Solano Transportation Authority

SOLANO TRANSPORTATION AUTHORITY

Member Agencies:
Benicia ♦ Dixon ♦ Fairfield ♦ Rio Vista ♦ Suisun City ♦ Vacaville ♦ Vallejo ♦ Solano County

One Harbor Center, Ste. 130, Suisun City, CA 94585-2473 ♦ Phone (707) 424-6075 / Fax (707) 424-6074
Email: info@sta.ca.gov ♦ Website: sta.ca.gov

TECHNICAL ADVISORY COMMITTEE (TAC)
AGENDA

1:30 p.m., Wednesday, November 29, 2017
Solano Transportation Authority
One Harbor Center, Suite 130
Suisun City, CA 94585

	ITEM	STAFF PERSON
1.	**CALL TO ORDER**	Daryl Halls, Chair
2.	**APPROVAL OF AGENDA**	
3.	**OPPORTUNITY FOR PUBLIC COMMENT** (1:30 -1:35 p.m.)	
4.	**REPORTS FROM MTC, STA, AND OTHER AGENCIES** (1:35 – 1:45 p.m.)	
5.	**CONSENT CALENDAR** Recommendation: Approve the following consent items in one motion. (1:45 – 1:50 p.m.)	
A.	**Minutes of the TAC Meeting of September 27, 2017** Recommendation: Approve TAC Meeting Minutes of September 27, 2017. **Pg. 5**	Johanna Masiclat
B.	**Fiscal Year (FY) 2017-18 Transportation Development Act (TDA) Matrix – Revised TDA Claim for City of Rio Vista** Recommendation: Forward a recommendation to the STA Board to approve the December FY 2017-18 Solano TDA Matrix as shown in Attachment A that includes the revised TDA claim for the City of Rio Vista. **Pg. 11**	Brandon Thomson

TAC MEMBERS

Randy Murphy	Jason Riley	George Hicks	Dave Melilli	VACANT	Shawn Cunningham	Terrance Davis	Matt Tuggle
City of Benicia	**City of Dixon**	**City of Fairfield**	**City of Rio Vista**	**City of Suisun City**	**City of Vacaville**	**City of Vallejo**	**County of Solano**

C. First/Last Mile Pilot - Suisun Train Station/Solano Business Park/Green Valley — Lloyd Nadal

Recommendation:

Forward a recommendation to the STA Board to:

1. Extend the First/Last Mile Pilot until June 30, 2017; and
2. Expand the eligible employers to the businesses located within the Solano Business Park.

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D. Solano Intercity Paratransit/Taxi Scrip Program – Phase II, Update — Ron Grassi

Recommendation:

Forward a recommendation to the STA Board to approve the development of Intercity Paratransit/Taxi Scrip Program – Phase II, Delivery Model that includes the following;

1. Develop a Debit Purchasing card that can be utilized for the Intercity Taxi Scrip Program;
2. Amend the Intercity Taxi Scrip Service to include contract for non-ambulatory service; and
3. Amend the Intercity Taxi Scrip Contracts to eliminate Taxi Scrip Vouchers and use a Debit Purchasing card.

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E. Solano Community College (SCC) Student Transportation Fee and Mobile Application Update — Lloyd Nadal

Recommendation:

Forward a recommendation to the STA Board to authorize STA's Executive Director to move forward with seeking options for financial support and onboarding the turnkey countywide mobile application separate of the SCC Transit Pilot Program.

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F. 2018 State Transportation Improvement Program (STIP) Programming — Anthony Adams

Recommendation:

Forward a recommendation to the STA Board to program the 2018 STIP as follows:

1. $1.939M to Construction Phase of the SR 12/Church Rd. Project for FY 2020-21; and
2. $620,000 to Planning, Programming, and Monitoring (PPM) activities for FYs 2020-21 through 2022-23.

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6. ACTION FINANCIAL ITEMS

A. Transit and Intercity Rail Capital Program (TIRCP) Application for Regional Transit Improvements — Anthony Adams

Recommendation:

Forward a recommendation to the STA Board to authorize STA to apply for a TIRCP application for Solano Regional Transit Improvements for an amount not to exceed $30M.

(1:50 – 1:55 p.m.)

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B. Regional Transportation Impact Fee (RTIF) 4th Annual Report — Robert Guerrero

Recommendation:
Forward a recommendation to the STA Board to approve the 4th Annual Solano Regional Transportation Impact Fee (RTIF) Report.
(1:55 – 2:00 p.m.)
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7. ACTION NON-FINANCIAL ITEMS

A. STA's Draft 2018 Legislative Platform and Legislative Update — Jayne Bauer

Recommendation:
Forward a recommendation to the STA Board to release the STA's Draft 2017 Legislative Platform for review and comment.
(2:00 – 2:05 p.m.)
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B. 2018 Solano Travel Safety Plan Highway Safety Improvement Program (HSIP) Project Identification — Anthony Adams

Recommendation:
Approve the attached 2018 Solano Travel Safety Plan HSIP project lists for each jurisdiction.
(2:05 – 2:10 p.m.)
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8. INFORMATIONAL ITEMS – DISCUSSION

A. Comprehensive Transportation Plan (CTP) Arterials, Highways and Freeways Element Update — Robert Macaulay

(2:10 – 2:15 p.m.)
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NO DISCUSSION

B. Summary of Funding Opportunities — Cory Peterson

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C. Draft Meeting Minutes of STA Board & Advisory Committees — Johanna Masiclat

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D. STA Board and Advisory Committee Meeting Schedule for Calendar Year 2018 — Johanna Masiclat

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9. UPCOMING TAC AGENDA ITEMS

December 2017

A. Future Congestion Corridor Update

January/February 2018

A. Annual Pothole Report
B. Updated Funding Agreements for Jepson Parkway

C. Countywide Active Transportation Plan (Bike/Ped) Update
D. Update on Countywide GIS
E. SB 1 Update
F. RM 3 Update
G. Draft Arterials, Highways and Freeways Element

10. ADJOURNMENT

The next regular meeting of the Technical Advisory Committee is scheduled at, **1:30 p.m. on Wednesday, December 20, 2017.**

Meeting Schedule for the Remainder of Calendar Year 2018

1:30 p.m., Wed., January 31, 2018
1:30 p.m., Wed., February 28, 2018
1:30 p.m., Wed., March 28, 2018
1:30 p.m., Wed., April 25, 2018
1:30 p.m., Wed., May 30, 2018
1:30 p.m., Wed., June 27, 2018
No Meeting in July
1:30 p.m., Wed., August 29, 2018
1:30 p.m., Wed., September 26, 2018
No Meeting in October
1:30 p.m., Wed., November 28, 2018
1:30 p.m., Wed., December 19, 2018

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707-399-3239

TECHNICAL ADVISORY COMMITTEE
DRAFT Minutes for the meeting of
September 27, 2017

1. CALL TO ORDER

The regular meeting of the STA's Technical Advisory Committee (TAC) was called to order by Daryl Halls at approximately 1:30 p.m. in the Solano Transportation Authority (STA)'s Conference Room 1.

TAC Members Present:	Graham Wadsworth	City of Benicia
	Jason Riley	City of Dixon
	George Hicks	City of Fairfield
	Dave Melilli	City of Rio Vista
	Tim McSorley	City of Suisun City
	Shawn Cunningham	City of Vacaville
	Terrance Davis	City of Vallejo
	Matt Tuggle	County of Solano
TAC Members Absent:	None.	
STA Staff and Others Present:	***(In Alphabetical Order by Last Name)***	
	Anthony Adams	STA
	Janet Adams	STA
	Jayne Bauer	STA
	Ryan Dodge	STA
	Robert Guerrero	STA
	Daryl Halls	STA
	Robert Macaulay	STA
	Johanna Masiclat	STA
	Debbie McQuilkin	STA
	John McKenzie	Caltrans
	Cory Peterson	STA

2. APPROVAL OF THE AGENDA

On a motion by Tim McSorley, and a second by Graham Wadsworth, the STA TAC unanimously approved the agenda. (8 Ayes)

3. OPPORTUNITY FOR PUBLIC COMMENT
None presented.

4. REPORTS FROM CALTRANS, MTC AND STA STAFF

Presentations:
1. Fairfield and Vacaville Intermodal Station Update presented by Nathaniel Atherstone, FAST
2. Ramp Metering Phase 2 presented by Anthony Adams, STA
3. Update on Capital Improvements for SolanoExpress presented by Robert Guerrero, STA

Announcements:
Robert Guerrero announced that the State Route (SR) 37 Open House for Solano is scheduled at 6:00 p.m., Monday, October 2, 2017 at the Naval Museum in Vallejo. He noted that the open house will aim to inform residents and SR 37 users about design alternatives and planning process and that other Open Houses for the Counties of Marin, Napa, and Sonoma have also been scheduled.

5. CONSENT CALENDAR
On a motion by Tim McSorley, and a second by Graham Wadsworth, the STA TAC approved the Consent Calendar A through G. (8 Ayes)

A. Minutes of the TAC Meeting of August 30, 2017
Recommendation:
Approve TAC Meeting Minutes of August 30, 2017.

B. Fiscal Year (FY) 2017-18 Transportation Development Act (TDA) Matrix – October 2017 – Revised City of Vacaville
Recommendation:
Forward a recommendation to the STA Board to approve the October FY 2017-18 Solano TDA Matrix as shown in Attachment B that includes the revised TDA claim for the City of Vacaville.

C. Fiscal Year (FY) 2017-18 and FY 2018-19 State Transit Assistance Funds (STAF) Population-based Priorities
Recommendation:
Forward a recommendation to the STA Board to approve the following:
1. FYs 2017-18 and 2018-19 STAF priorities as specified in Attachments C and D;
2. Authorize the Executive Director to administer a Call for Projects for $165,000 of STAF and work with the STA Transit and Rideshare Committee to make funding recommendation to the STA Board; and
3. $15,000 STAF in FY 2017-18 to be used as a local match for Vehicle Charging Stations if the BAAQMD grant application is awarded.

D. Updated Intercity Bus Replacement Capital Plan
Recommendation:
Forward a recommendation to the STA Board for approval of the updated Intercity Bus Replacement Funding Plan as shown in Attachment C.

E. Countywide In-Person ADA American with Disabilities Act (ADA) Assessment Program Annual Report for Fiscal Year (FY) 2016-17

Recommendation:

Forward a recommendation to the STA Board to approve the Countywide In-Person ADA American with Disabilities Act (ADA) Assessment Program Annual Report for Fiscal Year (FY) 2016-17 as shown in Attachment A.

F. Solano Countywide Water Transit Plan & Financial Feasibility Study Funding Agreement Between the Solano Transportation Authority (STA) and the Water Emergency Transportation Authority (WETA) for Ridership Demand Services

Recommendation:

Forward a recommendation to the STA Board to authorize the Executive Director to enter into a funding agreement for ridership demand modeling services paid for by WETA for the Solano Countywide Water Transit Plan & Financial Feasibility Study.

G. One Bay Area Grant (OBAG) 2 Project Reprogramming

Recommendation:

Forward a recommendation to the STA Board to approve the reprogramming of Suisun City's STP shares in the amount of $491,314 from Lotz Way to the Railroad Ave Repaving project.

6. ACTION FINANCIAL ITEMS

A. 2018 State Transportation Improvement Program (STIP) Programming

Janet Adams outlined the programming recommendations based on recent discussions with the City of Fairfield for the Train Station Building, the City of Rio Vista for Construction Phase of the SR 12/Church Rd. Project, and the City of Vacaville for the Jepson Parkway Project for Segment 3. She also noted that STA staff is recommending programming $762,000 for Planning, Programming, and Monitoring (PPM) activities for FYs 2020-21 through 2022-23. Of these funds, MTC will receive $171,000.

Recommendation:

Forward a recommendation to the STA Board to program the 2018 STIP as follows:

1. $6 M to Construction Phase Segment 3 of the Jepson Pkwy Project for FY 2020-21 (City of Vacaville);
2. $9 M to Plans, Specifications & Estimate Phase of the I-80/I-680/SR 12 Interchange Package 2A for FY 2018-19;
3. $5 M to Project Approval/Environmental Document of the SR 37 Project/Mare Island Interchange Project for FY 2018-19;
4. $1.895 M to Construction Phase of the SR 12/Church Rd. Project for FY 2020-21; and
5. $762,000 to Planning, Programming, and Monitoring (PPM) activities for FYs 2020-21 through 2022-23.

On a motion by Shawn Cunningham, and a second by Matt Tuggle, the STA TAC unanimously approved the recommendation. (8 Ayes)

B. Caltrans Sustainable Communities Planning Grant Application

Robert Macaulay reviewed STA's recommendation to submit for a $350,000 Sustainable Communities Planning Grant, based upon the estimated costs assuming that potentially all 8 Solano local jurisdictions will participate in the process. He added that the program is awarding $12.38 million in grants during this cycle. A request for $350,000 is within the guidelines, and appears to be a reasonable request for a suburban area such as Solano County.

Recommendation

Forward a recommendation to the STA Board to authorize the STA Executive Director to submit an application for a $350,000 Caltrans Sustainable Communities Planning Grant to expand and update the Solano Active Transportation Plan.

On a motion by Dave Melilli, and a second by Terrance Davis, the STA TAC unanimously approved the recommendation. (8 Ayes)

C. Transportation Development Act (TDA) Article 3 Funding Requests: Dixon SR2S OBAG Cycle 1 Project and SR2S ATP Cycle 2 Local Match

Cory Peterson reviewed the TDA Article 3 funding requests for two separate projects recommended the Bicycle Advisory Committee (BAC); Dixon SR2S OBAG Cycle 1 Project: Shortfall and Green Bike Lanes and SR2S ATP Cycle 2 Local Match. He noted that there is approximately $300,000 in TDA Article 3 funds available to be allocated for FY 2017-18. He added that approval would allocate $71,448 to the Dixon SR2S OBAG Cycle 1 project, and $85,000 to the SR2S Program for its ATP Cycle 2 Local Match, and this would leave approximately $143,552 in TDA Article 3 funds left to program for this fiscal year and all unused funds will roll over to the next fiscal year.

Recommendation:

Forward a recommendation to the STA Board to allocate the following allocation of TDA Article 3 funds:

1. $51,448 to cover the shortfall of the City of Dixon SR2S OBAG Cycle 1 project;
2. $20,000 to the City of Dixon SR2S OBAG Cycle 1 project to install green paint in the Class II bike lanes; and
3. $85,000 to the SR2S Program for its ATP Cycle 2 Local Match.

On a motion by Jason Riley, and a second by Graham Wadsworth, the STA TAC unanimously approved the recommendation. (8 Ayes)

D. Bay Area Air Quality Management District (BAAQMD) Charge! Grant

Cory Peterson commented that STA staff is proposing to work with the Cities of Fairfield, Suisun City, and Vallejo, as well as Fairfield-Suisun Transit (FAST) and SolTrans to apply for this grant and, if awarded, install the charging stations at five locations within these cities. Each of the five locations are proposed to gain four additional Level 2 charging ports under this grant application. He noted that STA staff would submit the application for the grant on behalf of the agencies, then if awarded, help administer the funds and effort to purchase and install the charging stations. The deadline to apply for the grant is November 3, 2017. He also noted that STA staff has identified a couple of other potential locations for EV charging stations that are not included in the application because they would not qualify for STAF funding.

Recommendation:
Forward a recommendation to the STA Board to authorize STA staff to apply for the Charge! Grant on behalf of the participating local agencies as specified for purchase and installation of EV Charging Stations.

On a motion by Graham Wadsworth, and a second by Tim McSorley, the STA TAC unanimously approved the recommendation. (8 Ayes)

7. ACTION NON FINANCIAL ITEMS

A. None.

8. INFORMATIONAL ITEMS – DISCUSSION

A. Legislative Update
Jayne Bauer provided an update to STA supported bills and the State Transportation Funding (SB 1 program development, the Initiative to repeal SB 1, Cap and Trade program extension, and Amendments to RM 3 legislation).

B. Senate Bill 1 (SB 1) Local Implementation Update
Anthony Adams reported that member agencies are required by the California Transportation Commission (CTC) to submit their Local Streets and Roads project lists to CTC by October 16th, and that CTC has released a template to report their projects. He noted that all cities and counties with a transportation impact fee are eligible to apply for the competitive pot of funding. He identified the two funding pots; $100M for formula distribution to jurisdictions that have voter approved transportation sales tax measures, and $100M for competitive distribution for jurisdictions that have voter approved sales tax measures OR legislatively implemented transportation impact fees. He also identified the four projects that might compete well for Transit and Intercity Rail Capital Program (TIRCP) funding. He noted that a CTC workshop is being held for Northern California jurisdictions on October 2nd.

C. One Bay Area Grant (OBAG) Cycle 2 Implementation
Anthony Adams reviewed the OBAG Cycle 2 funding agreements & resolution of local support and the OBAG Cycle 2 programming and upcoming schedule.

NO DISCUSSION

D. I-80 Ramp Metering Phase 2

E. Abandoned Vehicle Abatement (AVA) Program Fourth Quarter Report

F. Summary of Funding Opportunities

G. Draft Meeting Minutes of STA Board & Advisory Committees

H. STA Board and Advisory Committee Meeting Schedule for Calendar Year 2017

9. FUTURE STA TAC AGENDA ITEMS

A summary of the agenda items for November/December 2017 were presented.

10. ADJOURNMENT

The meeting was adjourned at 2:45 p.m.

The next regular meeting of the Technical Advisory Committee is scheduled at, **1:30 p.m. on Wednesday, November 29, 2017.**

DATE: November 13, 2017
TO: STA TAC
FROM: Brandon Thomson, Transit Mobility Coordinator
Liz Niedziela, Transit Program Manager
RE: Fiscal Year (FY) 2017-18 Transportation Development Act (TDA) Matrix – Revised TDA Claim for City of Rio Vista

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Background:
The Transportation Development Act (TDA) was enacted in 1971 by the California Legislature to ensure a continuing statewide commitment to public transportation. This law imposes a one-quarter-cent tax on retail sales within each county for this purpose. Proceeds are returned to counties based upon the amount of taxes collected, and are apportioned within the county based on population. To obtain TDA funds, local jurisdictions must submit requests to regional transportation agencies that review the claims for consistency with TDA requirements. Solano County agencies submit TDA claims to the Metropolitan Transportation Commission (MTC), the Regional Transportation Planning Agency (RTPA) for the nine Bay Area counties.

Discussion:
TDA funds are shared among agencies to fund joint services such as SolanoExpress intercity bus routes and Intercity Taxi Scrip Program. To clarify how the TDA funds are to be allocated each year among the local agencies and to identify the purpose of the funds, the STA works with the transit operators and prepares an annual TDA matrix. The TDA matrix is approved by the STA Board and submitted to MTC to provide MTC guidance when reviewing individual TDA claims. The TDA matrix for FY 2017-18 will be submitted to the STA Board for approval on December 13, 2017.

The Revised TDA claim for Rio Vista is being brought forward for review.

City of Rio Vista
The City of Rio Vista's initial TDA claim, they requested $411,811 in TDA funds which includes $334,268 in their local TDA funds, $65,000 from the City of Dixon TDA funds, and $12,543 from the SolTrans TDA funds. The $65,000 from the City of Dixon, were to be used for operations. The action authorized Rio Vista to claim $65,000 against Dixon's Intercity Bus Replacement TDA reserves, following Rio Vista's unsuccessful FTA 5310 application. The $12,543 from SolTrans completes swaps of Low Carbon Transit Operations Program (LCTOP) funds from FY 2015-16 and FY 2016-17, and will be used for operating. The City of Rio Vista's TDA funds in the amount of $352,624 will be used for operating, and $18,300 will be used for capital projects. The City of Rio Vista's capital project includes $18,300 for the local match for one vehicle replacement. This claim was approved by the STA Board on May 10, 2017.

For the revised claim, City of Rio Vista is requesting an additional $36,656 for operating expense increasing the total claim amount to $448,467. Rio Vista also identified $90,900 to be used for administration and planning that will be deducted from their operation expense.

The City of Rio Vista's revised TDA Claim will be consistent with the TDA matrix going to the STA Board for approval on December 13, 2017.

Recommendations:

Forward a recommendation to the STA Board to approve the December FY 2017-18 Solano TDA Matrix as shown in Attachment A that includes the revised TDA claim for the City of Rio Vista.

Attachment:

A. City of Rio Vista's TDA Summary

FY 2017-18 TDA Matrix

DRAFT December 2017

Attachment A

14-Nov-17

FY 2017-18

							Paratransit		Local Transit					Intercity												
														FAST	FAST	FAST	SolTrans	SolTrans	SolTrans	FAST	FAST	SolTrans				
AGENCY	**TDA Est from MTC, 7/26/17**	**Projected Carryover 7/26/17**	**Carryover Adjustment 2/28/17**	**Available for Allocation 7/26/17**		**FY2016-17 Allocations / Returns after 6/30/17**	**ADA Subsidized Intercity Taxi**	**Paratransit**	**Dixon Readi-Ride**	**FAST**	**Rio Vista Delta Breeze**	**Vacaville City Coach**	**SolTrans**	**Rt 20**	**Rt 30**	**Rt 40**	**Rt. 78**	**Rt. 80**	**Rt 85**	**Rt. 90**	**Intercity Subtotal**	**Intercity Subtotal**	**STA Planning**	**Other / Swaps**	**Transit Capital**	**Total**	**Balance**
	(1)	(1)	(2)	(1)		(3)	(4)			(4a)	(5)										(6)	(6)	(7)	(8)	(9)		
Dixon	776,613	1,329,574		**2,106,187**			5,000		446,537					$ 4,911	$ 112,848	$ 3,705	$ 8,685	$ 2,982	$ 6,020	$ 3,026	$ 124,491	$ 17,687	$ 22,700	$ 65,000	290,000	$ 971,415	1,134,772
Fairfield	4,535,754	1,033,685		**5,569,439**			40,000	763,813		62,607				$ 96,554	$ 135,088	$ 167,970	$ 40,714	$ 25,114	$ 107,924	$ 93,684	$ 493,295	$ 173,752	$ 132,533		2,141,959	$ 3,807,959	1,761,480
Rio Vista	332,122	405,377		**737,499**			5,000				352,624			$ -	$ -	$ -	$ -	$ -	$ -	$ -	0	$ -	$ 9,699	$ 65,000	$ 18,300	$ 450,623	286,876
Suisun City	1,171,040	35,351		**1,206,391**			0	134,790		694,198				$ 17,216	$ 37,135	$ 58,085	$ 9,104	$ 6,059	$ 27,599	$ 33,897	$ 146,333	$ 42,761	$ 46,463	$ 141,845		$ 1,206,391	0
Vacaville	3,838,959	7,842,488		**11,681,447**		-7,147	70,000	475,291				905,260		$ 139,981	$ 192,801	$ 131,387	$ 30,552	$ 16,440	$ 35,576	$ 31,455	$ 495,624	$ 82,568	$ 112,196	$ 200,000	2,119,000	$ 4,452,792	7,228,655
Vallejo/Benicia (SolTrans)	5,974,057	4,029,305		**10,003,362**			85,000	1,346,163					2,472,761	$ 31,729	$ 90,533	$ 31,941	$ 541,986	$ 266,902	$ 291,623	$ 12,772	$ 166,976	$ 1,100,511	$ 174,530	$ 186,830	3,025,171	$ 8,557,941	1,445,421
Solano County	784,315	1,303,344		**2,087,659**			512,650							$ 17,335	$ 34,895	$ 23,647	$ 36,799	$ 13,841	$ 23,727	$ 8,219	$ 84,095	$ 74,367	$ 22,925			$ 694,037	1,393,622
Total	**17,412,860**	**15,979,124**	**0**	**33,391,984**		**-7,147**	**717,650**	**2,720,057**	**446,537**	**756,805**	**352,624**	**905,260**	**2,472,761**	$ 307,726	$ 603,300	$ 416,735	$ 667,839	$ 331,337	$ 492,470	183,053	$ 1,510,814	$ 1,491,645	$ 521,046	$ 658,675	$ 7,594,430	$ 20,141,158	13,250,826

NOTES:
Background colors on Rt. Headings denote operator of intercity route
Background colors denote which jurisdiction is claiming funds

(1) MTC February 22, 2017 Fund Estimate; Reso 4268; columns I, H, J
(2) Correction from MTC on 2/28/17 for Solano County apportionment mistakenly attirbuted to the Vallejo apportionment; correction has been included in 7/26/17 Fund Estimate Projected Carryover amount.
(3) Vacaville return of $7,146.65, per MTC 4/18/17.$180,000 route planning allocation included in Projected Carryover.
(4) STA will be claimant. Amounts subject to change. $40,000 will go to Faith In Action.

(4a) Using the claim amounts provided by Fairfield would result in a negative balance of $11,618 for Suisun City due to reduction in Projected Carryover in 7/26/17 MTC Fund Estimate. MTC will not allocate full claim amount, as apportionment jurisdiction amounts cannot be negative in MTC's system. FAST claim amount was approved by City of Fairfield prior to revised fund estimate. This TDA matrix reduces the amount claimed under Suisun City for FAST's Local Transit by $11,618 and increases the amount claimed under City of Fairfield by $11,618 to provide full TDA funding to FAST without a negative balance for Suisun City's apportionment.
(5) Includes flex routes, paratransit, local subsidized taxi, and administration and planning
(6) Consistent with FY2017-18 Intercity Transit Funding Agreement and FY 2015-16 Reconciliation
(7) Claimed by STA from all agencies per formula; presented to STA Board on May 10, 2017. Suisun City amount includes $12,240 unclaimed from FY16-17 and $34,223 for FY17-18.
(8) Suisun City item to be claimed by STA for Suisun Amtrak station maintenance (includes FY16-17 $50,000 unclaimed and FY17-18 $50,000 and $41,845 return). STA will use $63,548 for STAF Loan Repayment for Fairground Transit Facility Study (9). SolTrans item includes LCTOP fund swap with Dixon ($30,216), Rio Vista ($12,543), and Vacaville ($144,070) for FY15-16 and FY16-17. Dixon item to be claimed by Rio Vista, per 10-May-17 STA Board approval of Rio Vista claiming $65,000 against Dixon's Intercity Bus Replacement TDA reserves, based on Rio Vista's unsuccessful FTA 5310 application. Rio Vista item to be claimed by STA for repayment of STAF loan authorized 11-Feb-15. Vacaville item to be claimed by Vacaville as TDA Section 4, Planning & Administration in the amount of $200,000 for marketing funds and new route promotion.

(9) Transit Capital purchases include bus purchases, maintenance facilities, etc.

SOLANO COUNTY POPULATION ESTIMATES

DRAFT
17-Apr-17

	Values for FY15-16 Calculations[1]				Values for FY17-18 Calculations[2]			
Solano County	**DOF Value**	**Share**	**Without County Uninc. And without Rio Vista**	**Share**	**DOF Value**	**Share**	**Without County Uninc. And without Rio Vista**	**Share**
Benicia	27,689	6.4%	27,689	6.89%	27,501	6.4%	27,501	6.82%
Dixon	19,158	4.5%	19,158	4.77%	19,018	4.4%	19,018	4.72%
Fairfield	111,891	26.0%	111,891	27.83%	112,637	26.1%	112,637	27.93%
Rio Vista	8,193	1.9%	0	0.00%	8,601	2.0%	0	0.00%
Suisun City	28,888	6.7%	28,888	7.19%	29,091	6.7%	29,091	7.21%
Vacaville	94,702	22.0%	94,702	23.56%	97,667	22.6%	97,667	24.22%
Vallejo	119,683	27.9%	119,683	29.77%	117,322	27.2%	117,322	29.10%
Balance Of County	19,348	4.5%	0	0.00%	19,661	4.6%	0	0.00%
Incorporated	410,204	95.5%	402,011	100.00%	411,837	95.4%	403,236	100.00%
County Total	429,552	100.0%	402,011	100.00%	431,498	100.0%	403,236	100.00%

1. State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2015, with 2010 Census Benchmark. Sacramento, California, May 2015

2. State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2011-2016, with 2010 Census Benchmark. Sacramento, California, May 2016

SOLANO TRANSPORTATION AUTHORITY
SOLANO EXPRESS COST SHARING
RIDERSHIP by JURISDICTION OF RESIDENCE

DRAFT
17-Apr-17

Values for FY15-16 Calculations[1]

WITHOUT 1) OUTSIDE COUNTY, 2) RIO VISTA, AND 3) UNINCORPORATED AREA

	Route 78		Route 20		Route 30		Route 40		Route 80		Route 85		Route 90	
	336		**160**		**126**		**86**		**1320**		**438**		**366**	
	Ridership	Percent	Ridership	Percent	Ridership	Percent	Ridership	Percent	Ridership	Percent	Ridership	Percent	Ridership	Percent
Benicia	80	43.19%	1	0.93%	0	0.00%	1	1.19%	23	2.66%	4	1.71%	0	0.00%
Dixon	1	0.54%	1	0.93%	26	23.64%	0	0.00%	0	0.00%	1	0.43%	4	1.01%
Fairfield	2	1.08%	37	34.58%	25	22.73%	39	46.43%	25	2.89%	51	21.79%	238	59.95%
Suisun City	0	0.00%	6	5.61%	7	6.36%	14	16.67%	5	0.58%	13	5.56%	89	22.42%
Vacaville	0	0.00%	58	54.21%	40	36.36%	30	35.71%	3	0.35%	8	3.42%	64	16.12%
Vallejo	102	55.18%	4	3.74%	12	10.91%	0	0.00%	808	93.52%	157	67.09%	2	0.50%
Total	**185**	100%	**107**	100%	**110**	100%	**84**	100%	**864**	100%	**234**	100%	**397**	100%
Rio Vista	0		0		0		0		0		0		1	
Balance of County	0		0		0		0		0		0		0	
Napa County	0		1		2		0		50		3		3	
Outside Solano Co	24		2		10		14		132		19		33	
Unincorp. Solano	0		1		0		0		2		0		0	
Total	**209**		**111**		**122**		**98**		**1,048**		**256**		**434**	

Values for FY17-18 Calculations[1]

WITHOUT 1) OUTSIDE COUNTY, 2) RIO VISTA, AND 3) UNINCORPORATED AREA

	Route 78		Route 20		Route 30		Route 40		Route 80		Route 85		Route 90	
	209		**111**		**122**		**98**		**1049**		**256**		**434**	
	Ridership	Percent	Ridership	Percent	Ridership	Percent	Ridership	Percent	Ridership	Percent	Ridership	Percent	Ridership	Percent
Benicia	80	43.19%	1	0.93%	0	0.00%	1	1.19%	23	2.66%	4	1.71%	0	0.00%
Dixon	1	0.54%	1	0.93%	26	23.64%	0	0.00%	0	0.00%	1	0.43%	4	1.01%
Fairfield	2	1.08%	37	34.58%	25	22.73%	39	46.43%	25	2.89%	51	21.79%	238	59.95%
Suisun City	0	0.00%	6	5.61%	7	6.36%	14	16.67%	5	0.58%	13	5.56%	89	22.42%
Vacaville	0	0.00%	58	54.21%	40	36.36%	30	35.71%	3	0.35%	8	3.42%	64	16.12%
Vallejo	102	55.18%	4	3.74%	12	10.91%	0	0.00%	808	93.52%	157	67.09%	2	0.50%
Total	**185**	100%	**107**	100%	**110**	100%	**84**	100%	**864**	100%	**234**	100%	**397**	100%
Rio Vista	0		0		0		0		0		0		1	
Balance of County	0		0		0		0		0		0		0	
Napa County	0		1		2		0		50		3		3	
Outside Solano Co	24		2		10		14		132		19		33	
Unincorp. Solano	0		1		0		0		2		0		0	
Total	**209**		**111**		**122**		**98**		**1,048**		**256**		**434**	

1. 2014 Solano Express Intercity Ridership Study, June 25, 2014, Figure 43. City of Residence - Individual Intercity

SOLANO TRANSPORTATION AUTHORITY
FY 15-16 SOLANO EXPRESS COST SHARING RECONCILIATION
Based on FY 2015-16 Planned vs Actual Cost[1]

