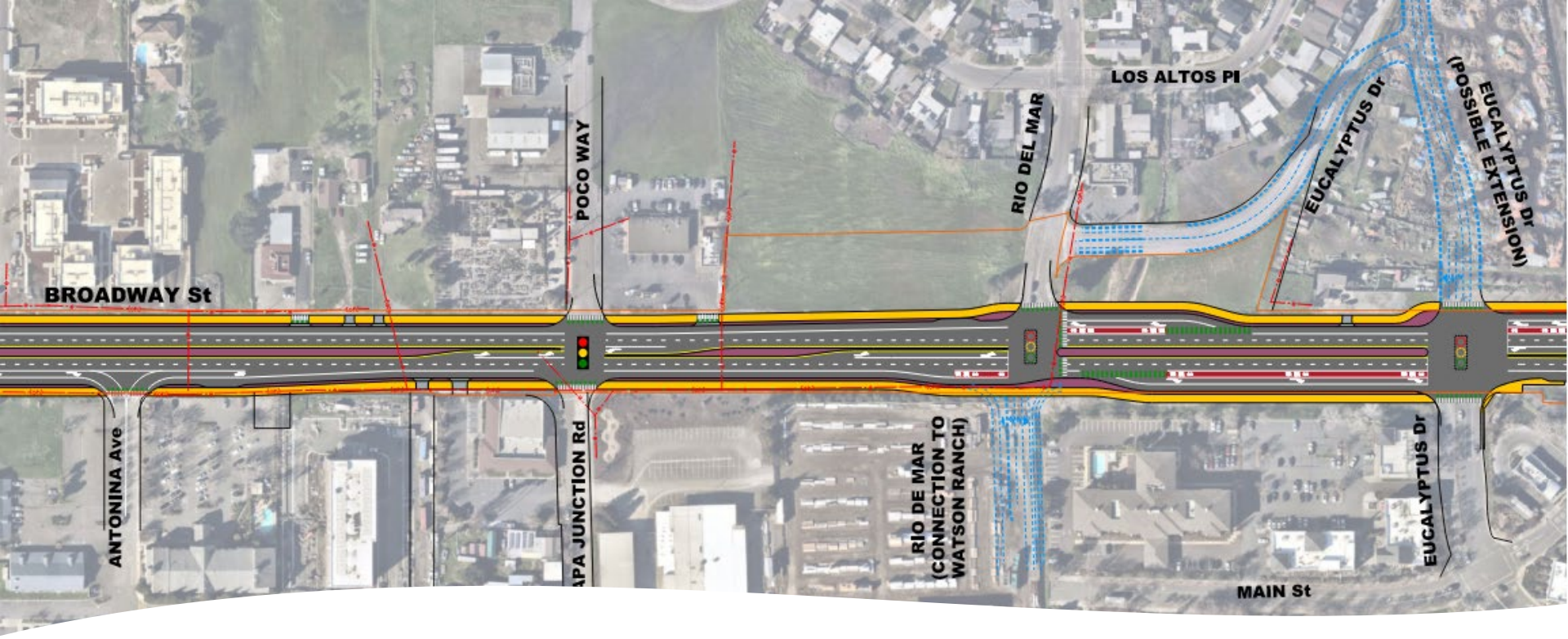

6.1 PROJECT UPDATE:
STATE ROUTE 29 AMERICAN CANYON CORRIDOR

- **March 4, 2026**
- Grant Bailey, P.E.
- Program Manager - Engineer

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American Canyon SR 29 Corridor

Overview

- **Project Alternatives**
- **Intersection Analysis**
  - Initial Findings from Intersection Safety & Operational Assessment Process (ISOAP) Analysis
    - Signalization improves traffic operations relative to roundabouts
- **Alternative Evaluation**
  - Led to larger alternative evaluation that demonstrates considerable advantages of signalization
- **NVTA Board Action**
  - Screen out roundabout alternative and proceed with signalization alternative

