

# SOLANO TRAVEL SAFETY PLAN

**ENGINEERING**

**ENFORCEMENT**

**SOLANO  
COUNTY**

**EDUCATION**

**JULY 13, 2005**



*Solano Transportation Authority*



## **ACKNOWLEDGEMENTS**

Solano Transportation Authority:

STA – Daryl Halls  
STA – Andrew Fremier  
STA – Dan Christians  
STA – Jennifer Tongson

Contacts:

Caltrans – Nicolas Endrawos  
California Highway Patrol – Michael Lowry  
City of Benicia – Dan Schiada  
City of Dixon – Jason Riley  
City of Fairfield – Trudy Ball, Mike Duncan  
City of Rio Vista – Felix Ajayi, Brent Salmi  
City of Suisun City – Lee Evans  
City of Vacaville – Gian Aggarwal  
City of Vallejo – Theresa Peterson  
Solano County – Paul Wiese, Susan White

Consultants:

Korve Engineering – Bill Burton  
Korve Engineering – Geoff Rubendall

## TABLE OF CONTENTS

1.0	Introduction.....	1
1.1	Purpose of Travel Safety Plan.....	1
1.2	Travel Safety Plan Process .....	1
1.3	Travel Safety Plan Framework .....	1
2.0	Evaluation of Travel Safety Data.....	2
2.1	Accident Data for Local Intersections .....	2
2.1.1	Methodology.....	2
2.2	Accident Data for Highways .....	6
2.3	Pedestrian and Bicycle Accident Data .....	8
2.3.1	Methodology.....	8
3.0	Recommended Safety Remediation Measures.....	9
3.1	Safety Projects at Local Intersections .....	9
3.2	Safety-Related Projects on Highways and Freeways .....	10
3.3	Ongoing CHP Enforcement Programs .....	10
4.0	Funding .....	11
4.1	Surface Transportation Program (STP)/Congestion Mitigation Air Quality Program (CMAQ).....	12
4.2	Eastern Solano County Congestion Mitigation Air Quality Program (ECMAQ).....	12
4.3	Transportation for Livable Communities Program (TLC).....	12
4.4	State Transportation Improvement Program (STIP).....	12
4.5	State Highway Operations and Protection Program (SHOPP).....	13
4.6	Regional Measure 2 (RM2) .....	14
4.7	Transportation Development Act Article 3 (TDA3) .....	14
4.8	Federal Earmarks.....	14
4.9	Office of Traffic Safety Program (OTS) .....	14
4.10	Safe Routes To Schools Program (SR2S) .....	15
4.11	Safe Routes to Transit Program (SR2T) .....	15
4.12	Hazard Elimination Safety Program (HES) .....	16
4.13	New Local Revenue .....	16

## LIST OF FIGURES

Figure 1: High Accident Intersections .....	5
Figure 2: Freeway Segment Accident Rates.....	7

## LIST OF TABLES

Table 1: Intersection Accident Rates .....	3
Table 2: Freeway Accident Rates – Accidents per Million Vehicle Miles .....	6
Table 3: Types of Collisions.....	8
Table 4: Pedestrian and Bicycle Accident Rates – Yearly Average per 1,000 population .....	8

## 1.0 INTRODUCTION

### 1.1 PURPOSE OF TRAVEL SAFETY PLAN

The purpose of the Solano Travel Safety Plan is to identify travel safety deficiencies in Solano County and recommend a program of cost-effective travel safety programs and projects. The Safety Plan includes a funding strategy for each proposed program or project that addresses the criteria for the applicable funding sources.

In 1998, The Solano Transportation Authority (STA) led a Travel Safety Committee to report the safety related problems in Solano County. With help from Korve Engineering and Grandy & Associates, a Safety Plan was published. This report is an update of that project, with additional updated analysis of highway, local street and bicycle/pedestrian accident rates in the County.

### 1.2 TRAVEL SAFETY PLAN PROCESS

The Travel Safety Plan was developed through the cooperative efforts of the Solano Transportation Authority and Korve Engineering with the help of the following agencies and jurisdictions:

- California Department of Transportation;
- California Highway Patrol;
- City of Benicia;
- City of Dixon;
- City of Fairfield;
- City of Rio Vista;
- City of Suisun City;
- City of Vacaville;
- City of Vallejo; and
- Solano County.

### 1.3 TRAVEL SAFETY PLAN FRAMEWORK

Traditional methods for addressing travel safety deficiencies involve education, engineering and/or enforcement programs. The opportunity to establish travel safety education programs at the county level is somewhat limited, as the state and local school districts typically address travel safety education for motorists. Several local school districts have developed joint programs (i.e. transportation, enforcement, and education professionals) to provide travel safety programs for school children. Engineering solutions for safety problems encompass a wide range of improvements including wider shoulders, guardrails, median barriers, traffic signal improvements, removal of obstacles, improved lighting, sidewalks, pedestrian crossing improvements, reconfiguration of roadways and intersections, rail safety improvements, etc. Enforcement programs address the primary factors in most accidents such as speeding, improper lane changes or turns, driving under the influence and improperly yielding the right-of-way.

## 2.0 EVALUATION OF TRAVEL SAFETY DATA

### 2.1 ACCIDENT DATA FOR LOCAL INTERSECTIONS

The following analysis of intersection accident data for the calendar years 1998 through 2003 and a portion of 2004 is based on a review of accident rates per million entering vehicles (MEV). Table 1 provides the total number of accidents at identified intersections for each of the calendar years and resulting average accident rate per MEV. Figure 1 shows the location of these intersections. The intersections are listed in descending order of their respective accident rates.