DRAFT
17-Apr-17

		Route 78		Route 20		Route 30		Route 40		Route 80		Route 85		Route 90		Total	
Cost & Subsidy		Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Gross Cost		1,183,409	1,374,399	425,588	381,611	717,275	712,831	796,379	855,273	2,454,456	2,291,394	947,487	909,536	2,316,899	2,039,917	8,841,493	8,564,962
Fares		274,681	312,354	140,516	83,270	235,719	154,500	239,310	176,271	1,739,739	1,668,577	303,376	299,989	1,057,575	1,108,382	3,990,915	3,803,342
Sec 5311						100,000	100,000					40,000	40,000			140,000	140,000
Sec 5316 JARC						28,020	28,020									28,020	28,020
RM-2		510,226	643,726					184,072	328,072	511,873	561,873	201,741	201,741	526,963	545,469	1,934,875	2,280,881
STAF Lifeline				82,713	82,713			-				244,162	247,467			326,875	330,180
Subtotal, Net Subsidy		**398,502**	**418,319**	**202,359**	**215,629**	**353,536**	**430,312**	**372,997**	**350,931**	**202,844**	**60,944**	**158,208**	**120,339**	**732,361**	**386,065**	**2,420,808**	**1,982,538**
County Subsidy Share	4.50%	24,679	31,633	12,532	16,306	21,894	32,540	23,099	26,537	12,562	4,609	9,798	9,100	45,355	29,194	149,919	149,919
County Cap @ $149,919	130.39%																
Balance to be Shared (Required Subsidy)	167.89%	**373,823**	**386,686**	**189,827**	**199,323**	**331,642**	**397,772**	**349,898**	**324,393**	**190,282**	**56,335**	**148,410**	**111,239**	**687,007**	**356,871**	**2,270,889**	**1,832,619**
Population Shares																	
at 20% of Required Subsidy		74,765	77,337	37,965	39,865	66,328	79,554	69,980	64,879	38,056	11,267	29,682	22,248	137,401	71,374	454,178	366,524
Benicia	6.89%	5,150	5,327	2,615	2,746	4,568	5,479	4,820	4,469	2,621	776	2,044	1,532	9,464	4,916	31,282	25,245
Dixon	4.77%	3,563	3,686	1,809	1,900	3,161	3,791	3,335	3,092	1,814	537	1,415	1,060	6,548	3,401	21,644	17,467
Fairfield	27.83%	20,809	21,525	10,567	11,095	18,461	22,142	19,477	18,058	10,592	3,136	8,261	6,192	38,243	19,865	126,410	102,014
Rio Vista	0.00%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Suisun City	7.19%	5,372	5,557	2,728	2,865	4,766	5,717	5,029	4,662	2,735	810	2,133	1,599	9,873	5,129	32,637	26,338
Vacaville	23.56%	17,612	18,218	8,944	9,391	15,625	18,741	16,485	15,284	8,965	2,654	6,992	5,241	32,368	16,814	106,991	86,342
Vallejo	29.77%	22,258	23,024	11,303	11,868	19,747	23,684	20,834	19,315	11,330	3,354	8,837	6,623	40,906	21,249	135,214	109,118
Balance of County	0.00%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Check Total	100.00%	74,765	77,337	37,965	39,865	66,328	79,554	69,980	64,879	38,056	11,267	29,682	22,248	137,401	71,374	454,178	366,524
Ridership by Residence																	
at 80% of Required Subsidy		299,058	309,349	151,862	159,458	265,314	318,217	279,918	259,515	152,226	45,068	118,728	88,991	549,605	285,497	1,816,711	1,466,096
Benicia	43.19%	129,174	133,619	0.93% 1,419	1,490	0.00% 0	0	1.19% 3,332	3,089	2.66% 4,052	1,200	1.71% 2,030	1,521	0.00% 0	0	140,007	140,919
Dixon	0.54%	1,618	1,674	0.93% 1,419	1,490	23.64% 62,711	75,215	0.00% 0	0	0.00% 0	0	0.43% 507	380	1.01% 5,538	2,877	71,793	81,636
Fairfield	1.08%	3,236	3,347	34.58% 52,513	55,140	22.73% 60,299	72,322	46.43% 129,962	120,489	2.89% 4,405	1,304	21.79% 25,877	19,396	59.95% 329,486	171,154	605,777	443,152
Rio Vista	0.00%	0	0	0.00% 0	0	0.00% 0	0	0.00% 0	0	0.00% 0	0	0.00% 0	0	0.00% 0	0	0	0
Suisun City	0.00%	0	0	5.61% 8,516	8,942	6.36% 16,884	20,250	16.67% 46,653	43,252	0.58% 881	261	5.56% 6,596	4,944	22.42% 123,211	64,003	202,740	141,652
Vacaville	0.00%	0	0	54.21% 82,318	86,435	36.36% 96,478	115,715	35.71% 99,971	92,684	0.35% 529	156	3.42% 4,059	3,042	16.12% 88,601	46,025	371,955	344,058
Vallejo	55.18%	165,031	170,709	3.74% 5,677	5,961	10.91% 28,943	34,715	0.00% 0	0	93.52% 142,359	42,147	67.09% 79,660	59,708	0.50% 2,769	1,438	424,439	314,678
Balance of County	0.00%	0	0	0.00% 0	0	0.00% 0	0	0.00% 0	0	0.00% 0	0	0.00% 0	0	0.00% 0	0	0	0
Check Total	100.00%	299,058	309,349	100.00% 151,862	159,458	100.00% 265,314	318,217	100.00% 279,918	259,515	100.00% 152,226	45,068	100.00% 118,728	88,991	100.00% 549,605	285,497	1,816,711	1,466,096
Total Subsidy with County Share		**398,502**	**418,319**	**202,359**	**215,629**	**353,536**	**430,312**	**372,997**	**350,931**	**202,844**	**60,944**	**158,208**	**120,339**	**732,361**	**386,065**	**2,420,808**	**1,982,538**
Total Subsidy by Jurisdiction																**0**	**0**
Benicia		**134,323**	**138,945**	**4,034**	**4,236**	**4,568**	**5,479**	**8,152**	**7,558**	**6,673**	**1,976**	**4,074**	**3,054**	**9,464**	**4,916**	171,289	166,164
Dixon		**5,181**	**5,359**	**3,229**	**3,390**	**65,871**	**79,006**	**3,335**	**3,092**	**1,814**	**537**	**1,922**	**1,441**	**12,086**	**6,278**	93,437	99,103
Fairfield		**24,045**	**24,872**	**63,080**	**66,235**	**78,760**	**94,464**	**149,439**	**138,547**	**14,997**	**4,440**	**34,138**	**25,588**	**367,729**	**191,020**	732,188	545,166
Rio Vista		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0
Suisun City		**5,372**	**5,557**	**11,244**	**11,806**	**21,650**	**25,967**	**51,682**	**47,915**	**3,616**	**1,070**	**8,729**	**6,543**	**133,085**	**69,132**	235,377	167,990
Vacaville		**17,612**	**18,218**	**91,261**	**95,826**	**112,103**	**134,456**	**116,456**	**107,967**	**9,494**	**2,811**	**11,051**	**8,283**	**120,969**	**62,838**	478,946	430,400
Vallejo		**187,289**	**193,734**	**16,980**	**17,829**	**48,690**	**58,399**	**20,834**	**19,315**	**153,689**	**45,501**	**88,496**	**66,331**	**43,675**	**22,687**	559,652	423,797
Balance of County		**24,679**	**31,633**	**12,532**	**16,306**	**21,894**	**32,540**	**23,099**	**26,537**	**12,562**	**4,609**	**9,798**	**9,100**	**45,355**	**29,194**	149,919	149,919
Check Total		398,502	418,319	202,359	215,629	353,536	430,312	372,997	350,931	202,844	60,944	158,208	120,339	732,361	386,065	2,420,808	1,982,538

Notes:
1. SOURCES for Cost & Subsidy data:
FY15-16 Planned values for Routes 78, 80, & 85: *SOLTRANS - Cost Allocation Model - FY 15-16 Budget.xls*
FY15-16 Planned values for Routes 20, 30, 40, & 90: *FF - Cost Allocation Model - Estimated FY 15-16 April 2015.xls* .
FY15-16 Actual values for Routes 78, 80, & 85: *SOLTRANS - Cost Allocation Model - FY 15-16 Actuals thru 6-30-16 FINAL.xls*
FY15-16 Actual values for Routes 20, 30, 40, & 90: *FF - Cost Allocation Model - FY 15-16-RECONCILED . xls*

SOLANO TRANSPORTATION AUTHORITY
SOLANO EXPRESS COST SHARING
RECONCILIATION OF FY 15-16 SUBSIDIES BY JURISDICTION
SUMMARY

DRAFT
17-Apr-17

	Amount Owed to FAST					Amount Owed to SolTrans			
	for Rt 20	for Rt 30	for Rt 40	for Rt 90	**TOTAL**	for Rt 78	for Rt 80	for Rt 85	**TOTAL**
Benicia	202	911	-594	-4,548	**-4,029**	4,622	-4,698	-1,020	**-1,096**
Dixon	162	13,135	-243	-5,808	**7,246**	178	-1,277	-481	**-1,580**
Fairfield	3,155	15,705	-10,893	-176,709	**-168,742**	827	-10,557	-8,550	**-18,280**
Rio Vista	0	0	0	0	**0**	0	0	0	**0**
Suisun City	562	4,317	-3,767	-63,953	**-62,841**	185	-2,545	-2,186	**-4,547**
Vacaville	4,565	22,353	-8,489	-58,131	**-39,701**	606	-6,683	-2,768	**-8,845**
Vallejo	849	9,709	-1,519	-20,988	**-11,948**	6,445	-108,187	-22,165	**-123,908**
Balance of County	3,774	10,646	3,438	-16,161	**1,697**	6,954	-7,953	-698	**-1,697**
TOTAL	**13,270**	**76,775**	**-22,067**	**-346,296**	**-278,318**	**19,817**	**-141,900**	**-37,869**	**-159,952**

Notes:
Negative amounts are credits to jurisdiction.
Positive amounts are funds owed to Solano Express operators.

SOLANO TRANSPORTATION AUTHORITY
SOLANO EXPRESS COST SHARING
FY 2017-18 Budget[1]

DRAFT
17-May-17

		Route 78		Route 20		Route 30		Route 40		Routes 80 & 82		Route 85		Route 90		Total
Cost & Subsidy																
Gross Cost		1,773,801		424,792		793,316		1,074,722		3,031,685		1,119,273		2,358,925		10,576,514
Fares		394,079		88,029		138,771		202,821		1,950,449		237,194		1,192,975		4,204,318
Sec 5311						100,000										100,000
Sec 5316 JARC				42,306		28,020										70,326
RM-2		731,700						433,100		608,000		201,741		636,600		2,611,141
STAF Lifeline												150,000				150,000
Subtotal, Net Subsidy		**648,022**		**294,456**		**526,525**		**438,801**		**473,237**		**530,338**		**529,349**		**3,440,729**
County Subsidy Share		29844.48798		13,561		24,249		20,209		21,795		24,425		24,379		158,462
County Cap @ $158,462																
Balance to be Shared (Required Subsidy)		**618,177**		**280,895**		**502,276**		**418,592**		**451,442**		**505,914**		**504,970**		**3,282,267**
Population Shares																
at 20% of Required Subsidy		123,635		56,179		100,455		83,718		90,288		101,183		100,994		656,453
Benicia	6.82%	8,432		3,831		6,851		5,710		6,158		6,901		6,888		44,771
Dixon	4.72%	5,831		2,650		4,738		3,948		4,258		4,772		4,763		30,961
Fairfield	27.93%	34,535		15,693		28,060		23,385		25,221		28,264		28,211		183,369
Rio Vista	0.00%	-		-		-		-		-		-		-		-
Suisun City	7.21%	8,920		4,053		7,247		6,040		6,514		7,300		7,286		47,359
Vacaville	24.22%	29,945		13,607		24,331		20,277		21,869		24,507		24,462		158,998
Vallejo	29.10%	35,972		16,345		29,228		24,358		26,270		29,439		29,384		190,996
Balance of County	0.00%	-		-		-		-		-		-		-		-
Check Total	100.00%	123,635		56,179		100,455		83,718		90,288		101,183		100,994		656,453
Ridership by Residence																
at 80% of Required Subsidy		494,542		224,716		401,821		334,874		361,154		404,731		403,976		2,625,814
Benicia		43.19%	213,610	0.93%	2,100	0.00%	-	1.19%	3,987	2.66%	9,614	1.71%	6,918	0.00%	-	236,229
Dixon		0.54%	2,676	0.93%	2,100	23.64%	94,976	0.00%	-	0.00%	-	0.43%	1,730	1.01%	4,070	105,551
Fairfield		1.08%	5,351	34.58%	77,706	22.73%	91,323	46.43%	155,477	2.89%	10,450	21.79%	88,211	59.95%	242,182	670,700
Rio Vista		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Suisun City		0.00%	-	5.61%	12,601	6.36%	25,570	16.67%	55,812	0.58%	2,090	5.56%	22,485	22.42%	90,564	209,123
Vacaville		0.00%	-	54.21%	121,809	36.36%	146,117	35.71%	119,598	0.35%	1,254	3.42%	13,837	16.12%	65,125	467,739
Vallejo		55.18%	272,905	3.74%	8,401	10.91%	43,835	0.00%	-	93.52%	337,745	67.09%	271,550	0.50%	2,035	936,472
Balance of County		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Check Total		1	494,542	1	224,716	1	401,821	1	334,874	1	361,154	1	404,731	1	403,976	2,625,814
																FY 17-18 Due (Gross)
Total Subsidy			**648,022**		**294,456**		**526,525**		**438,801**		**473,237**		**530,338**		**529,349**	**3,440,729**
Benicia			222,042		5,932		6,851		9,696		15,772		13,819		6,888	**281,000**
Dixon			8,507		4,750		99,714		3,948		4,258		6,502		8,834	**136,512**
Fairfield			39,887		93,398		119,383		178,862		35,671		116,474		270,393	**854,069**
Rio Vista			-		-		-		-		-		-		-	**-**
Suisun City			8,920		16,654		32,818		61,852		8,604		29,785		97,850	**256,482**
Vacaville			29,945		135,416		170,448		139,875		23,123		38,344		89,586	**626,737**
Vallejo			308,877		24,746		73,063		24,358		364,015		300,990		31,419	**1,127,468**
Balance of County			29,844		13,561		24,249		20,209		21,795		24,425		24,379	**158,462**
Check Total			648,022		294,456		526,525		438,801		473,237		530,338		529,349	3,440,729
Reconcilation with FY 15-16																**FY 17-18 Due (net)**
Benicia		4,622	222,042	202	5,932	911	6,851	(594)	9,696	(4,698)	15,772	(1,020)	13,819	(4,548)	6,888	**275,875**
Dixon		178	8,507	162	4,750	13,135	99,714	(243)	3,948	(1,277)	4,258	(481)	6,502	(5,808)	8,834	**142,178**
Fairfield		827	39,887	3,155	93,398	15,705	119,383	(10,893)	178,862	(10,557)	35,671	(8,550)	116,474	(176,709)	270,393	**667,047**
Rio Vista		-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Suisun City		185	8,920	562	16,654	4,317	32,818	(3,767)	61,852	(2,545)	8,604	(2,186)	29,785	(63,953)	97,850	**189,095**
Vacaville		606	29,945	4,565	135,416	22,353	170,448	(8,489)	139,875	(6,683)	23,123	(2,768)	38,344	(58,131)	89,586	**578,192**
Vallejo		6,445	308,877	849	24,746	9,709	73,063	(1,519)	24,358	(108,187)	364,015	(22,165)	300,990	(20,988)	31,419	**991,612**
Balance of County		6,954	29,844	3,774	13,561	10,646	24,249	3,438	20,209	(7,953)	21,795	(698)	24,425	(16,161)	24,379	**158,462**
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Check Total		19,817	648,022	13,270	294,456	76,775	526,525	(22,067)	438,801	(141,900)	473,237	(37,869)	530,338	(346,296)	529,349	3,002,459
Net Due By Route			667,839		307,726		603,300		416,735		331,337		492,470		183,053	

Notes:
1. SOURCES for Cost & Subsidy data:
FY17-18 Planned values for Routes 78, 80, 82 & 85: *SOLTRANS - Cost Allocation Model - FY 17-18 Budget_4-17-17.xls*
FY17-18 Planned values for Routes 20, 30, 40, & 90: *FF - Cost Allocation Model - FY 17-18-FINAL.xls*

SOLANO TRANSPORTATION AUTHORITY
SOLANO EXPRESS COST SHARING
RECONCILIATION OF FY 15-16 SUBSIDIES BY JURISDICTION PLUS AMOUNT OWED FOR 17-18
SUMMARY

DRAFT
17-May-17

	Amount Owed to FAST					Amount Owed to SolTrans			
	for Rt 20	for Rt 30	for Rt 40	for Rt 90	**TOTAL**	for Rt 78	for Rt 80	for Rt 85	**TOTAL**
Benicia	6,133	7,762	9,102	2,340	**25,338**	226,664	11,074	12,799	**250,537**
Dixon	4,911	112,848	3,705	3,026	**124,491**	8,685	2,982	6,020	**17,687**
Fairfield	96,554	135,088	167,970	93,684	**493,295**	40,714	25,114	107,924	**173,752**
Rio Vista	0	0	0	0	**0**	0	0	0	**0**
Suisun City	17,216	37,135	58,085	33,897	**146,333**	9,104	6,059	27,599	**42,761**
Vacaville	139,981	192,801	131,387	31,455	**495,624**	30,552	16,440	35,576	**82,568**
Vallejo	25,595	82,771	22,839	10,432	**141,638**	315,322	255,828	278,825	**849,974**
Balance of County	17,335	34,895	23,647	8,219	**84,095**	36,799	13,841	23,727	**74,367**
TOTAL	**307,726**	**603,300**	**416,735**	**183,053**	**1,510,814**	**667,839**	**331,337**	**492,470**	**1,491,645**

SOLANO TRANSPORTATION AUTHORITY
SOLANO EXPRESS COST SHARING
COMPARISON OF TOTAL SUBSIDIES PAID IN FY 2016-17 TO FY 2017-18
SUMMARY

DRAFT
17-May-17

	FY 16-17 TDA Matrix				FY 17-18 TDA Matrix		
	Amount Owed to FAST	**Amount Owed to SolTrans**	**TOTAL**		**Amount Owed to FAST**	**Amount Owed to SolTrans**	**TOTAL**
Benicia	26,669	125,966	**152,635**		25,338	250,537	**275,875**
Dixon	106,055	6,990	**113,045**		124,491	17,687	**142,178**
Fairfield	568,772	45,834	**614,606**		493,295	173,752	**667,047**
Rio Vista	0	0	**0**		0	0	**0**
Suisun City	182,421	11,868	**194,289**		146,333	42,761	**189,095**
Vacaville	480,811	23,529	**504,340**		495,624	82,568	**578,192**
Vallejo	139,282	238,352	**377,634**		141,638	849,974	**991,612**
Balance of County	114,027	39,810	**153,838**		84,095	74,367	**158,462**
TOTAL	**1,618,038**	**492,350**	**2,110,387**		**1,510,814**	**1,491,645**	**3,002,459**

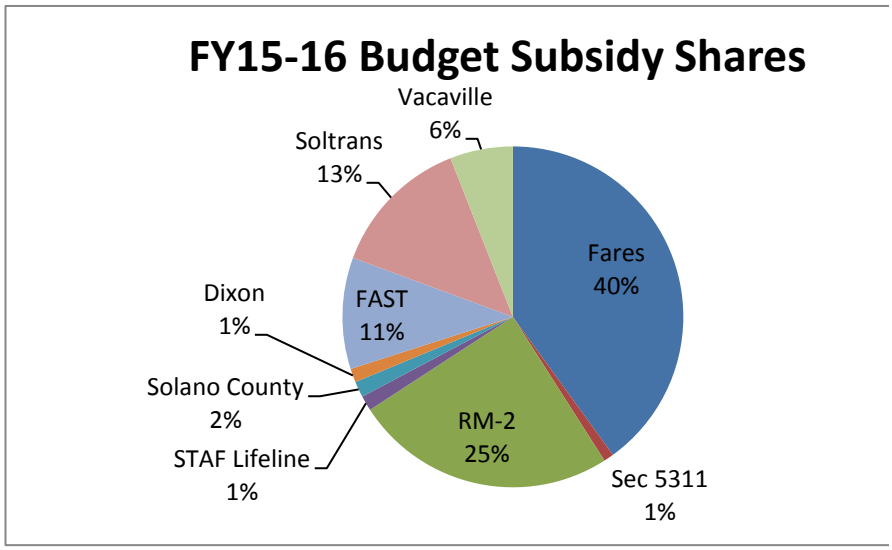
Notes:

FY 16-17 TDA Matrix: amounts each jurisdiction paid to Solano Express operators in FY 16-17 (combination of FY 14-15 reconciliation and FY 16-17 budget)

FY 17-18 TDA Matrix: amounts each jurisdiction will pay to Solano Express operators in FY 17-18 (combination of FY 15-16 reconciliation and FY 17-18 budget)

FY15-16 Budget Subsidy Shares

Source		Amount
Fares	$	4,204,318
Sec 5311	$	100,000
RM-2	$	2,611,141
STAF Lifeline	$	150,000
Solano County	$	158,462
Dixon	$	136,512
FAST	$	1,110,550
Soltrans	$	1,408,467
Vacaville	$	626,737
Total	$	10,506,188



Local Funding		
Solano County	$	158,462
Dixon	$	136,512
FAST	$	1,110,550
Soltrans	$	1,408,467
Vacaville	$	626,737
Subtotal	*$*	*3,440,729*

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DATE: November 13, 2017
TO: STA TAC
FROM: Lloyd Nadal, Program Services Division Manager
Sean Hurley, Employer Outreach Coordinator
RE: First/Last Mile Pilot - Suisun Train Station/Solano Business Park/Green Valley

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Background:

In November 2016, STA met with Solano County Health and Social Services (SCHSS) and identified a transit service gap between the County office located within the Solano Business Park and the Suisun/Fairfield Train Station. The Solano Business Park is located south of Highway 12 and contains over 70 employers with one of the largest employers being SCHSS. This first and last mile gap was accentuated by employees that have purchased "beater" cars in which they leave at the train station as a solution to close the last two and a half miles between the two locations. Recognizing this issue, STA staff worked with SCHSS and other Solano Business Park employers to assess the need and opportunities for first/last mile solutions that would provide reliable transportation alternatives between the region's major rail hub and their place of work.

In May 2017, STA entered into a six-month contract with Lyft and launched the "Solano Mobility Ride" First/Last Mile Pilot Project which was approved by the STA Board at the May Board Meeting. Under this new partnership, Lyft would help Solano Business Park employees connect from the Suisun/Fairfield Train Station to their employers, 2-5 miles away. Interested employees would be able to sign up for the pilot program by calling or emailing STA staff in order to receive a discount code from Lyft that would allow for a $2 or $3 subsidized ride. Due to potential cost concerns, the maximum number of employees participating in the pilot was 40 and would come from within the following companies/agencies:

1. Anheuser-Busch (Budweiser)
2. Fairfield-Suisun Sewer District
3. Jelly Belly Factory
4. NorthBay Center for Primary Care
5. Partnership Health Plan
6. Solano County Health and Social Services

Discussion:

As of November 2017, Partnership Health, Northbay Health and SCHSS have a combined thirteen employees registered for the pilot. Between May 1st and September 30th (5 months), there have been 139 trips taken. The total subsidized cost for these trips was $1,114.06 (Attachment A). STA staff is recommending to continue the pilot to June 30, 2018 and expand the service area to include more employers. STA staff has identified three strategies during this six month pilot expansion that will be incorporated to:

1. Extend the current service area to an eight mile radius surrounding the Fairfield/Suisun Train Station
2. Offer the pilot to the Benicia Industrial Park employers who use the Benicia Bus Hub;

3. Offer the pilot to Genentech and other employers in the Vaca Valley area using the new Fairfield/Vacaville Train Station.

The goal over the next six months is to have forty participants registered and to maintain the service for one year.

Fiscal Impact:

For the six-month pilot project, there was $100,000 of Transportation Funds for Clean Air (TFCA) from the Bay Area Air Quality Management District (BAAQMD) to fund this program. This was estimated to fund 40 pilot participants during the six month pilot. There are $98,885.84 remaining funds available to use as of September 30, 2017.

Recommendation:

Forward a recommendation to the STA Board to:

1. Extend the First/Last Mile Pilot until June 30, 2017; and
2. Expand the eligible employers to the businesses located within the Solano Business Park.

Attachment:

A. First Last Mile Pilot Statistics from May 1st through September 30th

First Last Mile Pilot Statistics from May 1st through September 30th

Number of Participants	13
Number of Employers	6
Total Trips Taken	139
Actual Trip Costs	$1,480.26
Subsidy Amount	$1,114.06
Fare Box Recovery Ratio	24%

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DATE: November 28, 2017
TO: STA TAC
FROM: Ronald Grassi, Director of Programs
RE: Intercity Paratransit/Taxi Scrip Program – Phase II, Update

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Background:

On February 1, 2015, management of the Solano Intercity Taxi Scrip Program transitioned to the Solano Transportation Authority (STA) from Solano County. The Solano Intercity Taxi Program continues to be a popular program, with nearly all booklets available selling out each month. Phase II of this program will seek to incorporate non-ambulatory riders as the taxi companies, operating within Solano County, have 13 vehicles that can fulfill this need. Additionally, Nelson\Nygaard Consulting Associates have analyzed options for a new service delivery model that are being proposed in order to achieve long-term program sustainability. Implementing a new service model would also allow for the incorporation of non-ambulatory passengers to the Intercity Taxi Scrip program.

In the attached memo, Nelson\Nygaard Consulting Associates dated May 12, 2015 provides a brief history of the Intercity Taxi Program and present ridership patterns and cost (Attachment A). As part of a study conducted when the transition of administrative responsibility transferred from Solano County, one of STA's key program objectives was to ensure the long-term sustainability of the Solano Intercity Taxi Program and address other issues associated with the current program. A variety of options was presented for consideration by the Consortium in order to ensure the long-term sustainability of the Solano Intercity Taxi Program.

In the attached memo Nelson\Nygaard discuss four service delivery options:

1. Modified taxi scrip
2. Taxicards
3. Centralized reservations
4. Dedicated fleet

Of these four options, Option 1 Modified Taxi Scrip, and Option 4, service using a dedicated fleet (similar to the old Solano Paratransit model), are not sustainable within existing resources and do not address the issue of long-term sustainability. The Modified Taxi Scrip model does not adequately address accessibility for non-ambulatory riders, does not create effective options for controlling costs, and does nothing to reduce the administrative burden of the existing program. A service using a dedicated fleet would not be financially feasible.

Of the two feasible options, Option 2, Taxicards, and Option 3, Centralized Reservations, Nelson\Nygaard recommended the Centralized Reservations option. A Centralized Reservations model would:

- Allow ambulatory riders and wheelchair users to use the same reservations and payment system

- Reduce the administrative burden on transit operators.
- Create better accountability and reduce opportunities for misuse of the program.
- Establish a more convenient method for customers to pay for trips.
- Create multiple options for cost containment such as trip grouping, trip priorities or limits, and multi-tiered fares or surcharges.

In comparison, a system based on taxicards was expected to create separate and potentially unequal services for ambulatory and wheelchair users, add significant cost for equipment in taxicabs as well as a need to keep this equipment operating, and involve substantial upfront cost to set up the new system. In addition, it was thought that only one vendor is available to provide and administer the taxicard system.

On March 14, 2017, the STA Board approved implementing a centralized reservation model for the Intercity Paratransit/Taxi Scrip Program.

Discussion:

The goal to implement an equivalent system by which all ADA eligible passengers (ambulatory and non-ambulatory) would have an equivalent reservations and payment system was initially recommended through the implementation of a centralized reservations agent model. The Solano Mobility Call Center was going to assist individuals to get to their appointments, shopping, work, recreation and other destinations without driving.

The Solano Mobility Call Center was to serve as the agent by:

- receiving all ride request from riders,
- verifying eligibility,
- scheduling trips with taxi and other providers,
- determining the fare and subsidy for each trip,
- maintaining credit accounts for each rider; and
- debiting these accounts for each trip taken

The issues that have arisen after further exploration of this model is the Solano Mobility Call Center operates 7am-5pm, Monday through Friday. Although some trips could be scheduled ahead of time, not everyone can plan trips in advance. Also, if there is a customer service issue afterhours such as the operator missing the appointment, not finding the address or a multitude of other issues customer support is not available to resolve the situation.

The other main issue is the development of a concierge trip booking software, currently the proven trip booking concierge software programs are proprietary in nature for companies such as Lyft or Uber. The development of a new database program would cost an estimated $50,000 for a Microsoft Access program or as much as $150,000 for a more robust user friendly program but without a proven track record. The risk of having to develop a new software package that may or may not serve all our needs has motivated staff to explore other options.

Option 2 Taxicards are currently being further examined, a vender used by several transit operators known as Cab Connect is one company that can offer a Taxicard which would automate the Taxi Scrip Program and allow customers to book trips directly with the operators. A second variation on the Taxicard option would be to use a debit purchasing card. A debit purchasing card can be preloaded with a specific value and transactions would be limited by the Standard Industry Classifications (SIC) codes for transportation services. This would allow

freedom of choice for the consumer and the availability to book trips on demand. This would also remove the burden on the call center to act as a taxi dispatch and the after hour's customer service issues. The call center would still be an intragyral part of the process to issue and reload the cards, insuring proper eligibility, and the appropriate level of participation.

STA staff preferred option is the transportation debit purchasing card system because it allows the consumer greater accessibility and freedom. Nelson/Nygaard will be assisting staff to identify potential venders and determine the cost of both Taxicards and a transportation debit purchasing card system. Staff will keep the Consortium, TAC, and Board updated on the progress and recommended changes to the Taxi Scrip Program as we move forward with implementing Phase II of the Taxi Scrip Program.

Fiscal Impact:

In FY 2015-16 the Solano Intercity Taxi Scrip budget was $656,481, which was funded by Passenger Fares, Solano County TDA, Lifeline funding, and FTA funding, and TDA funding from Solano County Transit, Fairfield and Suisun Transit, City of Vacaville, City of Dixon, and City of Rio Vista. In FY 2016-17 the Solano Intercity Taxi Scrip budget is $762,707 and is funded by a combination of Passenger Fares, Solano County TDA and TDA funding from Solano County Transit, Fairfield and Suisun Transit, City of Vacaville, City of Dixon, and City of Rio Vista. In FY 2017-18 $999,592 is budgeted for the Solano Intercity Taxi Scrip Program which is estimated to cover the costs for this Phase II Service Model.

Recommendation:

Forward a recommendation to the STA Board to approve the development of Intercity Paratransit/Taxi Scrip Program – Phase II, Delivery Model that includes the following;

1. Develop a Debit Purchasing card that can be utilized for the Intercity Taxi Scrip Program;
2. Amend the Intercity Taxi Scrip Service to include contract for non-ambulatory service; and
3. Amend the Intercity Taxi Scrip Contracts to eliminate Taxi Scrip Vouchers and use a Debit Purchasing card.

Attachment:

A. Service Delivery Options Memo (5/12/15)

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MEMORANDUM

To: Solano Transportation Authority

From: David Koffman

Date: May 12, 2015

Subject: Service Delivery Options for Solano Intercity Paratransit Service

INTRODUCTION

The Solano Intercity Taxi Program allows paratransit eligible individuals to take subsidized taxi trips between all of the cities within the county. The program is open to individuals certified as ADA paratransit eligible by one of the participating transit operators. Booklets containing scrip worth $100 in taxi rides are sold for $15 per booklet. Each transit operator sells scrip to its residents who use it to pay for taxi rides between the cities of Solano County. There are nine actively participating taxi companies. The precise number of customers is not known. An analysis of taxi company invoices in 2013 showed 210 distinct users over a three-month period. Making allowance for some infrequent riders, there are probably at least 300 eligible participating individuals.

The taxi companies turn in the scrip that drivers receive from customers to the cities in which they are licensed, along with an invoice for reimbursement. The cities review and approve the taxi company invoices and forward them for payment by STA. At the end of each fiscal year, there is an accounting reconciliation to ensure that each transit operator pays for usage by its riders.

The Solano Intercity Taxi Program provides a valuable service to ADA paratransit eligible residents of Solano County who are able to travel in non-wheelchair accessible vehicles. Over the course of the program's history, ridership has grown significantly and so have costs. The result is that the available quantity of taxi scrip is limited and runs out at most locations most months. While the popularity of the program is a positive sign from the community's perspective, it is clear that the current design is not meeting needs. In addition, wheelchair users who cannot transfer to a standard taxi are completely left out of the program due to the lack of accessible vehicles.

In 2013 the Solano Transportation Authority (STA) hired Nelson\Nygaard Consulting Associates and Nancy Whelan Consulting to conduct a study that documented how riders currently use the program, explored whether there are efficiencies that can be built into the program, and examined if there were alternative service delivery models that could provide the service more efficiently and cost-effectively, while also providing wheelchair-accessibility. The results of the study were delivered as a memorandum to STA that was presented to the STA Board in May 2014.

One of the key purposes of the study was to determine the feasibility of STA adopting administrative responsibility for the program, and how to ensure program sustainability into the future if STA were to take it over. As of January 2015, STA did in fact assume administrative responsibility. STA contracted with Nelson\Nygaard Consulting Associates to provide interim

program management services to: 1) help transition the existing program to STA administration, 2) determine in what ways the program should be modified, and 3) to assist in the transition to a modified program.