American Canyon SR 29 Corridor

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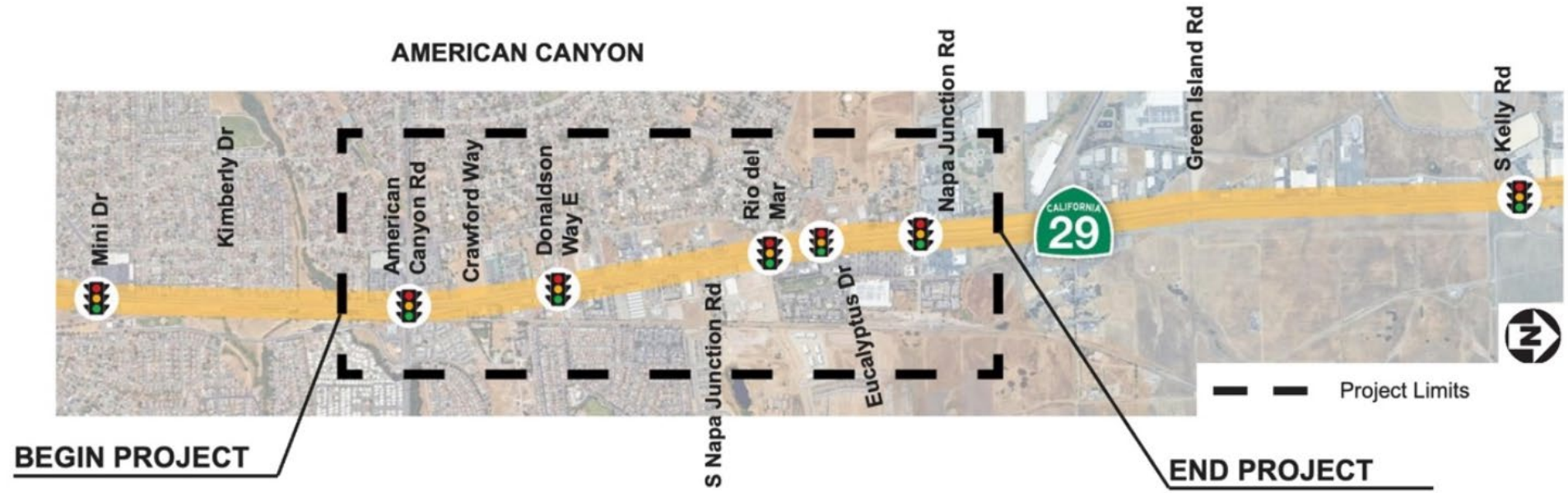
Project Purpose & Need

- **Purpose**
  - Improve mobility for all modes
  - Improve safety
  - Improve transit travel time & reliability
  - Support residential and commercial development
- **Need**
  - Corridor currently lacks:
    - Multimodal connectivity
    - Public transit facilities
    - Low level-of-traffic stress routing options
  - Intersection constrains lead to extensive queuing & delays
  - Number of collisions on the corridor exceeds state average for similar facilities



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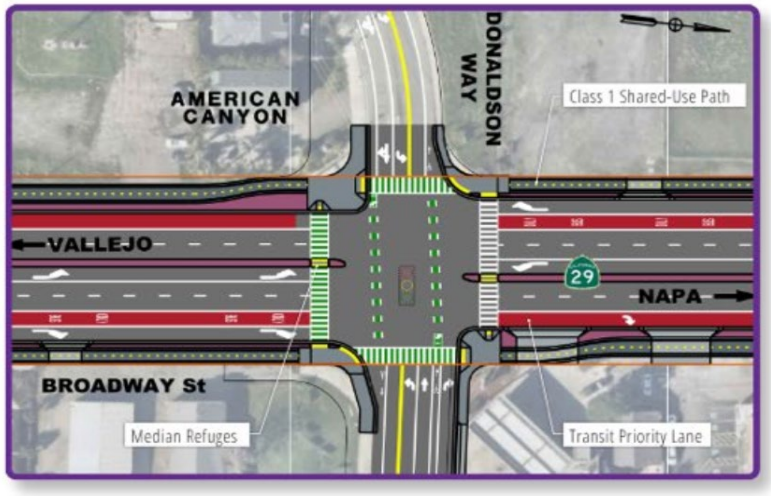
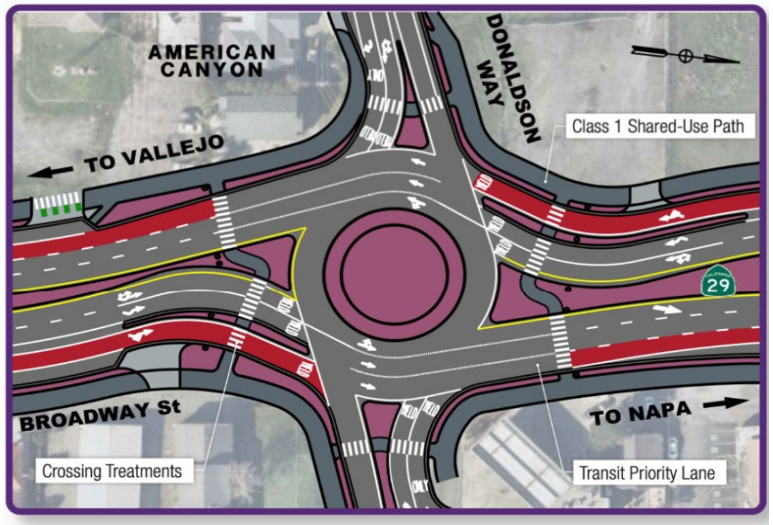
Project Alternatives

