State Route 12 Corridor Study[1]

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[1] This presentation is based on information gathered from the 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.

State Route 12

Comprehensive Corridor Evaluation and Corridor Management Plan

TAG/Stakeholder Meeting

[1] See Note Slide 1.

State Route 12 Corridor Study

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

[1] See Note Slide 1.

Source: PBS&J, 2011

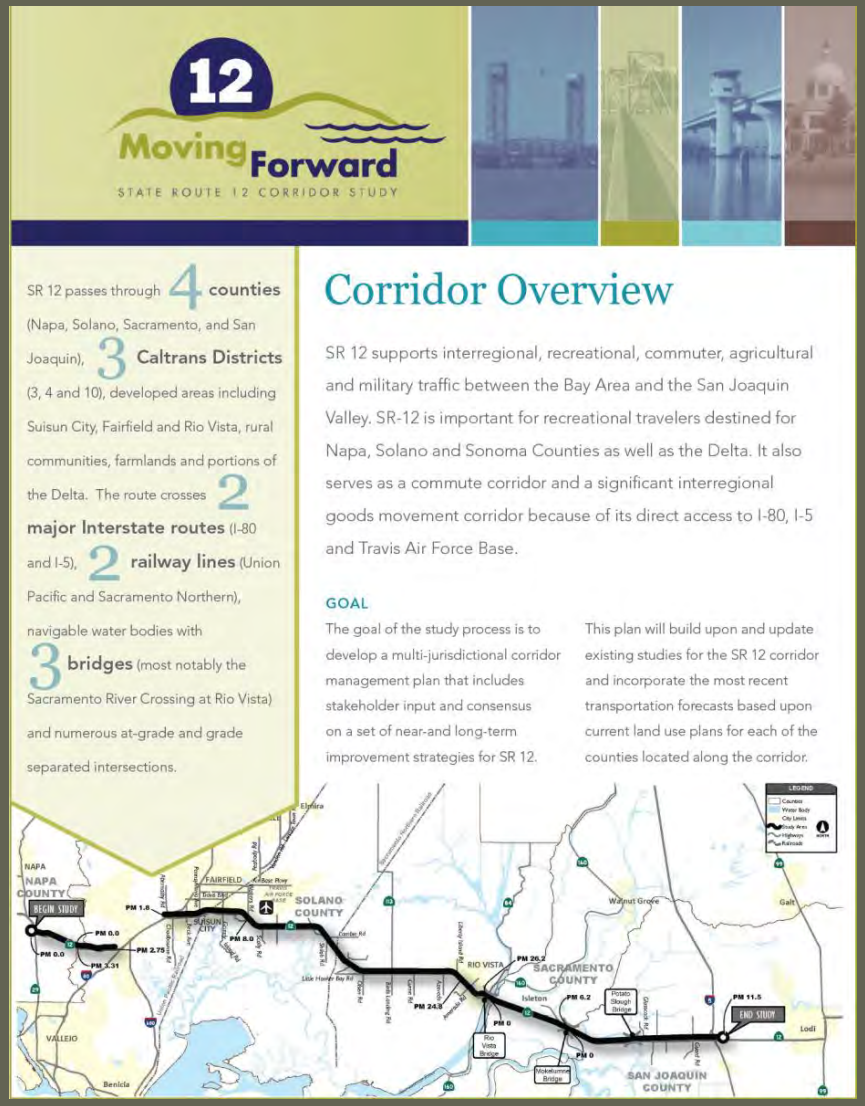
State Route 12 Corridor Study

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.



[1] See Note Slide 1.

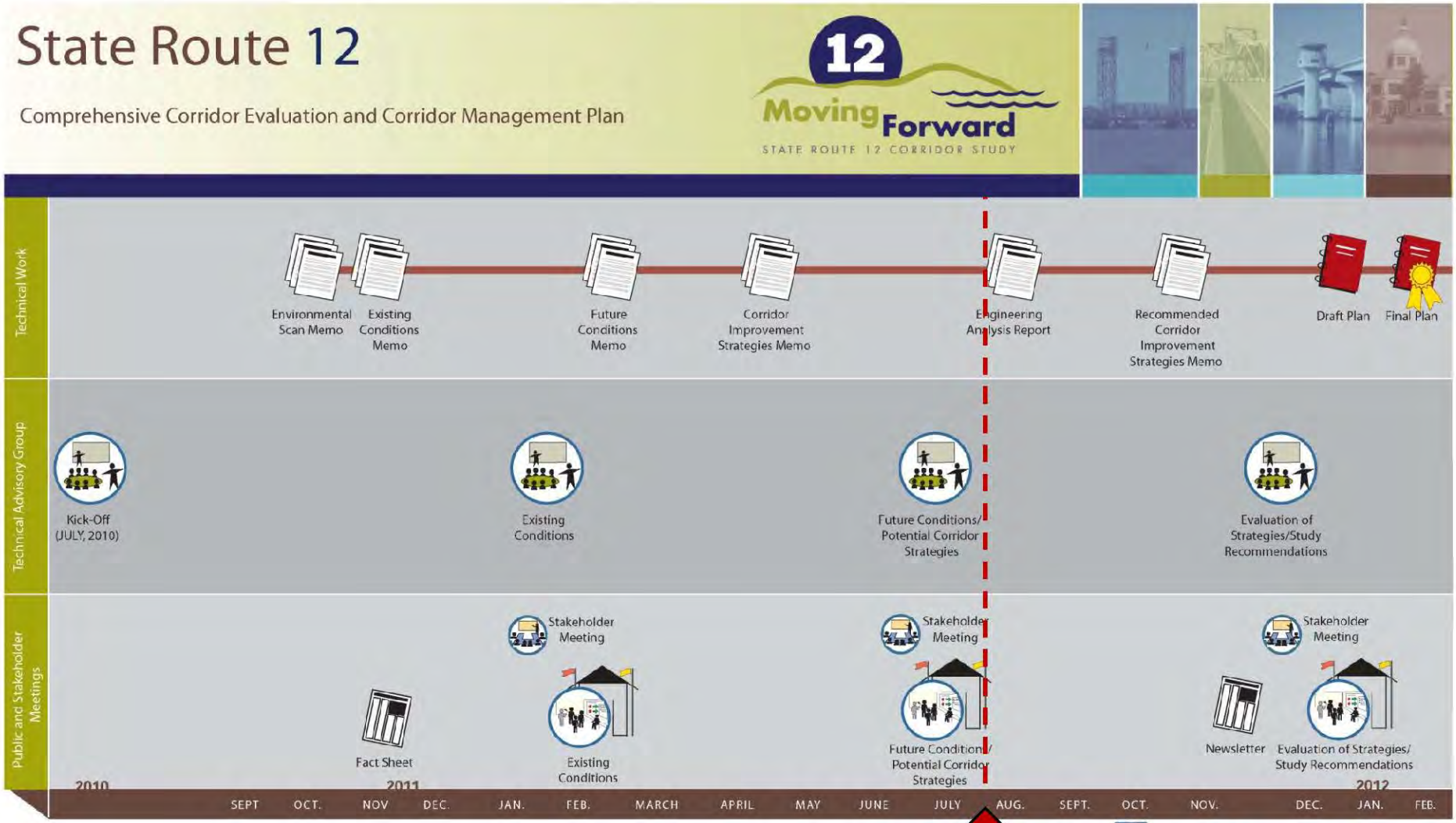
Outreach Structure & Roles

- 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*

[1] See Note Slide 1.

State Route 12 Corridor Study

Work Plan & Major Milestones



[1] See Note Slide 1.

State Route 12 Corridor Study

Meeting Objectives

1. Review of Prior Work Products
2. Review of Potential Corridor Improvement Strategies
3. Discussion on Next Steps

SR 12 Median Barrier, Solano County

[1] See Note Slide 1.

Existing Conditions Analysis

[1] See Note Slide 1.