The existing program is now being administered by STA and incremental improvements are being implemented. To help with the next step, this memorandum provides an updated analysis of options for longer-term changes. The memorandum includes:

- A brief summary of key data about the existing program
- Analysis of four options for revised service delivery methods. These have been modified from the options presented in the earlier memo, taking advantage of additional information that has become available.
- Analysis of implementation issues

HISTORY

Solano County has tried multiple methods for providing paratransit service between communities, supplementing the ADA and other paratransit services provided by the transit operators within their own service areas. For several years the City of Fairfield administered a program known as Solano Paratransit that was operated by the same contractor that provided ADA paratransit in Fairfield and Suisun. Solano Paratransit was designed to provide ADA paratransit corresponding to Route 20, between Fairfield and Vacaville, and also countywide intercity service for residents of Dixon, Fairfield, Rio Vista, Suisun City, Vacaville, and unincorporated areas. This service was discontinued in 2009, after which ADA paratransit service between transit service areas was provided by arranging transfers between the operators' local paratransit services.

In February 2010 a new service, the Solano Intercity Taxi Scrip program, began operations under the leadership of the City of Vacaville Transportation Division. The new service was designed as supplemental, non-ADA service, while ADA paratransit between cities continued to be provided by means of transfers. A Memorandum of Understanding among all of the cities, the County of Solano, and eight participating taxi companies outlined responsibilities under the new program.

The Intercity Taxi Scrip program has been popular and operates with few complaints. However, demand for trips has exceeded the available budget, so that several cities routinely sell their entire monthly allocation of scrip before the end of the month, and some have implemented caps on the amount of scrip that will be sold to each person. In addition, since there are no wheelchair accessible taxis in the county, service is only available for customers who can ride in a standard passenger vehicle. There are also concerns about the degree of accountability and oversight that is possible with the current service design; the cost of very lengthy trips that operate, as is normal in taxi operations, with no shared riding; and a high percentage of trips that are taken by a small number of individuals to a limited number of destinations.

In 2013, the County of Solano agreed to take over administration of the program as part of a plan to transition to a new service concept. The County led a process that produced a draft Request for Proposals for a contractor to implement the new service. The County later determined that it would be more appropriate for STA to administer the existing program and any replacement service. Following a review of alternative service concepts and feasibility, STA agreed to assume responsibility from the County and contracted with Nelson\Nygaard Consulting Associates to

manage the transition process, including implementation of a new program and administration of the existing program.

Since February 2015, the Solano Intercity Taxi Scrip program has operated under STA administration with few changes.

RIDERSHIP PATTERNS AND COSTS

This section provides a statistical snapshot of the Intercity Taxi Scrip Program based on limited data gleaned from three months of 2013 invoices submitted by seven participating taxi companies and from summary data prepared by staff of Solano County.

Summary Data

Full-year statistics for 2013-14 were:

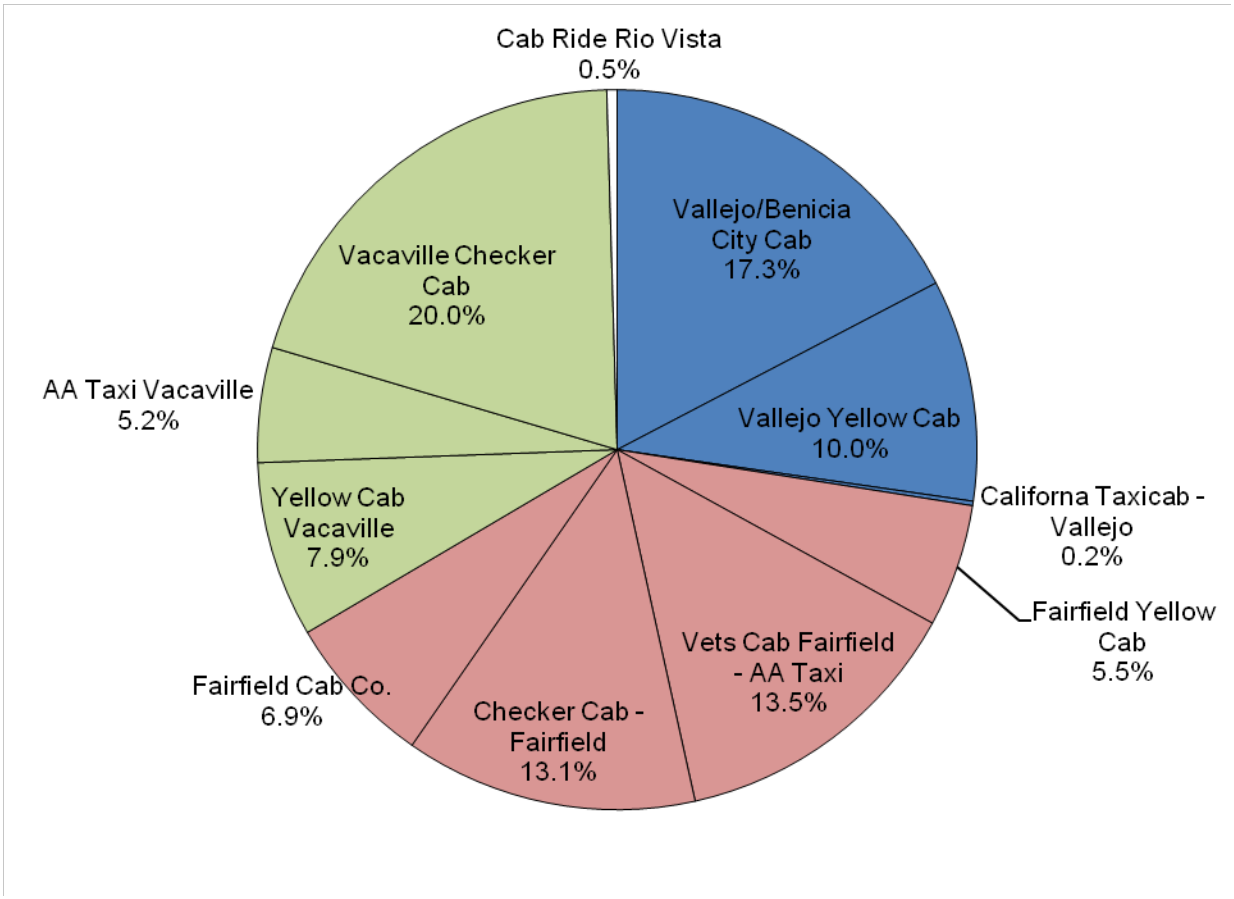
Passenger-trips	11,844
Trips	9,948
Cost (paid to taxi companies)	$397,406
Average trip length	13.4 miles
Average cost per trip	$39.95
Average cost per mile	$2.98
Passengers per trip	1.19

The number of passenger-trips and the cost of service has fallen from a peak in 2012-13 when 12,780 passenger-trips were provided at a cost of $529,865. The 2012-13 peak was a sharp increase from 2011-12 when 9,643 passenger-trips were provided at a cost of $364,045. Monthly data show that usage had already begun to fall off in the second half of 2012-13 because scrip had to be limited as the program ran up against budget constraints. The Intercity Taxi Scrip Program is still providing more trips at lower cost than the former Solano Paratransit program. In its final year of 2008-09, that program cost $612,793 to provide 7,557 passenger-trips, at an average cost per passenger-trip of $81.09.

Of the nine actively participating taxi companies, four, Vacaville Checker Cab, Vallejo-Benicia City Cab, Veterans Cab of Fairfield, and Checker Cab of Fairfield, provide 64% of the trips (see Figure 2). Color coding in Figure 1 indicates the cities in which the companies are based. In 2012-13 companies based in the city pairings of Vallejo and Benicia, Fairfield and Suisun, and Vacaville and Dixon carried about one-third of trips each. In 2013-14, as shown, the share of trip carried by Fairfield companies has grown while the share of trips by Vallejo-Benicia companies has fallen.

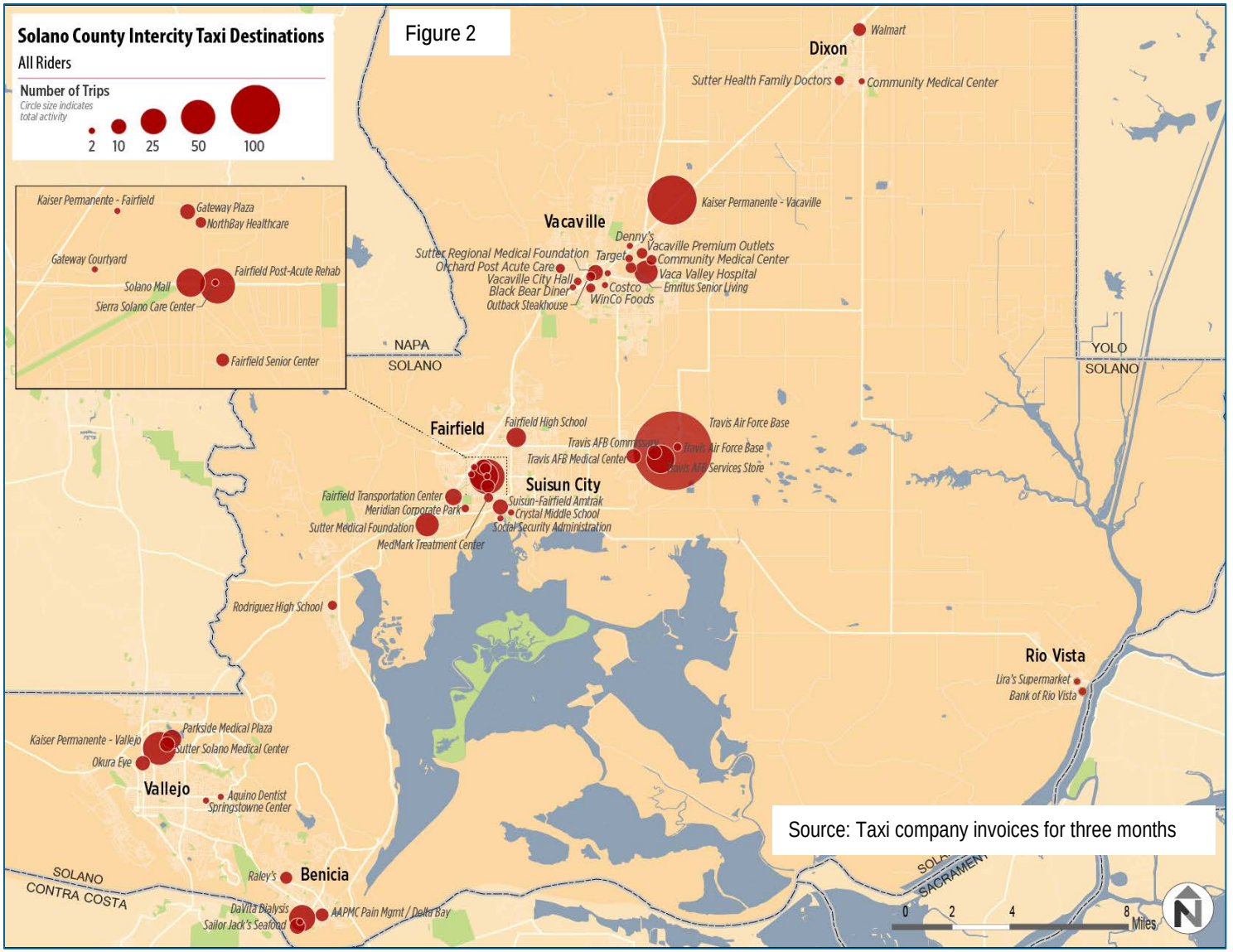
Figure 1 Shares of Taxi Companies

(Percentage of Trips in 2012-13)



Common Destinations

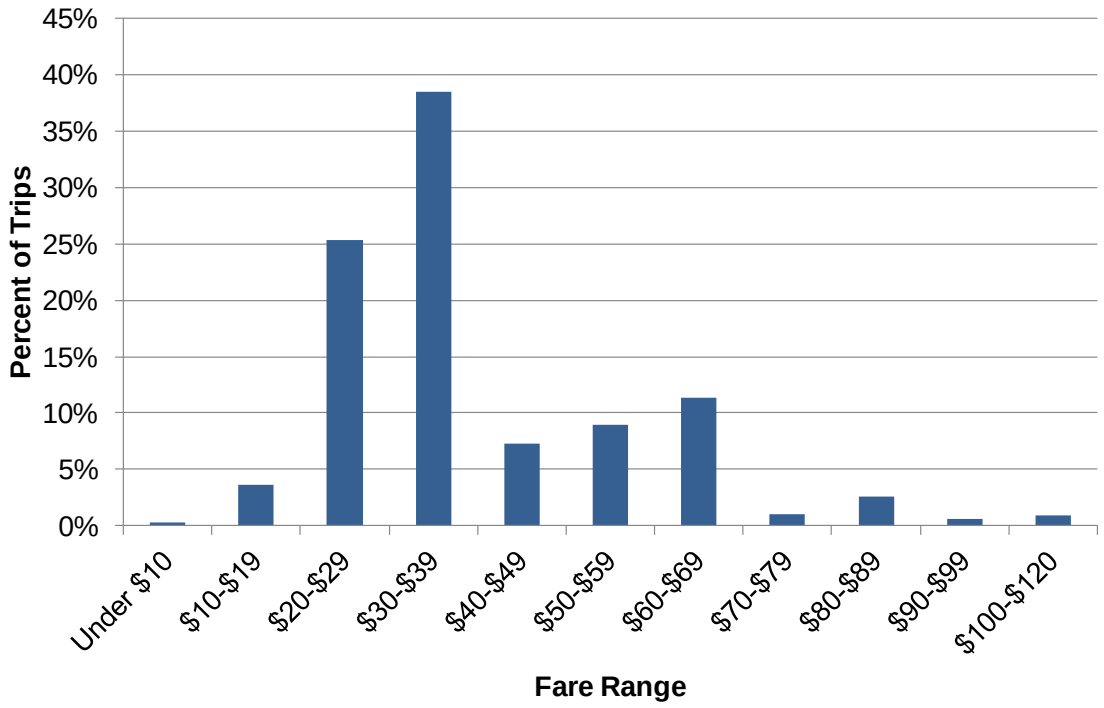
The most common non-home destinations of taxi scrip users are locations within Travis Air Force Base, especially one location that houses a call center, and Kaiser Permanente in Vacaville. (Most of the trips to Travis originate in Vallejo and Benicia.) These locations and others are shown in Figure 2. (A "non-home destination" is one that a rider travels to from their home; return trips to home are not shown.) Other popular destinations include the Solano Mall, Sutter Medical Center and various medical offices in Fairfield, the Vaca Valley Hospital, Kaiser Permanente in Vallejo, and DaVita Dialysis in Benicia. The size of the circles represent the number of trips to each location in three months of taxi company invoices.


Solano County Intercity Taxi Destinations
All Riders
Number of Trips
Circle size indicates total activity
2
10
25
50
100
Figure 2
Dixon
Walmart
Sutter Health Family Doctors
Community Medical Center
Vacaville
Kaiser Permanente - Vacaville
Denny's
Vacaville Premium Outlets
Sutter Regional Medical Foundation
Target
Community Medical Center
Orchard Post Acute Care
Vaca Valley Hospital
Vacaville City Hall
Emritus Senior Living
Black Bear Diner
Costco
WinCo Foods
Outback Steakhouse
Kaiser Permanente - Fairfield
Gateway Plaza
NorthBay Healthcare
Gateway Courtyard
Fairfield Post-Acute Rehab
Solano Mall
Sierra Solano Care Center
Fairfield Senior Center
NAPA
SOLANO
YOLO
SOLANO
Fairfield
Fairfield High School
Travis Air Force Base
Travis AFB Commissary
Travis Air Force Base
Travis AFB Medical Center
Travis AFB Services Store
Suisun City
Fairfield Transportation Center
Meridian Corporate Park
Suisun-Fairfield Amtrak
Crystal Middle School
Sutter Medical Foundation
Social Security Administration
MedMark Treatment Center
Rodriguez High School
Rio Vista
Lira's Supermarket
Bank of Rio Vista
Kaiser Permanente - Vallejo
Parkside Medical Plaza
Sutter Solano Medical Center
Okura Eye
Vallejo
Aquino Dentist
Springstowne Center
SOLANO
CONTRA COSTA
Raley's
Benicia
DaVita Dialysis
AAPMC Pain Mgmt / Delta Bay
Sailor Jack's Seafood
SACRAMEN
0
2
4
8
Miles
Source: Taxi company invoices for three months

Trip Fares

Most trips have a fare between $20 and $39, but there are substantial numbers of trips with fares over $60. Figure 3 provides detail. Typical trips in the $20 range (around eight miles) include trips between Vacaville and Travis Air Force Base and between Benicia and Vallejo. Typical trips in the $30 range (around 12 miles) include some longer trips between Benicia and Vallejo and trips between Vacaville and central Fairfield. Typical trips in the $60 range (over 20 miles) are those between Vallejo and Fairfield, including Travis Air Force Base.

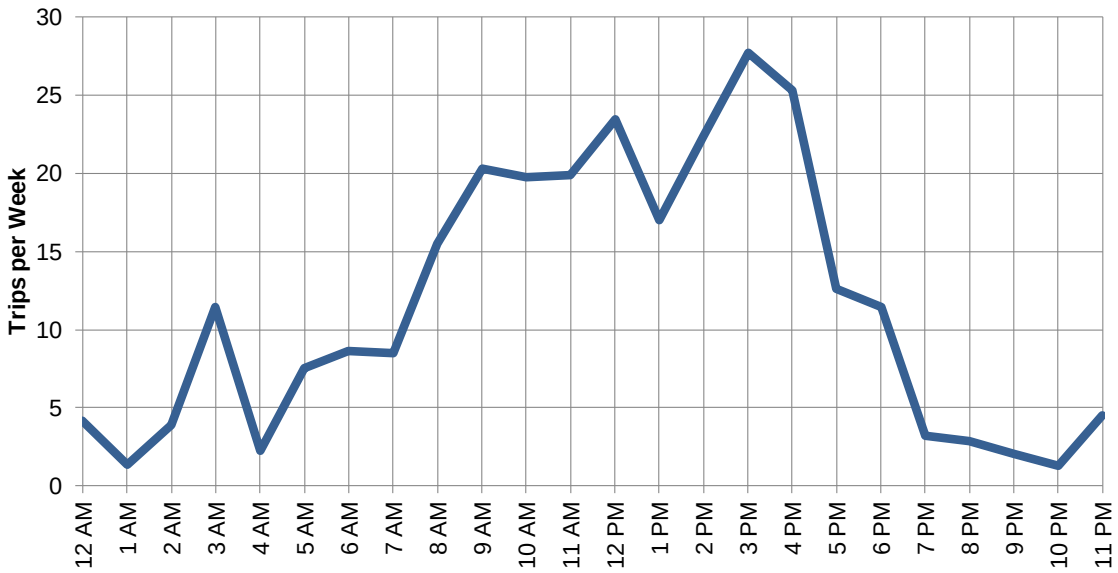
Figure 3 Percent of Trips in Fare Ranges



Time of Day of Travel

Most taxi scrip trips take place between 8 AM and 4 PM. An early peak at 3 AM and a peak at 3 PM appear to be largely due to trips to and from the call center in Travis Air Force Base. Figure 4 shows estimated weekly trips per hour of day, assuming that total travel is about 1,200 trips per month, as it was in the middle of 2012-13. The taxi invoices analyzed included about 875 trips per month. If this is accurate and complete (possibly reflecting continued scrip limits), then the trip levels in Figure 4 should be adjusted downward by about one-fourth.

Figure 4 Time of Day of Taxi Scrip Trips

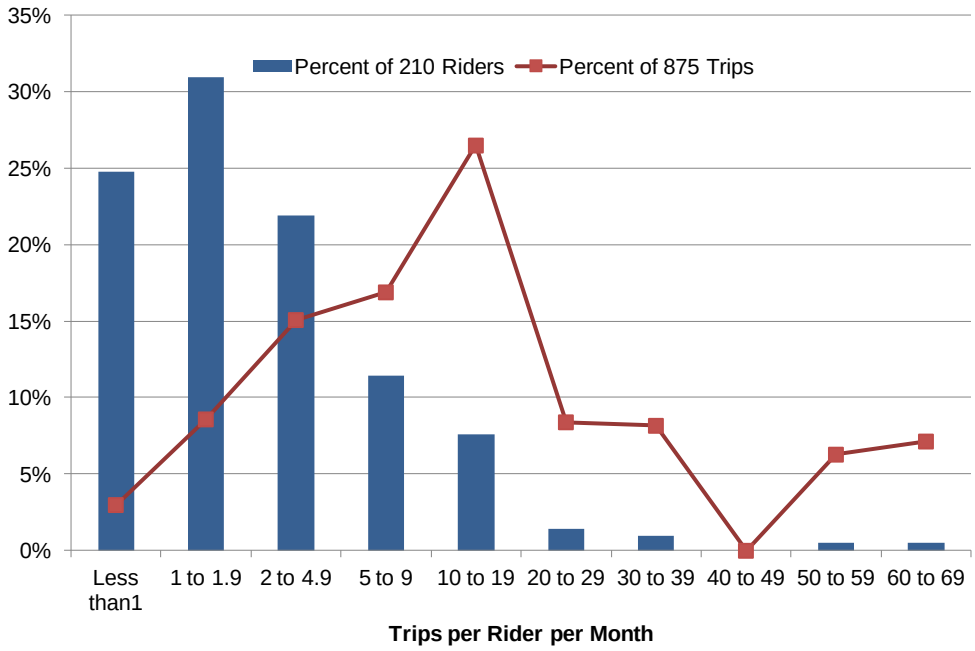


Estimated from taxi company invoices, assuming approximately 1,200 trips per month.

Frequency of Travel by Riders

A total of 210 distinct individuals used taxi scrip. The average rider made between four and six trips per month, depending on overall trip volumes. Using the actual 875 trips per month represented in the invoices that were analyzed, 56% of riders used the program for less than two trips per month, on average, as shown in Figure 5, accounting for 12% of all trips provided. Since these are one-way trips, this means that a typical scrip purchaser takes one round trip every month or two. About 13% of all trips were taken by two riders who made more than 50 trips per month. Another 16% of trips were taken by five riders who made between 20 and 39 trips per month.

Figure 5 Trips per Rider per Month



FOUR SERVICE DELIVERY OPTIONS FOR INTERCITY PARATRANSIT SERVICE

Four options for intercity paratransit service in Solano County are analyzed in this section. The four options are:

1. A modified version of the existing Intercity Taxi Scrip Program
2. Replacement of scrip with taxicards
3. Centralized reservations
4. Service using a dedicated fleet of vehicles, similar to the earlier Solano Paratransit program.

All of the options include wheelchair accessible van service. Each option is reviewed, focusing on how wheelchair-accessible service would be provided and identifying opportunities for cost containment. The advantages and disadvantages of each option are presented.

Option 1: Modified Taxi Scrip Program

The current service delivery method would be continued, but with some modifications to provide accessible service and contain costs. The first issue considered is how wheelchair accessible service could be added to the taxi scrip program. Two possibilities are: 1) a separate arrangement with wheelchair van providers, and 2) working with one or more taxi companies to develop wheelchair accessible taxi service.

Accessible Service by Wheelchair Van Providers.

There are several private providers of wheelchair van transport in Solano County. These include:

- NorthBay Transit Group, based in Vallejo, operates a fleet of wheelchair vans under the name Meditrans Service. The same company operates several taxi companies in the county.
- AA Medical Transportation, based in Vallejo, provides nonemergency medical transportation using wheelchair vans, sedans, and ambulance-style vehicles for patients who need stretcher/gurney transport of life support during transportation. http://www.aamedtrans.com/
- MedXpress, based in Fairfield, provides wheelchair and gurney transportation in Solano County and beyond. http://www.yelp.com/biz/medxpress-llc-fairfield
- Murphy Medical Transportation in Fairfield provides nonemergency medical transportation in Solano County and adjacent areas. www.murphymedicaltransport.com

These companies typically serve medical providers, hospitals, nursing homes, and some specialized programs for people with disabilities. In some cases, the transportation is paid for by Medi-Cal, directly or through Partnership Health. Typically, reservations from private-pay clients are also taken. Except for the one company that already participates in the Intercity Taxi Scrip Program, these companies have not been contacted to determine their interest in participating in an intercity paratransit program or the rates they would charge.

Medi-Cal pays providers $17.65 plus $1.30 per mile for pre-authorized wheelchair van trips to Medi-Cal covered services. The starting rate increases to $23.78 at night. Providers are free to charge any rates they wish for other clients. The Medi-Cal rates have not changed in many years (at least since 2002 and probably much longer). The mileage rate is actually less than the rate charged by taxi companies in Solano County. As a result, most companies probably charge much more than the Medi-Cal rates when they can. For example, one company in San Jose advertises rates of $45 plus $3.00 per mile. (http://www.ai4transport.com/rates.html) For a 13.4-mile trip (the average intercity scrip trip in 2013-14), that would work out to $85.20.

Currently taxi companies in Solano County charge $2.25 (the drop charge) plus $2.75 per mile. In practice, this averaged out to $2.98 per mile overall in fiscal year 2013-14. Based on experience in Alameda County, accessible service is likely to cost from 50% more to twice as much as conventional taxi service. Based on an average trip cost of $39.98 in fiscal year 2013-14, wheelchair-accessible trips might be expected to cost between $60 and $80 at current rates.

Companies that provide wheelchair van service typically work on a reservations basis. It might be possible to arrange for same-day appointments, but on-demand service of the type provided by taxicabs would probably not be reliably available.

Since none of these providers would use taxi fares, a different method of payment than taxi scrip would need to be established.

Wheelchair-Accessible Taxi Service

It would also be possible to work with taxi companies to have them include accessible vehicles in their fleets. In order to ensure availability that is equivalent to the availability for non-wheelchair users, one company in each jurisdiction would need to have at least two wheelchair accessible vehicles. These vehicles are more expensive to operate than a standard taxicab, but the Americans with Disabilities Act prohibits taxis charging a higher fare for wheelchair accessible service.

However, STA and/or the participating cities could pay a higher rate for trips sponsored under the Intercity Taxi Scrip Program. This rate would have to be set high enough to cover drivers' or companies' added cost to operate these vehicles at other times as well. The companies would also probably require assistance purchasing the accessible vehicles. Since STA would probably want to limit the arrangement to certain companies, some mechanism would be needed to determine which companies would receive the accessible vehicles. It is unknown whether any companies would actually be interested in this arrangement. Finally, the willingness of taxi drivers to operate the accessible vehicles is unknown. All these arrangements would add to the already complicated process of verifying and processing taxi company invoices. This option is theoretically possible but would be extremely difficult to implement in Solano County. It is not recommended.

Cost Containment

There are limited options for cost containment using scrip, but there are some. The purchase price could be increased from the current $15 for a $100 book, for example to $25 or more if necessary. It would also be relatively simple to limit the amount of scrip that any given participant can purchase.

Variable fare structures, as have been discussed in the past, would be more difficult than with other service models. For example, a three-tier fare structure was proposed by the County in 2013, as follows:

Figure 6 Three-Tier Fare Structure Proposal from 2013

Tier	Advance Reservation	Time Period	Rider Payment (Percent of the Meter)
Tier 1	Yes	Mon. – Fri. 9 AM – 5 PM	25%
Tier 2	Yes	Mon. – Fri. 7 AM – 9 AM and 5 PM – 7 PM Sat. 9 AM – 5 PM	50%
Tier 3	Yes	Mon. – Fri. 5 AM – 7 AM and 7 PM – 9 PM	75%
	No	All times	

Source: "Intercity Paratransit in Evolution." presentation by Solano County staff, October 2013

This type of fare structure would be impossible to enforce using a scrip-based system. However, it might be possible to charge a higher amount for scrip purchases over a set monthly limit. This assumes that participants would either buy their scrip from a central location for each jurisdiction, or that there would be a way to track purchases centrally for each jurisdiction.

Administrative Simplification

As long as scrip is retained, opportunities for administrative simplification would be very limited.

Figure 7 summarizes the advantages and disadvantages of modified taxi scrip.

Figure 7 Advantages and Disadvantages of Modified Taxi Scrip

Advantages	Disadvantages
A less significant overhaul of the current program than other options would allow for an easier transition No significant issues for participants due to program changes Cost can be contained by raising prices, limiting scrip purchases, or possibly charging more for purchases over a monthly limit Current reasonable quality of service will be maintained	Does not address issue of current lack of accountability and reliable billing of current taxi companies No significant options for administrative simplification Difficult to control fraud issues Fewer options for cost containment than with other models Issues with developing and administering accessible service: • Would need separate accessible service with medical transport providers, with a new payment mechanism, different than taxi scrip • Ability of the available accessible van operators to provide reasonably demand-responsive service is unknown • Theoretically possible to establish wheelchair accessible taxi service, but extremely difficult Limited ability to modify the fare structure: • Very hard to establish higher charges for same-day or off-peak travel • Higher charges for ticket or scrip purchases over set limits are possible, but have administrative issues

Option 2: Taxicard Payment System

How Taxicards Work

A card-based system could replace scrip without fundamentally altering the concept of the taxi scrip program. The same system is currently used in Chicago, Los Angeles, and Baltimore. According to the company that provides this service, MJM Innovations of Baltimore, some much smaller cities also use the system.

Instead of purchasing paper scrip, participants would pay into an account managed by STA with the support of MJM. Each customer would have access to a website where they could replenish their account, or customers could make payments in person or by mail and STA would update the online account. Customers could also review their recent trip history. Each customer would be

issued a card that identifies them and that is used by equipment in each taxicab to contact the MJM server on which the customer's account balance and other information would be kept.

After ordering a taxi and entering the vehicle, a customer would present the card to the driver who would run it through a swipe reader. This operation would trigger communication with the MJM server to verify that the card has sufficient balance for a minimum-length trip and would initiate the process of determining the cost of the trip. At the end of trip, the driver would run the card through the reader again. The rider would pay some flat fare amount set by STA and also any meter amount over a maximum, also set by STA. To illustrate the flexibility in the amounts, Figure 8 shows the flat fare and the maximum that can be charged to the card in three cities.

Figure 8 Taxicard Fare Structures in Three Cities

City	Flat Fare	Maximum per Trip Charged to the Card
Chicago	$5	$13.50
Los Angeles	None	$12
Baltimore	$3	$20

STA would probably set the per-trip maximum higher than the cities shown, since taxi fares under the Solano Intercity Taxi program average over $40 per trip. It would probably be possible to implement a different type of fare structure, for example one that uses a percentage of the meter. This would be similar to the way scrip works.

Taxicards offer a number of advantages compared to scrip. As discussed under "Cost Containment" a variety of fare structure options become feasible. In addition:

- The exact amount can be charged for each trip, rather than an approximation based on available scrip denominations remaining in the customer's booklet.
- As an option, the taxicard can be used as a photo ID, enabling drivers to quickly verify that the person using the card is the registered card holder.

The Cost of Taxicards

Taxicards would eliminate the need to print and distribute scrip, which is budgeted at $10,000 for 2015-16. However, they would have their own costs, including:

- The cost of the taxicards ($1 each for a basic card, or $2 for a photo ID card)
- An initial setup cost exceeding $10,000 and probably significantly more to program a custom fare structure, plus another $5,000 initial cost to establish a payment website.
- On-going payments to the vendor of about $6,000 per year at current trip volumes, plus an additional $0.50 per trip if trip volumes grow.
- A need for every participating taxicab to have equipment capable of reading the cards and communicating with the MJM server, and that is linked to the meter in the cab. The vendor will provide customized tablets that perform this function for approximately $500 to $1,000 per taxicab.

The on-going costs would be comparable to the current costs of scrip. The initial setup cost would probably be on the order of $20,000, which might be grant fundable. The most difficult cost to cover would the cost of providing the necessary equipment for each taxicab. Assuming on the

order of 50 cabs operated by all of the companies, this cost could amount to about $50,000. Taxi companies would probably pay for some of this cost *if the equipment is capability reading credit cards in addition to the special taxicards for the intercity program*. Otherwise the cost would need to be covered by the program. Further, if the only use for the equipment were for the intercity program, keeping all of the tablets operating would be an ongoing task that would require attention from STA or the operators.

Cost Containment

There are more fare structure possibilities using taxicards. Each of them would require some amount of custom programming that would be included by the vendor in the initial setup fee. The fee would be related to the degree of programming difficulty. Potential options and the level of programming difficulty include:

- Different rates for residents of various cities—easy
- Time of day (as in the three-tier proposal)—probably not too hard
- Fares that depend on how many trips the individual has made—unknown
- Variable subsidies depending on distance or zones—possible but harder

Different fares for advance reservations and on-demand trips would not be possible.