In order to select the study intersections, a letter was sent to each jurisdiction with the intersections included in the 1998 Report, and each jurisdiction was asked to add any intersections which have high accident volumes or were perceived as unsafe for vehicles, pedestrians, and/or bicycles.

An initial examination of the 65 intersections revealed that recent improvements had been installed at five intersections and funding is programmed for improvements at another two locations. A comprehensive assessment of the traffic accident data was performed for all 65 intersections to identify accident patterns.

At the time of the original plan produced in 1998, no intersections were identified in the Cities of Rio Vista or Vacaville. As a result of discussions between city officials and STA staff, a list of intersections in Vacaville and Rio Vista were added to the list of intersections to be evaluated.

#### 2.1.1 METHODOLOGY

The intersection accident rates were calculated based on a standardized set of parameters determined by coordination between STA and Korve staff. Accidents occurring at 100 feet or closer to an intersection were included in the accident rate calculation. One hundred feet was established as a standardized distance to be used at all intersections to capture the great majority of accidents which occurred at the selected locations. All accident data, with the exception of Fairfield, was taken from SWITRS reports between 1999 and 2004. Fairfield accidents were compiled using Crossroads, a local program implemented by the Fairfield Police Department and the Fairfield Public Works Department. It has been determined that the difference in SWITRS and Crossroads data is negligible and both databases provide sufficient consistent data for this safety analysis.

TABLE 1: INTERSECTION ACCIDENT RATES

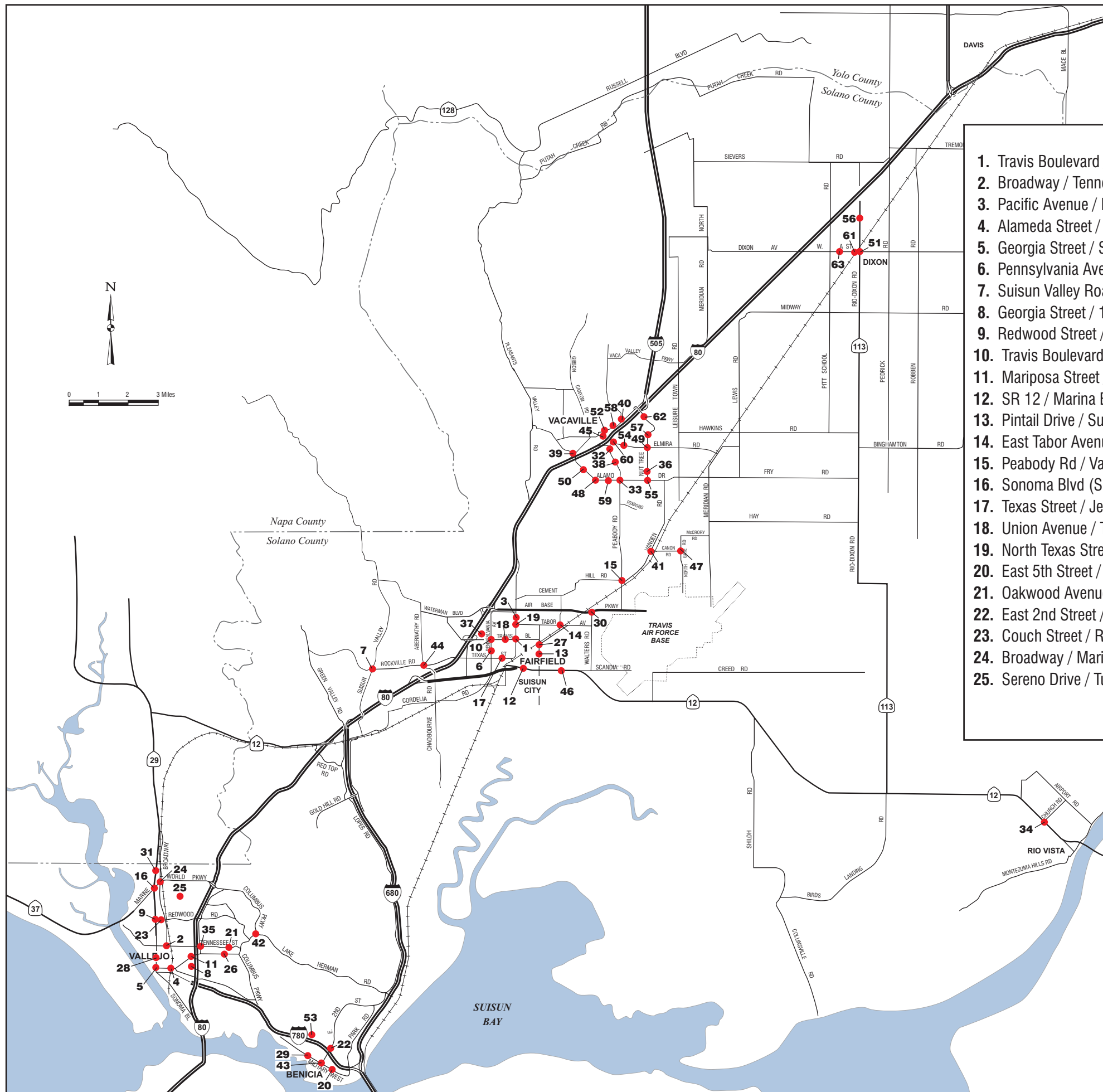
	INTERSECTION	AGENCY	'98	'99	'00	'01	'02	'03	'04	ACCIDENT RATE <sup>1</sup>
1	Travis/North Texas	Fairfield	11	18	22	23	10	18	n/a	1.22
2	Broadway/Tennessee	Vallejo	6	13	8	14	10	10	11	1.21
3	Pacific/North Texas	Fairfield	11	13	19	10	17	11	n/a	1.13
4	Alameda/Georgia	Vallejo	5	5	2	2	3	12	2	1.11
5	Georgia/Sonoma	Vallejo	7	7	6	7	6	4	1	1.04
6	Pennsylvania/Utah	Fairfield	7	7	17	5	6	0	n/a	1.00
7	Suisun Valley/Rockville	Solano Co.	n/a	n/a	3	4	10	3	4	0.97
8	Georgia/14 <sup>th</sup>	Vallejo	6	5	5	3	3	7	2	0.96
9	Redwood/Sonoma	Vallejo	12	14	12	12	12	11	6	0.96
10	Travis/Pennsylvania	Fairfield	6	26	12	11	18	15	n/a	0.94
11	Mariposa/Solano	Vallejo	12	2	4	5	2	1	3	0.90
12	SR 12/Marina	Suisun City	7	12	14	14	15	8	9	0.90
13	Pintail/Sunset	Suisun City	10	10	5	4	4	9	2	0.88
14	East Tabor/Clay Bank	Fairfield	7	3	9	4	8	9	n/a	0.87
15	Peabody/Vanden/Cement Hill <sup>2</sup>	Fairfield	9	9	4	6	5	7	n/a	0.86
16	Sonoma (SR 29)/Marine World (SR 37)	Vallejo	21	20	30	18	14	14	16	0.85
17	Texas/Jefferson	Fairfield	7	6	7	5	6	4	n/a	0.84
18	Union/Travis	Fairfield	7	2	14	10	6	16	n/a	0.83
19	North Texas/EastTabor	Fairfield	16	7	12	13	18	6	n/a	0.82
20	East 5th/Military East	Benicia	8	6	6	2	6	2	n/a	0.75
21	Oakwood/Tennessee	Vallejo	4	7	2	4	4	4	3	0.75
22	East 2nd/I-780	Benicia	12	6	11	5	7	4	n/a	0.73
23	Couch/Redwood	Vallejo	8	2	6	8	5	6	0	0.73
24	Broadway/Marine World	Vallejo	19	11	11	16	14	11	6	0.68
25	Sereno/Tuolumne	Vallejo	9	7	3	3	5	6	0	0.64
26	Maple/Springs	Vallejo	3	7	4	4	3	4	4	0.61
27	Railroad/Sunset	Suisun City	8	5	1	6	4	3	2	0.60
28	Maine/Sonoma	Vallejo	3	1	5	3	1	6	3	0.58
29	Military West/West 7th	Benicia	4	5	5	3	4	5	n/a	0.57
30	Air Base/Walters	Fairfield	6	4	8	13	12	8	n/a	0.56
31	Meadows/Sonoma	Vallejo	8	3	8	2	10	5	6	0.53
32	Cliffside/Peabody	Vacaville	n/a	3	3	5	6	1	1	0.51
33	Alamo/Peabody	Vacaville	n/a	3	6	8	8	10	3	0.49
34	SR 12/Church	Rio Vista	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.47
35	Adm.Callaghan/Tennessee	Vallejo	4	4	2	2	3	3	2	0.44
36	Fairview/Nut Tree	Vacaville	n/a	2	1	1	2	4	0	0.43
37	Gateway/Courtyard	Fairfield	2	7	2	2	4	2	n/a	0.42
38	Marshall/Peabody	Vacaville	n/a	1	3	8	4	5	2	0.38
39	Alamo/Merchant	Vacaville	n/a	5	5	8	6	1	1	0.36
40	Allison/East Monte Vista	Vacaville	n/a	1	6	7	1	5	3	0.34
41	Vanden/Canon	Solano Co.	n/a	n/a	0	1	0	0	6	0.34
42	Columbus/Lake Herman	Vallejo	0	1	0	1	2	3	2	0.34
43	East 2nd/Military East	Benicia	10	3	0	3	7	2	n/a	0.31

