

# SR12



## State Route 12

Comprehensive Corridor Evaluation and Corridor Management Plan

Meeting Summary

TAG/Stakeholder Meeting – February 27, 2012



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## SR 12 Corridor Study TAG/Stakeholder Meeting

Monday, February 27, 2012  
10:00 a.m. – 12:00 p.m.  
Solano County Event Center, Fairfield, CA

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### Overview

On Monday, February 27, 2012, a Technical Advisory Group (TAG) and Stakeholder Meeting was held for the SR 12 Corridor Study.

The purpose of the meeting was to review the following corridor study activities:

- Review of Future Conditions Analysis
- Evaluation of Corridor Improvement Strategies
  - Gap-fill Strategy.
  - Barrier Separated Two-Lane Strategy
  - Four-Lane Strategy
- Key Findings
- Next Steps

The workshop agenda is attached for reference.

Participants included representatives from:

- City of Rio Vista Council
- City of Rio Vista Planning Commission
- City of Suisun City Council
- Solano Transportation Authority (STA)
- Metropolitan Transportation Commission (MTC)
- Caltrans Districts 4 & 10
- California Highway Patrol (CHP)
- Solano County
- San Joaquin Council of Governments (SJCOG)
- San Joaquin County
- San Joaquin Partnership
- California Delta Protection Commission (DPC)
- Assemblymember Mariko Yamada's Office
- Congressman George Miller's Office
- Solano Economic Development Corporation (Solano EDC)
- ArchiLOGIX
- Solano County Board of Supervisors
- California Trucking Association (CTA)
- Discover the Delta Foundation
- Highway 12 Association
- Rio Vista Chamber of Commerce
- Rio Vista Airport Advisory Commission

A complete list of attendees is attached as an appendix to this summary.

## Welcome

Mr. Eric Cordoba, President, Cordoba Consulting Inc., called the meeting to order and thanked everyone for attending. Mr. Cordoba then asked everyone in attendance to introduce themselves.

## Engineered Feasibility Study Presentation

Mr. Cordoba provided an overview of the Study Purpose and discussed Study Goals, Schedule, and Meeting Objectives as a part of a detailed PowerPoint Presentation. Following Mr. Cordoba's presentation, Mr. Thomas Biggs, Atkins Global and Project Manager, provided a presentation regarding the Evaluation of Alternative Strategies including Review of the Baseline Analysis, Evaluation of Corridor Improvement Strategies, Key Findings, and Next Steps. Following the presentations, Eric and Thomas requested questions or comments from the attendees as noted below in Stakeholder Discussion.

A copy of the PowerPoint Presentation can be found in the Appendix of this document.

## Stakeholder Discussion

### Councilmember Fred Kogler, City of Rio Vista

- Good presentation and meeting approach.
- There is an urgency to identify one of the four (4) alternate alignments in the Rio Vista area considering timing of the General Plan Update and other development issues.
- The business community believes that a new Rio Vista Bridge is needed.
- The 4- way viaduct will have some impact in/or around Rio Vista.
- Narrow it down to give us the intended Route; so we can plan for it.
- Work on General Plan; need to know whether the alignment will be north or south of SR 12.
- What is the timeline; when will there be a decision on the alternative alignments presented?
- What about the viaduct?

Tom Biggs, Atkins Project Manager – It could be 10 years before the final decisions are made depending on when funding is available and the environmental process begins. The environmental document will set the timeline for the alternative alignments and various improvements.

- Will this presentation be available on-line?

Tom Biggs – Yes. The presentation will be available in less than 30-days.

### Councilmember Janith Norman, City of Rio Vista

- Isn't it Rio Vista's decision to decide on which alternate route through or around Rio Vista should be chosen?

Tom Biggs – The Study references the alternative routes. We can think of other alternatives, but the four alternative alignments were the primary alternate routes identified during Study development.

*Meeting Summary*

Daryl Halls, Exec. Dir., STA - SR 12 is a State facility and therefore making a decision on which alternative alignment is Caltrans' responsibility and decision. However, STA will listen to Rio Vista's concerns regarding the alternate alignments. Ultimately it will be Caltrans' decision to identify the most appropriate alternate route or alignment through or around Rio Vista since SR 12 is a State facility. In addition, the project will be a collaboration and partnership between Caltrans, STA, Rio Vista, and the EDC.

Tom Biggs – Such projects require a lot of cooperation and coordination with Caltrans. For this Study, a lot of attention and cooperation has occurred between the Caltrans Districts (3, 4, and 10) and other stakeholders.

- We need an economic sustainability strategy. Our business community will need to understand how businesses will survive depending on which alignment is chosen.
- What report is needed to get improvements defined and moving forward?

Tom Biggs – This Study is the first step.

#### Vice Mayor/Councilperson Jack Krebs, City of Rio Vista

- Jepson Parkway has been completed. Have these and future improvements been included in the traffic model analysis? Have port/delta operations including wine industry, other industry cluster operations, and other related truck traffic been included as well?

Tom Biggs – Yes.

- What about the Interchange at SR 12 and SR 160? Was that interchange considered?

Tom Biggs – SR 160 at Mokelumne will require improvements. Study documents detail the basis for the improvements and cost estimates.

- Considering the 2- versus 4-Lane scenarios, do both come with widened shoulders?

Tom Biggs – Yes. Wider shoulders (10") will be provided for 2-Lane sections. 4-Lane non-expressway segments will have 8' shoulders. All shoulder improvements will be subject to Caltrans' development process and could vary depending on ROW issues and other conditions.

- We need to work on the Benefit Study and identify benefits to the City of Rio Vista.
- The 4-lane alternative alignment divides the town.
- Community issues can't just be looked at on a regional basis.
- Hope that planners and decision makers including Caltrans listen to the City of Rio Vista. The City is normally optimistic, but not as optimistic now.
- The Rio Vista Bridge location is a key issue.
- Rio Vista is the most affected/fastest growing community along the corridor.

Tom Biggs – Rio Vista is very important. We want to talk with you more following the meeting.

#### Sandy Person, President, Solano EDC

- How well will these improvements compete for funding? Assume it is very competitive. We have previously lobbied for safety improvements.
- Bridge improvements are critical.

Daryl Halls – Other safety improvement projects are programmed. After that, there is not much more in the pipeline. This Study will identify the next round of improvement projects. The hard part will be financing those improvements. Partnership between all of our agencies will be very important.

- Agree. We can be competitive once we all act together.

Daryl Halls – It takes a lot of advocacy to get even near-term improvement projects defined and funded.

Eric Cordoba, Cordoba Consulting Inc., PDT Member – We need the environmental documents to identify segment by segment funding programs. We don't have that now as part of this Study. This Study is the first step in the process leading to Project Development, which includes the environmental process.

#### Other Workshop Comments:

- Can we designate other routes to handle the truck traffic other than SR 12?

Tom Biggs – No. There are no other alternative routes that can serve the communities along the SR 12 corridor.

#### Written Comments:

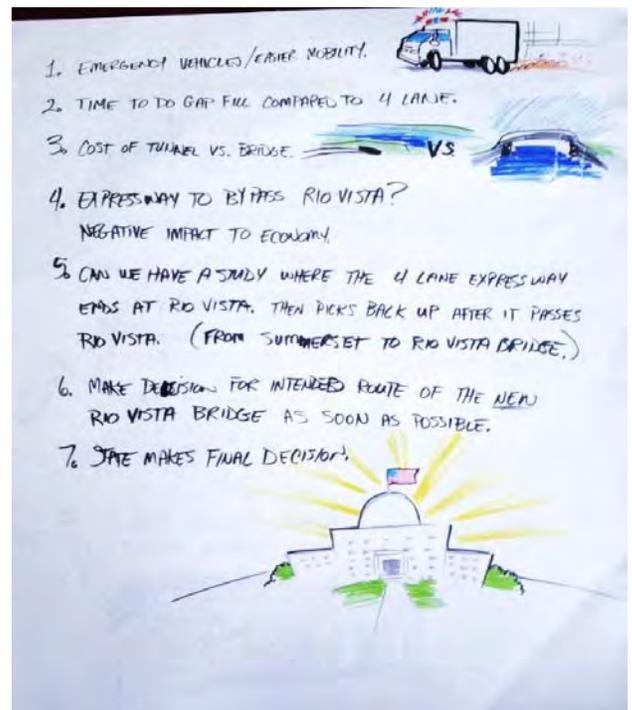
- Constance Boulware - Future evaluation should include an Economic Sustainability Strategy for Rio Vista businesses and the City.
- Fred Kogler – Need to look at Rio Vista Bridge impacts and develop a decision time line.

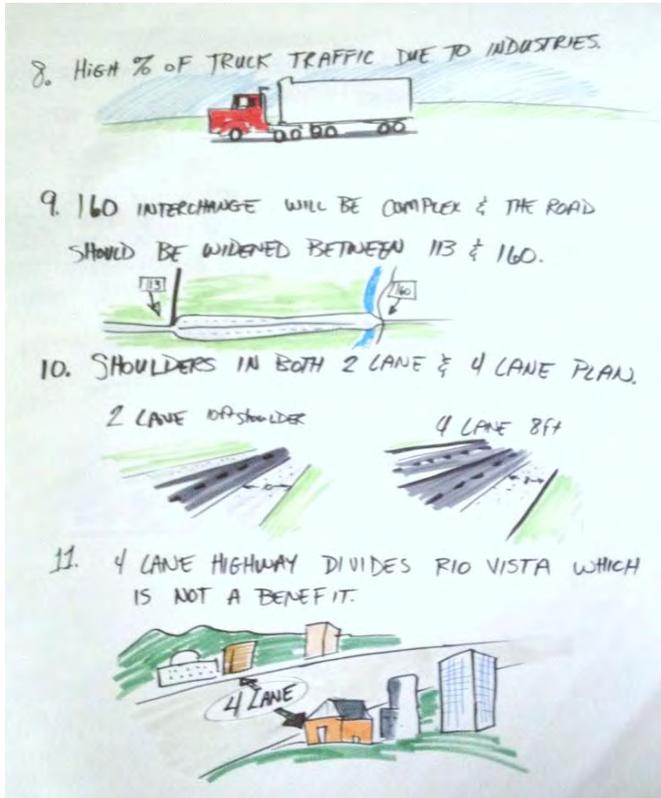
## Next Steps

Eric Cordoba provided an overview of the next steps in the Study development process focusing on short-term Intelligent Transportation System (ITS) and safety improvement projects.

## Graphic Artist Notes

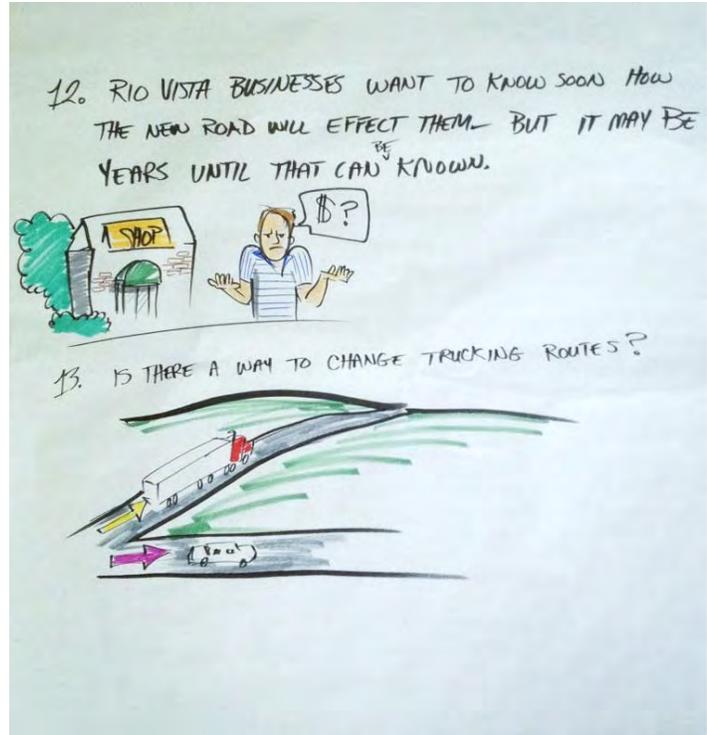
1. Emergency vehicles need easier mobility
2. It's time to do the Gap-Fill Alternative compared to the 4 Lane Alternative
3. Need to assess the cost of the tunnel versus a new Rio Vista Bridge
4. Will there be an Expressway that bypasses Rio Vista? Will have negative impacts on the economy
5. Can we have a study where the 4 Lane Expressway ends at Rio Vista, then picks back up after it passes Rio Vista? (or from Summerset to the Rio Vista Bridge)
6. Make the decision for intended route of the new Rio Vista Bridge as soon as possible
7. Caltrans makes the final decision on the alternative alignments through or around Rio Vista that have been identified





8. There is a high percentage of truck traffic due to the number and types of industries along the corridor
9. The SR 12/SR 160 interchange will be complex and the road should be widened between SR 113 and SR 160
10. What are the shoulder widths in both the 2-Lane and 4-Lane alternatives?
11. The 4-Lane highway divides Rio Vista, which is not a benefit

12. Rio Vista businesses want to know soon how the new alignment will affect them. It may be years until that can be known.
13. Is there a way to change trucking routes?