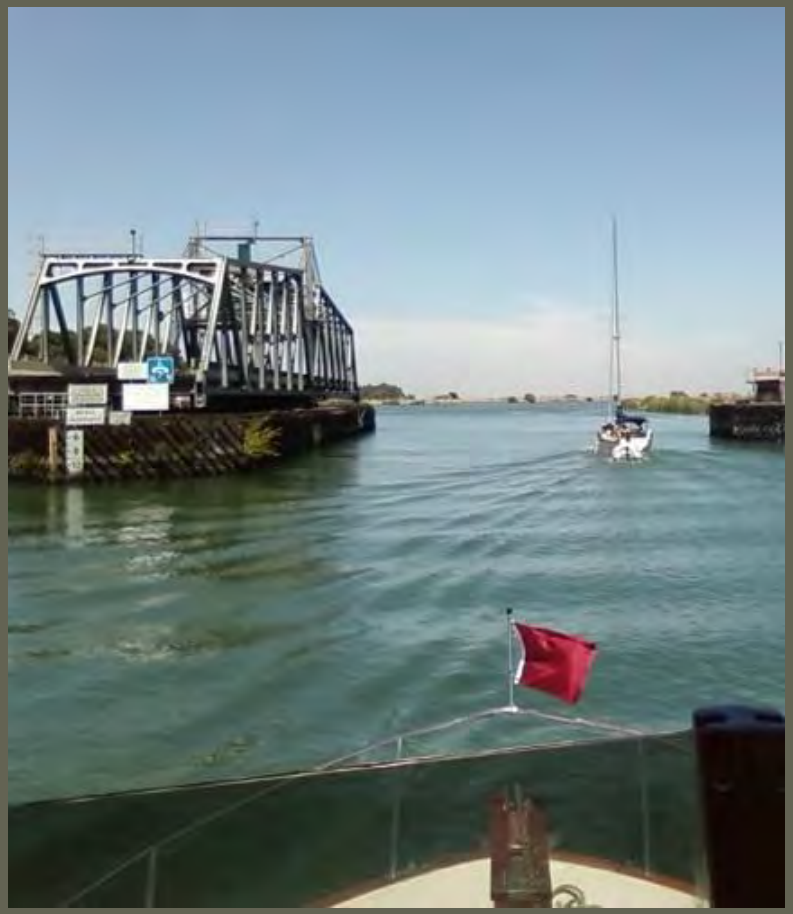
Median Treatments & Passing Lanes

- *Median treatments will be implemented throughout the corridor.*

[1] See Note Slide 1.

Moveable Bridge Operations

- Openings per day
  - *Rio Vista: 2 to 4*
  - *Mokelumne: 2 to 9*
- Bridge cycle times range from 8 to 25 minutes
- Queues can range from 70 to 250 vehicles (up to a mile long)
- Waterborne traffic at both bridges is 50% less than in 2004
- Concentration of accidents within ½-mile of Rio Vista and Mokelumne Bridges



SR 12 Mokelumne Bridge

[1] See Note Slide 1.

State Route 12 Corridor Study

Safety

- Roadway enhancements are making a difference
  - *Downward trend in total accidents*
  - *Downward trend in severity (including fatal accidents)*
  - *Reduction in head-on accidents*
- No head-on accidents where concrete barrier is installed
  - *Total accidents remain the same*
  - *Higher number of hit object accidents*
- Locations with accident concentrations include:
  - *Signalized intersections*
  - *Movable bridges*
  - *SR 113 & SR 160*

[1] See Note Slide 1.

Future Conditions Analysis

[1] See Note Slide 1.

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 double.

Year	Vehicles per Day
2010	9,000 – 40,000
2035	18,000 – 48,000

[1] See Note Slide 1.

Future Conditions Analysis

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

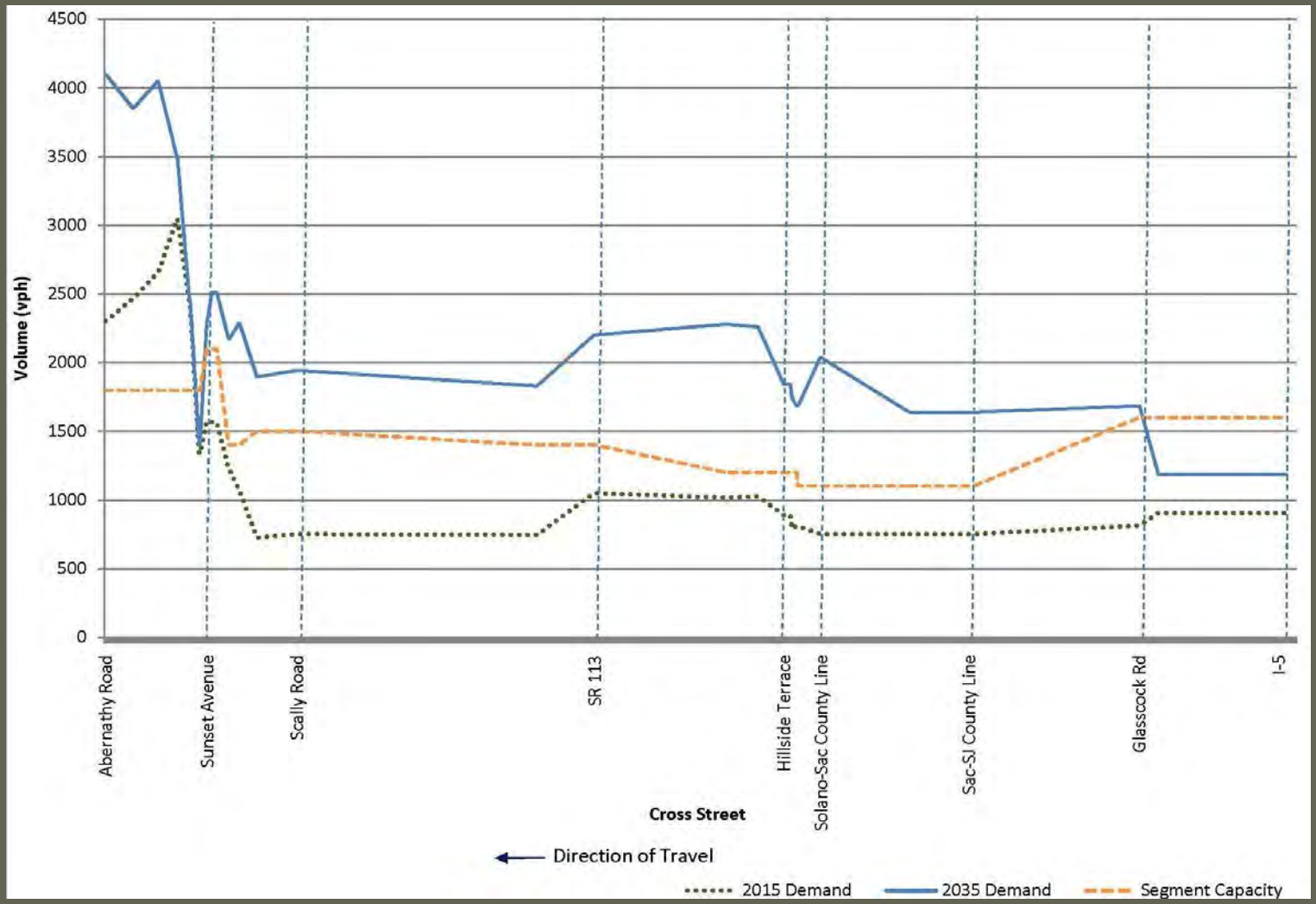
- Moveable bridge operations are expected to double from previous highs.

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

[1] See Note Slide 1.

Future Demand and Capacity

Comparison of Unconstrained Segment Demand and Capacity for Westbound SR 12 during the AM Peak Hour