**FINAL – SOLANO TRAVEL SAFETY PLAN**

	INTERSECTION	AGENCY	'98	'99	'00	'01	'02	'03	'04	ACCIDENT RATE <sup>1</sup>
44	Rockville/Abernathy	Solano Co.	n/a	n/a	0	1	2	1	4	0.31
45	Depot/Mason	Vacaville	n/a	0	3	8	5	3	4	0.30
46	SR 12/Sunset	Suisun City	3	9	4	3	1	6	0	0.30
47	Northgate/Canon	Solano Co.	n/a	n/a	0	2	0	2	0	0.26
48	Alamo Rd/Alamo Ln	Vacaville	n/a	2	3	4	1	1	1	0.25
49	Elmira/Nut Tree	Vacaville	n/a	4	2	3	6	2	0	0.25
50	Alamo/Marshall	Vacaville	n/a	0	1	5	4	3	1	0.23
51	First/A Street	Dixon	0	3	0	3	0	2	n/a	0.22
52	East Monte Vista/Markham	Vacaville	n/a	3	0	1	4	3	1	0.22
53	Southampton/I-780	Benicia	1	5	3	2	1	0	n/a	0.21
54	Allison/Elmira	Vacaville	n/a	1	5	3	3	0	1	0.21
55	Alamo/Nut Tree	Vacaville	n/a	1	2	4	2	0	1	0.19
56	First/Lincoln/Vaughn	Dixon	2	0	0	2	0	2	n/a	0.18
57	Nut Tree/Ulatis	Vacaville	n/a	0	2	2	3	1	2	0.18
58	Callen/East Monte Vista	Vacaville	n/a	1	1	1	0	3	0	0.17
59	Alamo/Mariposa	Vacaville	n/a	1	2	1	2	0	1	0.15
60	Elmira/Peabody	Vacaville	n/a	2	0	2	1	2	3	0.14
61	West A St/N. Jackson	Dixon	0	0	0	2	0	1	n/a	0.13
62	Allison/Nut Tree	Vacaville	n/a	1	4	0	1	0	2	0.10
63	West A St/N. Lincoln	Dixon	2	0	0	0	0	0	n/a	0.09

