



Northbound US-101 to Eastbound I-580 Direct Connector

Stakeholder Working Group Meeting #3
August 25, 2020, 3pm



Zoom Protocols & Meeting Guidelines

Zoom Meeting Protocols

- Everyone will be put on **Mute** to reduce background sounds. Meeting Host will unmute you when it is your turn to speak.
- During Presentations
 - The team will organize and moderate **clarifying questions** about presentation content.
 - Everyone: Use the **Chat to Panelists** feature to ask clarifying questions.
 - If you have **comments about the project**, please hold them until discussion or public comment.
- During Discussion
 - Stakeholder Working Group members can **Raise Hand** to ask questions/make comments.
- During Public Comment
 - Public participants can **Raise Hand** to provide comments.

Meeting Guidelines

- Please be concise, this is a challenging format for discussion
- Be honest and constructive, build on the ideas of others

Meet the TAM 101-580 Team

Transportation Authority Marin

- Anne Richman, Executive Director
- Dan Cherrier, Principal Project Delivery Manager
- Connie Fremier, Project Manager
- Molly Graham, Public Outreach Coordinator

Consulting Team

- Chadi Chazbek, Project Manager, Kimley-Horn
- Sean Mayer, Deputy Project Manager, Kimley-Horn
- Charles Gardiner, Facilitator, Catalyst Group
- Mary Currie, Outreach Manager, Catalyst Group

Stakeholder Working Group

Joanne Webster	Business	San Rafael Chamber of Commerce
Dave Troup	Transit Rider	Bus Passenger Advisory Committee
Betsy Swenerton	Community	Bret Harte Community Assoc
Jim Rosenfield/Libby Schenkel/Elaine Lin	Business	Marin Country Mart
Kate Powers	Environmental	Marin Conservation League
Stephanie Plante	Business	East San Rafael Working Group
Dave Pedroli	Community	San Rafael City Schools
Douglas Mundo	Community	Multicultural Center of Marin
Becky Kitteridge	Commuter	East Bay to/from Larkspur
Wendi Kallins	Environmental	Sustainable Marin
Jon Horinek	Community	College of Marin
Kevin Hagerty	Community	League of Women Voters
Bjorn Gripenburg	Bike & Pedestrian	Marin County Bicycle Coalition
Air Gallegos	Commuter	East Bay to/from San Rafael
Jim Draper	Community	Federation of San Rafael Neighborhoods
Julie Cervetto	Business	Larkspur Chamber of Commerce
Omar Carrera	Community	Canal Alliance
Jerry Belletto/Linda Jackson	Environmental	Sustainable San Rafael
Michele Barni	Community	Pt. San Quentin Village Homeowners Association
DJ Allison	Bike & Pedestrian	San Rafael Bicycle & Pedestrian Advisory Committee

Agenda for Today's Meeting

1. Overview of Today's Agenda and Goals (5 minutes)
2. Recap of What We Heard at SWG #2 (5 minutes)
3. Bellam Boulevard Bike/Pedestrian Options (40 minutes)
 - SWG Discussion
4. Project Alternatives (50 minutes)
 - Summary of Alternatives Information from SWG#2
 - Visual Renderings of Alternatives
 - Clarification of Alternatives 3A and 3B Design and Traffic Flows
 - New Information for Alternatives Comparison - Preliminary Right of Way (Property) & Environmental Assessment
 - SWG Discussion
5. Public Comment (10 minutes)
6. Topics for Virtual SWG Meeting #4 (5 minutes)

What We Heard at SWG Meeting #2

Key Issues, Considerations and Themes from SWG 2

For All Alternatives

- Clarify and compare travel times for alternatives
- Evaluate impacts to East San Rafael neighborhoods as well as San Quentin Village
- Provide additional information regarding environmental, aesthetics, economic, and community impacts and how these elements will be evaluated
- Clarify enhancements to Bellam Blvd., e.g., bike and pedestrian, traffic lanes, etc.
- Coordinate with other local planning efforts underway in East San Rafael