- **No Build Alternative**
  - Conditions remain as-is
- **Alternative 1:**
  - Signalization improvements and coordination throughout corridor
  - Business access and transit (BAT) lanes
    - Transit priority/queue jump
- **Alternative 2:**
  - Multilane roundabouts at six intersections
    - American Canyon Rd will remain signalized
- **Work Common to Both Alternatives:**
  - Construct physically separated Class I shared use path
  - Lower speed limit from 50 MPH to 35 MPH
  - Construct 4 bus stops or bus islands
  - Construct mobility hub
  - Reconfigure intersections to improve pedestrian crossings



ALTERNATIVE 1 - SIGNALIZED



ALTERNATIVE 2 - ROUNDABOUTS

Traffic Operations Context

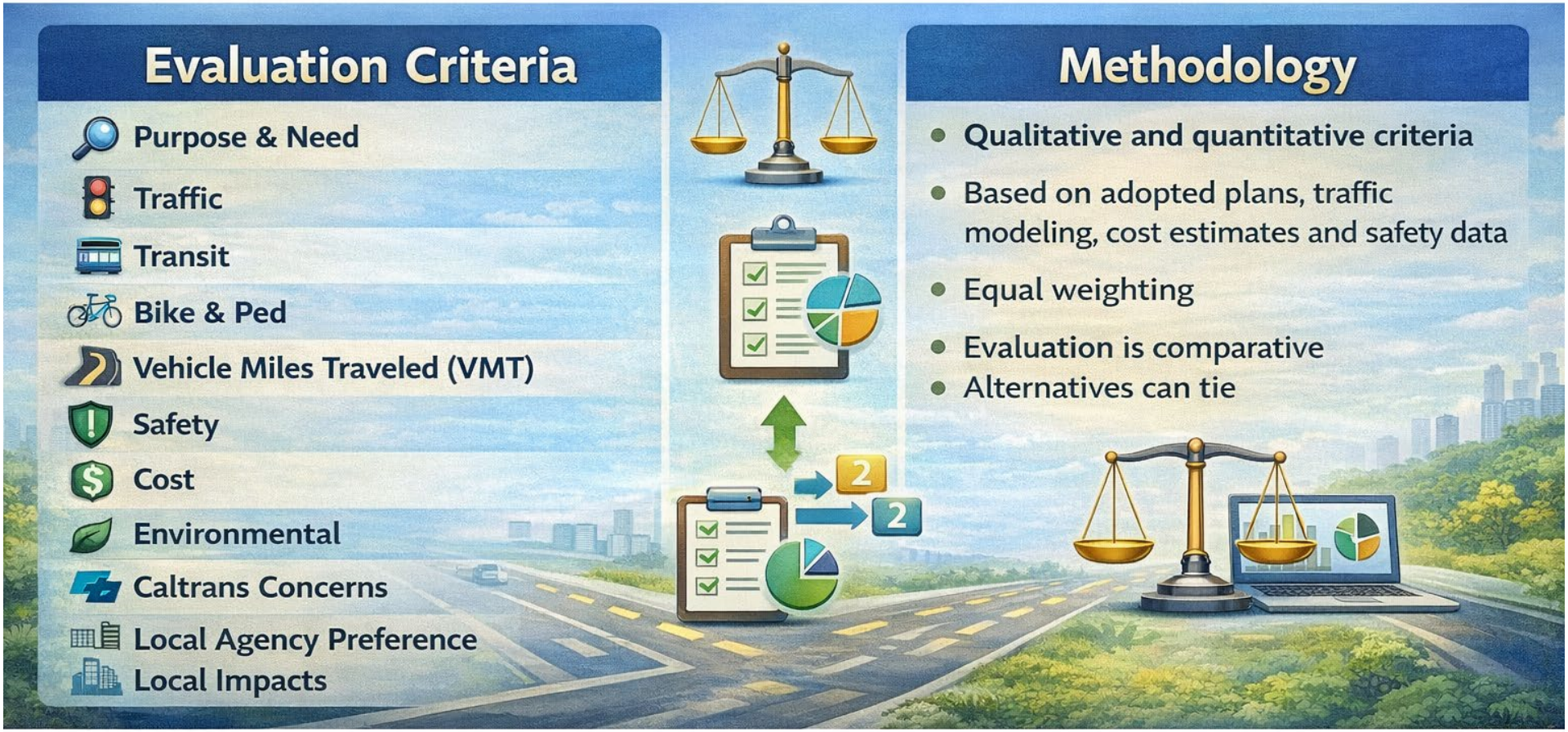
- **Roundabout Capacity**
  - 2-lane roundabout: 1,600 – 1,800 vehicles per hour
  - 3-lane roundabout: 2,100 – 2,300 vehicles per hour
- **Existing Peak Hour Volumes**
  - Napa Junction Rd
    - AM: 3,250 VPH / PM: 3,550 VPH
  - Donaldson Rd
    - AM: 3,450 VPH / PM: 3,650 VPH
  - American Canyon Rd
    - AM: 3,900 VPH / PM: 4,450
- **SR-29 American Canyon Corridor**
  - Annual Average Daily Traffic: 45,000 vehicles per day

