

Evaluation of Main Street Adaptive Traffic Signal System

For the City of Salinas

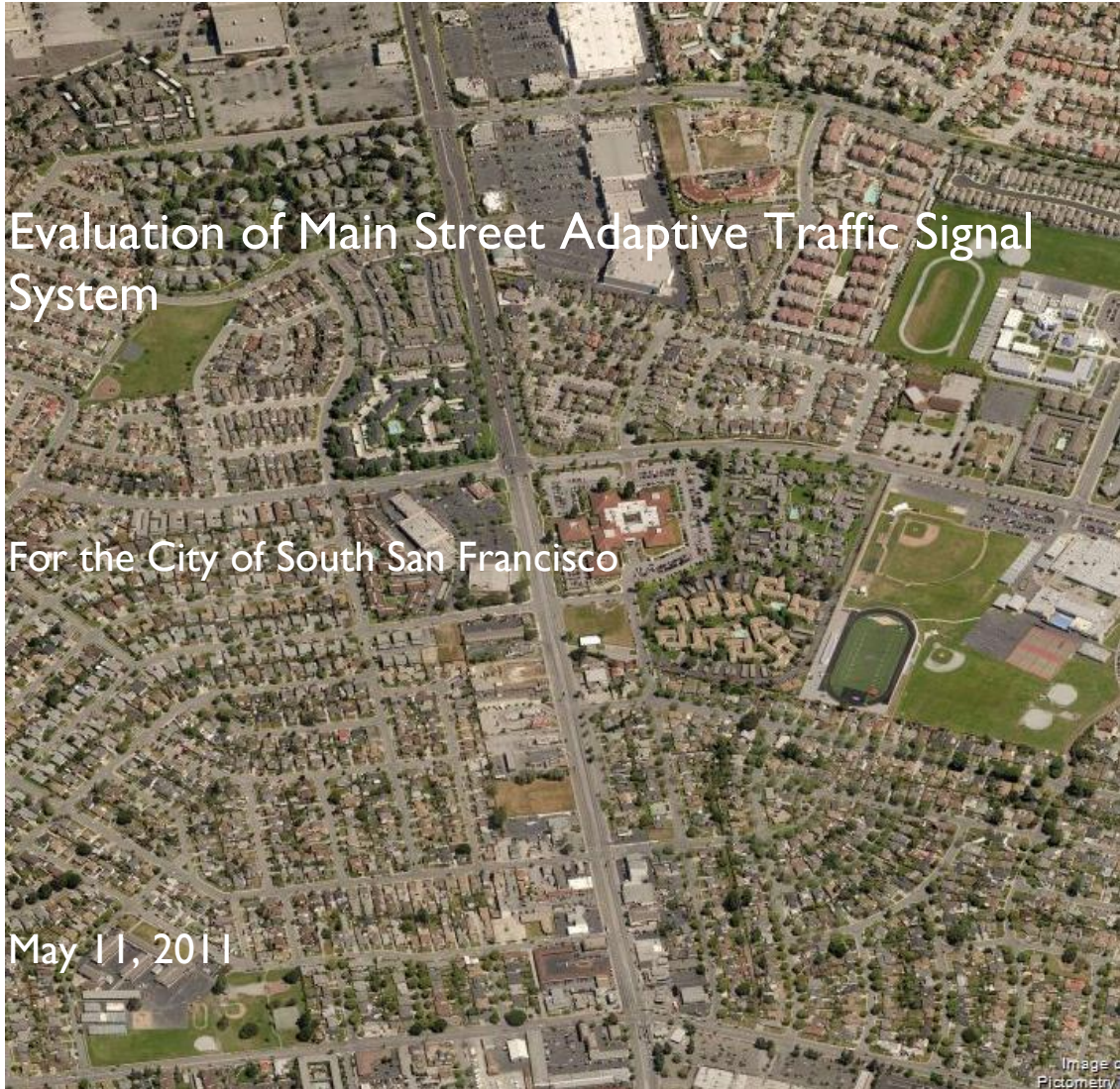
May 11, 2011

Vision That Moves Your Community

Evaluation of Main Street Adaptive Traffic Signal System

For the City of South San Francisco

May 11, 2011



www.tjkm.com

Prepared by:
TJKM Transportation Consultants
3875 Hopyard Road
Suite 200
Pleasanton, CA 94588-8526
Tel: 925.463.0611
Fax: 925.463.3690

Table of Contents

Introduction and Summary	1
Data Collection	2
Travel Time Runs	2
Analysis and Results.....	3
Travel Time Analysis	3
Average Signal Delay Analysis	4
Number of Stops along corridor.....	5
Fuel consumption and emission benefits	6
Benefit: Cost Evaluation	7
Conclusions.....	8
Study Participants.....	9
TJKM Transportation Consultants.....	9
Others.....	9

List of Appendices

- Appendix A – Detailed Floating Car Survey Worksheets
- Appendix B – Benefit Cost Ratio Analysis Worksheet

List of Figures

Figure 1: Main Street Travel Time Improvements.....	3
Figure 2: Main Street Average Signal Delay Improvements.....	5
Figure 3: Main Street Number of Stops Improvements	6

List of Tables

Table I: Main Street from Bernal Drive to Alvin Drive - “Before” vs. “After” Travel Time Survey Comparison	4
Table II: Main Street from Bernal Drive to Alvin Drive – Measures of Effectiveness.....	7
Table III: Project Performance Measures (lifetime).....	7

Introduction and Summary

City of Salinas has installed and fine-tuned the InSync adaptive signal timing system at five signalized intersections on Main Street between Bernal Drive and Alvin Drive. The purpose of the InSync adaptive signal timing system was to improve traffic flow along the 1.24-mile corridor on Main Street. The Main Street corridor was selected for the implementation since the corridor experiences shifts in traffic demand as the corridor runs parallel to US 101 and provides access to a sports stadium and many schools. The purpose for the deployment of the InSync adaptive system was to reduce travel times, vehicle delays, and number of stops on the corridor. The objective of this study is to evaluate the traffic operational effectiveness of the InSync adaptive signal timing system and to investigate InSync's ability to improve these performance measures. Improvement in traffic operations is expected to indirectly reduce fuel consumption and greenhouse gas emissions.

This report documents the evaluation of traffic operational and environmental benefits provided by the InSync signal system for the Main Street corridor. Results of this study will be useful for determining the suitability of the system for similar corridors within the City of Salinas.

In order to evaluate the system's performance, TJKM compared the traffic operational measures taken before the implementation of the system to the same measures taken few months after the implementation. The field measures included:

- travel time runs through the corridor
- delay experienced by drivers through the corridor
- delay experienced by drivers at individual intersections
- number of stops

In addition to these measurements, TJKM also observed volume data along the corridor to ensure that changes in these measures were not due to a change in volume. Traffic volume observations did not show any increase or decrease in volumes along the corridor before and after the implementation of the InSync adaptive system.

The evaluation results indicate that the adaptive traffic signal system is effective in reducing travel time, delay, emissions, fuel consumption, and the number of stops on the Main Street corridor. A detailed benefit-cost analysis suggests that the installation of the InSync adaptive traffic signal system was a good investment with a benefit to cost ratio of 46:1. Therefore, installation of similar adaptive traffic signal systems is recommended for further consideration for other corridors within the City of Salinas.

The results of the comparison of travel time runs indicated the following:

- The average reduction in travel times through the corridor was 42 percent.
- The average increase in speed through the corridor was 69 percent.
- The average fuel savings was 33 percent.

Data Collection

The study corridor included five signalized intersections along Main Street Bernal Drive and Alvin Drive in Salinas. The corridor is approximately 1.24 mi in length. Figure 1 shows a map of the corridor with each signalized intersection labeled.

Field data were collected along the study corridor during three study periods during a typical weekday during the a.m., midday, and the p.m. peak periods. The first field data was collected in July 2010, prior to the installation of the InSync adaptive system. Data collected during this period were used as the “Before” implementation travel time surveys for comparing the measures of effectiveness of the adaptive system. Data were collected again in May 2011, approximately five months after the installation of the InSync system. “After” implementation travel time surveys were carried out for the weekday during the a.m., midday, and p.m. peak periods for the study corridor to determine the efficacy of the implemented and fine-tuned timing plans. The measures of effectiveness (travel time, stop delay, probability of stopping, average speed, and free speed) for the “After” study were compared with that of the “Before” study.

Travel Time Runs

The travel time study involved measuring the time required for each of a series of vehicle runs through the corridor. Twelve vehicle runs in each direction of travel were conducted on a typical weekday during each of the following time periods:

- The a.m. peak (7:00 a.m. to 9:00 a.m.)
- The Midday Peak (11:00 a.m. to 1:00 p.m.)
- The p.m. peak (4:00 p.m. to 6:00 p.m.)

TJKM engineers conducted the travel time runs based on the “floating car method,” in which the drivers attempts to travel with the flow of traffic, changing lanes so as to pass as many cars as they are passed by. This method is used so that the travel times collected are representative of the travel time of the average vehicle traveling through the corridor.

Table 1 presents the summary statistics for the travel runs described above. The statistics include the travel time for each segment averaged over all the runs for a given time period and direction of travel, as well as other measures of effectiveness such as average speed, total delay, congested time, fuel consumption and emissions. The measures of effectiveness presented here for the corridor include:

Average Travel Time - the average travel time in seconds for the vehicle to travel through the corridor from the center of the first intersection to the center of the last intersection, calculated separately for each direction of travel.