Hillside Area Alternatives 1A & 1B

- Provide additional information on environmental impacts

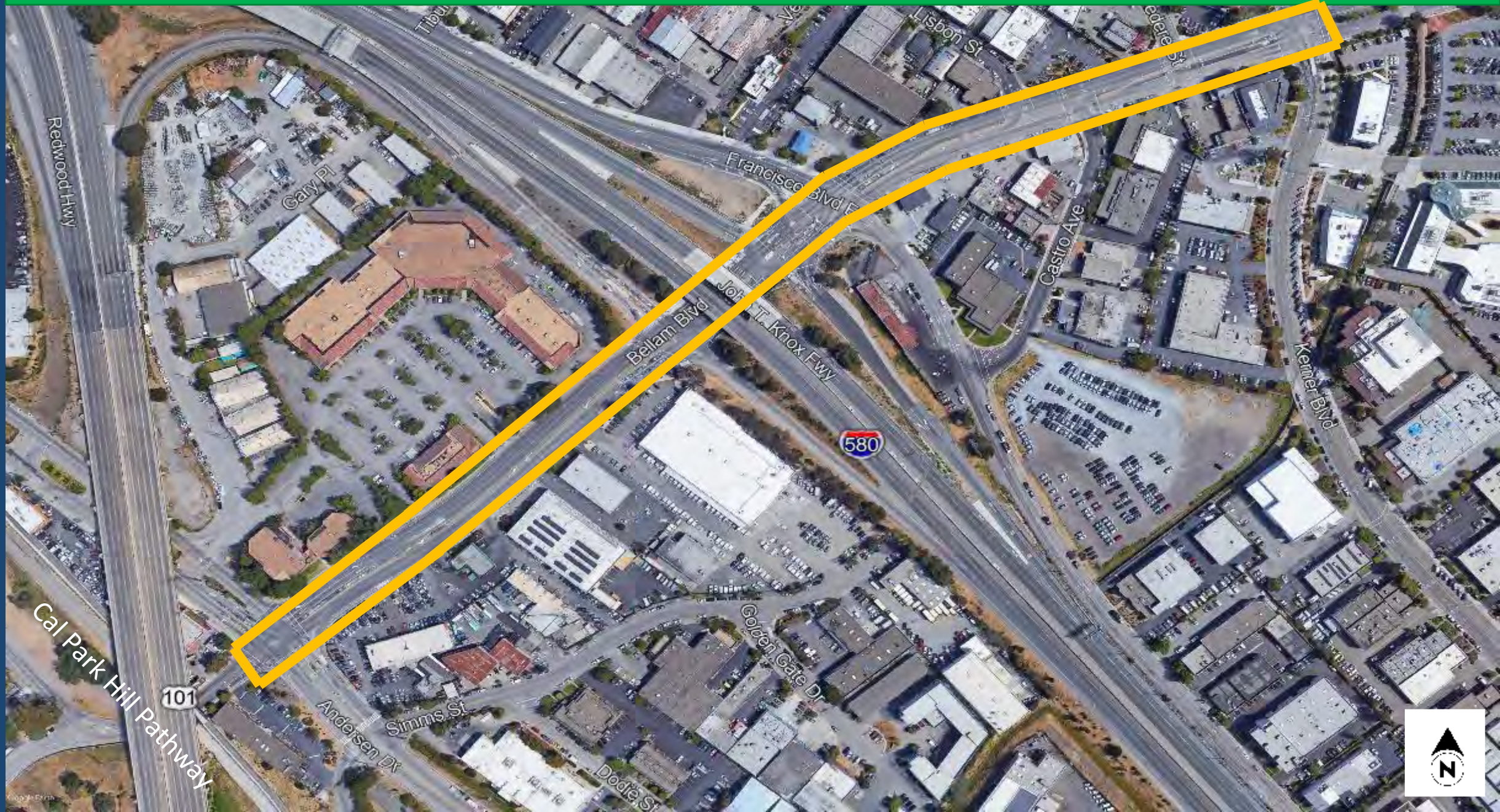
Bellam Area Alternatives 2, 3A, 3B, 4, 5

- Clarify access to East San Rafael with offramp closure from 580 to Bellam under Alts 3B & 4
- Provide more information on visual and community impacts with Alts 4 and 5
- Provide more information on property and economic impacts to East Rafael