<sup>1</sup>Accidents per million entering vehicles

<sup>2</sup>Peabody/Vanden and Peabody/Cement Hill were realigned to form one four-way intersection in September 2000



1. Travis Boulevard / North Texas Street
2. Broadway / Tennessee Street
3. Pacific Avenue / North Texas Street
4. Alameda Street / Georgia Street
5. Georgia Street / Sonoma Blvd (SR29)
6. Pennsylvania Avenue / Utah Street
7. Suisun Valley Road / Rockville Road
8. Georgia Street / 14th Street
9. Redwood Street / Sonoma Blvd (SR29)
10. Travis Boulevard / Pennsylvania Avenue
11. Mariposa Street / Solano Avenue
12. SR 12 / Marina Boulevard
13. Pintail Drive / Sunset Avenue
14. East Tabor Avenue / Clay Bank Road
15. Peabody Rd / Vanden Rd / Cement Hill Rd
16. Sonoma Blvd (SR29) / Marine World Pkwy (SR37)
17. Texas Street / Jefferson Street
18. Union Avenue / Travis Boulevard
19. North Texas Street / East Tabor Avenue
20. East 5th Street / Military East
21. Oakwood Avenue / Tennessee Street
22. East 2nd Street / I-780
23. Couch Street / Redwood Street
24. Broadway / Marine World Pkwy (SR37)
25. Sereno Drive / Tuolumne Street

26. Maple Avenue / Springs Road
27. Railroad West Avenue / Sunset Avenue
28. Maine Street / Sonoma Blvd (SR29)
29. Military West / West 7th Street
30. Air Base Parkway / Walters Road
31. Meadows Drive / Sonoma Blvd (SR29)
32. Cliffside Drive / Peabody Road
33. Alamo Drive / Peabody Road
34. SR 12 / Church Road
35. Admiral Callaghan Ln / Tennessee St
36. Fairview Druve / Nut Tree Road
37. Gateway Boulevard / The Courtyard
38. Marshall Road / Peabody Road
39. Alamo Drive / Merchant Street
40. Allison Drive / E. Monte Vista Avenue
41. Vanden Road / Canon Road
42. Columbus Pkwy / Lake Herman Road
43. East 2nd Street / Military East
44. Rockville Road / Abernathy Road
45. Depot Street / Mason Street
46. SR 12 / Sunset Avenue
47. North Gate Road / Canon Road
48. Alamo Road / Alamo Lane
49. Elmira Road / Nut Tree Road
50. Alamo Drive / Marshall Road
51. First Street / A Street
52. East Monte Vista Av / Markham Av
53. Southampton Road / I-780
54. Allison Drive / Elmira Road
55. Alamo Road / Nut Tree Road
56. N. First St / N. Lincoln St / Vaughn Rd
57. Nut Tree Road / Ulatis Drive
58. Callen Street / East Monte Vista Avenue
59. Alamo Drive / Mariposa Avenue
60. Elmira Road / Peabody Road
61. West A. Street / N. Jackson Street
62. Allison Drive / Nut Tree Pkwy
63. West A. Street / N. Lincoln Street

**Figure 1**  
**HIGH ACCIDENT LOCATIONS**  
 SOLANO TRAVEL SAFETY PLAN



## 2.2 ACCIDENT DATA FOR HIGHWAYS

The following analysis of freeway accident data for the calendar years 1998 through 2003 is based on a review of accident rates per million vehicle miles (MVM) for 13 freeway segments in Solano County. Caltrans supplied TASAS data to be used for this analysis. Table 2 provides the total number of accidents for each of the calendar years, the resulting average accident rate per MVM and the average statewide accident rates for similar segments of roadways. Figure 2 shows the freeway segments that were studied. The segments are listed in descending order of their respective accident rates. The last column refers to the statewide average accident rate of highways with the same characteristics, such as number of lanes, average daily vehicles, etc.

**TABLE 2: FREEWAY ACCIDENT RATES – ACCIDENTS PER MILLION VEHICLE MILES**

#	ROUTE	SEGMENT	'98	'99	'00	'01	'02	'03	ACCIDENT RATE <sup>1</sup>	STATE AVERAGE RATE <sup>2</sup>
1	SR-12	I-80 to Walters Road	95	90	119	109	101	71	<b>1.45</b>	<b>1.61</b>
2	SR-12	Napa County Line to I-80	41	46	38	51	43	27	<b>1.33</b>	<b>1.33</b>
3	I-80	Carquinez Bridge to SR-37	231	222	349	387	396	303	<b>1.28</b>	<b>1.04</b>
4	SR-37	Sonoma County Line to I-80	125	129	162	156	140	114	<b>0.93</b>	<b>1.24</b>
5	SR-12	Walters Road to Rio Vista	72	59	64	88	92	77	<b>0.86</b>	<b>0.96</b>
6	I-80	Red Top to North Texas	250	296	417	524	625	497	<b>0.86</b>	<b>0.93</b>
7	SR-113	I-80 to SR-12	27	32	31	45	49	42	<b>0.75</b>	<b>1.05</b>
8	I-780	I-80 to I-680	83	60	84	108	116	92	<b>0.74</b>	<b>0.92</b>
9	I-80	SR-37 to Red Top	130	128	120	168	176	157	<b>0.65</b>	<b>0.64</b>
10	I-80	N. Texas to Alamo	105	115	116	149	186	148	<b>0.58</b>	<b>0.81</b>
11	I-680	Benicia Bridge to I-80	111	96	152	172	194	129	<b>0.56</b>	<b>0.79</b>
12	I-80	Alamo to SR-113	276	291	348	406	423	347	<b>0.48</b>	<b>0.75</b>
13	I-505	Yolo County Line to I-80	22	20	15	43	36	40	<b>0.38</b>	<b>0.52</b>

<sup>1</sup>Accidents per million vehicle miles

<sup>2</sup>For similar facilities

A review of the freeway accident rates indicates that I-80 from Carquinez Bridge to SR 37 is the only freeway segment that experiences an average accident rate that is substantially higher than the average statewide accident rates for similar facility types.

