

HIGHWAY 29 GATEWAY CORRIDOR IMPROVEMENT PLAN

Caltrans Draft Concepts Review

October 2, 2013, 2-5pm

AGENDA

1. Introductions
2. Project Overview
3. Review and Discuss Draft Concepts:
 - Northern Vallejo
 - Central American Canyon
 - Northern American Canyon
 - Unincorporated Napa County - Jameson
 - Unincorporated Napa County - Soscol
 - Unincorporated Napa County - Carneros
4. Next Steps
5. Adjourn

**SR29 Gateway Corridor Improvement Plan
Staff Meeting with Caltrans and Staff Working Groups representatives
October 2, 2013, 2:00- 5:00 pm**

Participants

City of American Canyon

Dana Shigley, City Manager
Jason Holley, Public Works
Brent Cooper, Community Development

City of Napa

Jason Holley, Public Works

Napa County

Rick Marshall, Public Works

NCTPA

Eliot Hurwitz, Program Manager for Planning, Project Manager
Sophie Martin, Consultant (Dyett & Bhatia), Project Manager
Rajeev Bhatia, Consultant (Dyett & Bhatia)
Steve Crosley, Consultant (Fehr & Peers)

Caltrans

Dan McElhinney, Chief Deputy District Director
Sean Nozzari, Deputy District Director, Traffic Operations
Stephen Yokoi, Chief, Office of Regional Planning
Roland Au-Yeung, Chief, Office of Traffic
David Seriani, Chief, Highway Operations
Jean Finney, Chief, Office of Transit and Community Planning
Ina Gerhard, Office of Systems Planning
Hung Q. Tran, Office of Traffic
Sergio Ruiz, Office of Planning
Evelyn Gestuvo, Highway Operations
Ahmad Rahimi, Project Management