Average number of stops - the number of times the vehicle speed fell to 3 mph or below along the corridor, averaged over all the runs for each direction of travel during each time period.

Average speed - the length of the corridor divided by the average travel time for the corridor, expressed in mph.

Total delay - the travel time through the corridor for each run minus the time it would have taken the vehicle to travel through the corridor if it were able to travel at the normal speed of traffic, averaged over all runs for a given time period in each direction of travel. The normal speed of traffic is defined here as the posted speed limit of 45 mph.

Analysis and Results

Travel Time Analysis

The total travel time for each run through the corridor was used as the primary measure of effectiveness. Travel time was measured from the center of the first intersection to the center of the last intersection encountered during the run. Figure 1 shows the improvement in travel time along the corridor for the northbound and the southbound directions.

Figure 1: Main Street Travel Time Improvements

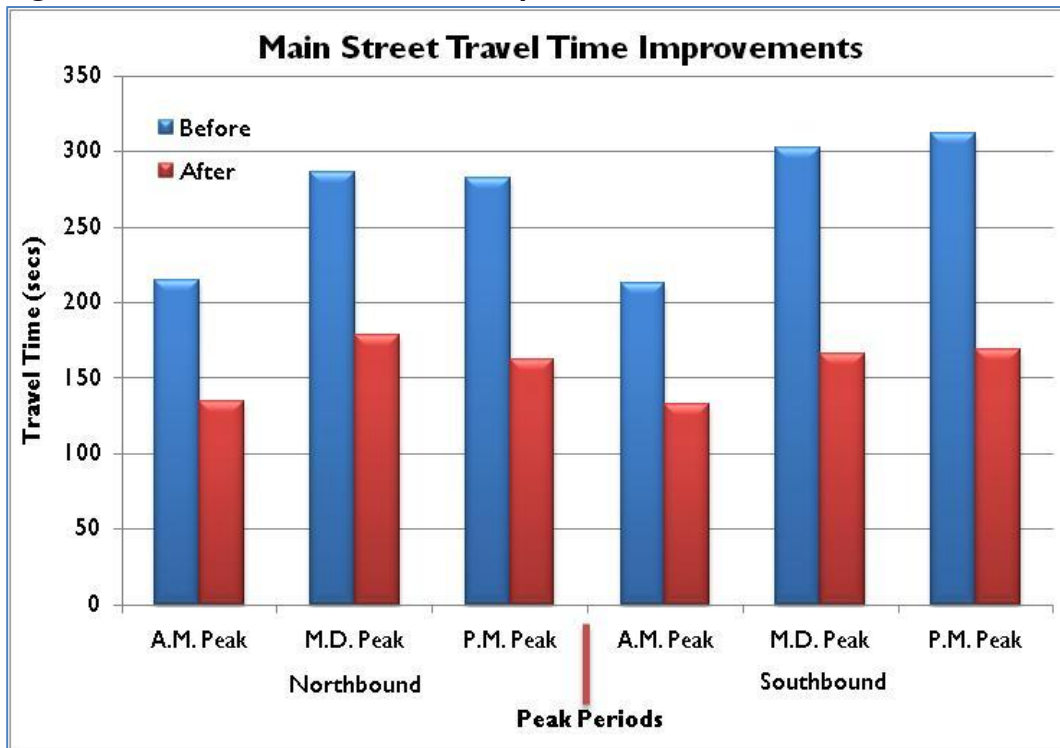


Table I show the results of the comparison between “Before” and “After” travel time surveys. Appendix A contains the spreadsheets for the “before” and “after” implementation travel time survey. As shown in Table I, the evaluation shows that the InSync adaptive system offers significant improvement over the existing time of day timing plans as reflected by the magnitude of the percent reduction in average travel times. The average travel time is expected to reduce by approximately 37 to 45 percent.

Table I: Main Street from Bernal Drive to Alvin Drive - “Before” vs. “After” Travel Time Survey Comparison

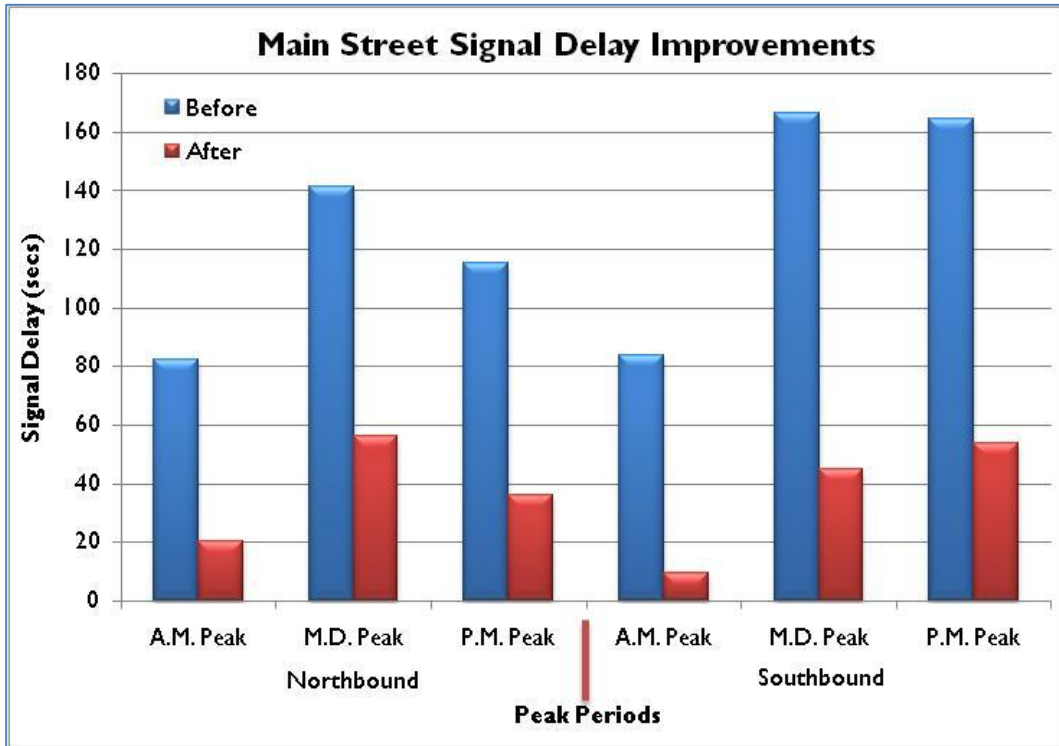
Peak Period	Direction	Survey	Average Travel Time	Average Signal Delay	Average # of stops	Probability of stopping	Average Speed ¹	Average Free Flow Speed ²
			(min:sec)	(min:sec)	(#)	(%)	(mph)	(mph)
A.M.	Northbound	Before	03:34	01:22	2.25	56.3	20.81	32.56
		After	02:14	00:22	0.50	12.5	33.17	37.53
		% Change	-37.26	-75.05	-77.78	-77.78	59.38	15.27
	Southbound	Before	03:32	01:23	1.83	45.8	21.03	32.11
		After	02:12	00:23	0.17	4.2	33.72	35.72
		% Change	-37.62	-88.83	-90.91	-90.91	60.31	11.26
MID.	Northbound	Before	04:46	02:21	2.75	68.8	15.62	30.96
		After	02:58	00:56	1.42	35.4	25.09	33.14
		% Change	-37.72	-60.27	-48.48	-48.48	60.57	7.04
	Southbound	Before	05:02	02:46	2.50	62.5	14.76	30.29
		After	02:46	00:45	1.00	25.0	26.91	34.54
		% Change	-45.14	-72.92	-60.00	-60.00	82.28	14.03
P.M.	Northbound	Before	04:42	01:55	2.33	58.3	15.81	29.04
		After	02:42	00:36	1.08	27.1	27.50	33.22
		% Change	-42.52	-68.64	-53.57	-53.57	73.97	14.38
	Southbound	Before	05:12	02:44	2.67	66.7	14.33	29.45
		After	02:49	00:54	1.00	25.0	26.37	33.00
		% Change	-45.68	-67.16	-62.50	-62.50	84.08	12.07

Notes: ¹Average speed along the corridor including stop delays.
²Average free flow speed along the corridor excluding stop delays.

Average Signal Delay Analysis

Stop delay caused by traffic signals was calculated for each intersection. The corridor was broken into segments beginning and ending at the midpoint between intersections. The delay in each of these segments was attributed to the intersection within that segment. TJKM measured the control delay in the field, which includes deceleration as the vehicle approaches a queue or a red signal indication, acceleration away from the signal to get back to free flow speed or cross the centerline of the next intersection, and the time spent stopped at a red indication. It should be noted that the control delay caused by a particular intersection may extend beyond the endpoints of the segment assigned to that intersection, since it may take longer to reach the free flow speed prior to leaving the segment. Therefore, for our analysis we are considering the control delay between intersections as the signal delay instead of the actual control delay. The comparison between the signal delays “before” and “after” condition provides a relative measure of signal performance improvement through the corridor. It is also noted that the average signal delay goes down with the reduction in the number of stops along the corridor. As shown in Table I, the average signal delay is reduced by approximately 60 to 90 percent. Figure 2 shows the decrease in the Average Stop Delay with the implementation of InSyn adaptive system.