## SR 12 Stakeholder Meeting Attendees

NAME	COMPANY	Phone	Email
Sandy Person	President Solano Economic Development Corp.	(707) 864-1855	<a href="mailto:sandy@solanoedc.org">sandy@solanoedc.org</a>
Janith Norman	City of Rio Vista City Councilperson		<a href="mailto:janith@janithnorman.com">janith@janithnorman.com</a>
Roz Malone	HWY 12 Association	(707) 374-6560	<a href="mailto:malonehwy12@gmail.com">malonehwy12@gmail.com</a>
David Barnes	Planning Commissioner Rio Vista/Business Owner		<a href="mailto:madetcher@aol.com">madetcher@aol.com</a>
Peter Stanley	Principal - ArchiLOGIX	(707) 636-0646 X402	<a href="mailto:ps@archilogix.com">ps@archilogix.com</a>
Vince Jacala	District 4 Public Information Officer	(510) 286-5206	<a href="mailto:Vince_Jacala@dot.ca.gov">Vince_Jacala@dot.ca.gov</a>
Mike Reagan	Solano County Supervisor, D 5	(707) 784-6130	<a href="mailto:mjreagan@solanocounty.com">mjreagan@solanocounty.com</a>
Eric Sauer & RJ Cervantes	VP Policy & Regulatory Affairs - California Trucking Association (CTA)	(916) 373-3562	<a href="mailto:esauer@caltrux.org">esauer@caltrux.org</a>
Fred Kogler	Rio Vista Councilmember	(707) 374-6022	<a href="mailto:fkogler@ci.rio-vista.ca.us">fkogler@ci.rio-vista.ca.us</a>
Sam Dickson	Solano Area CHP		<a href="mailto:sadickson@chp.ca.gov">sadickson@chp.ca.gov</a>
Zachary Gifford	District 4 Environmental Planner	(510)286-5610	<a href="mailto:zachary_gifford@dot.ca.gov">zachary_gifford@dot.ca.gov</a>
Constance Boulware	Councilmember - Rio Vista	(707)639-7175	<a href="mailto:cboulware@ci.rio-vista.ca.us">cboulware@ci.rio-vista.ca.us</a>
Mike Hudson	Councilmember/Vice Mayor, City of Suisun City	(707) 428-6175	<a href="mailto:mhudson@Suisun.com">mhudson@Suisun.com</a>
Kathy Hoffman	Sr. Field Rep. - Congressman George Miller	(707) 645-1888	<a href="mailto:Kathy.Hoffman@mail.house.gov">Kathy.Hoffman@mail.house.gov</a>
Don Lowrie	Field Rep. - Assemblymember Mariko Yamada	(707) 455-8025	<a href="mailto:Don.Lowrie@asm.ca.gov">Don.Lowrie@asm.ca.gov</a>
Jim Spering	Solano County Supervisor	(707) 718-0330	<a href="mailto:jpspering@solanocounty.com">jpspering@solanocounty.com</a>
Fred Kogler	City of Rio Vista City Councilmember		<a href="mailto:fkogler@ci.rio-vista.ca.us">fkogler@ci.rio-vista.ca.us</a>
Jack Krebs	City of Rio Vista City Councilmember/Vice Mayor	(707) 374-6451	<a href="mailto:jkrebs@ci.rio-vista.ca.us">jkrebs@ci.rio-vista.ca.us</a>
Mark Murgrew	CHP - Solano Division	(707) 428-2100	<a href="mailto:mmugrew@chp.ca.gov">mmugrew@chp.ca.gov</a>
Mitch Conner	ARCHiLogix	(707) 636-0646	<a href="mailto:mc@archilogix.com">mc@archilogix.com</a>
Joe Aguilar	Caltrans	(510) 286-5541	<a href="mailto:joseph_aguilar@dot.ca.gov">joseph_aguilar@dot.ca.gov</a>
Wil Ridder	San Joaquin Council of Governments	(209) 235-0600	<a href="mailto:ridder@sjcog.org">ridder@sjcog.org</a>
Firoz Vohra	San Joaquin County		<a href="mailto:fvhra@sjgov.org">fvhra@sjgov.org</a>
Mike Ammann	San Joaquin Partnership	(209) 956-3380	<a href="mailto:mammann@shnet.org">mammann@shnet.org</a>
Rod Eilison	CHP - Sacramento Division	(916)681-2300	<a href="mailto:rodeilison@chp.ca.gov">rodeilison@chp.ca.gov</a>
Fred Zaragoza	Solano County	(707) 784-6131	<a href="mailto:fczaragoza@solanocounty.com">fczaragoza@solanocounty.com</a>
Mike Machado	California Delta Protection Commission	(909) 601-5277	<a href="mailto:michaelmachado@dpc.gov">michaelmachado@dpc.gov</a>
Dale Pfeiffer	Solano Economic Development Corporation (EDC)	(707) 592-5536	<a href="mailto:dalepfeiffer@aol.com">dalepfeiffer@aol.com</a>
David Barnes	Rio Vista Chamber of Commerce	(707) 374-2218	<a href="mailto:madetcher@aol.com">madetcher@aol.com</a>
Daryl Halls	Solano Transportation Authority	(707) 424-6006	<a href="mailto:dkhalls@sta-snci.com">dkhalls@sta-snci.com</a>
Hale Conkin	Airport Advisory Commission (Rio Vista)		<a href="mailto:hconklin@ci.rio-vista.ca.us">hconklin@ci.rio-vista.ca.us</a>
Michael Jones	Caltrans District 4	(510) 286-6228	<a href="mailto:michael_k_jones@dot.ca.gov">michael_k_jones@dot.ca.gov</a>
Barbara Hempstead	Caltrans District 10	(209) 948-3909	<a href="mailto:barbara_hempstead@dot.ca.gov">barbara_hempstead@dot.ca.gov</a>
Tom Dumas	Caltrans District 10	(209) 941-1921	<a href="mailto:Tom_Dumas@dot.ca.gov">Tom_Dumas@dot.ca.gov</a>
Danielle Stanislaus	Metropolitan Transportation Commission (MTC)	(510) 817-5737	<a href="mailto:DStanislaus@mtc.ca.gov">DStanislaus@mtc.ca.gov</a>
Robert Macaulay	Solano Transportation Authority	(707) 424-6006	<a href="mailto:rmacaulay@sta-snci.com">rmacaulay@sta-snci.com</a>
Thomas Biggs	Atkins	(415) 362-1500	<a href="mailto:thomas.biggs@atkinsglobal.com">thomas.biggs@atkinsglobal.com</a>
Jenny Jackson	Atkins	(415) 813 5171	<a href="mailto:Jenny.Jackson@atkinsglobal.com">Jenny.Jackson@atkinsglobal.com</a>
Aron Zerezghi	Atkins		<a href="mailto:Aron.Zerezghi@atkinsglobal.com">Aron.Zerezghi@atkinsglobal.com</a>
Eric Cordoba	Cordoba Consulting, Inc.	(925) 671-5458	<a href="mailto:eric@cordobaconsulting.com">eric@cordobaconsulting.com</a>
Georgiena Vivian	VRPA Technologies, Inc.	(559) 259-9257	<a href="mailto:gvivian@vrpatechnologies.com">gvivian@vrpatechnologies.com</a>
Steve Riley	JSA		<a href="mailto:steve@tycooney.com">steve@tycooney.com</a>

# State Route 12

## Comprehensive Corridor Evaluation and Corridor Management Plan

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### TAG/Stakeholder Meeting

**February 27, 2012**

*10 a.m. – 12 p.m.*

**Solano County Event Center, 601 Texas Street, Fairfield, CA 94533**

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## A G E N D A

<b>1. Exhibit Viewing</b>	
<b>2. Introduction</b> A. Study Goals B. Schedule C. Meeting Objectives	<i>Eric Cordoba, Cordoba Consulting</i>
<b>3. Evaluation of Alternative Strategies</b> A. Review of the Baseline Analysis B. Evaluation of Corridor Improvement Strategies C. Key Findings D. Next Steps	<i>Tom Biggs, Atkins</i>
<b>4. Discussion</b>	<i>All</i>
<b>5. Next Steps</b> A. Upcoming Work/Schedule B. Other	<i>Eric Cordoba, Cordoba Consulting</i>





[www.movingSR12forward.com](http://www.movingSR12forward.com)

<sup>1</sup> This presentation is based on information gathered from the Alternative Analysis DRAFT Technical Memorandum of the SR-12 Comprehensive Corridor Evaluation and Corridor Management Plan from SR 29 to I-5. As a DRAFT the memorandum is subject to change with respect to findings and/or conclusions. It should also be noted that these findings and/or conclusions may not ever be programmed due to various reasons, including but not limited to, engineering judgment and/or budget constraints.

# SR12

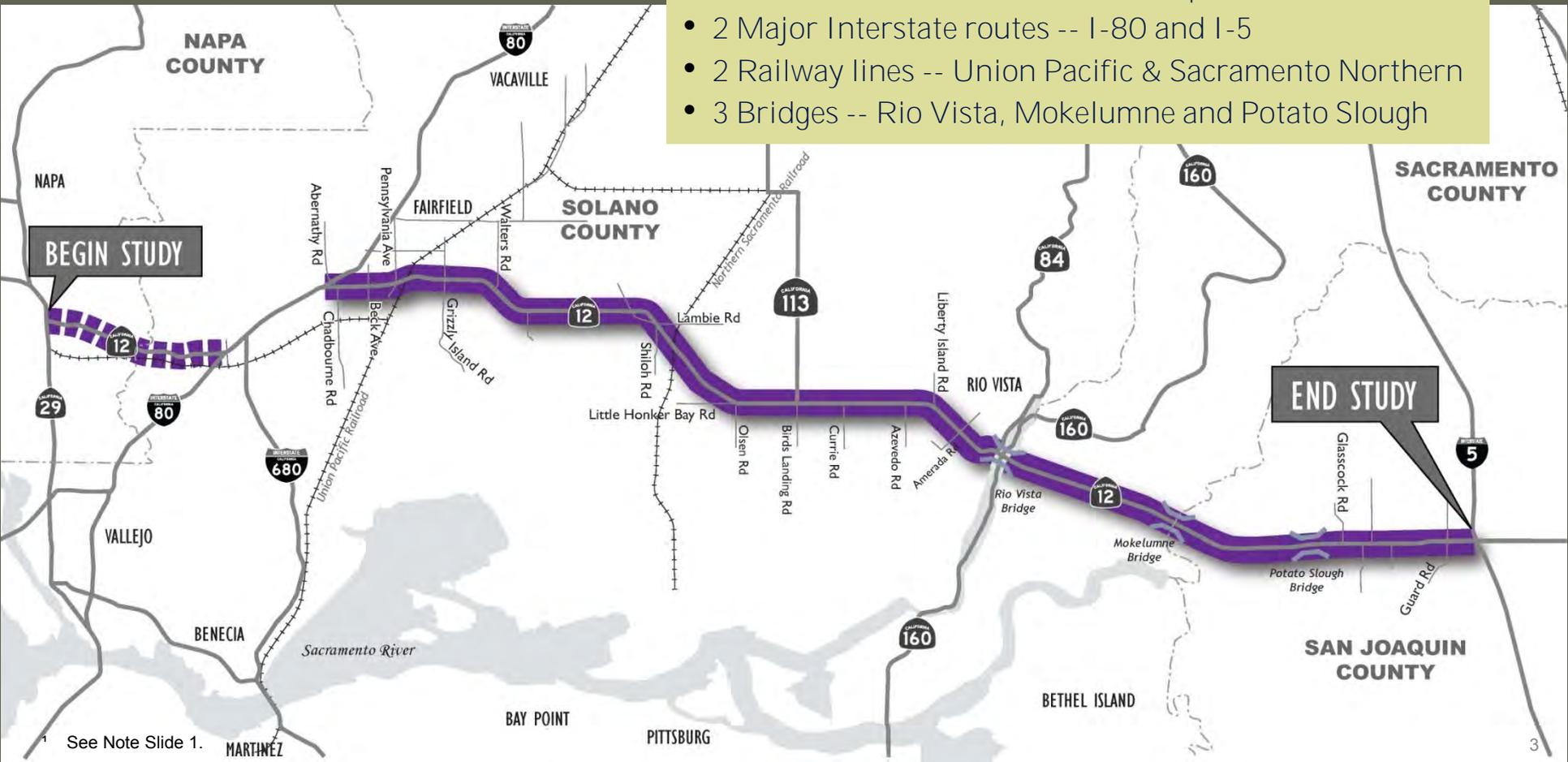
## State Route 12 Comprehensive Corridor Evaluation and Corridor Management Plan TAG/Stakeholder Meeting – February 2012



<sup>1</sup> See Note Slide 1.

# 53-Mile, Multi-Jurisdictional Corridor

- 4 Counties -- Napa, Solano, Sacramento & San Joaquin
- 3 Caltrans Districts -- 3, 4 and 10
- Developed areas -- Suisun City, Fairfield & Rio Vista
- Rural communities, farmlands and portions of the Delta
- 2 Major Interstate routes -- I-80 and I-5
- 2 Railway lines -- Union Pacific & Sacramento Northern
- 3 Bridges -- Rio Vista, Mokelumne and Potato Slough



## Goals

*Conduct a comprehensive evaluation of the State Route 12 corridor from SR-29 in Napa County through Solano, Sacramento, and San Joaquin Counties to I-5, building upon previous studies and projects.*

*Identify improvement strategies that address near- and long-term needs of the SR-12 corridor through an active stakeholder collaboration process.*

*Inform future county and regional funding and planning processes.*



**12**  
**Moving Forward**  
STATE ROUTE 12 CORRIDOR STUDY

SR 12 passes through **4** counties (Napa, Solano, Sacramento, and San Joaquin), **3** Caltrans Districts (3, 4 and 10), developed areas including Suisun City, Fairfield and Rio Vista, rural communities, farmlands and portions of the Delta. The route crosses **2** major Interstate routes (I-80 and I-5), **2** railway lines (Union Pacific and Sacramento Northern), navigable water bodies with **3** bridges (most notably the Sacramento River Crossing at Rio Vista) and numerous at-grade and grade separated intersections.

### Corridor Overview

SR 12 supports interregional, recreational, commuter, agricultural and military traffic between the Bay Area and the San Joaquin Valley. SR-12 is important for recreational travelers destined for Napa, Solano and Sonoma Counties as well as the Delta. It also serves as a commute corridor and a significant interregional goods movement corridor because of its direct access to I-80, I-5 and Travis Air Force Base.

**GOAL**  
The goal of the study process is to develop a multi-jurisdictional corridor management plan that includes stakeholder input and consensus on a set of near-and long-term improvement strategies for SR 12.

This plan will build upon and update existing studies for the SR 12 corridor and incorporate the most recent transportation forecasts based upon current land use plans for each of the counties located along the corridor.



The map shows the SR 12 corridor starting at the 'BEGIN STUDY' point near SR 29 in Napa County and ending at the 'END STUDY' point near I-5 in San Joaquin County. Key locations along the route include Fairfield, Rio Vista, and Lodi. Major interstates I-80 and I-5 are also shown. A legend in the top right corner identifies symbols for County, Water Body, City Area, Study Area, Highway, and Railroad.

<sup>1</sup> See Note Slide 1.