NORTHERN VALLEJO: Existing

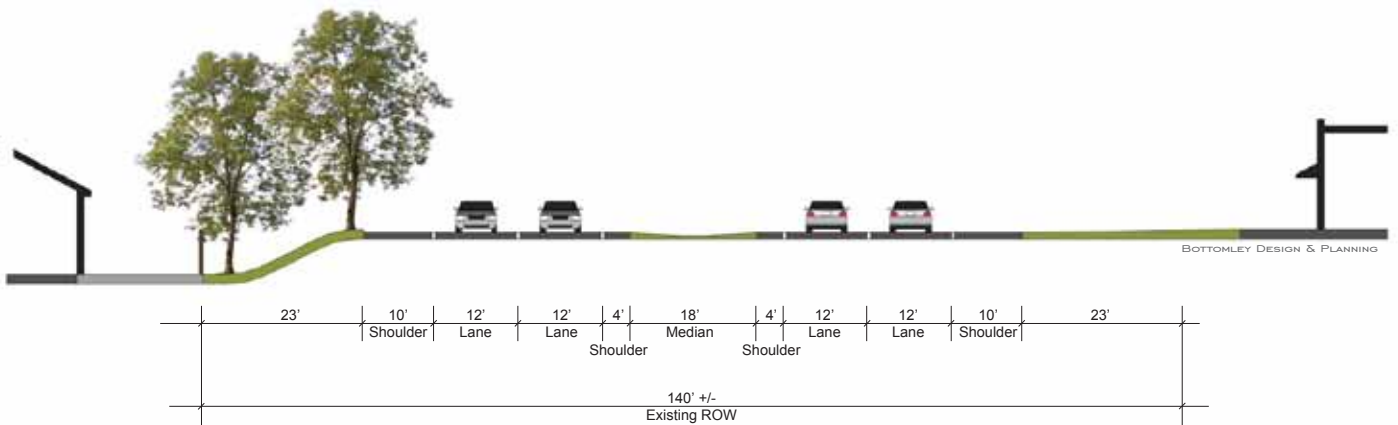
Existing Condition: SR 29/SR 37



Existing Condition: SR 29 between SR 37 and American Canyon Road

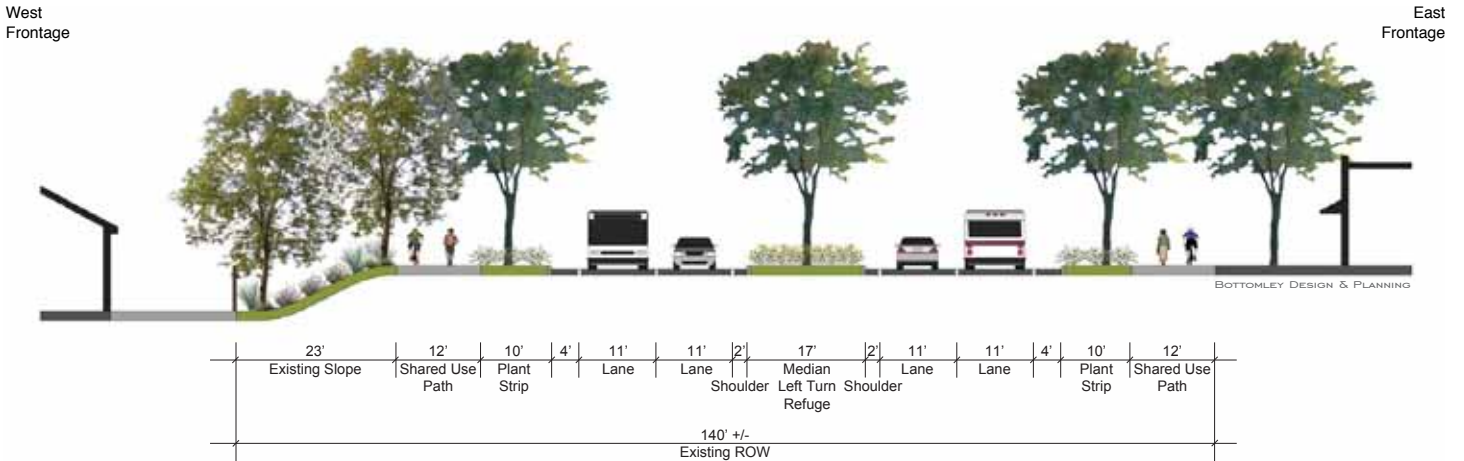
West Frontage

East Frontage



NORTHERN VALLEJO: Proposed

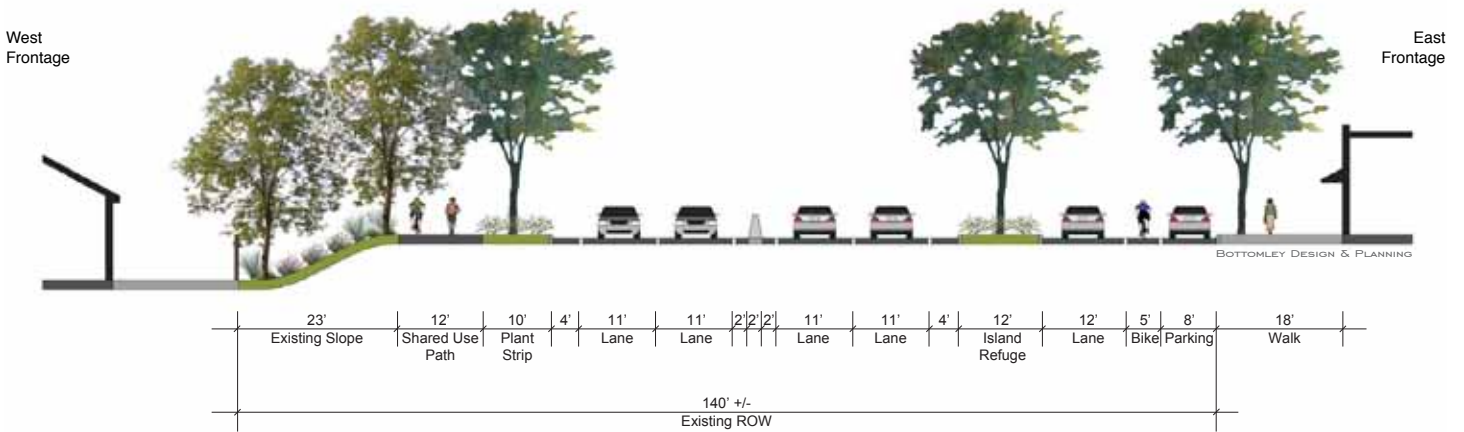
Option 1: Parkway



- 40mph
- 11' travel lanes allowed
- 8' right shoulder required; 4' requires design exception
- 2' left shoulder required

- 12' shared use paths
- 10' planting strips
- 17' median allows for left turn lane + pedestrian refuge at intersections
- Large trees require design exception or barrier curb

Option 2: Southbound Parkway/Northbound Boulevard



- 40mph
- 11' travel lanes allowed
- 8' right shoulder required; 4' requires design exception
- 2' left shoulder required

- 12' shared use path w/ 10' planting strip
- 12' frontage island with pedestrian refuge
- Pedestrian refuge at center median may or may not be feasible
- Large trees require design exception or barrier curb
- Possible variation: add southbound contraflow bike lane to local frontage way

Design/Operational Notes

- For Option 2, NB local access lane begins with slip lane north of intersection to Mini Drive
- No major changes to intersection operations at SR 37 under either scenario

SR 29/SR 37 Intersection Performance

Scenario	AM LOS	PM LOS
Existing	A	B
Future (4 Lane)	B	B
Future (4 Lane with NB Blvd)	B	B