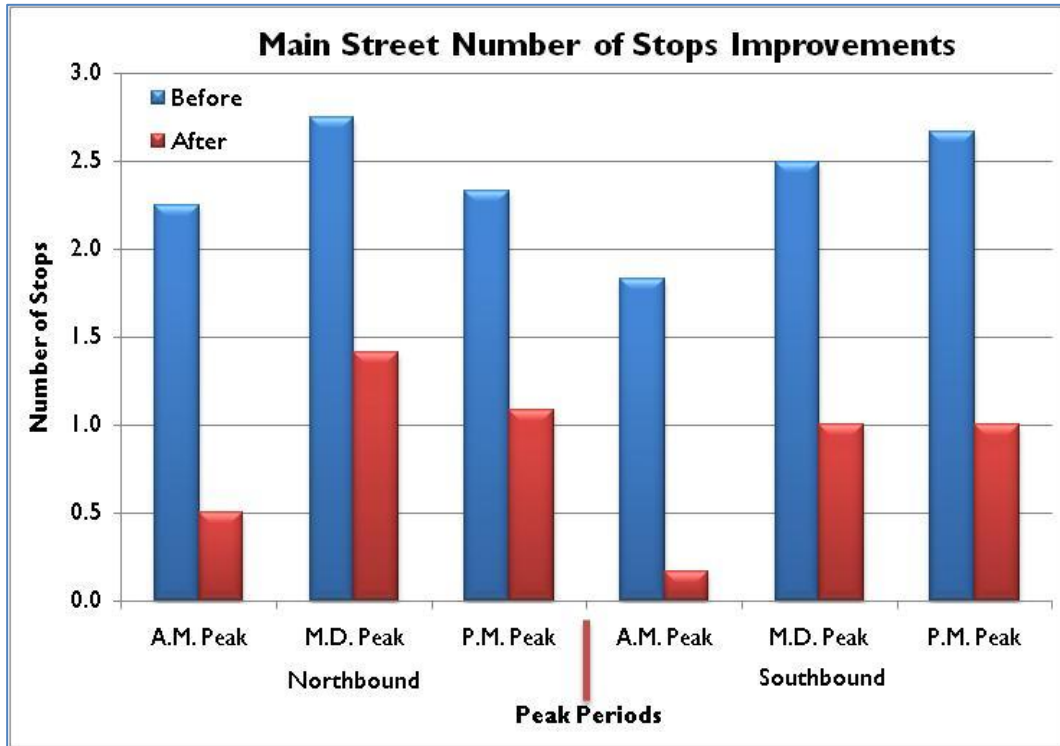
Figure 2: Main Street Average Signal Delay Improvements



Number of Stops along corridor

Data collected during the travel time runs were used to determine the number of times the test vehicle stopped along the corridor. The number of stops during a given travel time run was defined by the number of times the vehicle’s speed fell to 3 mph or below. The number of stops that occurred for each travel time run were averaged over all the runs for a given time of day during the before period, and during the combined after periods. They were then compared, and the percent change from the beginning to the after periods is presented in Table I. Figure 3 shows the decrease in the average number of stops along the Main Street corridor. As shown in Table I and Figure 3, average number of stops decreased at all times of the day in both directions. Implementation of the InSync adaptive system resulted in the decrease of the average number of stops by approximately 48 to 90 percent.

Figure 3: Main Street Number of Stops Improvements



Fuel consumption and emission benefits

While typical drivers are less aware of the fuel their vehicle consumes or the emissions their vehicle produces over a short segment of roadway, these are important measures of the benefits that may be realized due to signal improvements along an arterial. The reduction in fuel consumption and emissions for one car on one trip is negligible, but when multiplied by the number of vehicles using the corridor each day, and the number of trips each vehicle may make in a year, these benefits quickly become substantial and thus important.

The fuel consumption factors and health costs of motor vehicle emissions are based on the California Life-Cycle Benefit/Cost Analysis Model and Technical Supplement to the User’s Guide, 2009, prepared by the California Department of Transportation, Office of Transportation Economics. The benefits claimed include travel time savings, fuel consumption savings, and health cost savings associated with emissions reductions for weekday only. The yearly savings are calculated based on 250 days of workdays in a year. While the fuel consumption and emission numbers may not truly represent the amount of fuel consumed by a “typical” vehicle traveling through the study corridor, it is a valid measure for comparison of relative fuel consumption from one study to the next.

The health cost of ROG Emissions (\$1,210 per ton), NOx Emissions (\$17,298 per ton), PM10x Emissions (\$139,867 per ton), and CO Emissions (\$74 per ton) are based on the California Department of Transportation, Office of Transportation Economics from Exhibit III-41, p. III-64 of the year 2007. The 2010 costs were calculated with a standard assumption of two percent increase per year from the 2007 costs. In order to calculate the measures of effectiveness of the project in monetized saving, the project life was assumed to be five years. The benefits of the InSync adaptive system were assumed to remain the same as observed on field for the first five years, without any decline in efficiency. As shown in Table II, the proposed project is expected to provide a monetized savings of \$8.6 million over the next five year.

Table II: Main Street from Bernal Drive to Alvin Drive – Measures of Effectiveness

<i>Measures</i>	<i>Annual Average</i>		<i>Lifetime (5 Years)⁷</i>	
	<i>Savings</i>	<i>Monetized Savings</i>	<i>Savings</i>	<i>Monetized Savings</i>
Travel Time Savings (hrs)	48,987	\$850,795	244,936	\$4,253,976
Fuel Consumption Savings (gal)	258,586	\$793,256	1,292,930	\$3,966,280
ROG Emissions Reduction (tons)	1.56	\$1,885	7.79	\$9,423
NOx Emissions Reduction (tons)	1.82	\$31,451	9.09	\$157,253
PM10x Emissions Reduction (tons)	0.31	\$43,863	1.57	\$219,315
CO Emissions Reduction (tons)	12.14	\$902	60.72	\$4,510
Total Lifetime Benefits				\$8,610,757

Benefit: Cost Evaluation

The evaluation includes a benefit and cost analysis to determine the amount of public benefit derived from investing in the adaptive system implementation at five intersections along Main Street corridor. As shown in Table III, the analysis shows a benefit to cost ratio of approximately 46:1, with 69 percent increase in average speed, and 42 percent decrease in average travel time along the Main Street corridor. The project is expected to result in a significant reduction in green house gases and savings in fuel consumptions. Appendix B contains a detailed spreadsheet for the benefit and cost analysis.

Table III: Project Performance Measures (lifetime)

Average Speed Increase	69%
Average Decrease in Travel Time	42%
Benefit : Cost Ratio	46 : 1
Net Present Value (in 2010 constant dollars) with an investment of \$190,000	\$8,610,757

Conclusions

City of Salinas has installed and fine-tuned the InSync adaptive signal timing system at five signalized intersections on Main Street between Bernal Drive and Alvin Drive. This report documents the evaluation of traffic operational and environmental benefits provided by the InSync signal system for the Main Street corridor. In order to evaluate the system's performance, TJKM compared the traffic operational measures taken before the implementation of the system to the same measures taken few months after the implementation. The field measures included:

- travel time runs through the corridor
- delay experienced by drivers through the corridor
- delay experienced by drivers at individual intersections
- number of stops

The evaluation results indicate that the adaptive traffic signal system is effective in reducing travel time, delay, emissions, fuel consumption, and the number of stops on the Main Street corridor. A detailed benefit-cost analysis suggests that the installation of the InSync adaptive traffic signal system was a good investment with a benefit to cost ratio of 46:1. Therefore, installation of similar adaptive traffic signal systems is recommended for further consideration for other corridors within the City of Salinas.

The results of the comparison of travel time runs indicated the following:

- The average reduction in travel times through the corridor was 42 percent.
- The average increase in speed through the corridor was 69 percent.
- The average fuel savings was 33 percent.