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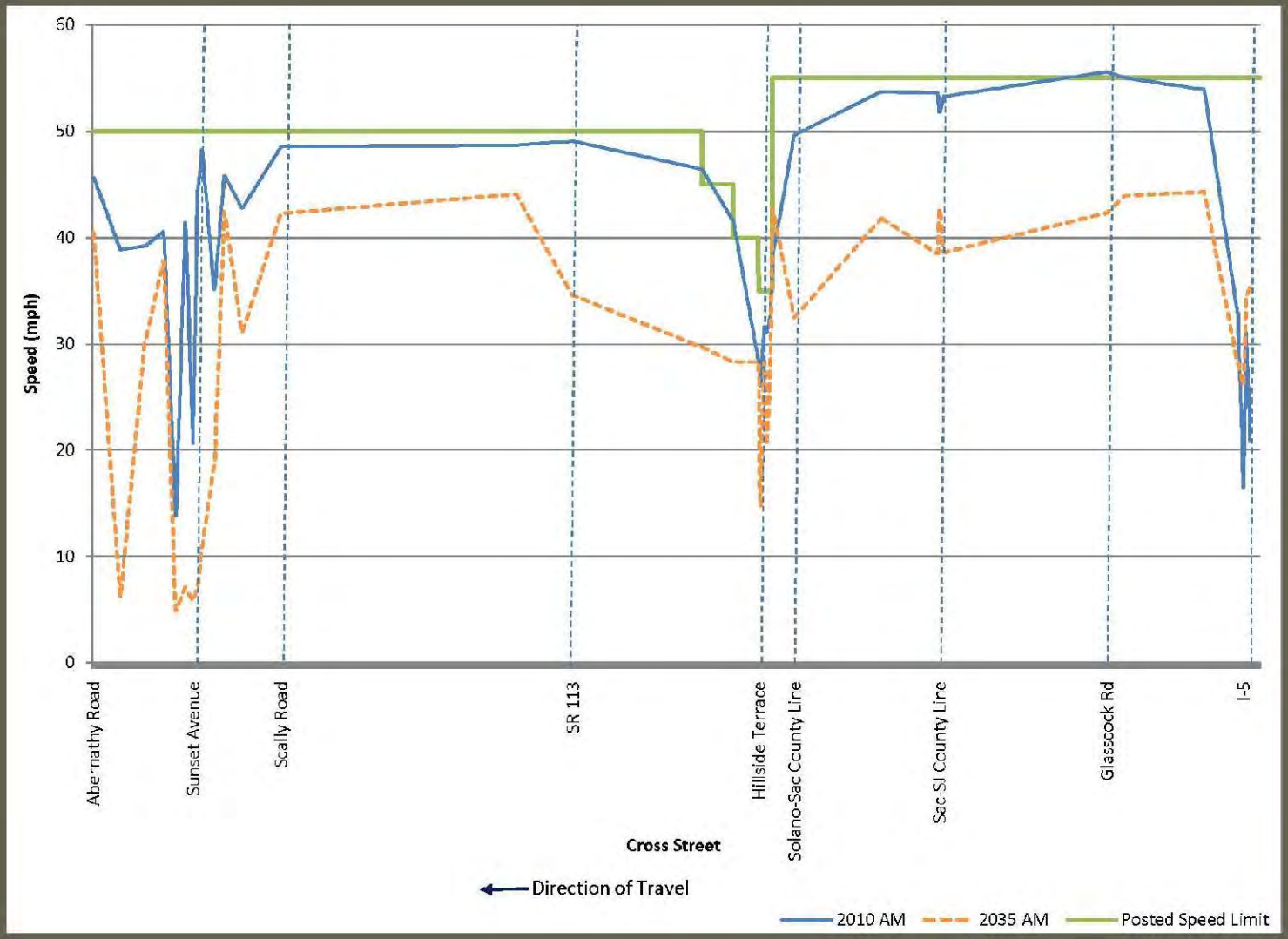
Future Conditions Analysis

Westbound Travel Speeds

Projected Travel Speeds for Westbound SR 12 during the AM Peak Hour



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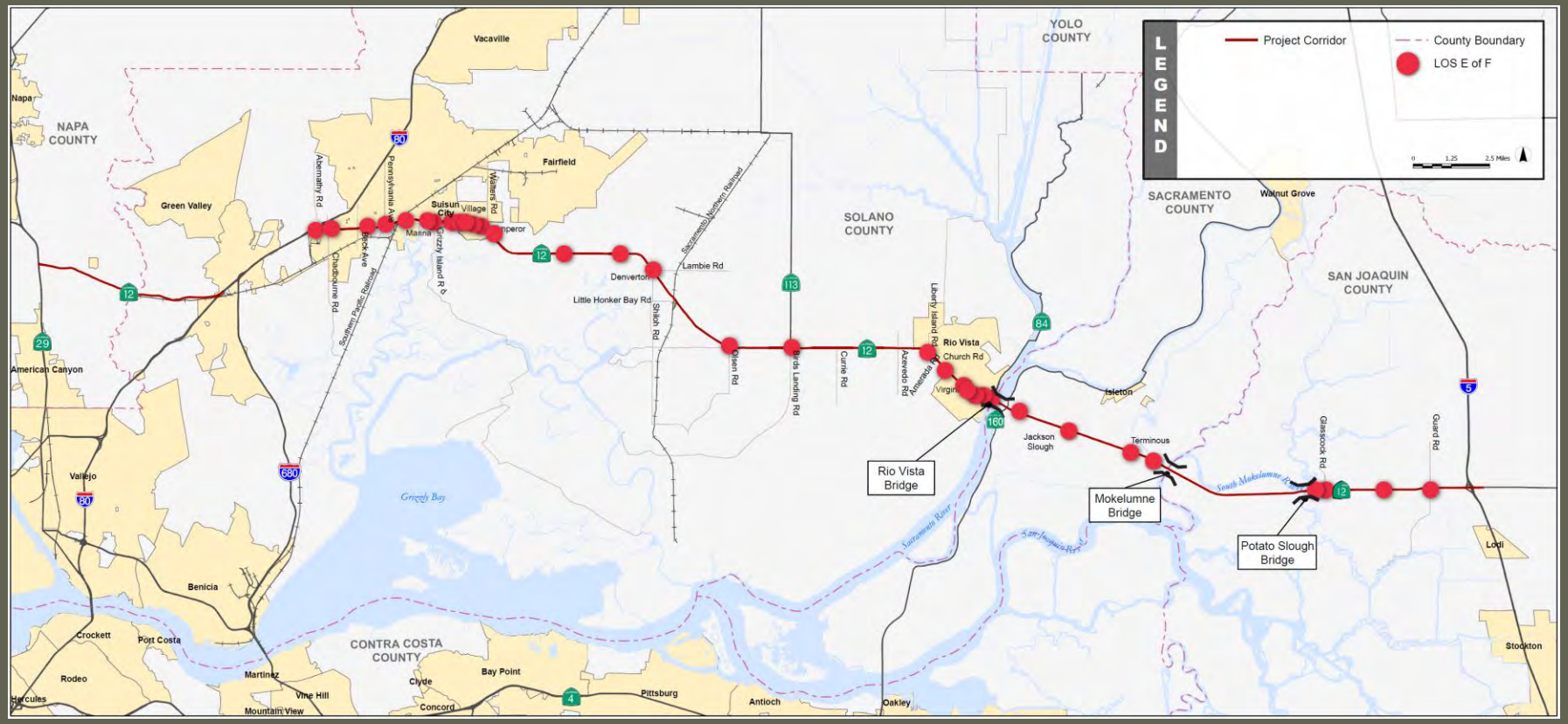
Future Conditions Analysis

Intersection Level of Service

Intersections where Projected Demand Exceeds Available Capacity for Future Year (2035)



[1] See Note Slide 1.

Future Conditions Analysis

Mainline Segment Operations

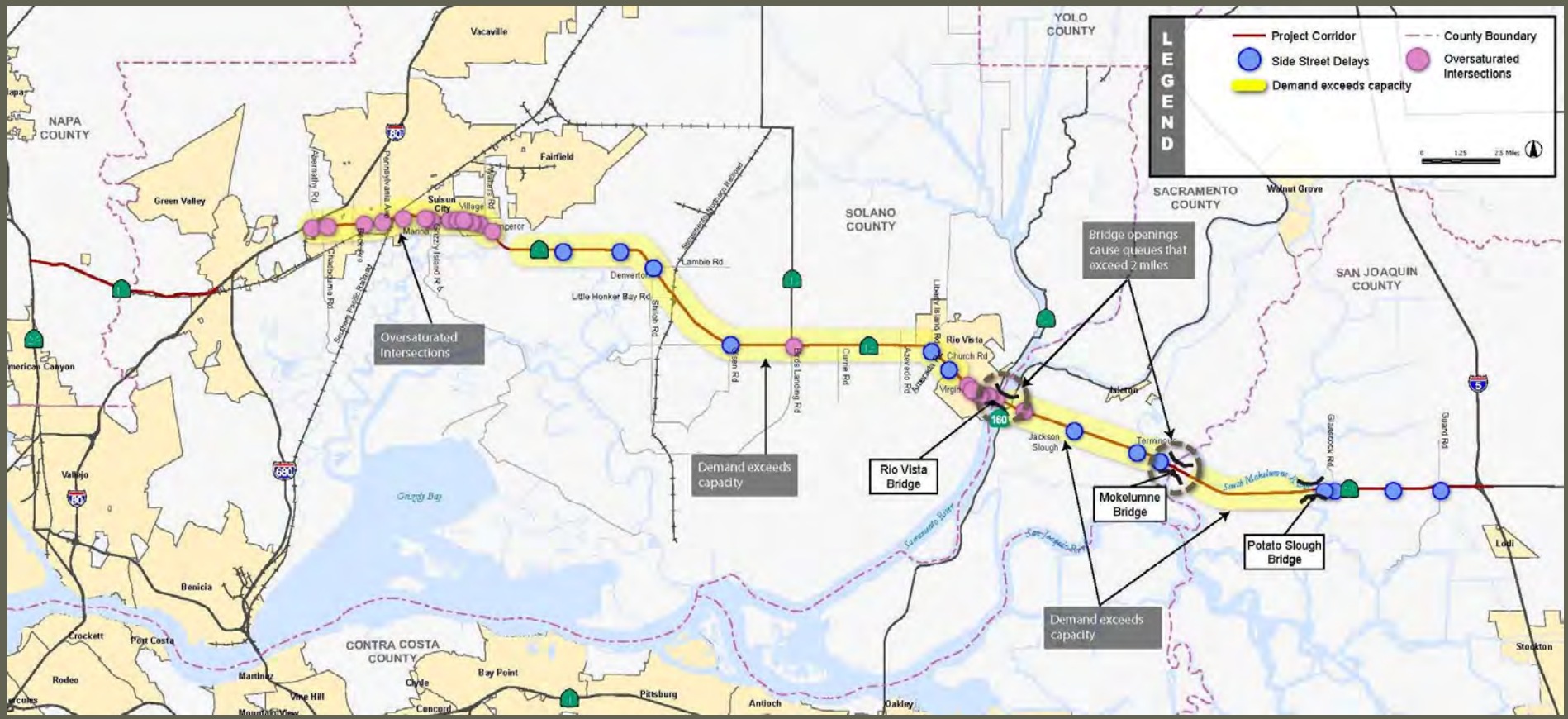
Location of Bottlenecks and Queues for Future Year (2015 and 2035)