The portion of I-80 between the Carquinez Bridge and SR 37 has experienced a general increase in accidents from calendar year 1998 to the present, with the exception of the 2003 calendar year. The average accident rate for 2003 for the I-80 Segment between the Carquinez Bridge and SR 37 was 1.28, which is approximately 23% higher than the statewide average of 1.04 for a similar facility. The primary accident types reported on this segment between 1998 and 2003 included rear end accidents (53%), sideswipe accidents (21%), and fixed object accidents (19%). Primary collision factors reported included unsafe speed (44%), improper turns (13%), and following too closely (8%).

All other segments analyzed were found to have lower than average accident rates when compared to other roadways in the state with a similar classification. The most common types of collisions were rear-ends and collisions with fixed objects. Table 3 summarizes the percentages of each type of accident for each segment. Types of accidents not included in Table 3 were head-on collisions and pedestrian-auto collisions due to the infrequency of both types.



TABLE 3: TYPES OF COLLISIONS

#	ROUTE	SEGMENT	SIDESWIPE	REAR END	FIXED OBJECT
1	SR 12	I-80 To Walters Road	7%	65%	10%
2	SR 12	Napa C.L. to I-80	9%	46%	20%
3	I-80	Carquinez Bridge to SR 37	21%	53%	19%
4	SR 37	Sonoma C.L. to I-80	16%	42%	19%
5	SR 12	Walters Road to Rio Vista	11%	31%	25%
6	I-80	Red Top to N. Texas	14%	61%	18%
7	SR 113	I-80 to SR 12	9%	15%	30%
8	I-780	I-80 to I-680	14%	26%	47%
9	I-80	SR 37 to Red Top	19%	27%	41%
10	I-80	N. Texas to Alamo	19%	34%	36%
11	I-680	Benicia Bridge to I-80	17%	35%	38%
12	I-80	Alamo to SR 113	15%	26%	47%
13	I-505	Yolo C.L. to I-80	5%	18%	53%
<b>TOTAL FOR SOLANO COUNTY</b>			16%	42%	29%

## 2.3 PEDESTRIAN AND BICYCLE ACCIDENT DATA

The following analysis of pedestrian and bicycle accident data for the calendar years 1998 through 2004 is based primarily on a review of accident rates by population. Table 4 provides a summary of the average number of accidents in each jurisdiction over the six-year period and the resulting average rate per 1,000 persons.

### 2.3.1 METHODOLOGY

The total number of pedestrian and bicycle accidents were collected from each jurisdiction based on SWITRS data or a similar local accident database. The total number of pedestrian accidents reported in each city was compared to the most recent population measurement and an accident rate was calculated. This procedure was duplicated for bicycle accidents.

TABLE 4: PEDESTRIAN AND BICYCLE ACCIDENT RATES – YEARLY AVERAGE PER 1,000 POPULATION

JURISDICTION	POPULATION <sup>1</sup>	PEDESTRIAN ACCIDENTS		BICYCLE ACCIDENTS	
		ANNUAL AVERAGE	ANNUAL RATE	ANNUAL AVERAGE	ANNUAL RATE
Benicia	27,323	6.4	0.23	5.0	0.18
Dixon	17,179	3.3	0.19	3.7	0.22
Fairfield	105,026	37.3	0.36	39.2	0.37
Rio Vista	6,837	1.8	0.26	2.6	0.38
Solano County	19,700	1.8	0.09	2.7	0.14
Suisun City	27,716	6.9	0.25	4.0	0.14
Vacaville	96,735	13.0	0.13	22.3	0.23
Vallejo	121,221	47.2	0.39	35.2	0.29

<sup>1</sup>Population from Department of Finance, 2005

### 3.0 RECOMMENDED SAFETY REMEDIATION MEASURES

#### 3.1 SAFETY PROJECTS AT LOCAL INTERSECTIONS

A number of safety projects have either been implemented or are planned for implementation in Solano County at the 65 study intersections. These projects provide a foundation for this Safety Plan to build upon. The following is a list of the projects that have been implemented or are currently planned.

##### Safety Improvements that were Recently Installed by Agencies:

###### *Benicia*

- East 2<sup>nd</sup>/I-780 – New traffic signal installed
- East 2<sup>nd</sup>/Military East – Traffic signal modifications
- Military West – Lighted crosswalk for Benicia H.S.