Study Participants

TJKM Transportation Consultants

Joy Bhattacharya, P.E., PTOE	Project Manager
Vishnu Gandluru	Transportation Engineer
Pawan Mulukutla	Transportation Engineer
Cindy DeRouchey	Word Processing

Others

Jose Saucedo	City of Salinas
Reggie Chandra	Rhythm Engineering

Appendix A – Detailed Floating Car Survey Worksheets

- “Before” Implementation Travel Time Survey
- “After” Implementation Travel Time Survey

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 7:30 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	22	22	20	36.30	36.30
2	0.42	1	55	71	33	21.31	39.81
3	0.18	3	15	80	55	7.88	25.22
4	0.42	4	20	65	24	23.35	37.02
TOTALS	1.241666667	4	20	260	132	17.15	34.84

Segment 1 To Iris Drive Comments:
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 7:45 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	25	25		31.95	31.95
2	0.42	1	2	37		40.89	40.89
3	0.18	1	40	38	16	16.60	28.66
4	0.42	3	20	100	56	15.18	34.49
TOTALS	1.241666667	3	20	200	72	22.30	34.84

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:00 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	32	32	8	24.96	33.28
2	0.42	2	35	123	80	12.30	35.18
3	0.18	2	55	20		31.53	31.53
4	0.42	3	55	60	15	25.29	33.73
TOTALS	1.241666667	3	55	235	103	18.98	33.79

Segment 1 To Iris Drive 3 lanes in each direction
 Segment 2 To Laurel Drive not much traffic during a.m. peak
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:15 AM **Direction:** Northbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	20		39.93	39.93
2	0.42	1	25	65	20	23.28	33.62
3	0.18	1	50	25		25.22	25.22
4	0.42	2	57	67	32	22.65	43.36
TOTALS	1.241666667	2	57	177	52	25.20	35.68

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:30 AM **Direction:** Northbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	14		14		
1	0.22	1	2	48	20	16.64	28.52
2	0.42	1	47	45		33.62	33.62
3	0.18	2	5	18		35.03	35.03
4	0.42	2	53	48		31.62	31.62
TOTALS	1.241666667	2	53	173	34	25.78	32.09

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:45 AM **Direction:** Northbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	1	4	26	54	30.72	30.72
2	0.42	2	57	87	45	17.39	36.02
3	0.18	3	44	47	24	13.42	27.42
4	0.42	4	30	46		32.99	32.99
TOTALS	1.241666667	4	30	270	123	16.52	30.34

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:15 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	10	29	10	27.54	27.54
2	0.42	2	14	95	51	15.93	34.38
3	0.18	2	37	23		27.42	27.42
4	0.42	3	45	68	26	22.32	36.14
TOTALS	1.241666667	3	45	225	87	19.82	32.32

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:30 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	30	50	30	15.97	28.52
2	0.42	1	5	45	22	33.62	33.62
3	0.18	2	24	19		33.19	33.19
4	0.42	3	13	49		30.97	30.97
TOTALS	1.241666667	3	13	193	52	23.11	31.63

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:45 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	37	13	21.58	33.28
2	0.42	0	37	73	30	20.73	35.18
3	0.18	2	19	29		21.75	21.75
4	0.42	3	2	43		35.30	35.30
TOTALS	1.241666667	3	2	182	43	24.50	32.09

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date: 7/28/10** **Time:** 7:30 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	22	48	22	31.62	31.62
2	0.18	3	6	116	96	5.44	31.53
3	0.42	3	46	40		37.82	37.82
4	0.22	4	8	22		36.30	36.30
TOTALS	1.24166667	4	8	248	118	17.98	34.31

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date: 7/28/10** **Time:** 7:45 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	49	49		30.97	30.97
2	0.18	1	8	19		33.19	33.19
3	0.42	1	52	44		34.38	34.38
4	0.22	2	35	43	18	18.57	31.95
TOTALS	1.24166667	2	35	155	18	28.77	32.55

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive 35 mph
 Segment 3 To Iris Drive mst 49
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date: 7/28/10** **Time:** 8:00 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	18		18		
1	0.42	1	8	50		30.35	30.35
2	0.18	2	59	111	91	5.68	31.53
3	0.42	3	59	60	10	25.22	30.26
4	0.22	4	33	34	8	23.49	30.72
TOTALS	1.24166667	4	33	273	127	16.34	30.55

Segment 1 To Curtis Street 35 mph
 Segment 2 To Laurel Drive mc donalds, burgerking, taco bell, chinese food etc.
 Segment 3 To Iris Drive aal corners shell, arco, valero
 Segment 4 To Bernal Drive 3-4 ves que
 Monterey Salinas Transit

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:15 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	38	38		39.94	39.94
2	0.18	1	33	55	15	11.47	15.77
3	0.42	2	15	42		36.02	36.02
4	0.22	3	2	47	12	16.99	22.82
TOTALS	1.24166667	3	2	182	27	24.50	28.77

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:30 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	45	45		33.73	33.73
2	0.18	2	34	109	86	5.79	27.42
3	0.42	3	27	53		28.55	28.55
4	0.22	4	20	53	24	15.07	27.54
TOTALS	1.24166667	4	20	260	110	17.15	29.73

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:45 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	45	45	45	33.73	33.73
2	0.18	1	30	57	40	11.06	37.09
3	0.42	2	10	43		35.18	35.18
4	0.22	3	59	49	27	16.30	36.30
TOTALS	1.24166667	3	59	239	112	18.66	35.12

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 7:30 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	25	48	25	31.62	31.62
2	0.18	2	30	77	56	8.19	30.03
3	0.42	3	18	48		31.52	31.52
4	0.22	3	45	27		29.58	29.58
TOTALS	1.24166667	3	45	225	81	19.82	30.97

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 7:45 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	6	66	19	23.00	32.29
2	0.18	1	38	32	8	19.71	26.28
3	0.42	2	24	46		32.89	32.89
4	0.22	2	47	23		34.72	34.72
TOTALS	1.24166667	2	47	167	27	26.71	31.86

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:00 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	9	56	9	27.10	35.30
2	0.18	1	25	20	13	31.53	31.53
3	0.42	2	15	50		30.26	30.26
4	0.22	2	45	30		26.62	26.62
TOTALS	1.24166667	2	45	165	22	27.03	31.19

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:15 AM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	42		36.14	36.14
2	0.18	1	29	47	28	13.42	33.19
3	0.42	2	14	45		33.62	33.62
4	0.22	3	0	46	26	17.36	39.93
TOTALS	1.24166667	3	0	180	54	24.78	35.40

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:30 AM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	52	58	52	26.17	31.62
2	0.18	1	50	120	10	5.26	27.42
3	0.42	4	38	48	97	31.52	31.52
4	0.22	5	5	27		29.58	29.58
TOTALS	1.24166667	5	5	305	159	14.62	30.55

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 8:45 AM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	51	46	51	32.99	32.99
2	0.18	1	37	81	64	7.79	37.09
3	0.42	2	58	54	9	28.02	33.62
4	0.22	3	52	46	24	17.36	36.30
TOTALS	1.24166667	4	38	278	148	16.04	34.31

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 1**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 11:30 AM **Direction:** Northbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	40	40	15	19.97	31.95
2	0.42	1	46	66	22	22.92	34.38
3	0.18	2	27	41	22	15.38	33.19
4	0.42	4	25	118	66	12.86	29.19
TOTALS	1.241666667	4	25	265	125	16.83	31.86

Segment 1 To Iris Drive
Segment 2 To Laurel Drive
Segment 3 To Curtis Street
Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 2**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 11:45 AM **Direction:** Northbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	38	20	36	39.93	39.93
2	0.42	2	52	114	74	13.27	37.82
3	0.18	3	22	30		21.02	21.02
4	0.42	5	12	110	62	13.80	31.62
TOTALS	1.241666667	5	12	312	172	14.29	31.86

Segment 1 To Iris Drive
Segment 2 To Laurel Drive
Segment 3 To Curtis Street
Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 3**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:00 PM **Direction:** Northbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	33	33	11	24.20	36.30
2	0.42	2	39	126	75	12.01	29.67
3	0.18	3	15	36	9	17.52	23.36
4	0.42	5	2	107	56	14.18	29.76
TOTALS	1.241666667	5	2	302	151	14.77	29.54

Segment 1 To Iris Drive
Segment 2 To Laurel Drive
Segment 3 To Curtis Street
Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:15 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	24	24		33.28	33.28
2	0.42	2	45	141	62	10.73	19.15
3	0.18	4	17	92	57	6.85	18.02
4	0.42	5	0	43		35.30	35.30
TOTALS	1.241666667	5	0	300	119	14.87	24.64

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:30 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		1	2		60		
1	0.22	1	25	23		34.72	34.72
2	0.42	3	22	117	70	12.93	32.19
3	0.18	3	45	23		27.42	27.42
4	0.42	4	34	49		30.97	30.97
TOTALS	1.241666667	4	34	274	130	16.28	30.97

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:45 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	25		25		
1	0.22	1	5	40		19.97	19.97
2	0.42	3	19	134	89	11.29	33.62
3	0.18	3	45	26		24.25	24.25
4	0.42	4	49	64	17	23.71	32.29
TOTALS	1.241666667	4	49	289	131	15.43	28.23

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 7**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 11:30 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	30	45	30	17.75	26.62
2	0.42	1	15	63	15	24.01	34.38
3	0.18	2	18	52	36	12.13	39.41
4	0.42	3	10	101	59	15.03	36.14
TOTALS	1.241666667	4	51	291	159	15.33	33.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 8**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 11:45 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	10	27	10	29.58	29.58
2	0.42	0	37	109	75	13.88	44.50
3	0.18	2	26	26	63	24.25	24.25
4	0.42	2	52	111	63	13.67	31.62
TOTALS	1.241666667	4	43	283	148	15.76	33.04

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 9**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:00 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	34	14	23.49	39.93
2	0.42	0	34	127	80	11.91	32.19
3	0.18	2	41	37	16	17.04	30.03
4	0.42	3	18	101	52	15.03	30.97
TOTALS	1.241666667	4	59	299	162	14.92	32.55

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:15 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	50	26	50	30.72	30.72
2	0.42	1	16	61	26	24.80	43.23
3	0.18	2	2	45	23	14.01	28.66
4	0.42	3	25	83	41	18.29	36.14
TOTALS	1.24166667	4	25	265	140	16.83	35.68