CENTRAL AMERICAN CANYON: Existing

Existing Conditions

SR 29/American Canyon Road



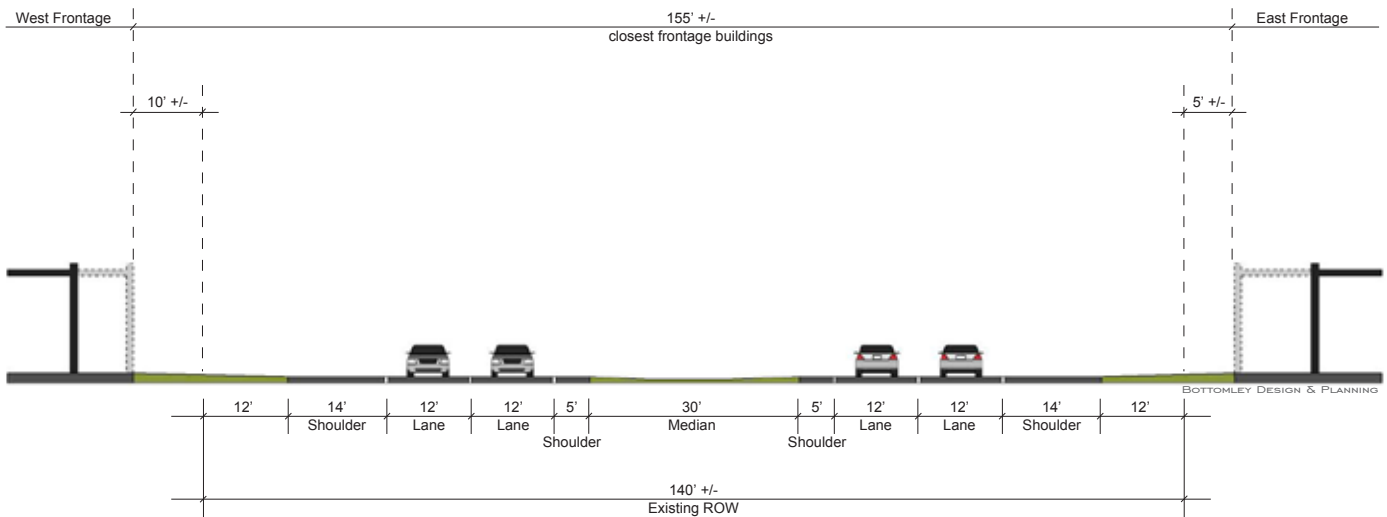
SR 29/Donaldson Way



SR 29/Napa Junction Road

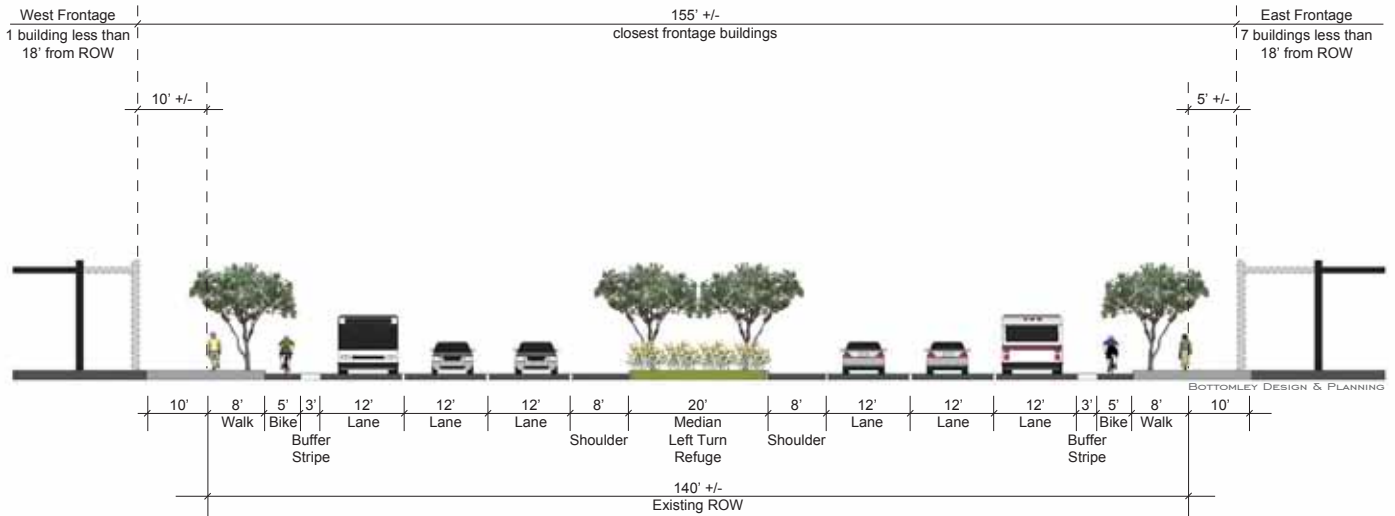


Existing Condition: SR 29 between American Canyon Road and Donaldson Way



CENTRAL AMERICAN CANYON: Proposed

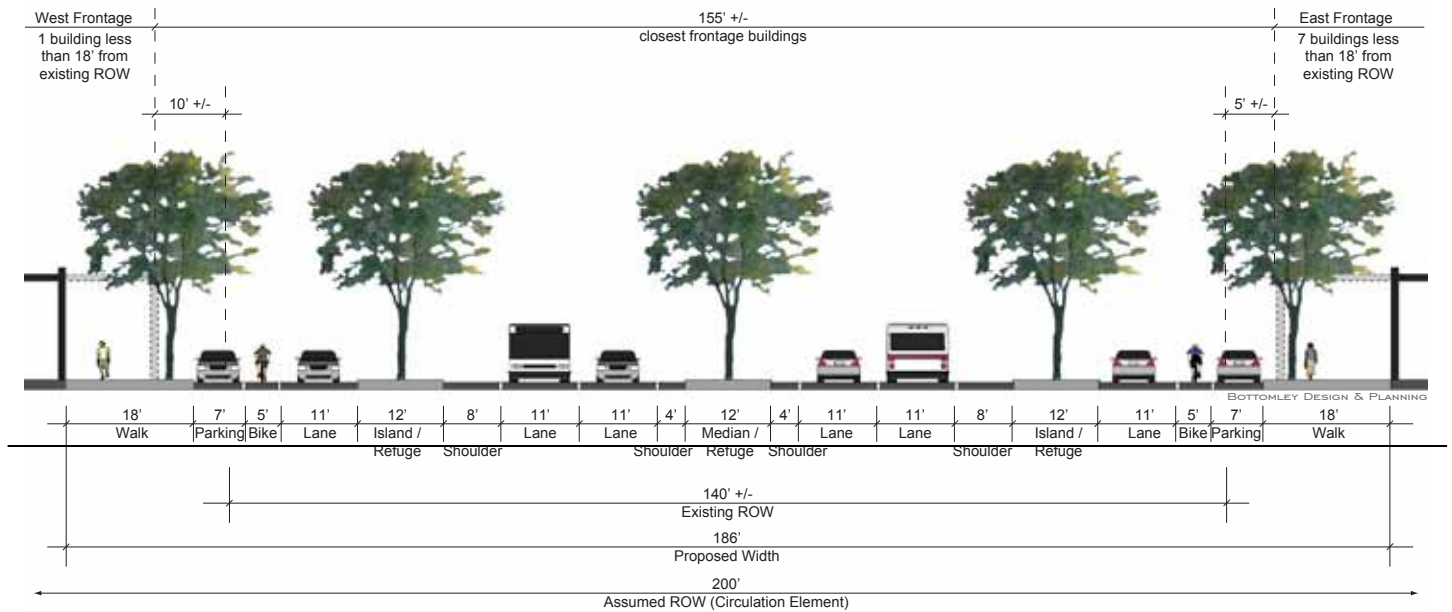
Option 1: 6-Lane Highway



- 55mph
- 12' travel lanes required
- 5' bike lane allowed