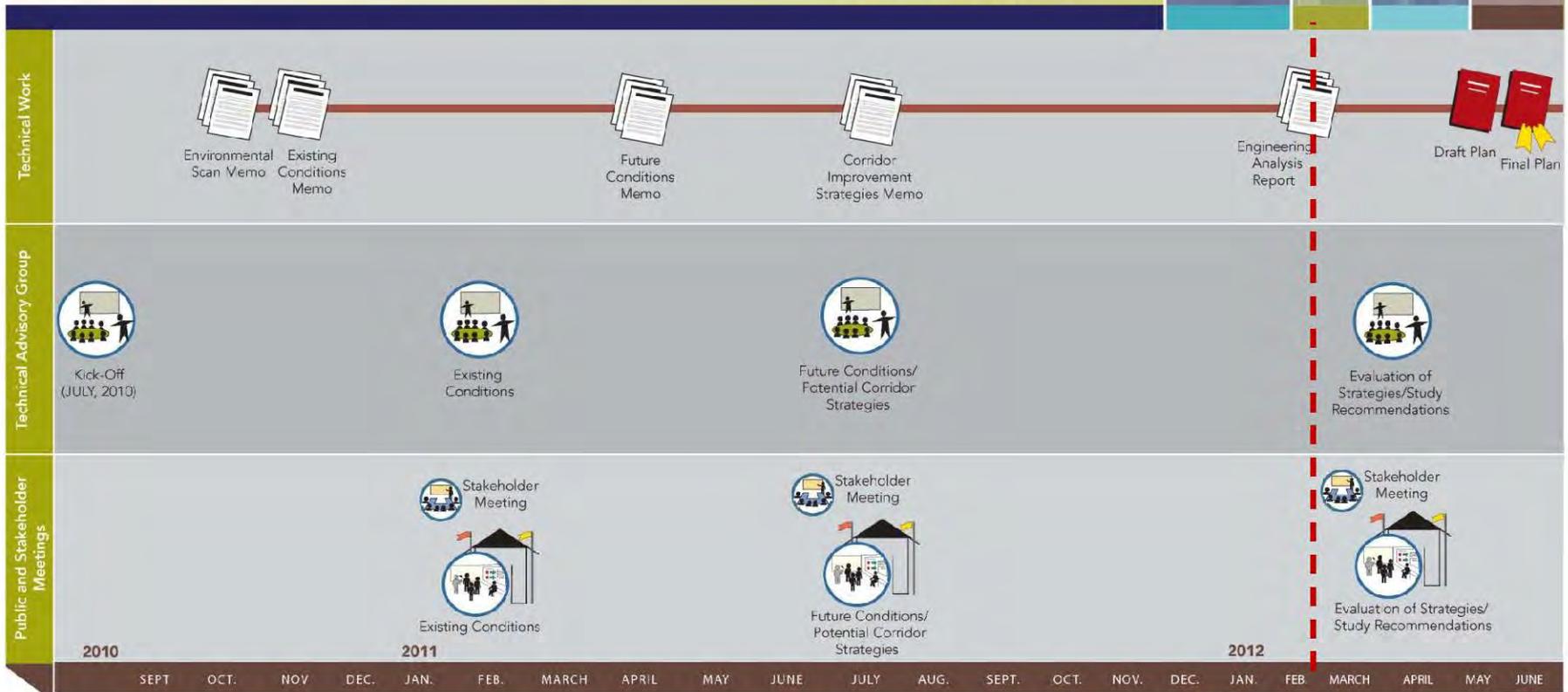
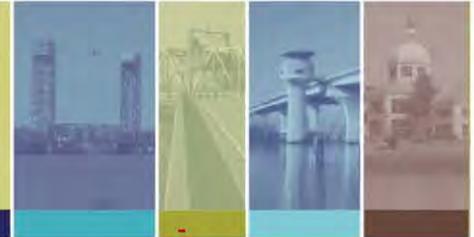
# Outreach Structure & Roles

- Project Development Team (PDT)
  - *Staff from Caltrans Districts, MPO's, Counties and the consultant team*
  - *Meets monthly to direct and guide the study*
  - *Reviews work plan and work products*
- Technical Advisory Group (TAG)
  - *Executives from transportation agencies, city engineers and professional staff*
  - *Meets at major milestones to provide input and guidance*
- Stakeholders
  - *Organized groups with a special interest in the SR-12 corridor*
  - *Briefed at major milestones and asked to provide input*
- Public at-large
  - *Engaged in advertised open-house forums to review major work products and provide input*

# Work Plan & Major Milestones

## State Route 12

Comprehensive Corridor Evaluation and Corridor Management Plan



1 See Note Slide 1.



# Meeting Objectives

1. Review of the Future Conditions Analysis
2. Evaluation of Corridor Improvement Strategies
3. Key Findings
4. Next Steps



*SR 12 Median Barrier, Solano County*

SR12

# Future Conditions Analysis

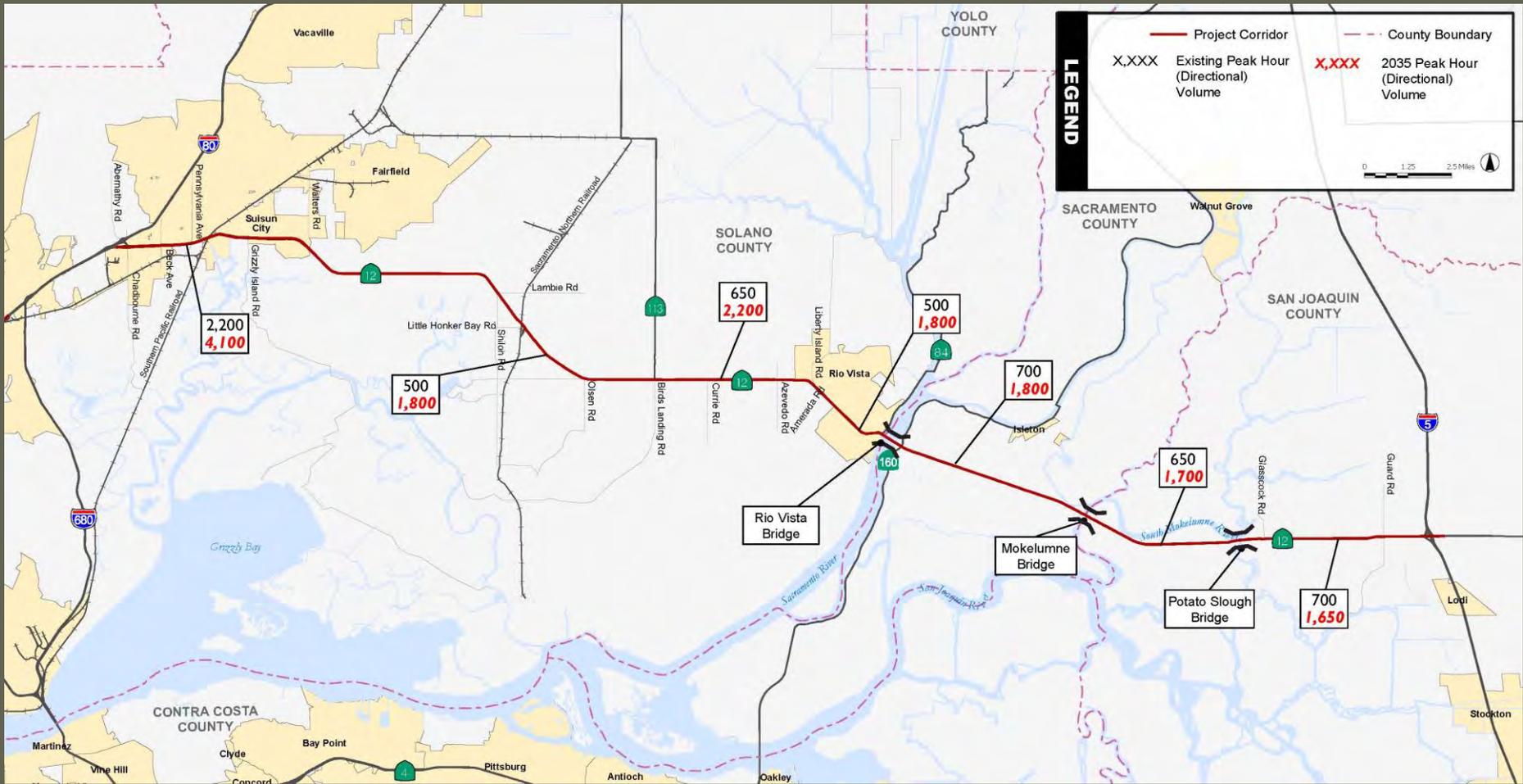
# 2035 Forecast

- Population is expected to grow by 40%, with the largest increase in the Rio Vista area (70%).
- Employment is expected to grow by 50% with the largest concentrations in the Fairfield, Suisun City and Rio Vista areas.
- Traffic demand along two-lane rural sections is expected to more than double.

# Future Conditions Analysis

# 2035 Forecast

## Peak Hour (Directional) Volumes



<sup>1</sup> See Note Slide 1.

# 2035 Forecast

- Truck\* traffic is expected to increase by 34 to 71 percent.

Year	Trucks per Day
2010	950 – 3,750
2035	2,850 – 5,850

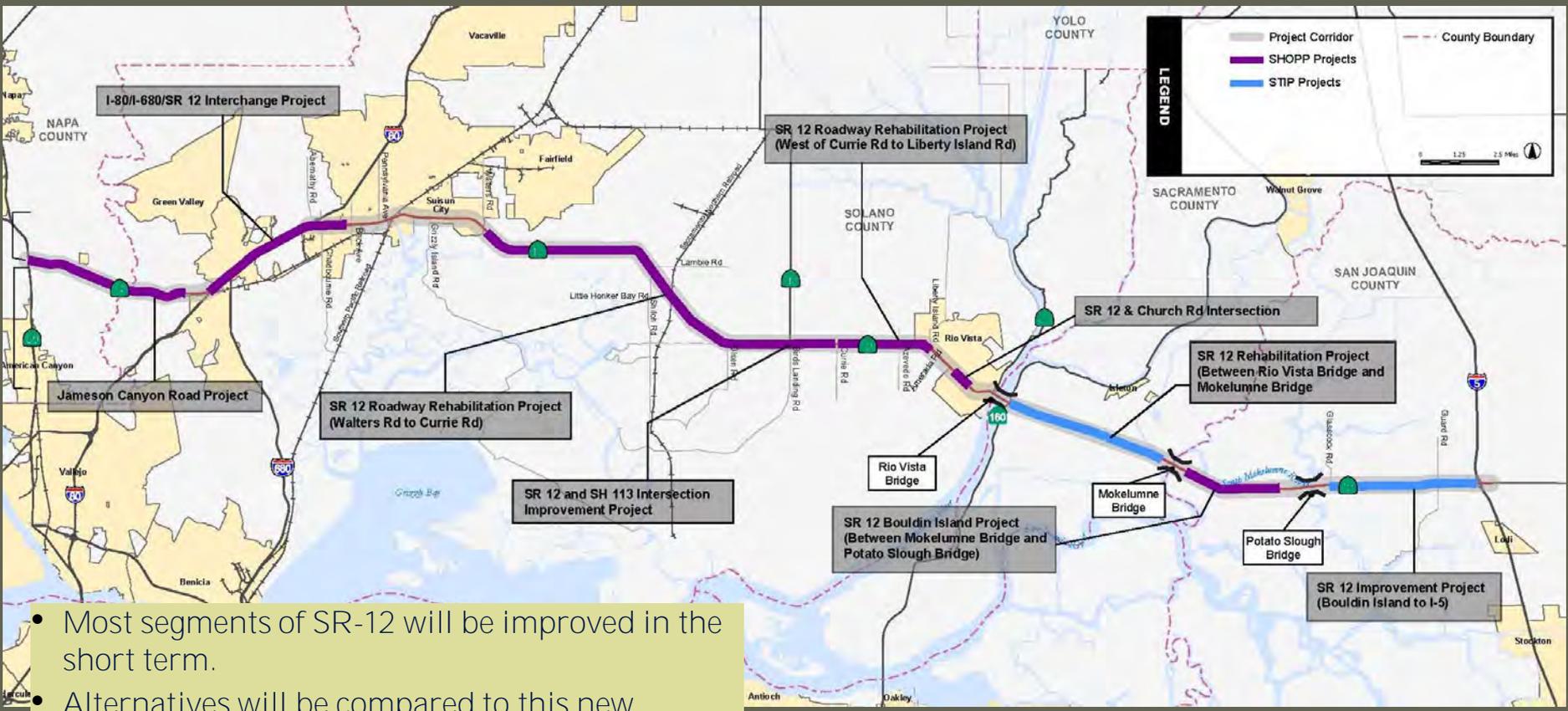
- Moveable bridge operations are expected to double from previous highs.

Year	Rio Vista Bridge Openings
2004	200/month
2010	100/month
2035	440/month

\* Defined as vehicles with three or more axles.