[1] See Note Slide 1.

Future Conditions Analysis

Summary of Operational Deficiencies

Future Year (2035)



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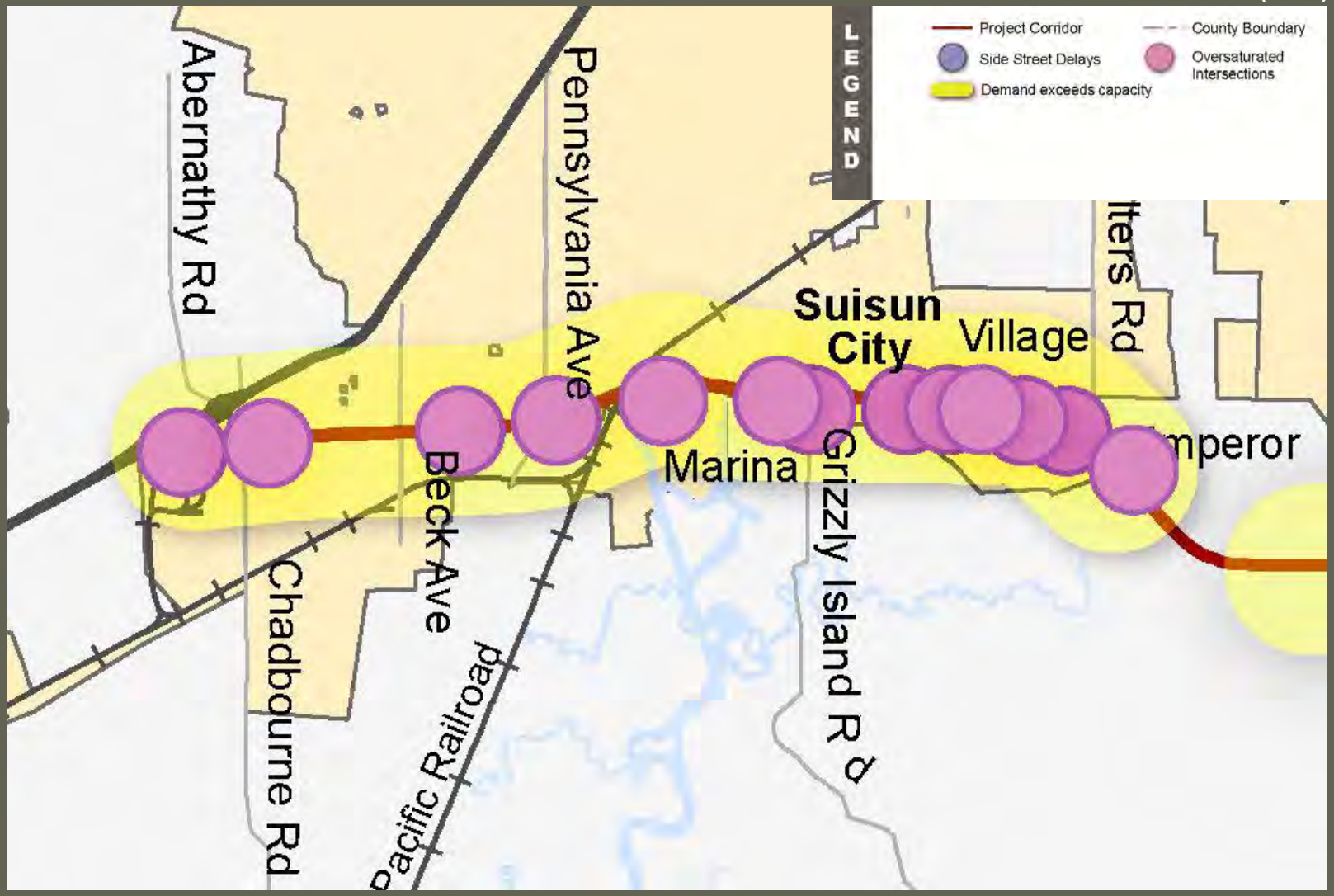
Summary of Operational Deficiencies

Future Year (2035)



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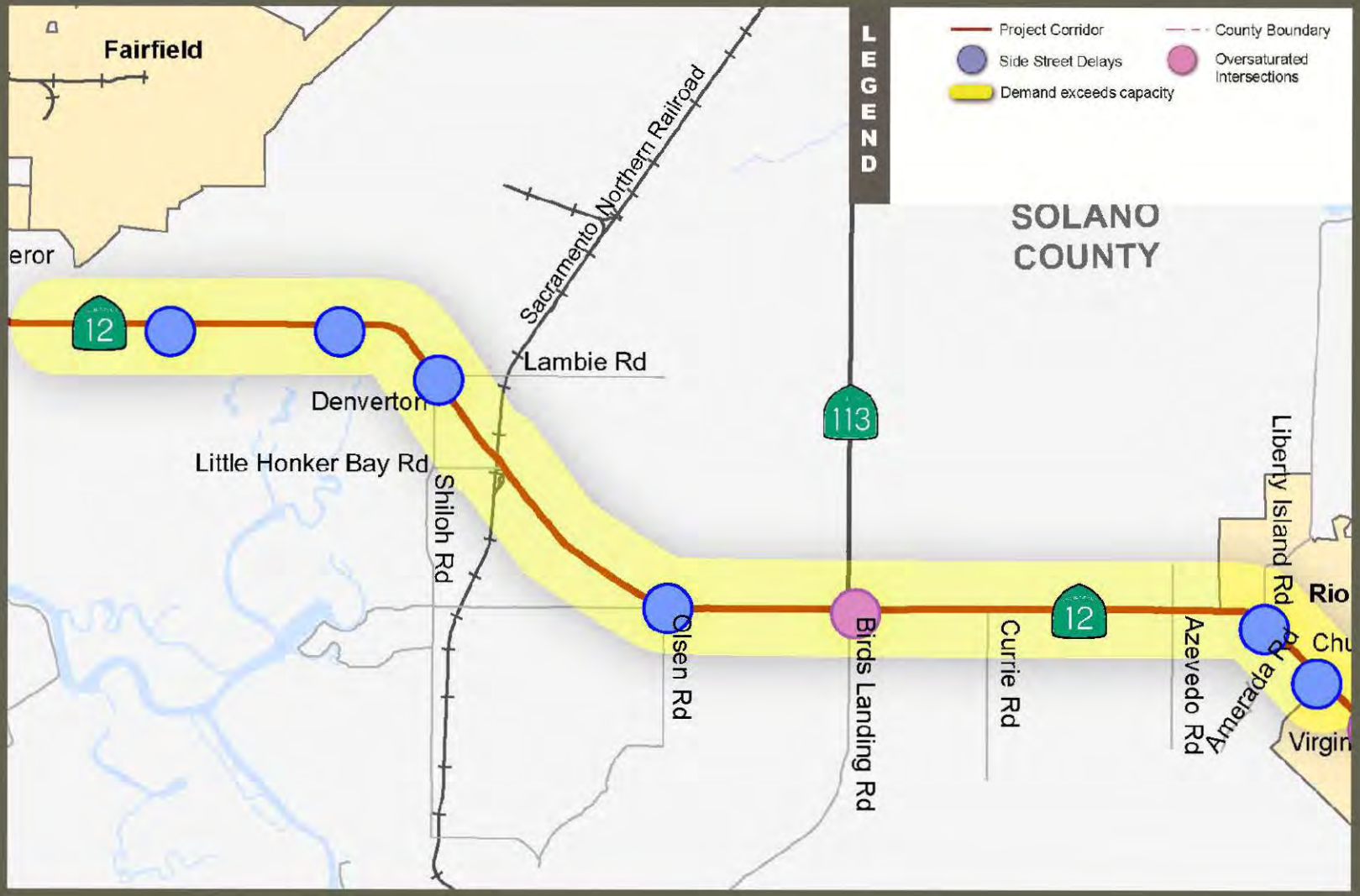
Future Conditions Analysis