###### *Dixon*

- Pitt School Rd/A Street – Multi-way stop installed (1998)
- First/A Street – Traffic signal installed (2004)
- West A Street/N. Lincoln – Traffic signal installed

###### *Fairfield*

- East Tabor Avenue – Traffic calming radar speed display signs
- Gateway/Travis – Red light photo enforcement project
- City-wide traffic signal pre-emption program
- North Texas/Travis – Median islands and additional channelization installed
- Pennsylvania/Utah – Signal modified to include protected left turn phases on Pennsylvania

###### *Rio Vista*

- SR12/Hillside Terrace – Marked as a school crossing
- SR12/Gardiner Way – In-ground lights were installed in the crosswalk

###### *Vacaville*

- City-wide school safety improvements projects

###### *Vallejo*

- Georgia/Sonoma – Signal modified to include protected left turn phases.
- Georgia/Alameda – Installation of R10-12 signs “Left Turn Yield on Green.”
- Traffic signals installed at the following 14 intersections.
  - Columbus/Lake Herman;
  - Sonoma (SR 29)/Marine World (SR 37);
  - Couch/Valle Vista;
  - Redwood/Sonoma;
  - Broadway/Sonoma;
  - Mariposa/Solano;
  - Couch/Redwood;
  - Georgia/14<sup>th</sup>;
  - Oakwood/Tennessee;
  - Meadows/Sonoma;
  - Sereno/Tuolumne;
  - Admiral Callaghan/Tennessee;
  - Maple/Springs; and
  - Maine/Sonoma.

Local Safety Improvements that are Funded but not yet Installed:

*Benicia*

- Military West – Traffic signal installation at Benicia H.S. (design underway)
- First Street – Streetscape and parking improvements (design underway)

*Fairfield*

- Travis/Union – Additional free right turn, NB Union to EB Travis
- East Tabor/Clay Bank – Traffic signal installed

*Solano County*

- Rockville/Abernathy – A roundabout is being constructed

*Vallejo*

- Tennessee/Broadway – Signal modified to include protected left turn phases on northbound and southbound Broadway (currently being constructed)
- Tennessee/Tuolumne – Signal modified to include protected left turn phases on northbound and southbound Tuolumne (currently being constructed)
- Georgia/Alameda – Grant application in review to install protected left turn phases

### 3.2 SAFETY-RELATED PROJECTS ON HIGHWAYS AND FREEWAYS

Caltrans has also installed projects in Solano County that would promote safer driving on Solano County highways and freeways. The following is a list of the projects located in Solano County that Caltrans has implemented or plans to implement in the next year.

*Highway 12*

- New median barrier between I-80 and Pennsylvania Avenue
- Soft median barrier and upgraded shoulder installed between Drouin Drive and Currie Drive
- Shoulder widening throughout Rio Vista

*Highway 29*

- New signal installed at Maritime Academy

*Highway 37*

- Concrete median barrier and widening east of Broadway

*Interstate 80*

- Rebuilt westbound off-ramp at Oliver Road
- Upgraded median barrier from West Texas to Yolo County and from American Canyon Road to I-680

*Interstate 505*

- Soft median barrier installed from I-80 to Yolo County

### 3.3 ONGOING CHP ENFORCEMENT PROGRAMS

The California Highway patrol has various programs and plans to encourage safe driving on California's highways. The CHP writes press releases each month focusing on the following topics:

- Safe and Proper Usage of seatbelts;
- Education and Prevention of Primary Collision Factors (i.e. speeding, following too closely, unsafe lane changes); and
- Vehicle Registration.

In order to enforce these issues, six days per month (two per issue) are selected to specifically enforce each issue. On these “special days” officers focus their patrols on drivers who violate these three common violations. In addition to these press releases, the following are programs the CHP implements to encourage safe driving in Solano County.

- Neighborhood Traffic Safety Program – The program focuses on officers and residents working together, in a cooperative effort to enhance public safety in their communities. Working together, residents and CHP personnel develop a strategic plan to reduce traffic violations and associated motor vehicle collisions. The program involves both education and enforcement, with a simple, but imperative objective; ensure communities are a safe place to drive and live.
- Community Response Team (CRT) – Three officers that split time between enforcement on unincorporated roads and working with neighborhood groups and schools in education efforts and engineering solutions to safety problems.
- DUI Team – Two officers assigned to work all CHP beats for DUI enforcement.
- State Route 12 Patrol – Permanent officer assigned daily to SR 12 for enforcement duty.
- Maintenance Zone Enhanced Enforcement Program (MAZEED) – Assistance provided by CHP to Caltrans on a reimbursable basis to patrol ongoing maintenance on state highway system.

Special CHP Enforcement Projects:

- Collision Reduction and Statewide Highway Enforcement Strategies (CRASHES) – One-time grant to provide additional enforcement on SR 12 through December of 1998.
- State Route 12 Task Force – Office of Traffic Safety (OTS) grant to prepare corridor strategy and provide one-time enforcement through December of 1999.
- County Roads Enforcement (CORE) Program – Federal grant to provide additional enforcement on unincorporated roads through December of 1998.
- DUI Checkpoints – Federal grant to provide for approximately three DUI checkpoints annually that are done jointly with local agencies.
- Construction Zone Enhanced Enforcement Program (COZEED) – Assistance provided by CHP to Caltrans on a reimbursable basis to patrol construction projects on state highway system.

The local police departments from each of the STA member agencies also have ongoing programs to address travel safety concerns. These programs vary but typically include enforcement and education components.

## **4.0 FUNDING**

The following section, compiled by STA staff, identifies potential sources of funding that may be pursued to pay for safety-related improvements in Solano County.

#### **4.1 SURFACE TRANSPORTATION PROGRAM (STP)/CONGESTION MITIGATION AIR QUALITY PROGRAM (CMAQ)**

The Intermodal Surface Transportation Efficiency Act (ISTEA), established in 1991, and the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), established in 1997, directed federal funds to projects and programs for a broad variety of transit, highway, and streets and roads projects. Surface Transportation Program (STP) funds are distributed through the Metropolitan Transportation Commission (MTC) for transit, highway, local road capital improvements, bicycle and pedestrian facilities, safety improvements, carpool and park and ride lots, surface transportation planning, Transportation for Livable Communities (TLC) projects, and transportation enhancement activities. Congestion Mitigation and Air Quality (CMAQ) funds are directed to transportation-related air quality improvement projects and programs in air quality non-attainment and maintenance areas that reduce transportation related emissions. Counties were provided a portion of these funds for local programming and both programs are anticipated to continue with the reauthorization of TEA-21.