Bellam Boulevard Improvements

Existing Conditions – Andersen Drive to Kerner Boulevard

NB US 101 to EB I-580 Direct Connector Project

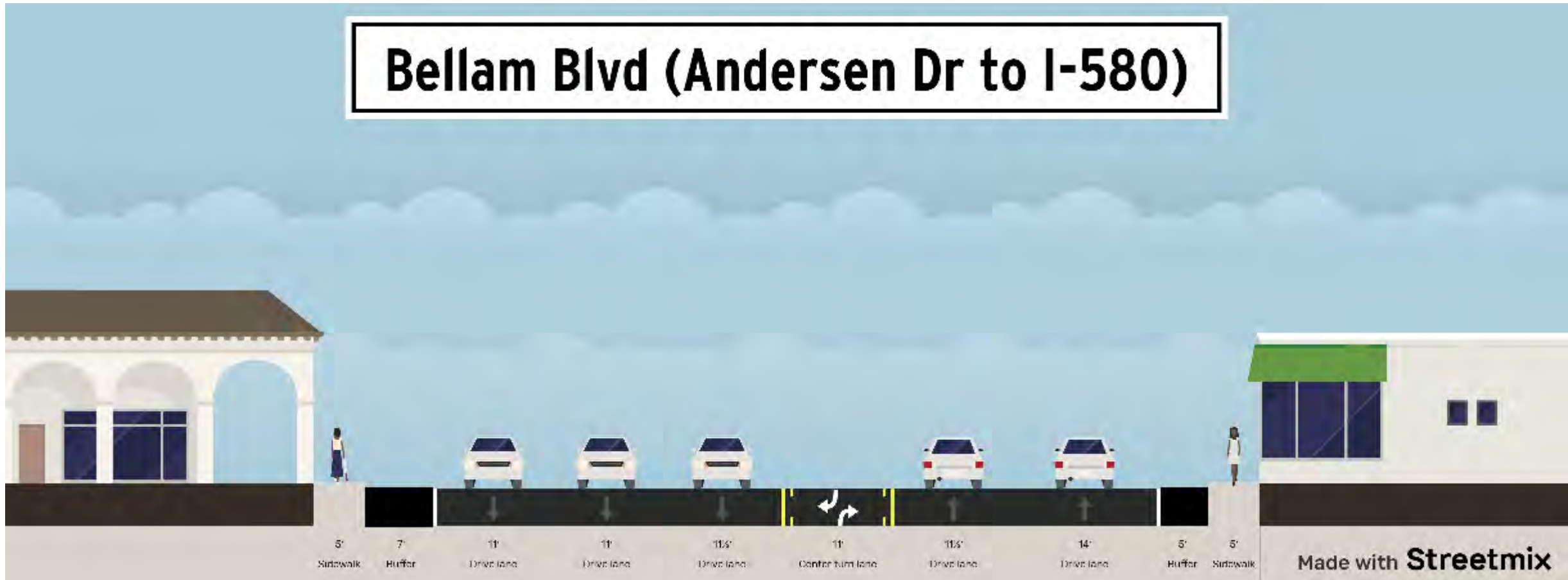


Existing Conditions – Andersen Drive to I-580



Existing Conditions - Looking East

Bellam Blvd (Andersen Dr to I-580)