Summary of Operational Deficiencies

Future Year (2035)



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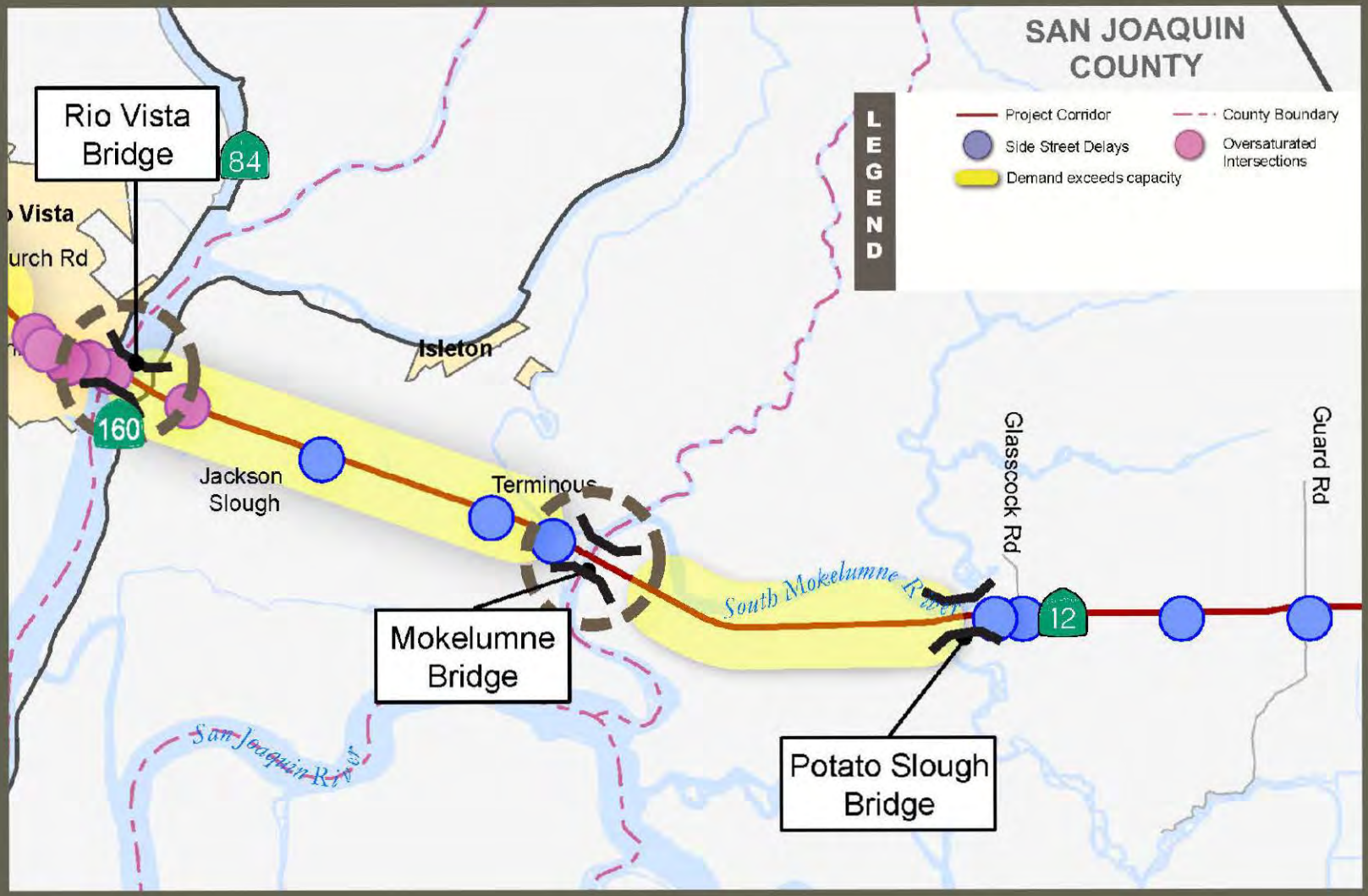
Future Conditions Analysis

Summary of Operational Deficiencies

Future Year (2035)



[1] See Note Slide 1.

Potential Corridor Improvement Strategies

[1] See Note Slide 1.

Potential Corridor Improvement Strategies

- Overview
- Common Elements
  - Pedestrian Facilities
  - Bicycle Facilities
  - Transit
  - Intelligent Transportation Systems
  - Bridge Operations

SR 12 Rio Vista Bridge

[1] See Note Slide 1.

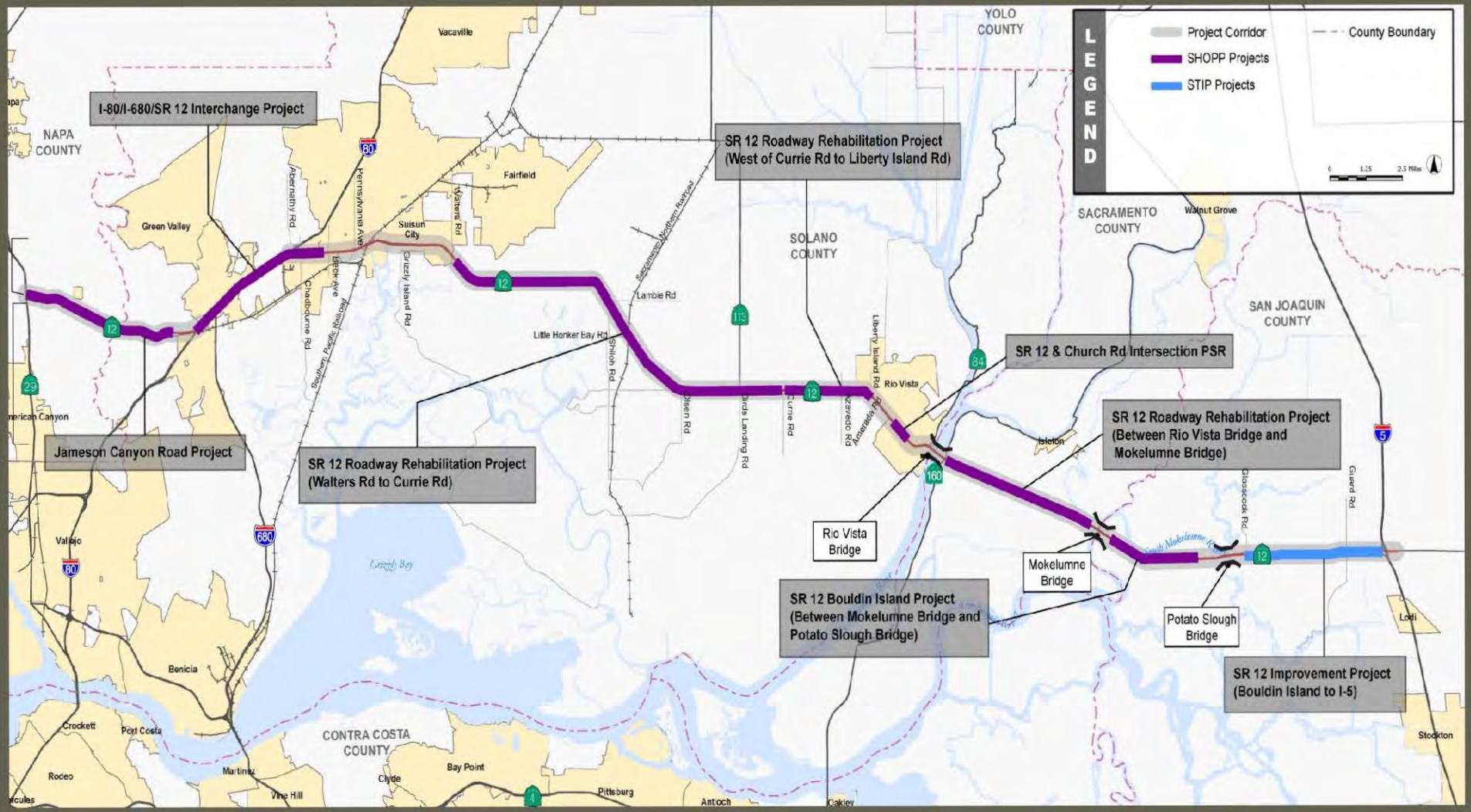
Potential Corridor Improvement Strategies

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

[1] See Note Slide 1.