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:30 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	28	27	28	29.58	29.58
2	0.42	0	55	105	61	14.41	34.38
3	0.18	2	40	37		17.04	17.04
4	0.42	3	17	105	55	14.45	30.35
TOTALS	1.24166667	5	2	302	144	14.77	28.23

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:45 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	49	22	16.30	29.58
2	0.42	0	49	101	62	14.98	38.79
3	0.18	2	30	32		19.71	19.71
4	0.42	3	2	74	29	20.51	33.73
TOTALS	1.24166667	4	16	256	113	17.42	31.19

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 11:30 AM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	14	58	14	26.17	26.17
2	0.18	1	12	56	20	11.26	17.52
3	0.42	2	8	69	19	21.93	30.26
4	0.22	3	17	43	20	18.57	34.72
TOTALS	1.24166667	4	0	240	73	18.58	26.71

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 11:45 AM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	36	46	96	32.99	32.99
2	0.18	2	22	103	80	6.12	27.42
3	0.42	4	5	64	17	23.64	32.19
4	0.22	5	9	26	35	30.72	30.72
TOTALS	1.24166667	5	35	335	193	13.31	31.41

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:00 PM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	53	47	53	32.29	32.29
2	0.18	1	40	130	95	4.85	18.02
3	0.42	3	50	40	30	37.82	37.82
4	0.22	4	30	40	16	19.97	33.28
TOTALS	1.24166667	5	10	310	164	14.39	30.55

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:15 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	45	45		33.73	33.73
2	0.18	4	10	205	145	3.08	10.51
3	0.42	6	12	122	60	12.40	24.40
4	0.22	6	35	23		34.72	34.72
TOTALS	1.24166667	6	35	395	205	11.29	23.47

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:30 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	22		22		
1	0.42	2	7	105	57	14.45	31.62
2	0.18	3	35	88	65	7.17	27.42
3	0.42	4	16	41		36.90	36.90
4	0.22	5	18	62	16	12.88	17.36
TOTALS	1.24166667	5	18	318	160	14.02	28.23

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:45 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	2	62	16	24.48	32.99
2	0.18	1	30	28		22.52	22.52
3	0.42	2	42	72	27	21.01	33.62
4	0.22	3	37	55	28	14.52	29.58
TOTALS	1.24166667	3	37	217	71	20.55	30.55

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 11:30 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	55		27.59	27.59
2	0.18	1	50	55	37	11.47	35.03
3	0.42	3	17	87	48	17.39	38.79
4	0.22	5	30	133	107	6.00	30.72
TOTALS	1.24166667	5	30	330	192	13.51	32.32

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 11:45 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	43	48	103	31.62	31.62
2	0.18	4	14	103	85	6.12	35.03
3	0.42	5	18	64	20	23.64	34.38
4	0.22	5	44	26	26	30.72	30.72
TOTALS	1.24166667	5	44	344	208	12.96	32.79

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:00 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	5	42	65	36.14	36.14
2	0.18	2	10	23		27.42	27.42
3	0.42	2	57	47		32.19	32.19
4	0.22	3	59	62	41	12.88	38.03
TOTALS	1.24166667	3	59	239	106	18.66	33.53

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:15 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	40	85	40	17.86	37.02
2	0.18	2	58	113	92	5.58	30.03
3	0.42	5	5	67	23	22.58	34.38
4	0.22	6	14	69	34	11.57	22.82
TOTALS	1.24166667	6	14	374	233	11.92	31.63

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:30 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	29	103	29	14.73	30.35
2	0.18	2	4	172	152	3.67	31.53
3	0.42	6	11	67	24	22.58	35.18
4	0.22	7	4	53	29	15.07	33.28
TOTALS	1.24166667	7	4	424	287	10.52	32.55

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 12:45 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	44		34.49	34.49
2	0.18	0	44	38		16.60	16.60
3	0.42	1	22	46		32.89	32.89
4	0.22	2	8	128	106	6.24	36.30
TOTALS	1.24166667	4	16	256	106	17.42	29.73

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:00 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	40	27	40	29.58	29.58
2	0.42	1	7	85	37	17.80	31.52
3	0.18	2	32	68	40	9.27	22.52
4	0.42	3	40	76	22	19.97	28.11
TOTALS	1.241666667	4	56	296	139	15.07	28.41

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:15 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22			0		#DIV/0!	#DIV/0!
2	0.42			0		#DIV/0!	#DIV/0!
3	0.18			0		#DIV/0!	#DIV/0!
4	0.42			0		#DIV/0!	#DIV/0!
TOTALS	1.241666667	0	0	0	0	#DIV/0!	#DIV/0!

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:30 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	34		34		
1	0.22	1	40	66	38	12.10	28.52
2	0.42	2	26	46		32.89	32.89
3	0.18	2	47	21		30.03	30.03
4	0.42	5	24	157	8	9.67	10.19
TOTALS	1.241666667	5	24	324	80	13.77	18.28

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:45 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	1	29	35	89	22.82	27.54
2	0.42	2	45	41	6	36.90	36.90
3	0.18	3	22	37	17	17.04	31.53
4	0.42	4	4	42		36.14	36.14
TOTALS	1.241666667	4	4	244	112	18.28	33.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 5:00 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	0				
1	0.22	0	40	40	17	19.97	34.72
2	0.42	2	37	117		12.93	12.93
3	0.18	3	5	28		22.52	22.52
4	0.42	4	46	101	56	15.03	33.73
TOTALS	1.241666667	4	46	286	73	15.59	20.94

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 5:15 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	24				
1	0.22	1	25	61	40	13.09	38.03
2	0.42	3	3	98	61	15.44	40.89
3	0.18	3	30	27		23.36	23.36
4	0.42	4	30	60	20	25.29	37.94
TOTALS	1.241666667	4	30	270	121	16.52	29.93

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:00 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	33	25	33	31.95	31.95
2	0.42	2	16	78	40	19.40	39.81
3	0.18	3	20	64	41	9.85	27.42
4	0.42	4	41	81	22	18.74	25.72
TOTALS	1.241666667	4	41	281	136	15.87	30.76

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:15 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	9	69	42	11.57	29.58
2	0.42	2	19	70	29	21.61	36.90
3	0.18	3	9	50	30	12.61	31.53
4	0.42	4	51	102	49	14.88	28.64
TOTALS	1.241666667	4	51	291	150	15.33	31.63

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:30 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	34	26	34	30.72	30.72
2	0.42	2	35	95	58	15.93	40.89
3	0.18	3	53	78	57	8.08	30.03
4	0.42	5	54	121	81	12.54	37.94
TOTALS	1.241666667	5	54	354	230	12.60	35.97

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:45 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	53	30	53	26.62	26.62
2	0.42	1	23	65		23.28	23.28
3	0.18	2	28	54	34	11.68	31.53
4	0.42	3	22	48		31.62	31.62
TOTALS	1.24166667	4	10	250	87	17.84	27.36

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 5:00 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	41	17	19.48	33.28
2	0.42	0	41	117	72	12.93	33.62
3	0.18	2	38	27		23.36	23.36
4	0.42	3	5	103	57	14.73	32.99
TOTALS	1.24166667	4	48	288	146	15.49	31.41

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 5:15 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	35		22.82	22.82
2	0.42	0	35	109	74	13.88	43.23
3	0.18	2	24	62	36	10.17	24.25
4	0.42	3	26	48		31.62	31.62
TOTALS	1.24166667	4	14	254	110	17.56	30.97

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date: 7/28/10** **Time:** 4:00 PM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	62		24.48	24.48
2	0.18	2	39	97	69	6.50	22.52
3	0.42	4	10	91	38	16.63	28.55
4	0.22	6	13	123	91	6.49	24.96
TOTALS	1.24166667	6	13	373	198	11.96	25.48

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date: 7/28/10** **Time:** 4:15 PM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	15	60	75	25.29	25.29
2	0.18	3	34	79	51	7.98	22.52
3	0.42	4	24	50		30.26	30.26
4	0.22	6	25	121	93	6.60	28.52
TOTALS	1.24166667	6	25	385	219	11.58	26.87

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date: 7/28/10** **Time:** 4:30 PM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	45	44		34.49	34.49
2	0.18	2	35	50	25	12.61	25.22
3	0.42	4	12	97	45	15.60	29.09
4	0.22	5	18	66	38	12.10	28.52
TOTALS	1.24166667	5	18	318	108	14.02	21.24

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:45 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	30	42		36.14	36.14
2	0.18	1	43	31	13	20.34	35.03
3	0.42	2	53	70	16	21.61	28.02
4	0.22	5	3	130	100	6.14	26.62
TOTALS	1.24166667	5	3	303	129	14.72	25.63

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 5:00 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	52	52		29.19	29.19
2	0.18	2	7	75	55	8.41	31.53
3	0.42	2	52	45		33.62	33.62
4	0.22	3	29	37	15	21.58	36.30
TOTALS	1.24166667	3	29	209	70	21.34	32.09

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 5:15 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	11	58		26.17	26.17
2	0.18	1	53	44	29	14.33	42.04
3	0.42	2	42	49		30.88	30.88
4	0.22	5	18	156	131	5.12	31.95
TOTALS	1.24166667	5	18	318	160	14.02	28.23

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:00 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	47		32.29	32.29
2	0.18	2	33	106	88	5.95	35.03
3	0.42	4	5	92	51	16.44	36.90
4	0.22	6	7	122	97	6.55	31.95
TOTALS	1.24166667	6	7	367	236	12.15	34.04