# Future Conditions Analysis

# Baseline Improvements

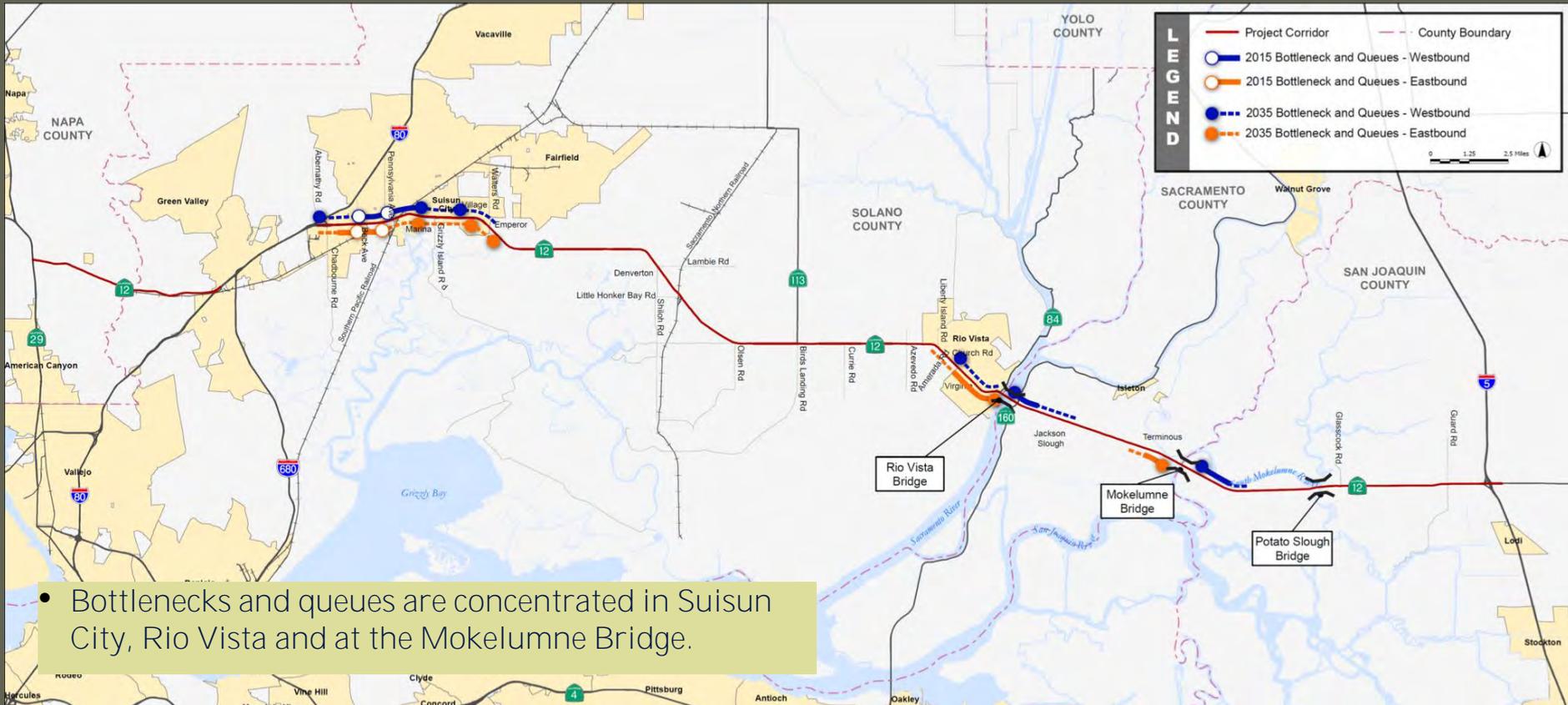


- Most segments of SR-12 will be improved in the short term.
- Alternatives will be compared to this new Baseline for the corridor.

<sup>1</sup> See Note Slide 1.

# Mainline Segment Operations

Location of Bottlenecks and Queues for Future Year (2015 and 2035)

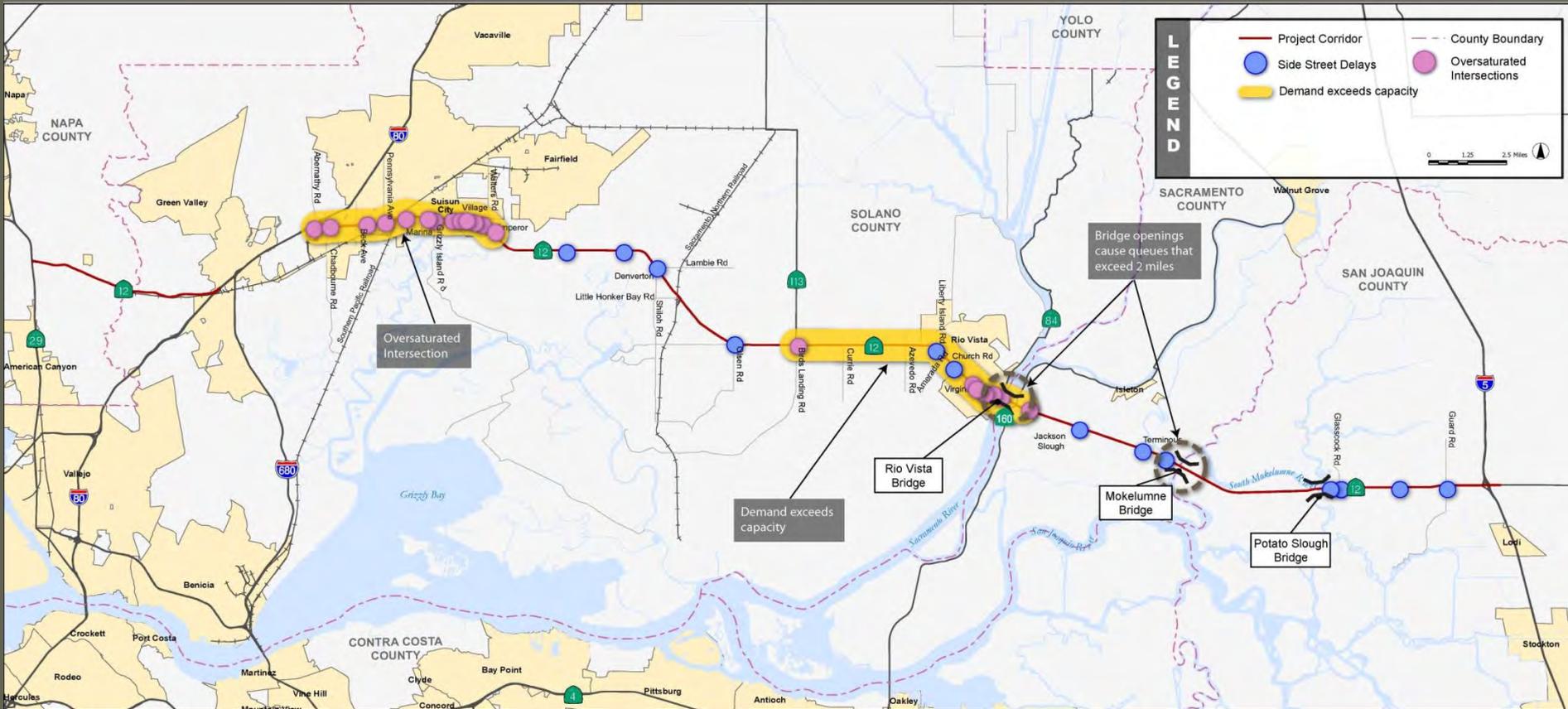


- Bottlenecks and queues are concentrated in Suisun City, Rio Vista and at the Mokelumne Bridge.

1 See Note Slide 1.

# Summary of Operational Deficiencies

Future Year (2035)



1 See Note Slide 1.

SR12

# Evaluation of Corridor Improvement Strategies

# Corridor Improvement Strategies

- Overview of the three strategies
- Common Elements
  - Pedestrian Facilities
  - Bicycle Facilities
  - Transit
  - Intelligent Transportation Systems
  - Bridge Operations
  - Sea Level Rise

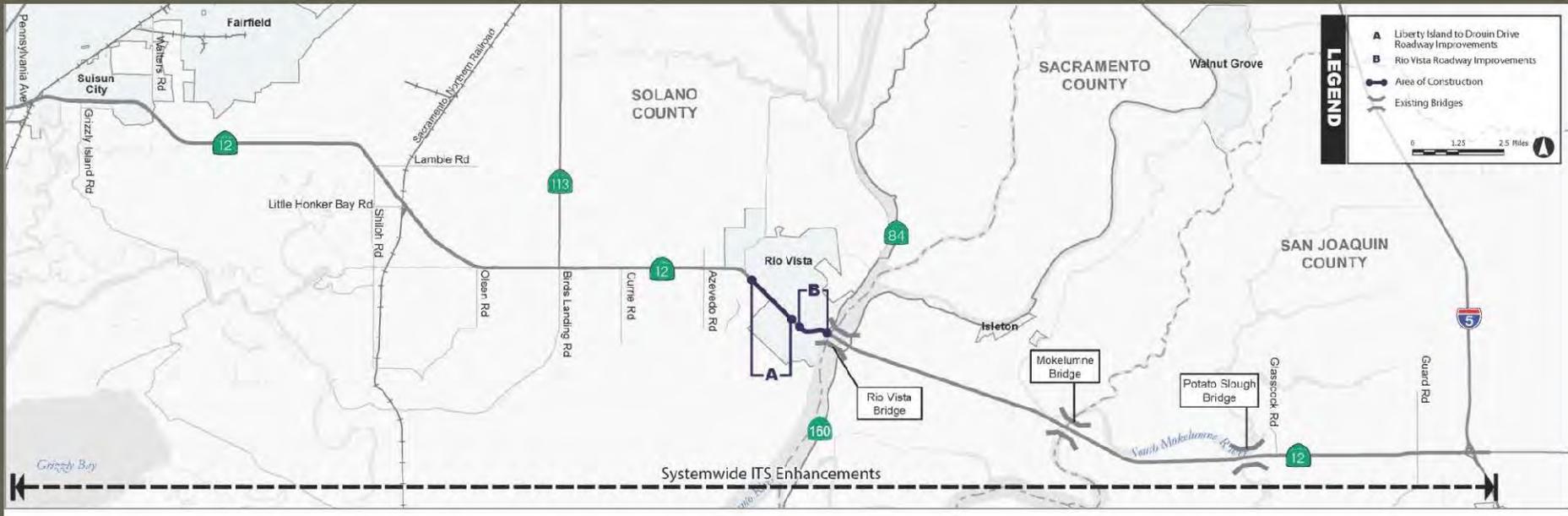


SR 12 Rio Vista Bridge

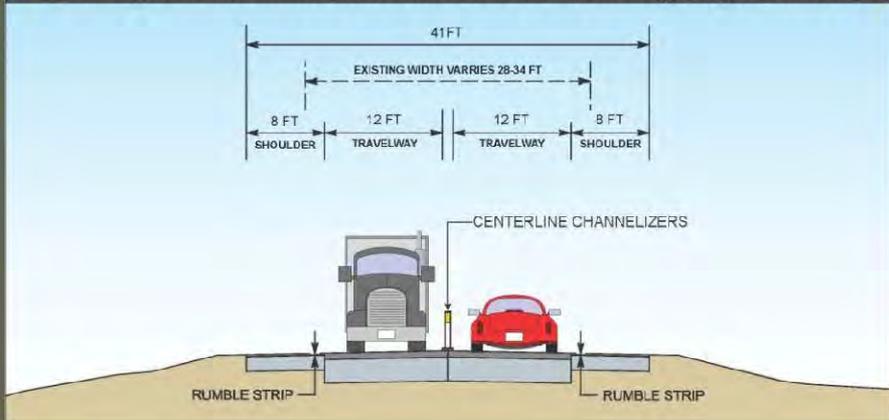
# Corridor Improvement Strategies

- **Gap-fill Strategy**
  - Builds upon Caltrans existing SHOPP/STIP projects
  - Addresses traffic, safety and operational problems
- **Barrier Separated Two-Lane Strategy**
  - Implement an enhanced two-lane cross section throughout the corridor
  - Includes concrete median barrier
  - Strategically located passing lanes
- **Four-Lane Strategy**
  - Implements a minimum four-lane section throughout the corridor
  - Includes bridge re-alignments
  - Evaluates expressway options