Existing Conditions – Andersen Drive Intersection



LOOKING SOUTHEAST

Existing Conditions – Mid-Block on Bellam Boulevard



LOOKING EAST

Existing Conditions – I-580 WB On and Off Ramps

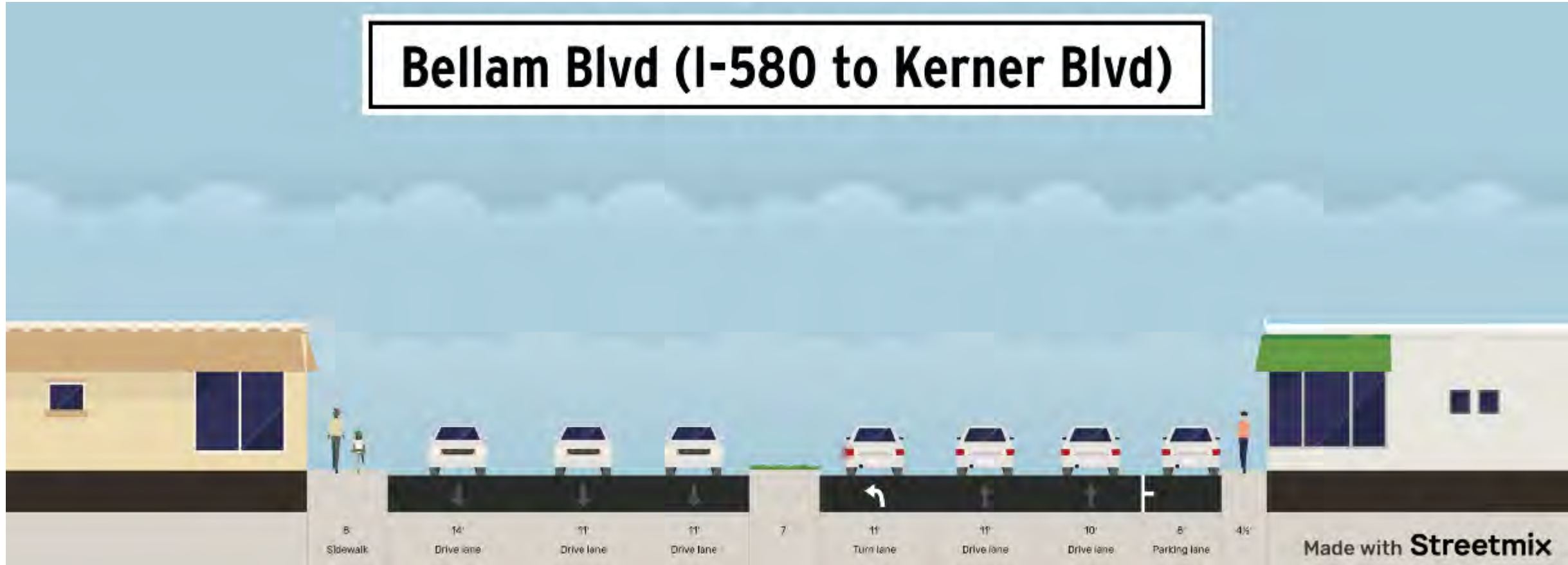


LOOKING EAST

Existing Conditions – I-580 to Kerner Boulevard



Existing Conditions - Looking East



Existing Conditions – I-580 Undercrossing



LOOKING EAST

Existing Conditions – Francisco Blvd. East and I-580 EB Ramps



LOOKING WEST

Existing Conditions – Mid-Block on Bellam Boulevard



LOOKING EAST

Existing Conditions – Kerner Boulevard Intersection

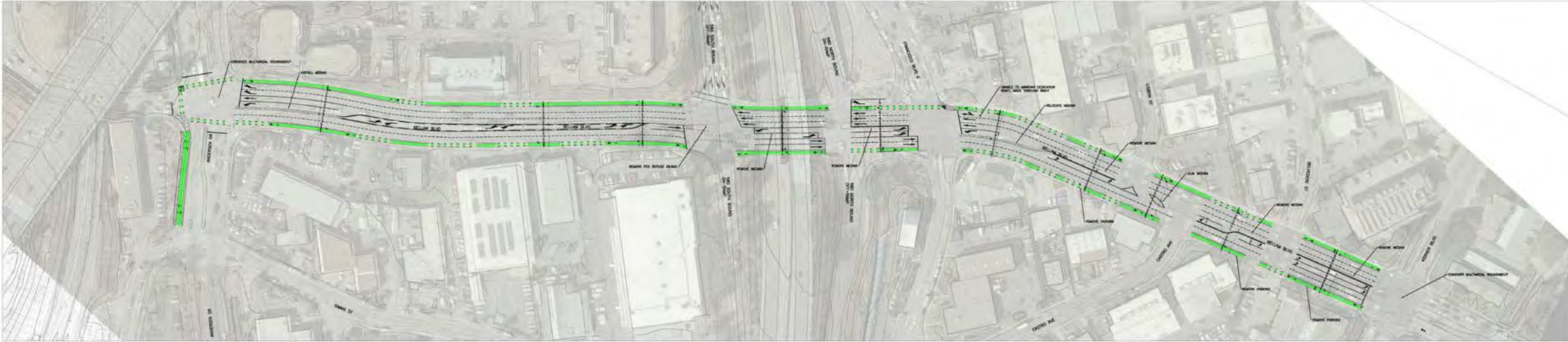


LOOKING EAST

Protected Bikeway Options Under Consideration

- Option 1: Directional Protected Bikeways
- Option 2: Two-way Protected Bikeway (North Side)
- Option 3: Simms/Castro Protected Bikeway and Bridge
- Note: All options would provide protected/separated bikeways and would include pedestrian enhancements