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:15 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	31	49	91	30.97	34.49
2	0.18	2	20	85	5	7.42	35.03
3	0.42	3	45	43	67	35.18	35.18
4	0.22	4	28	50	22	36.30	36.30
TOTALS	1.24166667	4	50	290	163	15.38	35.12

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:30 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	1	44	61	34.49	34.49
2	0.18	1	45	49	32	12.87	37.09
3	0.42	2	34	86	43	17.59	35.18
4	0.22	4	0	66	30	12.10	22.18
TOTALS	1.24166667	5	6	306	166	14.57	31.86

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 4:45 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	26	102	26	14.88	25.72
2	0.18	2	8	91	43	6.93	26.28
3	0.42	3	39	47	67	32.19	32.19
4	0.22	4	26	45		17.75	17.75
TOTALS	1.24166667	5	11	311	136	14.34	25.48

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 5:00 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	23	80	23	18.97	30.97
2	0.18	1	43	81	31	7.79	31.53
3	0.42	3	4	42	61	36.02	36.02
4	0.22	4	46	57	36	14.01	38.03
TOTALS	1.24166667	4	43	283	151	15.76	33.79

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 7/28/10 **Time:** 5:15 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	11	66	71	23.00	30.35
2	0.18	2	17	40	16	15.77	33.19
3	0.42	2	57	103	21	14.69	36.90
4	0.22	4	40	90	62	8.87	34.72
TOTALS	1.24166667	6	10	370	237	12.05	33.53

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 7:30 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	25	22	25	36.30	36.30
2	0.42	1	23	36		42.03	42.03
3	0.18	1	38	15		42.04	42.04
4	0.42	2	26	48	10	31.62	39.94
TOTALS	1.241666667	2	26	146	35	30.55	40.18

Segment 1 To Iris Drive Comments:
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 7:45 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	8	21	8	38.03	38.03
2	0.42	1	9	40		37.82	37.82
3	0.18	1	31	22		28.66	28.66
4	0.42	2	8	37		41.02	41.02
TOTALS	1.241666667	2	8	128	8	34.84	37.17

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:00 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	22		36.30	36.30
2	0.42	1	0	38		39.81	39.81
3	0.18	1	20	20		31.53	31.53
4	0.42	2	0	40		37.94	37.94
TOTALS	1.241666667	2	0	120	0	37.17	37.17

Segment 1 To Iris Drive 3 lanes in each direction
 Segment 2 To Laurel Drive not much traffic during a.m. peak
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:15 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	2		24		
1	0.22	0	45	43		18.57	18.57
2	0.42	1	25	40		37.82	37.82
3	0.18	1	42	17		37.09	37.09
4	0.42	2	18	36		42.16	42.16
TOTALS	1.241666667	2	18	138	24	32.32	39.12

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:30 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	22		22		
1	0.22	0	45	23		34.72	34.72
2	0.42	1	20	35		43.23	43.23
3	0.18	1	38	18		35.03	35.03
4	0.42	2	15	37		41.02	41.02
TOTALS	1.241666667	2	15	135	22	33.04	39.47

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:45 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	12		12		
1	0.22	0	35	23		34.72	34.72
2	0.42	1	12	37		40.89	40.89
3	0.18	1	32	20		31.53	31.53
4	0.42	2	8	36		42.16	42.16
TOTALS	1.241666667	2	8	128	12	34.84	38.45

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 7:30 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	22		36.30	36.30
2	0.42	2	28	126	79	12.01	32.19
3	0.18	2	48	20		31.53	31.53
4	0.42	3	40	52	5	29.19	32.29
TOTALS	1.241666667	3	40	220	84	20.27	32.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 7:45 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	24	24		33.28	33.28
2	0.42	2	7	103	56	14.69	32.19
3	0.18	2	29	22		28.66	28.66
4	0.42	3	13	44		34.49	34.49
TOTALS	1.241666667	3	13	193	56	23.11	32.55

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:00 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	24	24		33.28	33.28
2	0.42	1	2	38		39.81	39.81
3	0.18	1	21	19		33.19	33.19
4	0.42	1	57	36		42.16	42.16
TOTALS	1.241666667	1	57	117	0	38.12	38.12

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:15 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	21	21		38.03	38.03
2	0.42	1	5	44		34.38	34.38
3	0.18	1	26	21	2	30.03	33.19
4	0.42	2	12	46	4	32.99	36.14
TOTALS	1.24166667	2	12	132	6	33.79	35.40

- Segment 1 To Iris Drive
- Segment 2 To Laurel Drive
- Segment 3 To Curtis Street
- Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:30 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	22	22		36.30	36.30
2	0.42	0	58	36		42.03	42.03
3	0.18	1	14	16		39.41	39.41
4	0.42	1	50	36		42.16	42.16
TOTALS	1.24166667	1	50	110	0	40.54	40.54

- Segment 1 To Iris Drive
- Segment 2 To Laurel Drive
- Segment 3 To Curtis Street
- Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:45 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	23	23		34.72	34.72
2	0.42	1	1	38		39.81	39.81
3	0.18	1	16	15		42.04	42.04
4	0.42	1	53	37		41.02	41.02
TOTALS	1.24166667	1	53	113	0	39.47	39.47

- Segment 1 To Iris Drive
- Segment 2 To Laurel Drive
- Segment 3 To Curtis Street
- Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 7:30 AM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	42		36.14	36.14
2	0.18	0	56	14		45.04	45.04
3	0.42	1	32	36		42.03	42.03
4	0.22	1	50	18		44.37	44.37
TOTALS	1.24166667	1	50	110	0	40.54	40.54

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 7:45 AM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	55	42	55	36.14	36.14
2	0.18	1	37	28		22.52	22.52
3	0.42	2	47	42		36.02	36.02
4	0.22	2	12	25		31.95	31.95
TOTALS	1.24166667	3	12	192	55	23.23	32.55

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive 35 mph
 Segment 3 To Iris Drive mst 49
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:00 AM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	30	55	30	27.59	27.59
2	0.18	1	25	17		37.09	37.09
3	0.42	1	42	36		42.03	42.03
4	0.22	2	18	24		33.28	33.28
TOTALS	1.24166667	2	42	162	30	27.53	33.79

Segment 1 To Curtis Street 35 mph
 Segment 2 To Laurel Drive mc donalds, burgerking, taco bell, chinese food etc.
 Segment 3 To Iris Drive aal corners shell, arco, valero
 Segment 4 To Bernal Drive 3-4 ves que
 Monterey Salinas Transit

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:15 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42			0		#DIV/0!	#DIV/0!
2	0.18			0		#DIV/0!	#DIV/0!
3	0.42			0		#DIV/0!	#DIV/0!
4	0.22			0		#DIV/0!	#DIV/0!
TOTALS	1.24166667	0	0	0	0	#DIV/0!	#DIV/0!

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:30 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	0				
1	0.42	0	42	42		36.14	36.14
2	0.18	1	25	43	17	14.67	24.25
3	0.42	2	7	42		36.02	36.02
4	0.22	2	35	28		28.52	28.52
TOTALS	1.24166667	2	35	155	17	28.77	32.32

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:45 AM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	0				
1	0.42	0	53	53		28.64	28.64
2	0.18	1	10	17		37.09	37.09
3	0.42	1	47	37		40.89	40.89
4	0.22	2	27	40		19.97	19.97
TOTALS	1.24166667	2	27	147	0	30.34	30.34

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 7:30 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	42		36.14	36.14
2	0.18	0	58	16		39.41	39.41
3	0.42	1	38	40		37.82	37.82
4	0.22	2	0	22		36.30	36.30
TOTALS	1.24166667	2	0	120	0	37.17	37.17

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 7:45 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	39	39		38.92	38.92
2	0.18	0	56	17		37.09	37.09
3	0.42	1	35	39		38.79	38.79
4	0.22	1	55	20		39.93	39.93
TOTALS	1.24166667	1	55	115	0	38.78	38.78

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:00 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	45		33.73	33.73
2	0.18	1	1	16		39.41	39.41
3	0.42	1	41	40		37.82	37.82
4	0.22	2	1	20		39.93	39.93
TOTALS	1.24166667	2	1	121	0	36.86	36.86

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:15 AM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	43		35.30	35.30
2	0.18	0	56	13		48.51	48.51
3	0.42	1	40	44		34.38	34.38
4	0.22	2	3	23		34.72	34.72
TOTALS	1.24166667	2	3	123	0	36.26	36.26

Segment 1 To Curtis Street
Segment 2 To Laurel Drive
Segment 3 To Iris Drive
Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:30 AM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	40		37.94	37.94
2	0.18	1	7	27	10	23.36	37.09
3	0.42	1	47	40		37.82	37.82
4	0.22	2	9	22		36.30	36.30
TOTALS	1.24166667	2	9	129	10	34.57	37.48

Segment 1 To Curtis Street
Segment 2 To Laurel Drive
Segment 3 To Iris Drive
Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 8:45 AM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	40		37.94	37.94
2	0.18	0	57	17		37.09	37.09
3	0.42	1	38	41		36.90	36.90
4	0.22	2	1	23		34.72	34.72
TOTALS	1.24166667	2	1	121	0	36.86	36.86