Potential Corridor Improvement Strategies

Location of SHOPP/STIP Projects



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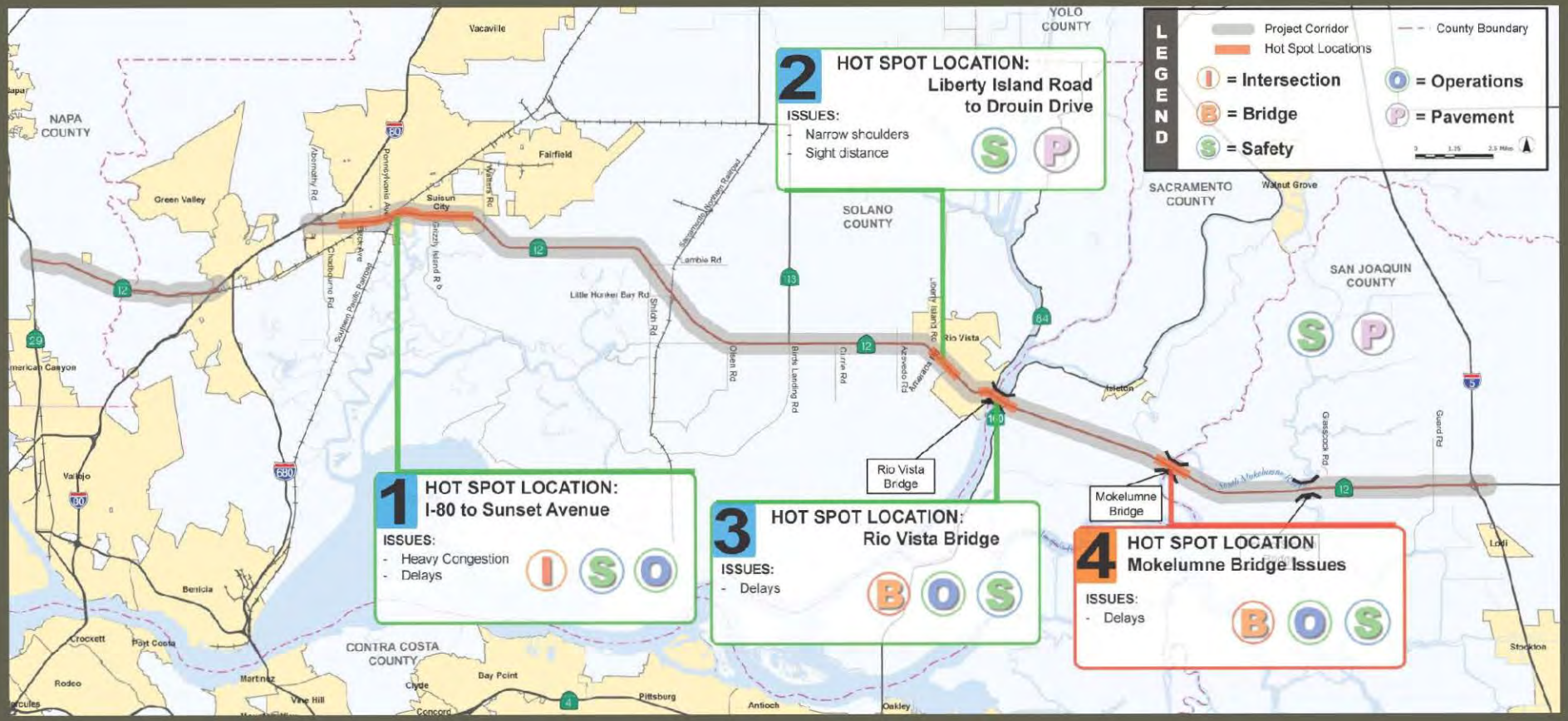
Potential Corridor Improvement Strategies

Gap-fill Strategy



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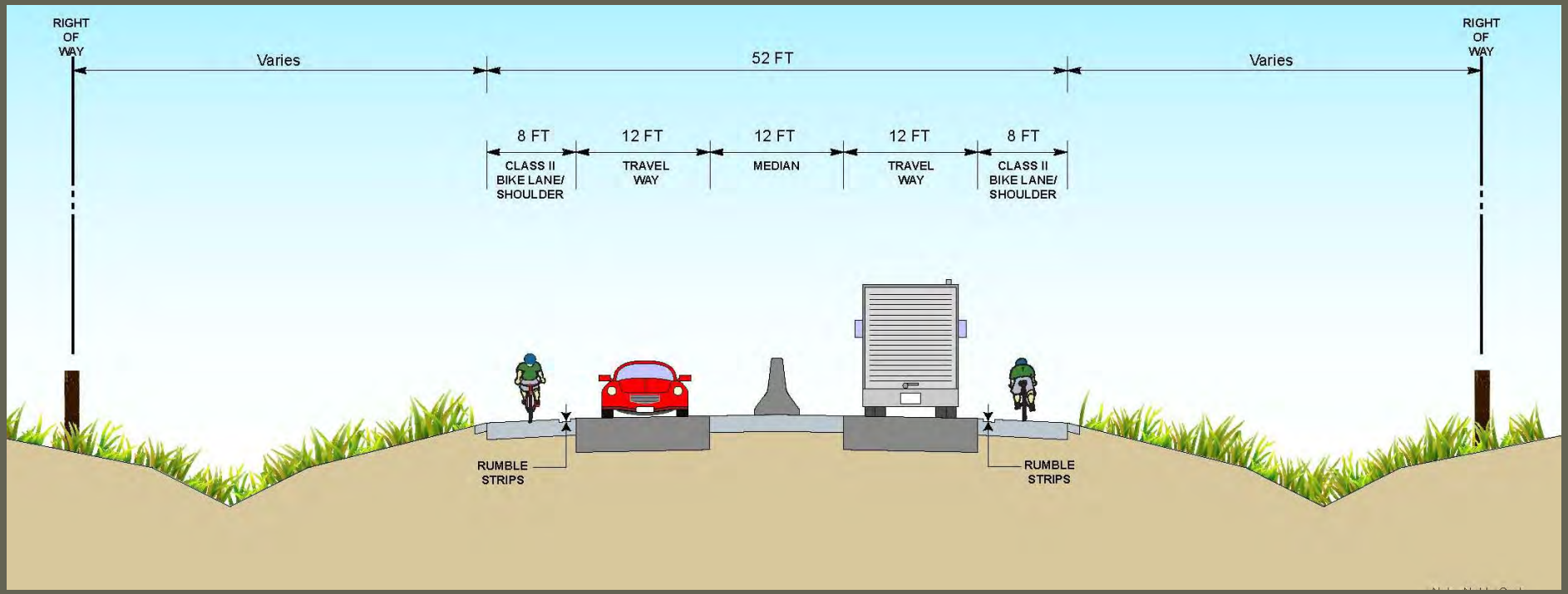
Potential Corridor Improvement Strategies