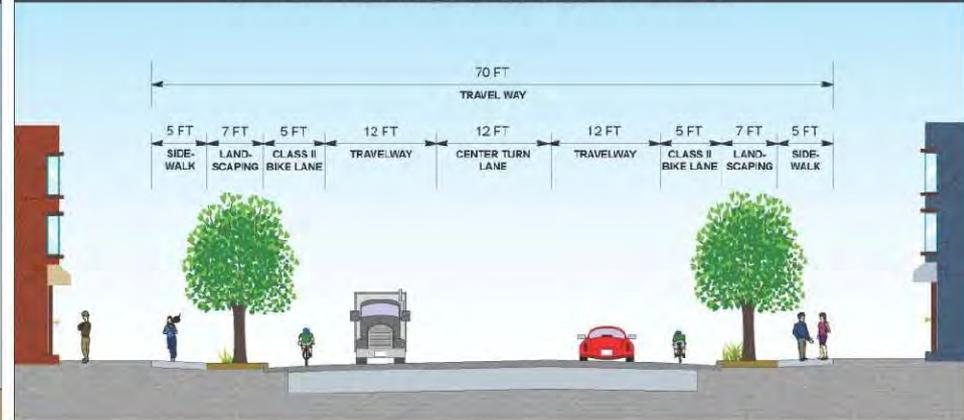
# Gap-fill Strategy



**A. Liberty Island Road to Drouin Drive Roadway Improvements**

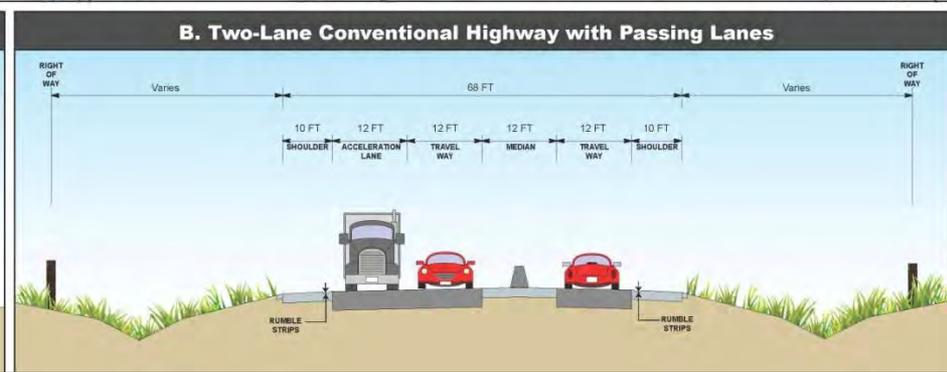
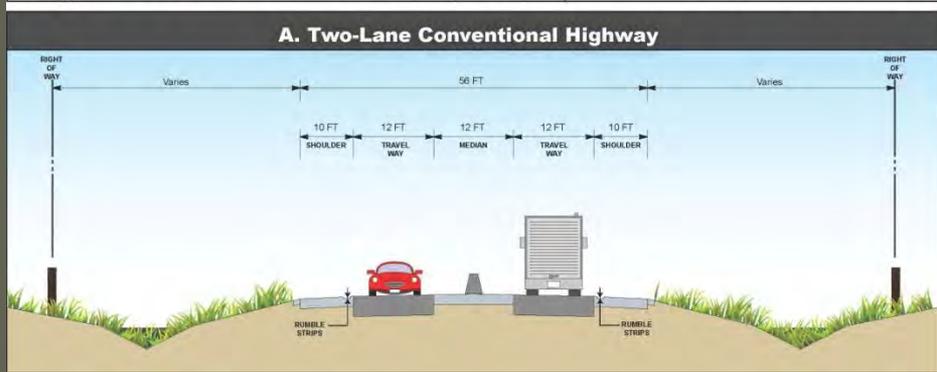
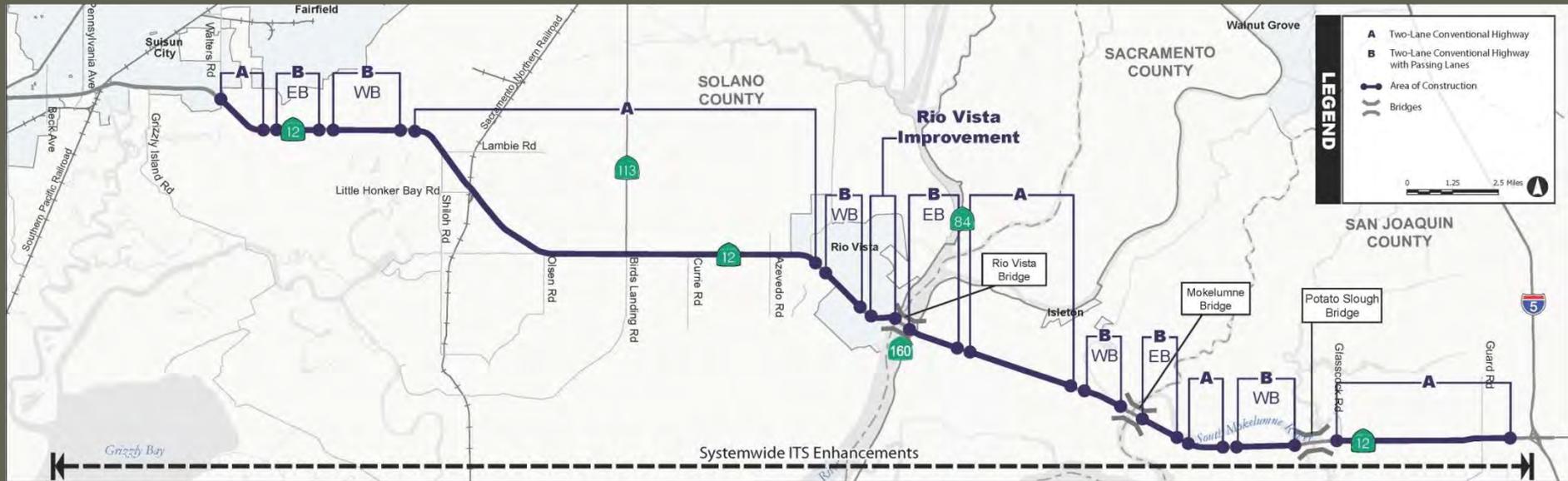


**B. Rio Vista Roadway Improvements**



<sup>1</sup> See Note Slide 1.

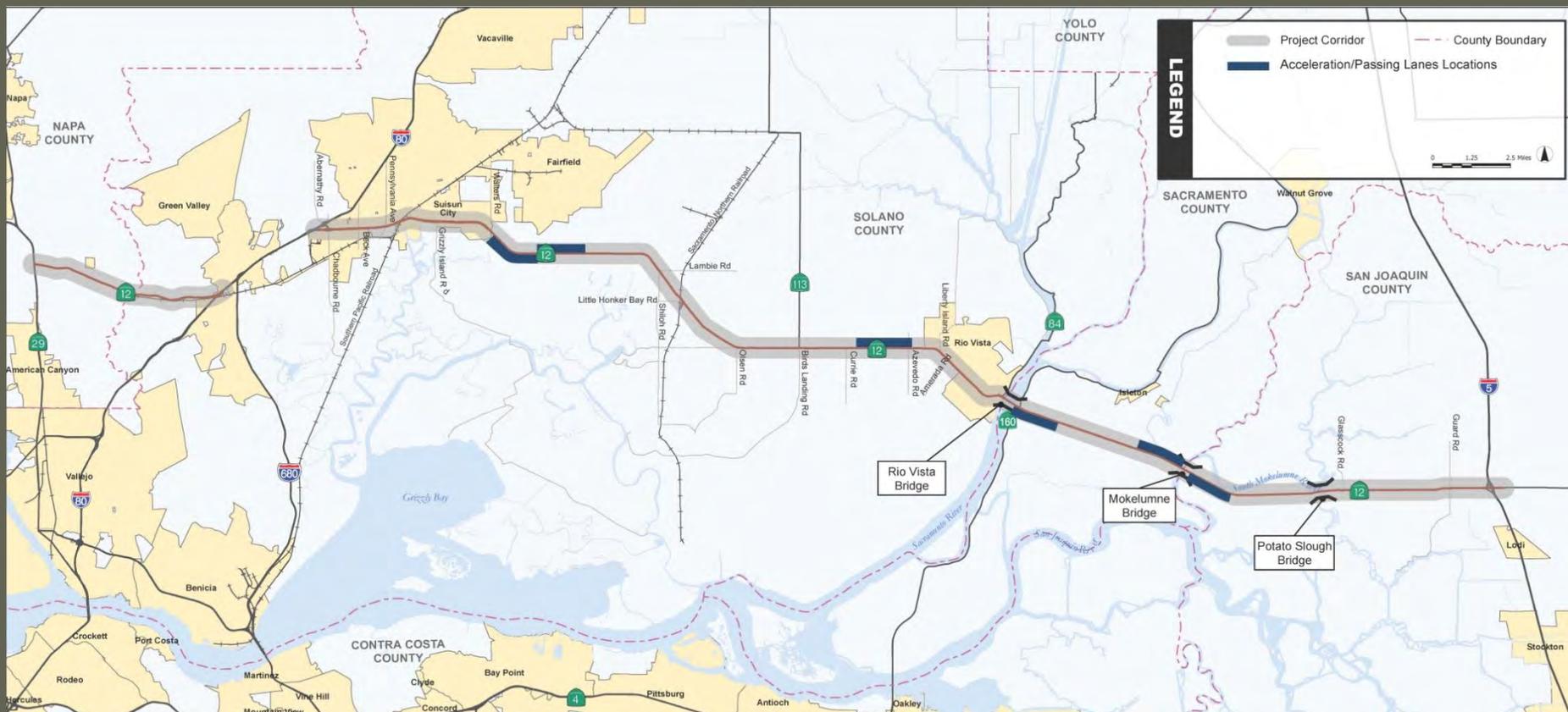
# Barrier Separated, Two-Lane Strategy



<sup>1</sup> See Note Slide 1.

# Barrier Separated, Two-Lane Strategy

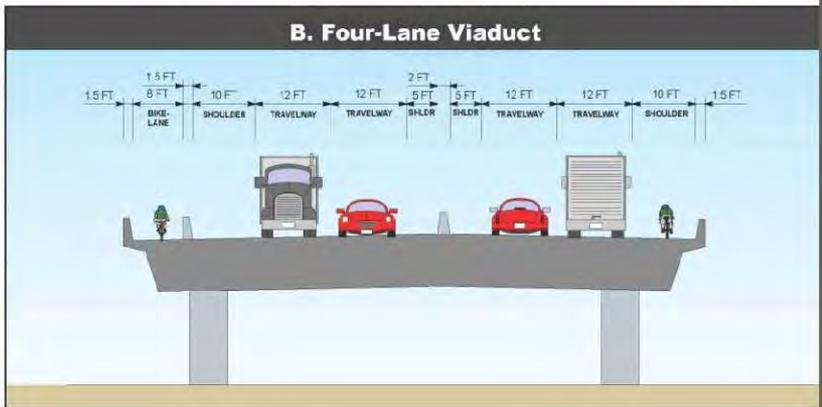
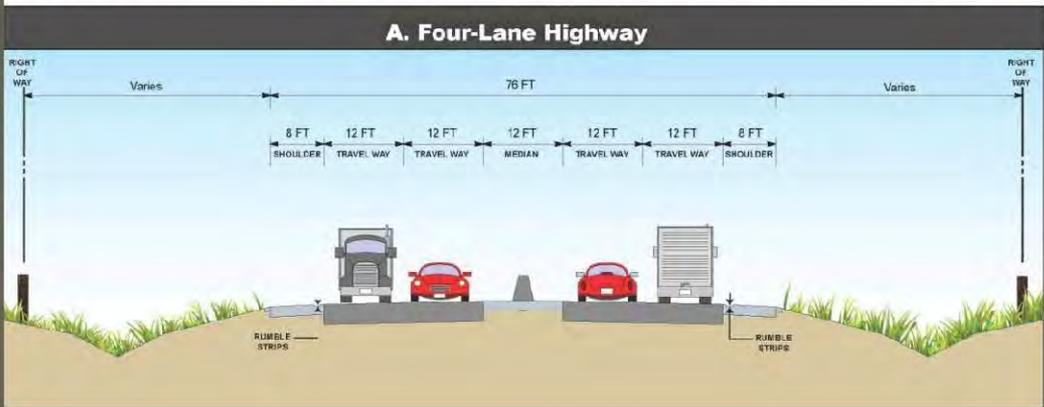
Location of Acceleration/Passing Lanes



<sup>1</sup> See Note Slide 1.

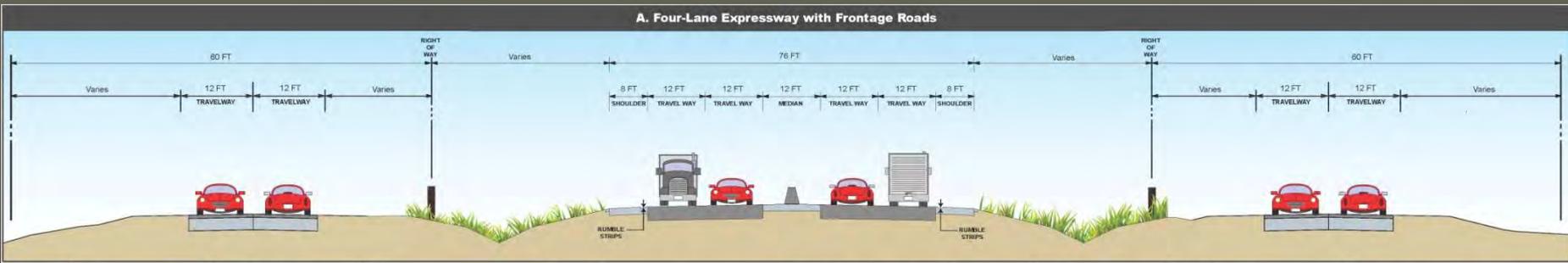
# Corridor Improvement Strategies

# Four-Lane Strategy



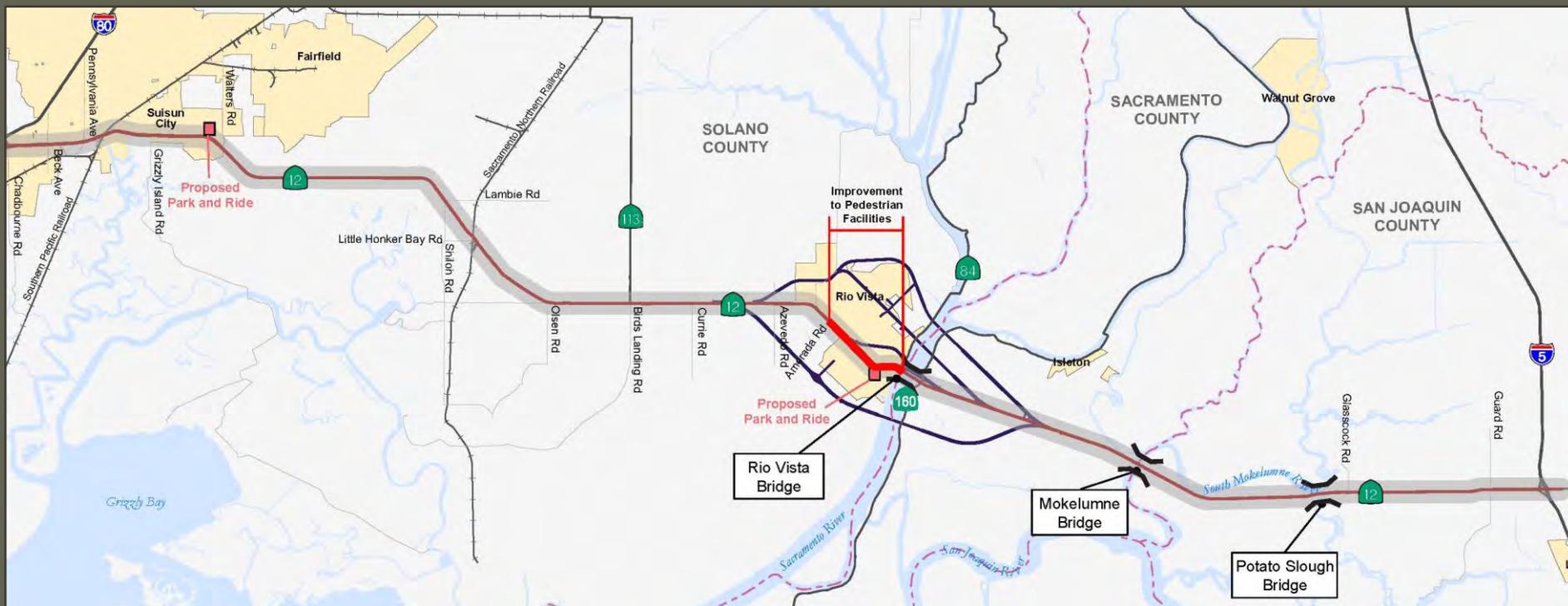
<sup>1</sup> See Note Slide 1.