Segment 1 To Curtis Street
Segment 2 To Laurel Drive
Segment 3 To Iris Drive
Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 1**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 11:30 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	34	23	34	34.72	34.72
2	0.42	2	4	67	19	22.58	31.52
3	0.18	2	24	20		31.53	31.53
4	0.42	4	32	128	82	11.86	32.99
TOTALS	1.241666667	4	32	272	135	16.40	32.55

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 2**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 11:45 AM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	29	29		27.54	27.54
2	0.42	1	14	45		33.62	33.62
3	0.18	1	42	28		22.52	22.52
4	0.42	4	10	148	85	10.25	24.09
TOTALS	1.241666667	4	10	250	85	17.84	27.03

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 3**

Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:00 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	21	21		38.03	38.03
2	0.42	1	28	67	23	22.58	34.38
3	0.18	1	46	18		35.03	35.03
4	0.42	2	28	42		36.14	36.14
TOTALS	1.241666667	2	28	148	23	30.13	35.68

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:15 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	47		47		
1	0.22	1	8	21		38.03	38.03
2	0.42	1	47	39		38.79	38.79
3	0.18	2	7	20		31.53	31.53
4	0.42	2	47	40		37.94	37.94
TOTALS	1.24166667	2	47	167	47	26.71	37.17

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:30 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	0				
1	0.22	0	31	31		25.76	25.76
2	0.42	1	16	45		33.62	33.62
3	0.18	1	40	24		26.28	26.28
4	0.42	2	22	42		36.14	36.14
TOTALS	1.24166667	2	22	142	0	31.41	31.41

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:45 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	22				
1	0.22	0	45	23		34.72	34.72
2	0.42	1	27	42		36.02	36.02
3	0.18	2	16	49	29	12.87	31.53
4	0.42	2	58	42		36.14	36.14
TOTALS	1.24166667	2	58	178	29	25.06	29.93

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 11:30 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	27	3	29.58	33.28
2	0.42	1	11	44		34.38	34.38
3	0.18	1	33	22	2	28.66	31.53
4	0.42	2	9	36		42.16	42.16
TOTALS	1.241666667	2	9	129	5	34.57	35.97

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 11:45 AM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	26		30.72	30.72
2	0.42	1	12	46		32.89	32.89
3	0.18	1	33	21		30.03	30.03
4	0.42	2	11	38		39.94	39.94
TOTALS	1.241666667	2	11	131	0	34.04	34.04

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:00 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	19		42.03	42.03
2	0.42	1	8	49		30.88	30.88
3	0.18	1	30	22	4	28.66	35.03
4	0.42	2	28	58	14	26.17	34.49
TOTALS	1.241666667	2	28	148	18	30.13	34.31

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:15 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	24		33.28	33.28
2	0.42	2	59	155	108	9.76	32.19
3	0.18	3	19	20	2	31.53	35.03
4	0.42	4	12	53	10	28.64	35.30
TOTALS	1.24166667	4	12	252	120	17.70	33.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:30 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	25		31.95	31.95
2	0.42	1	19	54	8	28.02	32.89
3	0.18	1	43	24	5	26.28	33.19
4	0.42	4	9	146	101	10.40	33.73
TOTALS	1.24166667	4	9	249	114	17.91	33.04

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:45 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	24		33.28	33.28
2	0.42	1	11	47		32.19	32.19
3	0.18	1	39	28	9	22.52	33.19
4	0.42	3	53	134	88	11.33	32.99
TOTALS	1.24166667	3	53	233	97	19.14	32.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 1**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 11:30 AM **Direction:** Southbound
Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	0	40	60	37.94	37.94
2	0.18	2	8	28	8	22.52	31.53
3	0.42	2	50	42		36.02	36.02
4	0.22	3	14	24		33.28	33.28
TOTALS	1.24166667	3	14	194	68	22.99	35.40

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 2**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 11:45 AM **Direction:** Southbound
Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	50	42	50	36.14	36.14
2	0.18	1	32	18		35.03	35.03
3	0.42	1	50	38		39.81	39.81
4	0.22	2	28	38		33.28	33.28
TOTALS	1.24166667	2	52	172	50	25.93	36.56

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 3**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:00 PM **Direction:** Southbound
Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	47		32.29	32.29
2	0.18	0	47	19		33.19	33.19
3	0.42	1	6	40		37.82	37.82
4	0.22	1	46	23		34.72	34.72
TOTALS	1.24166667	2	9	129	0	34.57	34.57

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:15 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	52	48	52	31.62	31.62
2	0.18	1	40	20		31.53	31.53
3	0.42	2	0	40		37.82	37.82
4	0.22	2	40	20		39.93	39.93
TOTALS	1.24166667	3	0	180	52	24.78	34.84

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:30 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	45	48	45	31.62	31.62
2	0.18	1	33	18		35.03	35.03
3	0.42	1	51	38		39.81	39.81
4	0.22	2	29	24		33.28	33.28
TOTALS	1.24166667	2	53	173	45	25.78	34.84

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:45 PM **Direction:** Southbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	45		33.73	33.73
2	0.18	0	45	17		37.09	37.09
3	0.42	1	2	41		36.90	36.90
4	0.22	1	43	22		36.30	36.30
TOTALS	1.24166667	2	5	125	0	35.68	35.68

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 11:30 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	57	8	26.63	30.97
2	0.18	1	18	21		30.03	30.03
3	0.42	2	3	45		33.62	33.62
4	0.22	2	23	20		39.93	39.93
TOTALS	1.24166667	2	23	143	8	31.19	33.04

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 11:45 AM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	52	6	29.19	32.99
2	0.18	1	9	17		37.09	37.09
3	0.42	1	48	39		38.79	38.79
4	0.22	3	41	113	90	7.07	34.72
TOTALS	1.24166667	3	41	221	96	20.18	35.68

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:00 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	43	6	35.30	41.02
2	0.18	1	11	28	9	22.52	33.19
3	0.42	2	22	71	24	21.31	32.19
4	0.22	3	59	97	73	8.23	33.28
TOTALS	1.24166667	3	59	239	112	18.66	35.12

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:15 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	46		32.99	32.99
2	0.18	1	12	26	6	24.25	31.53
3	0.42	1	55	43		35.18	35.18
4	0.22	2	16	21		38.03	38.03
TOTALS	1.24166667	2	16	136	6	32.79	34.31

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:30 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	53		28.64	28.64
2	0.18	1	24	31	10	20.34	30.03
3	0.42	2	7	43		35.18	35.18
4	0.22	4	1	114	89	7.01	31.95
TOTALS	1.24166667	4	1	241	99	18.51	31.41

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 12:45 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	48		31.62	31.62
2	0.18	1	13	25	5	25.22	31.53
3	0.42	1	58	45		33.62	33.62
4	0.22	2	20	22		36.30	36.30
TOTALS	1.24166667	2	20	140	5	31.86	33.04

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:00 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	21	59	21	13.54	33.28
2	0.42	1	20	90	35	16.81	36.02
3	0.18	2	15	25	48	25.22	25.22
4	0.42	3	55	40		37.94	37.94
TOTALS	1.241666667	3	55	235	104	18.98	34.04

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:15 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	23		34.72	34.72
2	0.42	1	23	40		37.82	37.82
3	0.18	1	24	21		30.03	30.03
4	0.42	2	16	52	8	29.19	34.49
TOTALS	1.241666667	2	16	136	8	32.79	34.84

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:30 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	22		36.30	36.30
2	0.42	1	9	47		32.19	32.19
3	0.18	2	45	96	60	6.57	17.52
4	0.42	3	52	67	20	22.65	32.29
TOTALS	1.241666667	3	52	232	80	19.22	29.34

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 4**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:45 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	18	22	18	36.30	36.30
2	0.42	1	27	47		32.19	32.19
3	0.18	1	48	21		30.03	30.03
4	0.42	2	56	68	26	22.32	36.14
TOTALS	1.24166667	2	56	176	44	25.34	33.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 5**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 5:00 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	0				
1	0.22	0	22	22		36.30	36.30
2	0.42	1	6	44		34.38	34.38
3	0.18	1	28	22		28.66	28.66
4	0.42	2	12	44		34.49	34.49
TOTALS	1.24166667	2	12	132	0	33.79	33.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 6**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 5:15 PM **Direction:** Northbound
 Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	24		33.28	33.28
2	0.42	1	19	55	13	27.51	36.02
3	0.18	1	38	19		33.19	33.19
4	0.42	2	22	44		34.49	34.49
TOTALS	1.24166667	2	22	142	13	31.41	34.57

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 7**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:00 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	26		30.72	30.72
2	0.42	1	8	42		36.02	36.02
3	0.18	1	30	22		28.66	28.66
4	0.42	2	26	56	7	27.10	30.97
TOTALS	1.241666667	2	26	146	7	30.55	32.09

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 8**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:15 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	24	24		33.28	33.28
2	0.42	1	12	48		31.52	31.52
3	0.18	1	37	25	6	25.22	33.19
4	0.42	3	48	131	83	11.59	31.62
TOTALS	1.241666667	3	48	228	89	19.56	32.09