Administrative Simplification

The difficulties of processing taxi company invoices, including processing scrip, would be greatly reduced using taxicards. Opportunities for introducing any unauthorized charges would be nearly eliminated and invoices would be pre-verified by the software.

- The cost of printing and distributing scrip would be eliminated,
- Taxi companies would no longer need to accumulate, count, and submit scrip for reimbursement. The companies would prepare their invoices using the program website.
- Program managers (or STA) would no longer need to verify scrip totals and would have improved ability to verify taxi company charges, since a record of each trip is maintained on the program website, showing the taxi company, the driver, the vehicle, the GPS coordinates of the start and end of the trip, the time of trip, and the meter charge.

Figure 9 Advantages and Disadvantages of a Taxicard System

Advantages	Disadvantages
Retains the basic structure of how participants interact with taxi companies, easing any transition	Adds significant cost for equipment in taxicabs, as well as a need to keep this equipment operating
Adds some options for containing costs beyond raising prices, probably including time-of-day pricing	Upfront cost of setting up the new system including fees to the system vendor, purchasing and distributing cards to participants
Current reasonable quality of service will be maintained	Continuing administration fees to the system vendor
Adds significant accountability by creating an automatic electronic record of all trips for verifying invoices	Dependence on a single vendor—availability of other vendors is unknown
Should increase the speed and accuracy of billing	Issues with developing and administering accessible service:
Eliminates the cost of scrip printing and distribution issues	• Would need separate accessible service with medical transport providers, with a different payment mechanism than taxicards
Drivers, companies, and programs not would not need to count, store, and deliver scrip	• Ability of the available accessible van operators to provide reasonably price demand-responsive service is unknown
Eliminates issues with control of multiple scrip sales locations	• Theoretically possible to establish wheelchair accessible taxi service, but extremely difficult
Participants can purchase taxi trip credit without needing to travel to a sales location	
Participants can use the exact amount of credit needed for each trip	

Option 3: Central Reservations

How Central Reservations Would Work

In a central reservations model, a **reservations agent** would receive all ride requests from riders, verify eligibility, schedule trips with providers, determine the fare and subsidy for each trip, maintain credit accounts for each rider, and debit these accounts for each trip taken.[1]

A similar model is used by Marin Transit for its Catch-a-Ride taxi subsidy service. Marin Transit's Catch-a-Ride program offers discounted taxi rides to seniors age 80 and older, seniors between 60 and 80 who no longer drive, and paratransit eligible riders. Riders call a scheduling center (operated by MV Transportation from the facility they use to operate ADA paratransit for Santa Rosa) to request a ride. The scheduling center determines the mileage of the trip using Google Maps, which by agreement with the three participating taxi companies determines the amount that will be paid for the trip. (The meter is not used.) This information is provided to the rider at the time of the call. Marin Transit pays up to $14 or $18 (depending on the rider's income) and

[1] In the analysis done for STA in April 2014 a "broker model" was described that was similar to the central reservations model described here, but that involved much more extensive responsibilities for the broker.

the rider pays any excess fare. If the trip costs no more than the $14 or $18 limit, the trip is free to the rider.

In Solano County, the fare structure would be different, but the concept would be the same. For example, to essentially duplicate the effect of the current scrip program, the following procedure would apply:

- Riders would pay $15 to establish credit for $100 worth of taxi trips. (The dollar amounts in this example are for illustration only—the actual amounts are likely to change.)
- When a rider wants to travel, he or she would call the reservations agent and give the desired time, pickup location, and destination, and the taxi company on which the rider wants to travel.
- The reservations agent would check the rider's eligibility and account balance.
- Assuming that the caller is eligible and there is sufficient trip credit in his or her account, the reservations agent would calculate the cost of the trip based on its mileage (measured using an online mapping program) and inform the rider.
- If the rider accepts the calculated cost, the reservations agent would transmit the reservation to the taxi company and debit the rider's account the cost of the trip.
- At the end of the accounting period, the taxi company would submit an invoice for completed trips and be paid the previously-agreed cost of all the trips.
- The reservations agent would also be responsible for conducting spot checks to verify that the reserved trips actually take place, for making adjustments when either the rider or the taxi company reports a no-show or cancellation, and for investigating complaints.

No payment would occur on the vehicle at all. Since riders are used to buying scrip in advance, the concept of paying in advance for trips is already well established. This method allows for maximum flexibility in fare structures. It avoids all issues of handling and reconciling cash or tickets. It allows for third parties to pay for (or sponsor) a rider's travel. It also works for riders with mental or physical disabilities that prevent them from dealing with cash or tickets.

The reservations and accounting task is simple enough that it could easily be managed by any of the contract providers that currently operate ADA paratransit in the county. STA could also consider acting as the reservations agent itself through its Mobility Call Center. In principle, the reservations agent need not be located in Solano County. Marin Transit provides a model for this possibility, since its program is run from a location in Sonoma County.

In Marin's case, MV is responsible for negotiating subcontracts with the participating taxi companies and makes payments to the taxi companies for which it is later reimbursed by Marin Transit. A similar arrangement could be established in Solano County, or STA could make the agreements with the taxi companies and pay them based on an accounting provided by the reservations agent.

Accessible Service

The reservations agent would also take requests for wheelchair accessible service. As in a model based on taxi scrip, separate arrangements would be made with one or more wheelchair van operators, but these arrangements would be transparent to riders. Riders would establish accounts just as for taxi service, and these could be debited using the same formula as for taxi accounts, but the providers would be paid whatever rate was negotiated with them. As noted

earlier, these rates would be substantially higher than taxi rates, potentially on the order of twice as high.

Maintaining account totals in terms of fictitious taxi rates would potentially be confusing, but would have the advantage of flexibility for any riders who do not need a wheelchair van all of the time, so they could mix taxi and wheelchair van trips. As an example, assume following hypothetical rates:

Taxi: $2.25 + $2.75 per mile

Wheelchair van: $30 + $3.00 per mile

If a rider has an initial trip credit of $100 and takes a 10-mile trip, *regardless of whether it is taken on a taxi or wheelchair van*, then the rider's account would be charged $2.25 + (10 miles x $2.75/mile) = $29.75, leaving $70.25 trip credit in the rider's account.

If the trip were taken on a taxi, the taxi company would be paid $29.75. But if the trip were taken on a wheelchair van, the van company would be paid $30 + (10 miles x $3.00/mile) = $60. The actual amount paid to the van company would be invisible to the rider. This could be advertised to customers as, "Ride a wheelchair van for the same rate as a taxi."

Cost Containment

An attractive feature of the central reservations model is the possibility of a variety of flexible cost containment measures. With reservations going through a central reservations agent, it is possible to implement:

- Advance reservations
- Trip grouping for efficiency
- Priority for certain types of trips or limits on others
- A flexible fare structure that need not be based on taxi fares
- Surcharges or premium fares for:
  - trips at night or during peak periods
  - same-day reservations
  - trips over a defined monthly allowance per person

Administrative Simplification

There would be no need to distribute scrip, process used taxi scrip, or verify the meter charge for each trip provided by taxicabs. The reservations agent would pre-approve the payment amount for each trip, based on mileage as determined at the time of booking.

While there would no longer need to be process for verify that the correct amounts were charged for each trip, there would still need to be a system to spot any instances of charges being made for trips that never actually occurred. In theory, a participant, working in league with a taxi company, could request unneeded trips and then share in the payment for non-existent service. The reservations agent would have to be on the alert for any unusual patterns of usage. The opportunity for fraud would be similar to one that already exists. Unlike in the current system, however, riders would not be able to request a specific driver, so there would be no opportunity for individual drivers to cheat without the participation of the company as well. In addition, the reservations agent would always have up-to-the-minute records of all trips that have been charged.

Advantages and disadvantages of the brokerage model are summarized below in Figure 10.

Figure 10 Advantages and Disadvantages of Central Reservations

Advantages	Disadvantages
Same as for taxicards: • Current reasonable quality of service will be maintained • Adds significant accountability by creating an automatic electronic record of all trips for verifying invoices • Should increase the speed and accuracy of billing • Eliminates the cost of scrip printing and distribution issues • Drivers, companies, and programs would not need to count, store, and deliver scrip • Eliminates issues with control of multiple scrip sales locations • Participants can purchase trip credit without needing to travel to a sales location • Participants can use the exact amount of credit needed for each trip Procedures for riders to obtain wheelchair-accessible service would be identical to procedures for taxi service Passengers do not need to handle scrip or money, except for trips that cost more than the rider's available credit or any limit on subsidy per trip Riders know in advance the exact cost of each trip Eliminates opportunities to overcharge for trips Allows multiple flexible options for cost containment, such as trip grouping, trip priorities or limits, multi-tiered fares or surcharges A choice of potential contractors is probably available	Uses a relatively new concept that is untested in Solano County Adds costs for a contractor compared to the current taxi-based model ADA paratransit program managers may have concerns about adding to existing contractor responsibilities Response time would probably be somewhat longer than currently, especially for wheelchair accessible service Mileage rates would need to be negotiated with taxi companies

Option 4: Dedicated Fleet

This model would be similar to the earlier Solano Paratransit program that was administered by the City of Fairfield and operated by Fairfield's ADA paratransit contract provider. One of the current contract providers for ADA paratransit might operate the service using accessible vans or minibuses as an add-on to their existing contract, depending on the options and terms of the existing contract, and compliance with procurement rules. The potential contract providers include those operating service for SolTrans, Fairfield and Suisun Transit, and Vacaville's City Coach system.

This concept assumes that one of these providers has the capability of supplementing its existing service, using existing facilities. Vehicles, drivers, and office staff might be added, but for the new service to be cost-effective, administration, reservations, scheduling, and dispatch would needed to be shared with the ADA paratransit program, so no staff would be dedicated full-time to the new program.

Accessible Service

The dedicated fleet model would provide wheelchair-accessibility by using a fleet of wheelchair-accessible vehicles dedicated to this service. For the most part, all trips, including trips by ambulatory riders, would be carried by these vehicles. However, for efficiency, some ambulatory trips could be subcontracted to taxicabs.

Cost Containment

The previous Solano Paratransit program was discontinued because of its expense. In a new program, measures would be introduced to address cost containment. The earlier Solano Paratransit service attempted to comply with ADA criteria for fares, no trip purpose rules, etc. In a new program, fares could vary by trip purpose or time of day, and certain trips could be prioritized. Trip limits could also be established. However, the basic cost per vehicle hour would be similar to cost per vehicle hour that currently applies to ADA paratransit. Cost savings would depend on the ability to efficiently schedule as many trips as possible in each vehicle-hour.

For the financial analysis, the prior Solano Paratransit program is the most relevant example. Based on actual costs in FY 2009 (the final year of Solano Paratransit), with increases to represent inflation since then, costs per trip on the order of $97 might be expected. Some cost savings would be possible, but these would mainly come from demand management practices rather than steps that would reduce the cost per trip.

Fares and Fare Payment

All the same flexible options for fare structure and fare payment methods would exist as in the brokerage model.

Advantages and disadvantages of the dedicated fleet model are summarized in Figure 11.

Figure 11 Advantages and Disadvantages of the Dedicated Fleet Model

Advantages	Disadvantages
Simplifies addition of wheelchair-accessible service Allows multiple flexible options for cost containment, such as trip grouping, trip priorities or limits, multi-tiered fares Uses a simple, well-understood model of service delivery Administratively simple, but requires a commitment to service monitoring by a city or transit agency	High cost per trip Unclear if any existing ADA paratransit operators have the capacity to take on additional responsibilities Because of low trip volumes and long distance trips, opportunities for efficient trip scheduling may be limited Same-day response time would probably not be possible for most trips

FINANCIAL ANALYSIS

Assumptions

An approximate total cost and cost per trip for each option has been calculated using the following assumptions:

Assumptions that apply to all options:

- Average payment per trip to taxi companies: $40
- Average payment for wheelchair-accessible trip: $80
- Percentage of wheelchair-accessible trips: 20%
- Passenger-trips per year: 12,000 (equivalent to about 10,000 vehicle trips)
- Farebox recovery per trip: 30% of taxi cost per trip
- Passengers per vehicle trip: 1.2

Option-dependent costs:

- **Modified scrip:**

  Administrative costs: $10,000 for scrip printing

  STA staff time: $40,000 (cost for the contracted Interim Program Manager are not included)
- **Taxicards:**

  Vendor payments and taxicards: $10,000

  STA staff time: $30,000
- **Central reservations:**

  Reservations agent contractor: $30,000 ($3 per vehicle trip based on $2.90 paid by Marin)

  STA staff time: $20,000

- **Dedicated vehicles:**
  Operations contract: $970,000 ($97 per trip)
  STA staff time: $20,000

The Role of Fares

All options can accommodate fare increases, and some of them can accommodate more nuanced fare increases that incentivize travel at certain times or advance reservations, or that allow for a lifeline level of usage at lower rates than more frequent trips. Currently scrip purchases recover 15% of the cost of taxi company payments, which is roughly 14% of total program costs. Raising fares would bring more revenue into the program or, equivalently, reduce the net subsidy cost per trip. For example doubling the scrip price to 30% would generate roughly $60,000 in additional revenue, equivalent to the cost of about 1,600 passenger-trips under the current program design.

A fare increase would also reduce demand for trips, that is the number of desired trips. The experience of 2012-13 demonstrated that there is significant unmet demand at current fare levels. At the peak of demand between October 2012 and February 2013, usage was averaging over 1,200 passenger-trips per month, more than 20% over current constrained levels. Taking into account the added revenue, a doubling of fares would probably just eliminate the current tendency of programs to exhaust their supply of scrip each month with the existing program design.

Adding an accessible van component will add demand (assumed above at about 20% of demand) for trips that will be about twice as expensive per trip as existing taxi trips. With this addition, even a doubling of fares might not be sufficient to balance demand and the amount of service that can be provided within budget limitations.

For the sake of analysis, an average fare of twice the current level has been assumed. This has been calculated as 30% of the cost of an average taxi trip, i.e. twice the current 15% scrip price. No decrease in demand (i.e. trips supplied) compared to current levels has been assumed.

Results of the Analysis

The results of the calculations are shown in Figure 12. The costs shown are based on fiscal year 2015-16 budgeted costs. The net subsidy cost for an intercity paratransit program is roughly the same whether the program is based on modified scrip, taxicards, or a central reservations agent. The estimated costs are “roughly the same” in the sense that any differences are small compared to the level of uncertainty in the analysis. A program using a fleet of dedicated vehicles, similar to the former Solano Paratransit program, would cost more than twice as much as any other alternative.

All of the options would cost slightly more than the current intercity scrip program. However, the analysis does not take into account the level of effort by staff of the transit operators. Under the current program, they are responsible for oversight of scrip sales; for receiving and counting scrip turned in by taxi companies; and for verifying taxi company invoices. These roles would continue under the modified scrip program, but under taxicard program or a central reservations program, they would be greatly reduced or even eliminated entirely.

Start-up Costs

In addition to ongoing operating costs, there would be significant start-up costs. Even for the modified scrip program, working out a new payment mechanism for van providers would take a significant amount of staff time. For a central reservations agent, the contract would have start up costs to create procedures and create a database tracking trips and charges. This might cost on the order of $20,000. By far, the highest level of start-up cost would be incurred for a taxicard system. These costs would include:

Vendor setup	$20,000
Taxicards	$600
Initial rider registration (STA staff time)	$20,000
Taxi in-vehicle equipment	$50,000
Total	$90,600

Figure 12 Financial Analysis of Options

	Option				
	Modified Scrip	Taxicard	Central Reservations	Dedicated Vehicles	Existing
Inputs					
Average payment per trip to taxi companies	$40	$40	$40	$40	$40
Average payment per accessible van trip	$80	$80	$80	$80	$80
Percentage of wheelchair-accessible trips	20%	20%	20%	20%	0%
Trips per year	12,000	12,000	12,000	12,000	12,000
Passengers per trip	1.2	1.2	1.2	1.2	1.2
Farebox recovery (pct. of taxi cost/trip)	30%	30%	30%	30%	15%
Scrip printing	$10,000				$10,000
Vendor payments and cards		$10,000			
Reservations agent			$36,000		
Operations contract				$1,164,000	
STA staff time	$40,000	$30,000	$20,000	$20,000	$40,000
Transit operator staff	$0	$0	$0		
Results					
Taxi payments	$320,000	$320,000	$320,000		$400,000
Van company payments	$160,000	$160,000	$160,000	$1,164,000	0
Admin	$50,000	$40,000	$56,000	$20,000	$50,000
Total operating cost	$520,000	$520,000	$536,000	$1,184,000	$440,000
Fare revenue	$120,000	$120,000	$120,000	$120,000	$60,000
Net subsidy cost	$410,000	$400,000	$416,000	$1,064,000	$390,000
Operating cost per trip	$44.17	$43.33	$44.67	$98.67	$37.50

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DATE: November 28, 2017
TO: STA TAC
FROM: Lloyd Nadal, Program Services Division Manager
RE: Solano Community College (SCC) Student Transportation Fee and Mobile Application Update

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Background:

At the May 2017 Consortium meeting, members received a report on the status of the Solano Community College (SCC) Student Transportation Fee 2-Year Pilot Program. The Consortium, and subsequently the TAC and Board, approved recommendations to improve the programs performance for the second year of the pilot program. The recommendations focused on implementing a low-cost countywide unlimited access program for Community College students, using a smart phone application for boarding buses operated by FAST, SolTrans, Vacaville City Coach, and the regional SolanoExpress service. At the August 2017 Consortium meeting, an update was provided with the mechanism to implement the pilot, develop the smart phone application and roll-out to SCC students in Fall 2017 and Spring 2018 once the agreements were in place. In review, here are the following processes that were discussed to move this forward:

1. SCC agrees to provide the student transportation fee revenue plus user fee revenue to STA each semester in FY 2017-18.
2. STA would then distribute the funds directly to the three Transit Operators per semester based on student ridership and an agreed upon formula by STA and the Transit Operators.
3. The Transit Operators agree to provide a reduced student fare product for SCC student users who pay the transit fee in their registration and choose to pay the semester user fee (in accordance with their 50% reduced fee which was voted on last year). The product would entail:
    a) Unlimited usage within the three Transit Agencies and SolanoExpress
    b) User fee at $50 for the semester (Fall 2017 and Spring 2018)
    c) Accessing student fare product using a mobile application (provided by a third-party vendor who will be contracted with STA)
4. STA and the Transit Operators agree to a funding split for a turnkey countywide mobile application to be used as part of the SCC Transit Pilot Program.

Discussion:

As of November 15, 2017, STA has provided SCC with the first draft agreement to move the pilot forward, but SCC has not yet approved the agreement. There are concerns that unless the first agreement is entered into by SCC and STA by the end of November that there won't be time available to implement by the start of the Spring semester in January 2018. SCC initially had concerns with the original 50% reduced fee system staying in place while this new student fare product was being developed. STA and the Transit Operators clarified that no changes would be made to the existing system while the fare product was being piloted. Also, SCC recently

informed STA that they have been working with their Fiscal Affairs and IT Department to set up a fee coding system where the collected fees can be distributed directly to STA and its taking longer than they anticipated. SCC has been working on trying to ensure that they can accept the fees, reconcile the information to ensure that verified students are using the service, get the fees to STA and then legally share student information. STA has followed up with SCC, but there currently is no timetable when this will all be done and the agreement for SCC to give the fees to STA (as stated in #1) still needs to go the SCC Governing Board as well.

Based on a suggestion by Nathan Atherstone, FAST, STA staff is recommending that the Transit Operators and STA consider moving forward with the selected vendor to onboard the countywide mobile application separate from the SCC Pilot. The cost for the mobile application is estimated at $114,000 which includes pilot development and implementation for one year. A potential option is to enter into a contract between STA and the three Transit Operators to hire the selected mobile application vendor and divide the cost between the four service entities or find additional funds to cover the costs. Ongoing maintenance would also be divided between the four service entities based on the actual use (percentage split based on the collected revenues or boardings for the year).

Fiscal Impact:
The cost for the mobile application is estimated at $114,000 per year with ongoing maintenance at $10,000/year. Agency specific changes to the program (fare changes/logo changes/ etc.), resulting in costs with the ticketing vendor would be paid by the individual agency (100%).

Recommendations:
Forward a recommendation to the STA Board to authorize STA's Executive Director to move forward with seeking options for financial support and onboarding the turnkey countywide mobile application separate of the SCC Transit Pilot Program.

DATE: November 17, 2017
TO: STA TAC
FROM: Anthony Adams, Project Manager
RE: 2018 State Transportation Improvement Program (STIP) Programming

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Background:

The State Transportation Improvement Program (STIP) is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources. The STIP is composed of two sub-elements: 75% to the Regional Transportation Improvement Program (RTIP), with projects decided by regional agencies, and 25% to the Interregional Transportation Improvement Program (ITIP). The STIP cycle is programmed every two years and covers a five-year period. STA's 2012 STIP programmed projects are shown in Attachment A. Solano County averages about $10M per 2-year STIP cycle in population shares of STIP funds.

The 2016 STIP was historic (in that the STIP fund estimate was negative creating the need to de-program $750M in programmed projects statewide, including $6 million deprogrammed from Solano's Jepson Parkway project. The passage of Senate Bill 1 (SB 1) created stability to the STIP. While it isn't expected to increase the overall average historic shares to the county, it has restored traditional STIP funding.

Since early 2000, the STA has been programming a substantial amount of the county STIP shares to Jepson Parkway. In recent years, the California Transportation Commission (CTC) moved away from funding off system projects, like the Jepson Parkway, with STIP funds. The focus is now on system (highways) projects and interregional and regional transit projects, such as the Capitol Corridor. This move was evident in 2016-17 when the Jepson Parkway allocations were placed as the lowest priority by the Commission when the limited amount of funds were being allocated.

In addition to providing stability to the STIP, SB 1 also has two new major competitive grants categories, Solutions for Congested Corridors Program ($250M annually) and the Trade Corridors Enhancement Program ($300M annually). These two programs are ideal for Solano County's major priority highway projects. These projects include the I-80 Express Lanes, the I-80/I-680/State Route (SR) 12 Interchange and the I-80 Westbound Cordelia Truck Scales. However, both programs are expected to require matching funds, currently anticipated to be 30%.

On August 17, 2017, CTC adopted the 2018 STIP guidelines (Attachment A). For Solano County, the 2018 STIP Fund Estimate (Attachment B). Solano has a "Base" amount of $7.167M. This "Base" amount is a minimum that will be available to Solano during the 2018 STIP horizon. Meaning, even if Los Angles has a $300M project (programming request in excess their county shares) and CTC uses other county's shares, this "Base" amount will still be available to Solano.

Solano also has $2.774 M in Advanced Project Delivery Estimate (APDE) funds, which are funds that can be advanced from the 2020 STIP to conduct Preliminary Engineering (PE) phases on projects to get them "shovel ready." The Unprogrammed Balance of $11,198 is available to Solano. This is the $5 M that was unallocated from Jepson Parkway and the $6 M that was deprogrammed from the 2016 STIP. These amounts left unprogrammed from the 2016 STIP are available to be reprogrammed during the 2018 STIP. The Formula Distribution of $12,404 is available to Solano, this is our normal 2018 STIP distribution. The Planning, Programming, and Monitoring (PPM) Share is $477,000 for FYs 2020-21 through 2012-23.

At the August 2017 TAC Meeting, STA staff presented priorities for programming the $22.657 M in 2018 STIP funding. Since that time, staff met with the City of Vacaville regarding the status of unfunded phase of the Jepson Parkway, the City of Fairfield regarding the potential for developing a funding package for the Train Station Building, and the City of Rio Vista regarding SR 12/Church and also presented this priorities to the STA Board. The programming recommendations below are based on these discussions.

At the October 2017 Board meeting the following amounts were approved for programming.

1. $6 M to Construction Phase Segment 3 of the Jepson Pkwy Project for FY 2020-21 (City of Vacaville);
2. $9 M to Plans, Specifications & Estimate Phase of the I-80/I-680/SR 12 Interchange Package 2A for FY 2018-19;
3. $5 M to Project Approval/Environmental Document of the SR 37 Project/Mare Island Interchange Project for FY 2018-19;
4. $1.895 M to Construction Phase of the SR 12/Church Rd. Project for FY 2020-21; and
5. $762,000 to Planning, Programming, and Monitoring (PPM) activities for FYs 2020-21 through 2022-23.

Discussion:

After the prior amounts were programmed, the Metropolitan Transportation Commission (MTC) informed STA that the amount that was programmed for PPM was incorrect. STA programmed $762k in PPM, but the amount actually programmed to STA from STIP was $620k. This means that the amount programmed for PPM to Solano should be $620k, with $143k going to MTC for monitoring activities, for a final amount of $591k. STA will be programming $159k over 3 over FY 2020-21 to FY 2022-23.

This lower amount programmed for PPM means that an additional $142k is available to be programmed to another project during this STIP cycle. The additional $142k will be added to the SR12/Church Rd project. The new amount to be programmed for SR12/Church Rd project CON phase will go from $1.895M to $1.939M.

Fiscal Impact:

In committing 2018 STIP PPM funds, STA will be continuing its commitment to facilitating planning, programming, and project monitoring activities in Solano County. The programming of Solano's STIP funds are at the discretion of the STA Board.

Recommendation:

Forward a recommendation to the STA Board to program the 2018 STIP as follows:

1. $1.939M to Construction Phase of the SR 12/Church Rd. Project for FY 2020-21; and
2. $620,000 to Planning, Programming, and Monitoring (PPM) activities for FYs 2020-21 through 2022-23.

DATE: November 16, 2017
TO: STA TAC
FROM: Anthony Adams, Project Manager
RE: Transit and Intercity Rail Capital Program (TIRCP) Application for Regional Transit Improvements

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Background:

The goals of the Transit and Intercity Rail Capital Program are to provide monies to fund transformative capital improvements that modernize California's intercity rail, bus (including feeder buses to intercity rail services, as well as vanpool services that are eligible to report as public transit to the Federal Transit Administration), ferry, and rail transit systems to achieve all of the following objectives:

1. Reduce emissions of greenhouse gases
2. Expand and improve transit service to increase ridership
3. Integrate the rail service of the state's various rail operations, including integration with High-Speed Rail
4. Improve transit safety

The Transit and Intercity Rail Capital Program (TIRCP) program receives 10% of the Cap-and-Trade auction proceeds, which totaled $390M for TIRCP in 2016. With the passage of SB1, the TIRCP category is set to receive a $245M annual boost in funding, as well as a one-time infusion of $79M.

Pursuant to SB 9, the California State Transportation Agency (CalSTA) will approve an initial five-year program of projects with the first year being Fiscal Year (FY) 2018-19, with additional five-year programs approved by April 1st of each even numbered year thereafter. With $245M annually in additional funds available and a five-year program of projects totaling nearly $1.5B, now is the time for Solano transit agencies to apply for TIRCP funding.

The final draft guidelines have been released and can be found here: http://www.dot.ca.gov/drmt/docs/sptircp/2018fdguidelines.pdf. The guidelines make it clear that the intent of this program is to "fund a small number of transformative projects that will significantly reduce vehicle miles traveled, congestion, and greenhouse gas emissions by creating new transit systems, increasing the capacity of an existing transit system, or otherwise significantly increasing the ridership of a transit system."

Eligible Projects Types

1. Rail capital projects, including rail car acquisition. (Solano Does Not Qualify)
2. Intercity, commuter, and urban rail projects that increase service and minor capital investments that are expected to generate increased ridership.
3. Rail, bus, and ferry integration implementation, including: integrating ticketing and scheduling systems and capital related investments.

4. Bus rapid transit and other bus or ferry transit investments to increase ridership and reduce greenhouse has emissions, including capital investments that will contribute to restructured or enhanced service.

Discussion:

STA Proposed Projects for TIRCP Funding

STA staff presented the concept of applying for two separate TIRCP applications at the September TAC and Consortium:

- SolanoExpress Electrification, Capital, and Operational Improvement Plan
- Fairfield/Vacaville (FF/VV) Train Station, Amenities, and Access Improvements

STA staff received approval from both committees to move forward with exploring the possibility of applying for both of these opportunities. STA met with Solano County Transit (SolTrans), Fairfield and Suisun Transit (FAST), and Fairfield staff over the proceeding weeks and formulated a plan of what would be included in each application, what information would need to be obtained, and how much each application would request.

A pre-application meeting was held with CalSTA and Caltrans on November 14th to discuss each of the proposed project applications. During this meeting, CalSTA staff appeared supportive of the integration of regional transportation that each potential application offered, and encouraged the participants that both applications be combined into one. With a focus on the regional transportation that is offered by SolanoExpress and the regional connections being expanded by the opening of the FF/VV Train Station, STA would like to provide a more visionary integrated project submittal of Solano Regional Transit for the upcoming TIRCP application.

This new combined application would take into consideration the entirety of the regional vision associated with the programs and projects offered by the Solano Transportation Authority. SolanoExpress' new service plan will better connect the Sacramento Region to BART and the SF Ferry in Vallejo, while the new VV/FF Train Station expands these opportunities to a new segment of the population. Beyond those connections, STA offers programs such as the Lyft Pilot, which subsidizes the first/last mile so commuters no longer have to worry about how to get all the way to work reliably. Presenting a comprehensive regional transportation solution for the purpose of this TIRCP grant will allow us to showcase the work that STA has already accomplished and show the vision of the goals we are trying to attain going forward.

A full schedule of upcoming dates and deadlines is shown below.

Upcoming Schedule for TIRCP Funding

Optional meetings to discuss project quantifications w/ CalSTA staff	Nov TBD 2017
Project applications due to Caltrans	Jan. 12, 2018
CalSTA publishes summary of applications	Feb. 12, 2018
CalSTA anticipates publishing list of approved projects	Apr. 30, 2018
Anticipated presentation of project list to CTC (at regular meeting)	May 2018

Recommendation:

Forward a recommendation to the STA Board to authorize STA to apply for a TIRCP application for Solano Regional Transit Improvements for an amount not-to-exceed $30M.

DATE: November 16, 2017
TO: STA TAC
FROM Robert Guerrero, Senior Project Manager
RE: Regional Transportation Impact Fee (RTIF) 4th Annual Report

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Background:
The STA and the County of Solano coordinates on the collection and management of the Regional Transportation Impact Fee (RTIF), a component of the County's Public Facilities Fee (PFF). The Solano County Board of Supervisors agreed to include a $1,500 per dwelling unit equivalent for the RTIF as part of the PFF at their meeting on December 3, 2013. The RTIF collection formally began on February 3, 2014. Each of seven cities and the County participate in the selection of RTIF projects through seven RTIF Working Groups.

The STA is responsible for administering the RTIF Program and is required to provide a RTIF annual report to the Solano County Board of Supervisors. The annual report includes status updates on the RTIF financials and the status of the approved projects funded by the RTIF. The STA submits the RTIF Annual Report in order to be included in the County's PFF Annual Report. This year marks the 4th RTIF Annual Report.

Discussion:
RTIF Annual Report for FY 2016-17
The RTIF Annual Report for Fiscal Year 2016-17 (FY 2016-17) is included as Attachment A to this report. In summary, a total of $1.426 million was collected for eligible RTIF projects in FY 2016-17 (after accounting for STA's two percent administrative fee to manage the program). The RTIF revenue collected was an increase of a little more than $200,000 in comparison to last fiscal year which had $1.264 million collected. Since the program began, a total of $4,447,766 has been collected with 90% of the funds already allocated to the RTIF projects.

In addition, four of the seven RTIF Working Groups have completed their project or have projects under construction (as of June 30, 2017):

1. Working Group 1 – Jepson Parkway – 2 phases **Under construction**
2. Working Group 2- Hwy 12 Church Road Environmental Documents - **Completed**
3. Working Group 3- Benicia Bus Hub – **Under Construction**
4. Working Group 4 – Green Valley Overpass – **Under Construction**

Table 2 on page 5 of the Report provides details on the current revenue status of each working group. In total, over half of the RTIF revenue collected through FY 2016-17 has been spent on project implementation with the remaining balance anticipated to be spent in FY 2017-18.

STA staff will continue to coordinate with each RTIF Working Group and the STA Board to disburse RTIF revenue for approved projects in FY 2017-18. The Working Groups will reconvene in the Spring of 2018 as part of their annual meeting requirement for the purposes to confirm progress and expenditures of RTIF funding.

Fiscal Impact:
None to the STA General Fund.

Recommendation:
Forward a recommendation to the STA Board to approve the 4th Annual Solano Regional Transportation Impact Fee (RTIF) Report.

