PM	0	0	0	1	0	2	5	17	0	0	17	1	43		
02:15 PM	02:30 PM	0	0	0	0	0	6	4	32	0	0	11	0	53		
02:30 PM	02:45 PM	0	0	0	2	0	6	4	24	0	0	13	0	49		
02:45 PM	03:00 PM	0	0	0	0	0	4	5	17	0	0	14	0	40		
03:00 PM	03:15 PM	0	0	0	2	0	2	0	13	0	0	26	1	44		
03:15 PM	03:30 PM	0	0	0	0	0	1	1	32	0	0	19	0	53		
03:30 PM	03:45 PM	0	0	0	1	0	3	1	27	0	0	14	1	47		
03:45 PM	04:00 PM	0	0	0	1	0	2	2	45	0	0	12	0	62		
04:00 PM	04:15 PM	0	0	0	0	0	4	0	61	0	0	9	1	75		
04:15 PM	04:30 PM	0	0	0	0	0	3	0	66	0	0	22	0	91		
04:30 PM	04:45 PM	0	0	0	1	0	3	0	62	0	0	23	0	89		
04:45 PM	05:00 PM	0	0	0	0	0	0	0	55	0	0	23	0	78		
HOURLY TOTALS																
07:00 AM	08:00 AM	0	0	0	3	0	1	15	141	0	0	264	0	224		
07:15 AM	08:15 AM	0	0	0	2	0	7	14	134	0	0	243	0	401		
07:30 AM	08:30 AM	0	0	0	2	0	9	18	119	0	0	229	0	378		
07:45 AM	08:45 AM	0	0	0	3	0	9	18	95	0	0	200	1	326		
08:00 AM	09:00 AM	0	0	0	3	0	9	17	94	0	0	175	1	299		
08:15 AM	09:15 AM	0	0	0	2	0	6	16	89	0	0	136	0	250		
08:30 AM	09:30 AM	0	0	0	2	0	5	14	78	0	0	91	2	192		
08:45 AM	09:45 AM	0	0	0	3	0	5	6	81	0	0	62	1	161		
09:00 AM	10:00 AM	0	0	0	2	0	5	6	83	0	0	54	1	154		
09:15 AM	10:15 AM	0	0	0	3	0	3	10	81	0	0	56	1	157		
09:30 AM	10:30 AM	0	0	0	3	0	8	5	81	0	0	59	3	159		
09:45 AM	10:45 AM	0	0	0	1	0	8	5	70	0	0	51	2	117		
10:00 AM	11:00 AM	0	0	0	2	0	9	5	62	0	0	39	5	122		
10:15 AM	11:15 AM	0	0	0	3	0	12	2	44	0	0	39	1	104		
10:30 AM	11:30 AM	0	0	0	4	0	6	1	38	0	0	57	5	111		
10:45 AM	11:45 AM	0	0	0	4	0	7	1	44	0	0	95	5	156		
11:00 AM	12:00 PM	0	0	0	3	0	11	1	40	0	0	133	5	193		
11:15 AM	12:15 PM	0	0	0	3	0	7	1	38	0	0	141	5	195		
11:30 AM	12:30 PM	0	0	0	2	0	8	1	42	0	0	137	6	196		
11:45 AM	12:45 PM	0	0	0	2	0	6	1	44	0	0	107	6	166		
12:00 PM	01:00 PM	0	0	0	4	0	4	4	58	0	0	78	4	152		
12:15 PM	01:15 PM	0	0	0	4	0	4	12	78	0	0	61	4	163		
12:30 PM	01:30 PM	0	0	0	5	0	3	12	83	0	0	50	6	159		
12:45 PM	01:45 PM	0	0	0	6	0	7	15	86	0	0	50	5	169		
01:00 PM	02:00 PM	0	0	0	5	0	8	18	74	0	0	44	3	153		
01:15 PM	02:15 PM	0	0	0	4	0	10	14	66	0	0	52	5	151		
01:30 PM	02:30 PM	0	0	0	3	0	16	18	78	0	0	50	1	166		
01:45 PM	02:45 PM	0	0	0	4	0	18	19	85	0	0	50	1	177		
02:00 PM	03:00 PM	0	0	0	3	0	18	18	90	0	0	55	1	185		
02:15 PM	03:15 PM	0	0	0	4	0	18	13	86	0	0	64	1	186		
02:30 PM	03:30 PM	0	0	0	4	0	13	10	86	0	0	72	1	186		
02:45 PM	03:45 PM	0	0	0	3	0	10	7	89	0	0	73	2	184		
03:00 PM	04:00 PM	0	0	0	4	0	8	4	117	0	0	71	2	306		
03:15 PM	04:15 PM	0	0	0	2	0	10	4	165	0	0	54	2	337		
03:30 PM	04:30 PM	0	0	0	2	0	12	3	199	0	0	57	2	375		
03:45 PM	04:45 PM	0	0	0	0	0	12	2	234	0	0	66	1	317		
04:00 PM	05:00 PM	0	0	0	1	0	10	0	244	0	0	77	1	333		
SF/PENINSULA: (415) 750-1317																
ALAMEDA: (510) 233-229 2																
CONTRA COSTA: (510) 232-1271																

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 6, 2002		DAY: THURSDAY	
N-S Approach: DRIVEWAY 7		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY	
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA07LV_2	
PEAK HOUR: 11:15 AM TO 12:15 PM					

HEAVY 2-AXLE: 5 0 1

TOTAL
33

EAST AVENUE

DRIVEWAY 7

ARRIVAL/DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
07:15 AM	07:30 AM	0	0	0	0	0	0	1	0	0	0	1	0	2
07:30 AM	07:45 AM	0	0	0	0	0	0	1	0	0	0	1	0	2
07:45 AM	08:00 AM	0	0	0	0	0	0	1	2	0	0	2	0	5
08:00 AM	08:15 AM	0	0	0	0	0	2	1	2	0	0	3	0	8
08:15 AM	08:30 AM	0	0	0	0	0	2	1	4	0	0	3	0	10
08:30 AM	08:45 AM	0	0	0	1	0	2	2	5	0	0	3	0	13
08:45 AM	09:00 AM	0	0	0	1	0	3	2	5	0	0	3	1	15
09:00 AM	09:15 AM	0	0	0	1	0	3	2	7	0	0	5	1	19
09:15 AM	09:30 AM	0	0	0	1	0	3	2	9	0	0	8	1	24
09:30 AM	09:45 AM	0	0	0	1	0	3	2	13	0	0	10	1	30
09:45 AM	10:00 AM	0	0	0	2	0	4	2	14	0	0	12	1	35
10:00 AM	10:15 AM	0	0	0	2	0	4	2	16	0	0	13	2	39
10:15 AM	10:30 AM	0	0	0	2	0	4	2	19	0	0	15	2	44
10:30 AM	10:45 AM	0	0	0	2	0	5	2	26	0	0	16	2	53
10:45 AM	11:00 AM	0	0	0	2	0	5	2	26	0	0	18	2	55
11:00 AM	11:15 AM	0	0	0	2	0	5	2	31	0	0	18	2	60
11:15 AM	11:30 AM	0	0	0	3	0	6	3	35	0	0	19	3	69
11:30 AM	11:45 AM	0	0	0	3	0	7	3	41	0	0	19	3	76
11:45 AM	12:00 PM	0	0	0	3	0	9	3	44	0	0	23	3	85
12:00 PM	12:15 PM	0	0	0	3	0	10	5	45	0	0	27	3	93
12:15 PM	12:30 PM	0	0	0	3	0	11	5	47	0	0	28	3	98
12:30 PM	12:45 PM	0	0	0	3	0	11	5	48	0	0	33	3	104
12:45 PM	01:00 PM	0	0	0	3	0	11	6	48	0	0	33	3	106
01:00 PM	01:15 PM	0	0	0	3	0	11	7	49	0	0	37	3	112
01:15 PM	01:30 PM	0	0	0	3	0	12	8	52	0	0	40	3	120
01:30 PM	01:45 PM	0	0	0	4	0	12	8	57	0	0	42	6	129
01:45 PM	02:00 PM	0	0	0	4	0	13	9	57	0	0	44	6	133
02:00 PM	02:15 PM	0	0	0	4	0	13	9	59	0	0	46	6	137
02:15 PM	02:30 PM	0	0	0	5	0	13	9	59	0	0	46	7	139
02:30 PM	02:45 PM	0	0	0	5	0	14	10	63	0	0	49	7	148
02:45 PM	03:00 PM	0	0	0	5	0	14	10	64	0	0	50	7	150
03:00 PM	03:15 PM	0	0	0	5	0	14	10	68	0	0	51	7	155
03:15 PM	03:30 PM	0	0	0	5	0	15	10	69	0	0	52	8	159
03:30 PM	03:45 PM	0	0	0	5	0	15	10	70	0	0	53	8	161
03:45 PM	04:00 PM	0	0	0	5	0	15	10	72	0	0	55	8	165
04:00 PM	04:15 PM	0	0	0	5	0	15	10	72	0	0	56	8	166
04:15 PM	04:30 PM	0	0	0	5	0	15	10	74	0	0	56	8	168
04:30 PM	04:45 PM	0	0	0	5	0	15	10	76	0	0	57	8	171
04:45 PM	05:00 PM	0	0	0	5	0	15	10	77	0	0	57	8	172

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:15 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
08:30 AM	08:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
08:45 AM	09:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:00 AM	09:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:15 AM	09:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:30 AM	09:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:45 AM	10:00 AM	0	0	0	0	0	0	1	1	0	0	1	0	3
10:00 AM	10:15 AM	0	0	0	0	0	0	1	1	0	0	1	0	3
10:15 AM	10:30 AM	0	0	0	0	0	0	1	1	0	0	1	0	3
10:30 AM	10:45 AM	0	0	0	0	0	0	1	1	0	0	1	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	1	1	0	0	1	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	2	1	0	0	1	0	4
11:15 AM	11:30 AM	0	0	0	0	0	0	2	1	0	0	1	0	4
11:30 AM	11:45 AM	0	0	0	0	0	0	2	1	0	0	2	0	5
11:45 AM	12:00 PM	0	0	0	0	0	0	2	1	0	0	2	0	5
12:00 PM	12:15 PM	0	0	0	0	0	1	2	2	0	0	2	0	7
12:15 PM	12:30 PM	0	0	0	0	0	1	2	4	0	0	2	0	9
12:30 PM	12:45 PM	0	0	0	0	0	1	2	5	0	0	2	0	10
12:45 PM	01:00 PM	0	0	0	0	0	1	2	5	0	0	2	0	10
01:00 PM	01:15 PM	0	0	0	0	0	2	2	6	0	0	3	0	13
01:15 PM	01:30 PM	0	0	0	0	0	2	2	6	0	0	3	0	13
01:30 PM	01:45 PM	0	0	0	0	0	2	2	6	0	0	3	0	13
01:45 PM	02:00 PM	0	0	0	0	0	2	2	8	0	0	3	0	15
02:00 PM	02:15 PM	0	0	0	0	0	2	2	8	0	0	3	0	15
02:15 PM	02:30 PM	0	0	0	0	0	2	2	8	0	0	3	0	15
02:30 PM	02:45 PM	0	0	0	0	0	2	2	8	0	0	3	0	15
02:45 PM	03:00 PM	0	0	0	0	0	2	2	8					

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:00 AM	09:15 AM	0	0	0	0	0	0	1	2	0	0	1	0	4
09:15 AM	09:30 AM	0	0	0	0	0	0	1	2	0	0	2	0	5
09:30 AM	09:45 AM	0	0	0	0	0	1	1	2	0	0	2	0	6
09:45 AM	10:00 AM	0	0	0	0	0	1	2	4	0	0	2	0	9
10:00 AM	10:15 AM	0	0	0	0	0	1	2	4	0	0	2	0	9
10:15 AM	10:30 AM	0	0	0	0	0	1	2	5	0	0	3	1	12
10:30 AM	10:45 AM	0	0	0	0	0	2	4	5	0	0	4	1	16
10:45 AM	11:00 AM	0	0	0	0	0	2	4	5	0	0	4	1	16
11:00 AM	11:15 AM	0	0	0	0	0	2	4	5	0	0	4	1	16
11:15 AM	11:30 AM	0	0	0	0	0	3	5	5	0	0	4	1	18
11:30 AM	11:45 AM	0	0	0	0	0	3	8	7	0	0	5	1	24
11:45 AM	12:00 PM	0	0	0	0	0	4	8	7	0	0	5	1	25
12:00 PM	12:15 PM	0	0	0	0	0	4	8	14	0	0	5	1	32
12:15 PM	12:30 PM	0	0	0	1	0	5	10	14	0	0	5	1	36
12:30 PM	12:45 PM	0	0	0	1	0	6	11	14	0	0	5	1	38
12:45 PM	01:00 PM	0	0	0	1	0	8	12	14	0	0	5	1	41
01:00 PM	01:15 PM	0	0	0	2	0	10	13	14	0	0	6	1	46
01:15 PM	01:30 PM	0	0	0	2	0	12	13	14	0	0	7	1	49
01:30 PM	01:45 PM	0	0	0	2	0	13	13	14	0	0	7	1	50
01:45 PM	02:00 PM	0	0	0	2	0	13	13	15	0	0	8	1	52
02:00 PM	02:15 PM	0	0	0	2	0	13	14	15	0	0	9	1	54
02:15 PM	02:30 PM	0	0	0	2	0	13	14	16	0	0	9	1	55
02:30 PM	02:45 PM	0	0	0	2	0	13	14	16	0	0	9	1	55
02:45 PM	03:00 PM	0	0	0										

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

[illegible]

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 6, 2002				DAY: THURSDAY			
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV 6			
PEAK HOUR: 11:00 AM TO 12:00 PM											

HEAVY >5-AXLE: 0 0 0

TOTAL
3

EAST AVENUE
0 0 0
DRIVEWAY 7

ARRIVAL / DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:15 AM	11:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
11:30 AM	11:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
11:45 AM	12:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
12:00 PM	12:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
12:15 PM	12:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
12:30 PM	12:45 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
12:45 PM	01:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:00 PM	01:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:15 PM	01:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:30 PM	01:45 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:45 PM	02:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
02:00 PM	02:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
02:15 PM	02:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
02:30 PM	02:45 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
02:45 PM	03:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:00 PM	03:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:15 PM	03:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:30 PM	03:45 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:45 PM	04:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
04:00 PM	04:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
04:15 PM	04:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
04:30 PM	04:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:45 PM	05:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:		LAWRENCE LIVERMORE LAB TIS						SURVEY DATE: DECEMBER 6 , 2002			DAY: THURSDAY			
N-S Approach:		DRIVEWAY 7						SURVEY TIME: 7:00 AM TO 5:00 PM			WEATHER: SUNNY			
E-W Approach:		EAST AVENUE						JURISDICTION: LIVERMORE			FILENAME: EA07LV 6			
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:15 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:30 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:30 AM	11:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
10:45 AM	11:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
11:00 AM	12:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
11:15 AM	12:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
11:30 AM	12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
11:45 AM	12:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:00 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:15 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:30 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:45 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
02:00 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:00 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
SF/PENINSULA: (415) 750-1317		ALAMEDA: (510) 233-229 2						CONTRA COSTA: (510) 232-1271						

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 6, 2002				DAY: THURSDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LVT			
PEAK HOUR: 07:00 AM TO 08:00 AM											

TOTAL VEHICLES

0	0	0
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EAST AVENUE

DRIVEWAY 8

ARRIVAL/DEPARTURE VOLUMES

0	0
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		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	4	0	0	0	0	0	0	12	27	10	72		125
07:15 AM	07:30 AM	11	0	5	0	0	0	0	24	58	25	132		255
07:30 AM	07:45 AM	17	0	9	0	0	0	0	39	81	37	197		380
07:45 AM	08:00 AM	19	0	17	0	0	0	0	47	96	54	248		481
08:00 AM	08:15 AM	26	0	19	0	0	0	0	60	115	67	297		584
08:15 AM	08:30 AM	36	0	19	0	0	0	0	74	132	74	339		674
08:30 AM	08:45 AM	42	0	24	0	0	0	0	81	140	81	377		745
08:45 AM	09:00 AM	45	0	31	0	0	0	0	91	150	89	400		806
09:00 AM	09:15 AM	48	0	34	0	0	0	0	107	166	97	415		867
09:15 AM	09:30 AM	49	0	34	0	0	0	0	118	174	100	425		900
09:30 AM	09:45 AM	58	0	37	0	0	0	0	128	187	109	431		950
09:45 AM	10:00 AM	63	0	44	0	0	0	0	137	201	112	446		1,003
10:00 AM	10:15 AM	69	0	44	0	0	0	0	154	211	118	459		1,055
10:15 AM	10:30 AM	72	0	53	0	0	0	0	161	225	121	469		1,101
10:30 AM	10:45 AM	74	0	55	0	0	0	0	172	227	129	474		1,131
10:45 AM	11:00 AM	77	0	62	0	0	0	0	177	238	133	479		1,166
11:00 AM	11:15 AM	81	0	69	0	0	0	0	184	244	140	493		1,211
11:15 AM	11:30 AM	95	0	75	0	0	0	0	196	248	145	508		1,267
11:30 AM	11:45 AM	121	0	76	0	0	0	0	211	255	151	529		1,343
11:45 AM	12:00 PM	150	0	87	0	0	0	0	216	263	153	549		1,418
12:00 PM	12:15 PM	162	0	98	0	0	0	0	229	264	154	567		1,474
12:15 PM	12:30 PM	173	0	100	0	0	0	0	247	266	160	581		1,527
12:30 PM	12:45 PM	181	0	102	0	0	0	0	260	269	170	591		1,572
12:45 PM	01:00 PM	187	0	102	0	0	0	0	279	274	178	600		1,620
01:00 PM	01:15 PM	192	0	108	0	0	0	0	297	285	188	610		1,678
01:15 PM	01:30 PM	199	0	111	0	0	0	0	312	291	194	620		1,727
01:30 PM	01:45 PM	203	0	120	0	0	0	0	326	299	197	631		1,776
01:45 PM	02:00 PM	203	0	127	0	0	0	0	340	300	203	644		1,817
02:00 PM	02:15 PM	211	0	130	0	0	0	0	355	304	209	656		1,865
02:15 PM	02:30 PM	214	0	132	0	0	0	0	381	311	214	666		1,918
02:30 PM	02:45 PM	220	0	135	0	0	0	0	403	317	222	676		1,973
02:45 PM	03:00 PM	224	0	146	0	0	0	0	421	318	226	687		2,022
03:00 PM	03:15 PM	232	0	152	0	0	0	0	438	319	226	706		2,073
03:15 PM	03:30 PM	239	0	161	0	0	0	0	470	320	228	720		2,138
03:30 PM	03:45 PM	242	0	179	0	0	0	0	496	322	233	733		2,205
03:45 PM	04:00 PM	242	0	186	0	0	0	0	541	324	233	747		2,273
04:00 PM	04:15 PM	245	0	196	0	0	0	0	601	326	237	755		2,360
04:15 PM	04:30 PM	253	0	214	0	0	0	0	667	328	241	769		2,472
04:30 PM	04:45 PM	264	0	233	0	0	0	0	723	337	243	783		2,583
04:45 PM	05:00 PM	267	0	263	0	0	0	0	776	340	245	803		2,694

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 6, 2002				DAY: THURSDAY						
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY						
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LVT						
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
TOTAL BY PERIOD														
07:00 AM	07:15 AM	4	0	0	0	0	0	0	12	27	10	72	0	123
07:15 AM	07:30 AM	7	0	5	0	0	0	0	12	31	15	60	0	130
07:30 AM	07:45 AM	6	0	4	0	0	0	0	15	23	12	65	0	125
07:45 AM	08:00 AM	2	0	8	0	0	0	0	8	15	17	51	0	101
08:00 AM	08:15 AM	7	0	2	0	0	0	0	13	19	13	49	0	103
08:15 AM	08:30 AM	10	0	0	0	0	0	0	14	17	7	42	0	90
08:30 AM	08:45 AM	6	0	5	0	0	0	0	7	8	7	38	0	71
08:45 AM	09:00 AM	3	0	7	0	0	0	0	10	10	8	23	0	61
09:00 AM	09:15 AM	3	0	3	0	0	0	0	16	16	8	15	0	61
09:15 AM	09:30 AM	1	0	0	0	0	0	0	11	8	3	10	0	33
09:30 AM	09:45 AM	9	0	3	0	0	0	0	10	13	9	6	0	50
09:45 AM	10:00 AM	5	0	7	0	0	0	0	9	14	3	15	0	53
10:00 AM	10:15 AM	6	0	0	0	0	0	0	17	10	6	13	0	52
10:15 AM	10:30 AM	3	0	9	0	0	0	0	7	14	3	10	0	46
10:30 AM	10:45 AM	2	0	2	0	0	0	0	11	2	8	5	0	30
10:45 AM	11:00 AM	3	0	7	0	0	0	0	5	11	4	5	0	35
11:00 AM	11:15 AM	4	0	7	0	0	0	0	7	6	7	14	0	45
11:15 AM	11:30 AM	14	0	6	0	0	0	0	12	4	5	15	0	56
11:30 AM	11:45 AM	26	0	1	0	0	0	0	15	7	6	21	0	76
11:45 AM	12:00 PM	29	0	11	0	0	0	0	5	8	2	20	0	75
12:00 PM	12:15 PM	12	0	11	0	0	0	0	13	1	1	18	0	56
12:15 PM	12:30 PM	11	0	2	0	0	0	0	18	2	6	14	0	53
12:30 PM	12:45 PM	8	0	2	0	0	0	0	13	3	10	10	0	46
12:45 PM	01:00 PM	6	0	0	0	0	0	0	19	5	8	9	0	47
01:00 PM	01:15 PM	5	0	6	0	0	0	0	18	9	10	15	0	58
01:15 PM	01:30 PM	7	0	3	0	0	0	0	15	8	6	10	0	49
01:30 PM	01:45 PM	4	0	9	0	0	0	0	14	8	3	11	0	49
01:45 PM	02:00 PM	0	0	7	0	0	0	0	14	1	6	13	0	41
02:00 PM	02:15 PM	8	0	3	0	0	0	0	15	4	6	12	0	48
02:15 PM	02:30 PM	3	0	2	0	0	0	0	26	7	5	10	0	53
02:30 PM	02:45 PM	6	0	3	0	0	0	0	22	6	8	10	0	55
02:45 PM	03:00 PM	4	0	11	0	0	0	0	18	1	4	11	0	49
03:00 PM	03:15 PM	8	0	6	0	0	0	0	17	1	0	19	0	51
03:15 PM	03:30 PM	7	0	9	0	0	0	0	32	1	2	14	0	65
03:30 PM	03:45 PM	3	0	18	0	0	0	0	26	2	5	13	0	67
03:45 PM	04:00 PM	0	0	7	0	0	0	0	45	2	0	14	0	68
04:00 PM	04:15 PM	3	0	10	0	0	0	0	60	2	4	8	0	87
04:15 PM	04:30 PM	8	0	18	0	0	0	0	66	2	4	14	0	112
04:30 PM	04:45 PM	11	0	19	0	0	0	0	56	9	2	14	0	111
04:45 PM	05:00 PM	3	0	30	0	0	0	0	53	3	2	20	0	111
HOURLY TOTALS														
07:00 AM	08:00 AM	19	0	17	0	0	0	0	47	96	54	248	0	481
07:15 AM	08:15 AM	22	0	19	0	0	0	0	48	88	57	225	0	459
07:30 AM	08:30 AM	25	0	14	0	0	0	0	50	74	49	207	0	419
07:45 AM	08:45 AM	25	0	15	0	0	0	0	42	59	44	180	0	365
08:00 AM	09:00 AM	26	0	14	0	0	0	0	44	54	35	152	0	325
08:15 AM	09:15 AM	22	0	15	0	0	0	0	47	51	30	118	0	283
08:30 AM	09:30 AM	13	0	15	0	0	0	0	44	42	26	86	0	236
08:45 AM	09:45 AM	16	0	13	0	0	0	0	47	47	28	54	0	205
09:00 AM	10:00 AM	18	0	13	0	0	0	0	46	51	23	46	0	197
09:15 AM	10:15 AM	21	0	10	0	0	0	0	47	45	21	44	0	188
09:30 AM	10:30 AM	23	0	19	0	0	0	0	43	51	21	44	0	201
09:45 AM	10:45 AM	16	0	18	0	0	0	0	44	40	20	43	0	181
10:00 AM	11:00 AM	14	0	18	0	0	0	0	40	37	21	33	0	163
10:15 AM	11:15 AM	12	0	25	0	0	0	0	30	33	22	34	0	156
10:30 AM	11:30 AM	23	0	22	0	0	0	0	35	23	24	39	0	166
10:45 AM	11:45 AM	47	0	21	0	0	0	0	39	28	22	55	0	212
11:00 AM	12:00 PM	73	0	25	0	0	0	0	39	25	20	70	0	252
11:15 AM	12:15 PM	81	0	29	0	0	0	0	45	20	14	74	0	263
11:30 AM	12:30 PM	78	0	25	0	0	0	0	51	18	15	73	0	260
11:45 AM	12:45 PM	60	0	26	0	0	0	0	49	14	19	62	0	230
12:00 PM	01:00 PM	37	0	15	0	0	0	0	63	11	25	51	0	202
12:15 PM	01:15 PM	30	0	10	0	0	0	0	68	19	34	43	0	204
12:30 PM	01:30 PM	26	0	11	0	0	0	0	65	25	34	39	0	200
12:45 PM	01:45 PM	22	0	18	0	0	0	0	66	30	27	40	0	203
01:00 PM	02:00 PM	16	0	25	0	0	0	0	61	26	25	44	0	197
01:15 PM	02:15 PM	19	0	22	0	0	0	0	58	21	21	46	0	187
01:30 PM	02:30 PM	15	0	21	0	0	0	0	69	20	20	46	0	191
01:45 PM	02:45 PM	17	0	15	0	0	0	0	77	18	25	45	0	197
02:00 PM	03:00 PM	21	0	19	0	0	0	0	81	18	23	43	0	205
02:15 PM	03:15 PM	21	0	22	0	0	0	0	83	15	17	50	0	208
02:30 PM	03:30 PM	25	0	29	0	0	0	0	89	9	14	54	0	220
02:45 PM	03:45 PM	22	0	44	0	0	0	0	93	5	11	57	0	232
03:00 PM	04:00 PM	18	0	40	0	0	0	0	120	6	7	60	0	251
03:15 PM	04:15 PM	13	0	44	0	0	0	0	163	7	11	49	0	287
03:30 PM	04:30 PM	14	0	53	0	0	0	0	197	8	13	49	0	334
03:45 PM	04:45 PM	22	0	54	0	0	0	0	227	15	10	50	0	378
04:00 PM	05:00 PM	25	0	77	0	0	0	0	235	16	12	56	0	421
SF/PENINSULA: (415) 750-1317														
ALAMEDA: (510) 233-229 2														
CONTRA COSTA: (510) 232-1271														

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:		LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 6, 2002				DAY: THURSDAY					
N-S Approach:		DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY					
E-W Approach:		EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV_A					
PEAK HOUR:		07:00 AM		TO		08:00 AM									
AUTO ONLY		0			0			0
		NORTH
		EAST AVENUE													
		19			0			16							
		DRIVEWAY 8													

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

			NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA															
07:00 AM	-----	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	-----	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	-----	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	-----	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	-----	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	-----	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	-----	08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	-----	09:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:00 AM	-----	09:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:15 AM	-----	09:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:30 AM	-----	09:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:45 AM	-----	10:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:00 AM	-----	10:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:15 AM	-----	10:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:30 AM	-----	10:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:45 AM	-----	11:00 AM	0	0	0	0	0	0	0	2	1	0	1	0	4
11:00 AM	-----	11:15 AM	0	0	0	0	0	0	0	2	1	0	1	0	4
11:15 AM	-----	11:30 AM	0	0	0	0	0	0	0	2	1	0	1	0	4
11:30 AM	-----	11:45 AM	0	0	0	0	0	0	0	4	1	0	3	0	8
11:45 AM	-----	12:00 PM	0	0	0	0	0	0	0	4	1	0	3	0	8
12:00 PM	-----	12:15 PM	0	0	0	0	0	0	0	4	1	0	3	0	8
12:15 PM	-----	12:30 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
12:30 PM	-----	12:45 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
12:45 PM	-----	01:00 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
01:00 PM	-----	01:15 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
01:15 PM	-----	01:30 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
01:30 PM	-----	01:45 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
01:45 PM	-----	02:00 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
02:00 PM	-----	02:15 PM	0	0	0	0	0	0	0	5	1	0	3	0	9
02:15 PM	-----	02:30 PM	0	0	0	0	0	0	0	5	1	0	5	0	11

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS			SURVEY DATE: DECEMBER 6, 2002				DAY: THURSDAY								
N-S Approach: DRIVEWAY 8			SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY								
E-W Approach: EAST AVENUE			JURISDICTION: LIVERMORE				FILENAME: EA08LV 4								
PEAK HOUR: 12:15 PM TO 1:15 PM															
HEAVY 4-AXLE			0 0 0
NORTH												
EAST AVENUE			0 0 0			DRIVEWAY 8									
						ARRIVAL / DEPARTURE VOLUMES									
			0 0												
			1 4			1 4									
			0 0												
From		To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
			Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA															
07:00 AM	----	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	----	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	----	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	----	08:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:00 AM	----	08:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:15 AM	----	08:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
08:30 AM	----	08:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
08:45 AM	----	09:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:00 AM	----	09:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:15 AM	----	09:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:30 AM	----	09:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:45 AM	----	10:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:00 AM	----	10:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:15 AM	----	10:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:30 AM	----	10:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:45 AM	----	11:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
11:00 AM	----	11:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
11:15 AM	----	11:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
11:30 AM	----	11:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:45 AM	----	12:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:00 PM	----	12:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
12:15 PM	----	12:30 PM	0	0	0	0	0	0	0	4	0	0	2	0	6
12:30 PM	----	12:45 PM	0	0	0	0	0	0	0	5	0	0	2	0	7
12:45 PM	----	01:00 PM	0	0	0	0	0	0	0	5	0	0	2	0	7
01:00 PM	----	01:15 PM	0	0	0	0	0	0	0	6	0	0	3	0	9
01:15 PM	----	01:30 PM	0	0	0	0	0	0	0	6	0	0	3	0	9
01:30 PM	----	01:45 PM	0	0	0	0	0	0	0	6	0	0	3	0	9
01:45 PM	----	02:00 PM	0	0	0	0	0	0	0	8	0	0	3	0	11
02:00 PM	----	02:15 PM	0	0	0	0	0	0	0	8	0	0	3	0	11
02:15 PM	----	02:30 PM	0	0	0	0	0	0	0	8	0	0	3	0	11
02:30 PM	----	02:45 PM	0	0	0	0	0	0	0	8	0	0	3	0	11
02:45 PM	----	03:00 PM	0	0	0	0	0	0	0	8	0	0	3	0	11
03:00 PM	----	03:15 PM	0	0	0	0	0	0	0	8	0	0	3	0	11
03:15 PM	----	03:30 PM	0	0	0	0	0	0	0	8	0	0	4	0	12
03:30 PM	----	03:45 PM	0	0	0	0	0	0	0	8	0	0	5	0	13
03:45 PM	----	04:00 PM	0	0	0	0	0	0	0	8	0	0	5	0	13
04:00 PM	----	04:15 PM	0	0	0	0	0	0	0	9	0	0	5	0	14
04:15 PM	----	04:30 PM	0	0	0	0	0	0	0	9	0	0	5	0	14
04:30 PM	----	04:45 PM	0	0	0	0	0	0	0	9	0	0	5	0	14
04:45 PM	----	05:00 PM	0	0	0	0	0	0	0	9	0	0	5	0	14
SF/PENINSULA: (415) 750-1317			ALAMEDA: (510) 233-229 2			CONTRA COSTA: (510) 232-1271									

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 6, 2002				DAY: THURSDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY							
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV 6			
PEAK HOUR: 11:00 AM TO 12:00 NN HEAVY >5-AXLE 0 0 0				<div style="text-align: center;"> <p style="text-align: center;">NORTH</p> </div>							
<div style="text-align: center;"> <p style="text-align: center;">ARRIVAL / DEPARTURE VOLUMES</p> </div>											

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
<i>SURVEY DATA</i>														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:15 AM	11:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
11:30 AM	11:45 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
11:45 AM	12:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
12:00 PM	12:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
12:15 PM	12:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
12:30 PM	12:45 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
12:45 PM	01:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:00 PM	01:15 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:15 PM	01:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:30 PM	01:45 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:45 PM	02:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
02:00 PM	02:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
02:15 PM	02:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
02:30 PM	02:45 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
02:45 PM	03:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:00 PM	03:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:15 PM	03:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:30 PM	03:45 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:45 PM	04:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
04:00 PM	04:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
04:15 PM	04:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
04:30 PM	04:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:45 PM	05:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-229 2
CONTRA COSTA: (510) 232-1271

Truck Counts
Locations 7 and 8
Friday, December 7, 2001

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 7, 2002		DAY: FRIDAY										
N-S Approach: DRIVEWAY 7		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY										
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: RA071.V52										
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	2	2	0	0	0	0	4
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
08:15 AM	08:30 AM	0	0	0	0	0	0	1	2	0	0	0	0	3
08:30 AM	08:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
08:45 AM	09:00 AM	0	0	0	0	0	0	1	5	0	0	0	0	6
09:00 AM	09:15 AM	0	0	0	1	4	0	1	1	0	0	1	0	7
09:15 AM	09:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
09:30 AM	09:45 AM	0	0	0	0	0	1	0	1	0	0	0	1	3
09:45 AM	10:00 AM	0	0	0	0	0	1	2	4	0	0	2	0	9
10:00 AM	10:15 AM	0	0	0	0	0	0	0	3	0	0	1	0	4
10:15 AM	10:30 AM	0	0	0	1	0	2	0	1	0	0	0	0	4
10:30 AM	10:45 AM	0	0	0	2	0	0	1	0	0	0	0	0	3
10:45 AM	11:00 AM	0	0	0	1	0	0	1	0	0	0	0	0	2
11:00 AM	11:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	4
11:15 AM	11:30 AM	0	0	0	0	0	0	1	4	0	0	0	2	7
11:30 AM	11:45 AM	0	0	0	0	0	2	1	4	0	0	2	0	9
11:45 AM	12:00 PM	0	0	0	0	0	1	0	1	0	0	0	1	3
12:00 PM	12:15 PM	0	0	0	1	0	1	1	4	0	0	2	0	9
12:15 PM	12:30 PM	0	0	0	0	0	2	3	1	0	0	2	0	8
12:30 PM	12:45 PM	0	0	0	0	0	1	0	1	0	0	1	0	3
12:45 PM	01:00 PM	0	0	0	1	0	2	3	3	0	0	0	0	9
01:00 PM	01:15 PM	0	0	0	0	0	1	1	1	0	0	1	1	5
01:15 PM	01:30 PM	0	0	0	0	0	0	2	2	0	0	0	1	5
01:30 PM	01:45 PM	0	0	0	0	0	3	1	2	0	0	1	0	7
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	02:15 PM	0	0	0	0	0	1	0	5	0	0	0	1	7
02:15 PM	02:30 PM	0	0	0	0	0	0	1	1	0	0	3	0	5
02:30 PM	02:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	4
02:45 PM	03:00 PM	0	0	0	0	0	1	0	3	0	0	0	0	4
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15 PM	03:30 PM	0	0	0	0	0	1	0	3	0	0	1	0	5
03:30 PM	03:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:4														

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:		LAWRENCE LIVERMORE LAB TIS				SURVEY DATE:		DECEMBER 7, 2002				DAY:		FRIDAY	
N-S Approach:		DRIVEWAY 7				SURVEY TIME:		7:00 AM TO 5:00 PM		WEATHER:		SUNNY			
E-W Approach:		EAST AVENUE				JURISDICTION:		LIVERMORE				FILENAME: EA07LV53			
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES	
TOTAL BY PERIOD															
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM	07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:00 AM	09:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45 AM	11:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2	
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30 AM	11:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 PM	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 PM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:00 PM	01:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:00 PM	02:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:00 PM	03:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:30 PM	03:45 PM	0	0	0	0										

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY			
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV54			
PEAK HOUR: 07:00 AM TO 08:00 AM											

HEAVY 4-AXLE

1	0	0
---	---	---

TOTAL
7

EAST AVENUE

0	0	0
---	---	---

DRIVEWAY 7

ARRIVAL / DEPARTURE VOLUMES

1	1
---	---

0	0
---	---

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL OLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	08:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	08:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
08:15 AM	08:30 AM	0	0	0	0	0	0	2	1	0	0	2	0	5
08:30 AM	08:45 AM	0	0	0	0	0	0	2	1	0	0	2	0	5
08:45 AM	09:00 AM	0	0	0	0	0	0	2	1	0	0	2	0	5
09:00 AM	09:15 AM	0	0	0	0	0	0	3	1	0	0	2	0	6
09:15 AM	09:30 AM	0	0	0	0	0	1	3	2	0	0	3	0	9
09:30 AM	09:45 AM	0	0	0	0	0	1	3	2	0	0	3	0	9
09:45 AM	10:00 AM	0	0	0	0	0	1	3	4	0	0	3	0	11
10:00 AM	10:15 AM	0	0	0	0	0	1	3	4	0	0	3	1	12
10:15 AM	10:30 AM	0	0	0	0	0	1	3	4	0	0	3	1	12
10:30 AM	10:45 AM	0	0	0	0	0	2	3	6	0	0	4	1	16
10:45 AM	11:00 AM	0	0	0	0	0	2	3	6	0	0	4	1	16
11:00 AM	11:15 AM	0	0	0	1	0	2	3	6	0	0	4	1	17
11:15 AM	11:30 AM	0	0	0	1	0	2	3	6	0	0	4	1	17
11:30 AM	11:45 AM	0	0	0	1	0	2	3	6	0	0	5	1	18
11:45 AM	12:00 PM	0	0	0	1	0	2	3	6	0	0	5	1	18
12:00 PM	12:15 PM	0	0	0	1	0	2	3	7	0	0	5	1	19
12:15 PM	12:30 PM	0	0	0	1	0	2	3	7	0	0	5	1	19
12:30 PM	12:45 PM	0	0	0	1	0	3	3	7	0	0	5	1	20
12:45 PM	01:00 PM	0	0	0	1	0	3	3	7	0	0	5	1	20
01:00 PM	01:15 PM	0	0	0	1	0	3	3	8	0	0	6	1	22
01:15 PM	01:30 PM	0	0	0	1	0	3	3	8	0	0	7	1	23
01:30 PM	01:45 PM	0	0	0	1	0	3	3	9	0	0	7	1	24
01:45 PM	02:00 PM	0	0	0	1	0	3	3	9	0	0	7	1	24
02:00 PM	02:15 PM	0	0	0	1	0	3	3	9	0	0	7	1	24
02:15 PM	02:30 PM	0	0	0	1	0	3	3	9	0	0	7	1	24
02:30 PM	02:45 PM	0	0	0	1	0	3	3	10	0	0	7	1	25
02:45 PM	03:00 PM	0	0	0	1	0	3	3	10	0	0	7	1	25
03:00 PM	03:15 PM	0	0	0	1	0	3	3	10	0	0	8	1	26
03:15 PM	03:30 PM	0	0	0	1	0	3	3	10	0	0	8	1	26
03:30 PM	03:45 PM	0	0	0	1	0	3	3	10	0	0	8	1	26
03:45 PM	04:00 PM	0	0	0	1	0	3	3	10	0	0	8	1	26
04:00 PM	04:15 PM	0	0	0	1	0	3	3	10	0	0	8	1	26
04:15 PM	04:30 PM	0	0	0	1	0	3	3	10	0	0	8	1	26
04:30 PM	04:45 PM	0	0	0	1	0	3	3	10	0	0	8	1	26
04:45 PM	05:00 PM	0	0	0	1	0	3	3	10	0	0	8	1	26

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-229 2
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY			
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV55			
PEAK HOUR: 12:00 NN TO 01:00 PM											

HEAVY 5-AXLE: 4 0 0

EAST AVENUE

DRIVEWAY 7

ARRIVAL / DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
08:30 AM	08:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
08:45 AM	09:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	2
09:00 AM	09:15 AM	0	0	0	0	0	0	1	0	0	0	1	0	2
09:15 AM	09:30 AM	0	0	0	0	0	0	2	0	0	0	2	1	5
09:30 AM	09:45 AM	0	0	0	0	0	0	2	1	0	0	2	1	6
09:45 AM	10:00 AM	0	0	0	0	0	0	2	1	0	0	3	1	7
10:00 AM	10:15 AM	0	0	0	0	0	1	2	1	0	0	4	1	9
10:15 AM	10:30 AM	0	0	0	0	0	2	3	2	0	0	4	1	12
10:30 AM	10:45 AM	0	0	0	0	0	4	5	4	0	0	6	2	21
10:45 AM	11:00 AM	0	0	0	0	0	5	5	5	0	0	6	2	23
11:00 AM	11:15 AM	0	0	0	0	0	8	5	5	0	0	6	2	26
11:15 AM	11:30 AM	0	0	0	0	0	8	6	6	0	0	7	2	29
11:30 AM	11:45 AM	0	0	0	1	0	9	6	7	0	0	7	2	32
11:45 AM	12:00 PM	0	0	0	1	0	11	6	7	0	0	7	2	34
12:00 PM	12:15 PM	0	0	0	1	0	12	6	9	0	0	7	3	38
12:15 PM	12:30 PM	0	0	0	1	0	12	9	9	0	0	9	3	43
12:30 PM	12:45 PM	0	0	0	1	0	13	10	11	0	0	9	3	47
12:45 PM	01:00 PM	0	0	0	1	0	15	10	13	0	0	10	3	52
01:00 PM	01:15 PM	0	0	0	1	0	15	11	14	0	0	10	3	54
01:15 PM	01:30 PM	0	0	0	1	0	16	14	14	0	0	10	3	58
01:30 PM	01:45 PM	0	0	0	1	0	17	15	16	0	0	10	3	62
01:45 PM	02:00 PM	0	0	0	1	0	17	15	19	0	0	10	4	66
02:00 PM	02:15 PM	0	0	0	1	0	18	15	21	0	0	11	4	70
02:15 PM	02:30 PM	0	0	0	1	0	18	15	22	0	0	11	4	71
02:30 PM	02:45 PM	0	0	0	1	0	19	16	22	0	0	11	4	73
02:45 PM	03:00 PM	0	0	0	1	0	19	16	22	0	0	11	4	73
03:00 PM	03:15 PM	0	0	0	1	0	19	16	23	0	0	12	4	75
03:15 PM	03:30 PM	0	0	0	1	0	19	16	24	0	0	12	4	76
03:30 PM	03:45 PM	0	0	0	1	0	19	16	24	0	0	12	4	76
03:45 PM	04:00 PM	0	0	0	1	0	19	16	24	0	0	12	4	76
04:00 PM	04:15 PM	0	0	0	1	0	19	16	25	0	0	13	4	78
04:15 PM	04:30 PM	0	0	0	1	0	19	16	25	0	0	13	4	78
04:30 PM	04:45 PM	0	0	0	1	0	19	16	25	0	0	14	4	79
04:45 PM	05:00 PM	0	0	0	1	0	19	16	25	0	0	14	4	79

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY								
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY								
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV56								
PEAK HOUR: 12:45 PM		TO 01:45 PM														
HEAVY 6-AXLE																
				NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
SURVEY DATA																
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10:00 AM	10:15 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
10:15 AM	10:30 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
11:15 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
11:30 AM	11:45 AM	0	0	0	1	0	0	0	2	0	0	0	2	0	0	5
11:45 AM	12:00 PM	0	0	0	1	0	0	0	2	0	0	0	2	0	0	5
12:00 PM	12:15 PM	0	0	0	1	0	0	0	2	0	0	0	2	0	0	5
12:15 PM	12:30 PM	0	0	0	1	0	0	0	2	0	0	0	2	0	0	5
12:30 PM	12:45 PM	0	0	0	1	0	0	0	2	0	0	0	2	0	0	5
12:45 PM	01:00 PM	0	0	0	1	0	0	0	2	0	0	0	3	0	0	6
01:00 PM	01:15 PM	0	0	0	1	0	0	0	2	0	0	0	3	0	0	6
01:15 PM	01:30 PM	0	0	0	1	0	0	0	3	0	0	0	3	0	0	7
01:30 PM	01:45 PM	0	0	0	1	0	0	0	4	0	0	0	3	0	0	8
01:45 PM	02:00 PM	0	0	0	1	0	0	0	4	0	0	0	3	0	0	8
02:00 PM	02:15 PM	0	0	0	1	0	0	0	4	0	0	0	3	0	0	8
02:15 PM	02:30 PM	0	0	0	1	0	0	0	4	0	0	0	3	0	0	8
02:30 PM	02:45 PM	0	0	0	1	0	0	0	4	0	0	0	3	0	0	8
02:45 PM	03:00 PM	0	0	0	1	0	0	0	4	0	0	0	3	0	0	8
03:00 PM	03:15 PM	0	0	0	1	0	0	0	4	0	0	0	3	0	0	8
03:15 PM	03:30 PM	0	0	0	1	0	0	0	4	0	0	0	4	0	0	9
03:30 PM	03:45 PM	0	0	0	1	0	0	0	4	0	0	0	4	0	0	9
03:45 PM	04:00 PM	0	0	0	1	0	0	0	4	0	0	0	4	0	0	9
04:00 PM	04:15 PM	0	0	0	1	0	0	0	4	0	0	0	4	0	0	9
04:15 PM	04:30 PM	0	0	0	1	0	0	0	5	0	0	0	4	0	0	10
04:30 PM	04:45 PM	0	0	0	1	0	0	0	5	0	0	0	4	0	0	10
04:45 PM	05:00 PM	0	0	0	1	0	0	0	5	0	0	0	4	0	0	10
SF/PENINSULA: (415) 750-1317				ALAMEDA: (510) 233-2292				CONTRA COSTA: (510) 232-1271								