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 9**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:30 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	36	36	12	22.18	33.28
2	0.42	2	18	102	55	14.83	32.19
3	0.18	2	39	21		30.03	30.03
4	0.42	3	19	40		37.94	37.94
TOTALS	1.241666667	3	19	199	67	22.41	33.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:45 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	22		36.30	36.30
2	0.42	1	1	39		38.79	38.79
3	0.18	1	23	22		28.66	28.66
4	0.42	2	8	45		33.73	33.73
TOTALS	1.24166667	2	8	128	0	34.84	34.84

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 5:00 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	0		34.72	34.72
2	0.42	1	12	49		30.88	30.88
3	0.18	1	34	22		28.66	28.66
4	0.42	2	43	69	22	22.00	32.29
TOTALS	1.24166667	2	43	163	22	27.36	31.63

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Bernal Drive **To:** Alvin Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 5:15 PM **Direction:** Northbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.22	0	0	22		36.30	36.30
2	0.42	1	6	44		34.38	34.38
3	0.18	1	25	19		33.19	33.19
4	0.42	2	12	47		32.29	32.29
TOTALS	1.24166667	2	12	132	0	33.79	33.79

Segment 1 To Iris Drive
 Segment 2 To Laurel Drive
 Segment 3 To Curtis Street
 Segment 4 To Alvin Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 1**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:00 PM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	47		32.29	32.29
2	0.18	1	10	23		27.42	27.42
3	0.42	2	22	72	27	21.01	33.62
4	0.22	4	2	100	74	7.99	30.72
TOTALS	1.24166667	4	2	242	101	18.43	31.63

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 2**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:15 PM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	56	56	56	27.10	27.10
2	0.18	2	12	20		31.53	31.53
3	0.42	3	2	50		30.26	30.26
4	0.22	4	58	116	88	6.88	28.52
TOTALS	1.24166667	4	58	298	144	14.97	28.96

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 3**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:30 PM **Direction:** Southbound
 Driver 1

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	1	27	48	87	31.62	31.62
2	0.18	2	57	42		15.01	15.01
3	0.42	3	40	43		35.18	35.18
4	0.22	5	28	108	80	7.39	28.52
TOTALS	1.24166667	5	28	328	167	13.60	27.70

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 4**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:45 PM **Direction:** Southbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	28	52	28	29.19	29.19
2	0.18	1	40	20		31.53	31.53
3	0.42	2	22	42		36.02	36.02
4	0.22	2	45	23		34.72	34.72
TOTALS	1.24166667	2	45	165	28	27.03	32.55

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 5**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 5:00 PM **Direction:** Southbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	0				
1	0.42	0	39	39		38.92	38.92
2	0.18	0	55	16		39.41	39.41
3	0.42	1	35	40		37.82	37.82
4	0.22	1	55	20		39.93	39.93
TOTALS	1.24166667	1	55	115	0	38.78	38.78

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 6**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 5:15 PM **Direction:** Southbound
Driver I

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
		0	0				
1	0.42	0	44	44		34.49	34.49
2	0.18	1	3	19		33.19	33.19
3	0.42	1	46	43		35.18	35.18
4	0.22	2	9	23		34.72	34.72
TOTALS	1.24166667	2	9	129	0	34.57	34.57

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 7**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:00 PM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	44		34.49	34.49
2	0.18	1	4	20		31.53	31.53
3	0.42	1	56	52	5	29.09	32.19
4	0.22	3	32	96	72	8.32	33.28
TOTALS	1.24166667	3	32	212	77	21.04	33.04

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 8**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:15 PM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	53	5	28.64	31.62
2	0.18	1	12	19		33.19	33.19
3	0.42	2	3	51	4	29.67	32.19
4	0.22	4	0	117	93	6.83	33.28
TOTALS	1.24166667	4	0	240	102	18.58	32.32

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas**Project # 096-014****Run # 9**

Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:30 PM **Direction:** Southbound
Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	47		32.29	32.29
2	0.18	1	20	33	13	19.11	31.53
3	0.42	2	3	43		35.18	35.18
4	0.22	2	23	20		39.93	39.93
TOTALS	1.24166667	2	23	143	13	31.19	34.31

Segment 1 To Curtis Street

Segment 2 To Laurel Drive

Segment 3 To Iris Drive

Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 10**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 4:45 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	44		34.49	34.49
2	0.18	1	13	29	10	21.75	33.19
3	0.42	1	58	45		33.62	33.62
4	0.22	2	23	25		31.95	31.95
TOTALS	1.24166667	2	23	143	10	31.19	33.53

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 11**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 5:00 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	52	6	29.19	32.99
2	0.18	1	9	17		37.09	37.09
3	0.42	1	55	46		32.89	32.89
4	0.22	2	15	20		39.93	39.93
TOTALS	1.24166667	2	15	135	6	33.04	34.57

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

TJKM Transportation Consultants

Field Data Analysis: Speed and Delay (Floating Car Study)

City of Salinas **Project # 096-014** **Run # 12**
Route: Main Street **From:** Curtis Street **To:** Bernal Drive
Day: Wednesday **Date:** 4/6/11 **Time:** 5:15 PM **Direction:** Southbound
 Driver 2

Segment	Miles	Minutes	Seconds	Total Time	Stop Time	Average Speed	Free Speed
1	0.42	0	0	48		31.62	31.62
2	0.18	1	6	18		35.03	35.03
3	0.42	1	50	44		34.38	34.38
4	0.22	2	11	21		38.03	38.03
TOTALS	1.24166667	2	11	131	0	34.04	34.04

Segment 1 To Curtis Street
 Segment 2 To Laurel Drive
 Segment 3 To Iris Drive
 Segment 4 To Bernal Drive

Appendix B – Benefit Cost Ratio Analysis Worksheet

City of Salinas
InSync Implementation
Measures of Effectiveness and Benefit-Cost Analysis

Project Title:	City of Salinas Adaptive Signal System Implementation		
Project Corridors:	Main Street between Bernal Drive and Alvin Drive		
Project Stakeholders:	City of Salinas		
Total # of Project Signals:	5	# of Caltrans Signals:	
Local Agency Contact:	Jose Saucedo		
Consultant Contact:	TJKM Transportation Consultant		

Costs	
Consultant Costs	\$10,000
Other Project Costs (Communications equipment, etc.)	\$175,000
Agency Staff Costs ⁸	\$2,500
Total Costs	\$187,500

Benefits				
Measures	Annual Average		Lifetime (5 Years)⁷	
	<i>Savings</i>	<i>Monetized Savings</i>	<i>Savings</i>	<i>Monetized Savings</i>
Travel Time Savings (hrs)	48,987	\$850,795	244,936	\$4,253,976
Fuel Consumption Savings (gal)	258,586	\$793,256	1,292,930	\$3,966,280
ROG Emissions Reduction (tons)	1.56	\$1,885	7.79	\$9,423
NOx Emissions Reduction (tons)	1.82	\$31,451	9.09	\$157,253
PM10x Emissions Reduction (tons)	0.31	\$43,863	1.57	\$219,315
CO Emissions Reduction (tons)	12.14	\$902	60.72	\$4,510
Total Lifetime Benefits				\$8,610,757

Overall Project Benefits	Auto
Average Decrease in Travel Time	42%
Average Speed Increase	69%
Average Fuel Savings	33%

Benefit/Cost Ratio	46 : 1
---------------------------	---------------

Notes:

- General methodology, fuel consumption factors, and health costs of motor vehicle emissions based on California Department of Transportation, Office of Transportation Economics. California Life-Cycle Benefit/Cost Analysis Model and Technical Supplement to the User's Guide, 2009.
- Benefits claimed include travel time savings, fuel consumption savings, and health cost savings associated with emissions reductions for weekday only. Yearly savings calculated based on 250 days of workdays in a year.
- Value of time assumed to be 50 percent of the wage rate for off-the-clock travel or \$17.37 in 2010 constant dollars. Bay Area average wage rate is \$20.82 per hour in 1990 constant dollars, based on Travel Demand Models for the San Francisco Bay Area [BAYCAST-90] Technical Summary, Table 4, p. 28, June 1997. Adjusted for inflation using CPI, from US Dept of Labor, Bureau of Labor Statistics, CPI - All Urban Consumers, San Francisco-Oakland-San Jose, CA area, All Items, Not Seasonally Adjusted (Series Id:CUURA422SA0). Vehicle fleet assumed to be 100 percent automobiles.
- Average vehicle occupancy assumed to be 1.118 persons per vehicle and is used in calculating travel-time savings in autos only. This is based on the San Francisco Bay Area Baycast Travel Model run for the RTP 2009 (using the 2010 network) developed by the Metropolitan Transportation Commission.
- Average fuel cost is from US Dept of Labor Bureau of Labor Statistics, CPI - Average Price Data, San Francisco-Oakland-San Jose, CA area, Gasoline unleaded regular per gallon. Average of monthly prices in the Bay Area from January 2010 – December 2010 is \$3.068.
- Health cost of ROG Emissions (\$1,210 per ton), NOx Emissions (\$17,298 per ton), PM10x Emissions (\$139,867 per ton), and CO Emissions (\$74 per ton) are based on the California Department of Transportation, Office of Transportation Economics from Exhibit III-41, p. III-64 of the year 2007. The 2010 costs are calculated with a standard assumption of 2% increase per year from the 2007 costs.
- Project life assumed to be ten years.
- Public agency involved staff costs is assumed to be 25% of the project consultant costs.