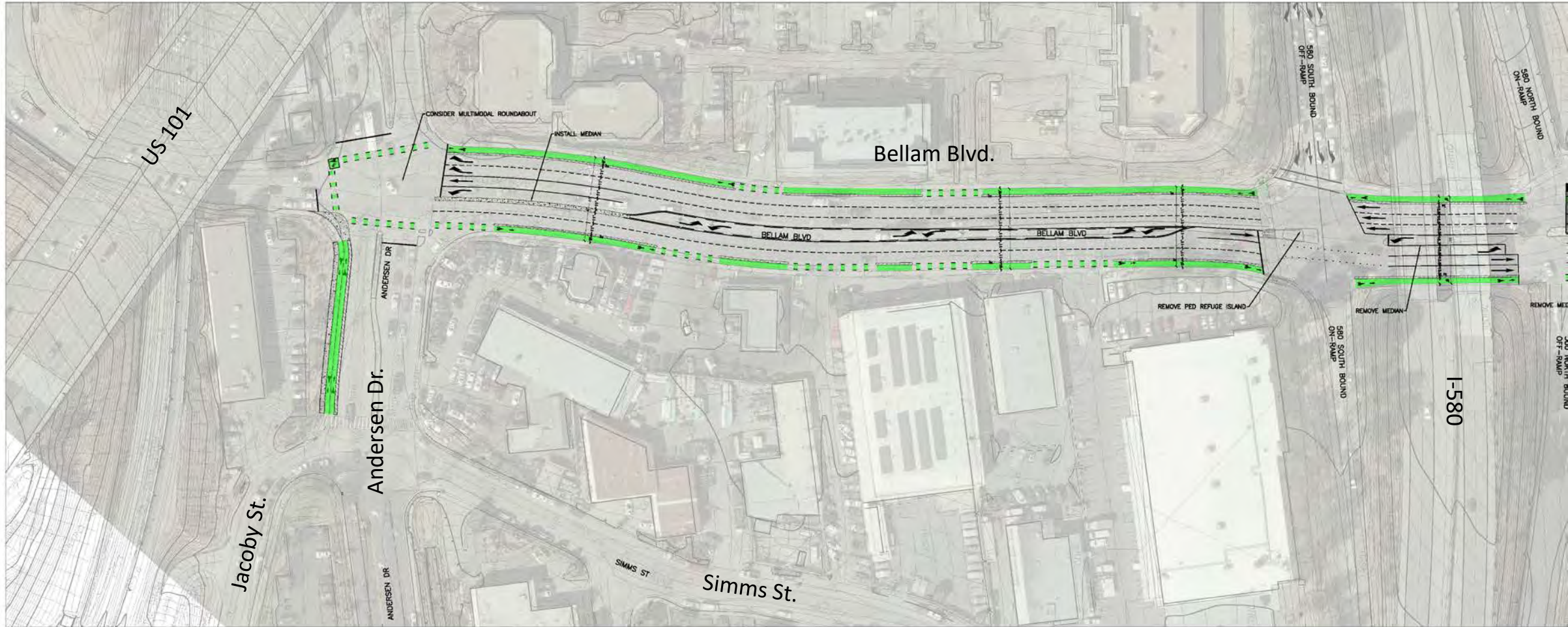
Option 1: Directional Protected Bikeways