Barrier Separated Two-Lane Strategy

Typical Cross Section Barrier Separated Two Lane Strategy



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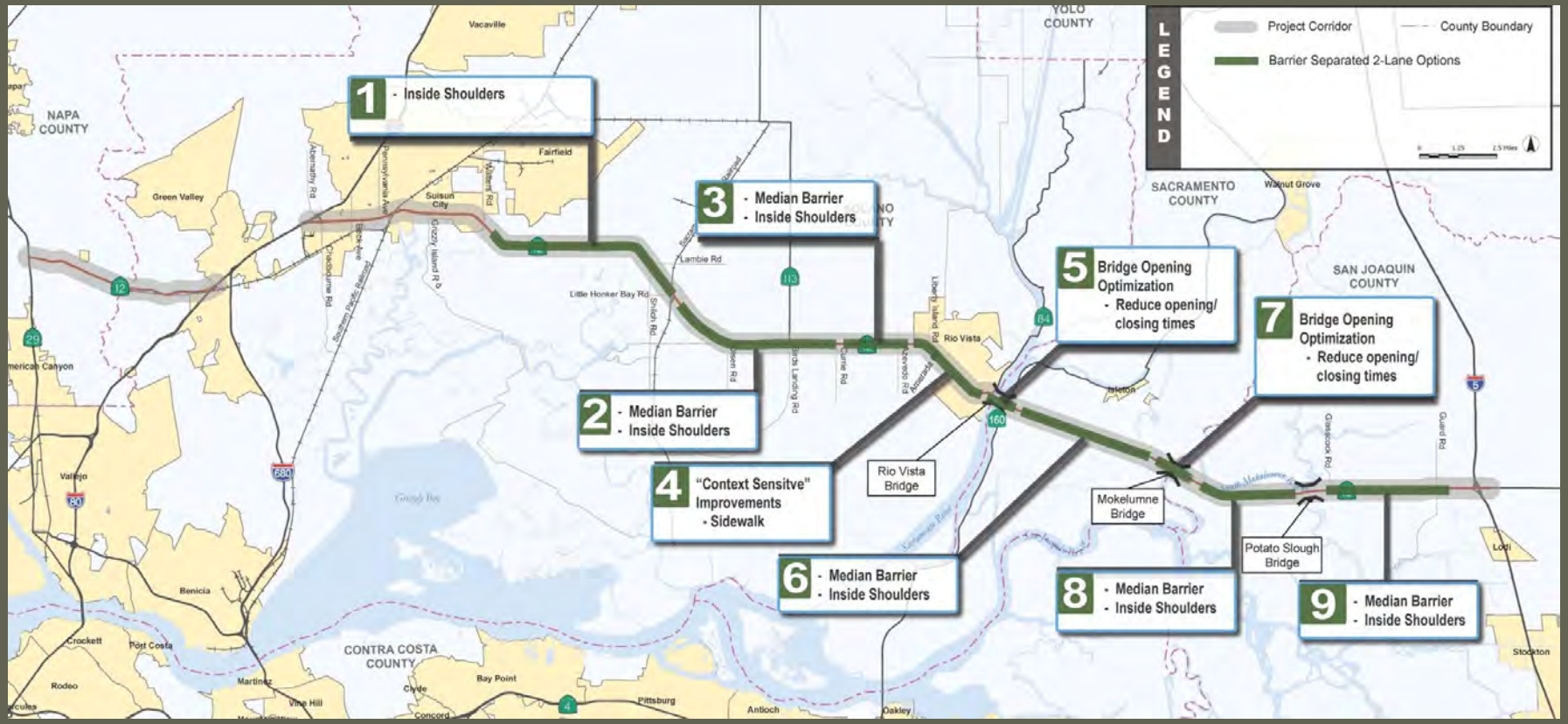
Potential Corridor Improvement Strategies

Barrier Separated Two-Lane Strategy



[1] See Note Slide 1.

Potential Corridor Improvement Strategies

Barrier Separated Two-Lane Strategy

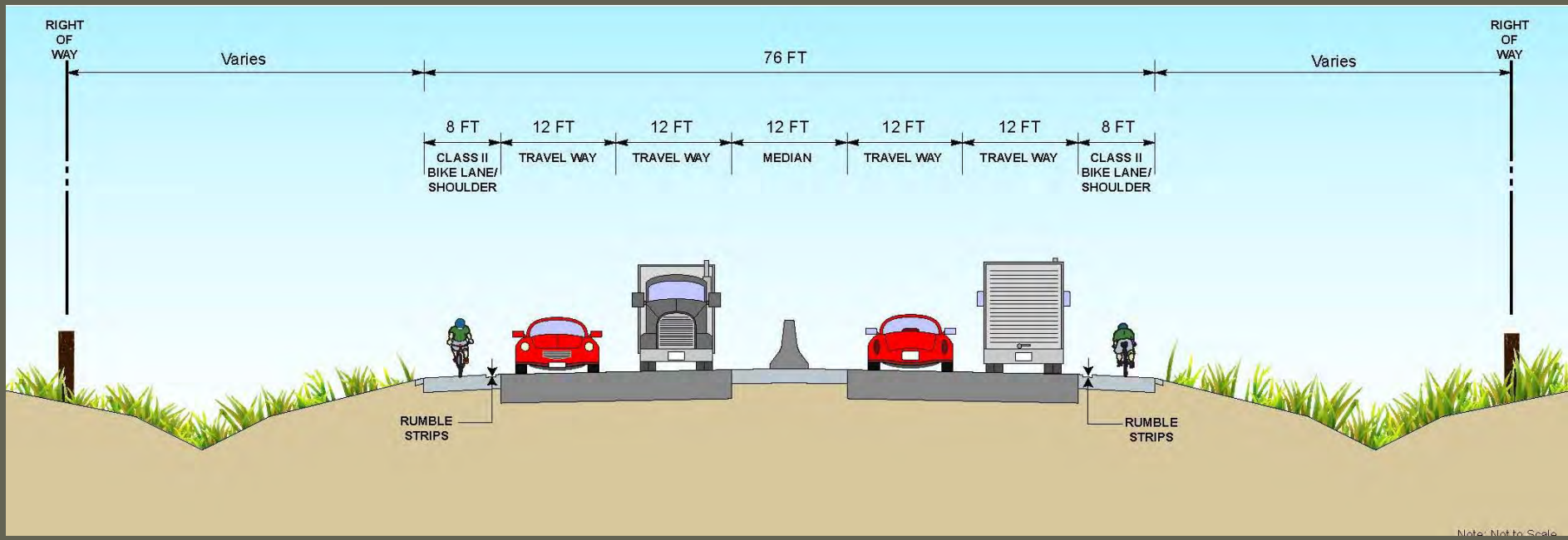
Location of Passing Lanes

[1] See Note Slide 1.

Potential Corridor Improvement Strategies

Four-Lane Strategy

Typical Cross Section Four Lane Highway Strategy



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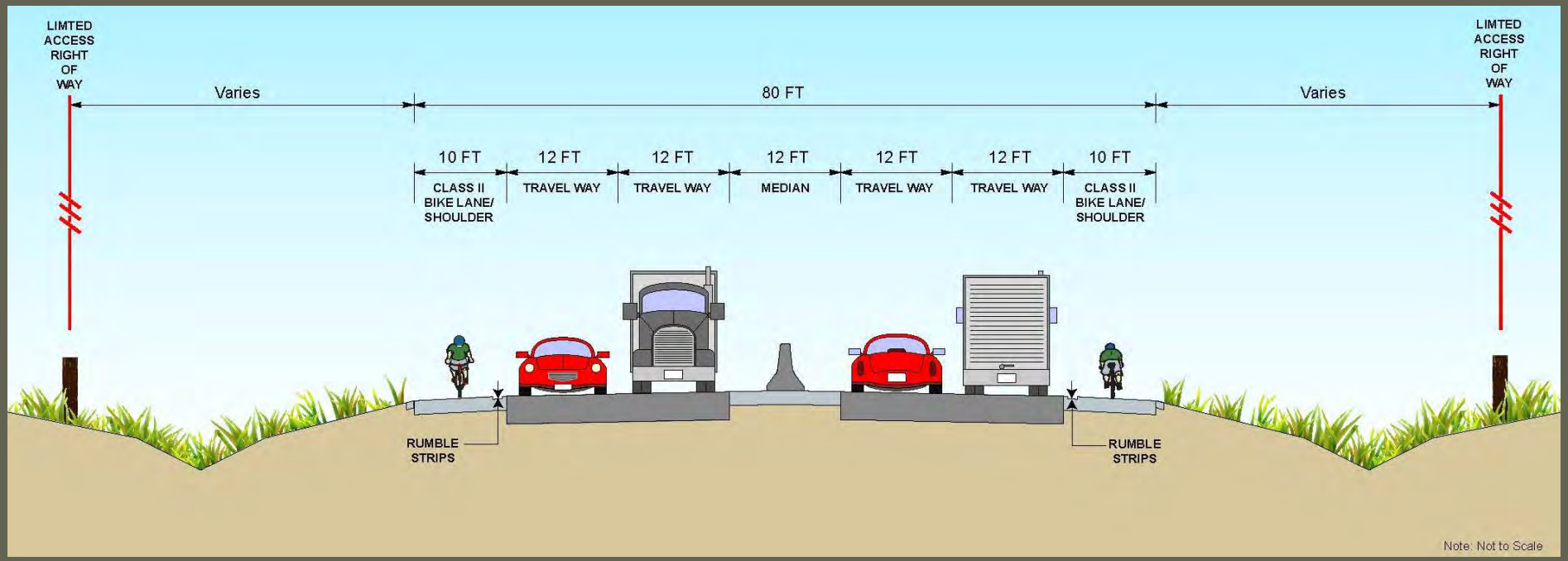
Potential Corridor Improvement Strategies