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV5T																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
PEAK HOUR: 07:15 AM TO 08:15 AM																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
TOTAL VEHICLES				0 0 0				ARRIVAL / DEPARTURE VOLUMES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
<p>0 43 71</p> <p>TOTAL 463</p> <p>0 268 54</p> <p>11 0 16</p>				<p>0 0</p> <p>279 114</p> <p>322 59</p> <p>125 27</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<table><tr><th colspan="2"></th><th colspan="3">NORTHBOUND</th><th colspan="3">SOUTHBOUND</th><th colspan="3">EASTBOUND</th><th colspan="3">WESTBOUND</th><th>TOTAL</th></tr><tr><th>From</th><th>To</th><th>Left</th><th>Thru</th><th>Right</th><th>Left</th><th>Thru</th><th>Right</th><th>Left</th><th>Thru</th><th>Right</th><th>Left</th><th>Thru</th><th>Right</th><th>VOLUMES</th></tr><tr><td colspan="15">SURVEY DATA</td></tr><tr><td>07:00 AM</td><td>07:15 AM</td><td>8</td><td>0</td><td>4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>14</td><td>15</td><td>12</td><td>66</td><td>0</td><td>119</td></tr><tr><td>07:15 AM</td><td>07:30 AM</td><td>9</td><td>0</td><td>9</td><td>0</td><td>0</td><td>0</td><td>0</td><td>24</td><td>36</td><td>28</td><td>128</td><td>0</td><td>234</td></tr><tr><td>07:30 AM</td><td>07:45 AM</td><td>10</td><td>0</td><td>15</td><td>0</td><td>0</td><td>0</td><td>0</td><td>37</td><td>48</td><td>46</td><td>182</td><td>0</td><td>338</td></tr><tr><td>07:45 AM</td><td>08:00 AM</td><td>16</td><td>0</td><td>18</td><td>0</td><td>0</td><td>0</td><td>0</td><td>48</td><td>68</td><td>57</td><td>252</td><td>0</td><td>459</td></tr><tr><td>08:00 AM</td><td>08:15 AM</td><td>19</td><td>0</td><td>20</td><td>0</td><td>0</td><td>0</td><td>0</td><td>57</td><td>86</td><td>66</td><td>334</td><td>0</td><td>582</td></tr><tr><td>08:15 AM</td><td>08:30 AM</td><td>21</td><td>0</td><td>22</td><td>0</td><td>0</td><td>0</td><td>0</td><td>63</td><td>105</td><td>70</td><td>387</td><td>0</td><td>668</td></tr><tr><td>08:30 AM</td><td>08:45 AM</td><td>26</td><td>0</td><td>25</td><td>0</td><td>0</td><td>0</td><td>0</td><td>78</td><td>119</td><td>78</td><td>430</td><td>0</td><td>756</td></tr><tr><td>08:45 AM</td><td>09:00 AM</td><td>31</td><td>0</td><td>32</td><td>0</td><td>0</td><td>0</td><td>0</td><td>88</td><td>133</td><td>81</td><td>479</td><td>0</td><td>844</td></tr><tr><td>09:00 AM</td><td>09:15 AM</td><td>32</td><td>0</td><td>38</td><td>0</td><td>0</td><td>0</td><td>0</td><td>100</td><td>153</td><td>83</td><td>504</td><td>0</td><td>910</td></tr><tr><td>09:15 AM</td><td>09:30 AM</td><td>39</td><td>0</td><td>39</td><td>0</td><td>0</td><td>0</td><td>0</td><td>113</td><td>171</td><td>87</td><td>530</td><td>0</td><td>979</td></tr><tr><td>09:30 AM</td><td>09:45 AM</td><td>48</td><td>0</td><td>44</td><td>0</td><td>0</td><td>0</td><td>0</td><td>130</td><td>186</td><td>92</td><td>544</td><td>0</td><td>1,044</td></tr><tr><td>09:45 AM</td><td>10:00 AM</td><td>55</td><td>0</td><td>48</td><td>0</td><td>0</td><td>0</td><td>0</td><td>145</td><td>196</td><td>94</td><td>566</td><td>0</td><td>1,104</td></tr><tr><td>10:00 AM</td><td>10:15 AM</td><td>59</td><td>0</td><td>48</td><td>0</td><td>0</td><td>0</td><td>0</td><td>155</td><td>203</td><td>100</td><td>583</td><td>0</td><td>1,148</td></tr><tr><td>10:15 AM</td><td>10:30 AM</td><td>64</td><td>0</td><td>55</td><td>0</td><td>0</td><td>0</td><td>0</td><td>172</td><td>208</td><td>103</td><td>595</td><td>0</td><td>1,197</td></tr><tr><td>10:30 AM</td><td>10:45 AM</td><td>66</td><td>0</td><td>55</td><td>0</td><td>0</td><td>0</td><td>0</td><td>182</td><td>217</td><td>107</td><td>609</td><td>0</td><td>1,236</td></tr><tr><td>10:45 AM</td><td>11:00 AM</td><td>68</td><td>0</td><td>60</td><td>0</td><td>0</td><td>0</td><td>0</td><td>197</td><td>228</td><td>112</td><td>625</td><td>0</td><td>1,290</td></tr><tr><td>11:00 AM</td><td>11:15 AM</td><td>68</td><td>0</td><td>66</td><td>0</td><td>0</td><td>0</td><td>0</td><td>222</td><td>236</td><td>118</td><td>640</td><td>0</td><td>1,350</td></tr><tr><td>11:15 AM</td><td>11:30 AM</td><td>88</td><td>0</td><td>72</td><td>0</td><td>0</td><td>0</td><td>0</td><td>244</td><td>244</td><td>122</td><td>662</td><td>0</td><td>1,432</td></tr><tr><td>11:30 AM</td><td>11:45 AM</td><td>98</td><td>0</td><td>75</td><td>0</td><td>0</td><td>0</td><td>0</td><td>267</td><td>252</td><td>125</td><td>687</td><td>0</td><td>1,504</td></tr><tr><td>11:45 AM</td><td>12:00 PM</td><td>118</td><td>0</td><td>77</td><td>0</td><td>0</td><td>0</td><td>0</td><td>288</td><td>257</td><td>130</td><td>711</td><td>0</td><td>1,581</td></tr><tr><td>12:00 PM</td><td>12:15 PM</td><td>129</td><td>0</td><td>83</td><td>0</td><td>0</td><td>0</td><td>0</td><td>309</td><td>263</td><td>132</td><td>741</td><td>0</td><td>1,657</td></tr><tr><td>12:15 PM</td><td>12:30 PM</td><td>138</td><td>0</td><td>86</td><td>0</td><td>0</td><td>0</td><td>0</td><td>332</td><td>272</td><td>133</td><td>770</td><td>0</td><td>1,731</td></tr><tr><td>12:30 PM</td><td>12:45 PM</td><td>148</td><td>0</td><td>90</td><td>0</td><td>0</td><td>0</td><td>0</td><td>353</td><td>282</td><td>137</td><td>799</td><td>0</td><td>1,809</td></tr><tr><td>12:45 PM</td><td>01:00 PM</td><td>153</td><td>0</td><td>94</td><td>0</td><td>0</td><td>0</td><td>0</td><td>376</td><td>298</td><td>142</td><td>826</td><td>0</td><td>1,889</td></tr><tr><td>01:00 PM</td><td>01:15 PM</td><td>158</td><td>0</td><td>96</td><td>0</td><td>0</td><td>0</td><td>0</td><td>396</td><td>302</td><td>144</td><td>857</td><td>0</td><td>1,953</td></tr><tr><td>01:15 PM</td><td>01:30 PM</td><td>160</td><td>0</td><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td><td>422</td><td>307</td><td>150</td><td>883</td><td>0</td><td>2,022</td></tr><tr><td>01:30 PM</td><td>01:45 PM</td><td>162</td><td>0</td><td>106</td><td>0</td><td>0</td><td>0</td><td>0</td><td>452</td><td>320</td><td>153</td><td>907</td><td>0</td><td>2,100</td></tr><tr><td>01:45 PM</td><td>02:00 PM</td><td>173</td><td>0</td><td>108</td><td>0</td><td>0</td><td>0</td><td>0</td><td>486</td><td>320</td><td>157</td><td>920</td><td>0</td><td>2,164</td></tr><tr><td>02:00 PM</td><td>02:15 PM</td><td>178</td><td>0</td><td>108</td><td>0</td><td>0</td><td>0</td><td>0</td><td>513</td><td>325</td><td>161</td><td>932</td><td>0</td><td>2,217</td></tr><tr><td>02:15 PM</td><td>02:30 PM</td><td>185</td><td>0</td><td>112</td><td>0</td><td>0</td><td>0</td><td>0</td><td>541</td><td>332</td><td>163</td><td>945</td><td>0</td><td>2,278</td></tr><tr><td>02:30 PM</td><td>02:45 PM</td><td>190</td><td>0</td><td>121</td><td>0</td><td>0</td><td>0</td><td>0</td><td>574</td><td>336</td><td>168</td><td>959</td><td>0</td><td>2,348</td></tr><tr><td>02:45 PM</td><td>03:00 PM</td><td>190</td><td>0</td><td>133</td><td>0</td><td>0</td><td>0</td><td>0</td><td>599</td><td>337</td><td>170</td><td>973</td><td>0</td><td>2,402</td></tr><tr><td>03:00 PM</td><td>03:15 PM</td><td>194</td><td>0</td><td>139</td><td>0</td><td>0</td><td>0</td><td>0</td><td>638</td><td>337</td><td>173</td><td>983</td><td>0</td><td>2,464</td></tr><tr><td>03:15 PM</td><td>03:30 PM</td><td>202</td><td>0</td><td>149</td><td>0</td><td>0</td><td>0</td><td>0</td><td>687</td><td>339</td><td>177</td><td>999</td><td>0</td><td>2,553</td></tr><tr><td>03:30 PM</td><td>03:45 PM</td><td>212</td><td>0</td><td>161</td><td>0</td><td>0</td><td>0</td><td>0</td><td>747</td><td>348</td><td>178</td><td>1,007</td><td>0</td><td>2,653</td></tr><tr><td>03:45 PM</td><td>04:00 PM</td><td>214</td><td>0</td><td>182</td><td>0</td><td>0</td><td>0</td><td>0</td><td>808</td><td>353</td><td>178</td><td>1,030</td><td>0</td><td>2,765</td></tr><tr><td>04:00 PM</td><td>04:15 PM</td><td>215</td><td>0</td><td>209</td><td>0</td><td>0</td><td>0</td><td>0</td><td>878</td><td>358</td><td>180</td><td>1,045</td><td>0</td><td>2,885</td></tr><tr><td>04:15 PM</td><td>04:30 PM</td><td>224</td><td>0</td><td>227</td><td>0</td><td>0</td><td>0</td><td>0</td><td>942</td><td>360</td><td>182</td><td>1,061</td><td>0</td><td>2,996</td></tr><tr><td>04:30 PM</td><td>04:45 PM</td><td>232</td><td>0</td><td>240</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1,007</td><td>366</td><td>182</td><td>1,080</td><td>0</td><td>3,107</td></tr><tr><td>04:45 PM</td><td>05:00 PM</td><td>240</td><td>0</td><td>248</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1,075</td><td>368</td><td>182</td><td>1,100</td><td>0</td><td>3,213</td></tr></table>																		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES	SURVEY DATA															07:00 AM	07:15 AM	8	0	4	0	0	0	0	14	15	12	66	0	119	07:15 AM	07:30 AM	9	0	9	0	0	0	0	24	36	28	128	0	234	07:30 AM	07:45 AM	10	0	15	0	0	0	0	37	48	46	182	0	338	07:45 AM	08:00 AM	16	0	18	0	0	0	0	48	68	57	252	0	459	08:00 AM	08:15 AM	19	0	20	0	0	0	0	57	86	66	334	0	582	08:15 AM	08:30 AM	21	0	22	0	0	0	0	63	105	70	387	0	668	08:30 AM	08:45 AM	26	0	25	0	0	0	0	78	119	78	430	0	756	08:45 AM	09:00 AM	31	0	32	0	0	0	0	88	133	81	479	0	844	09:00 AM	09:15 AM	32	0	38	0	0	0	0	100	153	83	504	0	910	09:15 AM	09:30 AM	39	0	39	0	0	0	0	113	171	87	530	0	979	09:30 AM	09:45 AM	48	0	44	0	0	0	0	130	186	92	544	0	1,044	09:45 AM	10:00 AM	55	0	48	0	0	0	0	145	196	94	566	0	1,104	10:00 AM	10:15 AM	59	0	48	0	0	0	0	155	203	100	583	0	1,148	10:15 AM	10:30 AM	64	0	55	0	0	0	0	172	208	103	595	0	1,197	10:30 AM	10:45 AM	66	0	55	0	0	0	0	182	217	107	609	0	1,236	10:45 AM	11:00 AM	68	0	60	0	0	0	0	197	228	112	625	0	1,290	11:00 AM	11:15 AM	68	0	66	0	0	0	0	222	236	118	640	0	1,350	11:15 AM	11:30 AM	88	0	72	0	0	0	0	244	244	122	662	0	1,432	11:30 AM	11:45 AM	98	0	75	0	0	0	0	267	252	125	687	0	1,504	11:45 AM	12:00 PM	118	0	77	0	0	0	0	288	257	130	711	0	1,581	12:00 PM	12:15 PM	129	0	83	0	0	0	0	309	263	132	741	0	1,657	12:15 PM	12:30 PM	138	0	86	0	0	0	0	332	272	133	770	0	1,731	12:30 PM	12:45 PM	148	0	90	0	0	0	0	353	282	137	799	0	1,809	12:45 PM	01:00 PM	153	0	94	0	0	0	0	376	298	142	826	0	1,889	01:00 PM	01:15 PM	158	0	96	0	0	0	0	396	302	144	857	0	1,953	01:15 PM	01:30 PM	160	0	100	0	0	0	0	422	307	150	883	0	2,022	01:30 PM	01:45 PM	162	0	106	0	0	0	0	452	320	153	907	0	2,100	01:45 PM	02:00 PM	173	0	108	0	0	0	0	486	320	157	920	0	2,164	02:00 PM	02:15 PM	178	0	108	0	0	0	0	513	325	161	932	0	2,217	02:15 PM	02:30 PM	185	0	112	0	0	0	0	541	332	163	945	0	2,278	02:30 PM	02:45 PM	190	0	121	0	0	0	0	574	336	168	959	0	2,348	02:45 PM	03:00 PM	190	0	133	0	0	0	0	599	337	170	973	0	2,402	03:00 PM	03:15 PM	194	0	139	0	0	0	0	638	337	173	983	0	2,464	03:15 PM	03:30 PM	202	0	149	0	0	0	0	687	339	177	999	0	2,553	03:30 PM	03:45 PM	212	0	161	0	0	0	0	747	348	178	1,007	0	2,653	03:45 PM	04:00 PM	214	0	182	0	0	0	0	808	353	178	1,030	0	2,765	04:00 PM	04:15 PM	215	0	209	0	0	0	0	878	358	180	1,045	0	2,885	04:15 PM	04:30 PM	224	0	227	0	0	0	0	942	360	182	1,061	0	2,996	04:30 PM	04:45 PM	232	0	240	0	0	0	0	1,007	366	182	1,080	0	3,107	04:45 PM	05:00 PM	240	0	248	0	0	0	0	1,075	368	182	1,100	0	3,213
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INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY											
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY											
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV52											
PEAK HOUR: 11:00 AM TO 12:00 NN								<div style="text-align: center;">ARRIVAL/DEPARTURE VOLUMES</div> <table border="1" style="margin: 0 auto; border-collapse: collapse;"> <tr><td>0</td><td>0</td></tr> <tr><td>7</td><td>7</td></tr> <tr><td>14</td><td>13</td></tr> <tr><td>3</td><td>2</td></tr> </table>				0	0	7	7	14	13	3	2
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<div style="display: flex; justify-content: space-between;"> <div>EAST AVENUE</div> <div>DRIVEWAY 8</div> </div>																			

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	07:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:30 AM	07:45 AM	0	0	0	0	0	0	0	2	1	0	0	0	3
07:45 AM	08:00 AM	0	0	0	0	0	0	0	2	1	1	0	0	4
08:00 AM	08:15 AM	0	0	0	0	0	0	0	4	1	1	1	0	7
08:15 AM	08:30 AM	0	0	0	0	0	0	0	5	2	1	1	0	9
08:30 AM	08:45 AM	0	0	0	0	0	0	0	5	2	1	1	0	9
08:45 AM	09:00 AM	0	0	0	0	0	0	0	8	4	1	1	0	14
09:00 AM	09:15 AM	0	0	0	0	0	0	0	9	5	1	2	0	17
09:15 AM	09:30 AM	0	0	0	0	0	0	0	10	5	1	2	0	18
09:30 AM	09:45 AM	1	0	0	0	0	0	0	10	6	1	2	0	20
09:45 AM	10:00 AM	1	0	0	0	0	0	0	12	8	2	4	0	27
10:00 AM	10:15 AM	1	0	0	0	0	0	0	13	10	2	5	0	31
10:15 AM	10:30 AM	1	0	0	0	0	0	0	13	12	2	5	0	33
10:30 AM	10:45 AM	1	0	0	0	0	0	0	15	12	2	5	0	35
10:45 AM	11:00 AM	1	0	1	0	0	0	0	15	13	3	5	0	38
11:00 AM	11:15 AM	2	0	1	0	0	0	0	16	13	3	6	0	41
11:15 AM	11:30 AM	2	0	1	0	0	0	0	20	13	3	8	0	47
11:30 AM	11:45 AM	2	0	1	0	0	0	0	22	15	3	10	0	53
11:45 AM	12:00 PM	3	0	2	0	0	0	0	23	15	3	10	0	56
12:00 PM	12:15 PM	3	0	2	0	0	0	0	28	15	4	12	0	64
12:15 PM	12:30 PM	5	0	2	0	0	0	0	28	16	5	12	0	68
12:30 PM	12:45 PM	5	0	2	0	0	0	0	28	17	5	13	0	70
12:45 PM	01:00 PM	5	0	3	0	0	0	0	31	18	5	13	0	75
01:00 PM	01:15 PM	6	0	3	0	0	0	0	32	18	5	14	0	78
01:15 PM	01:30 PM	7	0	3	0	0	0	0	34	18	5	14	0	81
01:30 PM	01:45 PM	7	0	4	0	0	0	0	35	19	7	15	0	87
01:45 PM	02:00 PM	7	0	4	0	0	0	0	35	19	7	15	0	87
02:00 PM	02:15 PM	7	0	4	0	0	0	0	40	19	7	16	0	93
02:15 PM	02:30 PM	8	0	4	0	0	0	0	40	20	7	18	0	97
02:30 PM	02:45 PM	8	0	5	0	0	0	0	42	20	8	18	0	101
02:45 PM	03:00 PM	8	0	5	0	0	0	0	43	22	8	18	0	104
03:00 PM	03:15 PM	8	0	5	0	0	0	0	43	22	8	19	0	105
03:15 PM	03:30 PM	9	0	5	0	0	0	0	46	22	8	19	0	109
03:30 PM	03:45 PM	9	0	5	0	0	0	0	48	22	8	22	0	114
03:45 PM	04:00 PM	9	0	5	0	0	0	0	49	22	8	23	0	116
04:00 PM	04:15 PM	9	0	5	0	0	0	0	48	22	9	23	0	116
04:15 PM	04:30 PM	9	0	5	0	0	0	0	48	22	9	23	0	116
04:30 PM	04:45 PM	9	0	5	0	0	0	0	49	22	9	24	0	118
04:45 PM	05:00 PM	9	0	5	0	0	0	0	49	22	9	24	0	118

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY							
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV53			
PEAK HOUR: 10:45 AM TO 11:45 AM											

HEAVY 3-AXLE 0 0 0

TOTAL
4

EAST AVENUE 0 0 0

DRIVEWAY 8

ARRIVAL / DEPARTURE VOLUMES

0 0

0 4 0

0 0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	---	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	---	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	---	07:45 AM	0	0	0	0	0	0	0	1	0	0	0	1
07:45 AM	---	08:00 AM	0	0	0	0	0	0	0	1	0	0	0	1
08:00 AM	---	08:15 AM	0	0	0	0	0	0	0	1	0	0	0	1
08:15 AM	---	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	1
08:30 AM	---	08:45 AM	0	0	0	0	0	0	0	1	0	0	0	1
08:45 AM	---	09:00 AM	0	0	0	0	0	0	0	1	0	0	0	1
09:00 AM	---	09:15 AM	0	0	0	0	0	0	0	2	0	0	1	3
09:15 AM	---	09:30 AM	0	0	0	0	0	0	0	2	0	0	1	3
09:30 AM	---	09:45 AM	0	0	0	0	0	0	0	2	0	0	2	4
09:45 AM	---	10:00 AM	0	0	0	0	0	0	0	2	0	0	2	4
10:00 AM	---	10:15 AM	0	0	0	0	0	0	0	2	0	0	2	4
10:15 AM	---	10:30 AM	0	0	0	0	0	0	0	2	0	0	2	4
10:30 AM	---	10:45 AM	0	0	0	0	0	0	0	2	0	0	2	4
10:45 AM	---	11:00 AM	0	0	0	0	0	0	0	4	0	0	2	6
11:00 AM	---	11:15 AM	0	0	0	0	0	0	0	5	0	0	2	7
11:15 AM	---	11:30 AM	0	0	0	0	0	0	0	5	0	0	2	7
11:30 AM	---	11:45 AM	0	0	0	0	0	0	0	6	0	0	2	8
11:45 AM	---	12:00 PM	0	0	0	0	0	0	0	6	0	0	2	8
12:00 PM	---	12:15 PM	0	0	0	0	0	0	0	6	0	0	2	8
12:15 PM	---	12:30 PM	0	0	0	0	0	0	0	6	0	0	2	8
12:30 PM	---	12:45 PM	0	0	0	0	0	0	0	6	0	0	2	8
12:45 PM	---	01:00 PM	0	0	0	0	0	0	0	6	0	0	2	8
01:00 PM	---	01:15 PM	0	0	0	0	0	0	0	7	0	0	2	9
01:15 PM	---	01:30 PM	0	0	0	0	0	0	0	7	0	0	2	9
01:30 PM	---	01:45 PM	0	0	0	0	0	0	0	7	0	0	2	9
01:45 PM	---	02:00 PM	0	0	0	0	0	0	0	7	0	0	2	9
02:00 PM	---	02:15 PM	0	0	0	0	0	0	0	8	0	0	3	11
02:15 PM	---	02:30 PM	0	0	0	0	0	0	0	8	0	0	3	11
02:30 PM	---	02:45 PM	0	0	0	0	0	0	0	8	0	0	3	11
02:45 PM	---	03:00 PM	0	0	0	0	0	0	0	8	0	0	3	11
03:00 PM	---	03:15 PM	0	0	0	0	0	0	0	9	0	0	3	12
03:15 PM	---	03:30 PM	0	0	0	0	0	0	0	9	0	0	3	12
03:30 PM	---	03:45 PM	0	0	0	0	0	0	0	9	0	0	3	12
03:45 PM	---	04:00 PM	0	0	0	0	0	0	0	9	0	0	3	12
04:00 PM	---	04:15 PM	0	0	0	0	0	0	0	9	0	0	3	12
04:15 PM	---	04:30 PM	0	0	0	0	0	0	0	9	0	0	3	12
04:30 PM	---	04:45 PM	0	0	0	0	0	0	0	9	0	0	4	13
04:45 PM	---	05:00 PM	0	0	0	0	0	0	0	9	0	0	4	13

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-229 2
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS			SURVEY DATE: DECEMBER 7, 2002			DAY: FRIDAY								
N-S Approach: DRIVEWAY 8			SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY											
E-W Approach: EAST AVENUE			JURISDICTION: LIVERMORE			FILENAME: EA08LV53								
From	To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	11:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	11:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	01:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	02:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	03:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	08:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:30 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	09:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
08:30 AM	09:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
08:45 AM	09:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
09:00 AM	10:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
09:15 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:30 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:45 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	11:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
10:15 AM	11:15 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
10:30 AM	11:30 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
10:45 AM	11:45 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
11:00 AM	12:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
11:15 AM	12:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:30 AM	12:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:45 AM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	01:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
12:30 PM	01:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
12:45 PM	01:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:00 PM	02:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:15 PM	02:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
01:30 PM	02:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
01:45 PM	02:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
02:00 PM	03:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
02:15 PM	03:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:30 PM	03:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:45 PM	03:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
03:00 PM	04:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
03:15 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:00 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
SF/PENINSULA: (415) 750-1317					ALAMEDA: (510) 233-2292					CONTRA COSTA: (510) 232-1271				

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LVS4			
PEAK HOUR: 10:15 AM TO 11:15 AM											

HEAVY 4-AXLE: 0 0 0

TOTAL
7

EAST AVENUE: 1 0 0

DRIVEWAY 8

ARRIVAL / DEPARTURE VOLUMES

0 0

3 2

4 3

1 1

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	08:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	08:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
08:30 AM	08:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
08:45 AM	09:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
09:00 AM	09:15 AM	0	0	0	0	0	0	0	1	0	1	2	0	4
09:15 AM	09:30 AM	0	0	0	0	0	0	0	1	1	1	3	0	6
09:30 AM	09:45 AM	0	0	0	0	0	0	0	1	1	1	3	0	6
09:45 AM	10:00 AM	0	0	0	0	0	0	0	3	1	1	3	0	8
10:00 AM	10:15 AM	0	0	0	0	0	0	0	3	1	1	4	0	9
10:15 AM	10:30 AM	1	0	0	0	0	0	0	3	1	1	4	0	10
10:30 AM	10:45 AM	1	0	0	0	0	0	0	4	2	1	5	0	13
10:45 AM	11:00 AM	1	0	0	0	0	0	0	4	2	1	5	0	13
11:00 AM	11:15 AM	1	0	0	0	0	0	0	4	2	1	5	0	13
11:15 AM	11:30 AM	1	0	0	0	0	0	0	4	2	1	5	0	13
11:30 AM	11:45 AM	2	0	0	0	0	0	0	4	2	1	6	0	15
11:45 AM	12:00 PM	2	0	0	0	0	0	0	5	2	1	6	0	16
12:00 PM	12:15 PM	2	0	1	0	0	0	0	6	2	1	6	0	18
12:15 PM	12:30 PM	2	0	1	0	0	0	0	6	2	1	6	0	18
12:30 PM	12:45 PM	2	0	1	0	0	0	0	6	2	1	6	0	18
12:45 PM	01:00 PM	2	0	1	0	0	0	0	6	2	1	6	0	18
01:00 PM	01:15 PM	2	0	1	0	0	0	0	7	2	1	7	0	20
01:15 PM	01:30 PM	2	0	1	0	0	0	0	7	2	1	8	0	21
01:30 PM	01:45 PM	2	0	1	0	0	0	0	8	2	1	8	0	22
01:45 PM	02:00 PM	2	0	1	0	0	0	0	8	2	1	8	0	22
02:00 PM	02:15 PM	2	0	1	0	0	0	0	8	2	1	8	0	22
02:15 PM	02:30 PM	2	0	1	0	0	0	0	8	2	1	8	0	22
02:30 PM	02:45 PM	2	0	1	0	0	0	0	9	2	1	8	0	23
02:45 PM	03:00 PM	2	0	1	0	0	0	0	9	2	1	8	0	23
03:00 PM	03:15 PM	2	0	1	0	0	0	0	9	2	1	9	0	24
03:15 PM	03:30 PM	2	0	1	0	0	0	0	9	2	1	9	0	24
03:30 PM	03:45 PM	2	0	1	0	0	0	0	9	2	1	9	0	24
03:45 PM	04:00 PM	2	0	1	0	0	0	0	9	2	1	9	0	24
04:00 PM	04:15 PM	2	0	1	0	0	0	0	9	2	1	9	0	24
04:15 PM	04:30 PM	2	0	1	0	0	0	0	9	2	1	9	0	24
04:30 PM	04:45 PM	2	0	1	0	0	0	0	9	2	1	9	0	24
04:45 PM	05:00 PM	2	0	1	0	0	0	0	9	2	1	9	0	24

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY								
N-S Approach: DRIVEWAY 8		SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY								
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE				FILENAME: EA08LV54								
From	To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	1	0	1	0	2
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
10:15 AM	10:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	1	0	1	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	11:45 AM	1	0	0	0	0	0	0	0	0	0	1	0	2
11:45 AM	12:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
12:00 PM	12:15 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
12:15 PM	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	01:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:30 PM	01:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	08:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:30 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	09:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
08:30 AM	09:30 AM	0	0	0	0	0	0	0	0	1	1	1	0	3
08:45 AM	09:45 AM	0	0	0	0	0	0	0	0	1	1	1	0	3
09:00 AM	10:00 AM	0	0	0	0	0	0	0	2	1	1	1	0	5
09:15 AM	10:15 AM	0	0	0	0	0	0	0	2	1	0	2	0	5
09:30 AM	10:30 AM	1	0	0	0	0	0	0	2	0	0	1	0	4
09:45 AM	10:45 AM	1	0	0	0	0	0	0	3	1	0	0	0	4
10:00 AM	11:00 AM	1	0	0	0	0	0	0	1	1	0	1	0	3
10:15 AM	11:15 AM	1	0	0	0	0	0	0	1	1	0	1	0	3
10:30 AM	11:30 AM	0	0	0	0	0	0	0	1	1	0	1	0	3
10:45 AM	11:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
11:00 AM	12:00 PM	1	0	0	0	0	0	0	1	0	0	1	0	2
11:15 AM	12:15 PM	1	0	1	0	0	0	0	2	0	0	1	0	4
11:30 AM	12:30 PM	1	0	1	0	0	0	0	2	0	0	1	0	4
11:45 AM	12:45 PM	0	0	1	0	0	0	0	2	0	0	0	0	2
12:00 PM	01:00 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
12:15 PM	01:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
12:30 PM	01:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:45 PM	01:45 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
01:00 PM	02:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
01:15 PM	02:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
01:30 PM	02:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:45 PM	02:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:00 PM	03:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:15 PM	03:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
02:30 PM	03:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
02:45 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:00 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:15 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY											
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY											
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV55											
PEAK HOUR: 01:30 PM TO 02:30 PM								<div style="text-align: center;">ARRIVAL/DEPARTURE VOLUMES</div> <table border="1" style="margin: 0 auto; border-collapse: collapse;"> <tr><td>0</td><td>0</td></tr> <tr><td>3</td><td>2</td></tr> <tr><td>8</td><td>8</td></tr> <tr><td>0</td><td>1</td></tr> </table>				0	0	3	2	8	8	0	1
0	0																		
3	2																		
8	8																		
0	1																		
<div style="display: flex; justify-content: space-between;"> <div> HEAVY 5-AXLE <table border="1" style="margin: 0 auto; border-collapse: collapse;"> <tr><td>0</td><td>0</td><td>0</td></tr> </table> </div> <div> </div> </div>				0	0	0													
0	0	0																	
<div style="display: flex; justify-content: space-between;"> <div>EAST AVENUE</div> <div>DRIVEWAY 8</div> </div> <table border="1" style="margin: 0 auto; border-collapse: collapse;"> <tr><td>1</td><td>0</td><td>0</td></tr> </table>				1	0	0													
1	0	0																	

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	1	3	4
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	1	3	0	5
09:30 AM	09:45 AM	0	0	0	0	0	0	0	1	0	1	3	0	6
09:45 AM	10:00 AM	0	0	0	0	0	0	0	1	0	1	4	0	7
10:00 AM	10:15 AM	0	0	0	0	0	0	0	1	0	1	5	0	8
10:15 AM	10:30 AM	0	0	0	0	0	0	0	2	0	1	5	0	13
10:30 AM	10:45 AM	0	0	0	0	0	0	0	3	1	1	8	0	15
10:45 AM	11:00 AM	0	0	1	0	0	0	0	4	1	1	8	0	16
11:00 AM	11:15 AM	0	0	1	0	0	0	0	4	1	2	8	0	18
11:15 AM	11:30 AM	0	0	1	0	0	0	0	5	1	2	9	0	20
11:30 AM	11:45 AM	0	0	1	0	0	0	0	7	1	2	9	0	21
11:45 AM	12:00 PM	1	0	1	0	0	0	0	7	1	2	9	0	24
12:00 PM	12:15 PM	1	0	1	0	0	0	0	8	2	2	10	0	26
12:15 PM	12:30 PM	1	0	1	0	0	0	0	8	2	2	12	0	28
12:30 PM	12:45 PM	1	0	1	0	0	0	0	10	2	2	12	0	30
12:45 PM	01:00 PM	1	0	1	0	0	0	0	10	3	2	13	0	32
01:00 PM	01:15 PM	1	0	1	0	0	0	0	11	4	2	13	0	33
01:15 PM	01:30 PM	2	0	1	0	0	0	0	11	4	2	13	0	35
01:30 PM	01:45 PM	2	0	1	0	0	0	0	13	4	2	13	0	39
01:45 PM	02:00 PM	2	0	1	0	0	0	0	16	4	2	14	0	42
02:00 PM	02:15 PM	2	0	1	0	0	0	0	18	4	2	15	0	44
02:15 PM	02:30 PM	3	0	1	0	0	0	0	19	4	2	15	0	45
02:30 PM	02:45 PM	3	0	2	0	0	0	0	19	4	2	15	0	48
02:45 PM	03:00 PM	3	0	2	0	0	0	0	19	4	2	15	0	49
03:00 PM	03:15 PM	4	0	2	0	0	0	0	20	4	2	16	0	49
03:15 PM	03:30 PM	4	0	2	0	0	0	0	21	4	2	16	0	49
03:30 PM	03:45 PM	4	0	2	0	0	0	0	21	4	2	16	0	49
03:45 PM	04:00 PM	4	0	2	0	0	0	0	21	4	2	16	0	51
04:00 PM	04:15 PM	4	0	2	0	0	0	0	22	4	2	17	0	51
04:15 PM	04:30 PM	4	0	2	0	0	0	0	22	4	2	17	0	52
04:30 PM	04:45 PM	4	0	2	0	0	0	0	22	4	2	18	0	52
04:45 PM	05:00 PM	4	0	2	0	0	0	0	22	4	2	18	0	52

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources INTERSECTION TURNING MOVEMENT SUMMARY

[illegible]

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 7, 2002				DAY: FRIDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV56			
PEAK HOUR: 12:45 PM TO 01:45 PM											

HEAVY >5-AXLE

0	0	0
---	---	---

EAST AVENUE

0	0	0
---	---	---

DRIVEWAY 8

ARRIVAL / DEPARTURE VOLUMES

0	0
---	---

0	0
---	---

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
<i>SURVEY DATA</i>														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
10:00 AM	10:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:15 AM	10:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:15 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:30 AM	11:45 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
11:45 AM	12:00 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
12:00 PM	12:15 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
12:15 PM	12:30 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
12:30 PM	12:45 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
12:45 PM	01:00 PM	0	0	0	0	0	0	0	3	0	0	3	0	6
01:00 PM	01:15 PM	0	0	0	0	0	0	0	3	0	0	3	0	6
01:15 PM	01:30 PM	0	0	0	0	0	0	0	4	0	0	3	0	7
01:30 PM	01:45 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
01:45 PM	02:00 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
02:00 PM	02:15 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
02:15 PM	02:30 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
02:30 PM	02:45 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
02:45 PM	03:00 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
03:00 PM	03:15 PM	0	0	0	0	0	0	0	5	0	0	3	0	8
03:15 PM	03:30 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
03:30 PM	03:45 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
03:45 PM	04:00 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
04:00 PM	04:15 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
04:15 PM	04:30 PM	0	0	0	0	0	0	0	6	0	0	4	0	10
04:30 PM	04:45 PM	0	0	0	0	0	0	0	6	0	0	4	0	10
04:45 PM	05:00 PM	0	0	0	0	0	0	0	6	0	0	4	0	10

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources INTERSECTION TURNING MOVEMENT SUMMARY

INTERSECTION TURNING MOVEMENT SUMMARY

[illegible]

Truck Counts

Locations 7 and 8

Monday, December 10, 2001

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS					SURVEY DATE: DECEMBER 10, 2002					DAY: MONDAY				
N-S Approach: DRIVEWAY 7					SURVEY TIME: 7:00 AM TO 5:00 PM					WEATHER: SUNNY				
E-W Approach: EAST AVENUE					JURISDICTION: LIVERMORE					FILENAME: EA07LVIT				
From	To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	3	29	0	0	97	0	129
07:15 AM	07:30 AM	0	0	0	0	0	0	2	37	0	0	90	0	129
07:30 AM	07:45 AM	0	0	0	0	0	0	3	34	0	0	73	0	110
07:45 AM	08:00 AM	0	0	0	0	0	0	1	39	0	0	91	0	131
08:00 AM	08:15 AM	0	0	0	0	0	0	1	45	0	0	79	1	126
08:15 AM	08:30 AM	0	0	0	0	0	0	0	37	0	0	70	1	108
08:30 AM	08:45 AM	0	0	0	0	0	0	0	34	0	0	54	2	90
08:45 AM	09:00 AM	0	0	0	0	0	0	2	37	0	0	47	1	87
09:00 AM	09:15 AM	0	0	0	0	0	0	13	38	0	0	45	0	96
09:15 AM	09:30 AM	0	0	0	0	0	0	5	26	0	0	43	0	74
09:30 AM	09:45 AM	0	0	0	0	0	1	2	19	0	0	21	0	43
09:45 AM	10:00 AM	0	0	0	0	0	0	2	19	0	0	34	0	55
10:00 AM	10:15 AM	0	0	0	0	0	2	2	21	0	0	23	1	49
10:15 AM	10:30 AM	0	0	0	0	0	1	3	16	0	0	18	1	39
10:30 AM	10:45 AM	0	0	0	0	0	3	1	19	0	0	18	0	41
10:45 AM	11:00 AM	0	0	0	0	0	2	0	20	0	0	22	1	45
11:00 AM	11:15 AM	0	0	0	2	0	3	3	15	0	0	13	2	38
11:15 AM	11:30 AM	0	0	0	0	0	0	4	17	0	0	33	0	54
11:30 AM	11:45 AM	0	0	0	1	0	4	3	28	0	0	37	0	73
11:45 AM	12:00 PM	0	0	0	1	0	3	4	19	0	0	46	1	74
12:00 PM	12:15 PM	0	0	0	0	0	3	3	28	0	0	39	2	75
12:15 PM	12:30 PM	0	0	0	1	0	2	2	31	0	0	31	0	67
12:30 PM	12:45 PM	0	0	0	1	0	3	2	14	0	0	20	1	41
12:45 PM	01:00 PM	0	0	0	1	0	6	3	45	0	0	34	1	90
01:00 PM	01:15 PM	0	0	0	1	0	10	3	25	0	0	28	0	67
01:15 PM	01:30 PM	0	0	0	2	0	2	1	26	0	0	27	1	59
01:30 PM	01:45 PM	0	0	0	2	0	1	7	24	0	0	14	3	51
01:45 PM	02:00 PM	0	0	0	1	0	3	2	26	0	0	19	1	52
02:00 PM	02:15 PM	0	0	0	3	0	1	1	21	0	0	13	2	47
02:15 PM	02:30 PM	0	0	0	0	0	2	1	18	0	0	19	0	40
02:30 PM	02:45 PM	0	0	0	2	0	6	4	24	0	0	9	0	45
02:45 PM	03:00 PM	0	0	0	1	0	2	2	23	0	0	21	0	49
03:00 PM	03:15 PM	0	0	0	1	0	6	4	32	0	0	15	0	58
03:15 PM	03:30 PM	0	0	0	0	0	4	4	48	0	0	22	0	78
03:30 PM	03:45 PM	0	0	0	2	0	4	2	61	0	0	17	0	86
03:45 PM	04:00 PM	0	0	0	1	0	6	0	62	0	0	22	0	91
04:00 PM	04:15 PM	0	0	0	0	0	2	0	63	0	0	20	0	85
04:15 PM	04:30 PM	0	0	0	1	0	0	0	78	0	0	24	0	103
04:30 PM	04:45 PM	0	0	0	1	0	0	0	74	0	0	19	0	94
04:45 PM	05:00 PM	0	0	0	0	0	0	0	90	0	0	24	0	114
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	9	139	0	0	351	0	499
07:15 AM	08:15 AM	0	0	0	0	0	0	7	155	0	0	333	1	496
07:30 AM	08:30 AM	0	0	0	0	0	0	5	155	0	0	313	2	475
07:45 AM	08:45 AM	0	0	0	0	0	0	2	155	0	0	294	4	455
08:00 AM	09:00 AM	0	0	0	0	0	0	3	153	0	0	250	5	411
08:15 AM	09:15 AM	0	0	0	0	0	0	15	146	0	0	216	4	381
08:30 AM	09:30 AM	0	0	0	0	0	0	20	133	0	0	189	3	347
08:45 AM	09:45 AM	0	0	0	0	0	1	22	120	0	0	156	1	300
09:00 AM	10:00 AM	0	0	0	0	0	1	22	102	0	0	143	0	268
09:15 AM	10:15 AM	0	0	0	0	0	3	11	85	0	0	121	1	227
09:30 AM	10:30 AM	0	0	0	0	0	4	9	75	0	0	96	2	186
09:45 AM	10:45 AM	0	0	0	0	0	6	8	75	0	0	93	2	184
10:00 AM	11:00 AM	0	0	0	0	0	8	6	76	0	0	81	3	174
10:15 AM	11:15 AM	0	0	0	2	0	9	7	70	0	0	71	4	163
10:30 AM	11:30 AM	0	0	0	2	0	8	8	71	0	0	86	3	178
10:45 AM	11:45 AM	0	0	0	3	0	9	10	80	0	0	105	3	210
11:00 AM	12:00 PM	0	0	0	4	0	10	14	79	0	0	129	3	239
11:15 AM	12:15 PM	0	0	0	2	0	10	14	92	0	0	155	3	276
11:30 AM	12:30 PM	0	0	0	3	0	12	12	106	0	0	153	3	289
11:45 AM	12:45 PM	0	0	0	3	0	11	11	92	0	0	136	4	257
12:00 PM	01:00 PM	0	0	0	3	0	14	10	118	0	0	124	4	273
12:15 PM	01:15 PM	0	0	0	4	0	21	10	115	0	0	113	2	265
12:30 PM	01:30 PM	0	0	0	5	0	21	9	110	0	0	109	3	257
12:45 PM	01:45 PM	0	0	0	6	0	19	14	120	0	0	103	5	267
01:00 PM	02:00 PM	0	0	0	6	0	16	13	101	0	0	88	5	229
01:15 PM	02:15 PM	0	0	0	8	0	7	11	97	0	0	73	7	203
01:30 PM	02:30 PM	0	0	0	6	0	7	11	89	0	0	65	6	184
01:45 PM	02:45 PM	0	0	0	6	0	12	8	89	0	0	60	3	178
02:00 PM	03:00 PM	0	0	0	6	0	11	8	86	0	0	62	2	175
02:15 PM	03:15 PM	0	0	0	4	0	16	11	97	0	0	64	0	192
02:30 PM	03:30 PM	0	0	0	4	0	18	14	127	0	0	67	0	230
02:45 PM	03:45 PM	0	0	0	4	0	16	12	164	0	0	75	0	271
03:00 PM	04:00 PM	0	0	0	4	0	20	10	203	0	0	76	0	313
03:15 PM	04:15 PM	0	0	0	3	0	16	6	234	0	0	81	0	340
03:30 PM	04:30 PM	0	0	0	4	0	12	2	264	0	0	83	0	365
03:45 PM	04:45 PM	0	0	0	3	0	8	0	277	0	0	85	0	373
04:00 PM	05:00 PM	0	0	0	2	0	2	0	305	0	0	87	0	396
SF/PENINSULA: (415) 750-1317					ALAMEDA: (510) 233-229 2					CONTRA COSTA: (510) 232-1271				