#### **4.2 EASTERN SOLANO COUNTY CONGESTION MITIGATION AIR QUALITY PROGRAM (ECMAQ)**

Solano County receives CMAQ funds from both the Bay Area region and the Sacramento region because it falls between the Bay Area and the Sacramento air basins. The Bay Area CMAQ funds are used to fund air quality improvement projects in the western portion of Solano County, and the Sacramento CMAQ funds are dedicated to projects in the eastern portion of the County, known as Eastern CMAQ (ECMAQ). Eastern CMAQ funds are only eligible to the cities of Dixon, Rio Vista, Vacaville, and the eastern portion of Solano County. Similar to the CMAQ program, the ECMAQ program funds projects in non-attainment or air quality maintenance areas for ozone, carbon monoxide, or particulate matter under provisions in the Federal Clean Air Act.

#### **4.3 TRANSPORTATION FOR LIVABLE COMMUNITIES PROGRAM (TLC)**

The Metropolitan Transportation Commission (MTC) administers funds for the Transportation for Livable Communities (TLC) program. The purpose of the program is to support community based transportation projects that bring new vibrancy to downtown areas, commercial cores, neighborhoods, and transit corridors, enhancing their amenities and ambiance and making them places where people want to live, work and visit. The TLC program provides funding for projects that are developed through an inclusive community planning effort, provide for a range of transportation choices, and support connectivity between transportation investments and land uses.

#### **4.4 STATE TRANSPORTATION IMPROVEMENT PROGRAM (STIP)**

In addition to STP and CMAQ funds, Solano County receives State Transportation Improvement Program (STIP) funds based upon a population formula that provides each county an equitable “county share” of these funds. These funds have been typically used for major transportation projects including the Jepson Parkway, SR 37 improvements, the Vallejo Station, commuter rail stations and roadway rehabilitation projects.

Historically, Solano County received an average of \$10 million per year from the STIP as its county share of the RTIP. Due to the state budget problems, Solano County received

no new funds in the 2004 STIP. The 2004 STIP was primarily a reprogramming of projects remaining in the 2002 STIP. Additionally, ITIP funds that have been dedicated in the past to such projects as SR37, Jameson Canyon, I-80/I-680/SR 12 Interchange, and interstate projects have also been seriously curtailed and the SHOPP program is proceeding at about one third of previous levels. The future availability of STIP funds (RTIP, ITIP, and SHOPP) is dependent on the state budget and federal funding; however, a level of funding significantly exceeding the historical amounts for any of these programs does not appear likely.

#### **4.5 STATE HIGHWAY OPERATIONS AND PROTECTION PROGRAM (SHOPP)**

The State Highway Operations and Protection Program (SHOPP) is the state-funding program used by Caltrans to maintain and operate state and federal highways in the state. The funds for the SHOPP are a combination of federal and state funds and share the same fund sources available for the State Transportation Improvement Program (STIP). Due to the necessity to operate and maintain existing infrastructure, the SHOPP is typically funded prior to determining the level of funding available for the STIP. SHOPP projects do not typically add capacity, but are designed to preserve existing infrastructure and correct safety deficiencies.

Every two years Caltrans prepares a list of proposed projects to include in the SHOPP. Each Caltrans District submits their proposed lists to Caltrans HQ and a master list for the state is prepared. The SHOPP program is fairly competitive since, like the STIP, funding is not available for all proposed projects.

The following is a partial list of some of the more significant projects for Solano County included in the Draft 2004 SHOPP:

- SR12 – Install median barrier between Chadbourne Road and Pennsylvania Avenue.
- SR12 – Petersen to Denverton roadway improvements and rehabilitation.
- SR12 – Denverton to Currie roadway improvements and rehabilitation.
- SR12 – Construct Truck Climbing Lane west of I-80.
- SR113 – East Chestnut to West H in Dixon, reconstruct roadway. (Intersection #51 from Table 1)
- I-80 – Upgrade cable median barrier from West Texas in Fairfield to Yolo County Line (install temporary K-rail on each side of oleanders).
- I-80 – Replace Ulatis Creek Bridge in Vacaville.
- I-80 – Rockville Road and West Texas Street, modify ramp and exit traffic signals.



## **4.6 REGIONAL MEASURE 2 (RM2)**

On March 2, 2004, voters passed Regional Measure 2 (RM2), raising the toll on the seven State-owned bridges in the Bay Area by \$1.00. This extra dollar is to fund various transportation projects within the region that have been determined to reduce congestion or to make improvements to travel in the toll corridors.

Solano County Capital Projects funded by RM2:

- Vallejo Station, \$28 Million;
- Solano County Express Bus Intermodal Facilities, \$20 Million;
- I-80/I-680 Interchange Improvements, \$100 Million;
- Capitol Corridor Improvements on I-80/I-680 Corridor, \$25 Million;
- Regional Express Bus North, \$20 Million; and
- Safe Routes to Transit, \$22.5 Million.

## **4.7 TRANSPORTATION DEVELOPMENT ACT ARTICLE 3 (TDA3)**

Transportation Development Act (TDA) funding is generated by a ¼ cent tax on retail sales collected in California's 58 states. The Metropolitan Transportation Commission (MTC) administers this funding for each of the nine Bay Area counties with assistance from each of the county Congestion Management Agencies (i.e. Solano Transportation Authority). Two percent of the TDA funding generated, called TDA Article 3, is returned to each county from which it was generated for bicycle and pedestrian projects. Although the exact amount fluctuates every year, Solano County generally receives between \$210,000 to \$230,000.