Attachment:

A. ***For immediate review and printing:***
   Click here: Solano County Regional Transportation Impact Fee Annual Report for FY 2016-17

DATE: November 13, 2017
TO: STA TAC
FROM: Jayne Bauer, Marketing and Legislative Program Manager
RE: STA's Draft 2018 Legislative Platform and Legislative Update

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Background:
Each year, STA staff monitors state and federal legislation that pertains to transportation and related issues. On February 8, 2017, the STA Board approved its 2017 Legislative Platform to provide policy guidance on transportation legislation and the STA's legislative activities during 2017.

Monthly legislative updates are provided by STA's State and Federal lobbyists and are attached for your information (Attachments A and B). An updated Legislative Bill Matrix listing state bills of interest is available at http://tiny.cc/staleg.

Discussion:
To help ensure the STA's transportation policies and priorities are consensus-based, the STA's Legislative Platform is first developed in draft form by staff with input from the STA's state (Shaw/Yoder/Antwih, Inc.) and federal (Akin Gump) legislative consultants.

The draft is distributed to STA member agencies and members of our federal and state legislative delegations for review and comment prior to adoption by the STA Board. Staff requests that the STA Technical Advisory Committee (TAC) and Transit Consortium review the Draft 2018 Legislative Platform for comment at their meetings in November. Proposed edits to the Platform are shown with tracked changes (Attachment C).

STA staff will forward the Draft 2018 Legislative Platform with TAC and Consortium feedback to the STA Board in December, with a recommendation to distribute the draft document for review and public comment. The Final Draft 2018 Legislative Platform will be placed on the January 2018 agenda of the TAC and Consortium, and forwarded to the STA Board for consideration of adoption at their February 14, 2018 meeting.

State Legislative Update (Shaw/Yoder/Antwih, Inc.):
The 2016-17 state legislative session has adjourned. The 2018 Regular Session reconvenes on January 3, 2018.

State Transportation Funding
Updates on the following are detailed in Attachment A:

- SB 1 ("Road Repair and Accountability Act of 2017" state transportation funding package) program development workshops
- Initiative to repeal SB 1
- Amendments to RM3 legislation, inclusion of 5 Solano projects
- Cap and Trade update

The following lists STA-supported bill status to date:

AB 28 (Frazier) - Department of Transportation: environmental review process: federal pilot program.
This bill would re-enact, until January 1, 2020, the California Department of Transportation's (Caltrans') authority to waive its 11th Amendment right to sovereign immunity from lawsuits brought in federal court thereby allowing Caltrans to continue assuming the role of the United States Department of Transportation (U.S. DOT) for National Environmental Policy Act (NEPA) decision making. STA Position: Support 2/8/17. *Chaptered on March 29th*.

AB 1113 (Bloom) – State Transit Assistance Program Formula Clarification
This bill amends the statutes governing the State Transit Assistance (STA) program to clarify several ambiguities in law that led to administrative changes made in 2016 by the State Controller's Office. STA Position: Support 5/10/17. *Chaptered on July 21st*.

AB 1324 (Gloria) – Local Sales Taxes for Transportation
This bill would authorize a Metropolitan Planning Organization or Regional Transportation Planning Agency authorized to levy a sales tax to levy that tax in only a portion of the jurisdiction, as an alternative to the entire jurisdiction, in which the organization or agency has authority if approved by the required percentage of the voters in that portion of the jurisdiction. The bill would require the revenues derived from the sales tax to be used only within the area for which the tax was approved by the voters. AB 1324 would benefit counties that have transportation needs that differ between rural and suburban areas, and that have difficulty obtaining the required 2/3 voter support countywide for local transportation sales tax measures. STA Position: Support 5/10/17. *Failed deadline, may be acted upon in January 2018.*

ACA 4 (Aguiar-Curry) - Local government financing: affordable housing and public infrastructure: voter approval.
This measure would lower the voter threshold to 55% for special taxes for purposes of funding the construction, rehabilitation or replacement of public infrastructure or affordable housing, which specifically includes improvements to transit and streets & highways, as well as protection from impacts of sea-level rise. This measure would also reduce the threshold to 55% for local governments to increase property taxes to cover bonded indebtedness to fund similar project types. STA Position: Support 4/12/17. *Referred to Comm. on Local Government & Appropriations April 24th*.

ACA 5 (Frazier and Newman) – Protection of Transportation Revenues
AssemblyMember Frazier introduced Assembly Constitutional Amendment (ACA) 5 to dedicate for transportation purposes all vehicle fee and gasoline/ diesel tax revenues raised by SB 1. STA Position: Support 5/10/17. *ACA 5 has been chaptered and will be on the June 2018 statewide ballot.*

SB 1 (Beall) - Transportation funding.
Comprehensive $52.4 billion transportation funding bill. STA Position: Support 12/14/16. *Chaptered.*

SB 595 (Beall) – Regional Measure 3
This bill is for Regional Measure 3 and would authorize the nine counties in the Bay Area to vote on an unspecified increase in tolls on the Bay Area's bridges to be used for transportation projects throughout the region. Bay Area leaders in both houses are working on the legislation, which could take shape in the coming weeks. STA Position: Support letter 7/13/17. *Chaptered on October 10, 2017.*

SCA 6 (Wiener) – Lower Vote Threshold for Local Transportation Taxes
The California Constitution subjects the imposition of a special tax by a city, county, or special district upon the approval of two-thirds of the voters. This measure would lower that threshold to 55 percent of voters for taxes for transportation purposes. STA Position: Support 4/12/17. *Held in Appropriations Committee and under submission May 25th*.

STA's state legislative advocates (Shaw/Yoder/Antwih, Inc.) will work with STA staff to schedule project briefings in early 2018 with each of Solano's state legislators and their staff (as well as key state agency staff) to provide the current status of STA priority projects and discuss future funding. Josh Shaw and Matt Robinson will present a legislative update at the December 13th Board meeting. Top STA priorities are to protect the funding implemented by Senate Bill (SB) 1 (the Road Repair and Accountability Act of 2017), and to support the enactment of Senate Bill (SB) 595 (the Regional Measure 3 Bay Area bridge toll extension).

Federal Legislative Update (Akin Gump):
STA's federal legislative advocate (Susan Lent of Akin Gump) continues to work with STA staff to craft STA's strategic objectives to align with those of the new administration. Updates on the following are detailed in Attachment B:

- FY 2018 Appropriations
- Infrastructure Legislation still forthcoming
- Federal Permitting (President's Executive Order on environmental streamlining demonstrates a commitment to advance projects more quickly through the federal environmental review process.
- National Performance Management Measures
- TIGER Grants opportunity released

Fiscal Impact:
None.

Recommendation:
Forward a recommendation to the STA Board to release the STA's Draft 2018 Legislative Platform for review and comment.

Attachments:
A. State Legislative Update
B. Federal Legislative Update
C. STA's Draft 2018 Legislative Platform with Tracked Changes (Redline)
(To be provided under separate cover.)

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September 28, 2017

TO: Board of Directors, Solano Transportation Authority

FM: Joshua W. Shaw, Partner
Matt Robinson, Legislative Advocate

RE: STATE LEGISLATIVE UPDATE – October, 2017

Legislative Update

The Legislature adjourned for Interim Recess on September 15. The Legislature will reconvene the 2017-2018 Legislative Session on January 3. In this report we highlight the most relevant bills this year affecting STA; those are discussed under ***Bills of Interest***, below.

SB 1 Workshops Underway

The State continues to develop and spool out draft guidelines for many of the programs funded by new SB 1 revenues. Following is a schedule of upcoming workshops on the Transit and Intercity Rail Capital Program, the State Rail Assistance Program, the State of Good Repair component of the State Transit Assistance Program, and, the Solutions for Congested Corridors Program. We've also included links to the draft guidelines for each program. We are working with your staff to determine whether and how to provide focused feedback to the State on how to improve any particular program.

Public Workshops on TIRCP and SRA Guidelines – Draft Guidelines Found Here **and** Here
Friday, September 29: Los Angeles, Caltrans District 7 Office, 10:00 am – 11:00 am
Monday, October 2: Sacramento, Caltrans HQ, 1:00 pm – 2:00 pm [Will be webcast here]
Thursday, October 5: Written Comments Due

Public Workshops on State Transit Assistance Program-State of Good Repair Guidelines – Draft Guidelines Found Here
Friday, September 29: Los Angeles, Caltrans District 7 Office, 11:00 am – 12:00 pm
Monday, October 2: Sacramento, Caltrans HQ, 2:00 pm – 3:00 pm [Will be webcast here]

Public Workshops on Solutions for Congested Corridors Guidelines – Draft Guidelines Found Here
Monday, September 25: Sacramento, Caltrans HQ, 1:30 pm – 5:00 pm
Wednesday, October 18: Modesto, Stanislaus County Administration Building, Time TBD
Friday, November 17: Stockton, San Joaquin Council of Governments, Time TBD (If Necessary)
Wednesday, December 6: Riverside, Riverside County Administration Building, Time TBD

SB 1 Repeal

As we have previously reported, on May 5, Assembly Member Travis Allen (R-Huntington Beach) filed an initiative to repeal SB 1. As of this writing, however, the sponsor still has not begun to circulate signature petitions; in fact, Mr. Allen has sued the California Attorney General, arguing that the official ballot title & summary statement that the AG's office prepared for those petitions is misleading. The court ruled in

Allen's favor and the initiative Title and Summary was redrafted by the judge and, unfortunately for the proponents of SB 1, now reflects a more negative Title and Summary.

In the meantime, a much more meaningful threat to the SB 1 revenues has arisen, with the filing of a new referendum initiative on September 14. The initiative would require statewide voter approval of any increase or extension of gasoline or diesel fuel taxes after January 1, 2017. According to recent press account, which we have verified through various contacts, it appears that Republican members of California's U.S. congressional delegation are determined to organize a serious and well-funded effort in pursuit of this initiative. They apparently see this as a means of driving voter turnout in their districts, in a year that otherwise would not feature much on the ballot to bring out Republicans in California.

If this effort proceeds, it will represent a very real threat to SB 1; internal polls show that the majority of Californians today, without further education, are willing to vote to repeal the SB 1 taxes. We continue to work with many coalition partners to strategize on how best to stave off any repeal effort.

RM3

After several months of negotiations between members of the Bay Area Caucus, the Assembly and Senate passed SB 595 (Beall) to authorize with voter approval a toll increase, not to exceed $3, on the Bay Area's bridges. Commonly referred to as Regional Measure 3, the increased toll(s) would fund a number of Bay Area transportation improvements across all nine counties. The bill is now before the Governor for his signature. The final bill includes the following benefits for Solano County:

- **I-80/680/SR 12 Interchange Improvements – $150 million**
- **Solano Westbound I-80 Truck Scales – $105 million**
- **Highway 37 Corridor Access Improvements and Sea Level Rise Adaptation – $100 million**
- **Corridor Express Lanes (I-80 Red Top Road to I505) – $300 million***
- **Ferries (new vessels, added frequency and service expansion) – $300 million***

* A portion of which could be spent in Solano County; other regional projects are also eligible for these funds

Cap and Trade

On September 16, the Governor signed into law AB 134 (Committee on Budget), which appropriates up to $180 million for the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project, commonly known as HVIP. This investment represents an increase of $162 million over the funding made available to HVIP in FY 2016-17. The bill guarantees a minimum investment of $35 million in zero-emission buses, which could include transit buses. We are talking with your staff about how to advantage your transit operators' projects in seeking a share of this funding.

Bills of Interest

SB 1 (Beall) – Transportation Funding Package (Signed by Governor on April 28)

This bill would increase several taxes and fees to address issues of deferred maintenance on state highways and local streets and roads, as well as provide new funding for public transit. Specifically, this bill would increase both the gasoline (over three years) and diesel excise taxes by 12 and 20 cents, respectively; increase the vehicle registration fee by $38; create a new $100 vehicle registration fee applicable to zero-emission motor vehicles; increase Cap and Trade funding for transit; increase the rate of sales tax on diesel by another 4% for the State Transit Assistance Program and intercity rail, limit the borrowing of weight-fee revenues, and repay outstanding transportation loans. As a result,

transportation funding would increase by approximately $6 billion per year. ***The STA Board SUPPORTS this bill (Board Action: 12/14/16).***

SB 595 (Beall) – Regional Measure 3
This is the Regional Measure 3 bill, authorizing the nine counties in the Bay Area to vote on an increase in tolls on the Bay Area's bridges to be used for transportation projects throughout the region. ***The STA Board SUPPORTS this bill (Support Letter 7/13/17).***

SCA 6 (Wiener) – Lower Vote Threshold for Local Transportation Taxes (2-Year Bill)
The California Constitution subjects the imposition of a special tax by a city, county, or special district upon the approval of two-thirds of the voters. This measure would lower that threshold to 55 percent of voters for taxes for transportation purposes. ***The STA Board SUPPORTS this bill (Board Action: 4/12/17).***

AB 28 (Frazier) – Caltrans NEPA Delegation (Signed by the Governor on March 29)
This bill would grant Caltrans the authority to continue performing federal environmental responsibilities for highway projects under the National Environmental Policy Act (NEPA) and other federal laws until January 1, 2020. ***The STA Board SUPPORTS this bill (Board Action: 2/8/17).***

AB 1113 (Bloom) – State Transit Assistance Program Formula Clarification (Signed by the Governor on July 21)
This bill amends the statutes governing the State Transit Assistance (STA) program to clarify several ambiguities in law that led to administrative changes made in 2016 by the State Controller's Office; these changes implemented new calculation and allocation methodologies for the STA program, suddenly changing the way these funds are distributed to transit agencies. ***The STA Board SUPPORTS this bill (Board Action: 5/10/17).***

AB 1121 (Chiu) – WETA Board (2-Year Bill)
Existing law establishes the San Francisco Bay Area Water Emergency Transportation Authority, composed of 3 members appointed by the Governor, one member appointed by the Senate Committee on Rules, and one member appointed by the Speaker of the Assembly. This bill would increase the membership of the authority to 9 members, with 5 members to be appointed by the Governor, 2 members appointed by the Senate Committee on Rules, and 2 members appointed by the Speaker of the Assembly.

AB 1324 (Gloria) – Local Sales Taxes for Transportation (2-Year Bill)
This bill would authorize a metropolitan planning organization or regional transportation planning agency authorized to levy a sales tax to levy that tax in only a portion of the jurisdiction, as an alternative to the entire jurisdiction, in which the organization or agency has authority if approved by the required percentage of the voters in that portion of the jurisdiction. The bill would require the revenues derived from the sales tax to be used only within the area for which the tax was approved by the voters. ***The STA Board SUPPORTS this bill (Board Action: 5/10/17).***

ACA 4 (Aguiar-Curry) – Lower Vote Threshold for Local Infrastructure Taxes
The California Constitution subjects the imposition of a special tax by a city, county, or special district upon the approval of two-thirds of the voters. This measure would lower that threshold to 55 percent of voters for taxes for purposes of funding the construction, rehabilitation or replacement of public infrastructure or affordable housing, which specifically includes improvements to transit and streets &

highways, as well as protection from impacts of sea-level rise. This measure would also reduce the threshold to 55 percent for local governments to increase property taxes to cover bonded indebtedness to fund similar project-types. ***The STA Board SUPPORTS this bill (Board Action: 4/12/17).***

ACA 5 (Frazier and Newman) – Protection of Transportation Revenues
This measure would prohibit the state from borrowing revenues from fees and taxes imposed on vehicles or their use, and from using those revenues other than as specifically permitted by Article XIX. This measure would prohibit vehicle revenues and fuel tax revenues from being pledged or used for the payment of principal and interest on general obligation bonds issued by the state, except for vehicle weight fee revenues used to pay bond approved prior to January 1, 2017. ***The STA Board SUPPORTS this bill (Board Action: 5/10/17).***

M E M O R A N D U M

September 26, 2017

To: Solano Transportation Authority

From: Akin Gump Strauss Hauer & Feld LLP

Re: September Report

During the month of September we monitored developments in Washington related to transportation funding and policy.

Fiscal Year 2018 Appropriations

On September 8, 2017 Congress passed and President Donald J. Trump signed legislation to fund the federal government through December 8, 2017 at FFY 2017 levels. The bill gives Congress additional time to pass any full appropriations bills to fund the federal government through the remainder of the FFY 2018. In addition to providing short-term funding for FFY 2018, the bill extended the nation's debt limit through December 8, extended authorization of the National Flood Insurance program, and made available $15 billion in hurricane relief.

In August and September, the House passed all 12 spending bills. As previously mentioned, the House-passed Transportation/Housing and Urban Development (THUD) Appropriations Bill funds highway and transit formula programs at the levels authorized in the FAST Act. The bill does not include funding for TIGER grants and reduces funding for Capital Investment Grants.

The full Senate has not passed any appropriations bills to date and only 8 of 12 appropriations bills have made it through the Senate Appropriations Committee. The Senate THUD bill includes funding for TIGER grants, FAST Act-authorized transit and highway funding, and higher funding for Capital Investment Grants. Senate leaders may still attempt to negotiate a bipartisan omnibus bill with the House. It is too early to tell whether an agreement can be reached or Congress will simply extend fiscal year 2017 funding levels for the remainder of fiscal year 2018.

Infrastructure

The Trump Administration is finalizing its infrastructure proposal and is expected to release it in the coming weeks. The President's team has had discussions with Members of Congress regarding options for identifying new funding for infrastructure, including potentially raising the federal gas tax. The President has also signaled a willingness to work with Democrats on infrastructure.

The House Transportation and Infrastructure Committee began holding oversight hearings in preparation for developing infrastructure legislation. The Committee has announced its intention to hold a hearing on highway and transit programs in the coming weeks.

Federal Permitting

The White House Council on Environmental Quality (CEQ) issued a September 14 *Federal Register* notice announcing its "initial list of actions" to implement the August 15 Executive Order addressing permitting reforms. The Plan identifies a process for referring projects that qualify for designation as high priority projects to the Federal Permitting Improvement Steering Council, the Department of Transportation, or the U.S. Army Corps of Engineers; revising guidance on improving the environmental review process; and reviewing and revising CEQ's procedural NEPA regulations.

National Performance Management Measures

Responding to litigation brought by six states, including California, the Department of Transportation will allow an Obama Administration rule requiring state and regional highway departments to report on and develop plans to reduce greenhouse gas emissions from vehicles traveling on federal-aid highways to go into effect on September 28. The Federal Highway Administration allowed some parts of the National Performance Management rules to go into effect in the spring, but indefinitely delayed the provisions concerning emissions reporting. The Trump Administration is expected to begin a rulemaking to repeal the climate metric later this year with the goal of finalizing it in early 2018, months prior to the first reporting deadline in October 2018.

Opponents of the rule have argued that FHWA lacks regulatory authority over greenhouse gas emissions and that emissions reporting would prevent new highway projects from going forward. California and other states, already require state agencies and MPOs to consider the global warming impacts of roads and develop plans to invest in alternative transit, bike lanes and affordable housing projects in order to control emissions.

Tiger Grants

The Department of Transportation issued its Notice of Funding Opportunity for the TIGER grants on September 6. Applications are due on October 16. Grants will range from $5 to $25 million and no state may receive more than $50 million in grant funds. The program is similar to prior TIGER rounds.

DATE: November 7, 2017
TO: STA TAC
FROM: Anthony Adams, Project Manager
RE: 2018 Solano Travel Safety Plan Highway Safety Improvement Program (HSIP) Project Identification

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Background:
The Highway Safety Improvement Program (HSIP) is a bi-annual funding program for local safety projects. Every two years, a Call for Projects is released with jurisdictions applying based on accident data. If a particular location has a high incidents of accidents, then depending on the preferred treatment, a project would receive a Benefit/Cost (B/C) ratio. A B/C ratio above a certain number, 3.5 for cycle 8, would mean the project is eligible for HSIP funding. While the Program is "competitive" it is also a "formula" based program, with most applicants receiving an award.

$10 million from the HSIP was set aside and exchanged for state funds to implement a new safety analysis program, the Systemic Safety Analysis Report Program (SSARP). The intent of the SSARP is to assist local agencies in performing collision analysis, identifying safety issues on their roadway network, and developing a list of systemic low-cost countermeasures that can be used to prepare future HSIP and other safety program applications. STA was awarded a $555,555 grant for a countywide safety analysis study, the largest grant awarded statewide during this grant cycle. This grant will build on the recently adopted 2016 Solano Safety Plan, which identified 76 locations, by identifying additional locations and prescribing potential treatments. The primary goal is to identify locations throughout Solano County where high-benefit and low-cost safety countermeasures may be implemented in order to save the most lives.

STA selected DKS and Associates to develop the 2018 Solano Travel Safety Plan. TAC members have previously selected potential project locations for further analysis. These locations were analyzed with preliminary cost estimates and b/c ratios.

Discussion:
Safety Plan Project locations and proposed treatment lists were provided to member agencies on October 30th. Project lists were separated into three main categories.

1. Countywide Systemic HSIP Projects along State Highways
2. Countywide Systemic HSIP Projects along Arterials and Collectors
3. Jurisdictionally-specific Systemic HSIP Projects

Member agencies had the opportunity to participate in a call with the plan consultant, DKS, on November 13th to discuss the project lists, propose new treatments and/or locations. These lists were confirmed and are now being presented to the STA TAC for approval. Countywide project lists that are located along State Highways will be submitted to Caltrans for implementation. Local HSIP projects that are selected for funding have a 10% local match required.

The next steps are for non-HSIP projects lists to be presented at the December TAC and a draft version of the 2018 Travel Safety Plan to be presented at the January TAC. DKS will work with member agencies to apply for HSIP cycle 9 funding for selected projects between March and May 2018.

Fiscal Impact:
None for STA. Local jurisdictions that apply for HSIP funding will have a 10% local match requirement.

Recommendation:
Approve the attached 2018 Solano Travel Safety Plan HSIP project lists for each jurisdiction.

Attachments:
A. 2018 Solano Travel Safety Plan HSIP Project Lists

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MEMORANDUM

DATE: October 20, 2017

TO: Anthony Adams, Solano Transportation Authority

FROM: Josh Pilachowski, DKS Associates
Benjamin Rady, DKS Associates
Bobby Sidhu, DKS Associates

SUBJECT: STA Travel Safety Plan – Unincorporated Project Summary

The purpose of this memorandum is to describe the methodology used to compile a list of projects for treatment packages applicable to Unincorporated County. Treatment packages are based on funding available from the Highway Safety Improvement Program (HSIP). As per the *HSIP Guidelines*, it is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. As long as a specific safety problem is identified and the proposed countermeasure addresses that condition, projects are eligible to receive funding. All proposed projects must lead to and complete the construction of safety improvements. The maximum federal HSIP reimbursement about for a single HSIP project is $10 million; if a project exceeds this limit, the remaining costs are to be covered by the project sponsor.

Locations identified to be included in treatment packages are at hot-spot intersections, or along corridors that have crash trends determined to be common throughout the system. Improvements include countermeasures to crash trends divided into the following treatments: widen shoulder, pave existing shoulder and provide tapered edge. Not all locations selected to be included in a treatment package have a high individual benefit-cost ratio, this is due to the averaging of all location benefit-cost ratios for a given package. Using this methodology, a higher benefit-cost ratio at one location raises the average such to include an intersection with a ratio below the threshold. Additional information for potential treatment projects are shown in Appendix A.

INTERSECTION CHARACTERISTICS

To best determine the intersections that would most benefit from treatments, all intersections that define the “safety segments” were identified. Each intersection was analyzed to determine a series of characteristics intended to aid in the determination of potential treatments. Characteristics noted include, but are not limited to: control type, type of crosswalk, number of lanes on minor and major streets, left turn phasing, the presence of medians and bicycle

facilities. Characteristics were then used to classify all intersections into archetypes to be used later in the process in determining treatments for additional intersections with a high number of crashes, or “hot-spots”.

SUMMARY OF TREATMENTS

As shown in Appendix A, several treatment packages may apply to a given project. There are four treatment packages associated with the improvement of segments: The first considers widening shoulders, unpaved (countermeasure R17) while another provides a tapered edge drop-off (countermeasure R25). Another treatment package includes widening shoulders, paved (countermeasure R16) and the last one is to pave existing shoulder (countermeasure R18). Treatment packages for signalized and unsignalized intersections were not included due to extremely low benefit cost ratios.

TREATMENTS

Countermeasures determined from jurisdiction feedback are used to develop treatment packages by organizing similar countermeasures into groups. Intersections identified by the jurisdiction that are already funded/in progress for improvements were removed from treatment packages. In Appendix A, countermeasures used to develop treatment packages are defined as follows:

Treatments Along Segments

- **Countermeasure ID R16** – Widen and pave shoulder. Implementation of this treatment reduces crashes by 30% for $150,000 per typical installation.
- **Countermeasure ID R17** – Widen shoulder (unpaved). Implementation of this treatment reduces crashes by 20% for $50,000 per typical installation.
- **Countermeasure ID R18** – Pave existing shoulder. Implementation of this treatment reduces crashes by 15% for $50,000 per typical installation.
- **Countermeasure ID R25** – Provide tapered edge for pavement edge drop-off. Implementation of this treatment reduces crashes by 10% for $25,000 per typical installation.

All intersections identified in the previous step were revisited to determine the potential application of the treatments listed above. If all countermeasures in a treatment package were determined to be feasible to implement at an intersection, that location was included in the benefit-cost analysis.

BENEFIT-COST RATIOS

The goal of this step was to compile a list of projects for Unincorporated jurisdiction treatment packages with a B/C ratio (B/C) of 6.0 or higher. In Appendix A, intersections are listed from highest to lowest and color coded to easily distinguish between local and state routes. In addition, intersections included in countywide treatment packages are identified by color. Note

that intersections identified in county-wide and jurisdiction specific treatment packages cannot apply to both. Unincorporated County has the option to remove intersections from county-wide treatment packages in order to include them in its' own specific treatment packages. However, this option should only be considered if doing so make a jurisdiction specific treatment package feasible or allows the inclusion of additional intersections into a treatment package.

B/C Ratios

The B/C ratios for each treatment package are the location specific products of annual benefit divided by annual cost. The higher the B/C ratio for a location, the more cost effective it is to apply the treatment package. Effectively, higher B/C ratios are associated with a reduction in sever crashes and/or with low cost but effective improvements. The benefit from a systemic approach, is that we can group together several locations with the same treatment package and calculate the total benefit and total cost over many locations. Since HSIP funding is entirely dependent on B/C ratio, and awards are given to all applications that show a B/C ratio over a relatively consistent threshold, projects with B/C ratios significantly higher than that threshold represent wasted benefit. By combining many locations together with a range of B/C ratios, the locations with higher B/C ratios can essentially fund those with lower ones. To effectively maximize the potential funding, the locations are sorted by B/C ratio from largest to smallest and a cumulative B/C ratio calculated for the entire list so that the final B/C ratio remains above the threshold, but includes the maximum number of locations while doing so.

NEEDED FROM JURISDICTION

In response to this memorandum, DKS Associates requests that Unincorporated County decide which treatment packages to include in the HSIP Grant Application. Additionally, identify for removal intersections that are not desired, which have been included in treatment packages.

Appendix A - Unincorporated County Potential Projects

Location	Benefit Cost Ratio	Cumulative BCR	CM	Unused & Desired CM	Prelim Grant Estimate	
					Per Location	All Locations
Project 1A: Treatments Along Segments - Widen Shoulders (Unpaved)						
Meridian Rd and Elizabeth Rd	3.5	3.5	R17	R25	$50,000	$200,000
Meridian Rd and Bryant Ln	3.5	3.5		R25		
Putah Creek Rd and Johnson Rd	0.1	2.3		R25		
Putah Creek Rd and Winters Rd	0.1	1.8		R25		
Project 1B: Treatments Along Segments - Provide a Tapered Edge Drop-Off						
Meridian Rd and Elizabeth Rd	3.5	3.5	R25	R17	$25,000	$100,000
Meridian Rd and Bryant Ln	3.5	3.5		R17		
Putah Creek Rd and Johnson Rd	0.1	2.3		R17		
Putah Creek Rd and Winters Rd	0.1	1.8		R17		
Project 2A: Treatments Along Segments - Widen Shoulders (Paved)						
Porter Rd and Pitt School Rd	34.6	34.6	R16	R18, R25	$150,000	$300,000
Putah Creek Rd and Wintu Way	0.1	17.4		R18		
Project 2B: Treatments Along Segments - Pave Existing Shoulder						
Porter Rd and Pitt School Rd	51.9	51.9	R18	R16, R25	$50,000	$100,000
Putah Creek Rd and Wintu Way	0.2	26.0		R16		
Project 3A: Treatments at Unsignalized Intersection - Convert to Signal						
Porter Rd and Pitt School Rd	4.8		NS3	NS2,NS4, NS5, NS6, NS7	$900,000	
Project 3B: Treatments at Unsignalized Intersection - Convert to Roundabout						
Porter Rd and Pitt School Rd	1.7		NS4	NS2, NS3, NS5, NS6, NS7	$2,000,000	
Project 3C: Treatments at Unsignalized Intersection - Install Additional Signs, Pavement Markings & Flashing Warning						
Porter Rd and Pitt School Rd	152.4		NS5 + NS6 + NS7	NS2, NS3, NS4, NS8	$26,000	
Project 3D: Treatments at Unsignalized Intersection - Install Additional Signs, Pavement Markings & Flashing Beacon (Large)						
Porter Rd and Pitt School Rd	55.7		NS5 + NS6 + NS8	NS2, NS3, NS4, NS7	$86,000	

County-wide Treatment State Int	Cumulative BCR above 6
County-wide Treatment Local Int	Cumulative BCR below 6
Jurisdiction Treatment State Int	
Jurisdiction Treatment Local int	

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MEMORANDUM

DATE: October 20, 2017

TO: Anthony Adams, Solano Transportation Authority

FROM: Josh Pilachowski, DKS Associates
Benjamin Rady, DKS Associates
Bobby Sidhu, DKS Associates

SUBJECT: STA Travel Safety Plan – Benicia Jurisdiction Project Summary

The purpose of this memorandum is to describe the methodology used to compile a list of projects for treatment packages applicable to Benicia. Treatment packages are based on funding available from the Highway Safety Improvement Program (HSIP). As per the *HSIP Guidelines*, it is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. As long as a specific safety problem is identified and the proposed countermeasure addresses that condition, projects are eligible to receive funding. All proposed projects must lead to and complete the construction of safety improvements. The maximum federal HSIP reimbursement about for a single HSIP project is $10 million; if a project exceeds this limit, the remaining costs are to be covered by the project sponsor.

Locations identified to be included in treatment packages are at hot-spot intersections, or along corridors that have crash trends determined to be common throughout the system. Improvements include countermeasures to crash trends divided into the following treatments: Improve signal hardware, improve signal timing, provide protected left turn phase, convert to all-way stop control, install/upgrade large or additional stop signs or other intersections warning/regulatory signs, and install splitter-islands on the minor road approaches. Not all locations selected to be included in a treatment package have a high individual benefit-cost ratio, this is due to the averaging of all location benefit-cost ratios for a given package (cumulative benefit-cost ratio). Using this methodology, a higher benefit-cost ratio at one location raises the average such to include an intersection with a ratio below the threshold. Additional information for potential treatment projects are shown in Appendix A.

INTERSECTION CHARACTERISTICS

To best determine the intersections that would most benefit from treatments, all intersections that define the “safety segments” were identified. Each intersection was analyzed to determine a series of characteristics intended to aid in the determination of potential treatments.

Characteristics noted include, but are not limited to: control type, type of crosswalk, number of lanes on minor and major streets, left turn phasing, the presence of medians and bicycle facilities. Characteristics were then used to classify all intersections into archetypes to be used later in the process in determining treatments for additional intersections with a high number of crashes, or "hot-spots".

SUMMARY OF TREATMENTS

As shown in Appendix A, several treatment packages may apply to a given project. There are two treatment packages associated with the improvement of signalized intersections: The first considers signal improvements and left turn phasing (countermeasures S2, S3, and S6) while another incorporates signal hardware improvements and left turn phasing (countermeasures S2 and S6). For unsignalized intersections, one treatment package considers installing signal and additional warning/regulatory signs (countermeasure NS3 and NS5) while another includes a conversion to All-Way Stop controlled and install warning/regulatory signs (countermeasures NS2 and NS5), a final unsignalized package considers installing a splitter islands (countermeasure NS11). The third package considers installing bike lanes along roadway segments (roadway countermeasure R36).

TREATMENTS

Countermeasures determined from jurisdiction feedback are used to develop treatment packages by organizing similar countermeasures into groups. Intersections identified by the jurisdiction that are already funded/in progress for improvements were removed from treatment packages. In Appendix A, countermeasures used to develop treatment packages are defined as follows:

Treatments at Signalized Intersections

- **Countermeasure ID S2** – Improve signal hardware, may include: lenses, back-plates, mounting, size and number of heads. Implementation of this treatment reduces crashes by 15% for $40,000 per intersection.
- **Countermeasure ID S3** – Improve signal timing: coordination, phasing, clearance intervals. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID S6** –Provide protected left turn phase for left turn lanes that already exists. Implementation of this treatment reduces crashes by 30% for $12,000 per intersection.
- **Countermeasure ID S10** –Install cameras to detect red-light running. Implementation of this treatment reduces crashes by 15% for $70,000 per intersection.