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 10, 2002		DAY: MONDAY										
N-S Approach: DRIVEWAY 7		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY										
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA07LV1A										
PEAK HOUR: 07:00 AM TO 08:00 AM														
<p>AUTO ONLY</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;">0</div> <div style="border: 1px solid black; padding: 5px;">0</div> <div style="border: 1px solid black; padding: 5px;">0</div> </div> <p style="text-align: center;">TOTAL 495</p> <p style="text-align: center;">EAST AVENUE</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;">0</div> <div style="border: 1px solid black; padding: 5px;">0</div> <div style="border: 1px solid black; padding: 5px;">0</div> </div> <p style="text-align: center;">DRIVEWAY 7</p>		<p>ARRIVAL / DEPARTURE VOLUMES</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;">0</div> <div style="border: 1px solid black; padding: 5px;">9</div> </div> <p style="text-align: center;">351</p> <p style="text-align: center;">144</p> <p style="text-align: center;">135</p> <p style="text-align: center;">0</p> <p style="text-align: center;">0</p>												
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	3	29	0	0	97		129
07:15 AM	07:30 AM	0	0	0	0	0	0	5	66	0	0	187		258
07:30 AM	07:45 AM	0	0	0	0	0	0	8	98	0	0	260		366
07:45 AM	08:00 AM	0	0	0	0	0	0	9	135	0	0	351		495
08:00 AM	08:15 AM	0	0	0	0	0	0	10	179	0	0	430		620
08:15 AM	08:30 AM	0	0	0	0	0	0	9	213	0	0	490		723
08:30 AM	08:45 AM	0	0	0	0	0	0	9	246	0	0	553		811
08:45 AM	09:00 AM	0	0	0	0	0	0	11	280	0	0	599		894
09:00 AM	09:15 AM	0	0	0	0	0	0	23	316	0	0	643		986
09:15 AM	09:30 AM	0	0	0	0	0	0	28	341	0	0	685		1,058
09:30 AM	09:45 AM	0	0	0	0	0	1	30	357	0	0	703		1,095
09:45 AM	10:00 AM	0	0	0	0	0	1	30	372	0	0	733		1,140
10:00 AM	10:15 AM	0	0	0	0	0	2	30	389	0	0	751		1,177
10:15 AM	10:30 AM	0	0	0	0	0	3	33	402	0	0	765		1,209
10:30 AM	10:45 AM	0	0	0	0	0	6	33	417	0	0	776		1,238
10:45 AM	11:00 AM	0	0	0	0	0	6	31	430	0	0	795		1,268
11:00 AM	11:15 AM	0	0	0	1	0	7	33	445	0	0	805		1,299
11:15 AM	11:30 AM	0	0	0	1	0	7	33	458	0	0	834		1,341
11:30 AM	11:45 AM	0	0	0	2	0	10	35	479	0	0	876		1,404
11:45 AM	12:00 PM	0	0	0	2	0	13	39	493	0	0	913		1,469
12:00 PM	12:15 PM	0	0	0	2	0	15	42	518	0	0	949		1,537
12:15 PM	12:30 PM	0	0	0	3	0	17	43	548	0	0	978		1,600
12:30 PM	12:45 PM	0	0	0	3	0	19	45	555	0	0	993		1,626
12:45 PM	01:00 PM	0	0	0	4	0	23	48	596	0	0	1,026		1,708
01:00 PM	01:15 PM	0	0	0	4	0	33	49	621	0	0	1,052		1,770
01:15 PM	01:30 PM	0	0	0	4	0	35	50	647	0	0	1,078		1,826
01:30 PM	01:45 PM	0	0	0	6	0	35	56	670	0	0	1,092		1,874
01:45 PM	02:00 PM	0	0	0	7	0	36	58	695	0	0	1,108		1,920
02:00 PM	02:15 PM	0	0	0	10	0	36	59	713	0	0	1,116		1,952
02:15 PM	02:30 PM	0	0	0	10	0	36	59	729	0	0	1,134		1,986
02:30 PM	02:45 PM	0	0	0	12	0	41	62	753	0	0	1,141		2,027
02:45 PM	03:00 PM	0	0	0	13	0	42	63	776	0	0	1,161		2,073
03:00 PM	03:15 PM	0	0	0	13	0	48	67	808	0	0	1,174		2,128
03:15 PM	03:30 PM	0	0	0	13	0	52	71	856	0	0	1,195		2,205
03:30 PM	03:45 PM	0	0	0	15	0	56	73	915	0	0	1,212		2,289
03:45 PM	04:00 PM	0	0	0	15	0	61	73	975	0	0	1,232		2,374
04:00 PM	04:15 PM	0	0	0	15	0	63	73	1,035	0	0	1,251		2,455
04:15 PM	04:30 PM	0	0	0	16	0	63	73	1,113	0	0	1,275		2,558
04:30 PM	04:45 PM	0	0	0	17	0	63	73	1,185	0	0	1,294		2,650
04:45 PM	05:00 PM	0	0	0	17	0	63	73	1,274	0	0	1,316		2,761

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 10, 2002		DAY: MONDAY	
N-S Approach: DRIVEWAY 7		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY	
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA07LV13	
PEAK HOUR: 10:45 AM TO 11:45 AM					

HEAVY 3-AXLE

0	0	1
---	---	---

TOTAL
6

EAST AVENUE

0	0	0
---	---	---

DRIVEWAY 7

ARRIVAL / DEPARTURE VOLUMES

1	1
---	---

0	0
---	---

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
09:30 AM	09:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
09:45 AM	10:00 AM	0	0	0	0	0	0	1	2	0	0	1	0	4
10:00 AM	10:15 AM	0	0	0	0	0	0	1	2	0	0	1	0	4
10:15 AM	10:30 AM	0	0	0	0	0	0	1	2	0	0	2	0	5
10:30 AM	10:45 AM	0	0	0	0	0	0	1	2	0	0	2	0	5
10:45 AM	11:00 AM	0	0	0	0	0	0	2	4	0	0	2	0	8
11:00 AM	11:15 AM	0	0	0	0	0	0	2	5	0	0	2	0	9
11:15 AM	11:30 AM	0	0	0	1	0	0	2	4	0	0	3	0	10
11:30 AM	11:45 AM	0	0	0	1	0	0	2	5	0	0	3	0	11
11:45 AM	12:00 PM	0	0	0	1	0	1	2	5	0	0	3	0	12
12:00 PM	12:15 PM	0	0	0	1	0	1	2	5	0	0	3	0	12
12:15 PM	12:30 PM	0	0	0	1	0	1	2	5	0	0	3	0	12
12:30 PM	12:45 PM	0	0	0	1	0	1	2	7	0	0	3	0	14
12:45 PM	01:00 PM	0	0	0	1	0	1	2	7	0	0	3	0	14
01:00 PM	01:15 PM	0	0	0	1	0	1	2	7	0	0	3	0	14
01:15 PM	01:30 PM	0	0	0	1	0	1	2	8	0	0	3	0	15
01:30 PM	01:45 PM	0	0	0	1	0	1	2	8	0	0	3	0	15
01:45 PM	02:00 PM	0	0	0	1	0	1	2	8	0	0	3	0	15
02:00 PM	02:15 PM	0	0	0	1	0	1	2	8	0	0	5	0	17
02:15 PM	02:30 PM	0	0	0	1	0	1	2	8	0	0	5	0	17
02:30 PM	02:45 PM	0	0	0	1	0	1	2	8	0	0	5	0	17
02:45 PM	03:00 PM	0	0	0	1	0	1	2	8	0	0	5	0	17
03:00 PM	03:15 PM	0	0	0	1	0	1	2	8	0	0	5	0	17
03:15 PM	03:30 PM	0	0	0	1	0	1	2	8	0	0	5	0	17
03:30 PM	03:45 PM	0	0	0	1	0	1	2	8	0	0	5	0	17
03:45 PM	04:00 PM	0	0	0	1	0	1	2	8	0	0	6	0	18
04:00 PM	04:15 PM	0	0	0	1	0	1	2	10	0	0	6	0	20
04:15 PM	04:30 PM	0	0	0	1	0	1	2	10	0	0	6	0	20
04:30 PM	04:45 PM	0	0	0	1	0	1	2	10	0	0	6	0	20
04:45 PM	05:00 PM	0	0	0	1	0	1	2	10	0	0	6	0	20
SF/PENINSULA: (415) 750-1317														
ALAMEDA: (510) 233-229 2														
CONTRA COSTA: (510) 232-1271														

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1275

INTERSECTION TURNING MOVEMENT SUMMARY

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	----- 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	----- 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	----- 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	----- 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	----- 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	----- 08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:30 AM	----- 08:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:45 AM	----- 09:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
09:00 AM	----- 09:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
09:15 AM	----- 09:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
09:30 AM	----- 09:45 AM	0	0	0	0	0	0	0	4	0	0	1	0	5
09:45 AM	----- 10:00 AM	0	0	0	0	0	0	0	4	0	0	1	0	5
10:00 AM	----- 10:15 AM	0	0	0	0	0	0	0	4	0	0	1	0	5
10:15 AM	----- 10:30 AM	0	0	0	0	0	0	0	4	0	0	1	0	5
10:30 AM	----- 10:45 AM	0	0	0	0	0	0	0	4	0	0	2	0	6
10:45 AM	----- 11:00 AM	0	0	0	0	0	0	0	5	0	0	4	0	9
11:00 AM	----- 11:15 AM	0	0	0	0	0	0	1	5	0	0	4	0	10
11:15 AM	----- 11:30 AM	0	0	0	0	0	0	1	6	0	0	4	0	11
11:30 AM	----- 11:45 AM	0	0	0	0	0	0	1	6	0	0	4	0	11
11:45 AM	----- 12:00 PM	0	0	0	0	0	0	1	7	0	0	5	0	13
12:00 PM	----- 12:15 PM	0	0	0	0	0	0	1	8	0	0	6	0	15
12:15 PM	----- 12:30 PM	0	0	0	0	0	0	1	8	0	0	6	0	15
12:30 PM	----- 12:45 PM	0	0	0	0	0	0	1	8	0	0	6	0	15
12:45 PM	----- 01:00 PM	0	0	0	0	0	0	1	8	0	0	6	0	15
01:00 PM	----- 01:15 PM	0	0	0	0	0	0	1	8	0	0	6	0	15
01:15 PM	----- 01:30 PM	0	0	0	0	0	0	1	9	0	0	6	0	16
01:30 PM	----- 01:45 PM	0	0	0	0	0	0	1	9	0	0	6	0	16
01:45 PM	----- 02:00 PM	0	0	0	0	0	1	1	9	0	0	6	0	17
02:00 PM	----- 02:15 PM	0	0	0	0	0	1	1	9	0	0	6	0	17
02:15 PM	----- 02:30 PM	0	0	0	0	0	1	1	9	0	0	6	0	17
02:30 PM	----- 02:45 PM	0	0	0	0	0	1	1	9	0	0	7	0	18
02:45 PM														

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 10, 2002				DAY: MONDAY			
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV15			
PEAK HOUR: 11:15 AM TO 12:15 PM											

HEAVY 5-AXLE: 1 0 1

EAST AVENUE

DRIVEWAY 7

ARRIVAL/DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	----- 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	----- 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	----- 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	----- 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	----- 08:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15 AM	----- 08:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
08:30 AM	----- 08:45 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
08:45 AM	----- 09:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
09:00 AM	----- 09:15 AM	0	0	0	0	0	0	1	2	0	0	1	0	4
09:15 AM	----- 09:30 AM	0	0	0	0	0	0	1	2	0	0	2	0	5
09:30 AM	----- 09:45 AM	0	0	0	0	0	0	1	3	0	0	3	0	7
09:45 AM	----- 10:00 AM	0	0	0	0	0	0	1	4	0	0	4	0	9
10:00 AM	----- 10:15 AM	0	0	0	0	0	0	1	5	0	0	4	0	10
10:15 AM	----- 10:30 AM	0	0	0	0	0	0	1	5	0	0	4	0	10
10:30 AM	----- 10:45 AM	0	0	0	0	0	0	2	5	0	0	6	0	13
10:45 AM	----- 11:00 AM	0	0	0	0	0	1	2	5	0	0	6	1	15
11:00 AM	----- 11:15 AM	0	0	0	0	0	1	2	5	0	0	6	1	15
11:15 AM	----- 11:30 AM	0	0	0	0	0	1	4	5	0	0	7	1	18
11:30 AM	----- 11:45 AM	0	0	0	0	0	1	4	8	0	0	8	1	22
11:45 AM	----- 12:00 PM	0	0	0	1	0	1	4	9	0	0	8	1	24
12:00 PM	----- 12:15 PM	0	0	0	1	0	2	4	9	0	0	8	1	25
12:15 PM	----- 12:30 PM	0	0	0	1	0	2	4	9	0	0	9	1	26
12:30 PM	----- 12:45 PM	0	0	0	1	0	2	4	9	0	0	13	1	30
12:45 PM	----- 01:00 PM	0	0	0	1	0	4	4	10	0	0	13	1	33
01:00 PM	----- 01:15 PM	0	0	0	1	0	4	4	11	0	0	13	1	34
01:15 PM	----- 01:30 PM	0	0	0	1	0	4	4	11	0	0	14	1	35
01:30 PM	----- 01:45 PM	0	0	0	1	0	5	4	11	0	0	14	1	36
01:45 PM	----- 02:00 PM	0	0	0	1	0	5	4	11	0	0	15	1	37
02:00 PM	----- 02:15 PM	0	0	0	1	0	5	4	12	0	0	15	1	38
02:15 PM	----- 02:30 PM	0	0	0	1	0	5	4	13	0	0	15	1	39
02:30 PM	----- 02:45 PM	0	0	0	1	0	5	4	13	0	0	15	1	39
02:45 PM	----- 03:00 PM	0	0	0	1	0	5	5	13	0	0	15	1	40
03:00 PM	----- 03:15 PM	0	0	0	1	0	5	5	13	0	0	17	1	42
03:15 PM	----- 03:30 PM	0	0	0	1	0	5	5	13	0	0	17	1	42
03:30 PM	----- 03:45 PM	0	0	0	1	0	5	5	14	0	0	17	1	43
03:45 PM	----- 04:00 PM	0	0	0	1	0	5	5	15	0	0	18	1	45
04:00 PM	----- 04:15 PM	0	0	0	1	0	5	5	15	0	0	19	1	46
04:15 PM	----- 04:30 PM	0	0	0	1	0	5	5	15	0	0	19	1	46
04:30 PM	----- 04:45 PM	0	0	0	1	0	5	5	17	0	0	19	1	48
04:45 PM	----- 05:00 PM	0	0	0	1	0	5	5	17	0	0	20	1	49

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-229 2
CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 10, 2002				DAY: MONDAY			
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV16			
PEAK HOUR: 09:45 AM TO 10:45 AM											
HEAVY >5-AXLE		0 0 0									

TOTAL
3

ARRIVAL/DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
<i>SURVEY DATA</i>														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:15 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:30 AM	11:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:45 AM	12:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:00 PM	12:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:15 PM	12:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:30 PM	12:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:45 PM	01:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
01:00 PM	01:15 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:15 PM	01:30 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:30 PM	01:45 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:45 PM	02:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:00 PM	02:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:15 PM	02:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:30 PM	02:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:45 PM	03:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:00 PM	03:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:15 PM	03:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:30 PM	03:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:45 PM	04:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:00 PM	04:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:15 PM	04:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:30 PM	04:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:45 PM	05:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-229 2
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS			SURVEY DATE: DECEMBER 10, 2002			DAY: MONDAY								
N-S Approach: DRIVEWAY 7			SURVEY TIME: 7:00 AM TO 5:00 PM			WEATHER: SUNNY								
E-W Approach: EAST AVENUE			JURISDICTION: LIVERMORE			FILENAME: EA07LV16								
From	To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:45 AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	02:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
09:15 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
09:30 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
09:45 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:00 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:15 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:30 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:45 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:45 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:00 PM	02:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
01:15 PM	02:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:30 PM	02:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:45 PM	02:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:00 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 10, 2002		DAY: MONDAY									
N-S Approach: DRIVEWAY 8		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY									
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA08LV1A									
PEAK HOUR: 09:45 AM TO 10:45 AM													
<p>AUTO ONLY</p> <table border="1" style="margin: 10px auto; width: 150px;"> <tr><td>0</td><td>0</td><td>0</td></tr> </table>		0	0	0	<p>↑ NORTH</p>								
0	0	0											
		<p>ARRIVAL / DEPARTURE VOLUMES</p> <table border="1" style="margin: 10px auto; width: 150px;"> <tr><td>0</td><td>0</td></tr> <tr><td>331</td><td>150</td></tr> <tr><td>389</td><td>86</td></tr> <tr><td>161</td><td>39</td></tr> </table>				0	0	331	150	389	86	161	39
0	0												
331	150												
389	86												
161	39												

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	6	0	2	0	0	0	0	16	13	7	94	0	138
07:15 AM	07:30 AM	13	0	5	0	0	0	0	29	37	21	174	0	279
07:30 AM	07:45 AM	14	0	18	0	0	0	0	46	52	48	246	0	424
07:45 AM	08:00 AM	18	0	22	0	0	0	0	60	75	62	333	0	570
08:00 AM	08:15 AM	21	0	26	0	0	0	0	78	101	80	410	0	716
08:15 AM	08:30 AM	30	0	33	0	0	0	0	93	120	84	471	0	831
08:30 AM	08:45 AM	31	0	41	0	0	0	0	114	132	95	525	0	938
08:45 AM	09:00 AM	33	0	48	0	0	0	0	132	148	102	570	0	1,033
09:00 AM	09:15 AM	37	0	53	0	0	0	0	144	172	103	609	0	1,118
09:15 AM	09:30 AM	49	0	56	0	0	0	0	165	176	107	637	0	1,190
09:30 AM	09:45 AM	58	0	60	0	0	0	0	181	176	115	645	0	1,235
09:45 AM	10:00 AM	73	0	63	0	0	0	0	196	176	122	660	0	1,290
10:00 AM	10:15 AM	76	0	64	0	0	0	0	213	176	128	676	0	1,333
10:15 AM	10:30 AM	78	0	69	0	0	0	0	225	177	132	689	0	1,370
10:30 AM	10:45 AM	79	0	71	0	0	0	0	239	178	136	699	0	1,402
10:45 AM	11:00 AM	80	0	78	0	0	0	0	248	182	143	718	0	1,449
11:00 AM	11:15 AM	83	0	78	0	0	0	0	263	182	151	727	0	1,484
11:15 AM	11:30 AM	89	0	79	0	0	0	0	274	183	153	750	0	1,528
11:30 AM	11:45 AM	99	0	84	0	0	0	0	292	185	157	776	0	1,593
11:45 AM	12:00 PM	117	0	91	0	0	0	0	308	185	161	802	0	1,664
12:00 PM	12:15 PM	124	0	93	0	0	0	0	332	186	164	833	0	1,732
12:15 PM	12:30 PM	130	0	97	0	0	0	0	358	191	166	856	0	1,798
12:30 PM	12:45 PM	133	0	101	0	0	0	0	361	195	170	869	0	1,829
12:45 PM	01:00 PM	145	0	103	0	0	0	0	383	215	176	891	0	1,913
01:00 PM	01:15 PM	154	0	105	0	0	0	0	400	223	180	908	0	1,970
01:15 PM	01:30 PM	158	0	111	0	0	0	0	422	227	187	931	0	2,036
01:30 PM	01:45 PM	160	0	111	0	0	0	0	437	237	190	946	0	2,081
01:45 PM	02:00 PM	168	0	113	0	0	0	0	455	245	195	955	0	2,131
02:00 PM	02:15 PM	171	0	113	0	0	0	0	473	248	197	962	0	2,164
02:15 PM	02:30 PM	174	0	116	0	0	0	0	484	252	202	977	0	2,205
02:30 PM	02:45 PM	174	0	120	0	0	0	0	510	252	207	984	0	2,247
02:45 PM	03:00 PM	176	0	128	0	0	0	0	534	252	208	1,002	0	2,300
03:00 PM	03:15 PM	178	0	132	0	0	0	0	563	256	211	1,013	0	2,353
03:15 PM	03:30 PM	184	0	137	0	0	0	0	611	256	213	1,028	0	2,429
03:30 PM	03:45 PM	185	0	147	0	0	0	0	672	256	214	1,044	0	2,518
03:45 PM	04:00 PM	188	0	162	0	0	0	0	728	260	218	1,061	0	2,617
04:00 PM	04:15 PM	192	0	177	0	0	0	0	787	261	221	1,076	0	2,714
04:15 PM	04:30 PM	198	0	196	0	0	0	0	865	262	224	1,094	0	2,839
04:30 PM	04:45 PM	206	0	222	0	0	0	0	937	263	225	1,105	0	2,958
04:45 PM	05:00 PM	216	0	263	0	0	0	0	1,024	265	226	1,117	0	3,111

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-229 2

CONTRA COSTA: (510) 233-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS			SURVEY DATE: DECEMBER 10, 2002			DAY: MONDAY								
N-S Approach: DRIVEWAY 8			SURVEY TIME: 7:00 AM TO 5:00 PM			WEATHER: SUNNY								
E-W Approach: EAST AVENUE			JURISDICTION: LIVERMORE			FILENAME: EA08LV12								
From	To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	2	0	0	0	2
07:45 AM	08:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
08:00 AM	08:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	1	1	0	0	2
08:30 AM	08:45 AM	0	0	0	0	0	0	0	1	0	1	1	0	3
08:45 AM	09:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
09:00 AM	09:15 AM	2	0	0	0	0	0	0	1	1	0	0	0	4
09:15 AM	09:30 AM	1	0	2	0	0	0	0	0	0	0	1	0	4
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	1	0	1	0	0	0	0	2	0	0	0	0	4
10:00 AM	10:15 AM	4	0	1	0	0	0	0	0	3	2	1	0	11
10:15 AM	10:30 AM	1	0	1	0	0	0	0	0	3	1	2	0	8
10:30 AM	10:45 AM	3	0	0	0	0	0	0	1	2	3	1	0	10
10:45 AM	11:00 AM	0	0	1	0	0	0	0	4	0	0	1	0	6
11:00 AM	11:15 AM	1	0	3	0	0	0	0	0	0	1	2	0	7
11:15 AM	11:30 AM	2	0	0	0	0	0	0	3	1	2	0	0	8
11:30 AM	11:45 AM	0	0	0	0	0	0	0	1	2	0	0	0	3
11:45 AM	12:00 PM	1	0	1	0	0	0	0	2	1	2	1	0	8
12:00 PM	12:15 PM	2	0	0	0	0	0	0	1	1	0	0	0	4
12:15 PM	12:30 PM	1	0	0	0	0	0	0	0	1	1	0	0	3
12:30 PM	12:45 PM	1	0	1	0	0	0	0	5	1	1	0	0	9
12:45 PM	01:00 PM	0	0	0	0	0	0	0	1	2	0	1	0	4
01:00 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	01:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
02:00 PM	02:15 PM	1	0	0	0	0	0	0	1	1	2	2	0	7
02:15 PM	02:30 PM	1	0	1	0	0	0	0	1	0	0	0	0	3
02:30 PM	02:45 PM	0	0	2	0	0	0	0	0	0	0	1	0	3
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:30 PM	03:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
04:00 PM	04:15 PM	0	0	1	0	0	0	0	1	0	0	0	0	2
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	1	3	0	0	0	4
07:15 AM	08:15 AM	0	0	1	0	0	0	0	1	3	0	0	0	5
07:30 AM	08:30 AM	0	0	1	0	0	0	0	1	4	1	0	0	7
07:45 AM	08:45 AM	0	0	1	0	0	0	0	2	2	2	1	0	8
08:00 AM	09:00 AM	0	0	1	0	0	0	0	3	1	2	2	0	9
08:15 AM	09:15 AM	2	0	0	0	0	0	0	4	2	2	2	0	12
08:30 AM	09:30 AM	3	0	2	0	0	0	0	4	1	1	3	0	14
08:45 AM	09:45 AM	3	0	2	0	0	0	0	3	1	0	2	0	11
09:00 AM	10:00 AM	4	0	3	0	0	0	0	3	1	0	1	0	12
09:15 AM	10:15 AM	6	0	4	0	0	0	0	2	3	2	2	0	19
09:30 AM	10:30 AM	6	0	3	0	0	0	0	2	6	3	3	0	23
09:45 AM	10:45 AM	9	0	3	0	0	0	0	3	8	6	4	0	33
10:00 AM	11:00 AM	8	0	3	0	0	0	0	5	8	6	5	0	35
10:15 AM	11:15 AM	5	0	5	0	0	0	0	5	5	5	6	0	31
10:30 AM	11:30 AM	6	0	4	0	0	0	0	8	3	6	4	0	31
10:45 AM	11:45 AM	3	0	4	0	0	0	0	8	3	3	3	0	24
11:00 AM	12:00 PM	4	0	4	0	0	0	0	6	4	5	3	0	26
11:15 AM	12:15 PM	5	0	1	0	0	0	0	7	5	4	1	0	23
11:30 AM	12:30 PM	4	0	1	0	0	0	0	4	5	3	1	0	18
11:45 AM	12:45 PM	5	0	2	0	0	0	0	8	4	4	1	0	24
12:00 PM	01:00 PM	4	0	1	0	0	0	0	7	5	2	1	0	20
12:15 PM	01:15 PM	2	0	1	0	0	0	0	6	4	2	2	0	17
12:30 PM	01:30 PM	1	0	1	0	0	0	0	6	3	1	2	0	14
12:45 PM	01:45 PM	0	0	0	0	0	0	0	2	2	0	2	0	6
01:00 PM	02:00 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:15 PM	02:15 PM	1	0	0	0	0	0	0	2	1	2	4	0	10
01:30 PM	02:30 PM	2	0	1	0	0	0	0	3	1	2	4	0	13
01:45 PM	02:45 PM	2	0	3	0	0	0	0	2	1	2	5	0	15
02:00 PM	03:00 PM	2	0	3	0	0	0	0	2	1	2	4	0	14
02:15 PM	03:15 PM	1	0	3	0	0	0	0	1	0	0	2	0	7
02:30 PM	03:30 PM	0	0	2	0	0	0	0	0	0	0	3	0	5
02:45 PM	03:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
03:00 PM	04:00 PM	0	0	0	0	0	0	0	1	1	0	1	0	3
03:15 PM	04:15 PM	0	0	1	0	0	0	0	2	1	0	1	0	5
03:30 PM	04:30 PM	0	0	1	0	0	0	0	2	1	0	0	0	4
03:45 PM	04:45 PM	0	0	1	0	0	0	0	1	1	0	0	0	3
04:00 PM	05:00 PM	0	0	1	0	0	0	0	2	0	0	1	0	4

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 10, 2002		DAY: MONDAY										
N-S Approach: DRIVEWAY 8		SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY												
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA08LV13										
PEAK HOUR: 10:45 AM TO 11:45 AM														
HEAVY 3-AXLE: 0 0 0														
EAST AVENUE		DRIVEWAY 8												
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	OLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	1	0	1	0	2
09:45 AM	10:00 AM	0	0	0	0	0	0	0	1	1	0	1	0	3
10:00 AM	10:15 AM	0	0	0	0	0	0	0	1	1	0	1	0	3
10:15 AM	10:30 AM	1	0	0	0	0	0	0	1	1	0	1	0	4
10:30 AM	10:45 AM	1	0	0	0	0	0	0	1	1	0	1	0	4
10:45 AM	11:00 AM	1	0	0	0	0	0	0	3	1	0	1	0	6
11:00 AM	11:15 AM	1	0	0	0	0	0	0	4	1	0	1	0	7
11:15 AM	11:30 AM	1	0	0	0	0	0	0	4	1	0	2	0	8
11:30 AM	11:45 AM	1	0	0	0	0	0	0	5	1	0	2	0	9
11:45 AM	12:00 PM	1	0	0	0	0	0	0	5	1	0	2	0	9
12:00 PM	12:15 PM	1	0	0	0	0	0	0	5	1	0	2	0	9
12:15 PM	12:30 PM	1	0	0	0	0	0	0	5	1	0	2	0	9
12:30 PM	12:45 PM	1	0	0	0	0	0	0	7	1	0	2	0	11
12:45 PM	01:00 PM	1	0	0	0	0	0	0	7	1	0	2	0	11
01:00 PM	01:15 PM	1	0	0	0	0	0	0	7	1	0	2	0	11
01:15 PM	01:30 PM	1	0	0	0	0	0	0	8	1	0	2	0	12
01:30 PM	01:45 PM	1	0	0	0	0	0	0	8	1	0	2	0	12
01:45 PM	02:00 PM	1	0	0	0	0	0	0	8	1	0	2	0	12
02:00 PM	02:15 PM	1	0	0	0	0	0	0	8	1	0	4	0	14
02:15 PM	02:30 PM	1	0	0	0	0	0	0	8	1	0	4	0	14
02:30 PM	02:45 PM	1	0	0	0	0	0	0	8	1	0	4	0	14
02:45 PM	03:00 PM	1	0	0	0	0	0	0	8	1	0	4	0	14
03:00 PM	03:15 PM	1	0	0	0	0	0	0	8	1	0	4	0	14
03:15 PM	03:30 PM	1	0	0	0	0	0	0	8	1	0	4	0	14
03:30 PM	03:45 PM	1	0	0	0	0	0	0	8	1	0	4	0	14
03:45 PM	04:00 PM	1	0	0	0	0	0	0	8	1	0	5	0	15
04:00 PM	04:15 PM	1	0	0	0	0	0	0	10	1	0	5	0	17
04:15 PM	04:30 PM	1	0	0	0	0	0	0	10	1	0	5	0	17
04:30 PM	04:45 PM	1	0	0	0	0	0	0	10	1	0	5	0	17
04:45 PM	05:00 PM	1	0	0	0	0	0	0	10	1	0	5	0	17

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (S10) 233-229 2

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 10, 2002				DAY: MONDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY							
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV14			
PEAK HOUR: 10:45 AM		TO 11:45 AM						ARRIVAL / DEPARTURE VOLUMES 			
HEAVY 4-AXLE		0 0 0									
0 4 0		0 0 0									
2 0 0		0 0 0									

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	----- 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	----- 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	----- 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	----- 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	----- 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	----- 08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:30 AM	----- 08:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:45 AM	----- 09:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
09:00 AM	----- 09:15 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
09:15 AM	----- 09:30 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
09:30 AM	----- 09:45 AM	0	0	0	0	0	0	0	1	3	0	1	0	5
09:45 AM	----- 10:00 AM	0	0	0	0	0	0	0	1	3	0	1	0	5
10:00 AM	----- 10:15 AM	0	0	0	0	0	0	0	1	3	0	1	0	5
10:15 AM	----- 10:30 AM	0	0	0	0	0	0	0	1	3	0	1	0	5
10:30 AM	----- 10:45 AM	0	0	0	0	0	0	0	1	3	0	2	0	6
10:45 AM	----- 11:00 AM	2	0	0	0	0	0	0	2	3	0	2	0	9
11:00 AM	----- 11:15 AM	2	0	0	0	0	0	0	2	3	0	2	0	9
11:15 AM	----- 11:30 AM	2	0	0	0	0	0	0	3	3	0	2	0	10
11:30 AM	----- 11:45 AM	2	0	0	0	0	0	0	5	3	0	2	0	12
11:45 AM	----- 12:00 PM	2	0	0	0	0	0	0	5	3	0	3	0	13
12:00 PM	----- 12:15 PM	3	0	0	0	0	0	0	5	3	0	3	0	14
12:15 PM	----- 12:30 PM	3	0	0	0	0	0	0	5	3	0	3	0	14
12:30 PM	----- 12:45 PM	3	0	0	0	0	0	0	5	3	0	3	0	14
12:45 PM	----- 01:00 PM	3	0	0	0	0	0	0	5	3	0	3	0	14
01:00 PM	----- 01:15 PM	3	0	0	0	0	0	0	5	3	0	3	0	14
01:15 PM	----- 01:30 PM	3	0	0	0	0	0	0	6	3	0	3	0	15
01:30 PM	----- 01:45 PM	3	0	0	0	0	0	0	6	3	0	3	0	15
01:45 PM	----- 02:00 PM	3	0	0	0	0	0	0	6	3	0	3	0	15
02:00 PM	----- 02:15 PM	3	0	0	0	0	0	0	6	3	0	3	0	15
02:15 PM	----- 02:30 PM	3	0	0	0	0	0	0	6	3	0	3	0	15
02:30 PM	----- 02:45 PM	3	0	0	0	0	0	0	6	3	0	4	0	16
02:45 PM	----- 03:00 PM	3	0	0	0	0	0	0	6	3	0	4	0	16
03:00 PM	----- 03:15 PM	3	0	0	0	0	0	0	6	3	0	4	0	16
03:15 PM	----- 03:30 PM	3	0	0	0	0	0	0	6	3	0	4	0	16
03:30 PM	----- 03:45 PM	3	0	0	0	0	0	0	6	3	0	4	0	16
03:45 PM	----- 04:00 PM	3	0	0	0	0	0	0	7	3	0	4	0	17
04:00 PM	----- 04:15 PM	3	0	0	0	0	0	0	7	3	0	4	0	17
04:15 PM	----- 04:30 PM	3	0	0	0	0	0	0	7	3	0	4	0	17
04:30 PM	----- 04:45 PM	3	0	0	0	0	0	0	7	3	0	4	0	17
04:45 PM	----- 05:00 PM	3	0	0	0	0	0	0	7	3	0	4	0	17

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 10, 2002				DAY: MONDAY							
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY											
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV15							
PEAK HOUR: 09:30 AM TO 10:30 AM															
HEAVY 5-AXLE		0 0 0													
					<div style="text-align: center;">NORTH</div>										
					<div style="text-align: center;">EAST AVENUE</div>										
					<div style="text-align: center;">DRIVEWAY 8</div>										

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15 AM	08:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
08:30 AM	08:45 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
08:45 AM	09:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
09:00 AM	09:15 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
09:15 AM	09:30 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
09:30 AM	09:45 AM	0	0	0	0	0	0	0	3	0	0	4	0	7
09:45 AM	10:00 AM	0	0	0	0	0	0	0	3	1	0	5	0	9
10:00 AM	10:15 AM	0	0	0	0	0	0	0	3	2	0	5	0	10
10:15 AM	10:30 AM	0	0	1	0	0	0	0	3	2	1	5	0	12
10:30 AM	10:45 AM	1	0	1	0	0	0	0	3	2	1	6	0	14
10:45 AM	11:00 AM	1	0	1	0	0	0	0	3	2	1	6	0	14
11:00 AM	11:15 AM	1	0	1	0	0	0	0	3	3	1	6	0	15
11:15 AM	11:30 AM	1	0	1	0	0	0	0	3	3	1	7	0	16
11:30 AM	11:45 AM	1	0	1	0	0	0	0	6	3	1	8	0	20
11:45 AM	12:00 PM	1	0	1	0	0	0	0	6	4	1	8	0	21
12:00 PM	12:15 PM	1	0	1	0	0	0	0	6	5	1	8	0	22
12:15 PM	12:30 PM	2	0	1	0	0	0	0	6	5	1	8	0	23
12:30 PM	12:45 PM	4	0	1	0	0	0	0	6	5	1	10	0	27
12:45 PM	01:00 PM	4	0	1	0	0	0	0	7	5	1	10	0	28
01:00 PM	01:15 PM	4	0	1	0	0	0	0	8	5	1	10	0	29
01:15 PM	01:30 PM	5	0	1	0	0	0	0	8	5	1	10	0	30
01:30 PM	01:45 PM	5	0	1	0	0	0	0	8	5	1	10	0	30
01:45 PM	02:00 PM	5	0	1	0	0	0	0	8	5	1	11	0	31
02:00 PM	02:15 PM	5	0	1	0	0	0	0	9	5	1	11	0	32
02:15 PM	02:30 PM	5	0	1	0	0	0	0	11	5	1	11	0	34
02:30 PM	02:45 PM	5	0	1	0	0	0	0	11	5	1	11	0	34
02:45 PM	03:00 PM	5	0	1	0	0	0	0	11	5	1	11	0	34
03:00 PM	03:15 PM	5	0	1	0	0	0	0	11	5	1	13	0	36
03:15 PM	03:30 PM	5	0	1	0	0	0	0	11	5	1	13	0	36
03:30 PM	03:45 PM	5	0	1	0	0	0	0	12	5	1	13	0	37
03:45 PM	04:00 PM	5	0	1	0	0	0	0	13	5	1	14	0	39
04:00 PM	04:15 PM	5	0	1	0	0	0	0	13	5	1	15	0	40
04:15 PM	04:30 PM	5	0	1	0	0	0	0	13	5	1	15	0	40
04:30 PM	04:45 PM	5	0	1	0	0	0	0	15	5	1	15	0	42
04:45 PM	05:00 PM	5	0	1	0	0	0	0	15	5	1	16	0	43

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources INTERSECTION TURNING MOVEMENT SUMMARY

INTERSECTION TURNING MOVEMENT SUMMARY

[illegible]

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 10, 2002		DAY: MONDAY	
N-S Approach: DRIVEWAY 8		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY	
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA08LV16	
PEAK HOUR: 09:45 AM TO 10:45 AM					

HEAVY >5 -AXLE 0 0 0

EAST AVENUE

DRIVEWAY 8

ARRIVAL / DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	----- 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	----- 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	----- 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	----- 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	----- 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	----- 08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	----- 08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	----- 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	----- 09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	----- 09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	----- 09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	----- 10:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:00 AM	----- 10:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:15 AM	----- 10:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:30 AM	----- 10:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:45 AM	----- 11:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:00 AM	----- 11:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:15 AM	----- 11:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:30 AM	----- 11:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:45 AM	----- 12:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:00 PM	----- 12:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:15 PM	----- 12:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:30 PM	----- 12:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:45 PM	----- 01:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
01:00 PM	----- 01:15 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:15 PM	----- 01:30 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:30 PM	----- 01:45 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:45 PM	----- 02:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:00 PM	----- 02:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:15 PM	----- 02:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:30 PM	----- 02:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:45 PM	----- 03:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:00 PM	----- 03:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:15 PM	----- 03:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:30 PM	----- 03:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:45 PM	----- 04:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:00 PM	----- 04:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:15 PM	----- 04:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:30 PM	----- 04:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:45 PM	----- 05:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-229 2
CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Truck Counts
Locations 7 and 8

Tuesday, December 11, 2001

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 11, 2002		DAY: TUESDAY	
N-S Approach: DRIVEWAY 7		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY	
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA07LV2T	
PEAK HOUR: 10:30 AM TO 11:30 AM					
TOTAL VEHICLES		0 0 0		ARRIVAL/DEPARTURE VOLUMES
NORTH
EAST AVENUE		0 0 0		DRIVEWAY 7	

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	1	38	0	0	53	0	92
07:15 AM	07:30 AM	0	0	0	0	0	0	1	72	0	0	111	1	185
07:30 AM	07:45 AM	0	0	0	0	0	0	2	100	0	0	174	2	278
07:45 AM	08:00 AM	0	0	0	0	0	0	8	124	0	0	241	4	377
08:00 AM	08:15 AM	0	0	0	0	0	0	8	161	0	0	324	5	498
08:15 AM	08:30 AM	0	0	0	0	0	0	16	178	0	0	370	5	569
08:30 AM	08:45 AM	0	0	0	0	0	0	18	196	0	0	426	5	645
08:45 AM	09:00 AM	0	0	0	1	0	0	25	219	0	0	472	5	722
09:00 AM	09:15 AM	0	0	0	1	0	0	29	234	0	0	512	6	782
09:15 AM	09:30 AM	0	0	0	1	0	0	29	252	0	0	526	9	817
09:30 AM	09:45 AM	0	0	0	1	0	0	41	266	0	0	541	9	858
09:45 AM	10:00 AM	0	0	0	1	0	3	45	279	0	0	552	9	889
10:00 AM	10:15 AM	0	0	0	1	0	3	47	292	0	0	581	9	933
10:15 AM	10:30 AM	0	0	0	1	0	4	50	298	0	0	583	10	946
10:30 AM	10:45 AM	0	0	0	1	0	7	50	305	0	0	594	10	967
10:45 AM	11:00 AM	0	0	0	1	0	10	51	317	0	0	610	12	1,001
11:00 AM	11:15 AM	0	0	0	1	0	12	58	333	0	0	624	13	1,041
11:15 AM	11:30 AM	0	0	0	1	0	12	58	345	0	0	641	15	1,072
11:30 AM	11:45 AM	0	0	0	1	0	12	60	371	0	0	658	15	1,117
11:45 AM	12:00 PM	0	0	0	1	0	12	61	393	0	0	704	15	1,186
12:00 PM	12:15 PM	0	0	0	1	0	17	66	427	0	0	739	15	1,265
12:15 PM	12:30 PM	0	0	0	2	0	20	68	440	0	0	767	15	1,312
12:30 PM	12:45 PM	0	0	0	4	0	20	70	459	0	0	778	16	1,347
12:45 PM	01:00 PM	0	0	0	6	0	25	70	483	0	0	798	18	1,400
01:00 PM	01:15 PM	0	0	0	8	0	28	70	521	0	0	826	19	1,472
01:15 PM	01:30 PM	0	0	0	8	0	29	71	539	0	0	839	22	1,508
01:30 PM	01:45 PM	0	0	0	8	0	29	72	552	0	0	862	22	1,545
01:45 PM	02:00 PM	0	0	0	8	0	30	73	566	0	0	882	25	1,584
02:00 PM	02:15 PM	0	0	0	8	0	30	73	589	0	0	890	26	1,616
02:15 PM	02:30 PM	0	0	0	8	0	32	73	608</					

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 11, 2002				DAY: TUESDAY			
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV23			
PEAK HOUR: 07:00 AM TO 08:00 AM											

HEAVY 3-AXLE

1	0	1
---	---	---

EAST AVENUE

0	0	0
---	---	---

DRIVEWAY 7

ARRIVAL / DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:15 AM	09:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:30 AM	09:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
10:00 AM	10:15 AM	0	0	0	0	0	0	2	1	0	0	0	0	3
10:15 AM	10:30 AM	0	0	0	0	0	0	2	1	0	0	0	0	3
10:30 AM	10:45 AM	0	0	0	0	0	0	2	1	0	0	0	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	2	1	0	0	0	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	2	2	0	0	0	0	4
11:15 AM	11:30 AM	0	0	0	0	0	0	2	4	0	0	1	0	7
11:30 AM	11:45 AM	0	0	0	0	0	0	2	4	0	0	1	0	7
11:45 AM	12:00 PM	0	0	0	0	0	1	2	3	0	0	1	1	8
12:00 PM	12:15 PM	0	0	0	1	0	1	2	5	0	0	1	1	11
12:15 PM	12:30 PM	0	0	0	1	0	1	2	5	0	0	1	1	11
12:30 PM	12:45 PM	0	0	0	1	0	1	2	5	0	0	2	1	12
12:45 PM	01:00 PM	0	0	0	1	0	1	2	5	0	0	3	1	13
01:00 PM	01:15 PM	0	0	0	1	0	1	2	5	0	0	3	1	13
01:15 PM	01:30 PM	0	0	0	1	0	1	2	5	0	0	3	1	13
01:30 PM	01:45 PM	0	0	0	1	0	2	2	5	0	0	3	1	14
01:45 PM	02:00 PM	0	0	0	1	0	2	2	5	0	0	3	1	14
02:00 PM	02:15 PM	0	0	0	1	0	2	2	5	0	0	5	1	16
02:15 PM	02:30 PM	0	0	0	1	0	2	2	5	0	0	5	1	16
02:30 PM	02:45 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
02:45 PM	03:00 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
03:00 PM	03:15 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
03:15 PM	03:30 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
03:30 PM	03:45 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
03:45 PM	04:00 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
04:00 PM	04:15 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
04:15 PM	04:30 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
04:30 PM	04:45 PM	0	0	0	1	0	2	2	6	0	0	5	1	17
04:45 PM	05:00 PM	0	0	0	1	0	2	2	6	0	0	5	1	17