# Four-Lane Expressway Variation



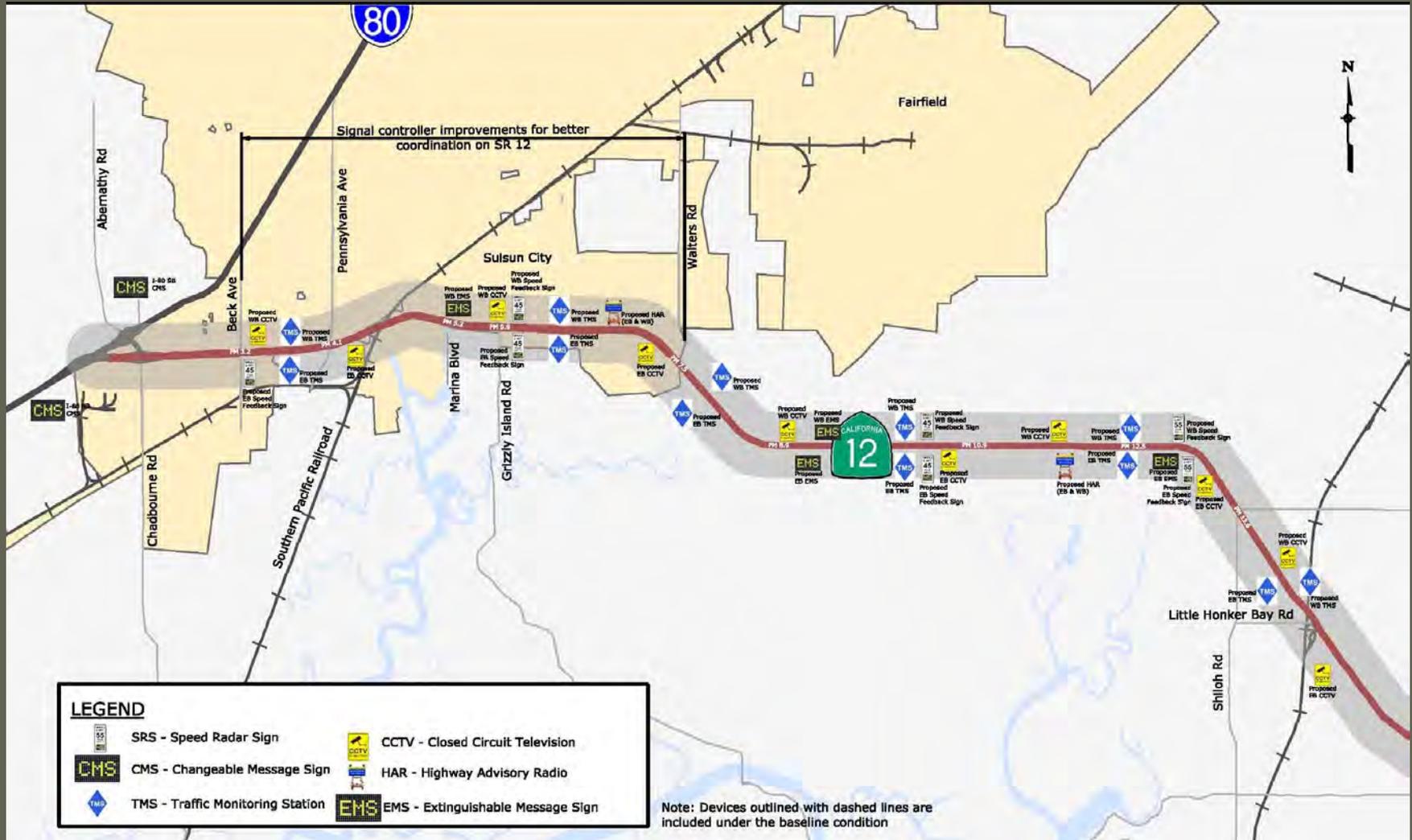
1 See Note Slide 1.

# Common Elements – Transit, Bicycle and Pedestrian Facilities



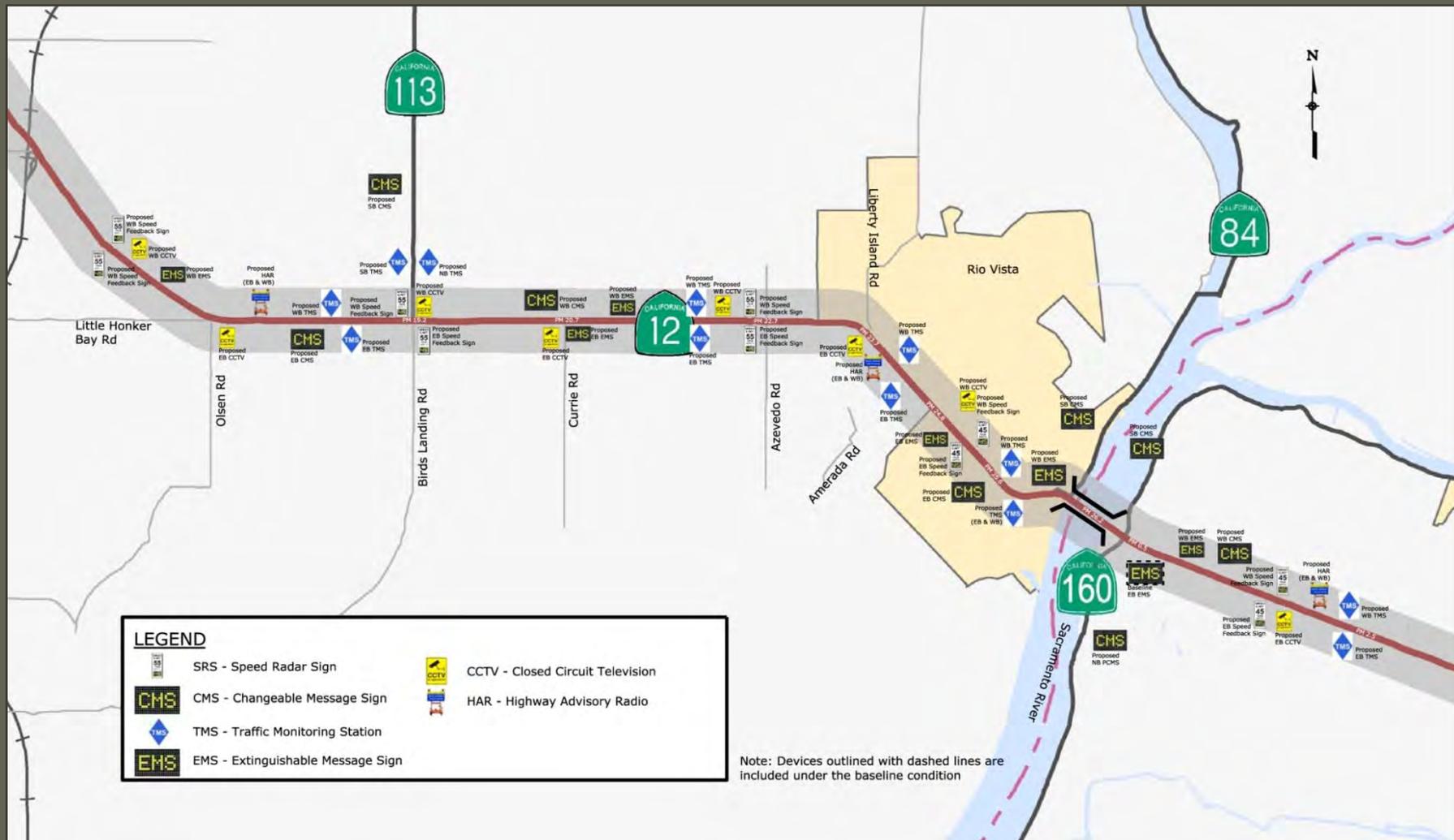
<sup>1</sup> See Note Slide 1.

# Common Elements – Intelligent Transportation Systems (ITS)



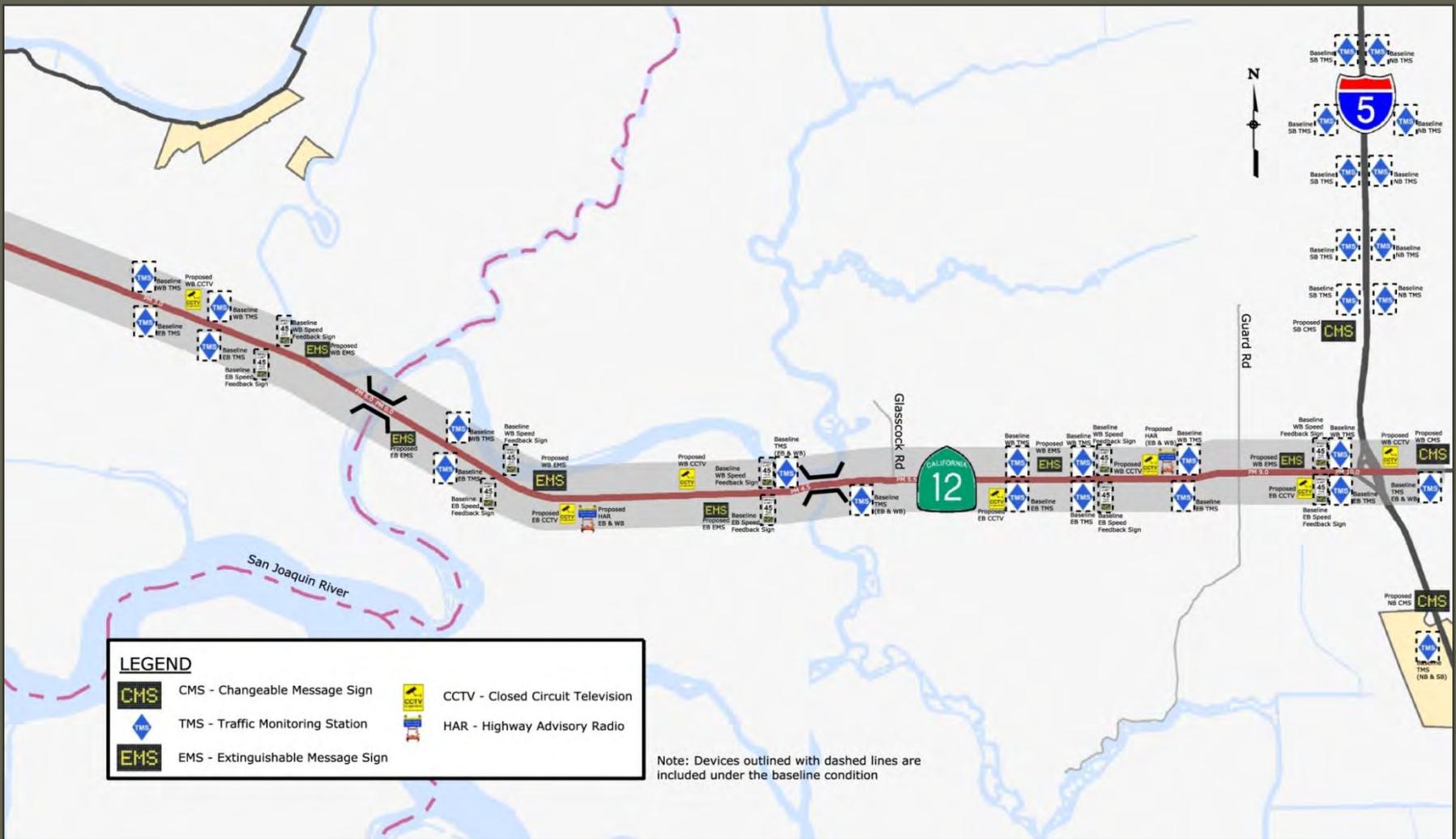
1 See Note Slide 1.

# Common Elements – Intelligent Transportation Systems (ITS)



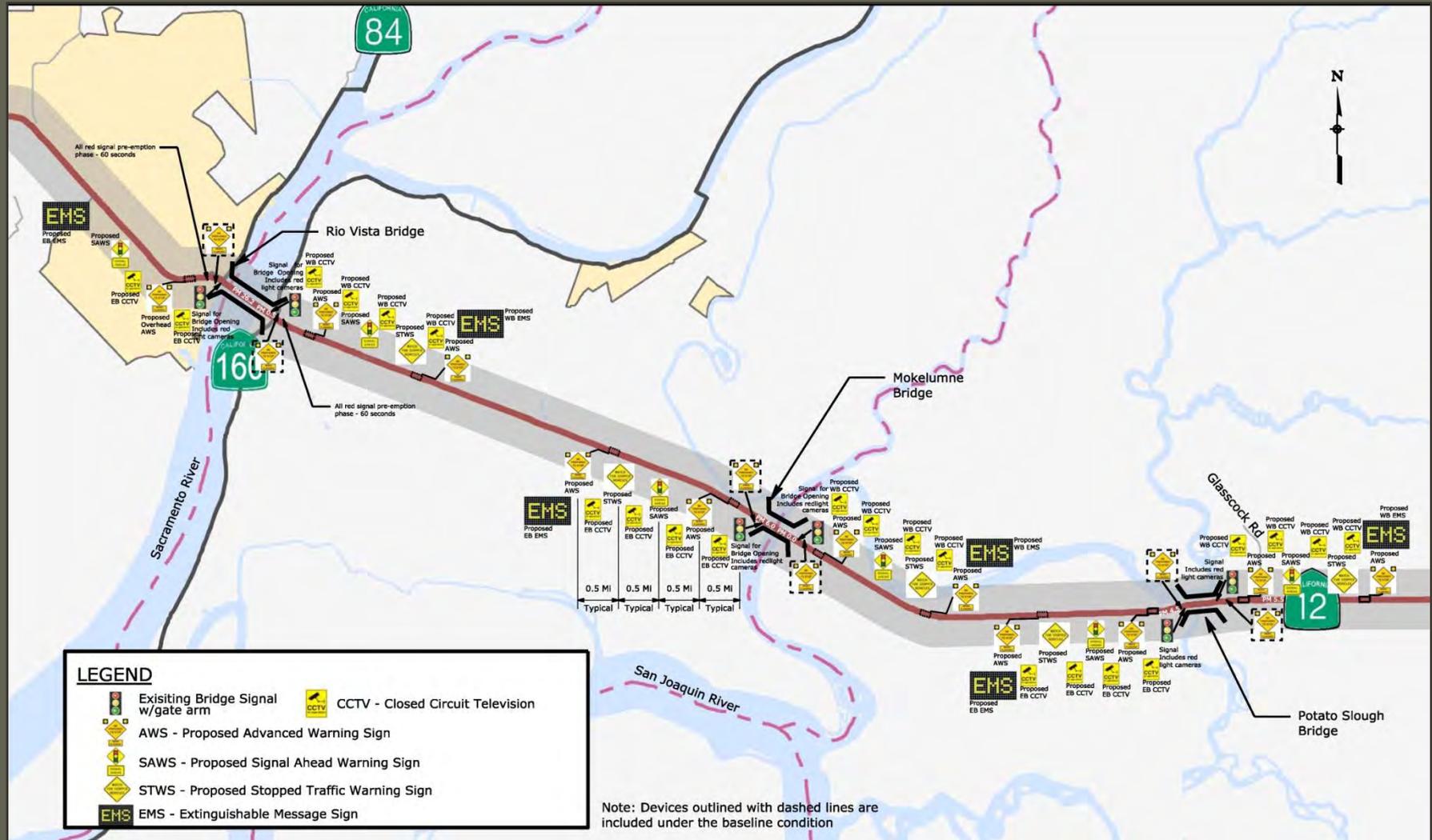
<sup>1</sup> See Note Slide 1.