Intersection Operation Evaluation Results

Intersection Level of Service (LOS)					
		Alternative 1 - Signals		Alternative 2 - Roundabouts	
Level of Service During Peak Period	*Existing Conditions 2025 AM (PM)*	*Opening Year 2030 AM (PM)*	*Design Year 2050 AM (PM)*	*Opening Year 2030 AM (PM)*	*Design Year 2050 AM (PM)*
Crawford Way	B(F)	C (B)	B (B)	B (C)	C (E)
Donaldson Way	C(C)	C (C)	C (D)	F (E)	F (F)
Poco Way/S Napa Junction Rd	E(D)	A (D)	A (F)	F (C)	F (E)
Rio Del Mar	C(B)	C (D)	E (D)	F (D)	F (F)
Eucalyptus Dr	B(B)	A (C)	E (E)	F (E)	F (F)
Napa Junction Rd	D(E)	D (C)	D (D)	F (E)	F (F)

LOS Key			Average Delay (seconds/vehicle)	
			Signalized	Unsignalized
Acceptable LOS	A-B-C	Acceptable	0-25	0-25
	D	At Capacity	35-55	25-35
Unacceptable LOS	E	Poor	55-80	35-50
	F	Failure	>80	>50

Alternative Evaluation



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Alternative Evaluation Results

Evaluation Criteria	Contributing Factors	Alternative 1	Alternative 2
Purpose and Need	Alternative accomplishes points outlined in the purpose and need of the project.	1	1
Traffic	Better Intersection Level of Service During Peak Period	1	0
Transit	Better improves transit operations	1	0
Bike and Ped	Better improves Pedestrian and Bike Connectivity	0	0
VMT	No VMT Increase	1	0
Safety	CMF Qualitative Analysis	0	1
Cost	Lower Total Project Cost	1	0
Environmental	Less environmental impacts	0	0
Department of Transportation Concerns	Caltrans has less concerns related to nonstandard design	1	0
Local Preference	Alternative preferred by users and local residents	0	1
City Preference	Alternative preferred by City Council & Staff	1	0
Local Impacts	Less Temporary construction impacts	0	0
	Less Right of Way impacts	1	0
	Less Significant Driveway Impacts	1	0
	TOTAL	**9**	**3**