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 11, 2002				DAY: TUESDAY							
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY											
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV24							
PEAK HOUR: 10:30 AM TO 11:30 AM															
HEAVY 4-AXLE		0 0 0													
					ARRIVAL / DEPARTURE VOLUMES 										
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES	
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
SURVEY DATA															
07:00 AM	---	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	---	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	---	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	---	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	---	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	---	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	---	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	---	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	---	09:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
09:15 AM	---	09:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
09:30 AM	---	09:45 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
09:45 AM	---	10:00 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
10:00 AM	---	10:15 AM	0	0	0	0	0	0	0	4	0	0	1	0	5
10:15 AM	---	10:30 AM	0	0	0	0	0	0	0	4	0	0	1	0	5
10:30 AM	---	10:45 AM	0	0	0	0	0	0	1	5	0	0	1	1	8
10:45 AM	---	11:00 AM	0	0	0	0	0	0	1	6	0	0	1	1	9
11:00 AM	---	11:15 AM	0	0	0	0	0	0	1	6	0	0	3	1	11
11:15 AM	---	11:30 AM	0	0	0	0	0	0	1	7	0	0	3	1	12
11:30 AM	---	11:45 AM	0	0	0	0	0	0	1	7	0	0	3	1	12
11:45 AM	---	12:00 PM	0	0	0	0	0	0	1	7	0	0	3	1	12
12:00 PM	---	12:15 PM	0	0	0	0	0	0	1	7	0	0	4	1	13
12:15 PM	---	12:30 PM	0	0	0	0	0	0	1	7	0	0	5	1	14
12:30 PM	---	12:45 PM	0	0	0	0	0	1	1	7	0	0	5	1	15
12:45 PM	---	01:00 PM	0	0	0	0	0	1	1	7	0	0	6	1	16
01:00 PM	---	01:15 PM	0	0	0	0	0	1	1	8	0	0	6	1	17
01:15 PM	---	01:30 PM	0	0	0	0	0	1	1	9	0	0	6	1	18
01:30 PM	---	01:45 PM	0	0	0	0	0	1	1	10	0	0	6	1	19
01:45 PM	---	02:00 PM	0	0	0	0	0	1	1	10	0	0	7	1	20
02:00 PM	---	02:15 PM	0	0	0	0	0	1	1	11	0	0	7	1	21
02:15 PM	---	02:30 PM	0	0	0	0	0	1	1	11	0	0	7	1	21
02:30 PM	---	02:45 PM	0	0	0	0	0	2	1	12	0	0	7	1	23
02:45 PM	---	03:00 PM	0	0	0	0	0	2	1	12	0	0	8	1	24
03:00 PM	---	03:15 PM	0	0	0	0	0	2	1	14	0	0	8	1	26
03:15 PM	---	03:30 PM	0	0	0	0	0	2	1	14	0	0	8	1	26
03:30 PM	---	03:45 PM	0	0	0	0	0	2	1	14	0	0	9	1	27
03:45 PM	---	04:00 PM	0	0	0	0	0	2	1	14	0	0	9	1	27
04:00 PM	---	04:15 PM	0	0	0	0	0	2	1	14	0	0	9	1	27
04:15 PM	---	04:30 PM	0	0	0	0	0	2	1	14	0	0	9	1	27
04:30 PM	---	04:45 PM	0	0	0	0	0	2	1	14	0	0	9	1	27
04:45 PM	---	05:00 PM	0	0	0	0	0	2	1	14	0	0	10	1	28
SF/PENINSULA: (415) 750-1317		ALAMEDA: (510) 233-2292				CONTRA COSTA: (510) 232-1271									

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 11, 2002				DAY: TUESDAY						
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY						
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV24						
From	To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	1	1	0	0	0	1	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:00 AM	11:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
11:15 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:30 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15 PM	12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	12:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
12:45 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:00 PM	01:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:15 PM	01:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:30 PM	01:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
02:00 PM	02:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:00 PM	03:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	09:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
08:30 AM	09:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
08:45 AM	09:45 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
09:00 AM	10:00 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
09:15 AM	10:15 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
09:30 AM	10:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
09:45 AM	10:45 AM	0	0	0	0	0	0	1	2	0	0	1	1	5
10:00 AM	11:00 AM	0	0	0	0	0	0	1	2	0	0	1	1	5
10:15 AM	11:15 AM	0	0	0	0	0	0	1	2	0	0	2	1	6
10:30 AM	11:30 AM	0	0	0	0	0	0	1	3	0	0	2	1	7
10:45 AM	11:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	4
11:00 AM	12:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:15 AM	12:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
11:30 AM	12:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
11:45 AM	12:45 PM	0	0	0	0	0	1	0	0	0	0	2	0	3
12:00 PM	01:00 PM	0	0	0	0	0	1	0	0	0	0	3	0	4
12:15 PM	01:15 PM	0	0	0	0	0	1	0	1	0	0	2	0	4
12:30 PM	01:30 PM	0	0	0	0	0	1	0	2	0	0	1	0	4
12:45 PM	01:45 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
01:00 PM	02:00 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
01:15 PM	02:15 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
01:30 PM	02:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:45 PM	02:45 PM	0	0	0	0	0	1	0	2	0	0	1	0	4
02:00 PM	03:00 PM	0	0	0	0	0	1	0	2	0	0	1	0	4
02:15 PM	03:15 PM	0	0	0	0	0	1	0	3	0	0	1	0	5
02:30 PM	03:30 PM	0	0	0	0	0	1	0	3	0	0	1	0	5
02:45 PM	03:45 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
03:00 PM	04:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
03:15 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:30 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:45 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1

SF/PENINSULA: (415) 750-1317

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Baymetrics Traffic Resources

PROJECT: LAWRENCE LIVERMORE LAB TIS.			SURVEY DATE: DECEMBER 11, 2002			DAY: TUESDAY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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<table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th colspan="2"></th> <th colspan="3">NORTHBOUND</th> <th colspan="3">SOUTHBOUND</th> <th colspan="3">EASTBOUND</th> <th colspan="3">WESTBOUND</th> <th rowspan="2">TOTAL VOLUMES</th> </tr> <tr> <th>From</th> <th>To</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> <th>Left</th> <th>Thru</th> <th>Right</th> </tr> </thead> <tbody> <tr><td colspan="15" style="text-align: center;">SURVEY DATA</td></tr> <tr><td>07:00 AM</td><td>07:15 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>07:15 AM</td><td>07:30 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>07:30 AM</td><td>07:45 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>07:45 AM</td><td>08:00 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>08:00 AM</td><td>08:15 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>08:15 AM</td><td>08:30 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>08:30 AM</td><td>08:45 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>08:45 AM</td><td>09:00 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>09:00 AM</td><td>09:15 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>5</td></tr> <tr><td>09:15 AM</td><td>09:30 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>7</td></tr> <tr><td>09:30 AM</td><td>09:45 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>2</td><td>6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>8</td></tr> <tr><td>09:45 AM</td><td>10:00 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>2</td><td>6</td><td>0</td><td>0</td><td>0</td><td>1</td><td>9</td></tr> <tr><td>10:00 AM</td><td>10:15 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>2</td><td>7</td><td>0</td><td>0</td><td>0</td><td>1</td><td>10</td></tr> <tr><td>10:15 AM</td><td>10:30 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>2</td><td>8</td><td>0</td><td>0</td><td>0</td><td>1</td><td>11</td></tr> <tr><td>10:30 AM</td><td>10:45 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>3</td><td>8</td><td>0</td><td>0</td><td>2</td><td>1</td><td>14</td></tr> <tr><td>10:45 AM</td><td>11:00 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>4</td><td>9</td><td>0</td><td>0</td><td>2</td><td>1</td><td>16</td></tr> <tr><td>11:00 AM</td><td>11:15 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>4</td><td>10</td><td>0</td><td>0</td><td>2</td><td>1</td><td>17</td></tr> <tr><td>11:15 AM</td><td>11:30 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>4</td><td>10</td><td>0</td><td>0</td><td>2</td><td>2</td><td>19</td></tr> <tr><td>11:30 AM</td><td>11:45 AM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>2</td><td>4</td><td>10</td><td>0</td><td>0</td><td>2</td><td>2</td><td>20</td></tr> <tr><td>11:45 AM</td><td>12:00 PM</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>2</td><td>4</td><td>10</td><td>0</td><td>0</td><td>2</td><td>2</td><td>20</td></tr> <tr><td>12:00 PM</td><td>12:15 PM</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>2</td><td>4</td><td>10</td><td>0</td><td>0</td><td>4</td><td>2</td><td>23</td></tr> <tr><td>12:15 PM</td><td>12:30 PM</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>3</td><td>4</td><td>10</td><td>0</td><td>0</td><td>4</td><td>2</td><td>24</td></tr> <tr><td>12:30 PM</td><td>12:45 PM</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>3</td><td>4</td><td>10</td><td>0</td><td>0</td><td>5</td><td>2</td><td>25</td></tr> <tr><td>12:45 PM</td><td>01:00 PM</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>4</td><td>4</td><td>10</td><td>0</td><td>0</td><td>5</td><td>2</td><td>26</td></tr> <tr><td>01:00 PM</td><td>01:15 PM</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>5</td><td>4</td><td>11</td><td>0</td><td>0</td><td>5</td><td>2</td><td>28</td></tr> <tr><td>01:15 PM</td><td>01:30 PM</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>5</td><td>4</td><td>13</td><td>0</td><td>0</td><td>6</td><td>2</td><td>31</td></tr> <tr><td>01:30 PM</td><td>01:45 PM</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>5</td><td>4</td><td>13</td><td>0</td><td>0</td><td>7</td><td>2</td><td>32</td></tr> <tr><td>01:45 PM</td><td>02:00 PM</td><td>0</td><td>0</td><td>0</td><td>2</td><td>0</td><td>6</td><td>5</td><td>13</td><td>0</td><td>0</td><td>7</td><td>2</td><td>35</td></tr> <tr><td>02:00 PM</td><td>02:15 PM</td><td>0</td><td>0</td><td>0</td><td>2</td><td>0</td><td>6</td><td>5</td><td>14</td><td>0</td><td>0</td><td>7</td><td>2</td><td>36</td></tr> <tr><td>02:15 PM</td><td>02:30 PM</td><td>0</td><td>0</td><td>0</td><td>2</td><td>0</td><td>6</td><td>6</td><td>15</td><td>0</td><td>0</td><td>7</td><td>2</td><td>38</td></tr> <tr><td>02:30 PM</td><td>02:45 PM</td><td>0</td><td>0</td><td>0</td><td>2</td><td>0</td><td>6</td><td>6</td><td>15</td><td>0</td><td>0</td><td>8</td><td>2</td><td>39</td></tr> <tr><td>02:45 PM</td><td>03:00 PM</td><td></td></tr></tbody></table>											NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES	From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	SURVEY DATA															07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	08:15 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	08:30 AM	08:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	08:45 AM	09:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	09:00 AM	09:15 AM	0	0	0	0	0	0	1	4	0	0	0	0	5	09:15 AM	09:30 AM	0	0	0	0	0	0	1	6	0	0	0	0	7	09:30 AM	09:45 AM	0	0	0	0	0	0	2	6	0	0	0	0	8	09:45 AM	10:00 AM	0	0	0	0	0	0	2	6	0	0	0	1	9	10:00 AM	10:15 AM	0	0	0	0	0	0	2	7	0	0	0	1	10	10:15 AM	10:30 AM	0	0	0	0	0	0	2	8	0	0	0	1	11	10:30 AM	10:45 AM	0	0	0	0	0	0	3	8	0	0	2	1	14	10:45 AM	11:00 AM	0	0	0	0	0	0	4	9	0	0	2	1	16	11:00 AM	11:15 AM	0	0	0	0	0	0	4	10	0	0	2	1	17	11:15 AM	11:30 AM	0	0	0	0	0	1	4	10	0	0	2	2	19	11:30 AM	11:45 AM	0	0	0	0	0	2	4	10	0	0	2	2	20	11:45 AM	12:00 PM	0	0	0	0	0	2	4	10	0	0	2	2	20	12:00 PM	12:15 PM	0	0	0	1	0	2	4	10	0	0	4	2	23	12:15 PM	12:30 PM	0	0	0	1	0	3	4	10	0	0	4	2	24	12:30 PM	12:45 PM	0	0	0	1	0	3	4	10	0	0	5	2	25	12:45 PM	01:00 PM	0	0	0	1	0	4	4	10	0	0	5	2	26	01:00 PM	01:15 PM	0	0	0	1	0	5	4	11	0	0	5	2	28	01:15 PM	01:30 PM	0	0	0	1	0	5	4	13	0	0	6	2	31	01:30 PM	01:45 PM	0	0	0	1	0	5	4	13	0	0	7	2	32	01:45 PM	02:00 PM	0	0	0	2	0	6	5	13	0	0	7	2	35	02:00 PM	02:15 PM	0	0	0	2	0	6	5	14	0	0	7	2	36	02:15 PM	02:30 PM	0	0	0	2	0	6	6	15	0	0	7	2	38	02:30 PM	02:45 PM	0	0	0	2	0	6	6	15	0	0	8	2	39	02:45 PM	03:00 PM	
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Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS			SURVEY DATE: DECEMBER 11, 2002			DAY: TUESDAY								
N-S Approach: DRIVEWAY 7			SURVEY TIME: 7:00 AM TO 5:00 PM			WEATHER: SUNNY								
E-W Approach: EAST AVENUE			JURISDICTION: LIVERMORE			FILENAME: EA07LV25								
From	To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	1	3	0	0	0	0	4
09:15 AM	09:30 AM	0	0	0	0	0	0	2	2	0	0	0	0	4
09:30 AM	09:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
10:00 AM	10:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:15 AM	10:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:30 AM	10:45 AM	0	0	0	0	0	0	1	0	0	0	2	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:15 AM	11:30 AM	0	0	0	0	0	1	0	0	0	0	0	1	2
11:30 AM	11:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	12:15 PM	0	0	0	1	0	0	0	0	0	0	2	0	3
12:15 PM	12:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
12:30 PM	12:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:45 PM	01:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
01:00 PM	01:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
01:15 PM	01:30 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:45 PM	02:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	2
02:00 PM	02:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:15 PM	02:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	2
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
02:45 PM	03:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:15 PM	03:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
03:30 PM	03:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
03:45 PM	04:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
04:45 PM	05:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	08:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	09:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15 AM	09:15 AM	0	0	0	0	0	0	1	4	0	0	0	0	5
08:30 AM	09:30 AM	0	0	0	0	0	0	1	5	0	0	0	0	6
08:45 AM	09:45 AM	0	0	0	0	0	0	2	5	0	0	0	0	7
09:00 AM	10:00 AM	0	0	0	0	0	0	2	5	0	0	0	0	7
09:15 AM	10:15 AM	0	0	0	0	0	0	1	3	0	0	0	0	4
09:30 AM	10:30 AM	0	0	0	0	0	0	1	2	0	0	0	0	3
09:45 AM	10:45 AM	0	0	0	0	0	0	1	2	0	0	0	0	3
10:00 AM	11:00 AM	0	0	0	0	0	0	2	3	0	0	0	0	5
10:15 AM	11:15 AM	0	0	0	0	0	0	2	3	0	0	0	0	5
10:30 AM	11:30 AM	0	0	0	0	0	1	2	2	0	0	0	0	4
10:45 AM	11:45 AM	0	0	0	0	0	2	1	2	0	0	0	0	4
11:00 AM	12:00 PM	0	0	0	0	0	2	0	1	0	0	0	0	3
11:15 AM	12:15 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
11:30 AM	12:30 PM	0	0	0	1	0	2	0	0	0	0	2	0	5
11:45 AM	12:45 PM	0	0	0	1	0	1	0	0	0	0	3	0	5
12:00 PM	01:00 PM	0	0	0	1	0	2	0	0	0	0	3	0	6
12:15 PM	01:15 PM	0	0	0	0	0	3	0	1	0	0	1	0	5
12:30 PM	01:30 PM	0	0	0	0	0	2	0	3	0	0	2	0	7
12:45 PM	01:45 PM	0	0	0	0	0	2	0	3	0	0	2	0	7
01:00 PM	02:00 PM	0	0	0	1	0	2	1	3	0	0	2	0	9
01:15 PM	02:15 PM	0	0	0	1	0	1	1	3	0	0	2	0	8
01:30 PM	02:30 PM	0	0	0	1	0	1	2	2	0	0	1	0	7
01:45 PM	02:45 PM	0	0	0	1	0	1	2	2	0	0	1	0	7
02:00 PM	03:00 PM	0	0	0	0	0	0	1	3	0	0	2	0	6
02:15 PM	03:15 PM	0	0	0	0	0	0	1	2	0	0	3	0	6
02:30 PM	03:30 PM	0	0	0	0	0	0	1	1	0	0	3	0	5
02:45 PM	03:45 PM	0	0	0	1	0	0	1	1	0	0	2	0	5
03:00 PM	04:00 PM	0	0	0	1	0	0	1	1	0	0	1	0	4
03:15 PM	04:15 PM	0	0	0	1	0	0	1	1	0	0	0	0	3
03:30 PM	04:30 PM	0	0	0	1	0	0	0	1	0	0	0	0	2
03:45 PM	04:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
04:00 PM	05:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 11, 2002		DAY: TUESDAY	
N-S Approach: DRIVEWAY 7		SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY			
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA07LV26	
PEAK HOUR: 10:30 AM TO 11:30 AM					
HEAVY >5-AXLE		0 0 0
NORTH
		ARRIVAL/DEPARTURE VOLUMES		0 0	
				2 1 2 1 0 0	
				0 0	
		DRIVEWAY 7			

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:15 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:30 AM	11:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:45 AM	12:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:00 PM	12:15 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:15 PM	12:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:30 PM	12:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
12:45 PM	01:00 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
01:00 PM	01:15 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:15 PM	01:30 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:30 PM	01:45 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
01:45 PM	02:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:00 PM	02:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:15 PM	02:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:30 PM	02:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
02:45 PM	03:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:00 PM	03:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:15 PM	03:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:30 PM	03:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:45 PM	04:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:00 PM	04:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:15 PM	04:30 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:30 PM	04:45 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
04:45 PM	05:00 PM	0	0	0	0	0	0	0	2	0	0	3	0	5

SF/PENINSULA: (415) 750-1317	ALAMEDA: (510) 233-2292	CONTRA COSTA: (510) 232-1271
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Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 11, 2002		DAY: TUESDAY										
N-S Approach: DRIVEWAY 7		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY										
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA07LV26										
From	To	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:45 AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	02:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
09:15 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
09:30 AM	10:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
09:45 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:00 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:15 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:30 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:45 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:45 PM	01:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
01:00 PM	02:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
01:15 PM	02:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:30 PM	02:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
01:45 PM	02:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
02:00 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

Diagram illustrating a building layout with a central area labeled "TOTAL" containing the value "24". The building is surrounded by a perimeter with arrows indicating flow or direction. The perimeter is divided into sections with numerical values:

- Left side (top to bottom): 0, 5, 6
- Right side (top to bottom): 0, 4, 2
- Bottom side (left to right): 7, 0, 0

The bottom section is labeled "EAST AVENUE" and "DRIVEWAY 8".

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45 AM	08:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	08:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:15 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	2
08:30 AM	08:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	2
08:45 AM	09:00 AM	0	0	0	0	0	0	0	1	1	0	0	1	4
09:00 AM	09:15 AM	0	0	0	0	0	0	0	2	1	0	0	2	5
09:15 AM	09:30 AM	1	0	1	0	0	0	0	2	1	0	0	4	9
09:30 AM	09:45 AM	1	0	1	0	0	0	0	2	2	0	0	6	12
09:45 AM	10:00 AM	1	0	1	0	0	0	0	2	4	0	0	6	14
10:00 AM	10:15 AM	2	0	1	0	0	0	0	2	5	0	0	6	16
10:15 AM	10:30 AM	2	0	1	0	0	0	0	4	5	0	0	7	19
10:30 AM	10:45 AM	3	0	1	0	0	0	0	5	7	0	0	7	23
10:45 AM	11:00 AM	4	0	1	0	0	0	0	8	8	0	0	8	29
11:00 AM	11:15 AM	5	0	2	0	0	0	0	8	10	1	0	8	44
11:15 AM	11:30 AM	6	0	2	0	0	0	0	11	10	1	0	8	38
11:30 AM	11:45 AM	7	0	2	0	0	0	0	12	12	1	0	9	43
11:45 AM	12:00 PM	9	0	2	0	0	0	0	13	12	1	0	11	48
12:00 PM	12:15 PM	12	0	2	0	0	0	0	13	13	1	0	11	52
12:15 PM	12:30 PM	12	0	2	0	0	0	0	16	15	1	0	13	59
12:30 PM	12:45 PM	13	0	2	0	0	0	0	16	17	2	0	14	64
12:45 PM	01:00 PM	16	0	2	0	0	0	0	18	18	3	0	15	72
01:00 PM	01:15 PM	16	0	3	0	0	0	0	19	18	3	0	15	74
01:15 PM	01:30 PM	16	0	3	0	0	0	0	19	19	4	0	15	76
01:30 PM	01:45 PM	16	0	5	0	0	0	0	22	19	4	0	15	81
01:45 PM	02:00 PM	18	0	5	0	0	0	0	24	19	4	0	15	85
02:00 PM	02:15 PM	18	0	5	0	0	0	0	24	19	4	0	16	86
02:15 PM	02:30 PM	18	0	5	0	0	0	0	25	19	4	0	19	90
02:30 PM	02:45 PM	18	0	5	0	0	0	0	28	20	4	0	19	94
02:45 PM	03:00 PM	18	0	5	0	0	0	0	28	20	4	0	20	95
03:00 PM	03:15 PM	18	0	5	0	0	0	0	29	20	4	0	20	96
03:15 PM	03:30 PM	18	0	5	0	0	0	0	29	20	5	0	22	99
03:30 PM	03:45 PM	18	0	5	0	0	0	0	29	20	5	0	22	99
03:45 PM	04:00 PM	18	0	5	0	0	0	0	30	20	5	0	22	100
04:00 PM	04:15 PM	18	0	5	0	0	0	0	30	20	5	0	23	101
04:15 PM	04:30 PM	18	0	5	0	0	0	0	31	20	5	0	23	102
04:30 PM	04:45 PM	18	0	5	0	0	0	0	33	20	5	0	24	105
04:45 PM	05:00 PM	18	0	5	0	0	0	0	33	20	5	0	25	106

CONTRA COSTA: (510)232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 11, 2002				DAY: TUESDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV23			
PEAK HOUR: 11:15 AM TO 12:15 PM											

HEAVY 3-AXLE

0	0	0
---	---	---

TOTAL
6

EAST AVENUE

1	0	0
---	---	---

DRIVEWAY 8

ARRIVAL / DEPARTURE VOLUMES

0	0
---	---

0	1
---	---

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:00 AM	10:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:15 AM	10:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	2
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	1	0	0	2
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	2
11:00 AM	11:15 AM	0	0	0	0	0	0	0	2	0	1	0	0	3
11:15 AM	11:30 AM	0	0	0	0	0	0	0	4	0	1	1	0	6
11:30 AM	11:45 AM	0	0	0	0	0	0	0	4	0	1	1	0	6
11:45 AM	12:00 PM	1	0	0	0	0	0	0	4	0	1	1	0	7
12:00 PM	12:15 PM	1	0	0	0	0	0	0	6	0	1	1	0	9
12:15 PM	12:30 PM	1	0	0	0	0	0	0	6	0	2	1	0	10
12:30 PM	12:45 PM	1	0	0	0	0	0	0	6	0	2	2	0	11
12:45 PM	01:00 PM	2	0	0	0	0	0	0	6	0	2	2	0	12
01:00 PM	01:15 PM	2	0	0	0	0	0	0	6	0	2	2	0	12
01:15 PM	01:30 PM	2	0	0	0	0	0	0	6	0	2	2	0	12
01:30 PM	01:45 PM	2	0	0	0	0	0	0	6	0	2	2	0	12
01:45 PM	02:00 PM	2	0	0	0	0	0	0	6	0	2	2	0	12
02:00 PM	02:15 PM	2	0	0	0	0	0	0	6	0	2	4	0	14
02:15 PM	02:30 PM	2	0	0	0	0	0	0	6	0	2	4	0	14
02:30 PM	02:45 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
02:45 PM	03:00 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
03:00 PM	03:15 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
03:15 PM	03:30 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
03:30 PM	03:45 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
03:45 PM	04:00 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
04:00 PM	04:15 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
04:15 PM	04:30 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
04:30 PM	04:45 PM	2	0	0	0	0	0	0	7	0	2	4	0	15
04:45 PM	05:00 PM	2	0	0	0	0	0	0	7	0	2	4	0	15

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 11, 2002				DAY: TUESDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV24			
PEAK HOUR: 10:30 AM TO 11:30 AM											

HEAVY 4-AXLE: 0 0 0

EAST AVENUE
0 0 0
DRIVEWAY 8

ARRIVAL / DEPARTURE VOLUMES

0 0
3 3
3 2
1 0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
09:15 AM	09:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
09:30 AM	09:45 AM	0	0	0	0	0	0	0	2	1	0	0	0	3
09:45 AM	10:00 AM	0	0	0	0	0	0	0	3	1	0	0	0	4
10:00 AM	10:15 AM	0	0	0	0	0	0	0	3	1	0	1	0	5
10:15 AM	10:30 AM	0	0	0	0	0	0	0	3	1	0	1	0	5
10:30 AM	10:45 AM	0	0	0	0	0	0	0	4	1	0	2	0	7
10:45 AM	11:00 AM	0	0	0	0	0	0	0	5	1	0	2	0	8
11:00 AM	11:15 AM	0	0	0	0	0	0	0	5	1	0	4	0	10
11:15 AM	11:30 AM	0	0	0	0	0	0	0	5	2	0	4	0	11
11:30 AM	11:45 AM	0	0	0	0	0	0	0	5	2	0	4	0	11
11:45 AM	12:00 PM	0	0	1	0	0	0	0	5	2	0	4	0	12
12:00 PM	12:15 PM	0	0	1	0	0	0	0	5	2	0	5	0	13
12:15 PM	12:30 PM	0	0	1	0	0	0	0	6	2	0	6	0	15
12:30 PM	12:45 PM	0	0	1	0	0	0	0	6	2	0	6	0	15
12:45 PM	01:00 PM	1	0	1	0	0	0	0	6	2	0	6	0	16
01:00 PM	01:15 PM	1	0	1	0	0	0	0	7	2	0	6	0	17
01:15 PM	01:30 PM	1	0	1	0	0	0	0	8	2	0	6	0	18
01:30 PM	01:45 PM	1	0	1	0	0	0	0	8	2	0	6	0	18
01:45 PM	02:00 PM	1	0	1	0	0	0	0	8	2	0	7	0	19
02:00 PM	02:15 PM	1	0	1	0	0	0	0	8	3	0	7	0	20
02:15 PM	02:30 PM	1	0	1	0	0	0	0	8	3	0	7	0	20
02:30 PM	02:45 PM	1	0	1	0	0	0	0	9	3	0	7	0	21
02:45 PM	03:00 PM	2	0	1	0	0	0	0	9	3	0	7	0	22
03:00 PM	03:15 PM	2	0	1	0	0	0	0	11	3	0	7	0	24
03:15 PM	03:30 PM	2	0	1	0	0	0	0	11	3	0	7	0	24
03:30 PM	03:45 PM	2	0	1	0	0	0	0	11	3	0	8	0	25
03:45 PM	04:00 PM	2	0	1	0	0	0	0	11	3	0	8	0	25
04:00 PM	04:15 PM	2	0	1	0	0	0	0	11	3	0	8	0	25
04:15 PM	04:30 PM	2	0	1	0	0	0	0	11	3	0	8	0	25
04:30 PM	04:45 PM	2	0	1	0	0	0	0	11	3	0	8	0	25
04:45 PM	05:00 PM	2	0	1	0	0	0	0	11	3	0	9	0	26

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:		LAWRENCE LIVERMORE LAB TIS		SURVEY DATE:		DECEMBER 11, 2002		DAY:		TUESDAY						
N-S Approach:		DRIVEWAY 8		SURVEY TIME:		7:00 AM TO 5:00 PM		WEATHER:		SUNNY						
E-W Approach:		EAST AVENUE		JURISDICTION:		LIVERMORE		FILENAME:		EA08LV25						
PEAK HOUR:		09:00 AM TO 10:00 AM														
HEAVY 5-AXLE				0		0		0								
				NORTH												
ARRIVAL / DEPARTURE VOLUMES				0		0										
EAST AVENUE		0		0		1										
DRIVEWAY 8		0		0		1										
From		To		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	OLUMES
SURVEY DATA																
07:00 AM	----	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	----	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	----	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	----	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	----	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	----	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:30 AM	----	08:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	1
08:45 AM	----	09:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	1
09:00 AM	----	09:15 AM	0	0	0	0	0	0	0	4	0	0	0	0	0	4
09:15 AM	----	09:30 AM	0	0	0	0	0	0	0	5	1	0	0	0	0	6
09:30 AM	----	09:45 AM	0	0	1	0	0	0	0	5	1	0	0	0	0	7
09:45 AM	----	10:00 AM	0	0	1	0	0	0	0	5	1	0	1	0	0	8
10:00 AM	----	10:15 AM	0	0	1	0	0	0	0	6	1	0	1	0	0	9
10:15 AM	----	10:30 AM	0	0	1	0	0	0	0	6	2	1	1	0	0	11
10:30 AM	----	10:45 AM	0	0	1	0	0	0	0	6	2	1	3	0	0	13
10:45 AM	----	11:00 AM	0	0	1	0	0	0	0	7	2	1	3	0	0	14
11:00 AM	----	11:15 AM	0	0	1	0	0	0	0	7	3	1	3	0	0	15
11:15 AM	----	11:30 AM	1	0	1	0	0	0	0	7	3	1	3	0	0	16
11:30 AM	----	11:45 AM	1	0	1	0	0	0	0	7	3	1	3	0	0	16
11:45 AM	----	12:00 PM	1	0	1	0	0	0	0	7	3	1	3	0	0	16
12:00 PM	----	12:15 PM	1	0	1	0	0	0	0	7	3	1	5	0	0	18
12:15 PM	----	12:30 PM	1	0	1	0	0	0	0	7	3	1	5	0	0	18
12:30 PM	----	12:														

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510)232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510)232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Truck Counts
Locations 7 and 8

Wednesday, December 12, 2001

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

ET: LAWRENCE LIVERMORE LAB TIS

SURVEY DATE: DECEMBER 12, 2002 DAY: WEDNESDAY

N-S Approach: DRIVEWAY 7

SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY

E-W Approach: EAST AVENUE

JURISDICTION: LIVERMORE

FILENAME: EA07LV32

PEAK HOUR:	10:00 AM	TO	11:00 AM
------------	----------	----	----------

HEAVY 2-AXLE

10	0	4
----	---	---

EAST AVENUE

0	0	0
---	---	---

DRIVEWAY 7

NORTH

ARRIVAL / DEPARTURE VOLUMES

14	12
----	----

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 12, 2002				DAY: WEDNESDAY						
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY						
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV32						
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
08:15 AM	08:30 AM	0	0	0	0	0	0	2	1	0	0	0	0	3
08:30 AM	08:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:30 AM	09:45 AM	0	0	0	0	0	0	2	1	0	0	0	0	3
09:45 AM	10:00 AM	0	0	0	0	0	0	1	1	0	0	4	0	6
10:00 AM	10:15 AM	0	0	0	0	0	2	2	1	0	0	1	1	7
10:15 AM	10:30 AM	0	0	0	0	0	0	1	3	0	0	3	0	7
10:30 AM	10:45 AM	0	0	0	0	0	1	0	1	0	0	3	0	5
10:45 AM	11:00 AM	0	0	0	0	0	1	2	0	0	0	3	0	6
11:00 AM	11:15 AM	0	0	0	0	0	1	0	4	0	0	1	0	6
11:15 AM	11:30 AM	0	0	0	0	0	0	2	1	0	0	2	0	5
11:30 AM	11:45 AM	0	0	0	2	0	0	0	3	0	0	0	1	6
11:45 AM	12:00 PM	0	0	0	1	0	1	1	4	0	0	3	0	10
12:00 PM	12:15 PM	0	0	0	0	0	2	2	1	0	0	0	0	5
12:15 PM	12:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	3
12:30 PM	12:45 PM	0	0	0	1	0	1	2	5	0	0	2	0	9
12:45 PM	01:00 PM	0	0	0	0	0	2	0	6	0	0	0	0	9
01:00 PM	01:15 PM	0	0	0	1	0	0	2	3	0	0	0	1	6
01:15 PM	01:30 PM	0	0	0	0	0	1	0	3	0	0	1	0	5
01:30 PM	01:45 PM	0	0	0	0	0	1	1	2	0	0	1	0	5
01:45 PM	02:00 PM	0	0	0	1	0	2	0	3	0	0	2	0	8
02:00 PM	02:15 PM	0	0	0	0	0	1	2	2	0	0	2	0	7
02:15 PM	02:30 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
02:30 PM	02:45 PM	0	0	0	0	0	1	0	2	0	0	0	0	3
02:45 PM	03:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
03:00 PM	03:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
03:15 PM	03:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
04:00 PM	04:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
07:15 AM	08:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
07:30 AM	08:30 AM	0	0	0	0	0	0	2	2	0	0	1	0	5
07:45 AM	08:45 AM	0	0	0	0	0	0	3	3	0	0	1	0	7
08:00 AM	09:00 AM	0	0	0	0	0	0	3	2	0	0	2	0	7
08:15 AM	09:15 AM	0	0	0	0	0	0	3	2	0	0	2	0	7
08:30 AM	09:30 AM	0	0	0	0	0	0	1	1	0	0	3	0	5
08:45 AM	09:45 AM	0	0	0	0	0	0	2	1	0	0	3	0	6
09:00 AM	10:00 AM	0	0	0	0	0	0	3	2	0	0	6	0	11
09:15 AM	10:15 AM	0	0	0	0	0	2	5	3	0	0	6	1	17
09:30 AM	10:30 AM	0	0	0	0	0	2	6	6	0	0	8	1	23
09:45 AM	10:45 AM	0	0	0	0	0	3	4	6	0	0	11	1	25
10:00 AM	11:00 AM	0	0	0	0	0	4	5	5	0	0	10	1	25
10:15 AM	11:15 AM	0	0	0	0	0	3	3	8	0	0	10	0	24
10:30 AM	11:30 AM	0	0	0	0	0	3	4	6	0	0	9	0	22
10:45 AM	11:45 AM	0	0	0	2	0	2	4	8	0	0	6	0	23
11:00 AM	12:00 PM	0	0	0	3	0	2	3	12	0	0	6	1	27
11:15 AM	12:15 PM	0	0	0	3	0	3	5	9	0	0	5	1	26
11:30 AM	12:30 PM	0	0	0	3	0	6	3	8	0	0	5	1	26
11:45 AM	12:45 PM	0	0	0	2	0	7	5	10	0	0	5	1	29
12:00 PM	01:00 PM	0	0	0	1	0	8	4	12	0	0	2	1	28
12:15 PM	01:15 PM	0	0	0	2	0	6	4	14	0	0	2	2	30
12:30 PM	01:30 PM	0	0	0	2	0	4	4	17	0	0	1	2	30
12:45 PM	01:45 PM	0	0	0	1	0	4	3	14	0	0	2	2	26
01:00 PM	02:00 PM	0	0	0	2	0	4	3	11	0	0	4	1	25
01:15 PM	02:15 PM	0	0	0	1	0	5	3	10	0	0	6	0	25
01:30 PM	02:30 PM	0	0	0	2	0	4	3	7	0	0	5	0	21
01:45 PM	02:45 PM	0	0	0	2	0	4	2	7	0	0	4	0	19
02:00 PM	03:00 PM	0	0	0	1	0	2	2	5	0	0	3	0	13
02:15 PM	03:15 PM	0	0	0	1	0	1	0	4	0	0	2	0	8
02:30 PM	03:30 PM	0	0	0	0	0	1	0	5	0	0	2	0	8
02:45 PM	03:45 PM	0	0	0	0	0	0	0	3	0	0	3	0	6
03:00 PM	04:00 PM	0	0	0	0	0	0	0	2	0	0	4	0	6
03:15 PM	04:15 PM	0	0	0	0	0	0	0	2	0	0	3	0	5
03:30 PM	04:30 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
03:45 PM	04:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3
04:00 PM	05:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
SF/PENINSULA: (415) 750-1317				ALAMEDA: (510) 233-2292				CONTRA COSTA: (510) 232-1271						

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 233-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 12, 2002		DAY: WEDNESDAY	
N-S Approach: DRIVEWAY 7		SURVEY TIME: 7:00 AM TO 5:00 PM		WEATHER: SUNNY	
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA07LV33	
PEAK HOUR: 12:00 NN TO 01:00 PM					

HEAVY 3-AXLE: 6 0 0

TOTAL
18

EAST AVENUE
0 0 0
DRIVEWAY 7

ARRIVAL / DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	2
08:30 AM	08:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
08:45 AM	09:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:00 AM	09:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:15 AM	09:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:30 AM	09:45 AM	0	0	0	0	0	0	2	0	0	0	0	0	2
09:45 AM	10:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	2
10:00 AM	10:15 AM	0	0	0	0	0	0	3	2	0	0	0	0	5
10:15 AM	10:30 AM	0	0	0	0	0	1	3	3	0	0	0	0	7
10:30 AM	10:45 AM	0	0	0	0	0	1	3	3	0	0	0	0	7
10:45 AM	11:00 AM	0	0	0	0	0	1	3	3	0	0	0	0	7
11:00 AM	11:15 AM	0	0	0	0	0	1	3	4	0	0	1	0	9
11:15 AM	11:30 AM	0	0	0	0	0	1	3	4	0	0	1	0	9
11:30 AM	11:45 AM	0	0	0	0	0	1	3	4	0	0	1	0	9
11:45 AM	12:00 PM	0	0	0	0	0	2	4	4	0	0	1	0	11
12:00 PM	12:15 PM	0	0	0	0	0	2	4	4	0	0	2	0	12
12:15 PM	12:30 PM	0	0	0	0	0	3	4	4	0	0	2	0	13
12:30 PM	12:45 PM	0	0	0	0	0	4	4	5	0	0	2	0	15
12:45 PM	01:00 PM	0	0	0	0	0	4	5	6	0	0	2	0	17
01:00 PM	01:15 PM	0	0	0	0	0	4	5	6	0	0	2	0	17
01:15 PM	01:30 PM	0	0	0	0	0	4	5	6	0	0	2	0	17
01:30 PM	01:45 PM	0	0	0	0	0	5	5	7	0	0	3	0	20
01:45 PM	02:00 PM	0	0	0	0	0	5	5	7	0	0	3	0	20
02:00 PM	02:15 PM	0	0	0	0	0	5	5	7	0	0	3	0	20
02:15 PM	02:30 PM	0	0	0	0	0	5	5	7	0	0	3	0	20
02:30 PM	02:45 PM	0	0	0	0	0	5	5	7	0	0	3	0	20
02:45 PM	03:00 PM	0	0	0	0	0	5	5	7	0	0	3	0	20
03:00 PM	03:15 PM	0	0	0	0	0	5	5	7	0	0	3	0	20
03:15 PM	03:30 PM	0	0	0	0	0	5	5	7	0	0	4	0	21
03:30 PM	03:45 PM	0	0	0	0	0	5	5	7	0	0	4	0	21
03:45 PM	04:00 PM	0	0	0	0	0	5	5	7	0	0	4	0	21
04:00 PM	04:15 PM	0	0	0	0	0	5	5	7	0	0	4	0	21
04:15 PM	04:30 PM	0	0	0	0	0	5	5	7	0	0	4	0	21
04:30 PM	04:45 PM	0	0	0	0	0	5	5	7	0	0	5	0	22
04:45 PM	05:00 PM	0	0	0	0	0	5	5	7	0	0	5	0	22

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:		LAWRENCE LIVERMORE LAB TIS						SURVEY DATE: DECEMBER 12, 2002			DAY: WEDNESDAY			
N-S Approach:		DRIVEWAY 7						SURVEY TIME: 7:00 AM TO 5:00 PM			WEATHER: SUNNY			
E-W Approach:		EAST AVENUE						JURISDICTION: LIVERMORE			FILENAME: EA07LV33			
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
TOTAL BY PERIOD														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	2
08:30 AM	08:45 AM	0	0	0	0	0	0	(1)	0	0	0	0	0	(1)
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	10:15 AM	0	0	0	0	0	0	1	2	0	0	0	0	3
10:15 AM	10:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	2
10:30 AM	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:15 AM	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	12:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	2
12:00 PM	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	12:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
12:30 PM	12:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
12:45 PM	01:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	2
01:00 PM	01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	01:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
01:45 PM	02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY TOTALS														
07:00 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	08:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	2
07:45 AM	08:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
08:00 AM	09:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
08:15 AM	09:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
08:30 AM	09:30 AM	0	0	0	0	0	0	(1)	0	0	0	0	0	(1)
08:45 AM	09:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:00 AM	10:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
09:15 AM	10:15 AM	0	0	0	0	0	0	2	2	0	0	0	0	4
09:30 AM	10:30 AM	0	0	0	0	0	1	2	3	0	0	0	0	6
09:45 AM	10:45 AM	0	0	0	0	0	1	1	3	0	0	0	0	5
10:00 AM	11:00 AM	0	0	0	0	0	1	1	3	0	0	0	0	5
10:15 AM	11:15 AM	0	0	0	0	0	1	0	2	0	0	0	0	3
10:30 AM	11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:45 AM	11:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
11:00 AM	12:00 PM	0	0	0	0	0	1	1	1	0	0	0	0	3
11:15 AM	12:15 PM	0	0	0	0	0	1	1	0	0	0	0	0	2
11:30 AM	12:30 PM	0	0	0	0	0	2	1	0	0	0	0	0	3
11:45 AM	12:45 PM	0	0	0	0	0	3	1	1	0	0	0	0	5
12:00 PM	01:00 PM	0	0	0	0	0	2	1	2	0	0	0	0	5
12:15 PM	01:15 PM	0	0	0	0	0	2	1	2	0	0	0	0	5
12:30 PM	01:30 PM	0	0	0	0	0	1	1	2	0	0	0	0	4
12:45 PM	01:45 PM	0	0	0	0	0	1	1	2	0	0	0	0	4
01:00 PM	02:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
01:15 PM	02:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
01:30 PM	02:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
01:45 PM	02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
SF/PENINSULA: (415) 750-1317		ALAMEDA: (510) 233-229 2						CONTRA COSTA: (510) 233-1271						

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 233-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 12, 2002				DAY: WEDNESDAY			
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV34			
PEAK HOUR: 10:30 AM TO 11:30 AM											

HEAVY 4-AXLE 1 0 0

EAST AVENUE 0 0 0

DRIVEWAY 7

ARRIVAL / DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	----- 07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	----- 07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	----- 07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	----- 08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	----- 08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	----- 08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	----- 08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	----- 09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	----- 09:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
09:15 AM	----- 09:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
09:30 AM	----- 09:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
09:45 AM	----- 10:00 AM	0	0	0	0	0	0	1	2	0	0	0	0	3
10:00 AM	----- 10:15 AM	0	0	0	0	0	0	1	2	0	0	0	0	3
10:15 AM	----- 10:30 AM	0	0	0	0	0	0	1	2	0	0	0	0	3
10:30 AM	----- 10:45 AM	0	0	0	0	0	0	2	2	0	0	0	0	4
10:45 AM	----- 11:00 AM	0	0	0	0	0	0	2	2	0	0	0	0	4
11:00 AM	----- 11:15 AM	0	0	0	0	0	0	2	3	0	0	1	0	6
11:15 AM	----- 11:30 AM	0	0	0	0	0	1	2	3	0	0	1	0	7
11:30 AM	----- 11:45 AM	0	0	0	0	0	1	2	3	0	0	1	0	7
11:45 AM	----- 12:00 PM	0	0	0	0	0	1	2	3	0	0	1	0	7
12:00 PM	----- 12:15 PM	0	0	0	0	0	1	2	3	0	0	2	0	8
12:15 PM	----- 12:30 PM	0	0	0	0	0	1	2	4	0	0	2	0	9
12:30 PM	----- 12:45 PM	0	0	0	0	0	1	2	4	0	0	2	0	9
12:45 PM	----- 01:00 PM	0	0	0	0	0	1	2	4	0	0	2	0	9
01:00 PM	----- 01:15 PM	0	0	0	0	0	1	2	4	0	0	2	0	9
01:15 PM	----- 01:30 PM	0	0	0	1	0	1	2	4	0	0	2	0	10
01:30 PM	----- 01:45 PM	0	0	0	1	0	2	2	4	0	0	3	0	12
01:45 PM	----- 02:00 PM	0	0	0	1	0	2	2	4	0	0	3	0	12
02:00 PM	----- 02:15 PM	0	0	0	1	0	2	2	4	0	0	3	0	12
02:15 PM	----- 02:30 PM	0	0	0	1	0	2	2	4	0	0	3	0	12
02:30 PM	----- 02:45 PM	0	0	0	1	0	2	2	5	0	0	3	0	13
02:45 PM	----- 03:00 PM	0	0	0	1	0	2	3	5	0	0	3	0	14
03:00 PM	----- 03:15 PM	0	0	0	1	0	2	3	5	0	0	3	0	14
03:15 PM	----- 03:30 PM	0	0	0	1	0	2	3	5	0	0	4	0	15
03:30 PM	----- 03:45 PM	0	0	0	1	0	2	3	5	0	0	4	0	15
03:45 PM	----- 04:00 PM	0	0	0	1	0	2	3	5	0	0	4	0	15
04:00 PM	----- 04:15 PM	0	0	0	1	0	2	3	5	0	0	4	0	15
04:15 PM	----- 04:30 PM	0	0	0	1	0	2	3	5	0	0	4	0	15
04:30 PM	----- 04:45 PM	0	0	0	1	0	2	3	5	0	0	5	0	16
04:45 PM	----- 05:00 PM	0	0	0	1	0	2	3	5	0	0	5	0	16

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510)232-1211

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 12, 2002				DAY: WEDNESDAY			
N-S Approach: DRIVEWAY 7				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA07LV36			
PEAK HOUR: 10:15 AM TO 11:15 AM											