- 8' right shoulder required; bike lane allowed in shoulder
- 8' left shoulder required

- Small trees only; large sidewalk and median trees only allowed with approval of Caltrans Design Coordinator and concurrence of Caltrans Headquarters Traffic Liaison
- 10' setback required to provide 18' boulevard sidewalk

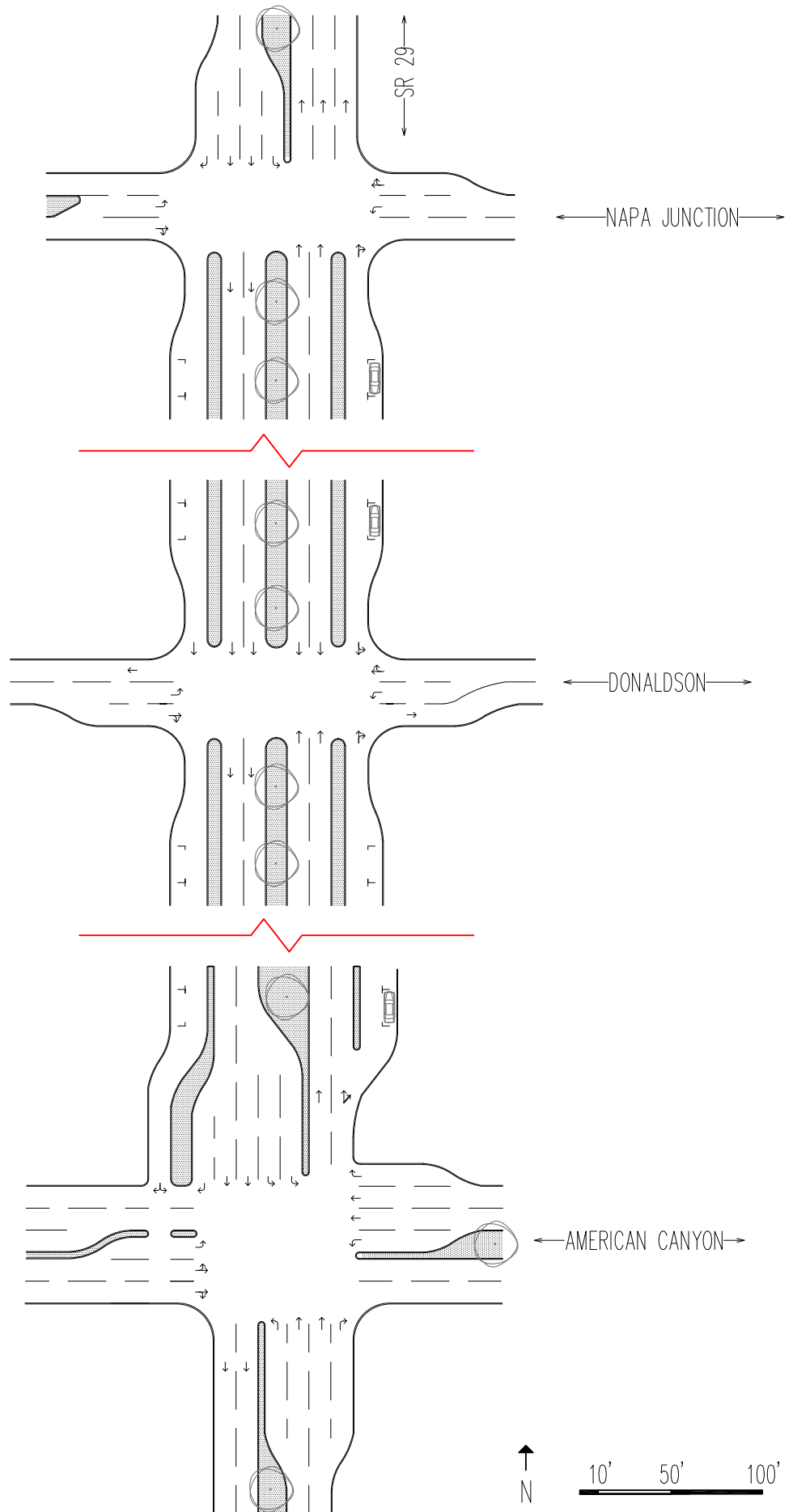
Option 2: Boulevard (4 Through Lanes, 2 Local Access Lanes)



- 40mph
- 11' travel lanes allowed
- 5' bike lane allowed
- 8' right shoulder
- 4' left shoulder