# Common Elements – Intelligent Transportation Systems (ITS)



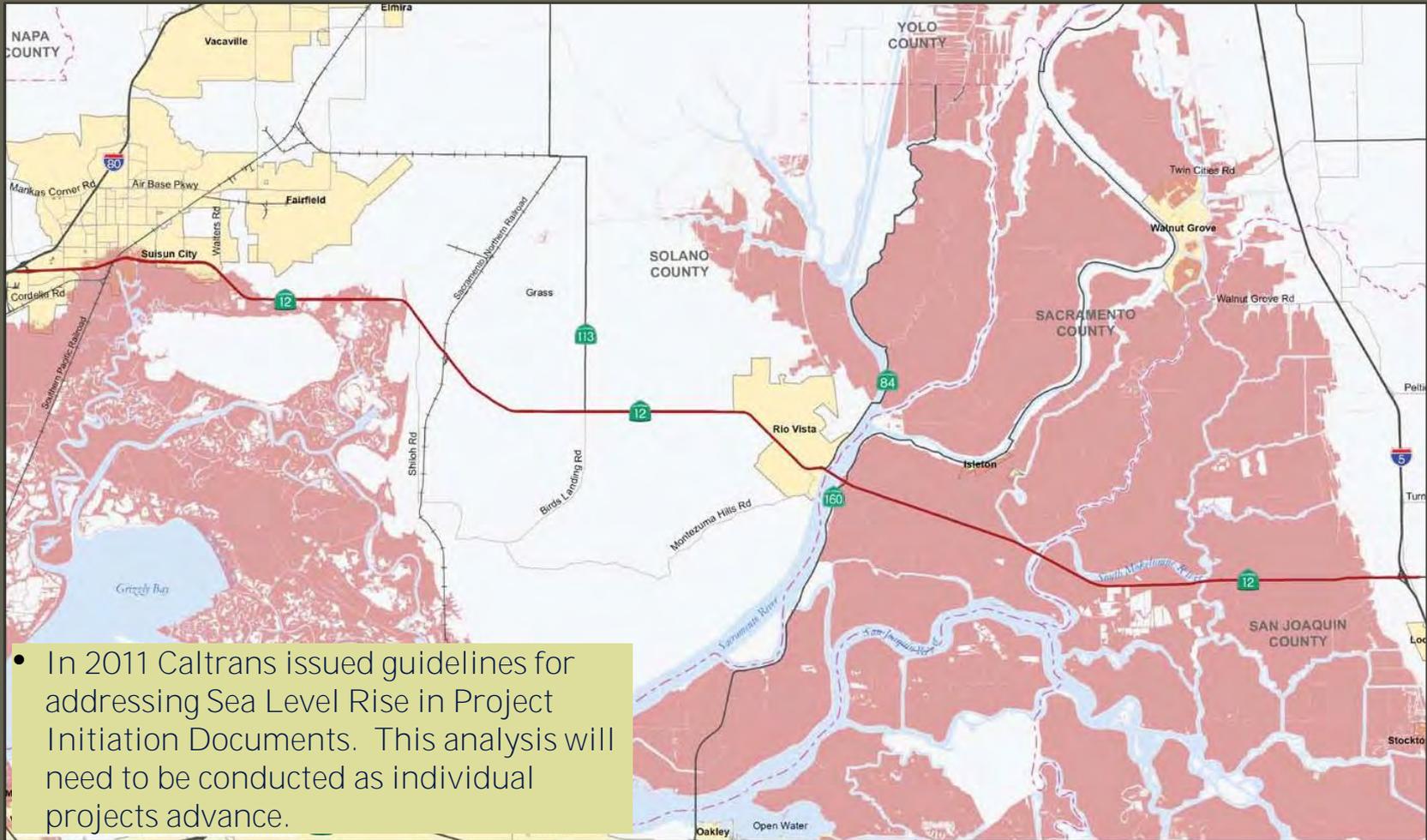
1 See Note Slide 1.

# Common Elements – Enhancements to Bridges



1 See Note Slide 1.

# Rising Sea Levels



- In 2011 Caltrans issued guidelines for addressing Sea Level Rise in Project Initiation Documents. This analysis will need to be conducted as individual projects advance.

Exhibit 12: Sea Level Rise Inundated Area

State Route 12 Environmental Resource Scan

— Project Corridor    - - - County Boundary  
■ Area Impacted by Sea Level Rise    ■ Urban Area



1 See Note Slide 1.

# Evaluation Methodology

- **All three strategies are compared to the Baseline case**
- **The initial evaluation was conducted without regard to cost**
  - Transportation Systems Efficiency
  - Safety
  - Economic Vitality
  - Environment
  - Healthy Communities
- **Cost was considered after the initial evaluation**
  - Capital Cost
  - O&M Cost (life-cycle)
  - Cost Effectiveness

# Evaluation Criteria



- **Transportation System Effectiveness**
  - Travel time
  - Daily Vehicle Miles and Vehicle Hours of Travel (VMT & VHT)
  - Improved highway miles
  - Bridge sufficiency ratings
- **Safety**
  - Safety enhanced roadway miles
  - Non-recurrent delay due to accidents and incidents
- **Economic Vitality**
  - Recurrent delay
  - Total delay (recurrent and non-recurrent)

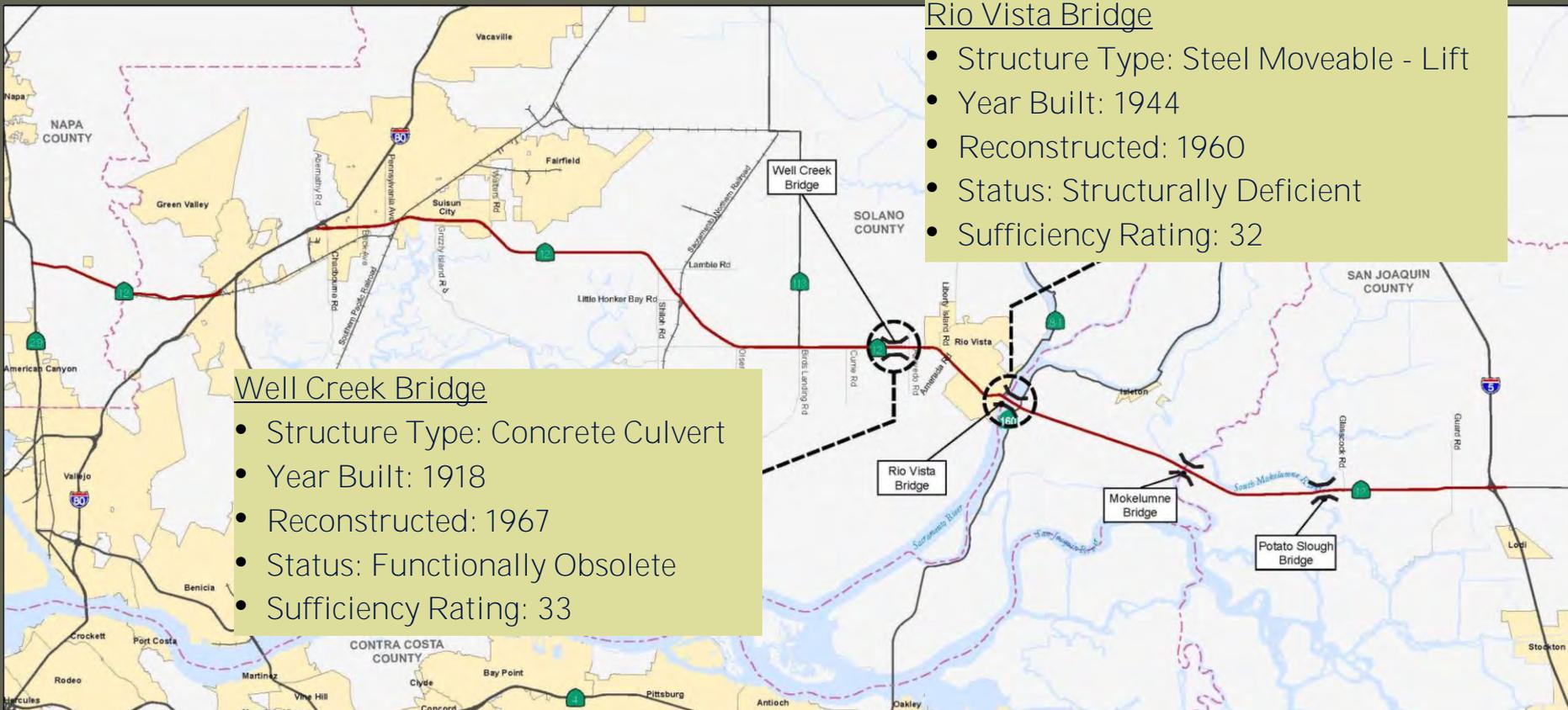
# Evaluation Criteria



- **Environmental**
  - Right-of-way impacts
  - CO2 emissions
- **Healthy Communities**
  - Particulate emissions
  - Bike friendly roadways
  - Dedicated bicycle and pedestrian facilities

<sup>1</sup> See Note Slide 1.

# Bridge Sufficiency



<sup>1</sup> See Note Slide 1.

# Bottlenecks and Queues

- For the two-lane alternatives bottlenecks are located at:
  - Fairfield/Suisun City
  - Rio Vista
  - Mokelumne
- For the four-lane alternative there are no projected bottlenecks



<sup>1</sup> See Note Slide 1.

# Comparison of Alternatives

## Transportation System Effectiveness

Evaluation Categories	Baseline		Gap-fill		Two-Lane		Four-Lane	
	2015	2035	2015	2035	2015	2035	2015	2035
<b>Transportation System Effectiveness</b>								
Average Peak Hour Travel Time (mins)	78	87	75	83	73	78	53	56
Daily VMT	485,000	831,200	485,500	831,200	485,800	848,600	495,000	882,000
Daily VHT	17,300	28,000	15,950	24,650	15,240	24,600	14,240	20,220
Improved pavement (Centerline miles)	N/A		2.5		13.4		25.3	
Number of Bridges with Sufficiency Rating < 80%	2		2		1		0	

Good   
 Better   
 Best

<sup>1</sup> See Note Slide 1.

# Comparison of Alternatives

## Safety

Evaluation Categories	Baseline		Gap-fill		Two-Lane		Four-Lane	
	2015	2035	2015	2035	2015	2035	2015	2035
<b>Safety</b>								
Safety enhanced roadway (Centerline miles)	N/A		2.6		31.1		39.0	
Daily non-recurrent delay (vehicle hrs)	584	6,300	470	5,200	460	5,210	50	1,350

Good   
 Better   
 Best

<sup>1</sup> See Note Slide 1.

# Comparison of Alternatives

## Economic Vitality

Evaluation Categories	Baseline		Gap-fill		Two-Lane		Four-Lane	
	2015	2035	2015	2035	2015	2035	2015	2035
<b>Economic Vitality</b>								
Daily non-recurrent delay (vehicle hrs)	584	6,300	470	4,800	460	5,210	50	1,350
Daily recurrent delay (vehicle hrs)	6,770	10,510	6,360	9,910	6,290	9,660	3,410	6,390
Total daily delay (vehicle hrs)	7,354	16,810	6,830	14,710	6,760	14,460	3,460	7,755

Good   
 Better   
 Best

<sup>1</sup> See Note Slide 1.

# Comparison of Alternatives

## Environment

Evaluation Categories	Baseline		Gap-fill		Two-Lane		Four-Lane	
	2015	2035	2015	2035	2015	2035	2015	2035
<b>Environment</b>								
Construction within existing ROW (acres)	N/A		20.0		197.7		214.1	
Construction outside existing ROW (acres)	N/A		5.9		44.2		399.2	
CO2 Emissions (tonnes/year)	51.4		49.2		48.9		46.8	

Good   
 Better   
 Best

<sup>1</sup> See Note Slide 1.

# Comparison of Alternatives

## Healthy Communities

Evaluation Categories	Baseline		Gap-fill		Two-Lane		Four-Lane	
	2015	2035	2015	2035	2015	2035	2015	2035
<b>Healthy Communities</b>								
Fine Particulate Emissions (tonnes/year)	6.7		6.2		6.2		5.6	
Coarse Particulate Emissions (tonnes/year)	10.9		10.3		10.3		9.5	
Bike friendly Roadways (miles)	33.6		35.3		35.6		39.7	
Dedicated Bikeways (miles)	2.9		3.3		3.3		23.1	
Dedicated pedestrian pathways (miles)	2.7		3.3		3.3		3.3	

Good   
 Better   
 Best

<sup>1</sup> See Note Slide 1.