Four-Lane Strategy

Typical Cross Section Four Lane Highway Strategy with Expressway Standards



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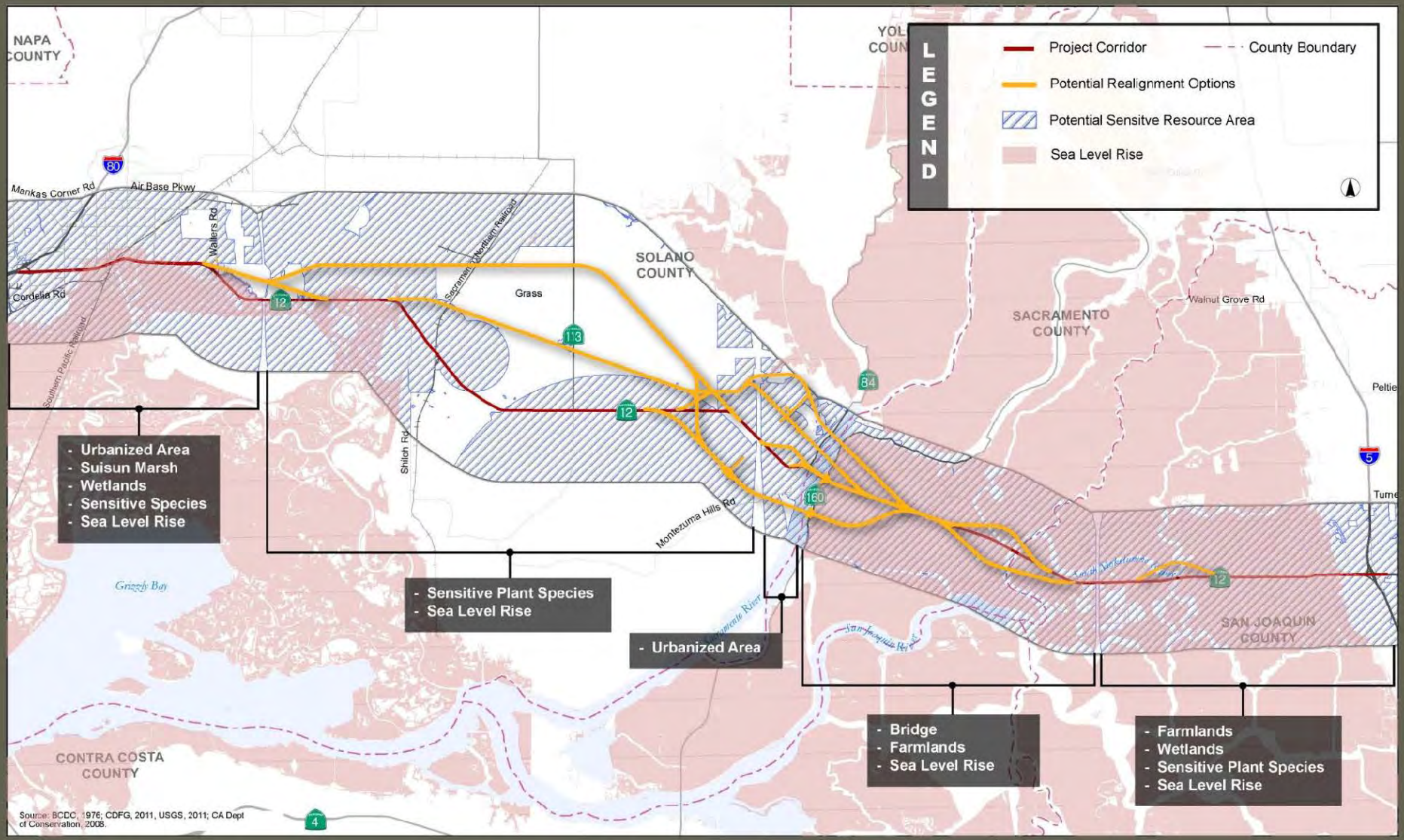
Potential Corridor Improvement Strategies

New SR-12 Alignments

Location of Environmental Constraints for SR 12



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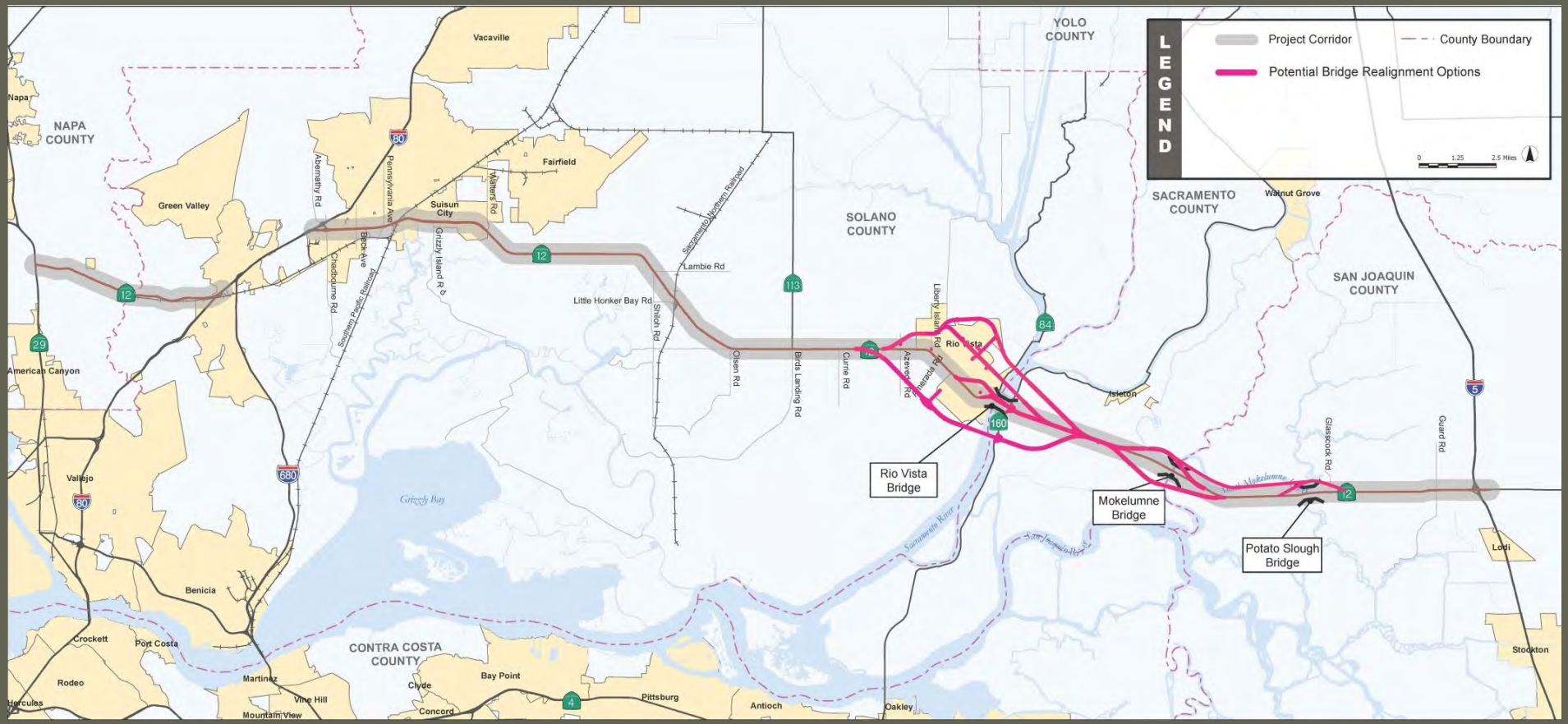
Potential Corridor Improvement Strategies

Four-Lane Strategy

Potential Bridge Re alignment Options



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Potential Corridor Improvement Strategies

Evaluation Criteria

- **Quantitative**
  - Mobility Metrics
  - Air Quality
  - Cost
- **Qualitative**
  - Transportation System Effectiveness
  - Safety
  - Economic Vitality
  - Environmental Impact
  - Equity

[1] See Note Slide 1.

Discussion

[1] See Note Slide 1.

State Route 12 Corridor Study

Next Steps

- Upcoming Work
  - Evaluation of Strategies
  - Development of Short-term and Long-term Recommendations
- Next Meeting
  - Early 2012
- To provide input:
  - www.movingsr12forward.com

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