- 12' setback required to provide 18' boulevard sidewalk
- 12' islands with pedestrian refuges
- 12' median with pedestrian refuge
- Large trees may require barrier curb
- Left turn from frontage road
- Possible variation: add contraflow bike lanes to local frontage ways

CENTRAL AMERICAN CANYON: Proposed



CENTRAL AMERICAN CANYON: Proposed

Design/Operational Notes

- 6-lane configuration improves LOS to acceptable conditions at SR 29/American Canyon Road intersection and along corridor
- Boulevard with local access lanes in both direction is functional at lower volume intersections (Donaldson, Rio Del Mar, Eucalyptus)
- At major intersections (American Canyon Road, Napa Junction Road), Boulevard configuration does not perform adequately due to larger turning movements
- At American Canyon Road, local access lane SB ends at American Canyon; NB local access begins with a slip lane
- At Napa Junction Road, Boulevard begins with southbound local access just south of the intersection

SR 29/American Canyon Road Intersection Performance

Scenario	AM LOS	PM LOS
Existing	E	D
Future (4 Lane Highway)	E	E
Future (6 Lane Highway)	D	D
Future (4 Lane Blvd)	E	F

SR 29/Donaldson Road Intersection Performance

Scenario	AM LOS	PM LOS
Existing	C	C
Future (4 Lane Highway)	D	C
Future (6 Lane Highway)	C	C
Future (4 Lane Blvd)	C	D

SR 29/Napa Junction Road Intersection Performance

Scenario	AM LOS	PM LOS
Existing	E	B
Future (4 Lane Highway)	F	F
Future (6 Lane Highway)	D	C
Future (4 Lane Blvd)	F	F

NORTHERN AMERICAN CANYON: Existing

Existing Conditions

SR 29/Green Island Road

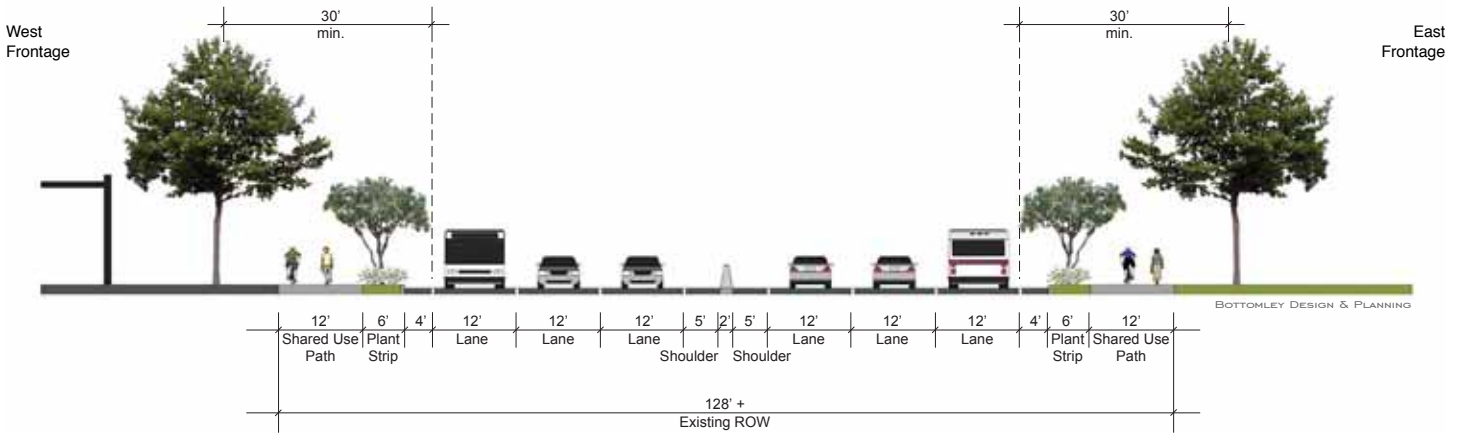


SR 29/South Kelly Road



NORTHERN AMERICAN CANYON: Proposed

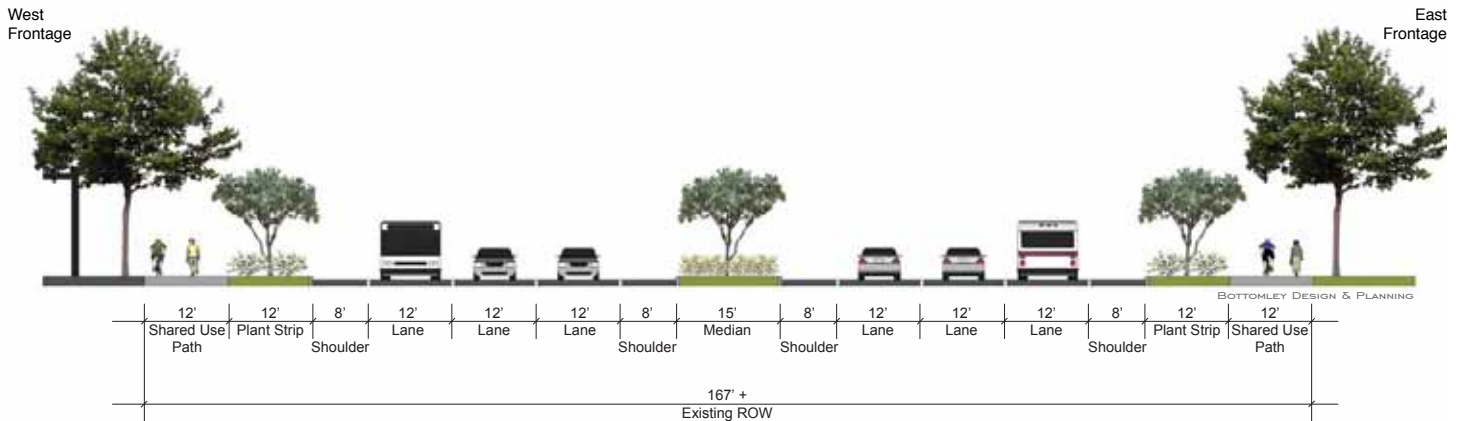
6-Lane Parkway: Green Island Road to South Kelly