# Comparison of Strategies based on Evaluation Criteria

- **The Gap-fill Strategy is best suited as a short-term plan for SR-12**
  - Localized improvements in and west of Rio Vista
  - Robust ITS Implementation
  - Bridge operational improvements
- **The Four-Lane Strategy provides the best long-term mobility benefits**
  - Shortest travel times
  - Most reductions in recurrent and non-recurrent delay
  - New bridges address sufficiency ratings
- **The Four-Lane Strategy has the greatest impact to the environment due to realignments and right-of-way needs**

# Cost and Cost Effectiveness Evaluation

- **Capital Cost Estimates**

- Prepared using 2011 dollars
- Includes allowances for environmental mitigation
- Includes soft costs and contingencies

- **Incremental Life-cycle Costs**

- Uses a simplified method (all projects assumed to have a common 20 year life-cycle from 2015 to 2035)
- Annual costs are based on incremental costs for new pavement, new bridges and ITS
- Expressed in 2011 dollars

- **Cost Effectiveness**

- Compares total cost to total reductions in delay over 20 years
- Expressed as Cost per Person Hour of Delay saved
- In general, a person hour of delay has a value of \$14

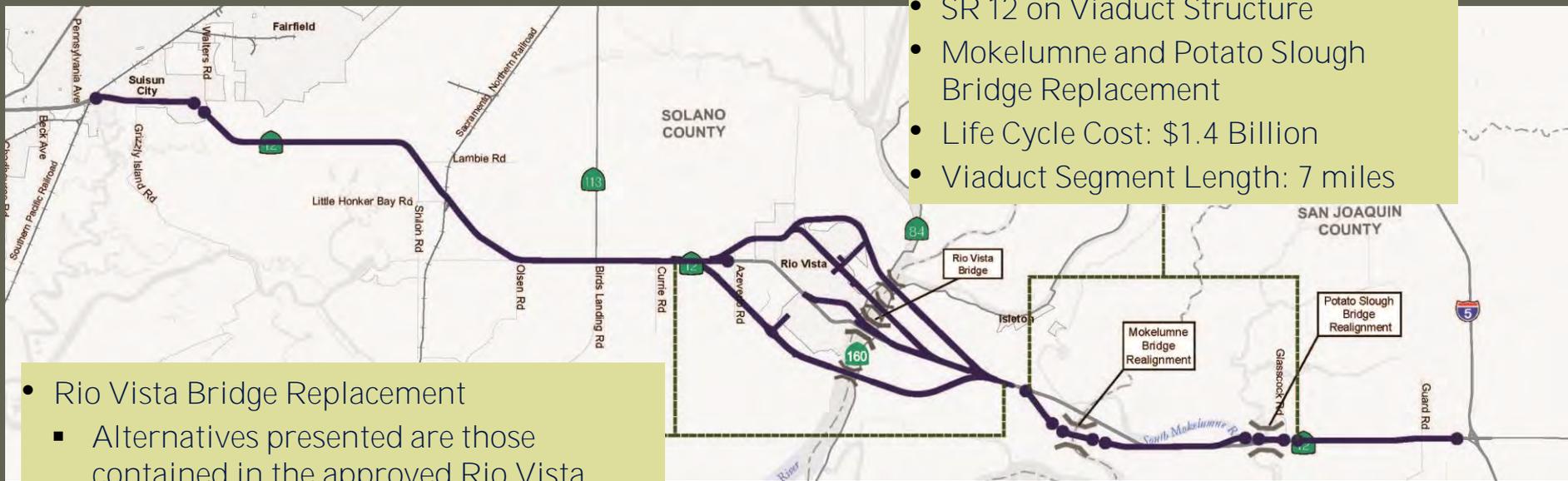
# Cost Effectiveness Results

Evaluation Categories	Baseline		Gap-fill		Two-Lane		Four-Lane	
	2015	2035	2015	2035	2015	2035	2015	2035
<b>Cost Effectiveness</b>								
Capital Cost (millions)	N/A		\$84		\$354		\$2,828	
O&M Life Cycle Cost (millions)	N/A		\$18		\$43		\$90	
Life Cycle Cost (millions)	N/A		\$102		\$397		\$2,918	
Cost Effectiveness Index (dollars per person hour of delay saved)	N/A		\$4.2		\$14.5		\$38.1	

Good   
 Better   
 Best

<sup>1</sup> See Note Slide 1.

# Cost Drivers of the Four-Lane Alternative



- SR 12 on Viaduct Structure
- Mokelumne and Potato Slough Bridge Replacement
- Life Cycle Cost: \$1.4 Billion
- Viaduct Segment Length: 7 miles

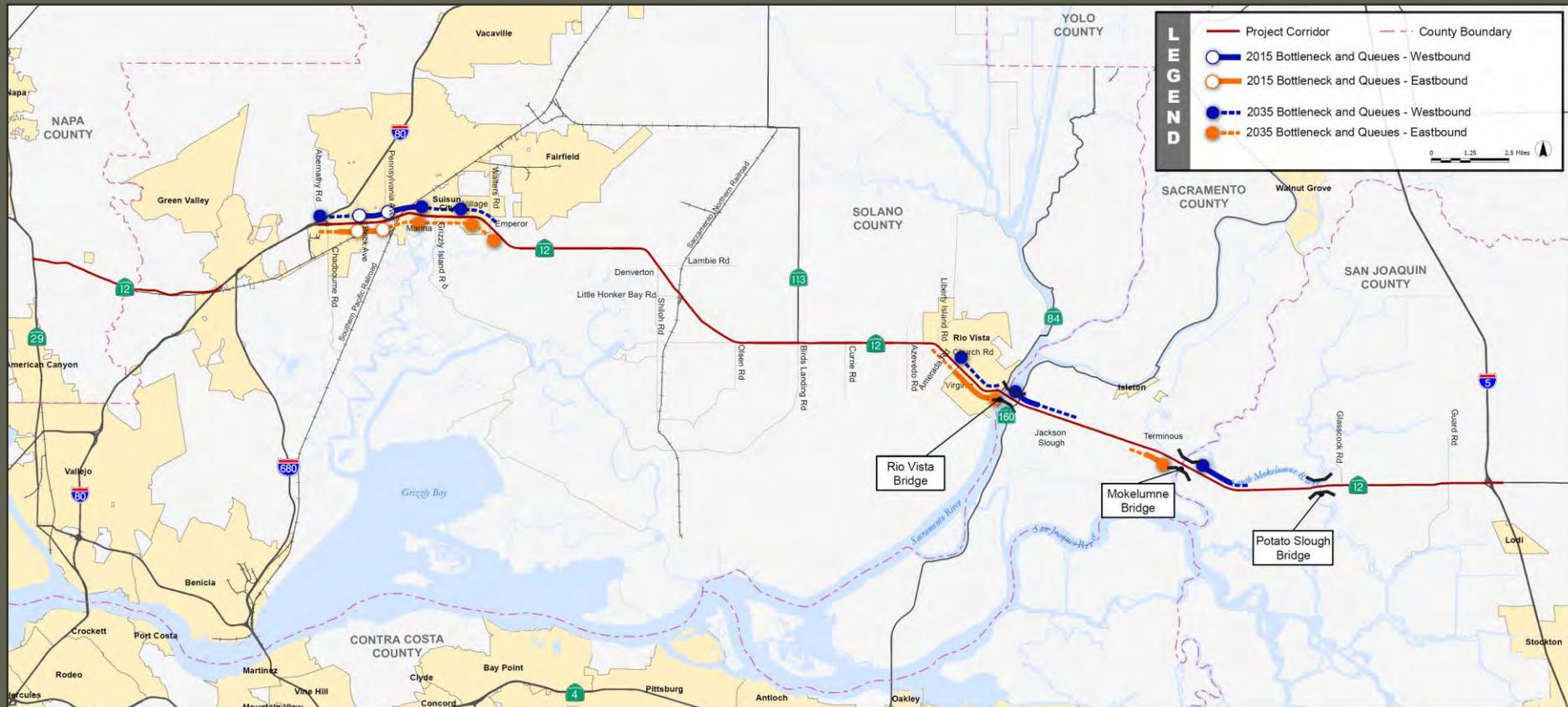
- Rio Vista Bridge Replacement
  - Alternatives presented are those contained in the approved Rio Vista Study.
- Life Cycle Cost: \$998 Million
- Segment Length: 9 miles

<sup>1</sup> See Note Slide 1.

# SR12

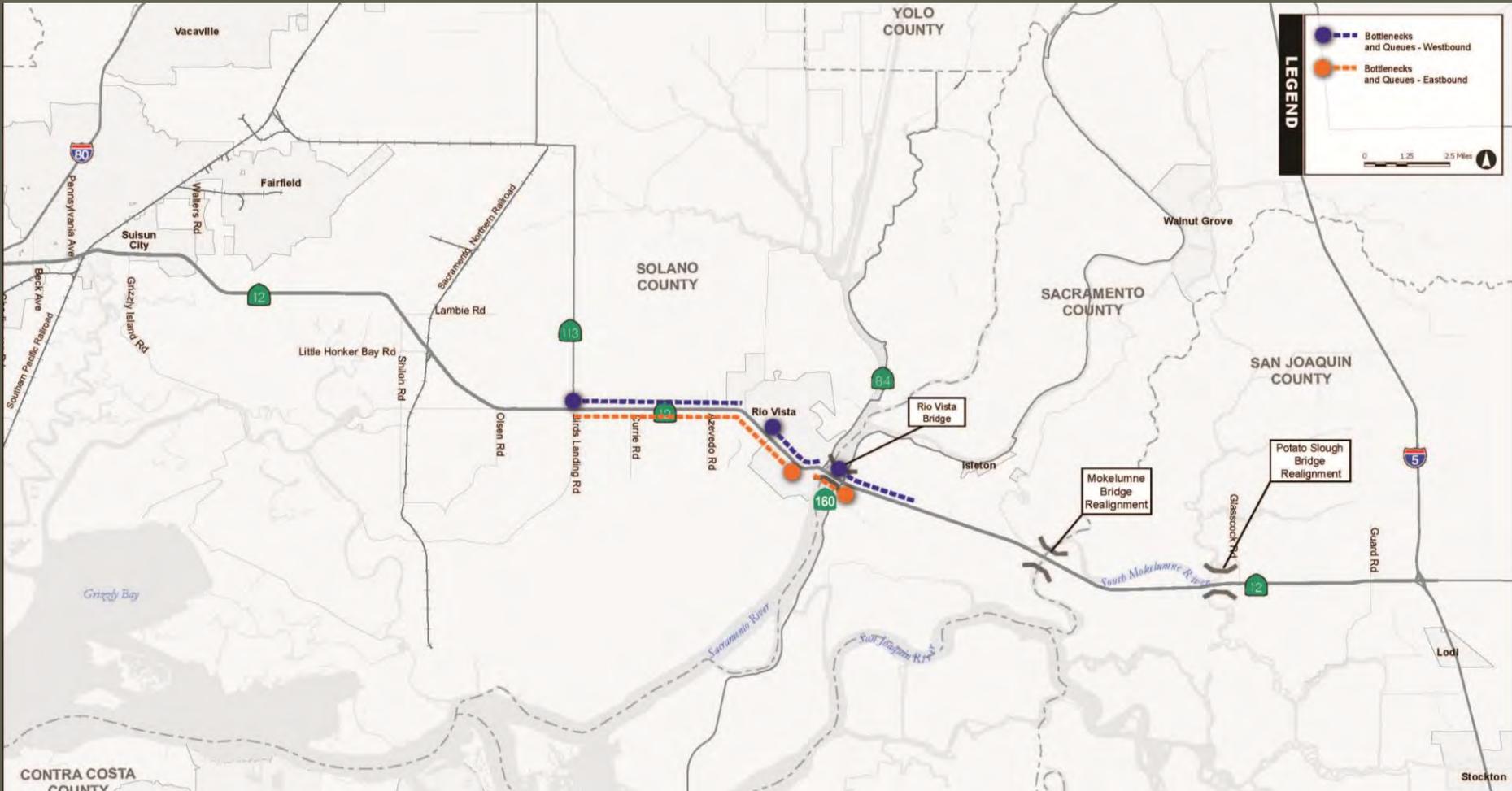
## Key Findings

# Primary Bottlenecks in the Corridor



<sup>1</sup> See Note Slide 1.

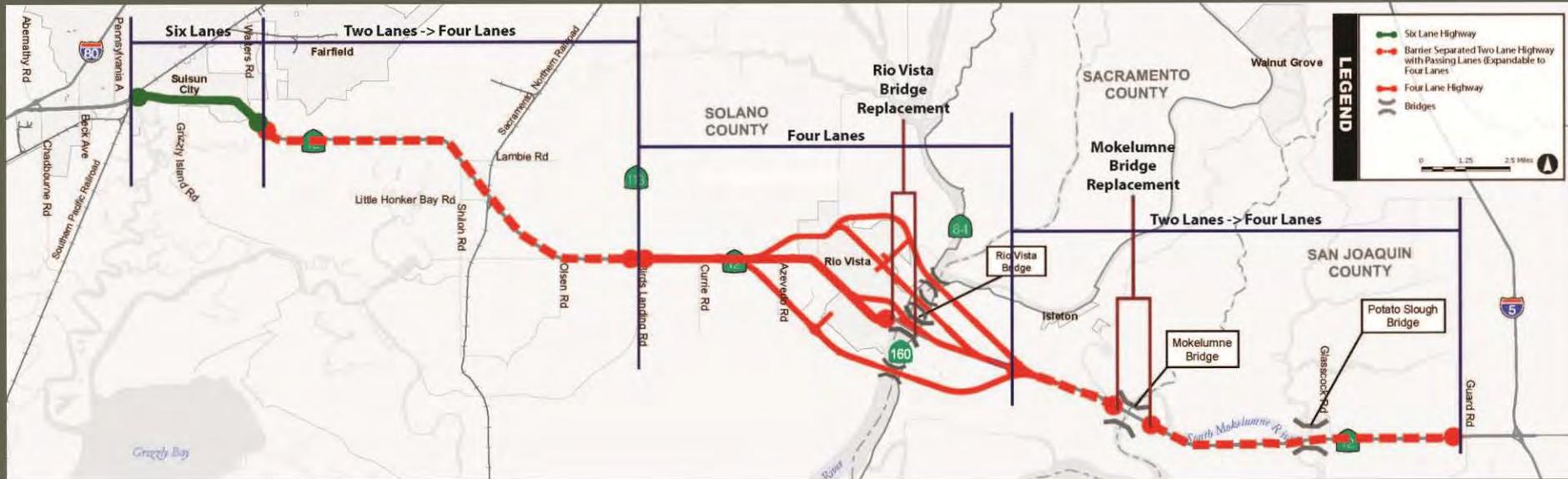
# Secondary Bottlenecks in the Corridor



<sup>1</sup> See Note Slide 1.

Key Findings

# Technical Findings



<sup>1</sup> See Note Slide 1.

# Discussion

# Next Steps

- Upcoming Work
  - Development of Short-term and Long-term Recommendations
  - Preparation of Draft Final Report
  - Public Outreach between April and June 2012
  - Final Report
- To provide input:
  - [www.movingsr12forward.com](http://www.movingsr12forward.com)