HEAVY 6-AXLE: 0 0 0

EAST AVENUE

DRIVEWAY 7

ARRIVAL / DEPARTURE VOLUMES

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
10:15 AM	10:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	2
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	0	2	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	0	2	3
11:00 AM	11:15 AM	0	0	0	0	0	0	0	3	0	0	0	2	5
11:15 AM	11:30 AM	0	0	0	0	0	0	0	3	0	0	0	2	5
11:30 AM	11:45 AM	0	0	0	0	0	0	0	3	0	0	0	2	5
11:45 AM	12:00 PM	0	0	0	0	0	0	0	3	0	0	0	2	5
12:00 PM	12:15 PM	0	0	0	0	0	0	0	3	0	0	0	2	5
12:15 PM	12:30 PM	0	0	0	0	0	0	0	3	0	0	0	2	5
12:30 PM	12:45 PM	0	0	0	0	0	0	0	3	0	0	0	2	6
12:45 PM	01:00 PM	0	0	0	0	0	0	0	3	0	0	0	2	6
01:00 PM	01:15 PM	0	0	0	0	0	0	0	3	0	0	0	4	7
01:15 PM	01:30 PM	0	0	0	0	0	0	0	3	0	0	0	4	7
01:30 PM	01:45 PM	0	0	0	0	0	0	0	3	0	0	0	4	7
01:45 PM	02:00 PM	0	0	0	0	0	0	0	5	0	0	0	4	9
02:00 PM	02:15 PM	0	0	0	0	0	0	0	5	0	0	0	4	9
02:15 PM	02:30 PM	0	0	0	0	0	0	0	5	0	0	0	4	9
02:30 PM	02:45 PM	0	0	0	0	0	0	0	6	0	0	0	4	10
02:45 PM	03:00 PM	0	0	0	0	0	0	0	6	0	0	0	5	11
03:00 PM	03:15 PM	0	0	0	0	0	0	0	6	0	0	0	5	11
03:15 PM	03:30 PM	0	0	0	0	0	0	0	6	0	0	0	5	11
03:30 PM	03:45 PM	0	0	0	0	0	0	0	8	0	0	0	5	13
03:45 PM	04:00 PM	0	0	0	0	0	0	0	8	0	0	0	5	13
04:00 PM	04:15 PM	0	0	0	0	0	0	0	8	0	0	0	5	13
04:15 PM	04:30 PM	0	0	0	0	0	0	0	9	0	0	0	5	14
04:30 PM	04:45 PM	0	0	0	0	0	0	0	9	0	0	0	6	15
04:45 PM	05:00 PM	0	0	0	0	0	0	0	9	0	0	0	6	15

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 12, 2002				DAY: WEDNESDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV3A			
PEAK HOUR: 10:15 AM		TO 11:15 AM									
<div style="display: flex; justify-content: space-around;"> AUTO ONLY <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div>											
				<div style="text-align: center;"> ARRIVAL / DEPARTURE VOLUMES </div>							

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
SURVEY DATA														
07:00 AM	07:15 AM	1	0	3	0	0	0	0	16	23	18	58	0	119
07:15 AM	07:30 AM	2	0	5	0	0	0	0	17	43	31	134	0	232
07:30 AM	07:45 AM	5	0	10	0	0	0	0	22	64	51	183	0	335
07:45 AM	08:00 AM	12	0	19	0	0	0	0	28	73	60	250	0	442
08:00 AM	08:15 AM	21	0	24	0	0	0	0	36	107	65	315	0	568
08:15 AM	08:30 AM	29	0	27	0	0	0	0	47	127	73	361	0	664
08:30 AM	08:45 AM	36	0	33	0	0	0	0	52	149	76	427	0	773
08:45 AM	09:00 AM	42	0	36	0	0	0	0	66	157	78	480	0	859
09:00 AM	09:15 AM	43	0	40	0	0	0	0	75	178	83	501	0	920
09:15 AM	09:30 AM	48	0	44	0	0	0	0	84	187	87	520	0	970
09:30 AM	09:45 AM	52	0	47	0	0	0	0	89	199	90	537	0	1,014
09:45 AM	10:00 AM	56	0	52	0	0	0	0	97	208	95	541	0	1,049
10:00 AM	10:15 AM	60	0	52	0	0	0	0	105	212	100	551	0	1,080
10:15 AM	10:30 AM	60	0	55	0	0	0	0	112	214	107	555	0	1,103
10:30 AM	10:45 AM	61	0	63	0	0	0	0	114	216	111	559	0	1,124
10:45 AM	11:00 AM	62	0	64	0	0	0	0	128	216	120	560	0	1,150
11:00 AM	11:15 AM	65	0	70	0	0	0	0	134	216	120	572	0	1,177
11:15 AM	11:30 AM	68	0	70	0	0	0	0	150	217	121	588	0	1,214
11:30 AM	11:45 AM	69	0	75	0	0	0	0	164	220	124	603	0	1,255
11:45 AM	12:00 PM	72	0	77	0	0	0	0	170	226	127	630	0	1,302
12:00 PM	12:15 PM	75	0	78	0	0	0	0	183	228	133	642	0	1,339
12:15 PM	12:30 PM	94	0	81	0	0	0	0	194	230	140	655	0	1,394
12:30 PM	12:45 PM	112	0	85	0	0	0	0	208	237	141	671	0	1,454
12:45 PM	01:00 PM	121	0	85	0	0	0	0	223	239	144	685	0	1,497
01:00 PM	01:15 PM	127	0	86	0	0	0	0	244	250	147	693	0	1,547
01:15 PM	01:30 PM	133	0	89	0	0	0	0	274	256	149	706	0	1,607
01:30 PM	01:45 PM	137	0	92	0	0	0	0	285	263	152	719	0	1,648
01:45 PM	02:00 PM	140	0	92	0	0	0	0	299	274	152	733	0	1,690
02:00 PM	02:15 PM	142	0	94	0	0	0	0	310	283	153	749	0	1,731
02:15 PM	02:30 PM	144	0	97	0	0	0	0	330	290	154	759	0	1,774
02:30 PM	02:45 PM	146	0	105	0	0	0	0	347	292	155	769	0	1,814
02:45 PM	03:00 PM	151	0	107	0	0	0	0	373	295	158	782	0	1,866
03:00 PM	03:15 PM	151	0	114	0	0	0	0	402	297	159	795	0	1,918
03:15 PM	03:30 PM	157	0	123	0	0	0	0	434	299	161	808	0	1,982
03:30 PM	03:45 PM	163	0	131	0	0	0	0	488	299	161	824	0	2,066
03:45 PM	04:00 PM	168	0	133	0	0	0	0	534	303	162	835	0	2,135
04:00 PM	04:15 PM	168	0	141	0	0	0	0	584	307	167	846	0	2,213
04:15 PM	04:30 PM	173	0	152	0	0	0	0	639	310	170	863	0	2,307
04:30 PM	04:45 PM	179	0	166	0	0	0	0	706	316	172	872	0	2,411
04:45 PM	05:00 PM	180	0	176	0	0	0	0	774	320	173	888	0	2,511

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-229 2

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	LAWRENCE LIVERMORE LAB TIS	SURVEY DATE:	DECEMBER 12, 2002	DAY:	WEDNESDAY
N-S Approach:	DRIVEWAY 8	SURVEY TIME:	7:00 AM TO 5:00 PM	WEATHER:	SUNNY
E-W Approach:	EAST AVENUE				

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES
TOTAL BY PERIOD														
07:00 AM	07:15 AM	1	0	3	0	0	0	0	16	23	18	58	0	119
07:15 AM	07:30 AM	1	0	3	0	0	0	0	1	20	13	76	0	113
07:30 AM	07:45 AM	3	0	5	0	0	0	0	5	21	20	49	0	103
07:45 AM	08:00 AM	7	0	9	0	0	0	0	6	9	5	67	0	107
08:00 AM	08:15 AM	9	0	5	0	0	0	0	11	20	8	46	0	126
08:15 AM	08:30 AM	8	0	3	0	0	0	0	5	22	3	66	0	96
08:30 AM	08:45 AM	7	0	6	0	0	0	0	8	34	5	65	0	109
08:45 AM	09:00 AM	6	0	3	0	0	0	0	14	8	2	53	0	86
09:00 AM	09:15 AM	1	0	4	0	0	0	0	9	21	5	21	0	61
09:15 AM	09:30 AM	5	0	4	0	0	0	0	5	12	3	19	0	50
09:30 AM	09:45 AM	4	0	3	0	0	0	0	7	4	5	17	0	43
09:45 AM	10:00 AM	4	0	5	0	0	0	0	8	9	5	4	0	35
10:00 AM	10:15 AM	4	0	0	0	0	0	0	7	2	4	10	0	31
10:15 AM	10:30 AM	0	0	3	0	0	0	0	2	2	4	4	0	23
10:30 AM	10:45 AM	1	0	8	0	0	0	0	14	0	9	1	0	21
10:45 AM	11:00 AM	1	0	1	0	0	0	0	6	0	0	12	0	26
11:00 AM	11:15 AM	3	0	6	0	0	0	0	16	1	0	7	0	37
11:15 AM	11:30 AM	3	0	0	0	0	0	0	14	3	3	15	0	37
11:30 AM	11:45 AM	1	0	5	0	0	0	0	6	7	1	16	0	55
11:45 AM	12:00 PM	3	0	2	0	0	0	0	15	2	3	14	0	60
12:00 PM	12:15 PM	3	0	1	0	0	0	0	11	2	7	13	0	43
12:15 PM	12:30 PM	19	0	3	0	0	0	0	13	2	6	12	0	50
12:30 PM	12:45 PM	18	0	4	0	0	0	0	14	7	1	16	0	60
12:45 PM	01:00 PM	9	0	0	0	0	0	0	15	2	3	14	0	43
01:00 PM	01:15 PM	6	0	1	0	0	0	0	21	11	3	8	0	50
01:15 PM	01:30 PM	6	0	3	0	0	0	0	30	6	2	13	0	60
01:30 PM	01:45 PM	4	0	3	0	0	0	0	11	9	1	16	0	41
01:45 PM	02:00 PM	3	0	0	0	0	0	0	14	7	3	13	0	42
02:00 PM	02:15 PM	2	0	2	0	0	0	0	11	9	1	16	0	41
02:15 PM	02:30 PM	2	0	3	0	0	0	0	20	7	1	13	0	42
02:30 PM	02:45 PM	2	0	8	0	0	0	0	17	2	1	16	0	

		HOURLY TOTALS													
07:00 AM	----	08:00 AM	12	0	19	0	0	0	0	0	28	73	60	160	
07:15 AM	----	08:15 AM	20	0	21	0	0	0	0	0	28	73	60	160	
07:30 AM	----	08:30 AM	27	0	22	0	0	0	0	0	20	84	47	142	
07:45 AM	----	08:45 AM	31	0	23	0	0	0	0	0	30	84	42	149	
08:00 AM	----	09:00 AM	30	0	17	0	0	0	0	0	30	85	25	142	
08:15 AM	----	09:15 AM	22	0	16	0	0	0	0	0	38	84	18	148	
08:30 AM	----	09:30 AM	19	0	17	0	0	0	0	0	39	71	18	147	
08:45 AM	----	09:45 AM	16	0	14	0	0	0	0	0	37	60	14	132	
09:00 AM	----	10:00 AM	14	0	16	0	0	0	0	0	37	50	14	106	
09:15 AM	----	10:15 AM	17	0	12	0	0	0	0	0	31	51	17	110	
09:30 AM	----	10:30 AM	12	0	11	0	0	0	0	0	30	34	17	61	
09:45 AM	----	10:45 AM	9	0	16	0	0	0	0	0	28	27	20	86	
10:00 AM	----	11:00 AM	6	0	12	0	0	0	0	0	25	17	21	58	
10:15 AM	----	11:15 AM	5	0	18	0	0	0	0	0	31	8	25	44	
10:30 AM	----	11:30 AM	8	0	15	0	0	0	0	0	29	4	20	53	
10:45 AM	----	11:45 AM	8	0	12	0	0	0	0	0	38	3	14	55	
11:00 AM	----	12:00 PM	10	0	13	0	0	0	0	0	50	4	13	70	
11:15 AM	----	12:15 PM	10	0	8	0	0	0	0	0	42	10	7	60	
11:30 AM	----	12:30 PM	26	0	11	0	0	0	0	0	49	12	13	70	
11:45 AM	----	12:45 PM	43	0	10	0	0	0	0	0	44	13	19	67	
12:00 PM	----	01:00 PM	49	0	8	0	0	0	0	0	44	17	17	68	
12:15 PM	----	01:15 PM	52	0	8	0	0	0	0	0	53	13	17	55	
12:30 PM	----	01:30 PM	39	0	8	0	0	0	0	0	61	22	14	51	
12:45 PM	----	01:45 PM	25	0	7	0	0	0	0	0	80	26	9	51	
01:00 PM	----	02:00 PM	19	0	7	0	0	0	0	0	77	26	11	48	
01:15 PM	----	02:15 PM	15	0	8	0	0	0	0	0	76	35	8	48	
01:30 PM	----	02:30 PM	11	0	8	0	0	0	0	0	66	33	6	56	
01:45 PM	----	02:45 PM	9	0	13	0	0	0	0	0	56	34	5	53	
02:00 PM	----	03:00 PM	11	0	15	0	0	0	0	0	62	29	3	50	
02:15 PM	----	03:15 PM	9	0	20	0	0	0	0	0	74	21	6	49	
02:30 PM	----	03:30 PM	13	0	26	0	0	0	0	0	92	14	6	46	
02:45 PM	----	03:45 PM	17	0	26	0	0	0	0	0	104	9	7	49	
03:00 PM	----	04:00 PM	17	0	26	0	0	0	0	0	141	7	6	55	
03:15 PM	----	04:15 PM	17	0	27	0	0	0	0	0	161	8	4	53	
03:30 PM	----	04:30 PM	16	0	29	0	0	0	0	0	182	10	8	51	
03:45 PM	----	04:45 PM	16	0	35	0	0	0	0	0	205	11	9	55	
04:00 PM	----	05:00 PM	12	0	43	0	0	0	0	0	218	17	11	48	
											240	17	11	53	
SF/PENINSULA: (415) 750-1317			ALAMEDA: (510) 233-229 2								CONTRA COSTA: (510) 232-1271				

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS		SURVEY DATE: DECEMBER 12, 2002		DAY: WEDNESDAY										
N-S Approach: DRIVEWAY 8		SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY												
E-W Approach: EAST AVENUE		JURISDICTION: LIVERMORE		FILENAME: EA08LV32										
PEAK HOUR: 12:30 PM TO 1:30 PM														
HEAVY 2-AXLE

		SURVEY DATA												
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
		Left Thru Right			Left Thru Right			Left Thru Right			Left Thru Right			VOLUMES
From To														
07:00 AM ---- 07:15 AM		0 0 0			0 0 0			0 0 0			0 0 0			0
07:15 AM ---- 07:30 AM		0 0 0			0 0 0			0 0 0			0 0 0			0
07:30 AM ---- 07:45 AM		0 0 0			0 0 0			0 0 0			0 0 0			0
07:45 AM ---- 08:00 AM		0 0 0			0 0 0			0 0 1			0 0 0			1
08:00 AM ---- 08:15 AM		0 0 0			0 0 0			0 0 1			0 1 0			2
08:15 AM ---- 08:30 AM		0 0 0			0 0 0			0 1 1			0 1 1			3
08:30 AM ---- 08:45 AM		0 0 0			0 0 0			0 1 2			1 1 0			5
08:45 AM ---- 09:00 AM		0 0 0			0 0 0			0 1 2			1 2 0			6
09:00 AM ---- 09:15 AM		0 0 0			0 0 0			0 2 2			1 3 0			8
09:15 AM ---- 09:30 AM		1 0 0			0 0 0			0 2 2			1 3 0			9
09:30 AM ---- 09:45 AM		1 0 1			0 0 0			0 3 3			1 3 0			12
09:45 AM ---- 10:00 AM		1 0 1			0 0 0			0 3 5			2 7 0			19
10:00 AM ---- 10:15 AM		2 0 1			0 0 0			0 5 5			2 8 0			23
10:15 AM ---- 10:30 AM		4 0 1			0 0 0			0 8 6			3 9 0			31
10:30 AM ---- 10:45 AM		6 0 1			0 0 0			0 8 7			3 10 0			35
10:45 AM ---- 11:00 AM		9 0 2			0 0 0			0 8 7			3 10 0			39
11:00 AM ---- 11:15 AM		9 0 2			0 0 0			0 9 10			3 11 0			44
11:15 AM ---- 11:30 AM		10 0 2			0 0 0			0 11 10			4 12 0			49
11:30 AM ---- 11:45 AM		10 0 2			0 0 0			0 13 11			4 13 0			53
11:45 AM ---- 12:00 PM		12 0 2			0 0 0			0 15 13			4 14 0			60
12:00 PM ---- 12:15 PM		12 0 3			0 0 0			0 16 13			4 14 0			62
12:15 PM ---- 12:30 PM		13 0 4			0 0 0			0 16 13			4 15 0			65
12:30 PM ---- 12:45 PM		13 0 5			0 0 0			0 19 15			5 15 0			72
12:45 PM ---- 01:00 PM		14 0 5			0 0 0			0 22 18			5 15 0			79
01:00 PM ---- 01:15 PM		15 0 7			0 0 0			0 24 20			5 15 0			86
01:15 PM ---- 01:30 PM		15 0 8			0 0 0			0 25 22			6 16 0			92
01:30 PM ---- 01:45 PM		16 0 10			0 0 0			0 26 23			6 16 0			97
01:45 PM ---- 02:00 PM		18 0 10			0 0 0			0 29 23			6 16 0			102
02:00 PM ---- 02:15 PM		20 0 10			0 0 0			0 30 24			6 16 0			106
02:15 PM ---- 02:30 PM		20 0 10			0 0 0			0 30 24			7 16 0			107
02:30 PM ---- 02:45 PM		20 0 10			0 0 0			0 32 24			7 16 0			109
02:45 PM ---- 03:00 PM		20 0 10			0 0 0			0 32 25			7 17 0			111
03:00 PM ---- 03:15 PM		20 0 10			0 0 0			0 33 25			7 18 0			113
03:15 PM ---- 03:30 PM		20 0 10			0 0 0			0 34 25			7 18 0			114
03:30 PM ---- 03:45 PM		20 0 11			0 0 0			0 34 25			7 19 0			116
03:45 PM ---- 04:00 PM		21 0 11			0 0 0			0 34 25			7 20 0			118
04:00 PM ---- 04:15 PM		21 0 11			0 0 0			0 35 25			7 20 0			119
04:15 PM ---- 04:30 PM		21 0 11			0 0 0			0 35 25			7 20 0			119
04:30 PM ---- 04:45 PM		21 0 11			0 0 0			0 35 25			7 20 0			119
04:45 PM ---- 05:00 PM		21 0 11			0 0 0			0 35 25			7 20 0			119
SF/PENINSULA: (415) 750-1317 ALAMEDA: (510) 233-229 2 CONTRA COSTA: (510) 232-1271														

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:		LAWRENCE LIVERMORE LAB TIS						SURVEY DATE: DECEMBER 12, 2002						DAY: WEDNESDAY	
N-S Approach:		DRIVEWAY 8						SURVEY TIME: 7:00 AM TO 5:00 PM						WEATHER: SUNNY	
E-W Approach:		EAST AVENUE						JURISDICTION: LIVERMORE						FILENAME: EA08LV32	
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL	
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	VOLUMES	
TOTAL BY PERIOD															
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	
08:15 AM	08:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	1	1	0	0	2	
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	
09:00 AM	09:15 AM	0	0	0	0	0	0	0	1	0	0	1	0	2	
09:15 AM	09:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	
09:30 AM	09:45 AM	0	0	1	0	0	0	0	1	1	0	0	0	3	
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	2	1	4	0	7	
10:00 AM	10:15 AM	1	0	0	0	0	0	0	2	0	0	1	0	4	
10:15 AM	10:30 AM	2	0	0	0	0	0	0	3	1	1	1	0	8	
10:30 AM	10:45 AM	2	0	0	0	0	0	0	0	1	0	1	0	4	
10:45 AM	11:00 AM	3	0	1	0	0	0	0	0	0	0	0	0	4	
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	3	0	1	0	5	
11:15 AM	11:30 AM	1	0	0	0	0	0	0	2	0	1	1	0	5	
11:30 AM	11:45 AM	0	0	0	0	0	0	0	2	1	0	1	0	4	
11:45 AM	12:00 PM	2	0	0	0	0	0	0	2	2	0	1	0	7	
12:00 PM	12:15 PM	0	0	1	0	0	0	0	1	0	0	0	0	2	
12:15 PM	12:30 PM	1	0	1	0	0	0	0	0	0	0	1	0	3	
12:30 PM	12:45 PM	0	0	1	0	0	0	0	3	2	1	0	0	7	
12:45 PM	01:00 PM	1	0	0	0	0	0	0	3	3	0	0	0	7	
01:00 PM	01:15 PM	1	0	2	0	0	0	0	2	2	0	0	0	6	
01:15 PM	01:30 PM	0	0	1	0	0	0	0	1	2	1	1	0	6	
01:30 PM	01:45 PM	1	0	2	0	0	0	0	1	1	0	0	0	5	
01:45 PM	02:00 PM	2	0	0	0	0	0	0	3	0	0	0	0	5	
02:00 PM	02:15 PM	2	0	0	0	0	0	0	1	1	0	0	0	4	
02:15 PM	02:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	
02:30 PM	02:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2	
02:45 PM	03:00 PM	0	0	0	0	0	0	0	0	1	0	1	0	2	
03:00 PM	03:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	
03:15 PM	03:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	
03:30 PM	03:45 PM	0	0	1	0	0	0	0	0	0	0	1	0	2	
03:45 PM	04:00 PM	1	0	0	0	0	0	0	0	0	0	1	0	2	
04:00 PM	04:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	
04:15 PM	04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30 PM	04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45 PM	05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
HOURLY TOTALS															
07:00 AM	08:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1	
07:15 AM	08:15 AM	0	0	0	0	0	0	0	0	1	0	1	0	2	
07:30 AM	08:30 AM	0	0	0	0	0	0	0	1	1	0	1	0	3	
07:45 AM	08:45 AM	0	0	0	0	0	0	0	1	2	1	1	0	5	
08:00 AM	09:00 AM	0	0	0	0	0	0	0	1	1	1	2	0	5	
08:15 AM	09:15 AM	0	0	0	0	0	0	0	2	1	1	2	0	6	
08:30 AM	09:30 AM	1	0	0	0	0	0	0	1	1	1	2	0	6	
08:45 AM	09:45 AM	1	0	1	0	0	0	0	2	1	0	2	0	7	
09:00 AM	10:00 AM	1	0	1	0	0	0	0	2	3	1	5	0	13	
09:15 AM	10:15 AM	2	0	1	0	0	0	0	3	3	2	5	0	15	
09:30 AM	10:30 AM	3	0	1	0	0	0	0	6	4	2	6	0	22	
09:45 AM	10:45 AM	5	0	0	0	0	0	0	5	4	2	7	0	23	
10:00 AM	11:00 AM	8	0	1	0	0	0	0	5	2	1	3	0	20	
10:15 AM	11:15 AM	7	0	1	0	0	0	0	4	5	1	3	0	21	
10:30 AM	11:30 AM	6	0	1	0	0	0	0	3	4	1	3	0	18	
10:45 AM	11:45 AM	4	0	1	0	0	0	0	5	4	1	3	0	18	
11:00 AM	12:00 PM	3	0	0	0	0	0	0	7	6	1	4	0	21	
11:15 AM	12:15 PM	3	0	1	0	0	0	0	7	3	1	3	0	18	
11:30 AM	12:30 PM	3	0	2	0	0	0	0	5	3	0	3	0	16	
11:45 AM	12:45 PM	3	0	3	0	0	0	0	6	4	1	2	0	19	
12:00 PM	01:00 PM	2	0	3	0	0	0	0	7	5	1	1	0	19	
12:15 PM	01:15 PM	3	0	4	0	0	0	0	8	7	1	1	0	24	
12:30 PM	01:30 PM	2	0	4	0	0	0	0	9	9	2	1	0	27	
12:45 PM	01:45 PM	3	0	5	0	0	0	0	7	8	1	1	0	25	
01:00 PM	02:00 PM	4	0	5	0	0	0	0	7	5	1	1	0	23	
01:15 PM	02:15 PM	5	0	3	0	0	0	0	6	4	1	1	0	20	
01:30 PM	02:30 PM	5	0	2	0	0	0	0	5	2	1	0	0	15	
01:45 PM	02:45 PM	4	0	0	0	0	0	0	6	1	1	0	0	12	
02:00 PM	03:00 PM	2	0	0	0	0	0	0	3	2	1	1	0	9	
02:15 PM	03:15 PM	0	0	0	0	0	0	0	3	1	1	2	0	7	
02:30 PM	03:30 PM	0	0	0	0	0	0	0	4	1	0	2	0	7	
02:45 PM	03:45 PM	0	0	1	0	0	0	0	2	1	0	3	0	7	
03:00 PM	04:00 PM	1	0	1	0	0	0	0	2	0	0	3	0	7	
03:15 PM	04:15 PM	1	0	1	0	0	0	0	2	0	0	2	0	6	
03:30 PM	04:30 PM	1	0	1	0	0	0	0	1	0	0	2	0	5	
03:45 PM	04:45 PM	1	0	0	0	0	0	0	1	0	0	1	0	3	
04:00 PM	05:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	
SF/PENINSULA: (415) 750-1317		ALAMEDA: (510) 233-229 2						CONTRA COSTA: (510) 232-1271							

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 12, 2002				DAY: WEDNESDAY						
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY						
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV33						
PEAK HOUR: 10:15 AM TO 11:15 AM														
HEAVY 3-AXLE														
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	10:15 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
10:15 AM	10:30 AM	0	0	0	0	0	0	0	2	1	0	0	0	3
10:30 AM	10:45 AM	0	0	0	0	0	0	0	2	1	0	0	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	2	1	0	0	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	0	3	1	1	1	0	6
11:15 AM	11:30 AM	0	0	0	0	0	0	0	3	1	1	1	0	6
11:30 AM	11:45 AM	0	0	0	0	0	0	0	3	1	1	1	0	6
11:45 AM	12:00 PM	0	0	0	0	0	0	0	3	1	1	1	0	6
12:00 PM	12:15 PM	1	0	0	0	0	0	0	3	1	1	1	0	7
12:15 PM	12:30 PM	1	0	0	0	0	0	0	3	1	1	1	0	7
12:30 PM	12:45 PM	1	0	0	0	0	0	0	4	1	1	1	0	8
12:45 PM	01:00 PM	1	0	0	0	0	0	0	5	1	1	1	0	9
01:00 PM	01:15 PM	1	0	0	0	0	0	0	5	1	1	1	0	9
01:15 PM	01:30 PM	1	0	0	0	0	0	0	5	1	1	1	0	9
01:30 PM	01:45 PM	1	0	0	0	0	0	0	6	1	1	2	0	11
01:45 PM	02:00 PM	1	0	0	0	0	0	0	6	1	1	2	0	11
02:00 PM	02:15 PM	1	0	0	0	0	0	0	6	1	1	2	0	11
02:15 PM	02:30 PM	1	0	0	0	0	0	0	6	1	1	2	0	11
02:30 PM	02:45 PM	1	0	0	0	0	0	0	6	1	1	2	0	11
02:45 PM	03:00 PM	1	0	0	0	0	0	0	6	1	1	2	0	11
03:00 PM	03:15 PM	1	0	0	0	0	0	0	6	1	1	2	0	11
03:15 PM	03:30 PM	2	0	0	0	0	0	0	6	1	1	2	0	12
03:30 PM	03:45 PM	2	0	0	0	0	0	0	6	1	1	2	0	12
03:45 PM	04:00 PM	2	0	0	0	0	0	0	6	1	1	2	0	12
04:00 PM	04:15 PM	2	0	0	0	0	0	0	6	1	1	2	0	12
04:15 PM	04:30 PM	2	0	0	0	0	0	0	6	1	1	2	0	12
04:30 PM	04:45 PM	2	0	0	0	0	0	0	6	1	1	3	0	13
04:45 PM	05:00 PM	2	0	0	0	0	0	0	6	1	1	3	0	13

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 12, 2002				DAY: WEDNESDAY						
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM WEATHER: SUNNY										
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV34						
PEAK HOUR: 11:00 AM TO 12:00 NN														
HEAVY 4-AXLE		0 0 0							ARRIVAL/DEPARTURE VOLUMES <div style="text-align: center;"> <div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; bottom: 0; border: 1px solid black; background: white;"></div> </div> </div>					
EAST AVENUE														
DRIVEWAY 8														
		0 0 0												

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	2	2	2
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	2	2	2
10:15 AM	10:30 AM	0	0	0	0	0	0	0	1	0	0	2	2	3
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	2	2	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	2	2	4
11:00 AM	11:15 AM	0	0	0	0	0	0	0	1	0	0	3	3	5
11:15 AM	11:30 AM	0	0	0	0	0	0	0	1	1	0	3	3	6
11:30 AM	11:45 AM	0	0	0	0	0	0	0	1	1	0	3	3	6
11:45 AM	12:00 PM	0	0	0	0	0	0	0	2	1	0	3	3	6
12:00 PM	12:15 PM	0	0	0	0	0	0	0	2	1	0	3	3	6
12:15 PM	12:30 PM	1	0	0	0	0	0	0	2	1	0	3	3	7
12:30 PM	12:45 PM	1	0	0	0	0	0	0	2	1	0	3	3	7
12:45 PM	01:00 PM	1	0	0	0	0	0	0	3	1	0	3	3	8
01:00 PM	01:15 PM	1	0	0	0	0	0	0	3	1	0	3	3	8
01:15 PM	01:30 PM	1	0	0	0	0	0	0	3	1	0	3	3	8
01:30 PM	01:45 PM	1	0	0	0	0	0	0	3	1	0	3	3	8
01:45 PM	02:00 PM	1	0	0	0	0	0	0	3	1	0	3	3	8
02:00 PM	02:15 PM	1	0	0	0	0	0	0	3	1	0	3	3	8
02:15 PM	02:30 PM	1	0	0	0	0	0	0	3	1	0	3	3	8
02:30 PM	02:45 PM	1	0	0	0	0	0	0	3	1	0	4	4	9
02:45 PM	03:00 PM	1	0	0	0	0	0	0	3	1	0	4	4	9
03:00 PM	03:15 PM	1	0	0	0	0	0	0	4	1	0	4	4	10
03:15 PM	03:30 PM	1	0	0	0	0	0	0	4	1	0	4	4	10
03:30 PM	03:45 PM	1	0	0	0	0	0	0	4	1	0	4	4	10
03:45 PM	04:00 PM	1	0	0	0	0	0	0	4	1	0	4	4	10
04:00 PM	04:15 PM	1	0	0	0	0	0	0	4	1	0	4	4	10
04:15 PM	04:30 PM	1	0	0	0	0	0	0	4	1	0	4	4	10
04:30 PM	04:45 PM	1	0	0	0	0	0	0	4	1	0	4	4	10
04:45 PM	05:00 PM	1	0	0	0	0	0	0	4	1	0	4	4	10

SF/PENINSULA: (415) 750-1317
ALAMEDA: (510) 233-2292
CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 12, 2002				DAY: WEDNESDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV35			
PEAK HOUR:		11:00 AM TO 12:00 NN						ARRIVAL/DEPARTURE VOLUMES 			
HEAVY 5-AXLE		0 0 0									
		1 0 0									
		DRIVEWAY 8									

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	09:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:00 AM	10:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:15 AM	10:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
10:30 AM	10:45 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	0	2	1	0	2	0	5
11:15 AM	11:30 AM	0	0	0	0	0	0	0	4	1	0	4	0	9
11:30 AM	11:45 AM	1	0	0	0	0	0	0	5	1	0	4	0	11
11:45 AM	12:00 PM	1	0	0	0	0	0	0	8	1	0	5	0	15
12:00 PM	12:15 PM	1	0	0	0	0	0	0	8	1	0	5	0	15
12:15 PM	12:30 PM	1	0	0	0	0	0	0	8	1	0	5	0	15
12:30 PM	12:45 PM	1	0	0	0	0	0	0	9	1	0	5	0	16
12:45 PM	01:00 PM	1	0	0	0	0	0	0	10	1	0	5	0	17
01:00 PM	01:15 PM	1	0	0	0	0	0	0	10	1	0	5	0	17
01:15 PM	01:30 PM	1	0	0	0	0	0	0	10	1	0	6	0	18
01:30 PM	01:45 PM	1	0	0	0	0	0	0	11	1	0	7	0	20
01:45 PM	02:00 PM	1	0	0	0	0	0	0	11	1	0	7	0	20
02:00 PM	02:15 PM	1	0	0	0	0	0	0	11	1	0	7	0	20
02:15 PM	02:30 PM	2	0	0	0	0	0	0	12	1	0	7	0	22
02:30 PM	02:45 PM	2	0	0	0	0	0	0	13	1	0	8	0	24
02:45 PM	03:00 PM	2	0	0	0	0	0	0	13	1	0	8	0	24
03:00 PM	03:15 PM	2	0	0	0	0	0	0	14	1	0	8	0	25
03:15 PM	03:30 PM	2	0	0	0	0	0	0	15	1	0	8	0	26
03:30 PM	03:45 PM	2	0	0	0	0	0	0	15	1	0	8	0	26
03:45 PM	04:00 PM	2	0	0	0	0	0	0	15	1	0	8	0	26
04:00 PM	04:15 PM	2	0	0	0	0	0	0	15	1	0	9	0	27
04:15 PM	04:30 PM	2	0	0	0	0	0	0	15	1	0	10	0	28
04:30 PM	04:45 PM	2	0	0	0	0	0	0	15	1	0	10	0	28
04:45 PM	05:00 PM	2	0	0	0	0	0	0	16	1	0	10	0	29

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

Baymetrics Traffic Resources

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT: LAWRENCE LIVERMORE LAB TIS				SURVEY DATE: DECEMBER 12, 2002				DAY: WEDNESDAY			
N-S Approach: DRIVEWAY 8				SURVEY TIME: 7:00 AM TO 5:00 PM				WEATHER: SUNNY			
E-W Approach: EAST AVENUE				JURISDICTION: LIVERMORE				FILENAME: EA08LV36			
PEAK HOUR: 10:15 AM		TO 11:15 AM						ARRIVAL/DEPARTURE VOLUMES <div style="text-align: center;"> <div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: -20px; left: 0; right: 0;">0 0</div> <div style="position: absolute; left: -20px; top: 0; bottom: 0;">1 3 0</div> <div style="position: absolute; right: -20px; top: 0; bottom: 0;">1 3 0</div> <div style="position: absolute; bottom: -20px; left: 0; right: 0;">0 0</div> </div> </div>			
HEAVY 6-AXLE <div style="text-align: center;"> <div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: -20px; left: 0; right: 0;">0 0 0</div> <div style="position: absolute; left: -20px; top: 0; bottom: 0;">0 3 0</div> <div style="position: absolute; right: -20px; top: 0; bottom: 0;">0 1 0</div> <div style="position: absolute; bottom: -20px; left: 0; right: 0;">0 0 0</div> </div> </div>											
<div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);"> TOTAL 4 </div> </div>											
EAST AVENUE <div style="text-align: center;"> <div style="border: 1px solid black; width: 100px; height: 100px; margin: 0 auto; position: relative;"> <div style="position: absolute; top: -20px; left: 0; right: 0;">0 0 0</div> </div> </div>				DRIVEWAY 8							

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL VOLUMES
From	To	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
SURVEY DATA														
07:00 AM	07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	09:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:30 AM	09:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
09:45 AM	10:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
10:00 AM	10:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
10:15 AM	10:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
10:30 AM	10:45 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
10:45 AM	11:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
11:00 AM	11:15 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
11:15 AM	11:30 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
11:30 AM	11:45 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
11:45 AM	12:00 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
12:00 PM	12:15 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
12:15 PM	12:30 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
12:30 PM	12:45 PM	0	0	0	0	0	0	0	3	0	0	3	0	6
12:45 PM	01:00 PM	0	0	0	0	0	0	0	3	0	0	3	0	6
01:00 PM	01:15 PM	0	0	0	0	0	0	0	3	0	0	4	0	7
01:15 PM	01:30 PM	0	0	0	0	0	0	0	3	0	0	4	0	7
01:30 PM	01:45 PM	0	0	0	0	0	0	0	3	0	0	4	0	7
01:45 PM	02:00 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
02:00 PM	02:15 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
02:15 PM	02:30 PM	0	0	0	0	0	0	0	5	0	0	4	0	9
02:30 PM	02:45 PM	0	0	0	0	0	0	0	6	0	0	4	0	10
02:45 PM	03:00 PM	0	0	0	0	0	0	0	6	0	0	5	0	11
03:00 PM	03:15 PM	0	0	0	0	0	0	0	6	0	0	5	0	11
03:15 PM	03:30 PM	0	0	0	0	0	0	0	6	0	0	5	0	11
03:30 PM	03:45 PM	0	0	0	0	0	0	0	8	0	0	5	0	13
03:45 PM	04:00 PM	0	0	0	0	0	0	0	8	0	0	5	0	13
04:00 PM	04:15 PM	0	0	0	0	0	0	0	8	0	0	5	0	13
04:15 PM	04:30 PM	0	0	0	0	0	0	0	9	0	0	5	0	14
04:30 PM	04:45 PM	0	0	0	0	0	0	0	9	0	0	6	0	15
04:45 PM	05:00 PM	0	0	0	0	0	0	0	9	0	0	6	0	15

SF/PENINSULA: (415) 750-1317

ALAMEDA: (510) 233-2292

CONTRA COSTA: (510) 232-1271

INTERSECTION TURNING MOVEMENT SUMMARY

CONTRA COSTA: (510) 232-1271

D. TRAFFIC ANALYSIS

Existing Conditions

Lanes, Volumes, Timings
1: East Ave & Vasco Road

1/22/2002

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	0.97	1.00	1.00
Frt		0.983			0.950				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3362	0	1770	3539	1583	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3479	0	1770	3362	0	1770	3539	1583	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			45				192			271
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
Link Speed (mph)		30			30				30			30
Link Distance (ft)		2480			2464				2088			1992
Travel Time (s)		56.4			56.0				47.5			45.3
Volume (vph)	250	333	42	21	82	41	40	209	177	336	216	249
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)	272	362	46	23	89	45	43	227	192	365	235	271
Lane Group Flow (vph)	272	408	0	23	134	0	43	227	192	365	235	271
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
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)	8.0	20.0		8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	16.0	28.0	0.0	8.0	20.0	0.0	9.0	21.0	21.0	13.0	25.0	25.0
Total Split (%)	23%	40%	0%	11%	29%	0%	13%	30%	30%	19%	36%	36%
Maximum Green (s)	12.0	24.0		4.0	16.0		5.0	17.0	17.0	9.0	21.0	21.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	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	Max	Max	None	Max	Max
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
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	11.6	18.9		4.0	7.1		5.0	17.2	17.2	8.9	26.7	26.7
Actuated g/C Ratio	0.20	0.32		0.06	0.12		0.08	0.29	0.29	0.15	0.46	0.46
v/c Ratio	0.77	0.36		0.21	0.31		0.31	0.22	0.32	0.70	0.28	0.31
Uniform Delay, d1	25.4	17.1		31.7	16.8		31.0	16.5	0.0	26.6	12.5	0.0
Delay	32.7	14.8		30.0	17.3		28.6	17.3	3.7	28.3	13.3	2.6
LOS	C	B		C	B		C	B	A	C	B	A
Approach Delay		21.9			19.2			12.7			16.3	
Approach LOS		C			B			B			B	
Queue Length 50th (ft)	96	50		8	15		15	33	0	67	47	0

Existing AM
Korve Engineering
KORVEBAYL4-FF51

Synchro 5 Report
Page 1

Lanes, Volumes, Timings
1: East Ave & Vasco Road

1/22/2002

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	#214	100		29	38		43	61	36	#125	121	35
Internal Link Dist (ft)	2400			2384			2008			1912		
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 58.6

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 17.5

Intersection LOS: B

Intersection Capacity Utilization 49.0%

ICU Level of Service A

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: East Ave & Vasco Road

Lanes, Volumes, Timings
1: East Ave & Vasco Road

1/22/2002

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	0.97	1.00	1.00
Frt		0.980			0.939				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3323	0	1770	3539	1583	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3468	0	1770	3323	0	1770	3539	1583	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			241				33			425
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
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2480			2464			2088			1992	
Travel Time (s)		56.4			56.0			47.5			45.3	
Volume (vph)	250	178	27	238	632	431	19	311	30	28	279	391
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)	272	193	29	259	687	468	21	338	33	30	303	425
Lane Group Flow (vph)	272	222	0	259	1155	0	21	338	33	30	303	425
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
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)	8.0	20.0		8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	18.0	24.0	0.0	23.0	29.0	0.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (%)	24%	32%	0%	31%	39%	0%	11%	27%	27%	11%	27%	27%
Maximum Green (s)	14.0	20.0		19.0	25.0		4.0	16.0	16.0	4.0	16.0	16.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	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	Max	Max	None	Max	Max
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
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	13.1	22.3		14.3	23.4		4.0	16.2	16.2	4.0	16.2	16.2
Actuated g/C Ratio	0.19	0.33		0.21	0.35		0.06	0.24	0.24	0.06	0.24	0.24
v/c Ratio	0.80	0.19		0.70	0.88		0.21	0.40	0.08	0.16	0.68	0.61
Uniform Delay, d1	27.4	15.6		26.0	17.5		34.1	23.0	0.0	34.0	24.8	0.0
Delay	37.2	16.6		25.4	22.4		34.5	23.6	9.4	34.1	30.9	3.3
LOS	D	B		C	C		C	C	A	C	C	A
Approach Delay		28.0			23.0			23.0			15.6	
Approach LOS		C			C			C			B	
Queue Length 50th (ft)	105	28		98	176		8	61	0	6	113	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	#246	65		178	#349		31	111	12	19	#249	71
Internal Link Dist (ft)		2400			2384			2008			1912	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary	
Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	67.8
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.88
Intersection Signal Delay:	21.9
	Intersection LOS: C
Intersection Capacity Utilization	75.0%
	ICU Level of Service C
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: East Ave & Vasco Road

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: AM Peak

Intersection: East Ave & SW Entrance (Location #4)

Jurisdiction:

Analysis Year: 2001

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: SW Entrance/West Perimeter Dr

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound	
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		450	455			130	115
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR		450	455			130	115
Percent Heavy Vehicles		2	--	--		--	--
Median Type	Undivided						
RT Channelized?							
Lanes		0	2			2	0
Configuration		LT	T			T	TR
Upstream Signal?			No			No	

Minor Street:	Approach Movement	Northbound				Southbound	
		7 L	8 T	9 R	10 L	11 T	12 R
Volume					10		30
Peak Hour Factor, PHF					1.00		1.00
Hourly Flow Rate, HFR					10		30
Percent Heavy Vehicles					2		2
Percent Grade (%)			0			0	
Median Storage							
Flared Approach: Exists?	Storage						
RT Channelized?							No
Lanes					1	1	
Configuration					L	R	

Delay, Queue Length, and Level of Service

Approach Movement	EB 1 LT	WB 4	Northbound			Southbound	
			7 	8	9	10 L	11 12 R
v (vph)	450					10	30
C(m) (vph)	1318					98	906
v/c	0.34					0.10	0.03
95% queue length	1.55					0.34	0.10
Control Delay	9.1					45.9	9.1

LOS	A	E	A
Approach Delay			18.3
Approach LOS			C

HCS2000: Unsignalized Intersections Release 4.1

Korve Engineering, Inc.

Phone:	Fax:
E-Mail:	

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/21/02
Analysis Time Period: AM Peak
Intersection: East Ave & SW Entrance
Jurisdiction:
Analysis Year: 2001
Project ID: Lawrence Livermore National Laboratory
East/West Street: East Ave
North/South Street: SW Entrance/West Perimeter Dr

Intersection Orientation: EW	Study period (hrs): 1.00
------------------------------	--------------------------

Vehicle Volumes and Adjustments

Major Street Movements	1 L	2 T	3 R	4 L	5 T	6 R
Volume	450	455			130	115
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	112	114			32	29
Hourly Flow Rate, HFR	450	455			130	115
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
RT Channelized?						
Lanes	0	2			2	0
Configuration		LT T			T	TR
Upstream Signal?		No			No	
Minor Street Movements	7 L	8 T	9 R	10 L	11 T	12 R
Volume				10		30
Peak Hour Factor, PHF				1.00		1.00
Peak-15 Minute Volume				2		8
Hourly Flow Rate, HFR				10		30
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
RT Channelized?						No

Lanes	1	1
Configuration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2 Left-Turn Through							
S5 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:	0	
Shared ln volume, major rt vehicles:	0	
Sat flow rate, major th vehicles:	1700	
Sat flow rate, major rt vehicles:	1700	
Number of major street through lanes:	2	

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
c(c,base)	4.1					7.5		6.9
c(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)	2					2		2
c(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)	0.00					0.70		0.00
t(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
c(c) 1-stage	4.1					6.8		6.9
2-stage								

Follow-Up Time Calculations								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
t(f,base)	2.20					3.50		3.30
t(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(HV)	2					2		2
c(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
V prog				
Total Saturation Flow Rate, s (vph)				
Arrival Type				
Effective Green, g (sec)				
Cycle Length, C (sec)				
Rp (from table 9-2)				
Proportion vehicles arriving on green P				
g(q1)				
g(q2)				
g(q)				

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
alpha				
beta				
Travel time, t(a) (sec)				
Smoothing Factor, F				
Proportion of conflicting flow, f				
Max platooned flow, V(c,max)				
Min platooned flow, V(c,min)				
Duration of blocked period, t(p)				
Proportion time blocked, p		0.000		0.000

Computation 3-Platoon Event Periods Result

p(2)	0.000
p(5)	0.000
p(dom)	
p(subo)	
Constrained or unconstrained?	