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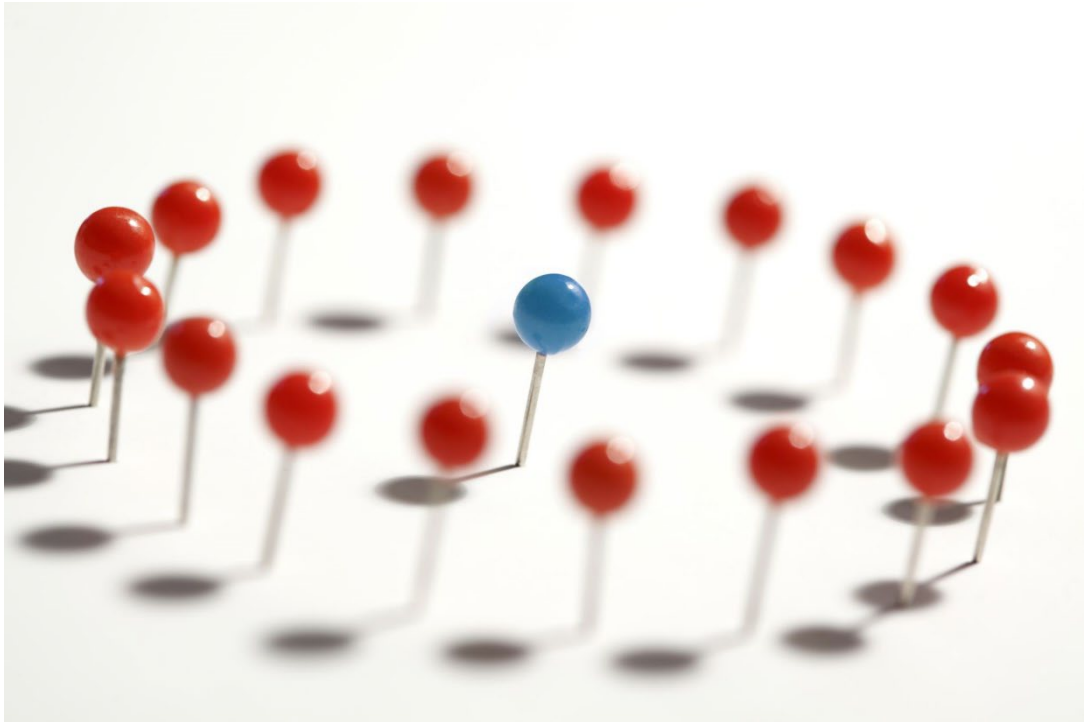
Board Action

- **Advance Alternative #1 (signalization) as the preferred alternative for environmental clearance**
- **Discontinue further analysis of Alternative #2 (roundabouts)**



Q&A – Thank you!

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American Canyon SR 29 Corridor

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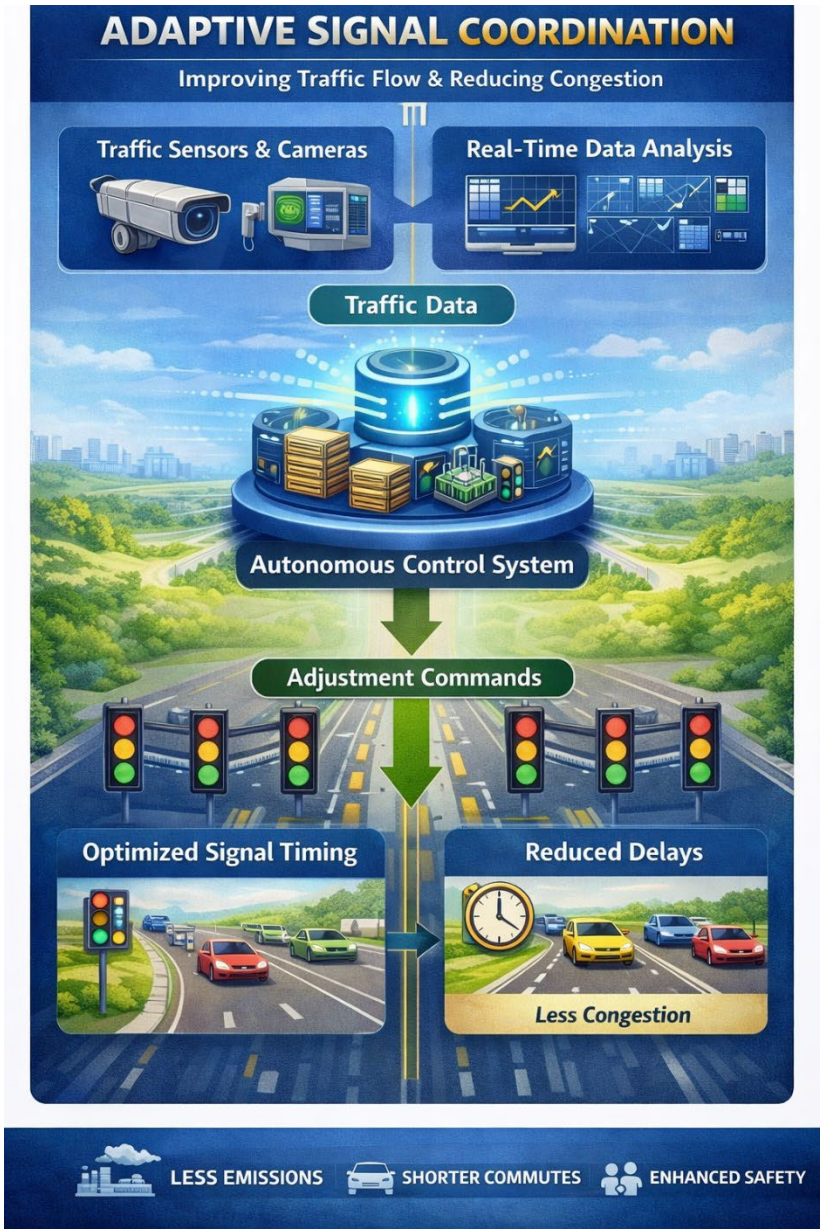
Signalization Improvements