Treatments at Unsignalized Intersections

- **Countermeasure ID NS2** – Convert two-way stop controlled to all-way stop control. Implementation of this treatment reduces crashes by 50% for $5,000 per intersection.

- **Countermeasure ID NS3** – Convert unsignalized intersection to signalized. Implementation of this treatment reduces crashes by 25% for $900,000 per intersection.
- **Countermeasure ID NS4** – Convert intersection to roundabout (from 2-way stop or Yield control). Implementation of this treatment reduces crashes by 27% for $2,000,000/$500,000 per intersection.
- **Countermeasure ID NS5** – Install/upgrade larger or additional stop signs or other intersection warning signs. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID NS10** – Improve sight distance to intersection. Implementation of this treatment reduces crashes by 20% for $100,000 per intersection.
- **Countermeasure ID NS11** – Install splitter-islands on the minor road approaches. Implementation of this treatment reduces crashes by 40% for $50,000 per intersection.
- **Countermeasure ID NS12** – Install raised median on approaches. Implementation of this treatment reduces crashes by 25% for $200,000 per intersection.

Treatments Along Segments

- **Countermeasure ID R36** – Install bike lanes. This treatment is only applicable to bicycle related crashes Implementation of this treatment reduces crashes by 35% for $100,000 per typical installation.

All intersections identified in the previous step were revisited to determine the potential application of the treatments listed above. If all countermeasures in a treatment package were determined to be feasible to implement at an intersection, that location was included in the benefit-cost analysis.

BENEFIT-COST RATIOS

The goal of this step was to compile a list of projects for Benicia jurisdiction treatment packages with a B/C ratio (B/C) of 6.0 or higher. In Appendix A, intersections are listed from highest to lowest and color coded to easily distinguish between local and state routes. In addition, intersections included in countywide treatment packages are identified by color. Note that intersections identified in county-wide and jurisdiction specific treatment packages cannot apply to both. Benicia has the option to remove intersections from county-wide treatment packages in order to include them in its' own specific treatment packages. However, this option should only be considered if doing so make a jurisdiction specific treatment package feasible or allows the inclusion of additional intersections into a treatment package.

B/C Ratios

The B/C ratios for each treatment package are the location specific products of annual benefit divided by annual cost. The higher the B/C ratio for a location, the more cost effective it is to apply the treatment package. Effectively, higher B/C ratios are associated with a reduction in sever crashes and/or with low cost but effective improvements. The benefit from a systemic

approach, is that we can group together several locations with the same treatment package and calculate the total benefit and total cost over many locations. Since HSIP funding is entirely dependent on B/C ratio, and awards are given to all applications that show a B/C ratio over a relatively consistent threshold, projects with B/C ratios significantly higher than that threshold represent wasted benefit. By combining many locations together with a range of B/C ratios, the locations with higher B/C ratios can essentially fund those with lower ones. To effectively maximize the potential funding, the locations are sorted by B/C ratio from largest to smallest and a cumulative B/C ratio calculated for the entire list so that the final B/C ratio remains above the threshold, but includes the maximum number of locations while doing so.

NEEDED FROM JURISDICTION

In response to this memorandum, DKS Associates requests that Benicia decide which treatment packages to include in the HSIP Grant Application. Additionally, identify for removal intersections that are not desired, which have been included in treatment packages.

Appendix A - Benicia Potential Projects

Location	Benefit Cost Ratio	Cumulative BCR	CM 1	CM 2	CM 3	Unused & Desired CM	Prelim Grant Estimate Per Location	Prelim Grant Estimate All Locations
Project 1A: Treatments at Signalized Intersections - Signal Improvements and Left Turn Phase								
Military at 5th St E	4.15	4.1	S2	S3	S6	S10	$132,500	$265,000
Military at E 2nd	2.30	3.2						
Project 1B: Treatments at Signalized Intersections - Signal Hardware and Left Turn Phase								
Military at 5th St E	8.80	8.8	S2	S6	-	S3	$54,000	$108,000
Military at E 2nd	4.90	6.9				S3, S10		
Project 2A: Treatments at Unsignalized Intersections - Install Signal and Additional Warning/Regulatory Signs								
Military at E 2nd	4.1	4.1	NS3	NS5	-	NS10	$101,000	$202,000
Military at W 2nd	2.8	3.4				NS10		
Project 2B: Treatments at Unsignalized Intersections - Convert to All-Way Stop and Install Warning/Regulatory Signs								
E 5th St at E L St	52.8	52.8	NS2	NS5	-	NS4, NS11	$6,000	$24,000
E 5th St at E I St	11.4	32.1				NS4, NS11, NS12		
E 5th St at E J St	10.0	24.8				NS4, NS11, NS12		
E 5th St at E N St	2.8	19.3				NS12		
Project 2C: Treatments at Unsignalized Intersections - Install Splitter Islands								
E 5th St at E L St	8.8	8.8	NS11	-	-	NS2, NS4, NS5	$50,000	$200,000
E 5th St at E I St	1.9	5.4				NS2, NS4, NS5, NS12		
E 5th St at E J St	1.7	4.1				NS2, NS4, NS5, NS12		
E 5th St at E N St	0.5	3.2				NS2, NS12		
Project 3: Treatments at Segments - Install Bike Lanes								
Military at 5th St E	6.2		R36	-	-	-	$100,000	

County-wide Treatment State Int	Cumulative BCR above 6
County-wide Treatment Local Int	Cumulative BCR below 6
Jurisdiction Treatment State Int	
Jurisdiction Treatment Local int	

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MEMORANDUM

DATE: October 20, 2017

TO: Anthony Adams, Solano Transportation Authority

FROM: Josh Pilachowski, DKS Associates
Benjamin Rady, DKS Associates
Bobby Sidhu, DKS Associates

SUBJECT: STA Travel Safety Plan – Dixon Jurisdiction Project Summary

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The purpose of this memorandum is to describe the methodology used to compile a list of project treatment packages applicable to Dixon. Treatment packages are based on funding available from the Highway Safety Improvement Program (HSIP). As per the *HSIP Guidelines*, it is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. As long as a specific safety problem is identified and the proposed countermeasure addresses that condition, projects are eligible to receive funding. All proposed projects must lead to and complete the construction of safety improvements. The maximum federal HSIP reimbursement about for a single HSIP project is $10 million; if a project exceeds this limit, the remaining costs are to be covered by the project sponsor.

Locations identified to be included in treatment packages are at hot-spot intersections, ramps, or along corridors that have crash trends determined to be common throughout the system. Improvements include countermeasures to crash trends divided into the following treatments: Improve signal hardware, install pedestrian crossing, Upgrade intersection pavement markings, install pedestrian crossing at uncontrolled locations, and install/upgrade larger or additional stop signs or other intersection warning signs. Not all locations selected to be included in a treatment package have a high individual benefit-cost ratio, this is due to the averaging of all location benefit-cost ratios for a given package (cumulative benefit-cost ratio). Using this methodology, a higher benefit-cost ratio at one location raises the average such to include an intersection with a ratio below the threshold. Additional information for potential treatment projects are shown in Appendix A.

INTERSECTION CHARACTERISTICS

To best determine the intersections that would most benefit from treatments, all intersections that define the “safety segments” were identified. Each intersection was analyzed to determine a series of characteristics intended to aid in the determination of potential treatments. Characteristics noted include, but are not limited to: control type, type of crosswalk, number of

lanes on minor and major streets, left turn phasing, the presence of medians and bicycle facilities. Characteristics were then used to classify all intersections into archetypes to be used later in the process in determining treatments for additional intersections with a high number of crashes, or “hot-spots”.

SUMMARY OF TREATMENTS

As shown in Appendix A, several treatment packages may apply to a given project. There is one treatment package associated with the improvement of signalized intersections: signal hardware improvements and pedestrian crossing (countermeasures S2 and S20). Treatment packages at unsignalized intersections include pavement marking improvements and pedestrian crossing (countermeasures NS6 and NS18) while another includes for the installation of additional warning/regulatory signage (countermeasures NS5).

TREATMENTS

Countermeasures determined from jurisdiction feedback are used to develop treatment packages by organizing similar countermeasures into groups. Intersections identified by the jurisdiction that are already funded/in progress for improvements were removed from treatment packages. In Appendix A, countermeasures used to develop treatment packages are defined as follows:

Treatments at Signalized Intersections

- **Countermeasure ID S2** – Improve signal hardware, may include: lenses, back-plates, mounting, size and number of heads. Implementation of this treatment reduces crashes by 15% for $40,000 per intersection.
- **Countermeasure ID S3** – Improve signal timing: coordination, phasing, clearance intervals. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID S19** – Install pedestrian countdown signal heads. This treatment is only applicable to pedestrian related crashes. Implementation of this treatment reduces crashes by 25% for $1,500 per typical installation.
- **Countermeasure ID S20** – Install pedestrian crossing. This treatment is only applicable to pedestrian related crashes. Implementation of this treatment reduces crashes by 25% for $5,000 per intersection.

Treatments at Unsignalized Intersections

- **Countermeasure ID NS1** – Add intersection lighting. This treatment is only applicable to night-time related crashes. Implementation of this treatment reduces crashes by 40% for $8,000 per intersection.
- **Countermeasure ID NS3** – Convert unsignalized intersection to signalized. Implementation of this treatment reduces crashes by 25% for $900,000 per intersection.

- **Countermeasure ID NS4** – Convert intersection to roundabout (from 2-way stop or Yield control). Implementation of this treatment reduces crashes by 27% for $2,000,000/$500,000 per intersection.
- **Countermeasure ID NS5** – Install/upgrade larger or additional stop signs or other intersection warning signs. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID NS6** – Upgrade intersection pavement markings. Implementation of this treatment reduces crashes by 25% for $10,000 per intersection.
- **Countermeasure ID NS12 –** Install raised median on approaches. Implementation of this treatment reduces crashes by 25% for $200,000 per intersection.
- **Countermeasure ID NS18** – Install pedestrian crossing at uncontrolled locations. This treatment is only applicable to pedestrian related crashes. Implementation of this treatment reduces crashes by 35% for $50,000 per intersection.

All intersections identified in the previous step were revisited to determine the potential application of the treatments listed above. If all countermeasures in a treatment package were determined to be feasible to implement at an intersection, that location was included in the benefit-cost analysis.

BENEFIT-COST RATIOS

The goal of this step was to compile a list of projects for Dixon jurisdiction treatment packages with a B/C ratio (B/C) of 6.0 or higher. In Appendix A, intersections are listed from highest to lowest and color coded to easily distinguish between local and state routes. In addition, intersections included in countywide treatment packages are identified by color. Note that intersections identified in county-wide and jurisdiction specific treatment packages cannot apply to both. Dixon has the option to remove intersections from county-wide treatment packages in order to include them in its' own specific treatment packages. However, this option should only be considered if doing so make a jurisdiction specific treatment package feasible or allows the inclusion of additional intersections into a treatment package.

B/C Ratios

The B/C ratios for each treatment package are the location specific products of annual benefit divided by annual cost. The higher the B/C ratio for a location, the more cost effective it is to apply the treatment package. Effectively, higher B/C ratios are associated with a reduction in sever crashes and/or with low cost but effective improvements. The benefit from a systemic approach, is that we can group together several locations with the same treatment package and calculate the total benefit and total cost over many locations. Since HSIP funding is entirely dependent on B/C ratio, and awards are given to all applications that show a B/C ratio over a relatively consistent threshold, projects with B/C ratios significantly higher than that threshold represent wasted benefit. By combining many locations together with a range of B/C ratios, the locations with higher B/C ratios can essentially fund those with lower ones. To effectively

maximize the potential funding, the locations are sorted by B/C ratio from largest to smallest and a cumulative B/C ratio calculated for the entire list so that the final B/C ratio remains above the threshold, but includes the maximum number of locations while doing so.

NEEDED FROM JURISDICTION

In response to this memorandum, DKS Associates requests that Dixon decide which treatment packages to include in the HSIP Grant Application. Additionally, identify for removal intersections that are not desired, which have been included in treatment packages.

Appendix A - Dixon Potential Projects

Location	Benefit Cost Ratio	Cumulative BCR	CM 1	CM 2	Unused & Desired CM	Prelim Grant Estimate	
						Per Location	All Locations
Project 1: Treatments at Signalized Intersections - Signal Hardware & Pedestrian Crossing							
CA-113 and E A St	3.8	3.8	S2	S20	S3, S19	$47,000	$188,000
CA-113 and Vaughn Rd	0.8	2.3			S3, S19		
CA-113 and Industrial Way/ Regency Parkway	0.8	1.8			S3, S19		
CA-113 and Atkinson Rd	0.1	1.4			S3, S19		
Project 2A: Treatments at Unsignalized Intersections - Pavement Marking & Pedestrian Crossing							
CA-113 at C Street	19.0	19.0	NS6	NS18		$30,000	$240,000
CA-113 and E Walnut St	3.0	11.0			NS5, NS12		
CA-113 and W F St	1.9	7.9			NS5, NS12		
CA-113 and W E St	0.6	6.1			NS5, NS12		
CA-113 and E Broadway St	0.4	4.9			NS5, NS12		
CA-113 and County Fair Dr	0.4	4.2			NS5, NS12		
CA-113 and W H St	0.2	3.6			NS5, NS12		
CA-113 and Chestnut St	0.2	3.2			NS5, NS12		
Project 2B: Treatments at Unsignalized Intersections - Install Additional Warning/Regulatory Signs							
Stratford Ave and Commercial Way	1.6	1.6	NS5	-	NS3, NS4	$50,000	$600,000
Stratford Ave and Weyland Way	0.9	1.3			NS3, NS4		
CA-113 and E Walnut St	0.7	1.1			NS6, NS12, NS18		
Pitt School Rd and Stratford	0.5	0.9			NS3, NS4		
CA-113 and E B St	0.5	0.8			NS6, NS12		
CA-113 and W F St	0.4	0.8			NS6, NS12, NS18		
CA-113 and E Mayes St	0.2	0.7			NS6, NS12, NS18		
CA-113 and E Broadway St	0.1	0.6			NS6, NS12, NS18		
CA-113 and W E St	0.1	0.6			NS6, NS12, NS18		
CA-113 and County Fair Dr	0.1	0.5			NS6, NS12, NS18		
CA-113 and Chestnut St	0.0	0.5			NS1, NS6, NS12, NS18		
CA-113 and W H St	0.0	0.4			NS6, NS12, NS18		

County-wide Treatment State Int	Cumulative BCR above 6
County-wide Treatment Local Int	Cumulative BCR below 6
Jurisdiction Treatment State Int	
Jurisdiction Treatment Local int	

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MEMORANDUM

DATE: October 20, 2017

TO: Anthony Adams, Solano Transportation Authority

FROM: Josh Pilachowski, DKS Associates
Benjamin Rady, DKS Associates
Bobby Sidhu, DKS Associates

SUBJECT: STA Travel Safety Plan - Fairfield Jurisdiction Project Summary

The purpose of this memorandum is to describe the methodology used to compile a list of projects for treatment packages applicable to Fairfield. Treatment packages are based on funding available from the Highway Safety Improvement Program (HSIP). As per the *HSIP Guidelines*, it is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. As long as a specific safety problem is identified and the proposed countermeasure addresses that condition, projects are eligible to receive funding. All proposed projects must lead to and complete the construction of safety improvements. The maximum federal HSIP reimbursement about for a single HSIP project is $10 million; if a project exceeds this limit, the remaining costs are to be covered by the project sponsor.

Locations identified to be included in treatment packages are at hot-spot intersections, or along corridors that have crash trends determined to be common throughout the system. Improvements include countermeasures to crash trends divided into the following treatments: Improve signal hardware, improve signal timing, improve pedestrian crossing, install advance flashing beacon, install pedestrian median fencing, convert to all-way stop control, install/upgrade large or additional stop signs or other intersections warning/regulatory signs, install raised median on approaches, install variable speed warning sign and convert intersection into roundabout. Not all locations selected to be included in a treatment package have a high individual benefit-cost ratio, this is due to the averaging of all location benefit-cost ratios for a given package. Using this methodology, a higher benefit-cost ratio at one location raises the average such to include an intersection with a ratio below the threshold. Additional information for potential treatment projects are shown in Appendix A.

INTERSECTION CHARACTERISTICS

To best determine the intersections that would most benefit from treatments, all intersections that define the “safety segments” were identified. Each intersection was analyzed to determine a

series of characteristics intended to aid in the determination of potential treatments. Characteristics noted include, but are not limited to: control type, type of crosswalk, number of lanes on minor and major streets, left turn phasing, the presence of medians and bicycle facilities. Characteristics were then used to classify all intersections into archetypes to be used later in the process in determining treatments for additional intersections with a high number of crashes, or “hot-spots”.

SUMMARY OF TREATMENTS

As shown in Appendix A, several treatment packages may apply to a given project. There are four treatment packages associated with the improvement of signalized intersections: The first considers signal improvements and pedestrian crossing improvements (countermeasures S2, S3, and S20). Another incorporates advance flashing warning with signal improvements (countermeasures S2, S3, and S9). Another includes pedestrian crossing improvements with pedestrian median fencing (countermeasures S20 and S23). The last includes advance flashing warning (countermeasure S9). For unsignalized intersections there are three treatment packages, the first considers installing additional warning/regulatory signs and raised median (countermeasure NS5 and NS12) while another includes a conversion to signal and install refuge islands (countermeasures NS3 and NS16), a final unsignalized package considers adding intersection lighting (countermeasure NS1). Another package considers installing a variable speed warning sign along roadway segments (countermeasure R30). The final project includes converting a signalized intersection into a roundabout (countermeasure S18).

TREATMENTS

Countermeasures determined from jurisdiction feedback are used to develop treatment packages by organizing similar countermeasures into groups. Intersections identified by the jurisdiction that are already funded/in progress for improvements were removed from treatment packages. In Appendix A, countermeasures used to develop treatment packages are defined as follows:

Treatments at Signalized Intersections

- **Countermeasure ID S2** – Improve signal hardware, may include: lenses, back-plates, mounting, size and number of heads. Implementation of this treatment reduces crashes by 15% for $40,000 per intersection.
- **Countermeasure ID S3** – Improve signal timing: coordination, phasing, clearance intervals. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID S4** –Provide advance dilemma-zone detection for high speed approaches. Implementation of this treatment reduces crashes by 40% for $50,000 per intersection.
- **Countermeasure ID S9** –Install flashing beacons as advance warnings of intersection. Implementation of this treatment reduces crashes by 30% for $70,000 per intersection.

- **Countermeasure ID S12** – Install raised median on approaches. Implementation of this treatment reduces crashes by 25% for $200,000 per intersection.
- **Countermeasure ID S18** – Convert intersection from a signal to a roundabout. Implementation of this treatment reduces crashes by 27% for $2,000,000/$500,000 per intersection.
- **Countermeasure ID S20** – Install pedestrian crossing. This treatment is only applicable to pedestrian related crashes. Implementation of this treatment reduces crashes by 25% for $5,000 per intersection.
- **Countermeasure ID S23** – Install pedestrian median fencing on approaches. This treatment is only applicable to pedestrian related crashes. Implementation of this treatment reduces crashes by 35% for $3,000 per typical installation.

Treatments at Unsignalized Intersections

- **Countermeasure ID NS1** – Add intersection lighting. This treatment is only applicable to night-time related crashes. Implementation of this treatment reduces crashes by 40% for $8,000 per intersection.
- **Countermeasure ID NS3** – Convert unsignalized intersection to signalized. Implementation of this treatment reduces crashes by 25% for $900,000 per intersection.
- **Countermeasure ID NS5** – Install/upgrade larger or additional stop signs or other intersection warning signs. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID NS12 –** Install raised median on approaches. Implementation of this treatment reduces crashes by 25% for $200,000 per intersection.
- **Countermeasure ID NS16** – Install raised medians (refuge islands). This treatment is only applicable to pedestrian related crashes. Implementation of this treatment reduces crashes by 45% for $50,000 per intersection.
- **Countermeasure ID NS19** – Install pedestrian signal or HAWK. This treatment is only applicable to pedestrian related crashes. Implementation of this treatment reduces crashes by 55% for $200,000 per intersection.

Treatments at Segments

- **Countermeasure ID R30** – Install dynamic/variable speed warning signs. Implementation of this treatment reduces crashes by 30% for $100,000 per typical installation.

All intersections identified in the previous step were revisited to determine the potential application of the treatments listed above. If all countermeasures in a treatment package were determined to be feasible to implement at an intersection, that location was included in the benefit-cost analysis.

BENEFIT-COST RATIOS

The goal of this step was to compile a list of projects for Fairfield jurisdiction treatment packages with a B/C ratio (B/C) of 6.0 or higher. In Appendix A, intersections are listed from highest to

lowest and color coded to easily distinguish between local and state routes. In addition, intersections included in countywide treatment packages are identified by color. Note that intersections identified in county-wide and jurisdiction specific treatment packages cannot apply to both. Fairfield has the option to remove intersections from county-wide treatment packages in order to include them in its' own specific treatment packages. However, this option should only be considered if doing so make a jurisdiction specific treatment package feasible or allows the inclusion of additional intersections into a treatment package.

B/C Ratios

The B/C ratios for each treatment package are the location specific products of annual benefit divided by annual cost. The higher the B/C ratio for a location, the more cost effective it is to apply the treatment package. Effectively, higher B/C ratios are associated with a reduction in sever crashes and/or with low cost but effective improvements. The benefit from a systemic approach, is that we can group together several locations with the same treatment package and calculate the total benefit and total cost over many locations. Since HSIP funding is entirely dependent on B/C ratio, and awards are given to all applications that show a B/C ratio over a relatively consistent threshold, projects with B/C ratios significantly higher than that threshold represent wasted benefit. By combining many locations together with a range of B/C ratios, the locations with higher B/C ratios can essentially fund those with lower ones. To effectively maximize the potential funding, the locations are sorted by B/C ratio from largest to smallest and a cumulative B/C ratio calculated for the entire list so that the final B/C ratio remains above the threshold, but includes the maximum number of locations while doing so.

NEEDED FROM JURISDICTION

In response to this memorandum, DKS Associates requests that Fairfield decide which treatment packages to include in the HSIP Grant Application. Additionally, identify for removal intersections that are not desired, which have been included in treatment packages.

Appendix A - Fairfield Potential Projects

Location	Benefit Cost Ratio	Cumulative BCR	CM 1	CM 2	CM 3	Unused & Desired CM	Prelim Grant Estimate Per Location	Prelim Grant Estimate All Locations
Project 1A: Treatments at Signalized Intersections - Signal Improvements and Pedestrian Crossing								
N Texas St and E Tabor Ave	41.2	41.2				S4		
W Texas St and 5th St	37.8	39.5				S23		
W Texas St and Pennsylvania Ave	7.9	29.0				S4, S9		
N Texas St and Travis Blvd	7.1	23.5	S2	S3	S20	S12	$125,500	$1,004,000
N Texas St and Acacia St	6.7	20.1				S12		
N Texes St and Pacific Ave	6.3	17.8				S12		
W Texas St and Gregory Ln	5.7	16.1				S23		
N Texas St and Bell Ave	2.3	14.4				S12		
Project 1B: Treatments at Signalized Intersections - Pedestrian Improvements								
W Texas St and 5th St	1097.3	1097.3				S2, S3		
W Texas St and Jackson St	23.0	560.2				S2, S3		
W Texas St and Jefferson St	20.2	380.2				S2, S3		
W Texas St and Gregory Ln	20.2	290.2	S20	S23	-	S2, S3	$8,000	$56,000
W Texas St and Washington St	11.5	234.5				S2, S3		
W Texas St and Union Ave	11.5	197.3				S2, S3		
W Texas St and Webster St	11.5	170.8				S2, S3		
Project 1C: Treatments at Signalized Intersections - Signal Improvements & Advance Flashing Warning								
CA-12 and Beck Ave	61.2	61.2				S4		
N Texas St and E Tabor Ave	26.1	43.7				S4, S20		
Air Base Parkway and Clay Bank Rd	9.6	32.3				S4		
Air Base Parkway and Heath Dr	7.5	26.1	S2	S3	S9	S4	$190,500	$1,333,500
W Texas St and Pennsylvania Ave	6.8	22.3				S4, S20		
Air Base Parkway and Walters Rd	3.9	19.2				S4		
Travis Blvd and Webster St/Richards Ct	0.8	16.6				S4		
Project 1D: Treatments at Signalized Intersections - Advance Flashing Warning								
CA-12 and Beck Ave	101.1	101.1				S2, S3, S4		
N Texas St and E Tabor Ave	43.1	72.1				S2, S3, S4, S20		
Air Base Parkway and Clay Bank Rd	15.9	53.4				S2, S3, S4		
Air Base Parkway and Heath Dr	12.4	43.1	S9	-	-	S2, S3, S4	$70,000	$490,000
W Texas St and Pennsylvania Ave	11.3	36.8				S2, S3, S4, S20		
Air Base Parkway and Walters Rd	6.4	31.7				S2, S3, S4		
Travis Blvd and Webster St/Richards Ct	1.3	27.4				S2, S3, S4		
Project 2A: Treatments at Unsignalized Intersections - Additional Warning Sign & Raised Median								
W Texas St and 1st St	21.9	21.9				NS1, NS3, NS16		
W Texas St and 2nd St	2.9	12.4				NS1, NS3, NS16		
W Texas St and Great Jones St	2.4	9.1				NS1, NS3, NS16		
N Texas St and Wisconsin St	2.3	7.4				NS19		
N Texas St and Empire Pl	1.1	6.1				NS19		
W Texas St and Madison St	1.0	5.2	NS5	NS12	-	NS1, NS3, NS16	$250,000	$3,000,000
N Texas St and Wyoming St	0.5	4.6				NS19		
N Texas St and Utah St	0.5	4.1				NS19		
N Texas St and Taft St	0.4	3.7				NS19		
N Texas Street and Hawthorn Dr	0.3	3.3				NS19		
W Texas St and Clay St	0.1	3.0				NS1, NS3, NS16		
N Texas St and E Kentucky St	0.0	2.8				NS19		
Project 2B: Treatments at Unsignalized Intersections - Install Signals & Refuge Islands								
W Texas St and 1st St	52.5	52.5				NS1, NS5, NS12		
W Texas St and 2nd St	6.9	29.7				NS1, NS5, NS12		
W Texas St and Great Jones St	5.8	21.8	NS3	NS16	-	NS1, NS5, NS12	$142,000	$710,000
W Texas St and Madison St	2.3	16.9				NS1, NS5, NS12		
W Texas St and Clay St	0.2	13.6				NS1, NS5, NS12		
Project 2C: Treatments at Unsignalized Intersections - Add Intersection Lighting								
W Texas St and 1st St	803.3	803.3				NS3, NS5, NS12, NS16		
Pennsylvania Ave at Empire St	61.2	432.2						
W Texas St and 2nd St	24.8	296.4	NS1	-	-	NS3, NS5, NS12, NS16	$8,000	$48,000
W Texas St and Madison St	4.4	223.4				NS3, NS5, NS12, NS16		
W Texas St and Clay St	3.0	179.3				NS3, NS5, NS12, NS16		
W Texas St and Great Jones St	0.0	149.4				NS3, NS5, NS12, NS16		
Project 3: Treatments at Segments - Variable Speed Warning								
Air Base Parkway near Clay Bank Rd	84.4	84.4				-		
W Texas St near 1st St	57.4	70.9				-		
Air Base Parkway near Heath Dr	33.7	58.5				-		
CA-12 near Pennsylvania Ave	19.7	48.8				-		
CA-12 near Chadbourne Rd Interchange	17.3	42.5				-		
Air Base Parkway near N Texas St	9.3	37.0				-		
W Texas and Pennsylvania Ave	8.1	32.8				-		
W Texas St near 5th St	6.2	29.5	R30	-	-	-	$100,000.00	$1,500,000.00
Air Base Parkway near Walters Rd	5.5	26.8				-		
CA-12 near Jackson St/Webster St	2.6	24.4				-		
W Texas St near Beck Ave	1.5	22.3				-		
W Texas St near Gregory Ln	1.4	20.6				-		
W Texas St near Clay St	0.2	19.0				-		
W Texas St near 2nd St	0.1	17.7				-		
W Texas and Washington St	0.1	16.5				-		
Project 4: Treatments at Signalized Intersections - Convert to Roundabout								
CA-12 at Beck Ave	6.37	6.37				-		
N Texas St at Tabor Ave	2.71	4.54	S18	-	-	-	$2,000,000	$8,000,000
Airbase Pkwy at Dover Ave	1.65	3.58				-		
Pennsylvania Ave at CA-12	0.91	2.91				-		
Project 4: Treatments at Signalized Intersections - Convert to Mini-Roundabout								
N Texas St at Tabor Ave	21.71	36.34				-		
Airbase Pkwy at Dover Ave	13.23	28.64	S18	-	-	-	$500,000	$1,500,000
Pennsylvania Ave at CA-12	7.29	23.30				-		

County-wide Treatment State Int	Cumulative BCR above 6
County-wide Treatment Local Int	Cumulative BCR below 6
Jurisdiction Treatment State Int	
Jurisdiction Treatment Local int	

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MEMORANDUM

DATE: October 20, 2017

TO: Anthony Adams, Solano Transportation Authority

FROM: Josh Pilachowski, DKS Associates
Benjamin Rady, DKS Associates
Bobby Sidhu, DKS Associates

SUBJECT: STA Travel Safety Plan – Suisun City Jurisdiction Project Summary

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The purpose of this memorandum is to describe the methodology used to compile a list of projects for treatment packages applicable to Suisun City. Treatment packages are based on funding available from the Highway Safety Improvement Program (HSIP). As per the *HSIP Guidelines*, it is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. As long as a specific safety problem is identified and the proposed countermeasure addresses that condition, projects are eligible to receive funding. All proposed projects must lead to and complete the construction of safety improvements. The maximum federal HSIP reimbursement about for a single HSIP project is $10 million; if a project exceeds this limit, the remaining costs are to be covered by the project sponsor.

Locations identified to be included in treatment packages are at hot-spot intersections, or along corridors that have crash trends determined to be common throughout the system. Improvements include countermeasures to crash trends divided into the following treatments: upgrade pavement markings and convert intersection into roundabout. Not all locations selected to be included in a treatment package have a high individual benefit-cost ratio, this is due to the averaging of all location benefit-cost ratios for a given package. Using this methodology, a higher benefit-cost ratio at one location raises the average such to include an intersection with a ratio below the threshold. Additional information for potential treatment packages are shown in Appendix A.

INTERSECTION CHARACTERISTICS

To best determine the intersections that would most benefit from treatments, all intersections that define the “safety segments” were identified. Each intersection was analyzed to determine a series of characteristics intended to aid in the determination of potential treatments. Characteristics noted include, but are not limited to: control type, type of crosswalk, number of lanes on minor and major streets, left turn phasing, the presence of medians and bicycle

facilities. Characteristics were then used to classify all intersections into archetypes to be used later in the process in determining treatments for additional intersections with a high number of crashes, or “hot-spots”.

SUMMARY OF TREATMENTS

As shown in Appendix A, various treatment packages may apply to a given package. There are two treatment packages associated with the improvement of unsignalized intersections: The first considers upgrading pavement markings (countermeasure NS6). Another unsignalized package considers converting the intersection into a roundabout (countermeasure NS4). Treatment packages for signalized intersections and segments were not included due to extremely low benefit cost ratios.

TREATMENTS

Countermeasures determined from jurisdiction feedback are used to develop treatment packages by organizing similar countermeasures into groups. Intersections identified by the jurisdiction that are already funded/in progress for improvements were removed from treatment packages. In Appendix A, countermeasures used to develop treatment packages are defined as follows:

Treatments at Unsignalized Intersections

- **Countermeasure ID NS4** – Convert intersection to roundabout (from 2-way stop or Yield control). Implementation of this treatment reduces crashes by 27% for $2,000,000/$500,000 per intersection.
- **Countermeasure ID NS6** – Upgrade intersection pavement markings. Implementation of this treatment reduces crashes by 25% for $10,000 per intersection.

All intersections identified in the previous step were revisited to determine the potential application of the treatments listed above. If all countermeasures in a treatment package were determined to be feasible to implement at an intersection, that location was included in the benefit-cost analysis.

BENEFIT-COST RATIOS

The goal of this step was to compile a list of projects for Suisun City jurisdiction treatment packages with a B/C ratio (B/C) of 6.0 or higher. In Appendix A, intersections are listed from highest to lowest and color coded to easily distinguish between local and state routes. In addition, intersections included in countywide treatment packages are identified by color. Note that intersections identified in county-wide and jurisdiction specific treatment packages cannot apply to both. Suisun City has the option to remove intersections from county-wide treatment packages in order to include them in its’ own specific treatment packages. However, this option

should only be considered if doing so make a jurisdiction specific treatment package feasible or allows the inclusion of additional intersections into a treatment package.