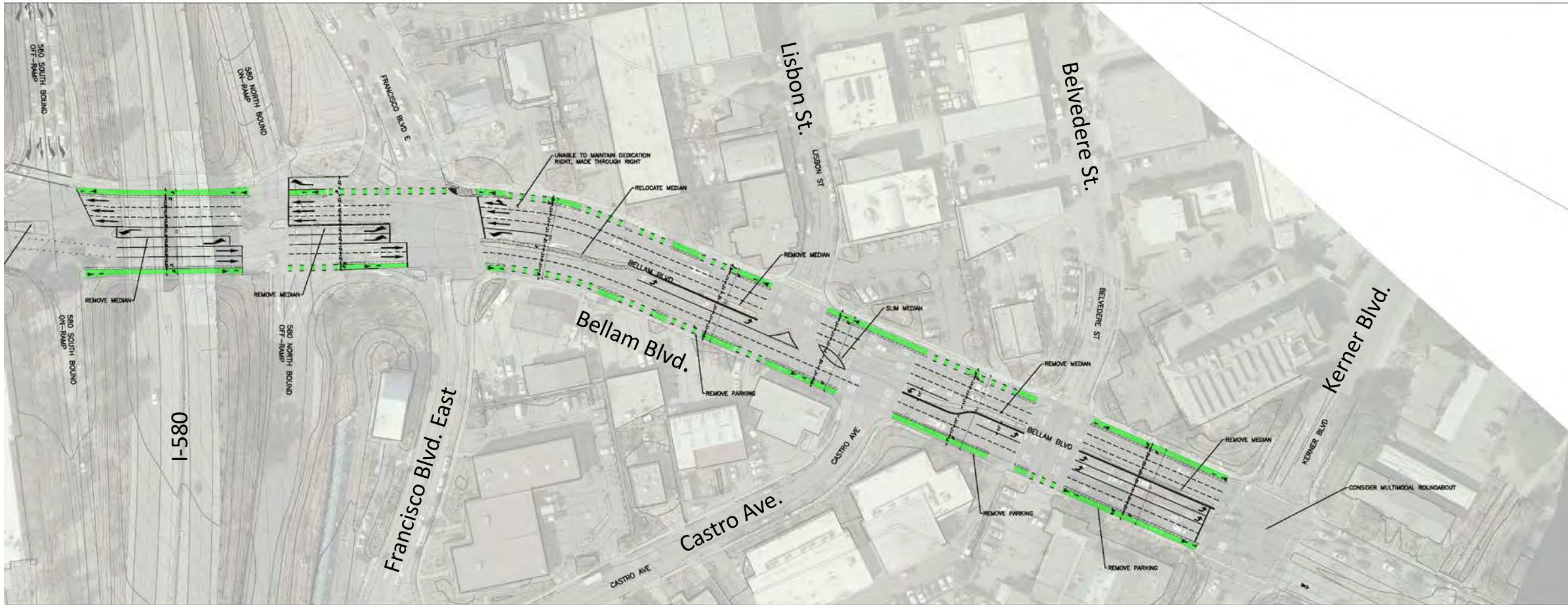
Option 1: Directional Protected Bikeways

- 2,200 feet between Andersen and Kerner
- Westbound bikeway would cross 8 driveways and 2 uncontrolled streets on north side of Bellam
- Eastbound bikeway would cross 9 driveways and 1 uncontrolled street on south side of Bellam
- Cyclists would travel in same direction as adjacent street traffic
- Various options for separating bicycle and vehicle traffic