- 55mph
- 12' travel lanes required
- 8' right shoulder required; 4' requires design exception
- 8' left shoulder required; 5' requires design exception

- 12' shared use paths
- 6' planting strips
- Pedestrian refuge at intersections may or may not be feasible
- Small trees only; large frontage trees only allowed within 30' of travel lane with approval of Caltrans Design Coordinator and concurrence of Caltrans Headquarters Traffic Liaison

6-Lane Parkway: South Kelly to SR 12



- 55mph
- 12' travel lanes required
- 8' right shoulder required
- 8' left shoulder required

- 12' shared use paths
- 12' planting strips
- Pedestrian refuge at intersections should be feasible
- Small trees only; large frontage and median trees only allowed with approval of Caltrans Design Coordinator and concurrence of Caltrans Headquarters Traffic Liaison

Design/Operational Notes

- 6-lane parkway with landscaping, shared use path in ROW, maintaining rural character and access to adjacent parcels
- Per American Canyon Circulation Element, no full intersection at Green Island Road
- 6-lane configuration greatly improves future LOS at South Kelly Road intersection to acceptable conditions

SR 29/South Kelly Road Intersection Performance

Scenario	AM LOS	PM LOS
Existing	C	B
Future (4 Lanes)	F	F
Future (6 Lanes)	C	C

UNINCORPORATED NAPA/JAMESON CANYON: Existing

Existing Condition: SR 29/Airport Boulevard/Jameson Canyon Road

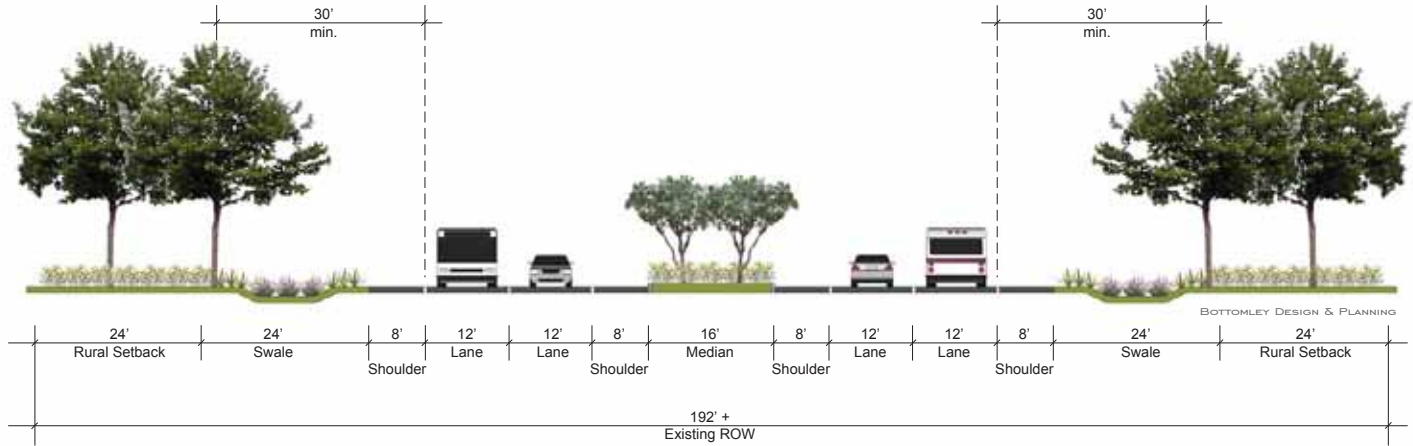


UNINCORPORATED NAPA/JAMESON CANYON: Proposed

4-Lane Rural Highway: SR 12 to SR 221 (Soscol Flyover)

West Frontage

East Frontage



- 55mph
- 12' travel lanes required
- 8' right shoulder required
- 8' left shoulder required

- 24' planting strips / bioswales
- 16' median allows for left turn lane and pedestrian refuges at intersections
- Small trees only; large frontage trees only allowed within 30' of travel lane with approval of Caltrans Design Coordinator and concurrence of Caltrans Headquarters Traffic Liaison

Proposal for SR 29/Airport/Jameson Canyon Intersection: Tight Diamond Interchange



Operational Notes

- Alternative modes: vision is to provide a separated trail system (Vine Trail) paralleling corridor
- Future diamond interchange configuration:
 - NB/SB free-flow
 - EB on-ramp to NB 29/WB on-ramp to SB 29 free-flow
 - Signals at off-ramps and Jameson Canyon
- Other configuration tested: Single-Point Urban Interchange
 - Does not perform notably better than Diamond
 - See next page for illustrations

SR 29/Airport/Jameson Canyon Intersection Performance

Scenario	AM LOS	PM LOS
Existing	A	B
Future (Diamond Interchange)	C*	F*
Future (4 Lane with NB Blvd)	C	F