B/C Ratios

The B/C ratios for each treatment package are the location specific products of annual benefit divided by annual cost. The higher the B/C ratio for a location, the more cost effective it is to apply the treatment package. Effectively, higher B/C ratios are associated with a reduction in sever crashes and/or with low cost but effective improvements. The benefit from a systemic approach, is that we can group together several locations with the same treatment package and calculate the total benefit and total cost over many locations. Since HSIP funding is entirely dependent on B/C ratio, and awards are given to all applications that show a B/C ratio over a relatively consistent threshold, projects with B/C ratios significantly higher than that threshold represent wasted benefit. By combining many locations together with a range of B/C ratios, the locations with higher B/C ratios can essentially fund those with lower ones. To effectively maximize the potential funding, the locations are sorted by B/C ratio from largest to smallest and a cumulative B/C ratio calculated for the entire list so that the final B/C ratio remains above the threshold, but includes the maximum number of locations while doing so.

NEEDED FROM JURISDICTION

In response to this memorandum, DKS Associates requests that Suisun City decide which treatment packages to include in the HSIP Grant Application. Additionally, identify for removal intersections that are not desired, which have been included in treatment packages.

Appendix A - Suisun City Potential Projects

Location	Benefit Cost Ratio	Cumulative BCR	CM 1	Unused & Desired CM	Prelim Grant Estimate	
					Per Location	All Locations
Project 1A: Sight Related Treatments - Upgrade Pavement Markings						
Railroad Ave at Marina Blvd	3.0		NS6	-	$10,000.00	
Project 1B: Convert to Mini-Roundabout						
Meridian Rd and Elizabeth Rd	9.4		NS4	-	$500,000.00	

County-wide Treatment State Int	Benefit Cost Ratio above 6
County-wide Treatment Local Int	Benefit Cost Ratio below 6
Jurisdiction Treatment State Int	
Jurisdiction Treatment Local int	

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MEMORANDUM

DATE: October 20, 2017

TO: Anthony Adams, Solano Transportation Authority

FROM: Josh Pilachowski, DKS Associates
Benjamin Rady, DKS Associates
Bobby Sidhu, DKS Associates

SUBJECT: STA Travel Safety Plan – Rio Vista Jurisdiction Project Summary

The purpose of this memorandum is to describe the methodology used to compile a list of projects for treatment packages applicable to Rio Vista. Treatment packages are based on funding available from the Highway Safety Improvement Program (HSIP). As per the *HSIP Guidelines*, it is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. As long as a specific safety problem is identified and the proposed countermeasure addresses that condition, projects are eligible to receive funding. All proposed projects must lead to and complete the construction of safety improvements. The maximum federal HSIP reimbursement about for a single HSIP project is $10 million; if a project exceeds this limit, the remaining costs are to be covered by the project sponsor.

Locations identified to be included in treatment packages are at hot-spot intersections, or along corridors that have crash trends determined to be common throughout the system. Improvements include countermeasures to crash trends divided into the following treatments: Install/upgrade larger or additional stop signs or warning/regulatory signs, install flashing beacon as advanced warning, improve sight distance and create directional median openings. Not all locations selected to be included in a treatment package have a high individual benefit-cost ratio, this is due to the averaging of all location benefit-cost ratios for a given package. Using this methodology, a higher benefit-cost ratio at one location raises the average such to include an intersection with a ratio below the threshold. Additional information for potential treatment projects are shown in Appendix A.

INTERSECTION CHARACTERISTICS

To best determine the intersections that would most benefit from treatments, all intersections that define the “safety segments” were identified. Each intersection was analyzed to determine a series of characteristics intended to aid in the determination of potential treatments. Characteristics noted include, but are not limited to: control type, type of crosswalk, number of

lanes on minor and major streets, left turn phasing, the presence of medians and bicycle facilities. Characteristics were then used to classify all intersections into archetypes to be used later in the process in determining treatments for additional intersections with a high number of crashes, or “hot-spots”.

SUMMARY OF TREATMENTS

As shown in Appendix A, several treatment packages may apply to a given project. There are three treatment types associated with the improvement of unsignalized intersection: The first considers installing additional stop or warning signs, advance flashing beacon and improving sight distance (countermeasures NS5, NS8, and NS13). Another incorporates installing additional stop or warning signs, advance flashing beacon with installing median openings (countermeasures NS5, NS8 and NS10). The third treatment includes improving sight distance and creating directional median openings (countermeasures NS10 and NS13). Treatment packages for signalized intersections and segments were not included due to extremely low benefit cost ratios.

TREATMENTS

Countermeasures determined from jurisdiction feedback are used to develop treatment packages by organizing similar countermeasures into groups. Intersections identified by the jurisdiction that are already funded/in progress for improvements were removed from treatment packages. In Appendix A, countermeasures used to develop treatment packages are defined as follows:

Treatments at Unsignalized Intersections

- **Countermeasure ID NS5** – Install/upgrade larger or additional stop signs or other intersection warning signs. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID NS8 –** Install flashing beacons as advanced warning at unsignalized intersections. Implementation of this treatment reduces crashes by 30% for $75,000 per intersection.
- **Countermeasure ID NS10** – Improve sight distance to intersection. Implementation of this treatment reduces crashes by 20% for $100,000 per intersection.
- **Countermeasure ID NS13** – Create directional median openings to allow (and restrict) left-turns and u-turns. Implementation of this treatment reduces crashes by 50% for $75,000 per intersection.

All intersections identified in the previous step were revisited to determine the potential application of the treatments listed above. If all countermeasures in a treatment package were determined to be feasible to implement at an intersection, that location was included in the benefit-cost analysis.

BENEFIT-COST RATIOS

The goal of this step was to compile a list of projects for Rio Vista jurisdiction treatment packages with a B/C ratio (B/C) of 6.0 or higher. In Appendix A, intersections are listed from highest to lowest and color coded to easily distinguish between local and state routes. In addition, intersections included in countywide treatment packages are identified by color. Note that intersections identified in county-wide and jurisdiction specific treatment packages cannot apply to both. Rio Vista has the option to remove intersections from county-wide treatment packages in order to include them in its' own specific treatment packages. However, this option should only be considered if doing so make a jurisdiction specific treatment package feasible or allows the inclusion of additional intersections into a treatment package.

B/C Ratios

The B/C ratios for each treatment package are the location specific products of annual benefit divided by annual cost. The higher the B/C ratio for a location, the more cost effective it is to apply the treatment package. Effectively, higher B/C ratios are associated with a reduction in sever crashes and/or with low cost but effective improvements. The benefit from a systemic approach, is that we can group together several locations with the same treatment package and calculate the total benefit and total cost over many locations. Since HSIP funding is entirely dependent on B/C ratio, and awards are given to all applications that show a B/C ratio over a relatively consistent threshold, projects with B/C ratios significantly higher than that threshold represent wasted benefit. By combining many locations together with a range of B/C ratios, the locations with higher B/C ratios can essentially fund those with lower ones. To effectively maximize the potential funding, the locations are sorted by B/C ratio from largest to smallest and a cumulative B/C ratio calculated for the entire list so that the final B/C ratio remains above the threshold, but includes the maximum number of locations while doing so.

NEEDED FROM JURISDICTION

In response to this memorandum, DKS Associates requests that Rio Vista decide which treatment packages to include in the HSIP Grant Application. Additionally, identify for removal intersections that are not desired, which have been included in treatment packages.

Appendix A - Rio Vista Potential Projects

Location	Benefit Cost Ratio	Cumulative BCR	CM 1	CM 2	CM 3	Unused & Desired CM	Prelim Grant Estimate
Project 1A: Treatment for Unsignalized Intersection - Install Additional Stop or Warning Signs, Install Flashing Beacon, and Improve Site Distance							
CA-12 at Virginia Dr	2.6		NS5	NS8	NS10	NS13	$300,000.00
Project 1B: Treatment for Unsignalized Intersection - Install Additional Stop or Warning Signs, Install Flashing Beacon, and Install Median Openings							
CA-12 at Virginia Dr	4.6		NS5	NS8	NS13	NS10	$275,000.00
Project 1C: Treatment for Unsignalized Intersection - Improve Sight Distance and Create Directional Median Openings							
CA-12 at Virginia Dr	5.4		NS10	NS13	-	NS5,NS8	$175,000.00
Project 2A: Treatment for Unsignalized Intersection - Install Right Turn Lane, Left Turn Lane and Acceleration Lane							
CA-12 at Church/Amerada Rd	9.3		NS14	NS15	R11		$1,100,000.00
Project 2B: Treatment for Unsignalized Intersection - Install Left Turn Lane and Right Turn Lane							
CA-12 at Church/Amerada Rd	20.1		NS14	NS15	-	R11	$400,000.00
Project 2C: Treatment for Unsignalized Intersection - Install Left Turn Lane							
CA-12 at Church/Amerada Rd	29.4		NS15		-	NS14, R11	$200,000.00

County-wide Treatment State Int	Benefit Cost Ratio above 6
County-wide Treatment Local Int	Benefit Cost Ratio below 6
Jurisdiction Treatment State Int	
Jurisdiction Treatment Local int	

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MEMORANDUM

DATE: October 20, 2017

TO: Anthony Adams, Solano Transportation Authority

FROM: Josh Pilachowski, DKS Associates
Benjamin Rady, DKS Associates
Bobby Sidhu, DKS Associates

SUBJECT: STA Travel Safety Plan – Vacaville Jurisdiction Project Summary

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The purpose of this memorandum is to describe the methodology used to compile a list of projects for treatment packages applicable to Vacaville. Treatment packages are based on funding available from the Highway Safety Improvement Program (HSIP). As per the *HSIP Guidelines*, it is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. As long as a specific safety problem is identified and the proposed countermeasure addresses that condition, projects are eligible to receive funding. All proposed projects must lead to and complete the construction of safety improvements. The maximum federal HSIP reimbursement about for a single HSIP project is $10 million; if a project exceeds this limit, the remaining costs are to be covered by the project sponsor.

Locations identified to be included in treatment packages are at hot-spot intersections, or along corridors that have crash trends determined to be common throughout the system. Improvements include countermeasures to crash trends divided into the following treatments: Improve signal timing and provide advance dilemma-zone detection. Not all locations selected to be included in a treatment package have a high individual benefit-cost ratio, this is due to the averaging of all location benefit-cost ratios for a given package. Using this methodology, a higher benefit-cost ratio at one location raises the average such to include an intersection with a ratio below the threshold. Additional information for potential treatment projects are shown in Appendix A.

INTERSECTION CHARACTERISTICS

To best determine the intersections that would most benefit from treatments, all intersections that define the “safety segments” were identified. Each intersection was analyzed to determine a series of characteristics intended to aid in the determination of potential treatments. Characteristics noted include, but are not limited to: control type, type of crosswalk, number of lanes on minor and major streets, left turn phasing, the presence of medians and bicycle

facilities. Characteristics were then used to classify all intersections into archetypes to be used later in the process in determining treatments for additional intersections with a high number of crashes, or “hot-spots”.

SUMMARY OF TREATMENTS

As shown in Appendix A, more than one treatment package may apply to a given project. There is one treatment package divided into two potential projects associated with the improvement of signalized intersections: The first considers signal improvements and advance dilemma-zone detection (countermeasures S3 and S4) while another simply includes advance dilemma-zone detection.

TREATMENTS

Countermeasures determined from jurisdiction feedback are used to develop treatment packages by organizing similar countermeasures into groups. Intersections identified by the jurisdiction that are already funded/in progress for improvements were removed from treatment packages. In Appendix A, countermeasures used to develop treatment packages are defined as follows:

Treatments at Signalized Intersections

- **Countermeasure ID S3** – Improve signal timing: coordination, phasing, clearance intervals. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID S4** –Provide advance dilemma-zone detection for high speed approaches.

All intersections identified in the previous step were revisited to determine the potential application of the treatments listed above. If all countermeasures in a treatment package were determined to be feasible to implement at an intersection, that location was included in the benefit-cost analysis.

BENEFIT-COST RATIOS

The goal of this step was to compile a list of projects for Vacaville jurisdiction treatment packages with a B/C ratio (B/C) of 6.0 or higher. In Appendix A, intersections are listed from highest to lowest and color coded to easily distinguish between local and state routes. In addition, intersections included in countywide treatment packages are identified by color. Note that intersections identified in county-wide and jurisdiction specific treatment packages cannot apply to both. Vacaville has the option to remove intersections from county-wide treatment packages in order to include them in its’ own specific treatment packages. However, this option should only be considered if doing so make a jurisdiction specific treatment package feasible or allows the inclusion of additional intersections into a treatment package.

B/C Ratios

The B/C ratios for each treatment package are the location specific products of annual benefit divided by annual cost. The higher the B/C ratio for a location, the more cost effective it is to apply the treatment package. Effectively, higher B/C ratios are associated with a reduction in sever crashes and/or with low cost but effective improvements. The benefit from a systemic approach, is that we can group together several locations with the same treatment package and calculate the total benefit and total cost over many locations. Since HSIP funding is entirely dependent on B/C ratio, and awards are given to all applications that show a B/C ratio over a relatively consistent threshold, projects with B/C ratios significantly higher than that threshold represent wasted benefit. By combining many locations together with a range of B/C ratios, the locations with higher B/C ratios can essentially fund those with lower ones. To effectively maximize the potential funding, the locations are sorted by B/C ratio from largest to smallest and a cumulative B/C ratio calculated for the entire list so that the final B/C ratio remains above the threshold, but includes the maximum number of locations while doing so.

NEEDED FROM JURISDICTION

In response to this memorandum, DKS Associates requests that Vacaville decide which treatment packages to include in the HSIP Grant Application. Additionally, identify for removal intersections that are not desired, which have been included in treatment packages.

Appendix A - Vacaville Potential Projects

Location	Benefit Cost Ratio	Cumulative BCR	CM 1	CM 2	Unused & Desired CM	Prelim Grant Estimate	
						Per Location	All Locations
Project 1A: Treatments at Signalized Intersections - Signal Timing and Advanced Dilemma-Zone Detection							
Alamo and Butcher	33.6	33.6			-		
Peabody and Cliffside	8.6	21.1			-		
Alamo and Marshall	8.4	16.8			-		
Peabody and Hume/Berryessa	7.5	14.5			-		
Peabody and California	4.9	12.6			-		
Peabody and Alamo	4.7	11.3	S3	S4	-	$128,500.00	$1,413,500.00
Peabody and Elmira	4.6	10.3			-		
Peabody and Beelard	3.7	9.5			-		
Peabody and Foxboro	3.1	8.8			-		
Alamo and Alamo Ln	3.0	8.2			-		
Alamo and Davis	2.0	7.6			-		
Project 1B: Treatments at Signalized Intersections - Signal Timing and Advanced Dilemma-Zone Detection							
Alamo and Butcher	70.4	70.4			S3		
Peabody and Cliffside	18.0	44.2			S3		
Alamo and Marshall	17.6	35.3			S3		
Peabody and Hume/Berryessa	15.8	30.4			S3		
Peabody and California	10.3	26.4			S3		
Peabody and Alamo	9.9	23.7	S4	-	S3	$50,000.00	$550,000.00
Peabody and Elmira	9.6	21.7			S3		
Peabody and Beelard	7.8	19.9			S3		
Peabody and Foxboro	6.6	18.4			S3		
Alamo and Alamo Ln	6.3	17.2			S3		
Alamo and Davis	4.2	16.0			S3		

County-wide Treatment State Int
County-wide Treatment Local Int
Jurisdiction Treatment State Int
Jurisdiction Treatment Local int

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MEMORANDUM

DATE: October 20, 2017

TO: Anthony Adams, Solano Transportation Authority

FROM: Josh Pilachowski, DKS Associates
Benjamin Rady, DKS Associates
Bobby Sidhu, DKS Associates

SUBJECT: STA Travel Safety Plan - Vallejo Project Grouping Summary

The purpose of this memorandum is to describe the methodology used to compile a list of projects for treatment packages applicable to Vallejo. Treatment packages are based on funding available from the Highway Safety Improvement Program (HSIP). As per the *HSIP Guidelines*, it is the intent of the HSIP program that federal funds be expended on safety projects that can be designed and constructed expeditiously. As long as a specific safety problem is identified and the proposed countermeasure addresses that condition, projects are eligible to receive funding. All proposed projects must lead to and complete the construction of safety improvements. The maximum federal HSIP reimbursement about for a single HSIP project is $10 million; if a project exceeds this limit, the remaining costs are to be covered by the project sponsor.

Locations identified to be included in treatment packages are at hot-spot intersections, or along corridors that have crash trends determined to be common throughout the system. Improvements include countermeasures to crash trends divided into the following treatments: Improve signal hardware, improve signal timing, add intersection lighting, install pedestrian signal or HAWK, install pedestrian crossing at uncontrolled locations, improve sight distance to intersection, install flashing beacons as advance warnings. Not all locations selected to be included in a treatment package have a high individual benefit-cost ratio, this is due to the averaging of all location benefit-cost ratios for a given package. Using this methodology, a higher benefit-cost ratio at one location raises the average such to include an intersection with a ratio below the threshold. Additional information for potential treatment projects are shown in Appendix A.

INTERSECTION CHARACTERISTICS

To best determine the intersections that would most benefit from treatments, all intersections that define the “safety segments” were identified. Each intersection was analyzed to determine a series of characteristics intended to aid in the determination of potential treatments. Characteristics noted include, but are not limited to: control type, type of crosswalk, number of

lanes on minor and major streets, left turn phasing, the presence of medians and bicycle facilities. Characteristics were then used to classify all intersections into archetypes to be used later in the process in determining treatments for additional intersections with a high number of crashes, or “hot-spots”.

SUMMARY OF TREATMENTS

As shown in Appendix A, several treatment packages may apply to a given project. There are three treatment packages associated with the improvement of signalized intersections: The first considers signal improvements and left turn phasing (countermeasures S2, S3, and S6). The second calls for signal improvements and a red-light camera (countermeasures S2, S3, and S10). The final includes signal improvements and the installation of flashing beacons (countermeasures S2, S3, and S9). For unsignalized intersections, one treatment package considers installing a pedestrian crossing (countermeasure NS18) while another includes the installation of a HAWK pedestrian crossing (countermeasures NS19) The final package considers intersection lighting, adding intersection lighting (countermeasure NS1) being the primary treatment.

TREATMENTS

Countermeasures determined from jurisdiction feedback are used to develop treatment packages by organizing similar countermeasures into groups. Intersections identified by the jurisdiction that are already funded/in progress for improvements were removed from treatment packages. In Appendix A, countermeasures used to develop treatment packages are defined as follows:

Treatments at Signalized Intersections

- **Countermeasure ID S2** – Improve signal hardware, may include: lenses, back-plates, mounting, size and number of heads. Implementation of this treatment reduces crashes by 15% for $40,000 per intersection.
- **Countermeasure ID S3** – Improve signal timing: coordination, phasing, clearance intervals. Implementation of this treatment reduces crashes by 15% for $1,000 per intersection.
- **Countermeasure ID S6** –Provide protected left turn phase for left turn lanes that already exists. Implementation of this treatment reduces crashes by 30% for $12,000 per intersection.
- **Countermeasure ID S9** –Install flashing beacons as advance warnings of intersection. Implementation of this treatment reduces crashes by 30% for $70,000 per intersection.
- **Countermeasure ID S10** –Install cameras to detect red-light running. Implementation of this treatment reduces crashes by 15% for $70,000 per intersection.

Treatments at Unsignalized Intersections

- **Countermeasure ID S18** – Convert intersection from a signal to a roundabout. Implementation of this treatment reduces crashes by 27% for $2,000,000/$500,000 per intersection.

- **Countermeasure ID S19** – Install pedestrian countdown signal heads. This treatment is only applicable to pedestrian related crashes. Implementation of this treatment reduces crashes by 25% for $1,500 per typical installation.

Lighting Treatments

- **Countermeasure ID NS1** – Add intersection lighting. This treatment is only applicable to night-time related crashes. Implementation of this treatment reduces crashes by 40% for $8,000 per intersection.

All intersections identified in the previous step were revisited to determine the potential application of the treatments listed above. If all countermeasures in a treatment package were determined to be feasible to implement at an intersection, that location was included in the benefit-cost analysis.

BENEFIT-COST RATIOS

The goal of this step was to compile a list of projects for Vallejo jurisdiction treatment packages with a B/C ratio (B/C) of 6.0 or higher. In Appendix A, intersections are listed from highest to lowest and color coded to easily distinguish between local and state routes. In addition, intersections included in countywide treatment packages are identified by color. Note that intersections identified in county-wide and jurisdiction specific treatment packages cannot apply to both. Vallejo has the option to remove intersections from county-wide treatment packages in order to include them in its' own specific treatment packages. However, this option should only be considered if doing so make a jurisdiction specific treatment package feasible or allows the inclusion of additional intersections into a treatment package.

B/C Ratios

The B/C ratios for each treatment package are the location specific products of annual benefit divided by annual cost. The higher the B/C ratio for a location, the more cost effective it is to apply the treatment package. Effectively, higher B/C ratios are associated with a reduction in sever crashes and/or with low cost but effective improvements. The benefit from a systemic approach, is that we can group together several locations with the same treatment package and calculate the total benefit and total cost over many locations. Since HSIP funding is entirely dependent on B/C ratio, and awards are given to all applications that show a B/C ratio over a relatively consistent threshold, projects with B/C ratios significantly higher than that threshold represent wasted benefit. By combining many locations together with a range of B/C ratios, the locations with higher B/C ratios can essentially fund those with lower ones. To effectively maximize the potential funding, the locations are sorted by B/C ratio from largest to smallest and a cumulative B/C ratio calculated for the entire list so that the final B/C ratio remains above the threshold, but includes the maximum number of locations while doing so.

NEEDED FROM JURISDICTION

In response to this memorandum, DKS Associates requests that Vallejo decide which treatment packages to include in the HSIP Grant Application. Additionally, identify for removal intersections that are not desired, which have been included in treatment packages.

Appendix 1 - Vallejo Potential Projects

Location	Benefit Cost Ratio	Cumulative BCR	CM 1	CM 2	CM 3	Unused & Desired CM	Prelim Grant Estimate: Per Location	Prelim Grant Estimate: All Locations
Project 1A: Treatments at Signalized Intersections - Signal Improvements and Left Turn Phase								
Redwood and Couch	5.4	5.4				-		
CA-29 and Maine	4.8	5.1				-		
CA-29 and Louisiana	4.0	4.7	S2	S3	S6	-	$132,500.00	$795,000.00
CA-29 and Florida	3.9	4.5				-		
Broadway and Valle Vista	1.2	3.9				S10		
Springs and Vervais	0.8	3.4				S10		
Project 1B: Treatments at Signalized Intersections - Signal Improvements and Red-Light Cameras								
CA-29 and Meadows	5.2	5.2				-		
CA-29 and Georgia	4.9	5.1				-		
Redwood and Tuolumne	3.9	4.7				-		
Broadway and Sereno	3.8	4.5				-		
Redwood and Fairgrounds	3.4	4.2	S2	S3	S10	-	$19,050.00	$190,500.00
CA-29 and Sereno	2.7	4.0				-		
Georgia and Steffan/Miller	2.3	3.8				-		
Broadway and Nebraska	1.3	3.5				-		
Broadway and Tuolumne	0.8	3.2				-		
Springs and Miller	0.6	2.9				-		
Project 1C: Treatments at Signalized Intersections- Signal Improvements and Flashing Beacons								
CA-29/Sonoma Ave at Mini Dr	4.8	4.8	S2	S3	S9	-	$22,050.00	$44,100.00
Broadway and Couch	1.0	2.9				-		
Project 2A: Pedestrian Treatments at Unsignalized Intersections - Install Pedestrian Crossing								
Broadway and Hogan	128.8	128.8				NS19		
Springs and Lain	36.5	82.6				-		
Springs and Modoc/Grennan	26.3	63.9				-		
Broadway and illinois	22.8	53.6				NS19		
Springs and Heartwood	18.3	46.5	NS18	-	-	NS19	$50,000.00	$450,000.00
Broadway and Winters	12.0	40.8				-		
Broadway and Sala	11.8	36.6				NS19		
Broadway and Couch	1.3	32.2				NS19		
Springs and Warford	0.6	28.7				-		
Project 2B: Pedestrian Treatments at Unsignalized Intersections- Install HAWK								
Broadway and Hogan	46.5	46.5				NS18		
Springs and Tregaskis	44.1	45.3				-		
Broadway and Illinois	0.5	30.4				NS18		
Broadway and Sala	0.5	22.9				NS18		
Springs and Heartwood	0.5	18.4	NS19	-	-	NS18	$200,000.00	$2,000,000.00
Broadway and Couch	0.0	15.3				NS18		
Springs and Lassen/Hilton	0.0	13.2				-		
Broadway and Hampshire	0.0	11.5				-		
Broadway and Oregon	0.0	10.2				-		
Broadway and Delaware	0.0	9.2				-		
Project 3: Lighting Treatments at Unsignalized Intersections								
Broadway and Hogan	801.8	801.8				-		
Broadway and Sereno	71.6	436.7				-		
CA-29 and Georgia	62.6	312.0				-		
CA-29 and Florida	49.6	246.4				-		
CA-29 and Ryder	46.2	206.4				-		
CA-29 and Ifland Way	44.7	179.4				-		
CA-29 and Louisiana	39.7	159.4				-		
4th and magazine	20.9	142.1				-		
Broadway and Couch	18.0	128.3				-		
Broadway and Michigan	15.8	117.1				-		
CA-29 and Maine	10.5	107.4				-		
CA-29 and Virginia	10.5	99.3				-		
4th and Lemon	9.0	92.4	NS1	-	-	-	$8,000.00	$208,000.00
Broadway and Illinois	3.0	86.0				-		
4th and Winchester	3.0	80.4				-		
Redwood and Cadloni	1.5	75.5				-		
Redwood and Sacramento	1.5	71.2				-		
Broadway and Oregon	1.5	67.3				-		
4th and Cherry	1.5	63.8				-		
Redwood and Foothill	0.0	60.6				-		
Redwood and Oakwood	0.0	57.7				-		
Tennessee and Alameda	0.0	55.1				-		
Broadway and Sala	0.0	52.7				-		
Springs and Halabuk	0.0	50.5				-		
Springs and Parkwood	0.0	48.5				-		
Broadway and Winters	0.0	46.6				-		
Project 4: Mini-Roundabout at Signalized Intersections								
CA-29/Sonoma Ave at Capitol St	11.2		S4	-	-	-	$500,000.00	

County-wide Treatment State Int	Cumulative BCR above 6
County-wide Treatment Local Int	Cumulative BCR below 6
Jurisdiction Treatment State Int	
Jurisdiction Treatment Local int	

DATE: November 29, 2017
TO: STA TAC
FROM: Robert Macaulay, Director of Planning
RE: Comprehensive Transportation Plan (CTP) Arterials, Highways and Freeways Element Update

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Background:
The Solano Comprehensive Transportation Plan (CTP) is one of the STA's primary long-range planning documents along with the Congestion Management Program (CMP) and the Metropolitan Transportation Commission's Regional Transportation Plan, known as Plan Bay Area. The CTP consists of three main elements: Active Transportation; Arterials, Highways and Freeways; and, Transit and Ridesharing.

The overall purpose of the CTP is to identify opportunities and resources to move the countywide transportation system from its current condition to a desired future condition, and to then prioritize steps to bring this change to fruition. The first step in preparing the Arterials, Highways and Freeways Element was identification of those facilities that connect the communities of Solano County to one another, to the broader Northern California mega-region, and to key employment, transit and civic facilities in the county. Together, these are known as the Routes of Regional Significance (RORS).

To date, the following chapters have been prepared and adopted:

Click here for immediate review and printing:
DRAFT Arterials Highways, and Freeways
- Chapter 1 – Introduction
- Chapter 2 – Purpose and goals
- Chapter 3 – System definition
- Chapter 4 – State of the System
- Chapter 5 – Goal Gap Analysis
- Chapter 6 – Resources

The Arterials, Highways and Freeways Committee met on June 29, 2017, and approved Chapters 1 through 7. The STA Board has not yet taken an action on these chapters.

Discussion:
The final chapters of the Element are:
- Chapter 7 - Making choices – policies, performance measures and milestones
- Chapter 8 – Project Priorities
- Chapter 9 - Assessing Implementation
- Chapter 10 - Conclusion

The draft Chapter 7 is provided as Attachment A. Chapter 8 priorities will be based first and foremost on STA's submittal of projects for the Regional Transportation Plan, the Regional Measure 3 project list and the State Transportation Improvement Program list.

The Draft Element will be presented at the meeting on November 29th. Staff will be seeking comments from TAC members by Monday, December 11, 2017. The Element will be brought to the December TAC for a recommended approval and to the Arterials, Highways and Freeways Committee in January.

Fiscal Impact:
None.

Recommendation:
Informational.

Attachment:
A. Chapter 7 - Making choices – policies, performance measures and milestones

If everything is indeed tied together, then how we make and implement choices is especially important. One choice can impact how we achieve – or fail to achieve – multiple goals. We commit ourselves to actions by adopting Policies. Policies are specific action statements that implement Goals. Policies contain clear action words such as *shall, will, assign* or *invest*. When STA staff make recommendations to committees or the Board, those recommendations will be guided by the policies in this Element.

Policies are specific action statements that implement Goals, and contain action words such as *shall, will, assign* or *invest*.

But making choices – implementing policies – is not enough by itself. There needs to be a way of measuring how one decision impacts all of the goals with which it is associated. Performance Measures and Milestones are the tools used to measure and track impacts. Because the most basic elements of measuring roadway performance are well understood – standards of congestion as measured by Level of Service (Los) and standards of maintenance as measured by Pavement Condition Index (PCI) – it appears to be easy to establish and report on how decisions impact goal achievement.

Milestones and performance measures are the tools used to measure impacts.

Unfortunately, the measuring of impacts isn't so simple, and that is due to one new, and two recently emphasized factors.

- The measurement of greenhouse gas (GHG) emissions is a new factor to the Solano CTP, and is now the most important factor in state and regional transportation planning. GHG emissions from vehicles have the additional complication of not being directly measured, but instead are based upon traffic modeling. In addition, research shows that the traditional steps of roadway improvements that relieve congestion actually add to GHG emissions through the phenomenon of *Induced Demand*. This is a new issue that has not been addressed in previous STA documents.
- The state and region are now putting greater emphasis on implementing the existing Complete Streets standards, and money is shifting from traditional car-bus-truck only roads into roads that accommodate Active Transportation. A few considerations about the difficulty of implementing Complete Streets is that they tend to be more expensive to build on a per-mile basis, require more right of way, and measuring active transportation participation is not as well developed a process as is measuring auto traffic.
- The third area of expanded emphasis, which is also incorporated into Complete Streets, is accommodation of large vehicles – transit buses and goods movement trucks. As with Active Transportation, measurement of freight vehicles is less sophisticated than is auto traffic. Bus use is usually measured by factors on-time performance and farebox recovery, not direct roadway use.

The result is that traditional measures of roadway performance – Level of Service and PCI – are not enough. State environmental law requires an analysis of Vehicle Miles Traveled (VMT) as a proxy for GHG emissions, and STA needs policies that reflect the state and regional goals of reducing GHG emissions.

On the following pages, the Arterials, Highways and Freeways Element lays out policies for helping guide STA decisions, performance measures and milestones.

- Policies are specific action statements that implement Goals. Policies contain clear action words such as *shall, will, assign* or *invest*.
- Performance measures can be thought of as a unit of measure; for example, in the question "what is the average PCI for Arterial Roads that are Routes of Regional Significance?", the PCI is the Performance Standard.
- A Milestone is a benchmark showing how much progress has been made; for example, if a policy states "Improve the average PCI for Arterial Roads that are Routes of Regional Significance by 1 point in 5 years," increasing the funds for maintenance of Arterial Roads that are Routes of Regional Significance would be a Milestone.

Each Policy is set out in **bold** text, and is followed by an explanatory paragraph. Performance Measures and Milestones are indicated by highlighting and, in most cases, end with a question. Finally, the Goals advanced by this particular policy are listed. Those Policies that advance Goals of other Elements are identified by a **black highlighting with white text**.

POLICIES

AHF Policy 1 – Focus local discretionary funds on Arterial Routes of Regional Significance that serve Regionally Significant Job Centers.

Discussion - The greatest impact that STA can have on reducing VMT and GHG emissions, on supporting active transportation and on supporting local and intercity transit, is to support the strengthening of the Solano County economy. The major employment and transit centers in the County are all located along Arterial Routes of Regional Significance – in fact, one of the definitions of a Routes of Regional Significance is service to major transit or employment centers.