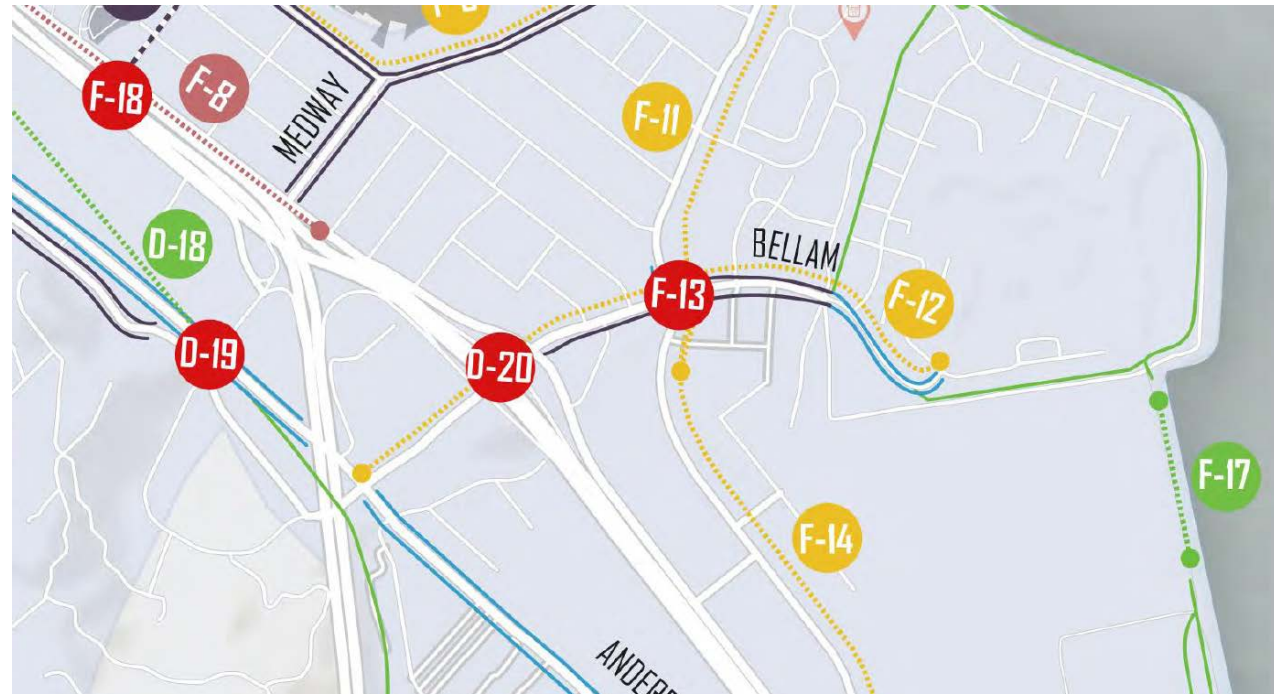
Option 1: Directional Protected Bikeways – Andersen Dr. to I-580



Option 1: Directional Protected Bikeways – I-580 to Kerner Blvd.



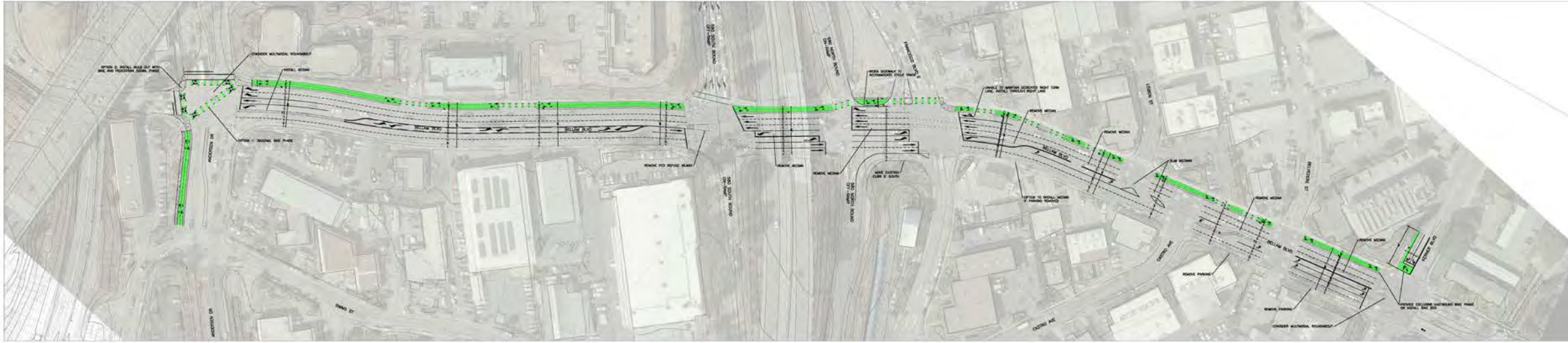
2018 Bicycle and Pedestrian Master Plan Update



Bellam Boulevard from Andersen Drive to Baypoint Drive

Study feasibility of Class IV protected bicycle facilities on Bellam Boulevard and Baypoint Village Drive corridor connecting to the San Francisco Bay Trail. Between Andersen Drive and Francisco Boulevard East, study potential for northside bikeway and widened sidewalk in conjunction with potential redevelopment Marin Square. Project is consistent with the proposed Highway 101 – I-580 flyover improvements in development by Caltrans and funded through Regional Measure 3.