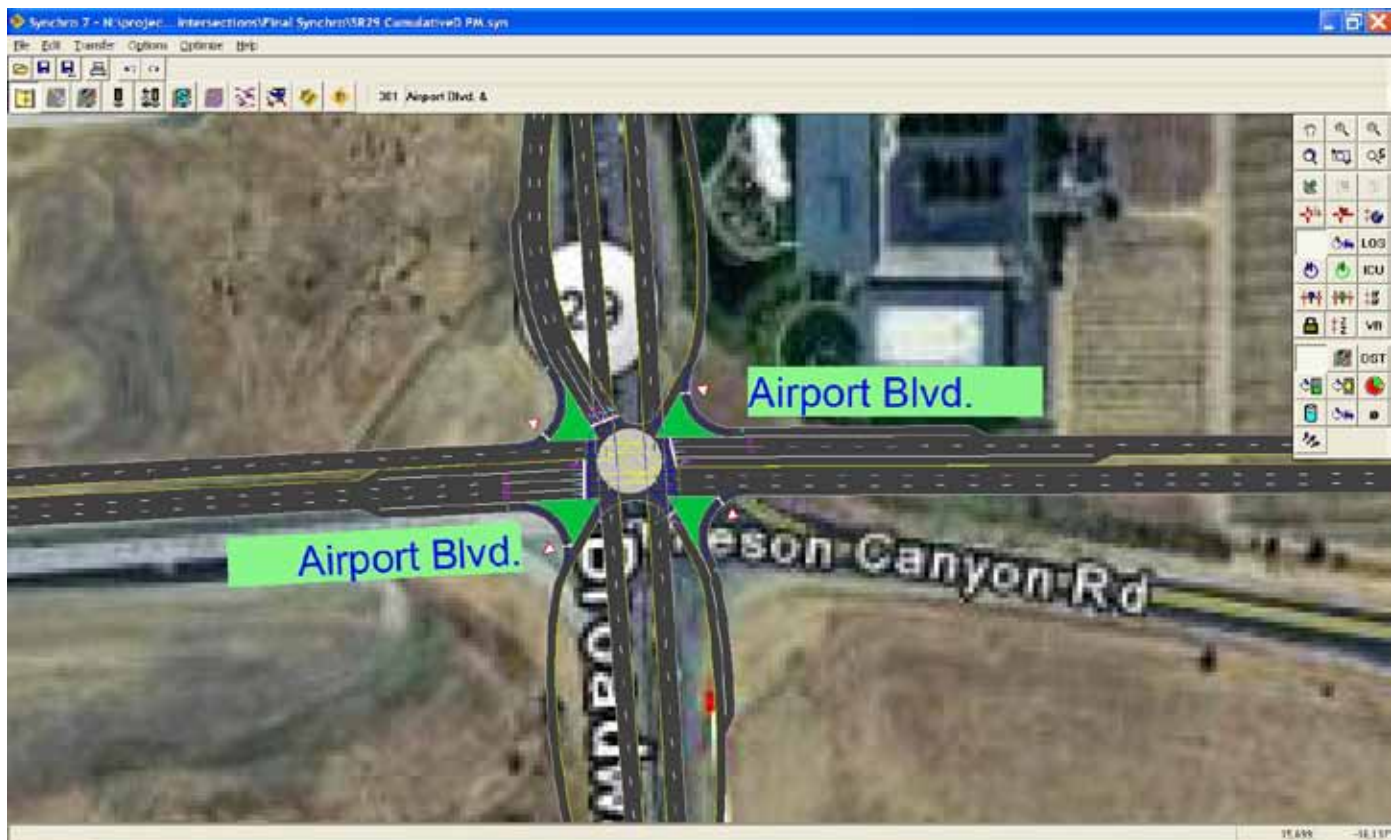
* Weighted average

UNINCORPORATED NAPA/JAMESON CANYON: Proposed

Tested Option 1: Diamond Interchange



Tested Option 2: Single-Point Urban Interchange



UNINCORPORATED NAPA/SOSCOL: Existing

Existing Condition: SR 29/SR 221/SR 12

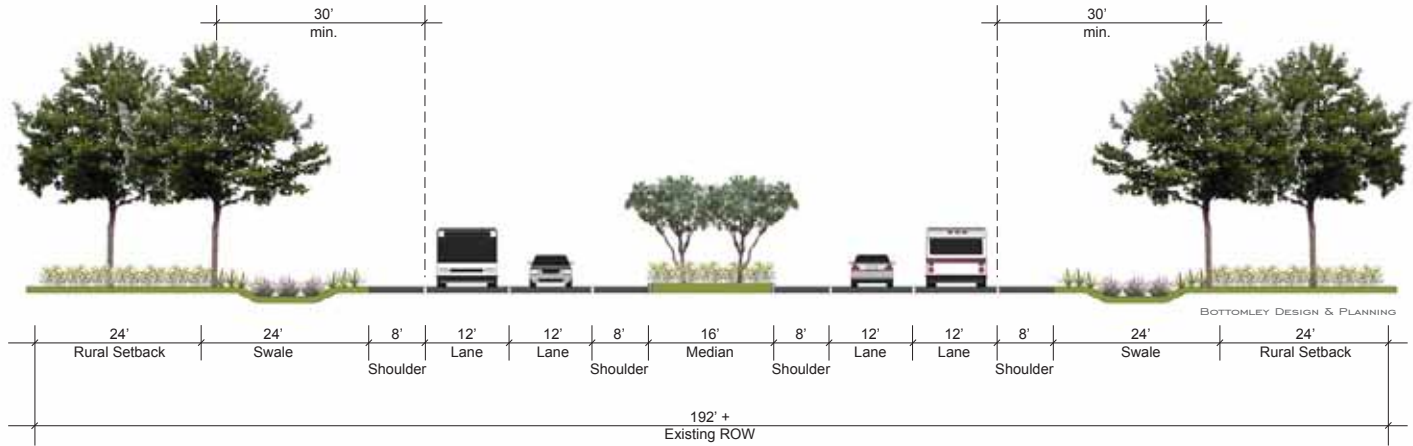


UNINCORPORATED NAPA/SOSCOL: Proposed

4-Lane Rural Highway from SR 221 to SR 121

West Frontage

East Frontage



- 55mph
- 12' travel lanes required
- 8' right shoulder required
- 8' left shoulder required