Proportion unblocked for minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Two-Stage Process Stage II
p(1)			
p(4)			
p(7)			
p(8)			
p(9)			
p(10)			
p(11)			
p(12)			

Computation 4 and 5
Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

$V(c,x)$	245	1315	122
P_x			
$V(c,u,x)$			
$V(r,x)$			
C_{plat},x			

Two-Stage Process									
	7		8		10		11		
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	
$V(c,x)$									
$V(x)$						3400			
$V(c,u,x)$									
$V(r,x)$									
$V(plat,x)$									

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
Conflicting Flows		122
Potential Capacity		906
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		906
Probability of Queue free St.	1.00	0.97
Step 2: LT from Major St.	4	1
Conflicting Flows		245
Potential Capacity		1318
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		1318
Probability of Queue free St.	1.00	0.66
Adj L-Shared Prob Q free St.		0.66
Step 3: TH from Minor St.	8	11
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.66	0.66
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows		1315
Potential Capacity		149
Pedestrian Impedance Factor	1.00	1.00
Adj. L, Min T Impedance factor	0.66	
Adj. L, Min T Adj. Imp Factor.	0.73	
Cap. Adj. factor due to Impeding mvmnt	0.71	0.66
Movement Capacity		98

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.66	0.66
Movement Capacity		
Result for 2 stage process:		
a		
y		
C t		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		1315
Potential Capacity		149
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.66	
Maj. L, Min T Adj. Imp Factor.	0.73	
Cap. Adj. factor due to Impeding mvmnt	0.71	0.66
Movement Capacity		98
Results for Two-stage process:		
a		
y		

Worksheet 8-Shared Lane Calculations

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (vph)				10		30
Movement Capacity (vph)				98		906
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
C sep				98		906
Volume				10		30
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
a max						
C sh						
SUM C sep						
l						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		R
v (vph)	450					10		30
C(m) (vph)	1318					98		906
v/c	0.34					0.10		0.03
95% queue length	1.55					0.34		0.10
ontrol Delay	9.1					45.9		9.1
LOS	A					E		A
Approach Delay							18.3	
Approach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	0.66	1.00
r(il), Volume for stream 2 or 5	0	
v(i2), Volume for stream 3 or 6	0	
s(il), Saturation flow rate for stream 2 or 5	1700	
s(i2), Saturation flow rate for stream 3 or 6	1700	
P*(oj)	0.66	
l(M,LT), Delay for stream 1 or 4	9.1	
N, Number of major street through lanes	2	
l(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: PM Peak

Intersection: East Ave & SW Entrance (Location #4)

Jurisdiction:

Analysis Year: 2001

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: SW Entrance/West Perimeter Dr

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound	
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		60	15			695	15
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR		60	15			695	15
Percent Heavy Vehicles		2	--	--		--	--
Median Type	Undivided						
RT Channelized?							
Lanes		0	2			2	0
Configuration			LT T			T	TR
Upstream Signal?			No			No	

Minor Street:	Approach Movement	Northbound				Southbound	
		7 L	8 T	9 R	10 L	11 T	12 R
Volume					40		495
Peak Hour Factor, PHF					1.00		1.00
Hourly Flow Rate, HFR					40		495
Percent Heavy Vehicles					2		2
Percent Grade (%)			0			0	
Median Storage							
Flared Approach: Exists?	Storage						
RT Channelized?							No
Lanes					1 L	1 R	
Configuration							

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound				Southbound	
	1 LT	4	7	8	9	10 L	11	12 R
v (vph)	60					40		495
C(m) (vph)	885					288		641
v/c	0.07					0.14		0.77
95% queue length	0.22					0.48		9.05
Control Delay	9.4					19.5		28.8

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Corve Engineering, Inc.

Phone:
E-Mail:

Fax:

TWO-WAY STOP CONTROL (TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/21/02
Analysis Time Period: PM Peak
Intersection: East Ave & SW Entrance
Jurisdiction:
Analysis Year: 2001
Project ID: Lawrence Livermore National Laboratory
East/West Street: East Ave
North/South Street: SW Entrance/West Perimeter Dr

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1 L	2 T	3 R	4 L	5 T	6 R
Volume	60	15			695	15
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	15	4			174	4
Hourly Flow Rate, HFR	60	15			695	15
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
RT Channelized?						
Lanes	0	2			2	0
Configuration	LT T				T	TR
Upstream Signal?	No				No	
Minor Street Movements	7 L	8 T	9 R	10 L	11 T	12 R
Volume				40		495
Peak Hour Factor, PHF				1.00		1.00
Peak-15 Minute Volume				10		124
Hourly Flow Rate, HFR				40		495
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
RT Channelized?						No

Lanes	1	1
Configuration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2	Left-Turn						
	Through						
S5	Left-Turn						
	Through						

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:	0	
Shared ln volume, major rt vehicles:	0	
Sat flow rate, major th vehicles:	1700	
Sat flow rate, major rt vehicles:	1700	
Number of major street through lanes:	2	

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(c,base)	4.1					7.5		6.9
t(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)	2					2		2
t(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)	0.00					0.70		0.00
t(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c) 1-stage	4.1					6.8		6.9
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(f,base)	2.20					3.50		3.30
t(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(HV)	2					2		2
t(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal			
	Movement 2		Movement 5
	V(t)	V(l,prot)	V(t) V(l,prot)
/ prog			
Total Saturation Flow Rate, s (vph)			
Arrival Type			
Effective Green, g (sec)			
Cycle Length, C (sec)			
Rp (from table 9-2)			
Proportion vehicles arriving on green P			
j(q1)			
g(q2)			
j(q)			

Computation 2-Proportion of TWSC Intersection Time blocked			
	Movement 2		Movement 5
	V(t)	V(l,prot)	V(t) V(l,prot)
alpha			
beta			
Travel time, t(a) (sec)			
Smoothing Factor, F			
Proportion of conflicting flow, f			
Max platooned flow, V(c,max)			
Min platooned flow, V(c,min)			
Duration of blocked period, t(p)			
Proportion time blocked, p	0.000		0.000

Computation 3-Platoon Event Periods	Result
p(2)	0.000
p(5)	0.000
p(dom)	
p(subo)	
Constrained or unconstrained?	

Proportion unblocked for minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Stage II
p(1)			
p(4)			
p(7)			
p(8)			
p(9)			
p(10)			
p(11)			
p(12)			

Computation 4 and 5 Single-Stage Process								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

V c,x710829355
S
Px
V c,u,x

C r,x
C plat,x

Two-Stage Process									
	7			8			10		11
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage2
V(c,x)									
s						3400			
P(x)									
V(c,u,x)									
C(r,x)									
C(plat,x)									

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
Conflicting Flows		355
Potential Capacity		641
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		641
Probability of Queue free St.	1.00	0.23
Step 2: LT from Major St.	4	1
Conflicting Flows		710
Potential Capacity		885
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		885
Probability of Queue free St.	1.00	0.93
Maj L-Shared Prob Q free St.		0.93
Step 3: TH from Minor St.	8	11
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.93	0.93
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows		829
Potential Capacity		309
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.93	
Maj. L, Min T Adj. Imp Factor.	0.95	
Cap. Adj. factor due to Impeding mvmnt	0.22	0.93
Movement Capacity		288

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
---------------------------	---	----

Part 1 - First Stage
 Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Cap. Adj. factor due to Impeding mvmnt
 Movement Capacity
 Probability of Queue free St.

Part 2 - Second Stage
 Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Cap. Adj. factor due to Impeding mvmnt
 Movement Capacity

Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.93	0.93
Movement Capacity		

Result for 2 stage process:

a		
/		
C t		
Probability of Queue free St.	1.00	1.00

Step 4: LT from Minor St.	7	10
---------------------------	---	----

Part 1 - First Stage
 Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Cap. Adj. factor due to Impeding mvmnt
 Movement Capacity

Part 2 - Second Stage
 Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Cap. Adj. factor due to Impeding mvmnt
 Movement Capacity

Part 3 - Single Stage		
Conflicting Flows		829
Potential Capacity		309
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.93	
Maj. L, Min T Adj. Imp Factor.	0.95	
Cap. Adj. factor due to Impeding mvmnt	0.22	0.93
Movement Capacity		288

Results for Two-stage process:

a
 y

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				40		495
Movement Capacity (vph)				288		641
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
C sep				288		641
Volume				40		495
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
n max						
C sh						
SUM C sep						
n						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		R
v (vph)	60					40		495
C(m) (vph)	885					288		641
v/c	0.07					0.14		0.77
95% queue length	0.22					0.48		9.05
Control Delay	9.4					19.5		28.8
LOS	A					C		D
Approach Delay							28.1	
Approach LOS							D	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	0.93	1.00
v(i1), Volume for stream 2 or 5	0	
v(i2), Volume for stream 3 or 6	0	
s(i1), Saturation flow rate for stream 2 or 5	1700	
s(i2), Saturation flow rate for stream 3 or 6	1700	
P*(oj)	0.93	
d(M,LT), Delay for stream 1 or 4	9.4	
N, Number of major street through lanes	2	
d(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.:
Date Performed: 1/21/02
Analysis Time Period: PM Peak
Intersection: East Ave & W Entrance (Location # 5)
Jurisdiction:
Analysis Year: 2001
Project ID: Lawrence Livermore National Laboratory
East/West Street: East Ave
North/South Street: West Entrance to Sandia Labs

Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments								
Major Street:	Approach Movement	Eastbound				Westbound		
		1	2	3		4	5	6
		L	T	R		L	T	R
Volume			40	15		30	590	
Peak-Hour Factor, PHF			1.00	1.00		1.00	1.00	
Hourly Flow Rate, HFR			40	15		30	590	
Percent Heavy Vehicles			--	--		2	--	--
Median Type	Undivided							
Channelized?								
Lanes			2	0		0	2	
Configuration			T	TR		LT	T	
Stream Signal?			No				No	

Minor Street:	Approach Movement	Northbound				Southbound		
		7	8	9		10	11	12
		L	T	R		L	T	R
Volume		90		190				
Peak Hour Factor, PHF		1.00		1.00				
Hourly Flow Rate, HFR		90		190				
Percent Heavy Vehicles		2		2				
Percent Grade (%)			0				0	
Median Storage								
Shared Approach: Exists?	Storage							
Channelized?				No				
Lanes		1		1				
Configuration		L		R				

Delay, Queue Length, and Level of Service								
Approach Movement	EB	WB	Northbound			Southbound		
			4	7	8	9	10	11
			LT	L		R		12
Flow (vph)		30	90			190		
Flow (m) (vph)		1548	564			1041		
Flow (c)		0.02	0.16			0.18		
% queue length		0.06	0.57			0.67		
Control Delay		7.4	12.6			9.2		

OS	A	B	A
pproach Delay			10.3
pproach LOS			B

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orve Engineering, Inc.

hone:	Fax:
-Mail:	

TWO-WAY STOP CONTROL (TWSC) ANALYSIS

nalist:
 gency/Co.:
 ate Performed: 1/21/02
 nalysis Time Period: PM Peak
 ntersection: East Ave & W Entrance
 urisdiction:
 nalysis Year: 2001
 roject ID: Lawrence Livermore National Laboratory
 ast/West Street: East Ave
 orth/South Street: West Entrance to Sandia Labs

ntersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		40	15	30	590	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Peak-15 Minute Volume		10	4	8	148	
Hourly Flow Rate, HFR		40	15	30	590	
Percent Heavy Vehicles		--	--	2	--	--
Median Type	Undivided					
T Channelized?						
Lanes		2	0	0	2	
Configuration		T	TR	LT	T	
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	90		190			
Peak Hour Factor, PHF	1.00		1.00			
Peak-15 Minute Volume	22		48			
Hourly Flow Rate, HFR	90		190			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Median Storage						
Flared Approach:	Exists?					
	Storage					
T Channelized?			No			

anes

onfiguration

1

L

1

R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
low (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
walking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
2 Left-Turn							
Through							
5 Left-Turn							
Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		0
Shared ln volume, major rt vehicles:		0
ut flow rate, major th vehicles:		1700
ut flow rate, major rt vehicles:		1700
Number of major street through lanes:		2

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
c,base)		4.1	7.5		6.9			
(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
(hv)		2	2		2			
c,g)			0.20	0.20	0.10	0.20	0.20	0.10
grade/100			0.00	0.00	0.00	0.00	0.00	0.00
(3,lt)		0.00	0.70		0.00			
c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage		4.1	6.8		6.9			
2-stage								

Follow-Up Time Calculations								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
(f,base)		2.20	3.50		3.30			
f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(HV)		2	2		2			
(f)		2.2	3.5		3.3			

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal			
	Movement 2		Movement 5
	V(t)	V(l,prot)	V(t) V(l,prot)

prog
otal Saturation Flow Rate, s (vph)
rrival Type
ffective Green, g (sec)
ycle Length, C (sec)
p (from table 9-2)
roportion vehicles arriving on green P
(q1)
(q2)
(q)

Computation 2-Proportion of TWSC Intersection Time blocked			
	Movement 2		Movement 5
	V(t)	V(l,prot)	V(t) V(l,prot)

lpha
eta
ravel time, t(a) (sec)
moothing Factor, F
roportion of conflicting flow, f
ax platooned flow, V(c,max)
in platooned flow, V(c,min)
uration of blocked period, t(p)
roportion time blocked, p

	0.000	0.000
--	-------	-------

Computation 3-Platoon Event Periods Result

(2)	0.000
(5)	0.000

(dom)
(subo)
onstrained or unconstrained?

roportion nblocked or minor ovements, p(x)	(1)	(2)	(3)
	Single-stage Process	Two-Stage Process Stage I	Stage II
(1)			
(4)			
(7)			
(8)			
(9)			
(10)			
(11)			
(12)			

Computation 4 and 5 Single-Stage Process								
ovement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

C,x

55

403

28

Px

C,u,x

C r,x

plat,x

Two-Stage Process

	7	8	10	11
	Stage1	Stage2	Stage1	Stage2

V(C,x)

3400

V(x)

V(C,u,x)

C(r,x)

C(plat,x)

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.

9

12

Conflicting Flows

28

Potential Capacity

1041

Pedestrian Impedance Factor

1.00

1.00

Movement Capacity

1041

Probability of Queue free St.

0.82

1.00

Step 2: LT from Major St.

4

1

Conflicting Flows

55

Potential Capacity

1548

Pedestrian Impedance Factor

1.00

1.00

Movement Capacity

1548

Probability of Queue free St.

0.98

1.00

Adj L-Shared Prob Q free St.

0.98

Step 3: TH from Minor St.

8

11

Conflicting Flows

Potential Capacity

Pedestrian Impedance Factor

1.00

1.00

Cap. Adj. factor due to Impeding mvmnt

0.98

0.98

Movement Capacity

Probability of Queue free St.

1.00

1.00

Step 4: LT from Minor St.

7

10

Conflicting Flows

403

Potential Capacity

575

Pedestrian Impedance Factor

1.00

1.00

Adj. L, Min T Impedance factor

0.98

Adj. L, Min T Adj. Imp Factor.

0.99

Cap. Adj. factor due to Impeding mvmnt

0.98

0.81

Movement Capacity

564

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
---------------------------	---	----

Part 1 - First Stage
 Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Adj. factor due to Impeding movement
 Movement Capacity
 Probability of Queue free St.

Part 2 - Second Stage
 Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Adj. factor due to Impeding movement
 Movement Capacity

Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Adj. factor due to Impeding movement	0.98	0.98
Movement Capacity		

Result for 2 stage process:

Probability of Queue free St.	1.00	1.00
-------------------------------	------	------

Step 4: LT from Minor St.	7	10
---------------------------	---	----

Part 1 - First Stage
 Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Adj. factor due to Impeding movement
 Movement Capacity

Part 2 - Second Stage
 Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Adj. factor due to Impeding movement
 Movement Capacity

Part 3 - Single Stage		
Conflicting Flows	403	
Potential Capacity	575	
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor		0.98
aj. L, Min T Adj. Imp Factor.		0.99
ap. Adj. factor due to Impeding movement	0.98	0.81
ovement Capacity	564	

Results for Two-stage process:

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)	90		190			
Movement Capacity (vph)	564		1041			
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Qsep	564		1041			
Volume	90		190			
Delay						
Qsep						
Qsep +1						
Qund (Qsep +1)						
max						
sh						
M C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
Volume (vph)		30	90		190			
Capacity (vph)		1548	564		1041			
PLC		0.02	0.16		0.18			
% queue length		0.06	0.57		0.67			
Control Delay		7.4	12.6		9.2			
LOS		A	B		A			
Approach Delay				10.3				
Approach LOS				B				

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
Qoj	1.00	0.98
V(i1), Volume for stream 2 or 5		0
V(i2), Volume for stream 3 or 6		0
S(i1), Saturation flow rate for stream 2 or 5		1700
S(i2), Saturation flow rate for stream 3 or 6		1700
P*(oj)		0.98
D(M,LT), Delay for stream 1 or 4		7.4
N, Number of major street through lanes		2
D(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: AM Peak

Intersection: East Ave & W Entrance (Location #5)

Jurisdiction:

Analysis Year: 2001

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: West Entrance to Sandia Labs

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound		
		1 L	2 T	3 R	 4 L	5 T	6 R	
Volume			265	200		140	90	
Peak-Hour Factor, PHF			1.00	1.00		1.00	1.00	
Hourly Flow Rate, HFR			265	200		140	90	
Percent Heavy Vehicles			--	--		2	--	--
Median Type	Undivided							
T Channelized?								
Lanes			2	0		0	2	
Configuration			T	TR		LT	T	
Poststream Signal?			No				No	

Minor Street:	Approach Movement	Northbound				Southbound		
		7 L	8 T	9 R	 10 L	11 T	12 R	
Volume		15		20				
Peak Hour Factor, PHF		1.00		1.00				
Hourly Flow Rate, HFR		15		20				
Percent Heavy Vehicles		2		2				
Percent Grade (%)			0			0		
Median Storage								
Shared Approach: Exists?								
Storage								
T Channelized?				No				
Lanes		1		1				
Configuration		L		R				

Delay, Queue Length, and Level of Service								
Approach Movement Lane Config	EB	WB	Northbound			Southbound		
	1	4 LT	7 L	8	9 R	10 L	11 T	12
(vph)		140	15		20			
(m) (vph)		1093	330		770			
/c		0.13	0.05		0.03			
5% queue length		0.44	0.14		0.08			
Control Delay		8.8	16.4		9.8			

S
Approach Delay
Approach LOS

A

C

12.6
B

A

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Phone:
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TWO-WAY STOP CONTROL (TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/21/02
Analysis Time Period: AM Peak
Intersection: East Ave & W Entrance
Jurisdiction:
Analysis Year: 2001
Project ID: Lawrence Livermore National Laboratory
East/West Street: East Ave
North/South Street: West Entrance to Sandia Labs

Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		265	200	140	90	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Peak-15 Minute Volume		66	50	35	22	
Hourly Flow Rate, HFR		265	200	140	90	
Percent Heavy Vehicles		--	--	2	--	--
Median Type	Undivided					
RT Channelized?						
Lanes		2	0		0	2
Configuration		T	TR		LT	T
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	15		20			
Peak Hour Factor, PHF	1.00		1.00			
Peak-15 Minute Volume	4		5			
Hourly Flow Rate, HFR	15		20			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Median Storage						
Paved Approach: Exists?	Storage					
RT Channelized?			No			

anes	1	1
onfiguration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
low (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
alking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
2 Left-Turn ... Through							
5 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
pared ln volume, major th vehicles:		0
pared ln volume, major rt vehicles:		0
at flow rate, major th vehicles:		1700
at flow rate, major rt vehicles:		1700
umber of major street through lanes:		2

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(c,base)		4.1	7.5		6.9			
(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
(hv)		2	2		2			
(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
rade/100			0.00	0.00	0.00	0.00	0.00	0.00
(3,lt)		0.00	0.70		0.00			
(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage		4.1	6.8		6.9			
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(f,base)		2.20	3.50		3.30			
(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(HV)		2	2		2			
(f)		2.2	3.5		3.3			

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal			
	Movement 2		Movement 5
	V(t)	V(l,prot)	V(t) V(l,prot)
/ prog			
Total Saturation Flow Rate, s (vph)			
Arrival Type			
Effective Green, g (sec)			
Vehicle Length, C (sec)			
(from table 9-2)			
Proportion vehicles arriving on green P			
q(q1)			
q2)			
q)			

Computation 2-Proportion of TWSC Intersection Time blocked			
	Movement 2		Movement 5
	V(t)	V(l,prot)	V(t) V(l,prot)
pha			
ta			
Travel time, t(a) (sec)			
Smoothing Factor, F			
Proportion of conflicting flow, f			
Max platooned flow, V(c,max)			
Min platooned flow, V(c,min)			
Duration of blocked period, t(p)			
Proportion time blocked, p	0.000		0.000

Computation 3-Platoon Event Periods	Result
p(2)	0.000
p(5)	0.000
dom)	
p(subo)	
Unconstrained or unconstrained?	

Proportion unblocked or minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Process Stage II
p(1)			
p(4)			
p(7)			
p(8)			
p(9)			
p(10)			
p(11)			
p(12)			

Computation 4 and 5 Single-Stage Process								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

c,x 465 690 232

x
c,u,x

r,x
plat,x

wo-Stage Process

7 8 10 11
Stage1 Stage2 Stage1 Stage2 Stage1 Stage2 Stage1 Stage2

(c,x)
3400
(x)
(c,u,x)

(r,x)
(plat,x)

orksheet 6-Impedance and Capacity Equations

tep 1: RT from Minor St. 9 12

onflicting Flows 232
otential Capacity 770
edestrian Impedance Factor 1.00 1.00
ovement Capacity 770
robability of Queue free St. 0.97 1.00

tep 2: LT from Major St. 4 1

onflicting Flows 465
otential Capacity 1093
edestrian Impedance Factor 1.00 1.00
ovement Capacity 1093
robability of Queue free St. 0.87 1.00
aj L-Shared Prob Q free St. 0.87

tep 3: TH from Minor St. 8 11

onflicting Flows
otential Capacity
edestrian Impedance Factor 1.00 1.00
ap. Adj. factor due to Impeding mvmnt 0.87 0.87
ovement Capacity
robability of Queue free St. 1.00 1.00

tep 4: LT from Minor St. 7 10

onflicting Flows 690
otential Capacity 379
edestrian Impedance Factor 1.00 1.00
aj. L, Min T Impedance factor 0.87
aj. L, Min T Adj. Imp Factor. 0.90
ap. Adj. factor due to Impeding mvmnt 0.87 0.88
ovement Capacity 330

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.87	0.87
Movement Capacity		
Result for 2 stage process:		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows	690	
Potential Capacity	379	
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor		0.87
Maj. L, Min T Adj. Imp Factor.		0.90
Cap. Adj. factor due to Impeding mvmnt	0.87	0.88
Movement Capacity	330	
Results for Two-stage process:		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)	15		20			
Movement Capacity (vph)	330		770			
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
sep	330		770			
Volume	15		20			
Delay						
sep						
sep +1						
bound (Qsep +1)						
max						
sh						
JM C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
(vph)		140	15		20			
(m) (vph)		1093	330		770			
/c		0.13	0.05		0.03			
5% queue length		0.44	0.14		0.08			
Control Delay		8.8	16.4		9.8			
OS		A	C		A			
Approach Delay				12.6				
Approach LOS				B				

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
(oj)	1.00	0.87
(i1), Volume for stream 2 or 5		0
(i2), Volume for stream 3 or 6		0
(i1), Saturation flow rate for stream 2 or 5		1700
(i2), Saturation flow rate for stream 3 or 6		1700
*(oj)		0.87
(M,LT), Delay for stream 1 or 4		8.8
, Number of major street through lanes		2
(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: AM Peak

Intersection: East Ave & S Gate (Location # 6)

Jurisdiction:

Analysis Year: 2001

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: South Gate

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach Movement	Eastbound				Westbound			
	1 L	2 T	3 R	4 L	5 T	6 R		
Volume	240	45			170	200		
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00		
Hourly Flow Rate, HFR	240	45			170	200		
Percent Heavy Vehicles	2	--	--		--	--		
Median Type	Undivided							
RT Channelized?								
Lines	0	2			1	0		
Configuration		LT T				TR		
Stream Signal?		No			No			

Minor Street: Approach Movement	Northbound				Southbound			
	7 L	8 T	9 R	10 L	11 T	12 R		
Volume				30		60		
Peak Hour Factor, PHF				1.00		1.00		
Hourly Flow Rate, HFR				30		60		
Percent Heavy Vehicles				2		2		
Percent Grade (%)		0			0			
Median Storage								
Shared Approach: Exists?								
Storage								
RT Channelized?							No	
Lines				1		1		
Configuration				L		R		

Delay, Queue Length, and Level of Service								
Approach Movement	EB	WB	Northbound			Southbound		
	1 LT	4	7	8	9	10 L	11	12 R
Volume (vph)	240					30		60
Flow (vph)	1185					268		728
Delay	0.20					0.11		0.08
95% queue length	0.76					0.38		0.27
Control Delay	8.8					20.1		10.4

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orve Engineering, Inc.

hone:
-Mail:

Fax:

TWO-WAY STOP CONTROL (TWSC) ANALYSIS

nalyst:
gency/Co.:
ate Performed: 1/21/02
nalysis Time Period: AM Peak
ntersection: East Ave & S Gate
urisdiction:
nalysis Year: 2001
roject ID: Lawrence Livermore National Laboratory
ast/West Street: East Ave
orth/South Street: South Gate

ntersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	240	45			170	200
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	60	11			42	50
Hourly Flow Rate, HFR	240	45			170	200
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
Left Channelized?						
Lanes	0	2			1	0
Configuration	LT T				TR	
Left Stream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				30		60
Peak Hour Factor, PHF				1.00		1.00
Peak-15 Minute Volume				8		15
Hourly Flow Rate, HFR				30		60
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Median Storage						
Left Approach: Exists?						
Left Approach: Storage						
Left Channelized?						No

anes	1	1
onfiguration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
low (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
walking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
52 Left-Turn Through							
5 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles	
	Movement 2
Shared ln volume, major th vehicles:	0
Shared ln volume, major rt vehicles:	0
at flow rate, major th vehicles:	1700
at flow rate, major rt vehicles:	1700
Number of major street through lanes:	2

Worksheet 4-Critical Gap and Follow-up Time Calculation								
Critical Gap Calculation								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
c,base)	4.1					7.5		6.9
c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
hv)	2					2		2
c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
3,lt)	0.00					0.70		0.00
c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
c) 1-stage	4.1					6.8		6.9
2-stage								

Follow-Up Time Calculations								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
f,base)	2.20					3.50		3.30
f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(HV)	2					2		2
(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
prog				
otal Saturation Flow Rate, s (vph)				
rrival Type				
ffective Green, g (sec)				
ycle Length, C (sec)				
p (from table 9-2)				
roportion vehicles arriving on green P				
(q1)				
(q2)				
(q)				

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
lpha				
eta				
ravel time, t(a) (sec)				
oothing Factor, F				
roportion of conflicting flow, f				
ax platooned flow, V(c,max)				
in platooned flow, V(c,min)				
uration of blocked period, t(p)				
roportion time blocked, p		0.000		0.000

Computation 3-Platoon Event Periods Result

(2)	0.000
(5)	0.000
(dom)	
(subo)	
onstrained or unconstrained?	

roportion nblocked or minor ovements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Stage II
(1)			
(4)			
(7)			
(8)			
(9)			
(10)			
(11)			
(12)			

Computation 4 and 5
Single-Stage Process

ovement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

C,x

370

772

270

C,u,x

r,x

plat,x

Two-Stage Process

	7		8		10		11
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1
							Stage2

V(C,x)

3400

x)

V(C,u,x)

r,x)

plat,x)

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.

9

12

Conflicting Flows

Potential Capacity

Pedestrian Impedance Factor

Movement Capacity

Probability of Queue free St.

1.00

1.00

270

728

1.00

728

0.92

Step 2: LT from Major St.

4

1

Conflicting Flows

Potential Capacity

Pedestrian Impedance Factor

Movement Capacity

Probability of Queue free St.

Adj L-Shared Prob Q free St.

1.00

1.00

370

1185

1.00

1185

0.80

0.80

Step 3: TH from Minor St.

8

11

Conflicting Flows

Potential Capacity

Pedestrian Impedance Factor

Cap. Adj. factor due to Impeding mvmnt

Movement Capacity

Probability of Queue free St.

1.00

0.80

1.00

1.00

0.80

1.00

Step 4: LT from Minor St.

7

10

Conflicting Flows

Potential Capacity

Pedestrian Impedance Factor

Adj. L, Min T Impedance factor

Adj. L, Min T Adj. Imp Factor.

Cap. Adj. factor due to Impeding mvmnt

Movement Capacity

1.00

0.80

0.84

0.77

772

336

1.00

0.80

268

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding mvmnt		
ovement Capacity		
robability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding mvmnt		
ovement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
ap. Adj. factor due to Impeding mvmnt	0.80	0.80
ovement Capacity		
Result for 2 stage process:		
t		
robability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding mvmnt		
ovement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding mvmnt		
ovement Capacity		
Part 3 - Single Stage		
Conflicting Flows		772
Potential Capacity		336
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor	0.80	
aj. L, Min T Adj. Imp Factor.	0.84	
ap. Adj. factor due to Impeding mvmnt	0.77	0.80
ovement Capacity		268
Results for Two-stage process:		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				30		60
Movement Capacity (vph)				268		728
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Q sep				268		728
Volume				30		60
Delay						
Q sep						
Q sep +1						
bound (Qsep +1)						
1 max						
sh						
IM C sep						
1						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		R
(vph)	240					30		60
Q(m) (vph)	1185					268		728
Q/c	0.20					0.11		0.08
% queue length	0.76					0.38		0.27
Control Delay	8.8					20.1		10.4
LOS	A					C		B
approach Delay							13.6	
approach LOS							B	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
Q(oj)	0.80	1.00
v(i1), Volume for stream 2 or 5	0	
v(i2), Volume for stream 3 or 6	0	
s(i1), Saturation flow rate for stream 2 or 5	1700	
s(i2), Saturation flow rate for stream 3 or 6	1700	
*Q(oj)	0.80	
(M,LT), Delay for stream 1 or 4	8.8	
N, Number of major street through lanes	2	
d(rank,1) Delay for stream 2 or 5		

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TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: PM Peak

Intersection: East Ave & S Gate

(Location #6)

Jurisdiction:

Analysis Year: 2001

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: South Gate

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound	
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		160	70			270	60
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR		160	70			270	60
Percent Heavy Vehicles		2	--	--		--	--
Median Type	Undivided						
RT Channelized?							
Lanes		0	2			1	0
Configuration		LT	T				TR
Upstream Signal?			No			No	

Minor Street:	Approach Movement	Northbound				Southbound	
		7 L	8 T	9 R	10 L	11 T	12 R
Volume					55		350
Peak Hour Factor, PHF					1.00		1.00
Hourly Flow Rate, HFR					55		350
Percent Heavy Vehicles					2		2
Percent Grade (%)			0			0	
Median Storage							
Shared Approach: Exists?							
Storage							
RT Channelized?							No
Lanes					1	1	
Configuration					L	R	

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound				Southbound	
	1	4	7	8	9	10	11	12
Lane Config	LT					L		R
V (vph)	160					55		350
Q (m) (vph)	1226					347		696
c	0.13					0.16		0.50
5% queue length	0.45					0.56		2.98
Control Delay	8.4					17.3		15.4

OS

A

C

C

pproach Delay

15.6

pproach LOS

C

HCS2000: Unsignalized Intersections Release 4.1

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hone:

Fax:

-Mail:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

analyst:

gency/Co.:

ate Performed: 1/21/02

alysis Time Period: PM Peak

ntersection: East Ave & S Gate

urisdiction:

alysis Year: 2001

roject ID: Lawrence Livermore National Laboratory

ast/West Street: East Ave

orth/South Street: South Gate

ntersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	160	70			270	60
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	40	18			68	15
Hourly Flow Rate, HFR	160	70			270	60
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
Left Channelized?						
Lanes	0	2			1	0
Configuration	LT T				TR	
Upstream Signal?	No				No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				55		350
Peak Hour Factor, PHF				1.00		1.00
Peak-15 Minute Volume				14		88
Hourly Flow Rate, HFR				55		350
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?	Storage					
Left Channelized?						No

nes	1	1
onfiguration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
ow (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
walking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
32 Left-Turn Through Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:	0	
Shared ln volume, major rt vehicles:	0	
ut flow rate, major th vehicles:	1700	
ut flow rate, major rt vehicles:	1700	
umber of major street through lanes:	2	

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
.(c,base)	4.1					7.5		6.9
.(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
hv)	2					2		2
. c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
3,lt)	0.00					0.70		0.00
c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
-(c) 1-stage	4.1					6.8		6.9
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
f,base)	2.20					3.50		3.30
f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(HV)	2					2		2
-(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
Program				
Initial Saturation Flow Rate, s (vph)				
Arrival Type				
Effective Green, g (sec)				
Cycle Length, C (sec)				
P (from table 9-2)				
Proportion vehicles arriving on green P				
(q1)				
(q2)				
(q)				

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
Alpha				
Eta				
Travel time, t(a) (sec)				
Smoothing Factor, F				
Proportion of conflicting flow, f				
Maximum platooned flow, V(c,max)				
Minimum platooned flow, V(c,min)				
Duration of blocked period, t(p)				
Proportion time blocked, p		0.000		0.000

Computation 3-Platoon Event Periods

	Result
(2)	0.000
(5)	0.000
(dom)	
(subo)	
Unconstrained or unconstrained?	

Proportion	(1)	(2)	(3)
Unblocked	Single-stage	Two-Stage Process	
or minor	Process	Stage I	Stage II
Movements, p(x)			
(1)			
(4)			
(7)			
(8)			
(9)			
(10)			
(11)			
(12)			

Computation 4 and 5

Single-Stage Process	1	4	7	8	9	10	11	12
Movement	L	L	L	T	R	L	T	R

C,x	330	655	300
C,u,x			
r,x			
plat,x			
Two-Stage Process			
	7	8	10
	Stage1	Stage2	Stage1
			11
			Stage1
			Stage2
I(C,x)			3400
x)			
I(C,u,x)			
r,x)			
(plat,x)			

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
Conflicting Flows		300
Potential Capacity		696
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		696
Probability of Queue free St.	1.00	0.50
Step 2: LT from Major St.	4	1
Conflicting Flows		330
Potential Capacity		1226
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		1226
Probability of Queue free St.	1.00	0.87
Maj L-Shared Prob Q free St.		0.87
Step 3: TH from Minor St.	8	11
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.87	0.87
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows		655
Potential Capacity		399
Pedestrian Impedance Factor	1.00	1.00
Adj. L, Min T Impedance factor	0.87	
Maj. L, Min T Adj. Imp Factor.	0.90	
Cap. Adj. factor due to Impeding mvmnt	0.45	0.87
Movement Capacity		347

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
ovement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
ovement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
ap. Adj. factor due to Impeding movement	0.87	0.87
ovement Capacity		
Result for 2 stage process:		
t		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
ovement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
ovement Capacity		
Part 3 - Single Stage		
Conflicting Flows		655
Potential Capacity		399
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor	0.87	
aj. L, Min T Adj. Imp Factor.	0.90	
ap. Adj. factor due to Impeding movement	0.45	0.87
ovement Capacity		347
Results for Two-stage process:		

Worksheet 8-Shared Lane Calculations

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (vph)				55		350
Movement Capacity (vph)				347		696
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Qsep				347		696
Volume				55		350
Delay						
Qsep +1						
Und (Qsep +1)						
max						
sh						
M C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	LT					L		R
Volume (vph)	160					55		350
Capacity (vph)	1226					347		696
Ratio	0.13					0.16		0.50
% queue length	0.45					0.56		2.98
Control Delay	8.4					17.3		15.4
LOS	A					C		C
Approach Delay							15.6	
Approach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
Qo	0.87	1.00
V(i1), Volume for stream 2 or 5	0	
V(i2), Volume for stream 3 or 6	0	
S(i1), Saturation flow rate for stream 2 or 5	1700	
S(i2), Saturation flow rate for stream 3 or 6	1700	
Qo	0.87	
M,LT), Delay for stream 1 or 4	8.4	
N, Number of major street through lanes	2	
Rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: PM Peak

Intersection: East Ave & E Entrance (Location # 8)

Jurisdiction:

Analysis Year: 2001

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: East Entrance

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound		
		1 L	2 T	3 R		4 L	5 T	6 R
Volume			210	10		20	60	
Peak-Hour Factor, PHF			1.00	1.00		1.00	1.00	
Hourly Flow Rate, HFR			210	10		20	60	
Percent Heavy Vehicles			--	--		2	--	--
Median Type	Undivided							
Left Channelized?								
Lanes			1	0		0	1	
Configuration				TR			LT	
Poststream Signal?			No				No	

Minor Street:	Approach Movement	Northbound				Southbound		
		7 L	8 T	9 R		10 L	11 T	12 R
Volume		40		90				
Peak Hour Factor, PHF		1.00		1.00				
Hourly Flow Rate, HFR		40		90				
Percent Heavy Vehicles		2		2				
Percent Grade (%)			0				0	
Median Storage								
Shared Approach: Exists?								
Storage								
Left Channelized?				No				
Lanes		1		1				
Configuration		L		R				

Delay, Queue Length, and Level of Service								
Approach Movement Lane Config	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
		LT	L		R			
(vph)		20	40		90			
(m) (vph)		1349	668		825			
/c		0.01	0.06		0.11			
5% queue length		0.05	0.19		0.37			
Control Delay		7.7	10.7		9.9			

		Vehicle Volumes and Adjustments					
Major Street Movements		1	2	3	4	5	6
		L	T	R	L	T	R
Volume			210	10	20	60	
Peak-Hour Factor, PHF			1.00	1.00	1.00	1.00	
Peak-15 Minute Volume			52	2	5	15	
Hourly Flow Rate, HFR			210	10	20	60	
Percent Heavy Vehicles			--	--	2	--	--
Median Type	Undivided						
Channelized?							
Lines			1	0	0	1	
Configuration				TR		LT	
Upstream Signal?			No			No	

		7	8	9	10	11	12
Minor Street Movements		L	T	R	L	T	R
Volume		40		90			
Peak Hour Factor, PHF		1.00		1.00			
Peak-15 Minute Volume		10		22			
Hourly Flow Rate, HFR		40		90			
Percent Heavy Vehicles		2		2			
Percent Grade (%)			0			0	
Median Storage							
Clear Approach:	Exists?						
	Storage						
Channelized?				No			

anes
onfiguration

1
L

1
R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
low (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
alking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
2 Left-Turn Through							
5 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		60
Shared ln volume, major rt vehicles:		0
at flow rate, major th vehicles:		1700
at flow rate, major rt vehicles:		1700
umber of major street through lanes:		1

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(c,base)		4.1	7.1		6.2			
(c,hv)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(hv)		2	2		2			
(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
rade/100			0.00	0.00	0.00	0.00	0.00	0.00
(3,lt)		0.00	0.70		0.00			
{c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
{c) 1-stage		4.1	6.4		6.2			
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(f,base)		2.20	3.50		3.30			
(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(HV)		2	2		2			
(f)		2.2	3.5		3.3			

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal				
	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
<hr/>				
prog				
Initial Saturation Flow Rate, s (vph)				
Arrival Type				
Effective Green, g (sec)				
Vehicle Length, C (sec)				
(from table 9-2)				
Proportion vehicles arriving on green P				
q1)				
q2)				
q)				

Computation 2-Proportion of TWSC Intersection Time blocked				
	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
<hr/>				
phi				
ta				
Travel time, t(a) (sec)				
Smoothing Factor, F				
Proportion of conflicting flow, f				
Max platooned flow, V(c,max)				
Min platooned flow, V(c,min)				
Duration of blocked period, t(p)				
Proportion time blocked, p		0.000		0.000

Computation 3-Platoon Event Periods		Result
p(2)		0.000
p(5)		0.000
p(dom)		
p(subo)		
Constrained or unconstrained?		

Proportion unblocked for minor movements, p(x)			
	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Two-Stage Process Stage II
p(1)			
p(4)			
p(7)			
p(8)			
p(9)			
p(10)			
p(11)			
p(12)			

Computation 4 and 5 Single-Stage Process								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

C,x

220 315

215

x

C,u,x

r,x

plat,x

wo-Stage Process

	7		8		10		11	
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
(C,x)		1700						
(x)								
(C,u,x)								
(r,x)								
(plat,x)								

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St. 9 12

Conflicting Flows	215	
Potential Capacity	825	
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity	825	
Probability of Queue free St.	0.89	1.00

Step 2: LT from Major St. 4 1

Conflicting Flows	220	
Potential Capacity	1349	
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity	1349	
Probability of Queue free St.	0.99	1.00
aj L-Shared Prob Q free St.	0.98	

Step 3: TH from Minor St. 8 11

Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
ap. Adj. factor due to Impeding mvmnt	0.98	0.98
Movement Capacity		
Probability of Queue free St.	1.00	1.00

Step 4: LT from Minor St. 7 10

Conflicting Flows	315	
Potential Capacity	678	
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor		0.98
aj. L, Min T Adj. Imp Factor.		0.99
ap. Adj. factor due to Impeding mvmnt	0.99	0.88
Movement Capacity	668	

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.98	0.98
Movement Capacity		
Result for 2 stage process:		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows	315	
Potential Capacity	678	
Pedestrian Impedance Factor	1.00	1.00
Max. L, Min T Impedance factor		0.98
Max. L, Min T Adj. Imp Factor.		0.99
Cap. Adj. factor due to Impeding mvmnt	0.99	0.88
Movement Capacity	668	
Results for Two-stage process:		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)	40		90			
Movement Capacity (vph)	668		825			
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
sep	668		825			
Volume	40		90			
Delay						
sep						
sep +1						
bound (Qsep +1)						
max						
sh						
UM C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
(vph)		20	40		90			
(m) (vph)		1349	668		825			
/c		0.01	0.06		0.11			
5% queue length		0.05	0.19		0.37			
ontrol Delay		7.7	10.7		9.9			
OS		A	B		A			
pproach Delay				10.2				
pproach LOS				B				

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
(oj)	1.00	0.99
(i1), Volume for stream 2 or 5		60
(i2), Volume for stream 3 or 6		0
(i1), Saturation flow rate for stream 2 or 5		1700
(i2), Saturation flow rate for stream 3 or 6		1700
*(oj)		0.98
(M,LT), Delay for stream 1 or 4		7.7
, Number of major street through lanes		1
(rank,1) Delay for stream 2 or 5		0.1

Study period (hrs): 0.25

Vehicle Volumes and Adjustments								
Major Street:	Approach Movement	1	2	3		4	5	6
		L	T	R		L	T	R
Volume		74	136				147	247
Peak-Hour Factor, PHF		1.00	1.00				1.00	1.00
Hourly Flow Rate, HFR		74	136				147	247
Percent Heavy Vehicles		2	--	--			--	--
Median Type	Undivided							
RT Channelized?								
Lines		0	1				1	0
Configuration		LT						TR
Stream Signal?			No				No	

Major Street: Approach Movement								
Westbound				Eastbound				
7	8	9		10	11	12		
L	T	R		L	T	R		
Volume				47	0	20		
Peak Hour Factor, PHF				1.00	1.00	1.00		
Hourly Flow Rate, HFR				47	0	20		
Percent Heavy Vehicles				2	2	2		
Percent Grade (%)		0			0			
Median Storage								
Shared Approach: Exists?					No			
Storage								
RT Channelized?								
Lines				0	1	0		
Configuration					LTR			

Delay, Queue Length, and Level of Service								
Approach Movement	NB	SB		Westbound		Eastbound		
Line Config	1	4		7	8	9		10
	LT							11
								LTR
Volume (vph)	74							67
Flow (vph)	1165							525
Control	0.06							0.13
95% queue length	0.20							0.44
Control Delay	8.3							12.9

OS
Approach Delay
Approach LOS

A

B
12.9
B

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orve Engineering, Inc.

none:
-Mail:

Fax:

TWO-WAY STOP CONTROL (TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/16/02
Analysis Time Period: Existing AM
Intersection: East Ave & Greenville Rd
Jurisdiction:
Analysis Year: 2001
Project ID: Lawrence Livermore Lab Traffic Impact Analysis
East/West Street: East Avenue
North/South Street: Greenville Road

Intersection Orientation: NS

Study period (hrs): 0.25

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	74	136			147	247
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	18	34			37	62
Hourly Flow Rate, HFR	74	136			147	247
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
Left Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Poststream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				47	0	20
Peak Hour Factor, PHF				1.00	1.00	1.00
Peak-15 Minute Volume				12	0	5
Hourly Flow Rate, HFR				47	0	20
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?					No	
Storage						
Left Channelized?						

nes
onfiguration

. 0 1 0
LTR

Pedestrian Volumes and Adjustments

Movements	13	14	15	16
ow (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
walking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data

	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
32 Left-Turn Through Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:	136	
Shared ln volume, major rt vehicles:	0	
t flow rate, major th vehicles:	1700	
sat flow rate, major rt vehicles:	1700	
umber of major street through lanes:	1	

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
c,base)	4.1					7.1	6.5	6.2
(c,hv)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
hv)	2					2	2	2
c,g)			0.20	0.20	0.10	0.20	0.20	0.10
grade/100			0.00	0.00	0.00	0.00	0.00	0.00
3,lt)	0.00					0.70	0.00	0.00
c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage	4.1					6.4	6.5	6.2
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(f,base)	2.20					3.50	4.00	3.30
(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(HV)	2					2	2	2
(f)	2.2					3.5	4.0	3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal			
Movement 2		Movement 5	
V(t)	V(1,prot)	V(t)	V(1,prot)

prog
otal Saturation Flow Rate, s (vph)
rrival Type
ffective Green, g (sec)
ycle Length, C (sec)
p (from table 9-2)
roportion vehicles arriving on green P
(q1)
(q2)
(q)

Computation 2-Proportion of TWSC Intersection Time blocked			
Movement 2		Movement 5	
V(t)	V(1,prot)	V(t)	V(1,prot)

lpha
eta
ravel time, t(a) (sec)
oothing Factor, F
roportion of conflicting flow, f
ax platooned flow, V(c,max)
in platooned flow, V(c,min)
uration of blocked period, t(p)
roportion time blocked, p

	0.000	0.000
--	-------	-------

Computation 3-Platoon Event Periods	Result
(2)	0.000
(5)	0.000
(dom)	
(subo)	
onstrained or unconstrained?	

roportion nblocked or minor ovements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Stage II
(1)			
(4)			
(7)			
(8)			
(9)			
(10)			
(11)			
(12)			

Computation 4 and 5 Single-Stage Process								
ovement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

C,x 394 554 554 270

Px
C,u,x

r,x
plat,x

Two-Stage Process

	7		8		10		11	
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
V(C,x)						1700		1700
x)								
V(C,u,x)								
r,x)								
C(plat,x).								