## **4.8 FEDERAL EARMARKS**

In 1998, the STA received two federal earmarks for the Jepson Parkway and, in recent years, the STA has landed federal appropriations earmarks for the Vallejo Station and the Fairfield/Vacaville Rail Station. The I-80/I-680/SR 12 Interchange project and Jepson Parkway have been slated to receive earmarks (\$21 million and \$2 million, respectively) as part of the House version of the Federal Transportation Reauthorization bill currently in Congress. Due to the differences between the House, the Senate and the Administration for funding levels for the Federal Transportation Reauthorization bill, the proposed earmarks for the Interchange and Jepson Parkway are not certain. Additionally, our Congressional Representatives have indicated that future earmarks may be difficult to obtain without a significant commitment of non-federal, local funds to individual projects seeking federal earmarks.

## **4.9 OFFICE OF TRAFFIC SAFETY PROGRAM (OTS)**

The Business, Transportation, & Housing's (BT&H) Office of Traffic Safety program (OTS) distributes federal grant funding on a competitive basis to mitigate traffic safety program deficiencies, expand ongoing activity, or develop a new program to reduce deaths, injuries and economic losses resulting from traffic related collisions. Priority attention will be given to applications requesting funds for alcohol/drug enforcement and education programs, police traffic services, emergency medical services, traffic records

and tracking, roadway safety, seat belt enforcement and promotion, and pedestrian and bike safety programs.

Solano County OTS projects awarded for FY 2005:

- Fairfield, “Safe Passage”, Lidar speed signs on Air Base Parkway, \$61,500.
- Fairfield Police Department, \$342,648.
- Suisun City Police Department, \$90,000.
- Vallejo Police Department, \$125,000.

#### **4.10 SAFE ROUTES TO SCHOOLS PROGRAM (SR2S)**

The Safe Routes to Schools Program (SR2S) is a construction program intended to improve and enhance the safety of pedestrian and bicycle facilities and related infrastructures to provide safe passage around schools. In September 2004, Governor Arnold Schwarzenegger extended the SR2S program for three more years, which dedicates funding for six categories of projects:

- Sidewalk improvements
- Traffic calming and speed reduction
- Pedestrian/bicycle crossing improvements
- On-street bicycle facilities
- Off-street bicycle/pedestrian facilities
- Traffic diversion improvements

Previously funded SR2S projects include:

- Suisun City: Crystal Middle School
- Rio Vista: D.H. White Elementary, Riverview Middle School, Rio Vista High School
- Solano County: Two projects at Benjamin Franklin Middle School
- Benicia: Robert Semple Elementary School
- Vacaville: Eugene Padan Elementary School
- Vacaville: Various elementary, junior, and senior high schools
- Fairfield: E. Ruth Sheldon Elementary School and T.C. McDaniels School

#### **4.11 SAFE ROUTES TO TRANSIT PROGRAM (SR2T)**

As part of the Bay Area’s approval of Regional Measure 2, \$22.5 million will be allocated on a competitive grant basis for projects aimed to improve the safety and convenience of pedestrian and bike paths to transit stations. Improving these segments will not only make it safer for pedestrians and bicyclists, SR2T will encourage more commuters to leave their cars at home. To be eligible, projects must have a “bridge nexus,” that is, reduce congestion on one or more state toll bridges by facilitating walking or bicycling to transit services or City CarShare pods. Eligible projects include secure bicycle storage at transit stations/stops/pods, safety enhancements for ped/bike access to transit stations,

removal of ped/bike barriers near transit stations, and system wide transit enhancements to accommodate bicyclists or pedestrians.

#### **4.12 HAZARD ELIMINATION SAFETY PROGRAM (HES)**

The Hazard Elimination Safety Program (HES) is a federal safety program that provides funds for safety improvements on all public roads and highways. These funds serve to eliminate or reduce the number and/or severity of traffic accidents at locations selected for improvement.

- Fairfield, Travis Blvd. corridor between Oliver Rd. and North Texas St., upgrade traffic signals; Reconstruction; Traffic signs and pavement markings, FY 2004-05, \$360,000. (Intersections #1, #10, and #18 from Table 1)
- Suisun City, Railroad Ave. at Sunset Ave., realign severely offset intersection, FY 2004-05, \$360,000. (Intersection #27 from Table 1)
- Vallejo, Broadway and Tennessee St., Modify signal system to include left-turn phases for northbound and southbound Broadway, FY 2004-05, \$94,050. (intersection #2 from Table 1)
- Vallejo, Tuolumne St. And Tennessee St., modify signal system to include left-turn phases for northbound and southbound Tuolomne St, FY 2004-05, \$81,180.

#### **4.13 NEW LOCAL REVENUE**

The STA Board took action in December 2003 to initiate the process for the development of a Countywide Transportation Expenditure Plan (CTEP) as part of the sales tax ordinance (Measure A) for a proposed ½-cent, 30-year sales tax measure for transportation. On November 2<sup>nd</sup>, 2004, Measure A failed to garner the required 2/3's vote to pass, with a 63.8%/36.2% yes/no vote. If Measure A had passed, it would have provided approximately \$1 billion in funding for the I-80/I-680/SR12 Interchange project, corridor improvements, local streets and roads, commuter rail service, senior and disabled transit service, express bus services, local return-to-source, and safety projects. Discussions are currently underway to pursue the sales tax initiative within the near future.