Arterial Routes of Regional Significance are also streets well suited to a full accommodation of Complete Streets. They have adequate right-of-way to accommodate bicycle and pedestrian facilities, transit turn-outs, and room for heavier trucks.

As noted previously in the Resources chapter, there are few local discretionary fund sources, such as the RTIF, so it is important to program them to projects that have the greatest beneficial impact.

Policy Performance Measures and Milestones – The performance measure for this Policy is money - the allocation of flexible local transportation funds to Arterial Routes of Regional Significance. Is STA focusing local discretionary funds on Routes of Regional Significance that serve Regionally Significant Job Centers? If so, the Policy is being implemented? There is not a milestone for this policy because it is not benchmarked against a specific funding amount or relative proportion of funds being spent on Arterial *Routes of Regional Significance*.

This Policy helps implement AHF Goals 1, 4, 10 and 11.

This Policy also helps advance Transit and Rideshare Element policies. All Transit Facilities of Regional Significance are located on *Routes of Regional Significance*, and most local and regional transit routes are on Routes of Regional Significance, so investments in those roadways help support those services.

This Policy also advances Active Transportation policies, which greatly benefit from Complete Streets arterials that provide access to major activity centers.

AHF Policy 2 – Prioritize federal, state and regional funds for the conversion and extension of the I-80 Express Lanes, the I-80/I-680/SR-12 interchange and the I-80 Westbound Truck Scales.

Discussion – These three projects, which are all interrelated, are prioritized for two primary reasons: they have the greatest potential to improve local and regional mobility, and their regional importance makes them the best candidates for large-scale funding sources. The Express Lanes projects also help eliminate the greatest congestion point in the county – the merge on I-80 EB from 5 to 4 lanes at North Texas Street – as well as helping support transit and rideshare users in the central portion of the county. Supporting transit is another method of reducing GHG emissions.

Reducing vehicle hours of delay (VHD) is not the preferred method of GHG emission reductions, but less time spend in traffic with engines at idle is another way to reduce GHG emissions, and all three projects will contribute to fewer VHD in Solano County. Reduced VHD also has the benefit of lowering the level of frustration felt by many Solano residents during their daily drive.

These three projects have been identified as priority projects in a number of different studies, including those prepared by both STA and MTC, and are ready for implementation as soon as funding is received. They are listed as priorities within these studies, and they have gone through most or all of the design and environmental clearance steps to make them construction ready.

One concern about projects that add new lanes is the theory of induced demand, where new road capacity not only addresses existing congestion but also motivates people to take trips they otherwise would not have taken. In a growing county such as Solano, which also has significant pass-through traffic on I-80 and SR-12, it is hard to predict how much new traffic would be generated. Research shows that gap fill projects and HOV/Express Lanes do not result in induced demand. Two of these three STA priorities - extension of the I-80 Express Lanes, the I-80/I-680/SR-12 interchange – fit these criteria.

By supporting the free flow of traffic on the major roadway system in Solano County – the I-80 system – they also improve the competitive advantage that Solano traffic conditions provide when companies are deciding where to locate or expand facilities. This further supports the AHF Policy 1, which focuses on local economic development.

Policy Performance Measures and Milestones – The performance measure for this Policy is the pursuit and allocation of applicable funds to these three projects, as opposed to other projects for which the same funds could be used. Is STA actively pursuing funding for these three projects? If the answer is yes, then the policy is being implemented. Milestones are the funding and delivery of projects or project segments. .

This Policy helps implement AHF Goals 2,3,5,12 and 13.

This Policy also helps advance Transit and Rideshare Element policies. Express bus and rideshare vehicles use the Express Lanes, and will have faster and more reliable trips when these projects are completed.

AHF Policy 3 – Develop and periodically update a corridor plan for all Routes of Regional Significance, and use the corridor plan to prioritize projects within the corridor. The exact format of the corridor plan may vary depending upon funding sources and the size of the roadway(s).

Discussion – While the STA will still need to prioritize between different corridors, within them the best tool for selecting projects to receive design, environmental and construction funding is the corridor plan itself. Corridor plans can take the form of a Major Infrastructure Study (MIS) such as was done for SR 113, or a Comprehensive Evaluation and Corridor Management Plan as was done for SR 12 in 2012. For arterials, corridor plans with a focus on Complete Streets were done for the Jepson Parkway and Suisun Parkway (aka North Connector) projects.

A Corridor need not be a single road. The I-80 Corridor consists of I-80, I-680, I-780 and the Suisun Parkway/North Connector, and the I-80 Corridor Study also addresses supporting facilities such as Park and Ride lots.

Corridor plans are also an ideal way to address technology applications that are appropriate for a roadway. Examples include ramp metering, arterial traffic light coordination (and, where transit stops are served, bus prioritization) and real-time monitoring to identify and remove broken down vehicles.

Local arterials that are Routes of Regional Significance, such as Woolner Way (which provides access to a TFORS), do not need a Corridor Plan, as they are adequately covered by local General Plan and other city documents.

Policy Performance Measures and Milestones – The performance measures for this Policy are the creation of corridor plans for Routes of Regional Significance, and the use of these plans in prioritizing project funding. A second performance measure is the allocation of funds to prepare and/or update corridor studies on a periodic basis. Does STA create and update corridor plans for *Routes of Regional Significance*? If the answer is yes, then the policy is being implemented. The milestone is an annual review of Routes of Regional Significance corridors and an identification of whether or not they are covered by a corridor plan, and how recent that plan is.

This Policy also helps advance both Transit and Rideshare Element and Active Transportation Element policies. Corridor plans provide detailed information for how new or updated facilities support transit use and both bicycle and pedestrian accommodations.

AHF Policy 4 – Require roadway plans to have a consistent number of lanes for their length. Only approve lane reductions at logical points such as major interchanges that divert traffic.

During STA's public outreach efforts in 2015 and 2016, the most commonly-referenced frustration for highway and freeway users were the back-ups that occur where the number of lanes is reduced. This occurs on SR 37 (at Mare Island), SR 12 (Jameson Canyon onto EB I-80) and at several places on I-80 (North Texas Street and Meridian Road EB, Kidwell Road WB). Lane merges are the location of the greatest amount of VHD in Solano County. The volume of traffic on these roads is part of the challenge, but the merger of two lanes of traffic into one, or five lanes into four, is the main culprit.

A merge of traffic lanes has an acceptable impact when traffic volumes are below capacity. In the cases of SR 37 and SR 12, there are no locations where traffic volumes can be reduced, and the solution needs to be more capacity. In the case of I-80 EB, traffic volumes drop off sharply between North Texas Street

and I-505, and a reduction in lanes is not expected to result in a simple shift of a back-up queue from Fairfield to Vacaville.

The lane reductions at Pedrick Road (I-80 WB) and Meridian Road (I-80 EB) need separate study, in conjunction with Caltrans District 3. This includes consideration of long-term plans for an HOV/Express network connection from Solano County into Yolo County.

Policy Performance Measures and Milestones – The performance measures for this Policy are project designs that result in consistent lane widths unless detailed traffic modeling shows that a lane reduction, and the resultant merge of traffic, is not expected to lead to significant traffic queueing. Does the SATA adopt plans, and ultimately improve roadways, in such a manner that lane reductions are eliminated? If plans are adopted that do not create, or that eliminate, lane reductions, then this policy is being implemented. The milestone is the construction of improvements that eliminate lane reductions.

AHF Policy 5 – Incorporate safety considerations into all STA documents. Provide a common basis for evaluating safety considerations by adopting a countywide safety program, including the following features:

1. **A common format for collecting and reporting data for the seven cities and the County.**
2. **A county-wide system for prioritizing safety improvement projects.**
3. **A requirement that all corridor studies and other project documents have an explicit safety analysis consistent with the countywide safety plan.**
4. **An application for federal, state or regional for one or more of the top safety projects during every applicable safety grant cycle.**

Discussion – Improving safety is always one of the most important aspects of any roadway project, and the foundation for improving safety is data. Without good data, it is all but impossible to effectively address safety issues. Once location, cause and severity data are in hand, safety planning can move on to mitigation and prioritization. This policy is intended to make this method of addressing safety issues a formalized part of every project or program document that STA prepares.

Policy Performance Measures and Milestones – The performance measures for this Policy are the ongoing incorporation of the identified safety data collection and analysis into STA documents. Does STA collect and publish safety data and adopt plans that address identified safety issues? If the data is being collected and used, then the policy is being implemented. The first milestone is the adoption of a countywide safety program by the end of Calendar Year 2018. Subsequent milestones are the adoption of other STA documents with the proper safety components included.

AHF Policy 6 – Review land use development plans from the seven cities and the County to identify right-of-way needs for STA projects within those developments. Where future right of way is present, work with local jurisdictions to seek dedication of and/or low-value development within those areas.

Discussion – early identification and preservation of future right of way can be an important cost saving tool, and can avoid future land use disruptions if used in the right circumstances. Unfortunately, actual preservation or outright purchase of right of way at the earliest possible point it time is often financially impossible. Right of way acquisition is funded late in the process, and requiring land to be set aside unused is a 'taking' that requires compensation.

Policy Performance Measures and Milestones – The performance measure is the identification of future right-of-way needs for STA projects prior to local land use approvals. Are plans being submitted to STA and, if appropriate, is STA providing comments? If so, the policy is being implemented. The milestone for this Policy is the submittal to and review by STA of local land use development projects.

AHF Policy 7 – Support Routes of Regional Significance maintenance by:

1. **Include a detailed PCI evaluation on all Routes of Regional Significance in the STA Pothole Report.**
2. **Requiring recipients of discretionary roadway maintenance funds administered by STA to spend them on Routes of Regional Significance rated as Fair or worse before spending them on other projects**
3. **Seeking additional roadway maintenance funds**

Discussion – Adequate data is the pre requisite to a properly maintained system, and adequate funding is the tool to its implementation. This policy is intended to make progress on fulfilling both of those needs. The Policy creates a regular process for gathering and reporting the data needed to guide maintenance investments, and provides specific guidance on spending in the most dire of maintenance situations.

The Policy includes a recommendation to seek additional funding, and the data and investments required by the policy will help determine how much funding is needed. With the 2017 adoption and 2018 implementation of SB 1, the maintenance backlog is expected to be substantially reduced. STA will wait until 2020 to re-examine maintenance funding needs.

Policy Performance Measures and Milestones – The performance measures for this Policy is the PCI of Routes of Regional Significance and the amount of money spent on Routes of Regional Significance maintenance. Is the Routes of Regional Significance PCI being reported upon annually, and if the PCI is increasing? If so, this policy is being implemented. The Milestones are the submittal of pavement data by local agencies to STA (or another entity from which STA can obtain the data), the publication of the STA Pothole Report, and change in the Routes of Regional Significance PCI.

AHF Policy 8 – Require that projects funded by STA use Solano HCP avoidance and mitigation standards unless the project environmental analysis shows a compelling reason that a different standard provides greater environmental and project delivery benefit.

Discussion – Project analysis, public acceptance and deliverability are all improved when existing standards are used. This can range from standardized lane widths to signage standards and, in this case, environmental policies. Although the Solano HCP has not been formally adopted, it does represent the most generally accepted standards for environmental impact avoidance and mitigation.

Policy Performance Measures and Milestones – The performance measures for this Policy are the use of Solano HCP avoidance and mitigation standards in draft and final environmental documents. The Milestones are the adoption of final environmental documents including such standards.

DATE: November 13, 2017
TO: STA TAC
FROM: Cory Peterson, Planning Assistant
RE: Summary of Funding Opportunities

Discussion:
Below is a list of funding opportunities that will be available to STA member agencies during the next few months, broken up by Federal, State, and Local. Attachment A provides further details for each program.

	FUND SOURCE	AMOUNT AVAILABLE	APPLICATION DEADLINE
	Regional		
1.	**Bay Area Air Quality Management District (BAAQMD) Charge Program	Anticipated $5 million	Extended to March 9, 2018
2.	Carl Moyer Off-Road Equipment Replacement Program (for Sacramento Metropolitan Area)	Approximately **$10 million**	Due On First-Come, First-Served Basis
3.	Air Resources Board (ARB) Clean Vehicle Rebate Project (CVRP)	Up to **$7,000** rebate per light-duty vehicle	Due On First-Come, First-Served Basis (Waitlist)
4.	Bay Area Air Quality Management District (BAAQMD) Hybrid Electric Vehicle Purchase Vouchers (HVIP) (for fleets)	Approximately **$5,000 to $45,000** per qualified request	Due On First-Come, First-Served Basis
	State		
1.	Caltrans Transit & Intercity Rail Capital Program	**Est. $323 million**	January 12, 2018

Fiscal Impact:
None.

Recommendation:
Informational.

Attachment:
A. Detailed Funding Opportunities Summary

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ATTACHMENT A

The following funding opportunities will be available to the STA member agencies during the next few months. Please distribute this information to the appropriate departments in your jurisdiction. Yellow highlighted grants have deadlines approaching soon!

Fund Source	Application Contact**	Project Types/Eligibility	Amount Available	Program Description	Call For Projects	STA Staff Contact	Potential Projects
			Regional Grants				
BAAQMD Charge Program	Grants Programs Information Request Line (415) 749-4994	Vehicle Charging Stations	**$5 million**	The Charge Program is an incentive that offers grant funding to help offset the cost of purchasing and installing new publicly available electric vehicle charging stations. Funded through the Transportation Funds for Clean Air fund.	Deadline extended to March 9, 2018	**Cory Peterson (707) 399-3214 cpeterson@sta.ca.gov**	**Transit Facilities, Govt buildings**
Carl Moyer Off-Road Equipment Replacement Program (for Sacramento Metropolitan Area)	Gary A. Bailey Sacramento Metropolitan Air Quality Management District **(916) 874-4893 gbailey@airquality.org**	Replace high-polluting off-road equipment	Approx. **$10 million**, maximum per project is $4.5 million	The Off-Road Equipment Replacement Program (ERP), an extension of the Carl Moyer Program, provides grant funds to replace Tier 0, high-polluting off-road equipment with the cleanest available emission level equipment.	Ongoing. Application Due On First-Come, First-Served Basis	**Robert Guerrero (707) 399-3211 rguererro@sta.ca.gov**	

Fund Source	Application Contact**	Project Types/Eligibility	Amount Available	Program Description	Call For Projects	STA Staff Contact	Potential Projects
Air Resources Board (ARB) Clean Vehicle Rebate Project (CVRP)*	Graciela Garcia ARB **(916) 323-2781** ggarcia@arb.ca.gov		Up to **$7,000** rebate per light-duty vehicle	The Zero-Emission and Plug-In Hybrid Light-Duty Vehicle (Clean Vehicle) Rebate Project is intended to encourage and accelerate zero-emission vehicle deployment and technology innovation. Rebates for clean vehicles are now available through the Clean Vehicle Rebate Project (CVRP) funded by the Air Resources Board (ARB) and implemented statewide by the California Center for Sustainable Energy (CCSE).	Application Due On First-Come, First-Served Basis (Currently applicants are put on waitlist)	**Cory Peterson (707) 399-3214** cpeterson@sta.ca.gov	
Bay Area Air Quality Management District (BAAQMD) Hybrid Electric Vehicle Purchase Vouchers (HVIP)*	To learn more about how to request a voucher, contact: **888-457-HVIP** info@californiahvip.org	Low/No Carbon Engines	Approx. **$5,000 to $45,000** per qualified request	The California Air Resources Board (ARB) created the HVIP to speed the market introduction of low-emitting hybrid trucks and buses. It does this by reducing the cost of these vehicles for truck and bus fleets that purchase and operate the vehicles in the State of California. The HVIP voucher is intended to reduce about half the incremental costs of purchasing hybrid heavy-duty trucks and buses.	Application Due On First-Come, First-Served Basis	**Brandon Thomson (707) 399-3234** bthomson@sta.ca.gov	**- FAST Renewable Diesel Bus Purchase**
	Statewide Grants						
	SB 1 Grants						
Active Transportation Program (ATP)		Bicycle/Pedestrian	**$440 Million**	The Active Transportation Program provides funding to bicycle and pedestrian projects across California. It is distributed on a competitive grant basis at the regional and state level. Approximately $60 million is available from a statewide competitive grant.	Bi-Annually Next Cycle is March – May 2018	**Ryan Dodge (707) 399-3230** rdodge@sta.ca.gov	**- Fairfield Green Valley Road Overcrossing** **- Fairfield West Texas Gateway** **- Rio Vista Airport Rd** **- Vacaville Elmira Road Bike Path** **- Vallejo Sonoma Blvd Improvements**

Fund Source	Application Contact**	Project Types/Eligibility	Amount Available	Program Description	Call For Projects	STA Staff Contact	Potential Projects
Cap and Trade Grants							
Transit and Intercity Rail Capital Program (TIRCP)	Ezequiel Castro Caltrans (916) 654-8012 tircpcomments@dot.ca.gov		**Est. $323 million**	Provides funding for expanding and improving rail and transit service to increase ridership and reduce GHG emissions. Potential Solano County projects could include bus/ferry investments that help increase ridership.	October 13 – January 12, 2018	**Anthony Adams (707) 399-3215 aadams@sta.ca.gov**	**- Solano Express Bus Expansion/ Electrification - FF/VV Train Station**
Future Funding Opportunities							
Volkswagen Settlement – CARB and Electrify America		EV Infrastructure	**$800 million over 10 years**	$800 million of funding from a settlement with Volkswagen will be put into a trust called Electrify America that will be used to fund EV education and infrastructure projects across the state. Could be a potential fund source in the future and will be updated as information becomes available.	N/A	**Cory Peterson (707) 399-3214 cpeterson@sta.ca.gov**	**- EV Charging Infrastructure**
PG&E EV Charge Network	1-877-704-8723 EVChargeNetwork@pge.com	EV Infrastructure	**TBD**	PG&E plans to install 7,500 charging stations across their service area. Most of these will be at employers or multi-unit dwellings. This could be a potential avenue for funding and coordination to bring more EV infrastructure to Solano County.	Early 2018	**Cory Peterson (707) 399-3214 cpeterson@sta.ca.gov**	**EV Charging Infrastructure**

**STA staff, Cory Peterson, can be contacted directly at (707) 399-3214 or cpeterson@sta.ca.gov for assistance with finding more information about any of the funding opportunities listed in this report

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DATE: November 16, 2017
TO: STA TAC
FROM: Johanna Masiclat, Clerk of the Board
RE: Draft Meeting Minutes for STA Advisory Committees

Attached is the most recent Draft Meeting Minutes of the STA Advisory Committees that may be of interest to the STA TAC.

Attachments:

A. Consolidated Transportation Services Agency (CTSA) Draft Meeting Minutes of September 28, 2017

ATTACHMENT A

CTSA-AC

CONSOLIDATED TRANSPORTATION SERVICES AGENCY
ADVISORY COMMITTEE
Draft Minutes for the meeting of
September 28, 2017

1. CALL TO ORDER

Chair Spering called the meeting to order at 9:30 a.m. in the Solano County Government Building in Fairfield.

Voting Members Present: ***In Alphabetical Order by Last Name***

Nathan Atherstone	Fairfield and Suisun Transit (FAST)
Lori Damassa	Vacaville City Coach
Beth Kranda	SolTrans
Gerald Huber	Solano County Health & Social Services
Leanne Martinsen	Area Agency on Aging (AAoA)
Ruth Matz	Veteran/Low Income
Harry Price	STA Board Member
Ernest Rogers	PCC Member
Susan Rotchy	Independent Living Resources (ILR)
Jim Spering	Chair, STA Board Member

Voting Members Not Present: ***In Alphabetical Order by Last Name***

Richard Burnett	Lifeline Committee
Norman Richardson	STA Board Member

Also Present: ***In Alphabetical Order by Last Name***

Ruth Clark	Area Agency on Aging (AAoA)
Catherine Cook	Office of Supervisor Spering
Sheila Ernst	STA
Robert Fuentes	Faith In Action
Daryl Halls	STA
Cindy Hayes	Independent Living Resources (ILR)
Debbie McQuilkin	STA
Elizabeth Richards	STA Consultant
Veronica Jones	Connections For Life
Brandon Thomson	STA

2. INTRODUCTIONS

The group dispensed with self-introductions.

3. APPROVAL OF AGENDA

On a motion by Nathan Atherstone, and a second by Member Ernest Rogers, the CTSA-AC approved the September 28, 2017 agenda. (10 Ayes, 2 Absent)

4. OPPORTUNITY FOR PUBLIC COMMENT

None.

5. CONSENT CALENDAR

Minutes of the CTSA-AC Meeting of March 23, 2017
Recommendation: Approve the CTSA-AC minutes of March 23, 2017.

On a motion by Nathan Atherstone, and a second by Gerry Huber, the CTSA-AC approved the recommendation. (10 Ayes, 2 Absent)

6. PRESENTATIONS

A. Faith In Action (FIA)

Robert Fuentes outlined Faith In Action's mission statement. He explained the Caregiver Respite Program which is a door-through-door transportation, primarily to medical appointments. Mr. Fuentes explained that the Ride with Pride Program is shuttle transportation for ambulatory seniors who do not drive. He stated that this service provides transportation to medical and social services, but also life enhancement activities. Mr. Fuentes also highlighted the Senior Peer Counseling Program which provides transportation to mental health appointees both County and private, group therapy, and substance abuse programs, including AA/NA/Al-Anon.

Gerry Huber and Robert Fuentes plan to discuss the possibility of recruiting a health provider such as MediCal or Healthy Partnerships to help with transportation cost/coverage.

Daryl Halls and Robert Fuentes plan to discuss offline ways to recruit more volunteers outside the senior based community for evenings and weekends since most seniors are not willing to volunteer during those days/times.

7. ACTION ITEMS

A. CTSA-AC Implementation Plan

Chair Spering asked the group to discuss issues to focus on for implementation.

Daryl Halls explained that mini mobility summits are currently being held in each city in Solano County to obtain feedback from the communities on their transportation gaps.

Gerry Huber commented that access to special need medical care within the community is an ongoing issue. He added that partnerships and volunteers for non-medical related transportation is a great way to minimize this gap.

Daryl Halls requested Gerry Huber to provide a presentation to the committee to address these transportation gaps and needs at the next meeting.

Ruth Matz commented that extremely low income clients accessing RTC clipper cards has been a challenge. She recommended an easier way for them to sign up for the discount.

Debbie McQuilkin explained that there is a $3.00 fee to apply for the RTC Clipper Card. She added that a photo is taken during the application process so it is imperative that the client apply in person. Ms. McQuilkin stated that if 10 potential clients wanted to apply all at once, someone may be willing to go to them with a camera and necessary paperwork to help make the transportation process easier.

Veronica Jones requested waiving the $3.00 fee for poverty level applicants.

Chair Spering asked if the low income families and seniors and people with disabilities groups are separated. He stated that there may be a way to get one group on fixed route.

Nathan Atherstone commented that adjusting the Golden Pass Program to a lower age is also a possibility. He added that seniors must be over the age of 80 to qualify for the program but they are currently discussing ways to lower the age to 70.

Chair Spering asked that a group presentation be provided at the next meeting to discuss ways each agency is addressing these issues (by FAST and Solano County Health & Social Services, FIA, etc.). He added that coordination between these groups is absolutely critical.

Recommendation:
Forward a recommendation to the STA Board to authorize development of an implementation plan for the CTSA-AC.

8. INFORMATIONAL ITEMS (Discussion)

A. New SolanoExpress Service Plan

Brandon Thomson provided an update on the New SolanoExpress Service Plan. He outlined route consolidation and capital plans. He discussed the New Highway 37 at Fairgrounds and how it alleviates congestion. Mr. Thomson highlighted that implementation components and improvement examples for the new SolanoExpress Service Plan and the current fare structure in a more simplified approach. He concluded his presentation with marketing and outreach information and stated that the STA Board adopted that new service plan in July.

B. Update on Mobility Management Programs

1. Solano Mobility Call Center

Debbie McQuilkin provided a brief presentation on the Solano Mobility Call Center. She stated that Customer Service Representatives are available at two locations and the hours are from 7am-3pm at the Depot, and from 3pm to 5pm at One Harbor Center in Suisun City. Ms. McQuilkin explained that the Call Center has increased the number of people served since last fiscal year from 24% to 51%. She added that in 2018 the Solano Mobility Call Center will implement Phase II of the Taxi Scrip intercity program.

2. Solano Intercity Taxi Scrip Program

Debbie McQuilkin provided a brief overview of the Solano Intercity Taxi Scrip Program. She highlighted the cost and fare revenues from fiscal year's 2009-10 through 2016-17. Ms. McQuilkin also discussed fare type scrip sales percentage is 25% for non-low-income and 75% for low-income. She outlined ridership information and sales comparisons for each transit operator for fiscal years 2015-16 and 2016-17.

3. Solano Mobility ADA Eligibility Program

Debbie McQuilkin provided an update on the Solano Solano Mobility ADA Eligibility Program. She provided the Solano Mobility ADA Eligibility program statistics to the group and the countywide applicant volumes by year. Ms. McQuilkin discussed countywide eligibility results by assessments, the complimentary paratransit usage, certification by city and eligibility breakdown results. She added that 26 ADA comments have been received of which 85% "Highly Satisfied", 15% "Satisfied", and 0% "Dissatisfied".

4. Travel Training

Susan Rotchy provided an overview of the travel training through Independent Living Resources (ILR). She outlined their mission statement and services designed to give people with disabilities the tools to achieve independence. She stated that since June 30,

2017, ILR has completed 25 trainings with 14 consumers, 58 presentations and 5 group outings. Ms. Rotchy concluded her presentation with training challenges and plans for the future.

Cindy Hayes, a Travel Trainer, shared a touching testimonial on the how Independent Living Resources is making a difference in people's lives through the Travel Training Program.

Veronica Jones provided an overview of the travel training through Connections For Life which is in partnership with the STA. Ms. Jones explained that 15 group trainings have been conducted, 8 travel training sessions have been completed and that 92 presentations have been provided She added that they have 11 referrals.

C. Update of Solano Mobility Study for Solano Seniors and People with Disabilities

Elizabeth Richards provided a brief update on the Solano Mobility Study for Solano Seniors and People with Disabilities. She explained that "mini summits" are being held in each city in Solano County to study specific mobility needs of Seniors and People with Disabilities to improve mobility and to ensure quality of life. She stated that thus far summits have been held in Rio Vista, Suisun City and Benicia and highlighted the mobility gaps/challenges and potential strategies/solutions for each city which were obtained through dot exercises and clicker devices. She added that the next summit will be held in Dixon on October 12th.

9. COMMENTS FROM STAFF AND REPRESENTATIVES FROM ADVISORY COMMITTEES

Daryl Halls announced that Liz Niedziela will be retiring in December. He stated that STA has hired a Director of Programs, Ron Grassi. He added that a new Program Services Division Manager, Lloyd Nadal has also been hired.

10. FUTURE AGENDA ITEMS

- Group Presentation on Transportation Gaps
  (By: Solano County Health and Social Services, FAST, FIA, ILR, etc.)

11. ADJOURNMENT

The next CTSA-AC is scheduled to meet on **Thursday, February 22, 2018**, at the **County Events Center in Conference Room B**, located at 601 Texas Street in Fairfield.

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DATE: November 16, 2017
TO: STA TAC
FROM: Johanna Masiclat, Clerk of the Board
RE: STA Board and Advisory Meeting Schedule for Calendar Year 2018

Discussion:
Attached is the STA Board and Advisory meeting schedule for STA Board and Advisory meeting schedule for Calendar Year 2018 that may be of interest to the STA TAC.

Fiscal Impact:
None.

Recommendation:
Informational.

Attachment:
A. STA Board and Advisory Meeting Schedule for Calendar Year 2018

Solano Transportation Authority

STA BOARD AND ADVISORY COMMITTEE MEETING SCHEDULE CALENDAR YEAR 2018

STA Board:	Meets 2nd Wednesday of Every Month
Consortium :	Meets *Last* Tuesday of Every Month
TAC:	Meets *Last* Wednesday of Every Month
BAC:	Meets 1st Thursday of every *Odd* Month
PAC:	Meets 1st Thursday of every *Even* Month
PCC:	Meets 3rd Thursday of every *Odd* Month
SR2S-AC	Meets Quarterly (Begins Feb.) on the 3rd Wed.

DATE	TIME	DESCRIPTION	LOCATION	STATUS
Thurs., January 4	6:30 p.m.	Bicycle Advisory Committee (BAC)	STA Conference Room	Confirmed
Wed., January 10	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Thurs., January 18	1:00 p.m.	Paratransit Coordinating Council (PCC)	Dixon Senior Center	Tentative
Tues., January 30	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., January 31	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., February 1	6:00 p.m.	Pedestrian Advisory Committee (PAC)	STA Conference Room	Confirmed
Wed., February 14	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Wed., February 21	1:30 p.m.	Safe Routes to School Advisory (SR2S-AC)	STA Conference Room	Confirmed
Thurs., February 22	9:30 a.m.	Consolidated Transportation Svcs. Agency (CTSA)	TBD	Confirmed
Tues., February 27	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., February 28	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., March 1	6:30 p.m.	Bicycle Advisory Committee (BAC)	STA Conference Room	Confirmed
Wed., March 14	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Thurs., March 15	1:00 p.m.	Paratransit Coordinating Council (PCC)	Ulatis Community Center	Tentative
Tues., March 27	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., March 28	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., April 5	6:00 p.m.	Pedestrian Advisory Committee (PAC)	STA Conference Room	Confirmed
Wed., April 11	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Tues., April 24	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., April 25	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., May 3	6:30 p.m.	Bicycle Advisory Committee (BAC)	STA Conference Room	Confirmed
Wed., May 9	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Wed., May 16	1:30 p.m.	Safe Routes to School Advisory (SR2S-AC)	STA Conference Room	Confirmed
Thurs., May 17	1:00 p.m.	Paratransit Coordinating Council (PCC)	KROC Center	Tentative
Thurs., May 24	9:30 p.m.	Consolidated Transportation Services Agency (CTSA-AC)	TBD	Confirmed
Tues., May 29	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., May 30	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., June 7	6:00 p.m.	Pedestrian Advisory Committee (PAC)	STA Conference Room	Tentative
Wed., June 13	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Tues., June 26	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., June 27	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., July 5	6:30 p.m.	Bicycle Advisory Committee (BAC)	STA Conference Room	Confirmed
Wed., July 11	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Thurs., July 19	1:00 p.m.	Paratransit Coordinating Council (PCC)	Benicia City Hall	Tentative
July 24 (No Meeting)	SUMMER RECESS	Intercity Transit Consortium	N/A	N/A
July 25 (No Meeting)		Technical Advisory Committee (TAC)	N/A	N/A
Thurs., August 2	6:00 p.m.	Pedestrian Advisory Committee (PAC)	STA Conference Room	Confirmed
August 8 (No Meeting)	SUMMER RECESS	STA Board Meeting	N/A	N/A
Wed., August 15	1:30 p.m.	Safe Routes to School Advisory (SR2S-AC)	STA Conference Room	Confirmed
Tues., August 28	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., August 29	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., September 6	6:30 p.m.	Bicycle Advisory Committee (BAC)	STA Conference Room	Confirmed
Wed., September 12	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Thurs., September 20	1:00 p.m.	Paratransit Coordinating Council (PCC)	Fairfield Community Center	Tentative
Tues., September 25	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., September 26	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., September 27	9:30 a.m.	Consolidated Transportation Services Agency (CTSA-AC)	TBD	Confirmed
Thurs., October 4	6:00 p.m.	Pedestrian Advisory Committee (PAC)	STA Conference Room	Confirmed
Wed., October 10	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
No meeting due to STA's Annual Awards in November (No STA Board Meeting)		Intercity Transit Consortium	N/A	N/A
		Technical Advisory Committee (TAC)	N/A	N/A
Thurs., November 1	6:30 p.m.	Bicycle Advisory Committee (BAC)	STA Conference Room	Confirmed
Wed., November 14	6:00 p.m.	STA's 21th Annual Awards	TBD	Confirmed
Wed., November 21	11:30 a.m.	Safe Routes to School Advisory (SR2S-AC)	STA Conference Room	Confirmed
Thurs., November 15	1:00 p.m.	Paratransit Coordinating Council (PCC)	SolTrans Operations Facility	Tentative
Tues., November 27	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., November 28	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed
Thurs., December 6	6:00 p.m.	Pedestrian Advisory Committee (PAC)	STA Conference Room	Confirmed
Wed., December 12	6:00 p.m.	STA Board Meeting	Suisun City Hall	Confirmed
Tues., December 18	1:30 p.m.	Intercity Transit Consortium	STA Conference Room	Confirmed
Wed., December 19	1:30 p.m.	Technical Advisory Committee (TAC)	STA Conference Room	Confirmed