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
Conflicting Flows		270
Potential Capacity		769
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		769
Probability of Queue free St.	1.00	0.97
Step 2: LT from Major St.	4	1
Conflicting Flows		394
Potential Capacity		1165
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		1165
Probability of Queue free St.	1.00	0.94
Maj L-Shared Prob Q free St.		0.93
Step 3: TH from Minor St.	8	11
Conflicting Flows		554
Potential Capacity		440
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.93	0.93
Movement Capacity		410
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows		554
Potential Capacity		493
Pedestrian Impedance Factor	1.00	1.00
Adj. L, Min T Impedance factor	0.93	
Maj. L, Min T Adj. Imp Factor.	0.95	
Cap. Adj. factor due to Impeding mvmnt	0.92	0.94
Movement Capacity		462

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		554
Potential Capacity		440
Pedestrian Impedance Factor	1.00	1.00
ap. Adj. factor due to Impeding movement	0.93	0.93
Movement Capacity		410
Result for 2 stage process:		
Probability of Queue free St.	1.00	410
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		554
Potential Capacity		493
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor	0.93	
aj. L, Min T Adj. Imp Factor.	0.95	
ap. Adj. factor due to Impeding movement	0.92	0.94
Movement Capacity		462
Results for Two-stage process:		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				47	0	20
Movement Capacity (vph)				462	410	769
Shared Lane Capacity (vph)					525	

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Qsep				462	410	769
Volume				47	0	20
lay						
Qsep						
Qsep +1						
und (Qsep +1)						
max						
sh					525	
M C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
(vph)	74						67	
Q(m) (vph)	1165						525	
r/c	0.06						0.13	
% queue length	0.20						0.44	
ontrol Delay	8.3						12.9	
LOS	A						B	
proach Delay							12.9	
proach LOS							B	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
Q(oj)	0.94	1.00
Q(i1), Volume for stream 2 or 5	136	
Q(i2), Volume for stream 3 or 6	0	
Q(i1), Saturation flow rate for stream 2 or 5	1700	
Q(i2), Saturation flow rate for stream 3 or 6	1700	
Q*(oj)	0.93	
Q(M,LT), Delay for stream 1 or 4	8.3	
N, Number of major street through lanes	1	
Q(rank,1) Delay for stream 2 or 5	0.6	

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/16/02

Analysis Time Period: Existing PM

Intersection: East Ave & Greenville Rd

Jurisdiction:

Analysis Year: 2001

Project ID: Lawrence Livermore Lab Traffic Impact Analysis

East/West Street: East Avenue

North/South Street: Greenville Road

Intersection Orientation: NS

Study period (hrs): 0.25

Vehicle Volumes and Adjustments								
Major Street:	Approach Movement	Northbound				Southbound		
		1 L	2 T	3 R	4 L	5 T	6 R	
Volume		10	185			173	76	
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00	
Hourly Flow Rate, HFR		10	185			173	76	
Percent Heavy Vehicles		2	--	--		--	--	
Median Type	Undivided							
Left Channelized?								
Left Lanes		0	1			1	0	
Left Configuration		LT				TR		
Left Stream Signal?			No			No		

Minor Street:	Approach Movement	Westbound				Eastbound		
		7 L	8 T	9 R	10 L	11 T	12 R	
Volume					254	0	48	
Peak Hour Factor, PHF					1.00	1.00	1.00	
Hourly Flow Rate, HFR					254	0	48	
Percent Heavy Vehicles					2	2	2	
Percent Grade (%)			0			0		
Median Storage								
Left Labeled Approach: Exists?						No		
Left Labeled Approach: Storage								
Left Channelized?								
Left Lanes					0	1	0	
Left Configuration						LTR		

Delay, Queue Length, and Level of Service								
Approach Movement Lane Config	NB	SB	Westbound			Eastbound		
	1 LT	4 	7 	8	9 	10 	11 LTR	12
(vph)	10						302	
(m) (vph)	1317						616	
/c	0.01						0.49	
5% queue length	0.02						2.70	
Control Delay	7.8						16.3	

OS
Approach Delay
Approach LOS

A

C
16.3
C

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erve Engineering, Inc.

Phone:
E-Mail:

Fax:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/16/02
Analysis Time Period: Existing PM
Intersection: East Ave & Greenville Rd
Jurisdiction:
Analysis Year: 2001
Project ID: Lawrence Livermore Lab Traffic Impact Analysis
East/West Street: East Avenue
North/South Street: Greenville Road

Intersection Orientation: NS

Study period (hrs): 0.25

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	10	185			173	76
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	2	46			43	19
Hourly Flow Rate, HFR	10	185			173	76
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
RT Channelized?						
Lanes	0	1			1	0
Configuration	LT				TR	
Upstream Signal?	No				No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				254	0	48
Peak Hour Factor, PHF				1.00	1.00	1.00
Peak-15 Minute Volume				64	0	12
Hourly Flow Rate, HFR				254	0	48
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Median Storage						
Shared Approach: Exists?					No	
Storage						
RT Channelized?						

anes
onfiguration

0 1 0
LTR

Pedestrian Volumes and Adjustments				
movements	13	14	15	16
low (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
alking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
2 Left-Turn Through							
5 Left-Turn Through							

orksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
hared ln volume, major th vehicles:	185	
hared ln volume, major rt vehicles:	0	
at flow rate, major th vehicles:	1700	
at flow rate, major rt vehicles:	1700	
umber of major street through lanes:	1	

orksheet 4-Critical Gap and Follow-up Time Calculation

ritical Gap Calculation								
ovement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(c,base)	4.1					7.1	6.5	6.2
(c,hv)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(hv)	2					2	2	2
(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
rade/100			0.00	0.00	0.00	0.00	0.00	0.00
(3,lt)	0.00					0.70	0.00	0.00
(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage	4.1					6.4	6.5	6.2
2-stage								

ollow-Up Time Calculations								
ovement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(f,base)	2.20					3.50	4.00	3.30
(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(HV)	2					2	2	2
(f)	2.2					3.5	4.0	3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal			
	Movement 2		Movement 5
	V(t)	V(l,prot)	V(t) V(l,prot)
/ prog			
[tal Saturation Flow Rate, s (vph)			
: rival Type			
Effective Green, g (sec)			
: cle Length, C (sec)			
: (from table 9-2)			
: oportion vehicles arriving on green P			
r(q1)			
: q2)			
: q)			

Computation 2-Proportion of TWSC Intersection Time blocked			
	Movement 2		Movement 5
	V(t)	V(l,prot)	V(t) V(l,prot)
: pha			
: ta			
Travel time, t(a) (sec)			
: ooting Factor, F			
: oportion of conflicting flow, f			
Max platooned flow, V(c,max)			
Min platooned flow, V(c,min)			
: ration of blocked period, t(p)			
: oportion time blocked, p			
		0.000	0.000

Computation 3-Platoon Event Periods	Result
p(2)	0.000
: 5)	0.000
: dom)	
p(subo)	
onstrained or unconstrained?	

Proportion	(1)	(2)	(3)
unblocked	Single-stage	Two-Stage Process	
or minor	Process	Stage I	Stage II
movements, p(x)			
'(1)			
. 4)			
p(7)			
-(8)			
. 9)			
p,10)			
p(11)			
. 12)			

Computation 4 and 5								
Single-Stage Process								
ovement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

c,x	249		416	416	211
-----	-----	--	-----	-----	-----

x
c,u,x

r,x
plat,x

wo-Stage Process

	7		8		10		11
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1
							Stage2

(c,x)					1700		1700
(x)							
(c,u,x)							
(r,x)							
(plat,x)							

orksheet 6-Impedance and Capacity Equations

tep 1: RT from Minor St.	9	12
--------------------------	---	----

onflicting Flows		211
otential Capacity		829
edestrian Impedance Factor	1.00	1.00
ovement Capacity		829
robability of Queue free St.	1.00	0.94

tep 2: LT from Major St.	4	1
--------------------------	---	---

onflicting Flows		249
otential Capacity		1317
edestrian Impedance Factor	1.00	1.00
ovement Capacity		1317
robability of Queue free St.	1.00	0.99
aj L-Shared Prob Q free St.		0.99

tep 3: TH from Minor St.	8	11
--------------------------	---	----

onflicting Flows		416
otential Capacity		527
edestrian Impedance Factor	1.00	1.00
ap. Adj. factor due to Impeding mvmnt	0.99	0.99
ovement Capacity		523
robability of Queue free St.	1.00	1.00

tep 4: LT from Minor St.	7	10
--------------------------	---	----

onflicting Flows		416
otential Capacity		593
edestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor	0.99	
aj. L, Min T Adj. Imp Factor.	0.99	
ap. Adj. factor due to Impeding mvmnt	0.94	0.99
ovement Capacity		588

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		416
Potential Capacity		527
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.99	0.99
Movement Capacity		523
Result for 2 stage process:		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		416
Potential Capacity		593
Pedestrian Impedance Factor	1.00	1.00
Adj. L, Min T Impedance factor	0.99	
Adj. L, Min T Adj. Imp Factor.	0.99	
Cap. Adj. factor due to Impeding mvmnt	0.94	0.99
Movement Capacity		588
Results for Two-stage process:		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				254	0	48
Movement Capacity (vph)				588	523	829
Shared Lane Capacity (vph)					616	

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
sep				588	523	829
Volume				254	0	48
Delay						
sep						
sep +1						
bound (Qsep +1)						
max						
sh					616	
JM C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
(vph)	10						302	
(m) (vph)	1317						616	
/c	0.01						0.49	
5% queue length	0.02						2.70	
ontrol Delay	7.8						16.3	
OS	A						C	
pproach Delay							16.3	
pproach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
(oj)	0.99	1.00
(il), Volume for stream 2 or 5	185	
(i2), Volume for stream 3 or 6	0	
(il), Saturation flow rate for stream 2 or 5	1700	
(i2), Saturation flow rate for stream 3 or 6	1700	
*(oj)	0.99	
(M,LT), Delay for stream 1 or 4	7.8	
, Number of major street through lanes	1	
(rank,1) Delay for stream 2 or 5	0.1	

E. TRAFFIC ANALYSIS
Future Conditions - Year 2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	0.97	1.00	1.00
Frt		0.983			0.950				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3362	0	1770	3539	1583	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3479	0	1770	3362	0	1770	3539	1583	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			50				216			330
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
Link Speed (mph)		30			30				30			30
Link Distance (ft)		2480			2464				2088			1992
Travel Time (s)		56.4			56.0				47.5			45.3
Volume (vph)	281	374	47	24	92	46	45	235	199	410	264	304
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)	305	407	51	26	100	50	49	255	216	446	287	330
Lane Group Flow (vph)	305	458	0	26	150	0	49	255	216	446	287	330
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
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)	8.0	20.0		8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	19.0	30.0	0.0	9.0	20.0	0.0	10.0	21.0	21.0	15.0	26.0	26.0
Total Split (%)	25%	40%	0%	12%	27%	0%	13%	28%	28%	20%	35%	35%
Maximum Green (s)	15.0	26.0		5.0	16.0		6.0	17.0	17.0	11.0	22.0	22.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	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	Max	Max	None	Max	Max
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
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	14.0	19.7		5.0	7.4		5.9	17.3	17.3	10.8	26.5	26.5
Actuated g/C Ratio	0.22	0.31		0.07	0.11		0.09	0.27	0.27	0.17	0.42	0.42
v/c Ratio	0.78	0.42		0.20	0.35		0.31	0.26	0.37	0.76	0.37	0.39
Uniform Delay, d1	25.6	18.6		32.3	18.3		31.2	18.6	0.0	27.3	14.7	0.0
Delay	31.0	17.2		30.9	18.8		29.9	20.0	3.8	31.5	16.7	2.6
LOS	C	B		C	B		C	B	A	C	B	A
Approach Delay		22.7			20.6			14.2			18.5	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)	116	62		10	20		19	43	0	90	90	0

Lanes, Volumes, Timings
1: East Ave & Vasco Road

1/22/2002

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	#242	119		33	44		50	75	43	#163	163	44
Internal Link Dist (ft)	2400			2384			2008			1912		
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary	
Area Type:	Other
Cycle Length:	75
Actuated Cycle Length:	63.3
Natural Cycle:	75
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	19.0
	Intersection LOS: B
Intersection Capacity Utilization	54.4%
	ICU Level of Service A
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: East Ave & Vasco Road

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00	0.97	1.00	1.00
Frt		0.980			0.939				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3323	0	1770	3539	1583	3433	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3468	0	1770	3323	0	1770	3539	1583	3433	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			212				37			450
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
Link Speed (mph)		30			30				30			30
Link Distance (ft)		2480			2464				2088			1992
Travel Time (s)		56.4			56.0				47.5			45.3
Volume (vph)	281	200	30	267	710	484	21	349	34	31	313	439
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)	305	217	33	290	772	526	23	379	37	34	340	477
Lane Group Flow (vph)	305	250	0	290	1298	0	23	379	37	34	340	477
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Detector Phases	7	4		3	8		5	2	2	1	6	6
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)	8.0	20.0		8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	21.0	31.0	0.0	28.0	38.0	0.0	8.0	23.0	23.0	8.0	23.0	23.0
Total Split (%)	23%	34%	0%	31%	42%	0%	9%	26%	26%	9%	26%	26%
Maximum Green (s)	17.0	27.0		24.0	34.0		4.0	19.0	19.0	4.0	19.0	19.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	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	Max	Max	None	Max	Max
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
Pedestrian Calls (#/hr)		0			0			0	0		0	0
Act Effct Green (s)	16.4	30.7		18.0	32.3		4.0	19.2	19.2	4.0	20.7	20.7
Actuated g/C Ratio	0.19	0.36		0.21	0.38		0.04	0.23	0.23	0.05	0.24	0.24
v/c Ratio	0.89	0.20		0.77	0.93		0.29	0.47	0.10	0.22	0.75	0.66
Uniform Delay, d1	34.5	18.0		32.7	22.0		42.5	28.9	0.0	41.6	30.8	1.5
Delay	54.8	19.0		31.6	28.2		42.9	30.0	10.1	41.8	41.2	4.5
LOS	D	B		C	C		D	C	B	D	D	A
Approach Delay		38.7			28.8			29.0			20.7	
Approach LOS		D			C			C			C	
Queue Length 50th (ft)	171	46		157	318		13	101	0	9	165	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Length 95th (ft)	#324	82		230	#469		38	146	15	25	#337	85
Internal Link Dist (ft)		2400			2384			2008			1912	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary	
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	84.5
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.93
Intersection Signal Delay:	28.4
Intersection Capacity Utilization	83.0%
Intersection LOS:	C
ICU Level of Service	D
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: East Ave & Vasco Road

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: AM Peak

Intersection: East Ave & SW Entrance (Location # 4)

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: SW Entrance/West Perimeter Dr

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound	
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		506	511			146	129
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR		506	511			146	129
Percent Heavy Vehicles		2	--	--		--	--
Median Type	Undivided						
T Channelized?							
Lanes		1	2			2	0
Configuration		L	T			T	TR
Upstream Signal?			No			No	

Minor Street:	Approach Movement	Northbound				Southbound	
		7 L	8 T	9 R	10 L	11 T	12 R
Volume					11		34
Peak Hour Factor, PHF					1.00		1.00
Hourly Flow Rate, HFR					11		34
Percent Heavy Vehicles					2		2
Percent Grade (%)			0			0	
Median Storage							
Flared Approach: Exists?	Storage						
T Channelized?							No
Lanes					1	1	
Configuration					L	R	

Delay, Queue Length, and Level of Service

Approach Movement	EB	WB	Northbound			Southbound		
			7	8	9	10	11	12
Lane Config	L						L	R
(vph)	506					11		34
(m) (vph)	1285					71		885
v/c	0.39					0.15		0.04
5% queue length	1.94					0.54		0.12
Control Delay	9.6					64.9		9.2

LOS

A

F

A

Approach Delay

22.8

Approach LOS

C

HCS2000: Unsignalized Intersections Release 4.1

Korve Engineering, Inc.

Phone:

Fax:

E-Mail:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst:

Agency/Co.:

Date Performed:1/21/02

Analysis Time Period:AM Peak

Intersection:East Ave & SW Entrance

Jurisdiction:

Analysis Year:2020

Project ID:Lawrence Livermore National Laboratory

East/West Street:East Ave

North/South Street:SW Entrance/West Perimeter Dr

Intersection Orientation:EW

Study period (hrs):1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	506	511			146	129
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	126	128			36	32
Hourly Flow Rate, HFR	506	511			146	129
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
RT Channelized?						
Lanes	1	2			2	0
Configuration	L	T			T	TR
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				11		34
Peak Hour Factor, PHF				1.00		1.00
Peak-15 Minute Volume				3		8
Hourly Flow Rate, HFR				11		34
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Median Storage						
Flared Approach:Exists?						
Storage						
RT Channelized?						No

Lanes	1	1
Configuration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2 Left-Turn Through							
S5 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(c,base)	4.1					7.5		6.9
(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)	2					2		2
(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
(3,lt)	0.00					0.70		0.00
t(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage	4.1					6.8		6.9
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(f,base)	2.20					3.50		3.30
t(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(HV)	2					2		2
(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal			
Movement 2		Movement 5	
V(t)	V(l,prot)	V(t)	V(l,prot)

V prog
Total Saturation Flow Rate, s (vph)
Arrival Type
Effective Green, g (sec)
Cycle Length, C (sec)
Rp (from table 9-2)
Proportion vehicles arriving on green P
g(q1)
g(q2)
g(q)

Computation 2-Proportion of TWSC Intersection Time blocked			
Movement 2		Movement 5	
V(t)	V(l,prot)	V(t)	V(l,prot)

alpha
beta
Travel time, t(a) (sec)
Smoothing Factor, F
Proportion of conflicting flow, f
Max platooned flow, V(c,max)
Min platooned flow, V(c,min)
Duration of blocked period, t(p)
Proportion time blocked, p

	0.000	0.000
--	-------	-------

Computation 3-Platoon Event Periods	Result
-------------------------------------	--------

p(2)	0.000
p(5)	0.000
p(dom)	
p(subo)	
Constrained or unconstrained?	

Proportion unblocked for minor movements, p(x)	(1)	(2)	(3)
	Single-stage Process	Two-Stage Stage I	Process Stage II

p(1)
p(4)
p(7)
p(8)
p(9)
p(10)
p(11)
p(12)

Computation 4 and 5 Single-Stage Process								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

C r,x
C plat,x

Two-Stage Process								
	7		8		10		11	
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
I(c,x)								
S						3400		
P(x)								
I(c,u,x)								
C(r,x)								
C(plat,x)								

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9		12	
Conflicting Flows				138
Potential Capacity				885
Pedestrian Impedance Factor	1.00			1.00
Movement Capacity				885
Probability of Queue free St.	1.00			0.96
Step 2: LT from Major St.	4		1	
Conflicting Flows				275
Potential Capacity				1285
Pedestrian Impedance Factor	1.00			1.00
Movement Capacity				1285
Probability of Queue free St.	1.00			0.61
Maj L-Shared Prob Q free St.				
Step 3: TH from Minor St.	8		11	
Conflicting Flows				
Potential Capacity				
Pedestrian Impedance Factor	1.00			1.00
Cap. Adj. factor due to Impeding mvmnt	0.61			0.61
Movement Capacity				
Probability of Queue free St.	1.00			1.00
Step 4: LT from Minor St.	7		10	
Conflicting Flows				1477
Potential Capacity				117
Pedestrian Impedance Factor	1.00			1.00
Maj. L, Min T Impedance factor	0.61			
Maj. L, Min T Adj. Imp Factor.	0.69			
Cap. Adj. factor due to Impeding mvmnt	0.67			0.61
Movement Capacity				71

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
---------------------------	---	----

Part 1 - First Stage

Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Cap. Adj. factor due to Impeding mvmnt
 Movement Capacity
 Probability of Queue free St.

Part 2 - Second Stage

Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Cap. Adj. factor due to Impeding mvmnt
 Movement Capacity

Part 3 - Single Stage

Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.61	0.61
Movement Capacity		

Result for 2 stage process:

a		
Y		
C t		
Probability of Queue free St.	1.00	1.00

Step 4: LT from Minor St.	7	10
---------------------------	---	----

Part 1 - First Stage

Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Cap. Adj. factor due to Impeding mvmnt
 Movement Capacity

Part 2 - Second Stage

Conflicting Flows
 Potential Capacity
 Pedestrian Impedance Factor
 Cap. Adj. factor due to Impeding mvmnt
 Movement Capacity

Part 3 - Single Stage

Conflicting Flows		1477
Potential Capacity		117
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.61	
Maj. L, Min T Adj. Imp Factor.	0.69	
Cap. Adj. factor due to Impeding mvmnt	0.67	0.61
Movement Capacity		71

Results for Two-stage process:

a
 y

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				11		34
Movement Capacity (vph)				71		885
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Qsep				71		885
Volume				11		34
Delay						
Qsep						
Qsep +1						
round (Qsep +1)						
Cmax						
Csh						
CUM Csep						
Cact						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement Lane Config	1 L	4	7	8	9	10 L	11	12 R
Q (vph)	506					11		34
Qm (vph)	1285					71		885
Q/c	0.39					0.15		0.04
95% queue length	1.94					0.54		0.12
Control Delay	9.6					64.9		9.2
LOS	A					F		A
Approach Delay							22.8	
Approach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
Q(oj)	0.61	1.00
Q(i1), Volume for stream 2 or 5		
Qv(i2), Volume for stream 3 or 6		
Q(i1), Saturation flow rate for stream 2 or 5		
Q(i2), Saturation flow rate for stream 3 or 6		
Q*(oj)		
d(M,LT), Delay for stream 1 or 4	9.6	
N, Number of major street through lanes		
Q(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: PM Peak

Intersection: East Ave & SW Entrance (Location # 4)

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: SW Entrance/West Perimeter Dr

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments								
Major Street:	Approach Movement	Eastbound				Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R	
Volume		67	17			781	17	
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00	
Hourly Flow Rate, HFR		67	17			781	17	
Percent Heavy Vehicles		2	--	--		--	--	
Median Type	Undivided							
RT Channelized?								
Lanes		1	2			2	0	
Configuration		L	T			T	TR	
Upstream Signal?			No			No		

Minor Street:	Approach Movement	Northbound				Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R	
Volume					45		556	
Peak Hour Factor, PHF					1.00		1.00	
Hourly Flow Rate, HFR					45		556	
Percent Heavy Vehicles					2		2	
Percent Grade (%)			0			0		
Median Storage								
Flared Approach: Exists?	Storage							
RT Channelized?							No	
Lanes					1	1		
Configuration					L	R		

Delay, Queue Length, and Level of Service								
Approach Movement	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
Lane Config	L						L	R
v (vph)	67					45		556
C(m) (vph)	820					243		601
v/c	0.08					0.19		0.93
95% queue length	0.27					0.68		19.74
Control Delay	9.8					23.2		64.1

LOS	A	C	F
Approach Delay			61.0
Approach LOS			F

HCS2000: Unsignalized Intersections Release 4.1

Korve Engineering, Inc.

Phone: Fax:
E-Mail:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/21/02
Analysis Time Period: PM Peak
Intersection: East Ave & SW Entrance
Jurisdiction:
Analysis Year: 2020
Project ID: Lawrence Livermore National Laboratory
East/West Street: East Ave
North/South Street: SW Entrance/West Perimeter Dr

Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	67	17			781	17
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	17	4			195	4
Hourly Flow Rate, HFR	67	17			781	17
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
T Channelized?						
Lanes	1	2			2	0
Configuration	L	T			T	TR
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				45		556
Peak Hour Factor, PHF				1.00		1.00
Peak-15 Minute Volume				11		139
Hourly Flow Rate, HFR				45		556
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
T Channelized?						No

Lanes
Configuration

1 1
L R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2 Left-Turn Through							
S5 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(c,base)	4.1					7.5		6.9
t(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)	2					2		2
t(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)	0.00					0.70		0.00
t(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c) 1-stage	4.1					6.8		6.9
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(f,base)	2.20					3.50		3.30
t(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(HV)	2					2		2
t(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal			
	Movement 2		Movement 5
	V(t)	V(1,prot)	V(t) V(1,prot)
/ prog			
Total Saturation Flow Rate, s (vph)			
Arrival Type			
Effective Green, g (sec)			
Cycle Length, C (sec)			
Rp (from table 9-2)			
Proportion vehicles arriving on green P			
j(q1)			
g(q2)			
T(q)			

Computation 2-Proportion of TWSC Intersection Time blocked			
	Movement 2		Movement 5
	V(t)	V(1,prot)	V(t) V(1,prot)
alpha			
beta			
Travel time, t(a) (sec)			
Smoothing Factor, F			
Proportion of conflicting flow, f			
Max platooned flow, V(c,max)			
Min platooned flow, V(c,min)			
Duration of blocked period, t(p)			
Proportion time blocked, p		0.000	0.000

Computation 3-Platoon Event Periods		Result
(2)		0.000
p(5)		0.000
p(dom)		
(subo)		
onstrained or unconstrained?		

Proportion unblocked for minor movements, p(x)	(1)	(2)	(3)
	Single-stage Process	Two-Stage Process Stage I	Stage II
p(1)			
p(4)			
(7)			
(8)			
p(9)			
(10)			
(11)			
p(12)			

Computation 4 and 5 Single-Stage Process								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

V c,x	798	932	399
S			
Px			
V c,u,x			
C r,x			
C plat,x			

Two-Stage Process									
	7		8		10		11		
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	
V(c,x)									
S						3400			
P(x)									
V(c,u,x)									
C(r,x)									
C(plat,x)									

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
Conflicting Flows		399
Potential Capacity		601
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		601
Probability of Queue free St.	1.00	0.07
Step 2: LT from Major St.	4	1
Conflicting Flows		798
Potential Capacity		820
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		820
Probability of Queue free St.	1.00	0.92
Maj L-Shared Prob Q free St.		
Step 3: TH from Minor St.	8	11
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.92	0.92
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows		932
Potential Capacity		265
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.92	
Maj. L, Min T Adj. Imp Factor.	0.94	
Cap. Adj. factor due to Impeding mvmnt	0.07	0.92
Movement Capacity		243

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.92	0.92
Movement Capacity		
Result for 2 stage process:		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		932
Potential Capacity		265
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor	0.92	
Maj. L, Min T Adj. Imp Factor.	0.94	
Cap. Adj. factor due to Impeding mvmnt	0.07	0.92
Movement Capacity		243

Results for Two-stage process:

Worksheet 8-Shared Lane Calculations

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (vph)				45		556
Movement Capacity (vph)				243		601
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
C sep				243		601
Volume				45		556
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
n max						
C sh						
SUM C sep						
n						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	67					45		556
C(m) (vph)	820					243		601
v/c	0.08					0.19		0.93
95% queue length	0.27					0.68		19.74
Control Delay	9.8					23.2		64.1
LOS	A					C		F
Approach Delay							61.0	
Approach LOS							F	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	0.92	1.00
v(i1), Volume for stream 2 or 5		
v(i2), Volume for stream 3 or 6		
s(i1), Saturation flow rate for stream 2 or 5		
s(i2), Saturation flow rate for stream 3 or 6		
P*(oj)		
d(M,LT), Delay for stream 1 or 4	9.8	
N, Number of major street through lanes		
d(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.:
Date Performed: 1/21/02
Analysis Time Period: AM Peak
Intersection: East Ave & W Entrance (Location # 5)
Jurisdiction:
Analysis Year: 2020
Project ID: Lawrence Livermore National Laboratory
East/West Street: East Ave
North/South Street: West Entrance to Sandia Labs

Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments								
Major Street:	Approach Movement	Eastbound				Westbound		
		1	2	3	4	5	6	
		L	T	R	L	T	R	
Volume			298	225		157	101	
Peak-Hour Factor, PHF			1.00	1.00		1.00	1.00	
Hourly Flow Rate, HFR			298	225		157	101	
Percent Heavy Vehicles			--	--		2	--	--
Median Type		Undivided						
T Channelized?								
Lanes			2	0		1	1	
Configuration			T	TR		L	T	
Upstream Signal?			No			No		

Minor Street:	Approach Movement	Northbound			Southbound			
		7	8	9		10	11	12
		L	T	R		L	T	R
Volume		17		22				
Peak Hour Factor, PHF		1.00		1.00				
Hourly Flow Rate, HFR		17		22				
Percent Heavy Vehicles		2		2				
Percent Grade (%)			0			0		
Median Storage								
Flared Approach: Exists?								
Storage								
T Channelized?				No				
Lanes		1		1				
Configuration		L		R				

Delay, Queue Length, and Level of Service										
Approach	EB	WB	Northbound				Southbound			
Movement	1	4		7	8	9		10	11	12
Lane Config		L		L		R				
<hr/>										
(vph)		157		17		22				
C(m) (vph)		1040		264		737				
v/c		0.15		0.06		0.03				
5% queue length		0.53		0.21		0.09				
ontrol Delay		9.1		19.6		10.0+				

LOS

Approach Delay

Approach LOS

A

C

14.2

B

E

HCS2000: Unsignalized Intersections Release 4.1

Korve Engineering, Inc.

Phone:

E-Mail:

Fax:

TWO-WAY STOP CONTROL (TWSC) ANALYSIS

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: AM Peak

Intersection: East Ave & W Entrance

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: West Entrance to Sandia Labs

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		298	225	157	101	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Peak-15 Minute Volume		74	56	39	25	
Hourly Flow Rate, HFR		298	225	157	101	
Percent Heavy Vehicles		--	--	2	--	--
Median Type	Undivided					
RT Channelized?						
Lanes		2	0	1	1	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	17		22			
Peak Hour Factor, PHF	1.00		1.00			
Peak-15 Minute Volume	4		6			
Hourly Flow Rate, HFR	17		22			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Median Storage						
Flared Approach:	Exists?					
	Storage					
RT Channelized?			No			

Lanes	1	1
Configuration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
32 Left-Turn Through							
55 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
(c,base)		4.1	7.5		6.9			
(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)		2	2		2			
(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
c(3,lt)		0.00	0.70		0.00			
c(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage		4.1	6.8		6.9			
2-stage								

Follow-Up Time Calculations								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
c(f,base)		2.20	3.50		3.30			
c(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(HV)		2	2		2			
(f)		2.2	3.5		3.3			

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
V prog				
Total Saturation Flow Rate, s (vph)				
Arrival Type				
Effective Green, g (sec)				
Cycle Length, C (sec)				
Rp (from table 9-2)				
Proportion vehicles arriving on green P				
g(q1)				
g(q2)				
g(q)				

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
alpha				
beta				
Travel time, t(a) (sec)				
Smoothing Factor, F				
Proportion of conflicting flow, f				
Max platooned flow, V(c,max)				
Min platooned flow, V(c,min)				
Duration of blocked period, t(p)				
Proportion time blocked, p		0.000		0.000

Computation 3-Platoon Event Periods

	Result
p(2)	0.000
p(5)	0.000
p(dom)	
p(subo)	
Constrained or unconstrained?	

Proportion unblocked for minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Two-Stage Process Stage II
p(1)			
p(4)			
p(7)			
p(8)			
p(9)			
p(10)			
p(11)			
p(12)			

Computation 4 and 5
Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

r c,x	523	825	262	
x				
V c,u,x				
r,x				
C plat,x				
Two-Stage Process				
	7	8	10	11
	Stage1	Stage2	Stage1	Stage2
(c,x)				
s	1700			
(x)				
(c,u,x)				
(r,x)				
(plat,x)				

Worksheet 6-Impedance and Capacity Equations				
Step 1: RT from Minor St.	9	12		
onflicting Flows	262			
Potential Capacity	737			
Pedestrian Impedance Factor	1.00	1.00		
ovement Capacity	737			
robability of Queue free St.	0.97	1.00		
tep 2: LT from Major St.	4	1		
Conflicting Flows	523			
Potential Capacity	1040			
edestrian Impedance Factor	1.00	1.00		
ovement Capacity	1040			
robability of Queue free St.	0.85	1.00		
aj L-Shared Prob Q free St.				
Step 3: TH from Minor St.	8	11		
onflicting Flows				
Potential Capacity				
Pedestrian Impedance Factor	1.00	1.00		
ap. Adj. factor due to Impeding mvmnt	0.85	0.85		
ovement Capacity				
robability of Queue free St.	1.00	1.00		
tep 4: LT from Minor St.	7	10		
onflicting Flows	825			
Potential Capacity	311			
Pedestrian Impedance Factor	1.00	1.00		
Maj. L, Min T Impedance factor		0.85		
aj. L, Min T Adj. Imp Factor.		0.88		
ap. Adj. factor due to Impeding mvmnt	0.85	0.86		
Movement Capacity	264			

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.85	0.85
Movement Capacity		
Result for 2 stage process:		
a		
Y		
C t		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows	825	
Potential Capacity	311	
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor		0.85
Maj. L, Min T Adj. Imp Factor.		0.88
Cap. Adj. factor due to Impeding mvmnt	0.85	0.86
Movement Capacity	264	
Results for Two-stage process:		
a		
Y		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)	17		22			
Movement Capacity (vph)	264		737			
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Q sep	264		737			
Volume	17		22			
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
C max						
C sh						
UM C sep						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement Lane Config	1	4 L	7 L	8	9 R	10	11	12
Volume (vph)		157	17		22			
Capacity (m) (vph)		1040	264		737			
Volume/C		0.15	0.06		0.03			
95% queue length		0.53	0.21		0.09			
Control Delay		9.1	19.6		10.0+			
LOS		A	C		B			
Approach Delay				14.2				
Approach LOS				B				

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
Q (oj)	1.00	0.85
Q (i1), Volume for stream 2 or 5		
Q (i2), Volume for stream 3 or 6		
Q (i1), Saturation flow rate for stream 2 or 5		
Q (i2), Saturation flow rate for stream 3 or 6		
Q * (oj)		
Q (M,LT), Delay for stream 1 or 4		9.1
Q, Number of major street through lanes		
Q (rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: PM Peak

Intersection: East Ave & W Entrance (Location # 5)

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: West Entrance to Sandia Labs

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound		
		1 L	2 T	3 R	 	4 L	5 T	6 R
Volume			45	17		34	663	
Peak-Hour Factor, PHF			1.00	1.00		1.00	1.00	
Hourly Flow Rate, HFR			45	17		34	663	
Percent Heavy Vehicles			--	--		2	--	--
Median Type	Undivided							
RT Channelized?								
Lanes			2	0		1	1	
Configuration			T	TR		L	T	
Upstream Signal?			No				No	

Minor Street:	Approach Movement	Northbound				Southbound		
		7 L	8 T	9 R	 	10 L	11 T	12 R
Volume		101		213				
Peak Hour Factor, PHF		1.00		1.00				
Hourly Flow Rate, HFR		101		213				
Percent Heavy Vehicles		2		2				
Percent Grade (%)			0				0	
Median Storage								
Flared Approach: Exists?	Storage							
RT Channelized?				No				
Lanes		1		1				
Configuration		L		R				

Delay, Queue Length, and Level of Service

Approach Movement	EB 1	Northbound				Southbound		
		4 L	 	7 L	8 R	9 R	 	10 11 12
Lane Config		L		L		R		
v (vph)		34		101		213		
C(m) (vph)		1539		323		1036		
v/c		0.02		0.31		0.21		
95% queue length		0.07		1.35		0.77		
Control Delay		7.4		21.2		9.4		

LOS

A

C

A

Approach Delay

13.2

Approach LOS

B

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Korve Engineering, Inc.

Phone:

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TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: PM Peak

Intersection: East Ave & W Entrance

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: West Entrance to Sandia Labs

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		45	17	34	663	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Peak-15 Minute Volume		11	4	8	166	
Hourly Flow Rate, HFR		45	17	34	663	
Percent Heavy Vehicles		--	--	2	--	--
Median Type	Undivided					
T Channelized?						
Lanes		2	0		1	1
Configuration		T	TR		L	T
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	101		213			
Peak Hour Factor, PHF	1.00		1.00			
Peak-15 Minute Volume	25		53			
Hourly Flow Rate, HFR	101		213			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?	Storage					
T Channelized?			No			

Lanes	1	1
Configuration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2 Left-Turn Through							
S5 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(c,base)		4.1	7.5		6.9			
t(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)		2	2		2			
t(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)		0.00	0.70		0.00			
t(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c) 1-stage		4.1	6.8		6.9			
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(f,base)		2.20	3.50		3.30			
t(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(HV)		2	2		2			
t(f)		2.2	3.5		3.3			

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal				
	Movement 2		Movement 5	
	V(t)	V(1,prot)	V(t)	V(1,prot)
<hr/>				
prog				
Total Saturation Flow Rate, s (vph)				
Arrival Type				
Effective Green, g (sec)				
Cycle Length, C (sec)				
Rp (from table 9-2)				
Proportion vehicles arriving on green P				
q1				
g(q2)				
r(q)				

Computation 2-Proportion of TWSC Intersection Time blocked				
	Movement 2		Movement 5	
	V(t)	V(1,prot)	V(t)	V(1,prot)
<hr/>				
alpha				
eta				
Travel time, t(a) (sec)				
Smoothing Factor, F				
Proportion of conflicting flow, f				
Max platooned flow, V(c,max)				
Min platooned flow, V(c,min)				
Duration of blocked period, t(p)				
Proportion time blocked, p		0.000		0.000

Computation 3-Platoon Event Periods		Result	
(2)		0.000	
p(5)		0.000	
b(dom)			
(subo)			
Unconstrained or unconstrained?			
Proportion			
Unblocked	(1)	(2)	(3)
for minor	Single-stage	Two-Stage Process	
Movements, p(x)	Process	Stage I	Stage II
p(1)			
b(4)			
(7)			
(8)			
p(9)			
(10)			
(11)			
p(12)			

Computation 4 and 5								
Single-Stage Process								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

V c,x	62	785	31
s			
Px			
V c,u,x			

C r,x
C plat,x

Two-Stage Process

	7	8	10	11
	Stage1	Stage2	Stage1	Stage2
V(c,x)				
s		1700		
P(x)				
V(c,u,x)				

C(r,x)
C(plat,x)

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
---------------------------	---	----

Conflicting Flows	31	
Potential Capacity	1036	
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity	1036	
Probability of Queue free St.	0.79	1.00

Step 2: LT from Major St.	4	1
---------------------------	---	---

Conflicting Flows	62	
Potential Capacity	1539	
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity	1539	
Probability of Queue free St.	0.98	1.00
Maj L-Shared Prob Q free St.		

Step 3: TH from Minor St.	8	11
---------------------------	---	----

Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.98	0.98
Movement Capacity		
Probability of Queue free St.	1.00	1.00

Step 4: LT from Minor St.	7	10
---------------------------	---	----

Conflicting Flows	785	
Potential Capacity	330	
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor		0.98
Maj. L, Min T Adj. Imp Factor.		0.98
Cap. Adj. factor due to Impeding mvmnt	0.98	0.78
Movement Capacity	323	

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.98	0.98
Movement Capacity		
Result for 2 stage process:		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows	785	
Potential Capacity	330	
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor		0.98
Maj. L, Min T Adj. Imp Factor.		0.98
Cap. Adj. factor due to Impeding mvmnt	0.98	0.78
Movement Capacity	323	

Results for Two-stage process:

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)	101		213			
Movement Capacity (vph)	323		1036			
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
C sep	323		1036			
Volume	101		213			
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
n max						
C sh						
SUM C sep						
n						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config		L	L		R			
v (vph)		34	101		213			
C(m) (vph)		1539	323		1036			
v/c		0.02	0.31		0.21			
95% queue length		0.07	1.35		0.77			
Control Delay		7.4	21.2		9.4			
LOS		A	C		A			
Approach Delay				13.2				
Approach LOS				B				

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	1.00	0.98
v(i1), Volume for stream 2 or 5		
v(i2), Volume for stream 3 or 6		
s(i1), Saturation flow rate for stream 2 or 5		
s(i2), Saturation flow rate for stream 3 or 6		
P*(oj)		
d(M,LT), Delay for stream 1 or 4		7.4
N, Number of major street through lanes		
d(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: AM Peak

Intersection: East Ave & S Gate

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: South Gate

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments								
Major Street:	Approach Movement	1 L	2 T	3 R	4 L	5 T	6 R	
Volume		270	51			191	225	
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00	
Hourly Flow Rate, HFR		270	51			191	225	
Percent Heavy Vehicles		2	--	--		--	--	
Median Type	Undivided							
T Channelized?								
Lanes		1	2			1	0	
Configuration		L	T				TR	
Upstream Signal?			No			No		
Minor Street:	Approach Movement	7 L	8 T	9 R	10 L	11 T	12 R	
Volume					34		67	
Peak Hour Factor, PHF					1.00		1.00	
Hourly Flow Rate, HFR					34		67	
Percent Heavy Vehicles					2		2	
Percent Grade (%)			0			0		
Median Storage								
Flared Approach: Exists?	Storage							
T Channelized?							No	
Lanes					1	1		
Configuration					L	R		
Delay, Queue Length, and Level of Service								
Approach Movement	EB	WB	Northbound			Southbound		
Lane Config	1 L	4 	7 	8	9	10 	11 L	12 R
(vph)	270						34	67
U(m) (vph)	1139						222	692
U/c	0.24						0.15	0.10
5% queue length	0.93						0.54	0.32
Control Delay	9.1						24.1	10.8

LOS

A

C

15.3

E

Approach Delay

Approach LOS

C

HCS2000: Unsignalized Intersections Release 4.1

Korve Engineering, Inc.

Phone:

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TWO-WAY STOP CONTROL (TWSC) ANALYSIS

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: AM Peak

Intersection: East Ave & S Gate (Location #6)

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: South Gate

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	270	51			191	225
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	68	13			48	56
Hourly Flow Rate, HFR	270	51			191	225
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
RT Channelized?						
Lanes	1	2			1	0
Configuration	L	T				TR
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				34		67
Peak Hour Factor, PHF				1.00		1.00
Peak-15 Minute Volume				8		17
Hourly Flow Rate, HFR				34		67
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
RT Channelized?						No

anes
onfiguration

1 1
L R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
low (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
walking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
2 Left-Turn Through							
5 Left-Turn Through							

orksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
hared ln volume, major th vehicles:		
hared ln volume, major rt vehicles:		
sat flow rate, major th vehicles:		
at flow rate, major rt vehicles:		
umber of major street through lanes:		

orksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(c,base)	4.1					7.5		6.9
(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)	2					2		2
(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
rade/100			0.00	0.00	0.00	0.00	0.00	0.00
c(3,lt)	0.00					0.70		0.00
+(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage	4.1					6.8		6.9
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
c(f,base)	2.20					3.50		3.30
+(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(HV)	2					2		2
(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
V prog				
Total Saturation Flow Rate, s (vph)				
Arrival Type				
Effective Green, g (sec)				
Cycle Length, C (sec)				
Rp (from table 9-2)				
Proportion vehicles arriving on green P				
g(q1)				
g(q2)				
g(q)				

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
alpha				
beta				
Travel time, t(a) (sec)				
Smoothing Factor, F				
Proportion of conflicting flow, f				
Max platooned flow, V(c,max)				
Min platooned flow, V(c,min)				
Duration of blocked period, t(p)				
Proportion time blocked, p		0.000		0.000

Computation 3-Platoon Event Periods

	Result
p(2)	0.000
p(5)	0.000
p(dom)	
p(subo)	
Constrained or unconstrained?	