- **Additional Signals**
  - Crawford Wy
  - Poco Wy / S Napa Junction
- **Side Street Improvements**
  - Additional Turning Lanes
  - New Crosswalks across SR 29
- **Signal Coordination**
  - Adaptative Signal Coordination
  - Driven by actual vehicle volumes
- **Why?**
  - Minimize side street delays and accommodate future land use growth
  - Regulate N-S vehicle throughput
  - Transit Queue Jumps and Transit Signal Priority at all signalized Intersections
  - Easier and safer pedestrian crossings

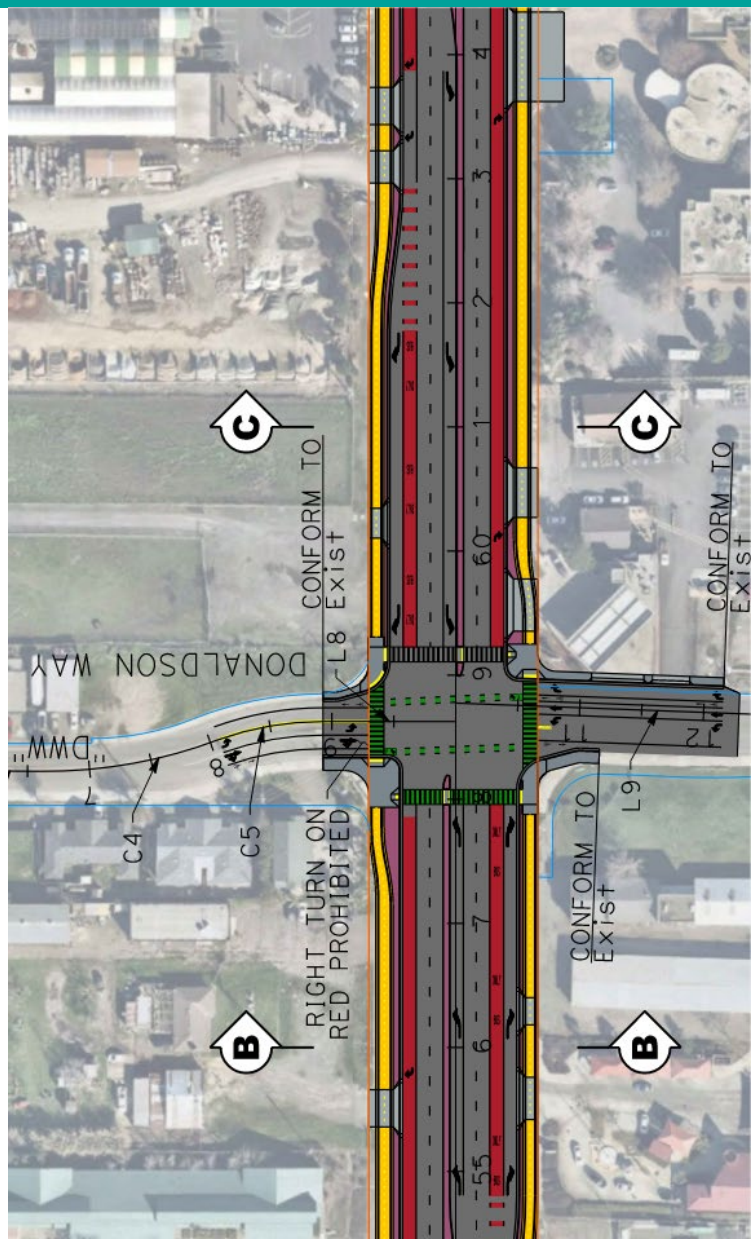


American Canyon SR 29 Corridor

Business Access & Transit Lanes

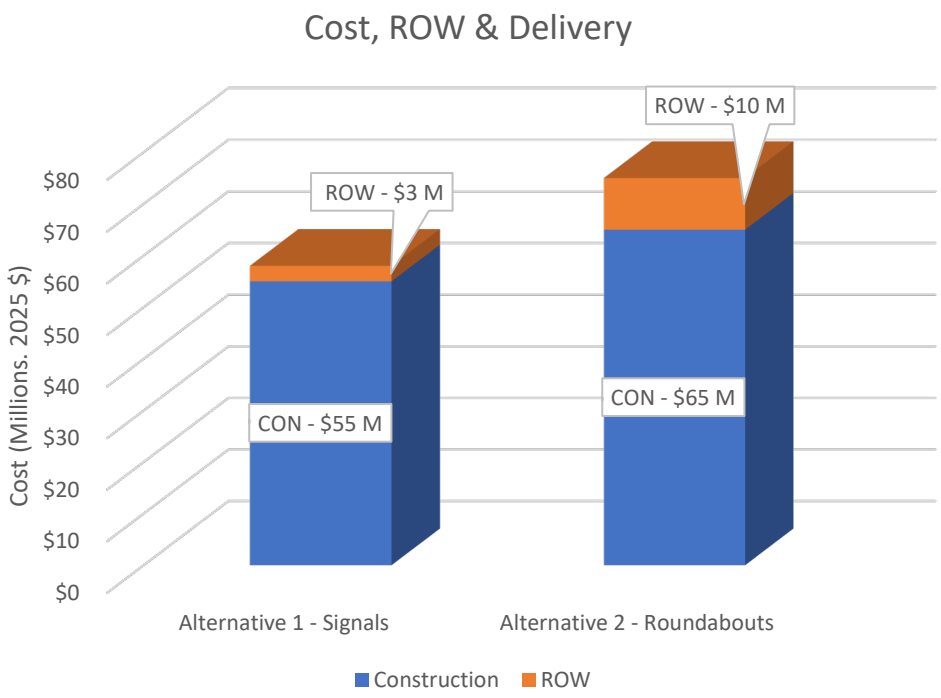
Benefits:

- **Transit**
  - Efficiently and reliably move transit vehicles through the corridor
  - Couple with intersection queue jumps and transit signal priority (TSP) technology
- **Local Access**
  - Acceleration/deceleration lane for commercial & residential facilities along the corridor
  - Improves operations between intersections
  - Limits impacts to and consolidation of existing driveways
- **Standard Shoulder**
  - Accommodates vehicle breakdowns
- **Enforcement**
  - Technology driven
  - Signal-mounted enforcement cameras
  - Potential for bus-mounted enforcement cameras



Cost, Right of Way & Delivery

- **Costs**
  - Alt 1: ~$58M (ROW & Construction)
  - Alt 2: ~$75M (ROW & Construction)
- **ROW**
  - Alt 1: minimal impacts to public right of way and private property corners
  - Alt 2: major acquisitions, potential structure demolitions
- **Alternative 2 Delivery Risk**
  - Limited use of three-lane roundabouts in California
  - No examples in the proposed configuration of multiple consecutive roundabouts
  - Potential VMT mitigation could increase costs



American Canyon SR 29 Corridor

Alternative #1 Advantages

- **Traffic Operations & Intersection Level of Service**
  - Alternative 1 offers improved LOS
- **Transit Reliability**
  - Business Access and Transit (BAT) Lanes
  - Queue Jump Lanes
- **ROW**
  - Limited property acquisitions and driveway impacts
- **Vehicle Miles Traveled (VMT)**
  - No increase in VMT

- **Alternative #1 Supports:**
  - Transit reliability
  - Emergency response times
  - Limited ROW impacts
  - Improved mobility for all modes (including bikes/pedestrians)