- 24' planting strips / bioswales
- 16' median allows for left turn lane and pedestrian refuges at intersections
- Small trees only; large frontage trees only allowed within 30' of travel lane with approval of Caltrans Design Coordinator and concurrence of Caltrans Headquarters Traffic Liaison

Design/Operational Notes

- Rural highway character similar to that proposed for area between Napa Junction and Jameson Canyon, with separated trail system parallel to corridor
- Caltrans completing Draft EIR for intersection improvements; considering two alternatives:
 - SB flyover only (SR 221 to SR 29)
 - Fully grade-separated interchange; Soscol Ferry Road right in/right out only

SR 29/SR 221/SR 12 Intersection Performance

Scenario	AM LOS	PM LOS
Existing	F	F
Future (Flyover Only)	F	F
Future (Caltrans Preferred)	A	A

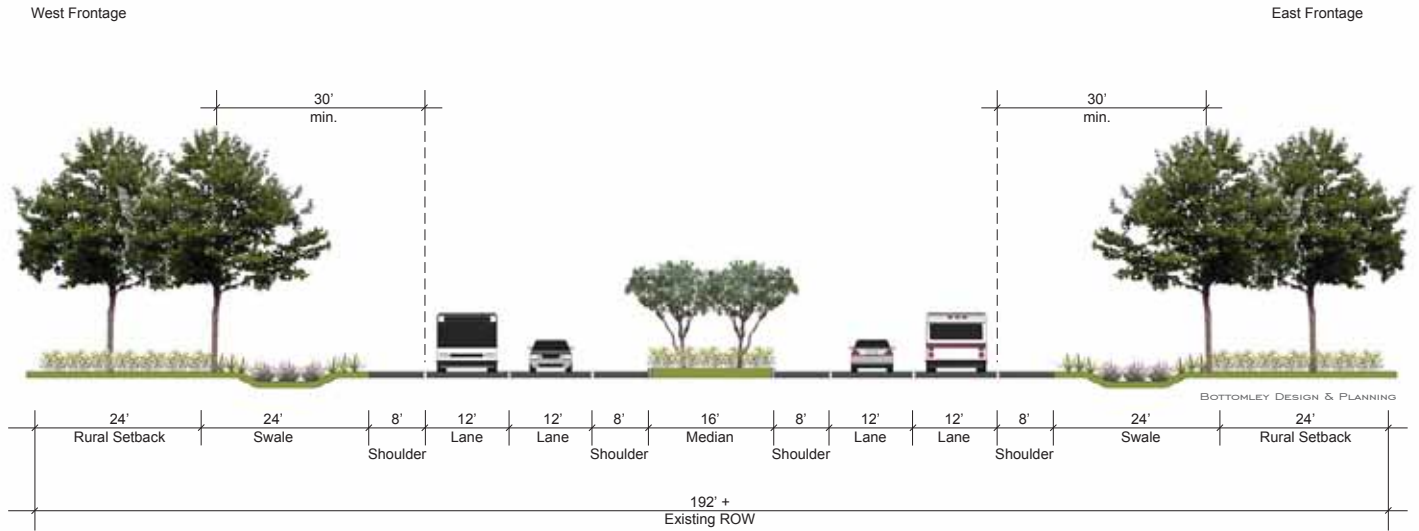
UNINCORPORATED NAPA/CARNEROS: Existing

Existing Condition: SR 29/SR 121/SR 12



UNINCORPORATED NAPA/CARNEROS: Proposed

4-Lane Rural Highway from SR 121 to Freeway Section in City of Napa



- 55mph
- 12' travel lanes required
- 8' right shoulder required
- 8' left shoulder required

- 24' planting strips / bioswales
- 16' median allows for left turn lane and pedestrian refuges at intersections
- Small trees only; large frontage trees only allowed within 30' of travel lane with approval of Caltrans Design Coordinator and concurrence of Caltrans Headquarters Traffic Liaison

Design/Operational Notes

- Rural highway character similar to that proposed for area south, with separated trail system parallel to corridor
- Caltrans has considered various intersection/interchange designs but there is no adopted/accepted improvement strategy. Options include:
 - Channelization
 - Roundabout
 - Fully grade-separated interchange
- Channelization details:
 - Northbound thru movement on SR 29 moves freely, eastbound left movement on SR 12 merges via a slip lane into the northbound direction, and free eastbound right movement is reintroduced
 - Still performs at LOS F in both peak hours in future, but with average delay reduced by over 60 seconds

SR 29/SR 121/SR 12 Intersection Performance

Scenario	AM LOS	PM LOS
Existing	D	D
Future (4 lanes)	F	F
Future (Channelization)	F	F

SR 29/SR 121/SR Future Peak Hour LOS and Delay

Peak Hour	Standard 4-lane Configuration	With Channelization
AM	F, 204s avg delay	F, 119s avg delay
PM	F, 161s avg delay	F, 87s avg delay