Proportion unblocked for minor movements, p(x)	(1) Single-stage Process	(2) Two-Stage Process Stage I	(3) Process Stage II
p(1)			
p(4)			
p(7)			
p(8)			
p(9)			
p(10)			
p(11)			
p(12)			

Computation 4 and 5
Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

Step 1: RT from Minor St.	9	12
Conflicting Flows		304
Potential Capacity		692
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		692
Probability of Queue free St.	1.00	0.90
Step 2: LT from Major St.	4	1
Conflicting Flows		416
Potential Capacity		1139
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		1139
Probability of Queue free St.	1.00	0.76
Major L-Shared Prob Q free St.		
Step 3: TH from Minor St.	8	11
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.76	0.76
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows		869
Potential Capacity		291
Pedestrian Impedance Factor	1.00	1.00
Cap. L, Min T Impedance factor	0.76	
Cap. L, Min T Adj. Imp Factor.	0.82	
Cap. Adj. factor due to Impeding mvmnt	0.74	0.76
Movement Capacity		222

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.76	0.76
Movement Capacity		
Result for 2 stage process:		
a		
y		
C t		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		869
Potential Capacity		291
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.76	
Maj. L, Min T Adj. Imp Factor.	0.82	
Cap. Adj. factor due to Impeding mvmnt	0.74	0.76
Movement Capacity		222
Results for Two-stage process:		
a		
y		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				34		67
Movement Capacity (vph)				222		692
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Qsep				222		692
Volume				34		67
Delay						
Qsep						
Qsep +1						
Round (Qsep +1)						
max						
Csh						
NUM C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement Lane Config	1 L	4	7	8	9	10 L	11	12 R
Q (vph)	270					34		67
Qm (vph)	1139					222		692
Q/c	0.24					0.15		0.10
95% queue length	0.93					0.54		0.32
Control Delay	9.1					24.1		10.8
OS	A					C		B
Approach Delay							15.3	
Approach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
(oj)	0.76	1.00
(il), Volume for stream 2 or 5		
v(i2), Volume for stream 3 or 6		
(il), Saturation flow rate for stream 2 or 5		
(i2), Saturation flow rate for stream 3 or 6		
r*(oj)		
d(M,LT), Delay for stream 1 or 4	9.1	
, Number of major street through lanes		
(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: PM Peak

Intersection: East Ave & S Gate (Location #6)

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: South Gate

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments								
Major Street:	Approach Movement	Eastbound				Westbound		
		1 L	2 T	3 R	4 L	5 T	6 R	
Volume		180	79			303	67	
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00	
Hourly Flow Rate, HFR		180	79			303	67	
Percent Heavy Vehicles		2	--	--		--	--	
Median Type	Undivided							
RT Channelized?								
Lanes		1	2			1	0	
Configuration		L	T				TR	
Upstream Signal?			No			No		

Minor Street:	Approach Movement	Northbound				Southbound		
		7 L	8 T	9 R	10 L	11 T	12 R	
Volume					62		393	
Peak Hour Factor, PHF					1.00		1.00	
Hourly Flow Rate, HFR					62		393	
Percent Heavy Vehicles					2		2	
Percent Grade (%)			0			0		
Median Storage								
Flared Approach: Exists?	Storage							
RT Channelized?							No	
Lanes					1	1		
Configuration					L	R		

Delay, Queue Length, and Level of Service								
Approach Movement	EB	WB	Northbound			Southbound		
	1	4	7	8	9	10	11	12
Lane Config	L						L	R
v (vph)	180					62		393
C(m) (vph)	1185					301		660
v/c	0.15					0.21		0.60
95% queue length	0.54					0.77		4.28
Control Delay	8.6					20.1		18.4

LOS	A	C	C
Approach Delay			18.6
Approach LOS			C

HCS2000: Unsignalized Intersections Release 4.1

Torve Engineering, Inc.

Phone:	Fax:
-Mail:	

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/21/02
Analysis Time Period: PM Peak
Intersection: East Ave & S Gate
Jurisdiction:
Analysis Year: 2020
Project ID: Lawrence Livermore National Laboratory
East/West Street: East Ave
North/South Street: South Gate

Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	180	79			303	67
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	45	20			76	17
Hourly Flow Rate, HFR	180	79			303	67
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
Channelized?						
Lanes	1	2			1	0
Configuration	L	T				TR
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				62		393
Peak Hour Factor, PHF				1.00		1.00
Peak-15 Minute Volume				16		98
Hourly Flow Rate, HFR				62		393
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Median Storage						
Flared Approach: Exists?						
Storage						
Channelized?						No

Lanes
Configuration

1 1
L R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
Flow (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
Walking Speed (ft/sec)	4.0	4.0	4.0	4.0
Percent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
S2 Left-Turn Through							
S5 Left-Turn Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:		
Shared ln volume, major rt vehicles:		
Sat flow rate, major th vehicles:		
Sat flow rate, major rt vehicles:		
Number of major street through lanes:		

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(c,base)	4.1					7.5		6.9
t(c,hv)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
P(hv)	2					2		2
t(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)	0.00					0.70		0.00
t(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c) 1-stage	4.1					6.8		6.9
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(f,base)	2.20					3.50		3.30
t(f,HV)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(HV)	2					2		2
t(f)	2.2					3.5		3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal				
	Movement 2		Movement 5	
	V(t)	V(1,prot)	V(t)	V(1,prot)
<hr/>				
prog				
Total Saturation Flow Rate, s (vph)				
Arrival Type				
Effective Green, g (sec)				
Cycle Length, C (sec)				
Rp (from table 9-2)				
Proportion vehicles arriving on green P				
q1)				
g(q2)				
q(q)				

Computation 2-Proportion of TWSC Intersection Time blocked				
	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)
<hr/>				
alpha				
eta				
Travel time, t(a) (sec)				
Smoothing Factor, F				
Proportion of conflicting flow, f				
Max platooned flow, V(c,max)				
Min platooned flow, V(c,min)				
Duration of blocked period, t(p)				
Proportion time blocked, p		0.000		0.000

Computation 3-Platoon Event Periods		Result		
(2)		0.000		
p(5)		0.000		
dom)				
(subo)				
Constrained or unconstrained?				
Proportion				
Unblocked				
for minor				
Movements, p(x)	(1)	(2)	(3)	
	Single-stage	Two-Stage Process		
	Process	Stage I	Stage II	
p(1)				
p(4)				
(7)				
p(8)				
p(9)				
(10)				
(11)				
p(12)				

Computation 4 and 5								
Single-Stage Process								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

V c,x	370	735	336
S			
Px			
V c,u,x			

C r,x
C plat,x

Two-Stage Process

	7		8		10		11
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1
							Stage2

V(c,x)							
s						3400	
P(x)							
V(c,u,x)							

C(r,x)
C(plat,x)

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
---------------------------	---	----

Conflicting Flows		336
Potential Capacity		660
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		660
Probability of Queue free St.	1.00	0.40

Step 2: LT from Major St.	4	1
---------------------------	---	---

Conflicting Flows		370
Potential Capacity		1185
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity		1185
Probability of Queue free St.	1.00	0.85
Maj L-Shared Prob Q free St.		

Step 3: TH from Minor St.	8	11
---------------------------	---	----

Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.85	0.85
Movement Capacity		
Probability of Queue free St.	1.00	1.00

Step 4: LT from Minor St.	7	10
---------------------------	---	----

Conflicting Flows		735
Potential Capacity		355
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.85	
Maj. L, Min T Adj. Imp Factor.	0.88	
Cap. Adj. factor due to Impeding mvmnt	0.36	0.85
Movement Capacity		301

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.85	0.85
Movement Capacity		
Result for 2 stage process:		
Cut		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		735
Potential Capacity		355
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor	0.85	
Maj. L, Min T Adj. Imp Factor.	0.88	
Cap. Adj. factor due to Impeding mvmnt	0.36	0.85
Movement Capacity		301

Results for Two-stage process:

Worksheet 8-Shared Lane Calculations

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (vph)				62		393
Movement Capacity (vph)				301		660
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
C sep				301		660
Volume				62		393
Delay						
Q sep						
Q sep +1						
round (Qsep +1)						
n max						
C sh						
SUM C sep						
n						
C act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	180					62		393
C(m) (vph)	1185					301		660
v/c	0.15					0.21		0.60
95% queue length	0.54					0.77		4.28
Control Delay	8.6					20.1		18.4
LOS	A					C		C
Approach Delay							18.6	
Approach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
p(oj)	0.85	1.00
v(i1), Volume for stream 2 or 5		
v(i2), Volume for stream 3 or 6		
s(i1), Saturation flow rate for stream 2 or 5		
s(i2), Saturation flow rate for stream 3 or 6		
P*(oj)		
d(M,LT), Delay for stream 1 or 4	8.6	
N, Number of major street through lanes		
d(rank,1) Delay for stream 2 or 5		

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: AM Peak

Intersection: East Ave & E Entrance (Location # 8)

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: East Entrance

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Eastbound				Westbound		
		1 L	2 T	3 R	 	4 L	5 T	6 R
Volume			45	67		101	247	
Peak-Hour Factor, PHF			1.00	1.00		1.00	1.00	
Hourly Flow Rate, HFR			45	67		101	247	
Percent Heavy Vehicles			--	--		2	--	--
Median Type	Undivided							
Channelized?								
Lanes			1	0		0	1	
Configuration				TR			LT	
Stream Signal?			No				No	

Minor Street:	Approach Movement	Northbound				Southbound		
		7 L	8 T	9 R	 	10 L	11 T	12 R
Volume		34		28				
Peak Hour Factor, PHF		1.00		1.00				
Hourly Flow Rate, HFR		34		28				
Percent Heavy Vehicles		2		2				
Percent Grade (%)			0				0	
Median Storage								
Shared Approach: Exists?								
Shared Approach: Storage								
Channelized?				No				
Lanes		1		1				
Configuration		L		R				

Delay, Queue Length, and Level of Service									
Approach Movement	EB 1	WB 4	Northbound				Southbound		
			7 LT	8 	9 L	10 R	11 	12	
Volume (vph)		101	34			28			
Volume (vph)		1478	477			983			
Delay		0.07	0.07			0.03			
Queue length		0.22	0.23			0.09			
Control Delay		7.6	13.1			8.8			

OS

pproach Delay

pproach LOS

A

B

11.2

B

A

HCS2000: Unsignalized Intersections Release 4.1

orve Engineering, Inc.

hone:

-Mail:

Fax:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

nalyst:

gency/Co.:

ate Performed: 1/21/02

nalysis Time Period: AM Peak

ntersection: East Ave & E Entrance

urisdiction:

nalysis Year: 2020

roject ID: Lawrence Livermore National Laboratory

ast/West Street: East Ave

orth/South Street: East Entrance

ntersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		45	67	101	247	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Peak-15 Minute Volume		11	17	25	62	
Hourly Flow Rate, HFR		45	67	101	247	
Percent Heavy Vehicles		--	--	2	--	--
Median Type	Undivided					
T Channelized?						
lanes		1	0	0	1	
onfiguration			TR		LT	
postream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	34		28			
Peak Hour Factor, PHF	1.00		1.00			
Peak-15 Minute Volume	8		7			
Hourly Flow Rate, HFR	34		28			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Median Storage						
Shared Approach:	Exists?					
	Storage					
T Channelized?			No			

nes	1	1
onfiguration	L	R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
ow (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
walking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
52 Left-Turn							
Through							
Left-Turn							
Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles							
	Movement 2			Movement 5			
Shared ln volume, major th vehicles:						247	
Shared ln volume, major rt vehicles:						0	
st flow rate, major th vehicles:						1700	
st flow rate, major rt vehicles:						1700	
Number of major street through lanes:						1	

Worksheet 4-Critical Gap and Follow-up Time Calculation								
Critical Gap Calculation								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
c,base)		4.1	7.1		6.2			
c,hv)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
hv)		2	2		2			
c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
(3,lt)		0.00	0.70		0.00			
c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
c): 1-stage		4.1	6.4		6.2			
2-stage								

Follow-Up Time Calculations								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
(f,base)		2.20	3.50		3.30			
(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(HV)		2	2		2			
(f)		2.2	3.5		3.3			

Movement 2		Movement 5	
V(t)	V(l,prot)	V(t)	V(l,prot)
0.00	0.00	0.00	0.00
0.01	0.01	0.01	0.01
0.02	0.02	0.02	0.02
0.03	0.03	0.03	0.03
0.04	0.04	0.04	0.04
0.05	0.05	0.05	0.05
0.06	0.06	0.06	0.06
0.07	0.07	0.07	0.07
0.08	0.08	0.08	0.08
0.09	0.09	0.09	0.09
0.10	0.10	0.10	0.10
0.11	0.11	0.11	0.11
0.12	0.12	0.12	0.12
0.13	0.13	0.13	0.13
0.14	0.14	0.14	0.14
0.15	0.15	0.15	0.15
0.16	0.16	0.16	0.16
0.17	0.17	0.17	0.17
0.18	0.18	0.18	0.18
0.19	0.19	0.19	0.19
0.20	0.20	0.20	0.20
0.21	0.21	0.21	0.21
0.22	0.22	0.22	0.22
0.23	0.23	0.23	0.23
0.24	0.24	0.24	0.24
0.25	0.25	0.25	0.25
0.26	0.26	0.26	0.26
0.27	0.27	0.27	0.27
0.28	0.28	0.28	0.28
0.29	0.29	0.29	0.29
0.30	0.30	0.30	0.30
0.31	0.31	0.31	0.31
0.32	0.32	0.32	0.32
0.33	0.33	0.33	0.33
0.34	0.34	0.34	0.34
0.35	0.35	0.35	0.35
0.36	0.36	0.36	0.36
0.37	0.37	0.37	0.37
0.38	0.38	0.38	0.38
0.39	0.39	0.39	0.39
0.40	0.40	0.40	0.40
0.41	0.41	0.41	0.41
0.42	0.42	0.42	0.42
0.43	0.43	0.43	0.43
0.44	0.44	0.44	0.44
0.45	0.45	0.45	0.45
0.46	0.46	0.46	0.46
0.47	0.47	0.47	0.47
0.48	0.48	0.48	0.48
0.49	0.49	0.49	0.49
0.50	0.50	0.50	0.50
0.51	0.51	0.51	0.51
0.52	0.52	0.52	0.52
0.53	0.53	0.53	0.53
0.54	0.54	0.54	0.54
0.55	0.55	0.55	0.55
0.56	0.56	0.56	0.56
0.57	0.57	0.57	0.57
0.58	0.58	0.58	0.58
0.59	0.59	0.59	0.59
0.60	0.60	0.60	0.60
0.61	0.61	0.61	0.61
0.62	0.62	0.62	0.62
0.63	0.63	0.63	0.63
0.64	0.64	0.64	0.64
0.65	0.65	0.65	0.65
0.66	0.66	0.66	0.66
0.67	0.67	0.67	0.67
0.68	0.68	0.68	0.68
0.69	0.69	0.69	0.69
0.70	0.70	0.70	0.70
0.71	0.71	0.71	0.71
0.72	0.72	0.72	0.72
0.73	0.73	0.73	0.73
0.74	0.74	0.74	0.74
0.75	0.75	0.75	0.75
0.76	0.76	0.76	0.76
0.77	0.77	0.77	0.77
0.78	0.78	0.78	0.78
0.79	0.79	0.79	0.79
0.80	0.80	0.80	0.80
0.81	0.81	0.81	0.81
0.82	0.82	0.82	0.82
0.83	0.83	0.83	0.83
0.84	0.84	0.84	0.84
0.85			

```

prog
total Saturation Flow Rate, s (vph)
Arrival Type
Effective Green, g (sec)
Cycle Length, C (sec)
p (from table 9-2)
Proportion vehicles arriving on green P
(q1)
(q2)
(q)

```

Movement 2		Movement 5	
V(t)	V(1,prot)	V(t)	V(1,prot)

lpha		
eta		
ravel time, t(a) (sec)		
moothing Factor, F		
roportion of conflicting flow, f		
ax platooned flow, V(c,max)		
in platooned flow, V(c,min)		
uration of blocked period, t(p)		
roportion time blocked, p	0.000	0.000

Computation 3-Platoon Event Periods	Result
-------------------------------------	--------

(2)	0.000
(5)	0.000
(dom)	
(subo)	
onstrained or unconstrained?	

roportion			
nblocked	(1)	(2)	(3)
or minor	Single-stage	Two-Stage Process	
ovements, $p(x)$	Process	Stage I	Stage II

- (1)
- (4)
- (7)
- (8)
- (9)
- (10)
- (11)
- (12)

Computation 4 and 5 Single-Stage Process Improvement

1	4	7	8	9	10	11	12
L	L	L	T	R	L	T	R

c,x 112 527 . 78

Px
c,u,x

r,x
plat,x

Two-Stage Process

	7		8		10		11	
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
V(c,x)		1700						
l x)								
V(c,u,x)								
r,x)								
plat,x)								

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St.	9	12
Conflicting Flows	78	
Potential Capacity	983	
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity	983	
Probability of Queue free St.	0.97	1.00
Step 2: LT from Major St.	4	1
Conflicting Flows	112	
Potential Capacity	1478	
Pedestrian Impedance Factor	1.00	1.00
Movement Capacity	1478	
Probability of Queue free St.	0.93	1.00
Adj L-Shared Prob Q free St.	0.92	
Step 3: TH from Minor St.	8	11
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.92	0.92
Movement Capacity		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Conflicting Flows	527	
Potential Capacity	512	
Pedestrian Impedance Factor	1.00	1.00
Adj. L, Min T Impedance factor		0.92
Adj. L, Min T Adj. Imp Factor.		0.94
Cap. Adj. factor due to Impeding mvmnt	0.93	0.91
Movement Capacity	477	

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step	8	11
Step 3: TH from Minor St.		

art 1 - First Stage		
conflicting Flows		
potential Capacity		
pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
movement Capacity		
probability of Queue free St.		

art 2 - Second Stage		
conflicting Flows		
potential Capacity		
pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
movement Capacity		

art 3 - Single Stage		
conflicting Flows		
potential Capacity		
pedestrian Impedance Factor	1.00	1.00
ap. Adj. factor due to Impeding movement	0.92	0.92
movement Capacity		

result for 2 stage process:

probability of Queue free St.	1.00	1.00
-------------------------------	------	------

Step	7	10
Step 4: LT from Minor St.		

art 1 - First Stage		
conflicting Flows		
potential Capacity		
pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
movement Capacity		

art 2 - Second Stage		
conflicting Flows		
potential Capacity		
pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
movement Capacity		

art 3 - Single Stage		
conflicting Flows	527	
potential Capacity	512	
pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor		0.92
aj. L, Min T Adj. Imp Factor.		0.94
ap. Adj. factor due to Impeding movement	0.93	0.91
movement Capacity	477	

results for Two-stage process:

Worksheet 8-Shared Lane Calculations

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (vph)	34		28			
Movement Capacity (vph)	477		983			
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Qsep	477		983			
Volume	34		28			
Delay						
Qsep						
Qsep +1						
Round (Qsep +1)						
Qmax						
Qsh						
M C sep						
Qact						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
Q (vph)		101	34		28			
Q(m) (vph)		1478	477		983			
Q/c		0.07	0.07		0.03			
% queue length		0.22	0.23		0.09			
Control Delay		7.6	13.1		8.8			
LOS		A	B		A			
Approach Delay				11.2				
Approach LOS				B				

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
Q(oj)	1.00	0.93
Q(i1), Volume for stream 2 or 5		247
Q(i2), Volume for stream 3 or 6		0
S(i1), Saturation flow rate for stream 2 or 5		1700
S(i2), Saturation flow rate for stream 3 or 6		1700
Q(oj)		0.92
S(M,LT), Delay for stream 1 or 4		7.6
N, Number of major street through lanes		1
Q(rank,1) Delay for stream 2 or 5		0.6

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/21/02

Analysis Time Period: PM Peak

Intersection: East Ave & E Entrance (Location #8)

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore National Laboratory

East/West Street: East Ave

North/South Street: East Entrance

Intersection Orientation: EW

Study period (hrs): 1.00

Vehicle Volumes and Adjustments									
Major Street:	Approach Movement	Eastbound				Westbound			
		1 L	2 T	3 R	4 L	5 T	6 R		
Volume			236	11	22	67			
Peak-Hour Factor, PHF			1.00	1.00	1.00	1.00			
Hourly Flow Rate, HFR			236	11	22	67			
Percent Heavy Vehicles			--	--	2	--	--		
Median Type	Undivided								
Left Channelized?									
Left Lanes			1	0		0	1		
Left Configuration				TR		LT			
Left Stream Signal?			No			No			
Minor Street:	Approach Movement	Northbound				Southbound			
		7 L	8 T	9 R	10 L	11 T	12 R		
Volume		45		101					
Peak Hour Factor, PHF		1.00		1.00					
Hourly Flow Rate, HFR		45		101					
Percent Heavy Vehicles		2		2					
Percent Grade (%)			0			0			
Median Storage									
Left Approach: Exists?	Storage								
Left Channelized?				No					
Left Lanes		1	1						
Left Configuration		L	R						
Delay, Queue Length, and Level of Service									
Approach Movement Lane Config	EB	WB	Northbound			Southbound			
	1	4 LT	7 L	8	9 R	10	11	12	
(vph)		22	45		101				
(m) (vph)		1319	634		797				
/c		0.02	0.07		0.13				
5% queue length		0.05	0.23		0.43				
Control Delay		7.8	11.1		10.2				

S	A	B	B
Approach Delay			10.5
Approach LOS			B

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Live Engineering, Inc.

Phone:	Fax:
E-Mail:	

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/21/02
Analysis Time Period: PM Peak
Intersection: East Ave & E Entrance
Jurisdiction:
Analysis Year: 2020
Project ID: Lawrence Livermore National Laboratory
East/West Street: East Ave
North/South Street: East Entrance

Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		236	11	22	67	
Peak-Hour Factor, PHF		1.00	1.00	1.00	1.00	
Peak-15 Minute Volume		59	3	6	17	
Hourly Flow Rate, HFR		236	11	22	67	
Percent Heavy Vehicles		--	--	2	--	--
Median Type	Undivided					
RT Channelized?						
Lines		1	0	0	1	
Configuration			TR		LT	
Upstream Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	45		101			
Peak Hour Factor, PHF	1.00		1.00			
Peak-15 Minute Volume	11		25			
Hourly Flow Rate, HFR	45		101			
Percent Heavy Vehicles	2		2			
Percent Grade (%)		0			0	
Median Storage						
Shared Approach: Exists?	Storage					
RT Channelized?			No			

anes
onfiguration

1 1
L R

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
low (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
alking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
2	Left-Turn Through						.
5	Left-Turn Through						

orksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
hared ln volume, major th vehicles:		67
hared ln volume, major rt vehicles:		0
at flow rate, major th vehicles:		1700
at flow rate, major rt vehicles:		1700
umber of major street through lanes:		1

orksheet 4-Critical Gap and Follow-up Time Calculation

ritical Gap Calculation								
ovement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
(c,base)		4.1	7.1		6.2			
(c,hv)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(hv)		2	2		2			
(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
rade/100			0.00	0.00	0.00	0.00	0.00	0.00
(3,lt)		0.00	0.70		0.00			
(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage		4.1	6.4		6.2			
2-stage								

Follow-Up Time Calculations								
Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R
(f,base)		2.20	3.50		3.30			
(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(HV)		2	2		2			
(f)		2.2	3.5		3.3			

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(1,prot)	V(t)	V(1,prot)

prog
 Total Saturation Flow Rate, s (vph)
 Arrival Type
 Effective Green, g (sec)
 Cycle Length, C (sec)
 g (from table 9-2)
 Proportion vehicles arriving on green P
 q1
 q2
 q

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(1,prot)	V(t)	V(1,prot)

pha
 a
 Travel time, t(a) (sec)
 Frictioning Factor, F
 Proportion of conflicting flow, f
 Max platooned flow, V(c,max)
 Min platooned flow, V(c,min)
 Duration of blocked period, t(p)
 Proportion time blocked, p

	0.000	0.000
--	-------	-------

Computation 3-Platoon Event Periods

	Result
q(2)	0.000
q(5)	0.000
q(lom)	
q(subo)	
Unconstrained or unconstrained?	

	(1)	(2)	(3)
	Single-stage	Two-Stage Process	
	Process	Stage I	Stage II

q(2)
 q(5)
 q(7)
 q(8)
 q(9)
 q(10)
 q(11)
 q(12)

Computation 4 and 5

Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

c,x 247 353 242

x
c,u,x

r,x
plat,x

wo-Stage Process

7 8 10 11
Stage1 Stage2 Stage1 Stage2 Stage1 Stage2 Stage1 Stage2

(c,x)
(x)
(c,u,x)

(r,x)
(plat,x)

Worksheet 6-Impedance and Capacity Equations

Step 1: RT from Minor St. 9 12

Conflicting Flows 242
Potential Capacity 797
Pedestrian Impedance Factor 1.00 1.00
Movement Capacity 797
Probability of Queue free St. 0.87 1.00

Step 2: LT from Major St. 4 1

Conflicting Flows 247
Potential Capacity 1319
Pedestrian Impedance Factor 1.00 1.00
Movement Capacity 1319
Probability of Queue free St. 0.98 1.00
Major L-Shared Prob Q free St. 0.98

Step 3: TH from Minor St. 8 11

Conflicting Flows
Potential Capacity
Pedestrian Impedance Factor 1.00 1.00
Ap. Adj. factor due to Impeding movement 0.98 0.98
Movement Capacity
Probability of Queue free St. 1.00 1.00

Step 4: LT from Minor St. 7 10

Conflicting Flows 353
Potential Capacity 645
Pedestrian Impedance Factor 1.00 1.00
Major L, Min T Impedance factor 0.98
Major L, Min T Adj. Imp Factor. 0.99
Ap. Adj. factor due to Impeding movement 0.98 0.86
Movement Capacity 634

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.98	0.98
Movement Capacity		
Result for 2 stage process:		
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows	353	
Potential Capacity	645	
Pedestrian Impedance Factor	1.00	1.00
Adj. L, Min T Impedance factor		0.98
Adj. L, Min T Adj. Imp Factor.		0.99
Cap. Adj. factor due to Impeding mvmnt	0.98	0.86
Movement Capacity	634	
Results for Two-stage process:		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)	45		101			
Movement Capacity (vph)	634		797			
Shared Lane Capacity (vph)						

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Qsep	634		797			
Volume	45		101			
Delay						
Qsep						
Qsep +1						
Round (Qsep +1)						
max						
sh						
UM C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L		R			
(vph)		22	45		101			
(m) (vph)		1319	634		797			
/c		0.02	0.07		0.13			
5% queue length		0.05	0.23		0.43			
Control Delay		7.8	11.1		10.2			
OS		A	B		B			
Approach Delay				10.5				
Approach LOS				B				

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
(oj)	1.00	0.98
(i1), Volume for stream 2 or 5		67
(i2), Volume for stream 3 or 6		0
(i1), Saturation flow rate for stream 2 or 5		1700
(i2), Saturation flow rate for stream 3 or 6		1700
* (oj)		0.98
(M,LT), Delay for stream 1 or 4		7.8
, Number of major street through lanes		1
(rank,1) Delay for stream 2 or 5		0.1

TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/16/02

Analysis Time Period: Existing AM

Intersection: East Ave & Greenville Rd

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore Lab Traffic Impact Analysis

East/West Street: East Avenue

North/South Street: Greenville Road

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Approach Movement	Northbound				Southbound	
		1 L	2 T	3 R	4 L	5 T	6 R
Volume		83	153			165	308
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00
Hourly Flow Rate, HFR		83	153			165	308
Percent Heavy Vehicles		2	--	--		--	--
Median Type	Undivided						
Channelized?							
Lanes		0	1			1	0
Configuration		LT				TR	
Stream Signal?			No			No	

Major Street:	Approach Movement	Westbound				Eastbound	
		7 L	8 T	9 R	10 L	11 T	12 R
Volume					53	0	22
Peak Hour Factor, PHF					1.00	1.00	1.00
Hourly Flow Rate, HFR					53	0	22
Percent Heavy Vehicles					2	2	2
Percent Grade (%)			0			0	
Median Storage							
Shared Approach: Exists?						No	
Shared Approach: Storage							
Channelized?							
Lanes					0	1	0
Configuration						LTR	

Delay, Queue Length, and Level of Service								
Approach Movement	NB	SB	Westbound			Eastbound		
	1	4	7	8	9	10	11	12
Line Config	LT						LTR	
V (vph)	83						75	
C/m (vph)	1089						467	
V/c	0.08						0.16	
% queue length	0.25						0.57	
Control Delay	8.6						14.2	

HCS2000: Unsignalized Intersections Release 4.1

orve Engineering, Inc.

hone:
-Mail:

Fax:

TWO-WAY STOP CONTROL(TWSC) ANALYSIS

nalyst:
gency/Co.:
ate Performed: 1/16/02
nalysis Time Period: Existing AM
ntersection: East Ave & Greenville Rd
urisdiction:
nalysis Year: 2020
roject ID: Lawrence Livermore Lab Traffic Impact Analysis
ast/West Street: East Avenue
orth/South Street: Greenville Road

ntersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	83	153			165	308
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	21	38			41	77
Hourly Flow Rate, HFR	83	153			165	308
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
T Channelized?						
lanes	0	1			1	0
onfiguration	LT				TR	
posteam Signal?		No			No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				53	0	22
Peak Hour Factor, PHF				1.00	1.00	1.00
Peak-15 Minute Volume				13	0	6
Hourly Flow Rate, HFR				53	0	22
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Median Storage						
lared Approach: Exists?					No	
Storage						
T Channelized?						

Pedestrian Volumes and Adjustments				
Movements	13	14	15	16
low (ped/hr)	0	0	0	0
Lane Width (ft)	12.0	12.0	12.0	12.0
walking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
52 Left-Turn							
Through							
5 Left-Turn							
Through							

Worksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
Shared ln volume, major th vehicles:	153	
Shared ln volume, major rt vehicles:	0	
sat flow rate, major th vehicles:	1700	
sat flow rate, major rt vehicles:	1700	
Number of major street through lanes:	1	

Worksheet 4-Critical Gap and Follow-up Time Calculation

Critical Gap Calculation								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(c,base)	4.1					7.1	6.5	6.2
t(c,hv)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
P(hv)	2					2	2	2
t(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
Grade/100			0.00	0.00	0.00	0.00	0.00	0.00
t(3,lt)	0.00					0.70	0.00	0.00
t(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
t(c) 1-stage	4.1					6.4	6.5	6.2
2-stage								

Follow-Up Time Calculations								
Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
t(f,base)	2.20					3.50	4.00	3.30
t(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P(HV)	2					2	2	2
t(f)	2.2					3.5	4.0	3.3

Movement 2		Movement 5	
V(t)	V(1,prot)	V(t)	V(1,prot)

```

prog
total Saturation Flow Rate, s (vph)
arrival Type
effective Green, g (sec)
cycle Length, C (sec)
p (from table 9-2)
proportion vehicles arriving on green P
(q1)
(q2)
(q)

```

Movement 2		Movement 5	
V(t)	V(1,prot)	V(t)	V(1,prot)

α
 η
 travel time, $t(a)$ (sec)
 smoothing Factor, F
 proportion of conflicting flow, f
 max platooned flow, $V(c, \max)$
 min platooned flow, $V(c, \min)$
 duration of blocked period, $t(p)$
 proportion time blocked, p

0.000 0.000

computation	3-Platoon Event Periods	Result
-------------	-------------------------	--------

(2)	0.000
(5)	0.000

```
(dom)
(subo)
onstrained or unconstrained?
```

proportion			
nblocked	(1)	(2)	(3)
or minor	Single-stage	Two-Stage Process	
movements, $p(x)$	Process	Stage I	Stage II

(1)
(4)
(7)
(8)
(9)
(10)
(11)
(12)

Computation 4 and 5 Single-Stage Process

Improvement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

C,x	473					638	638	319
C,u,x								
r,x								
plat,x								
Two-Stage Process								
	7		8		10		11	
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
V(C,x)						1700		1700
x)								
V(C,u,x)								
r,x)								
plat,x)								
Worksheet 6-Impedance and Capacity Equations								
Step 1: RT from Minor St.					9		12	
Conflicting Flows								319
Potential Capacity								722
Pedestrian Impedance Factor					1.00			1.00
Movement Capacity								722
Probability of Queue free St.					1.00			0.97
Step 2: LT from Major St.					4			1
Conflicting Flows								473
Potential Capacity								1089
Pedestrian Impedance Factor					1.00			1.00
Movement Capacity								1089
Probability of Queue free St.					1.00			0.92
Adj L-Shared Prob Q free St.								0.92
Step 3: TH from Minor St.					8			11
Conflicting Flows								638
Potential Capacity								394
Pedestrian Impedance Factor					1.00			1.00
Cap. Adj. factor due to Impeding mvmnt					0.92			0.92
Movement Capacity								361
Probability of Queue free St.					1.00			1.00
Step 4: LT from Minor St.					7			10
Conflicting Flows								638
Potential Capacity								441
Pedestrian Impedance Factor					1.00			1.00
Adj. L, Min T Impedance factor					0.92			
Adj. L, Min T Adj. Imp Factor.					0.94			
Cap. Adj. factor due to Impeding mvmnt					0.91			0.92
Movement Capacity								407

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		638
Potential Capacity		394
Pedestrian Impedance Factor	1.00	1.00
ap. Adj. factor due to Impeding movement	0.92	0.92
Movement Capacity		361
Result for 2 stage process:		
Probability of Queue free St.	1.00	361
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
ap. Adj. factor due to Impeding movement		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		638
Potential Capacity		441
Pedestrian Impedance Factor	1.00	1.00
aj. L, Min T Impedance factor	0.92	
aj. L, Min T Adj. Imp Factor.	0.94	
ap. Adj. factor due to Impeding movement	0.91	0.92
Movement Capacity		407
Results for Two-stage process:		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				53	0	22
Movement Capacity (vph)				407	361	722
Shared Lane Capacity (vph)					467	

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Qsep				407	361	722
Volume				53	0	22
Delay						
Qsep						
Qsep +1						
Qund (Qsep +1)						
Qmax						
Qsh					467	
Q M C sep						
Qact						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
Volume (vph)	83						75	
Capacity (vph)	1089						467	
Q/C	0.08						0.16	
% queue length	0.25						0.57	
Control Delay	8.6						14.2	
LOS	A						B	
Approach Delay							14.2	
Approach LOS							B	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
Q(oj)	0.92	1.00
Q(i1), Volume for stream 2 or 5	153	
Q(i2), Volume for stream 3 or 6	0	
S(i1), Saturation flow rate for stream 2 or 5	1700	
S(i2), Saturation flow rate for stream 3 or 6	1700	
Q*(oj)	0.92	
S(M,LT), Delay for stream 1 or 4	8.6	
N, Number of major street through lanes	1	
Q(rank,1) Delay for stream 2 or 5	0.7	

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TWO-WAY STOP CONTROL SUMMARY

Analyst:

Agency/Co.:

Date Performed: 1/16/02

Analysis Time Period: Existing PM

Intersection: East Ave & Greenville Rd

Jurisdiction:

Analysis Year: 2020

Project ID: Lawrence Livermore Lab Traffic Impact Analysis

East/West Street: East Avenue

North/South Street: Greenville Road

Intersection Orientation: NS

Study period (hrs): 1.00

Vehicle Volumes and Adjustments								
Major Street:	Approach Movement	Northbound				Southbound		
		1 L	2 T	3 R	4 L	5 T	6 R	
Volume		11	208			194	85	
Peak-Hour Factor, PHF		1.00	1.00			1.00	1.00	
Hourly Flow Rate, HFR		11	208			194	85	
Percent Heavy Vehicles		2	--	--		--	--	
Median Type	Undivided							
Is Channelized?								
Lanes		0	1			1	0	
Configuration			LT				TR	
Upstream Signal?			No			No		
Minor Street:	Approach Movement	Westbound				Eastbound		
		7 L	8 T	9 R	10 L	11 T	12 R	
Volume					285	0	54	
Peak Hour Factor, PHF					1.00	1.00	1.00	
Hourly Flow Rate, HFR					285	0	54	
Percent Heavy Vehicles					2	2	2	
Percent Grade (%)			0			0		
Median Storage								
Is T-Interchange?	Exists?					No		
Storage								
Is Channelized?								
Lanes					0	1	0	
Configuration						LTR		
Delay, Queue Length, and Level of Service								
Approach Movement	NB 1 LT	SB 4	Westbound			Eastbound		
			7	8	9	10	11 LTR	12
Lane Config								
(vph)	11						339	
(m) (vph)	1284						579	
/c	0.01						0.59	
5% queue length	0.03						4.10	
Control Delay	7.8						19.9	

S	A	C
Approach Delay		19.9
Approach LOS		C

HCS2000: Unsignalized Intersections Release 4.1

erve Engineering, Inc.

Phone: Fax:
E-Mail:

TWO-WAY STOP CONTROL (TWSC) ANALYSIS

Analyst:
Agency/Co.:
Date Performed: 1/16/02
Analysis Time Period: Existing PM
Intersection: East Ave & Greenville Rd
Jurisdiction:
Analysis Year: 2020
Project ID: Lawrence Livermore Lab Traffic Impact Analysis
East/West Street: East Avenue
North/South Street: Greenville Road

Intersection Orientation: NS Study period (hrs): 1.00

Vehicle Volumes and Adjustments						
Major Street Movements	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	11	208			194	85
Peak-Hour Factor, PHF	1.00	1.00			1.00	1.00
Peak-15 Minute Volume	3	52			48	21
Hourly Flow Rate, HFR	11	208			194	85
Percent Heavy Vehicles	2	--	--		--	--
Median Type	Undivided					
RT Channelized?						
Lines	0	1			1	0
Configuration	LT				TR	
Upstream Signal?	No				No	
Minor Street Movements	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				285	0	54
Peak Hour Factor, PHF				1.00	1.00	1.00
Peak-15 Minute Volume				71	0	14
Hourly Flow Rate, HFR				285	0	54
Percent Heavy Vehicles				2	2	2
Percent Grade (%)		0			0	
Median Storage						
Shared Approach: Exists?					No	
Storage						
RT Channelized?						

anes
onfiguration

0 1 0
LTR

Pedestrian Volumes and Adjustments				
ovements	13	14	15	16
low (ped/hr)	0	0	0	0
ane Width (ft)	12.0	12.0	12.0	12.0
alking Speed (ft/sec)	4.0	4.0	4.0	4.0
ercent Blockage	0	0	0	0

Upstream Signal Data							
	Prog. Flow vph	Sat Flow vph	Arrival Type	Green Time sec	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
2 Left-Turn Through							
5 Left-Turn Through							

orksheet 3-Data for Computing Effect of Delay to Major Street Vehicles

	Movement 2	Movement 5
hared ln volume, major th vehicles:	208	
hared ln volume, major rt vehicles:	0	
at flow rate, major th vehicles:	1700	
at flow rate, major rt vehicles:	1700	
umber of major street through lanes:	1	

orksheet 4-Critical Gap and Follow-up Time Calculation

ritical Gap Calculation								
ovement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(c,base)	4.1					7.1	6.5	6.2
(c,hv)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
(hv)	2					2	2	2
(c,g)			0.20	0.20	0.10	0.20	0.20	0.10
rade/100			0.00	0.00	0.00	0.00	0.00	0.00
(3,lt)	0.00					0.70	0.00	0.00
(c,T): 1-stage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2-stage	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
(c) 1-stage	4.1					6.4	6.5	6.2
2-stage								

ollow-Up Time Calculations								
ovement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
(f,base)	2.20					3.50	4.00	3.30
(f,HV)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(HV)	2					2	2	2
(f)	2.2					3.5	4.0	3.3

Worksheet 5-Effect of Upstream Signals

Computation 1-Queue Clearance Time at Upstream Signal

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)

v prog
Total Saturation Flow Rate, s (vph)
Arrival Type
Effective Green, g (sec)
Cycle Length, C (sec)
P (from table 9-2)
Proportion vehicles arriving on green P
g(q1)
g(q2)
g(q)

Computation 2-Proportion of TWSC Intersection Time blocked

	Movement 2		Movement 5	
	V(t)	V(l,prot)	V(t)	V(l,prot)

phi
ta
Travel time, t(a) (sec)
Smoothing Factor, F
Proportion of conflicting flow, f
Max platooned flow, V(c,max)
Min platooned flow, V(c,min)
Duration of blocked period, t(p)
Proportion time blocked, p

	0.000	0.000
--	-------	-------

Computation 3-Platoon Event Periods

p(2)	0.000
p(5)	0.000
p dom)	
p,subo)	

Constrained or unconstrained?

	(1)	(2)	(3)
	Single-stage	Two-Stage Process	
	Process	Stage I	Stage II

p(1)
p(4)
p(7)
p(8)
p(9)
p(10)
p(11)
p(12)

Computation 4 and 5
Single-Stage Process

Movement	1	4	7	8	9	10	11	12
	L	L	L	T	R	L	T	R

x

c,u,x

r,x

plat,x

wo-Stage Process								
	7		8		10		11	
	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2	Stage1	Stage2
(c,x)						1700		1700
(x)								
(c,u,x)								
(r,x)								
(plat,x)								

orksheetsheet 6-Impedance and Capacity Equations

tep 1: RT from Minor St.	9		12	
onflicting Flows			236	
otential Capacity			803	
edestrian Impedance Factor	1.00		1.00	
ovement Capacity			803	
robability of Queue free St.	1.00		0.93	
tep 2: LT from Major St.	4		1	
onflicting Flows			279	
otential Capacity			1284	
edestrian Impedance Factor	1.00		1.00	
ovement Capacity			1284	
robability of Queue free St.	1.00		0.99	
aj L-Shared Prob Q free St.			0.99	
tep 3: TH from Minor St.	8		11	
onflicting Flows			466	
otential Capacity			494	
edestrian Impedance Factor	1.00		1.00	
ap. Adj. factor due to Impeding mvmnt	0.99		0.99	
ovement Capacity			489	
robability of Queue free St.	1.00		1.00	
tep 4: LT from Minor St.	7		10	
onflicting Flows			466	
otential Capacity			555	
edestrian Impedance Factor	1.00		1.00	
aj. L, Min T Impedance factor	0.99			
aj. L, Min T Adj. Imp Factor.	0.99			
ap. Adj. factor due to Impeding mvmnt	0.93		0.99	
ovement Capacity			550	

Worksheet 7-Computation of the Effect of Two-stage Gap Acceptance

Step 3: TH from Minor St.	8	11
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Probability of Queue free St.		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		466
Potential Capacity		494
Pedestrian Impedance Factor	1.00	1.00
Cap. Adj. factor due to Impeding mvmnt	0.99	0.99
Movement Capacity		489
Result for 2 stage process:		
Capacity		489
Probability of Queue free St.	1.00	1.00
Step 4: LT from Minor St.	7	10
Part 1 - First Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 2 - Second Stage		
Conflicting Flows		
Potential Capacity		
Pedestrian Impedance Factor		
Cap. Adj. factor due to Impeding mvmnt		
Movement Capacity		
Part 3 - Single Stage		
Conflicting Flows		466
Potential Capacity		555
Pedestrian Impedance Factor	1.00	1.00
Maj. L, Min T Impedance factor	0.99	
Maj. L, Min T Adj. Imp Factor.	0.99	
Cap. Adj. factor due to Impeding mvmnt	0.93	0.99
Movement Capacity		550
Results for Two-stage process:		
Capacity		
Probability		

Worksheet 8-Shared Lane Calculations

Movement	7 L	8 T	9 R	10 L	11 T	12 R
Volume (vph)				285	0	54
Movement Capacity (vph)				550	489	803
Shared Lane Capacity (vph)					579	

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

Movement	7 L	8 T	9 R	10 L	11 T	12 R
sep				550	489	803
Volume				285	0	54
Delay						
sep						
sep +1						
bound (Qsep +1)						
max						
sh					579	
UM C sep						
act						

Worksheet 10-Delay, Queue Length, and Level of Service

Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LTR	
(vph)	11						339	
(m) (vph)	1284						579	
/c	0.01						0.59	
5% queue length	0.03						4.10	
ontrol Delay	7.8						19.9	
OS	A						C	
pproach Delay							19.9	
pproach LOS							C	

Worksheet 11-Shared Major LT Impedance and Delay

	Movement 2	Movement 5
(oj)	0.99	1.00
(i1), Volume for stream 2 or 5	208	
(i2), Volume for stream 3 or 6	0	
(i1), Saturation flow rate for stream 2 or 5	1700	
(i2), Saturation flow rate for stream 3 or 6	1700	
*(oj)	0.99	
(M,LT), Delay for stream 1 or 4	7.8	
, Number of major street through lanes	1	
(rank,1) Delay for stream 2 or 5	0.1	