ALTERNATIVE 1 - SIGNALIZED

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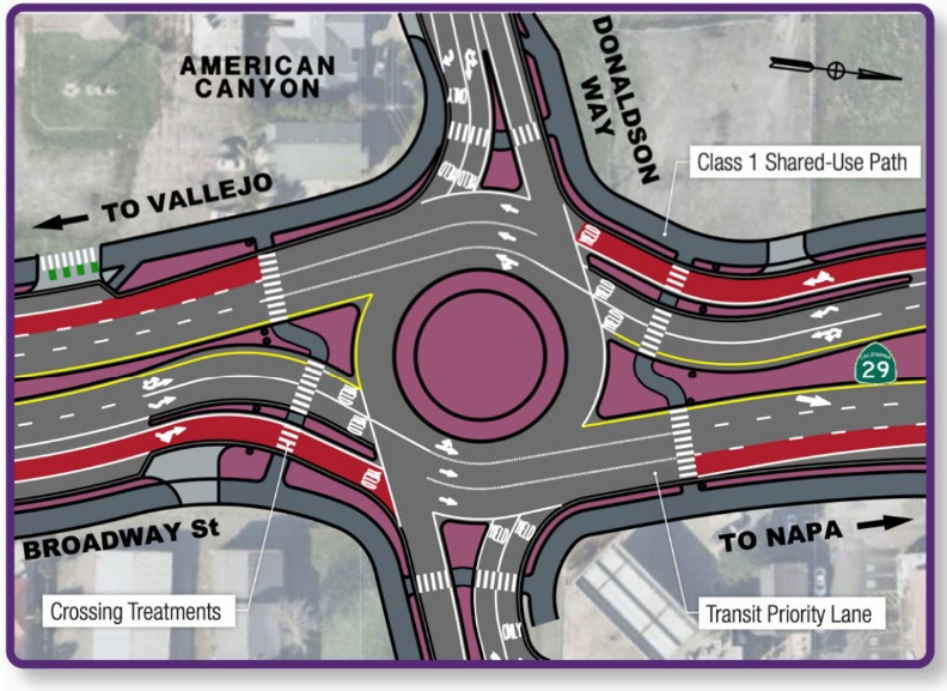
Alternative #2 Advantages

- **Injury collision reduction potential**
  - Alternative 2 carries higher crash reduction potential
- **Local/public preference**
  - General sentiment from public workshop was a preference for roundabouts
  - Roundabout carry a public perception of improved traffic flow

- **Alternative #2 Supports**
  - Potentially reduced incidence of collision
  - Improved mobility for all modes (including bikes/pedestrians)



ALTERNATIVE 2 - ROUNDABOUTS

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LOS Table with No Build Conditions

Expanded Intersection Level of Service (LOS)							
		No Build Alternative		Alternative 1 - Signals		Alternative 2 - Roundabouts	
Level of Service During Peak Period	*Existing Conditions 2025 AM (PM)*	*Opening Year 2030 AM (PM)*	*Design Year 2050 AM (PM)*	*Opening Year 2030 AM (PM)*	*Design Year 2050 AM (PM)*	*Opening Year 2030 AM (PM)*	*Design Year 2050 AM (PM)*
Crawford Way	B(F)	F(F)	F(E)	C (B)	B (B)	B (C)	C (E)
Donaldson Way	C(C)	D(C)	F(D)	C (C)	C (D)	F (E)	F (F)
Poco Way/S Napa Junction Rd	E(D)	F(E)	F(F)	A (D)	A (F)	F (C)	F (E)
Rio Del Mar	C(B)	D(C)	F(F)	C (D)	E (D)	F (D)	F (F)
Eucalyptus Dr	B(B)	B(B)	F(F)	A (C)	E (E)	F (E)	F (F)
Napa Junction Rd	D(E)	D(F)	F(F)	D (C)	D (D)	F (E)	F (F)

LOS Key			Average Delay (seconds/vehicle)	
			Signalized	Unsignalized
Acceptable LOS	A-B-C	Acceptable	0-25	0-25
	D	At Capacity	35-55	25-35
Unacceptable LOS	E	Poor	55-80	35-50
	F	Failure	>80	>50

Traffic Modeling Methodology

- Regional Model Covers All Counties.
  - Focused on Solano and Napa Counties
- Project specific Sub-Area to capture major changes in land use and traffic circulation.
- Model also includes the City of American Canyon General Plan changes and growth projections.
  - i.e. Watson Ranch Development
- Developed regional and local volumes.

Solano Napa Area Base Model (SNABM)
Sub-Area Mode
(Focus on Project Study Area)