Option 2: Two-way Protected Bikeway (North Side)



Option 2: Two-way Protected Bikeway

- 2,200 feet between Andersen and Kerner
- Two-way bikeway would cross 8 driveways and 2 uncontrolled streets on north side of Bellam
- Would require special traffic signal phasing at I-580 and Francisco Blvd. intersections, increasing vehicle congestion



Option 2: Two-way Protected Bikeway

NACTO* Guidance:

- Since some bicyclists would not travel in the same direction as adjacent automobiles, motorists may not be aware of their presence, leading to increased vulnerability at driveways and intersections
- To minimize conflicts associated with motor vehicles crossing two-way bikeways, these are more appropriate to areas with longer blocks and fewer driveways
- Two-way bikeways located on one-way streets have fewer potential driveway conflicts

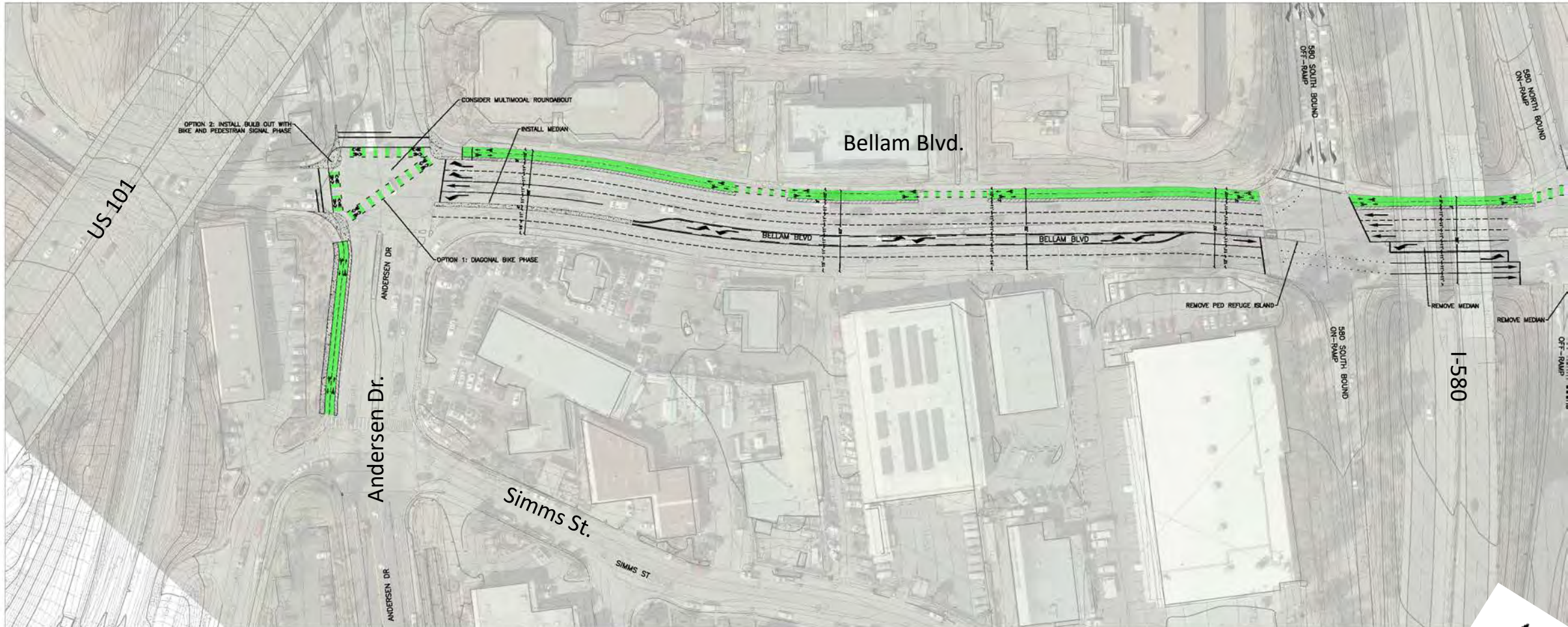
* *National Association of City Transportation Officials*

Option 2: Two-way Protected Bikeway

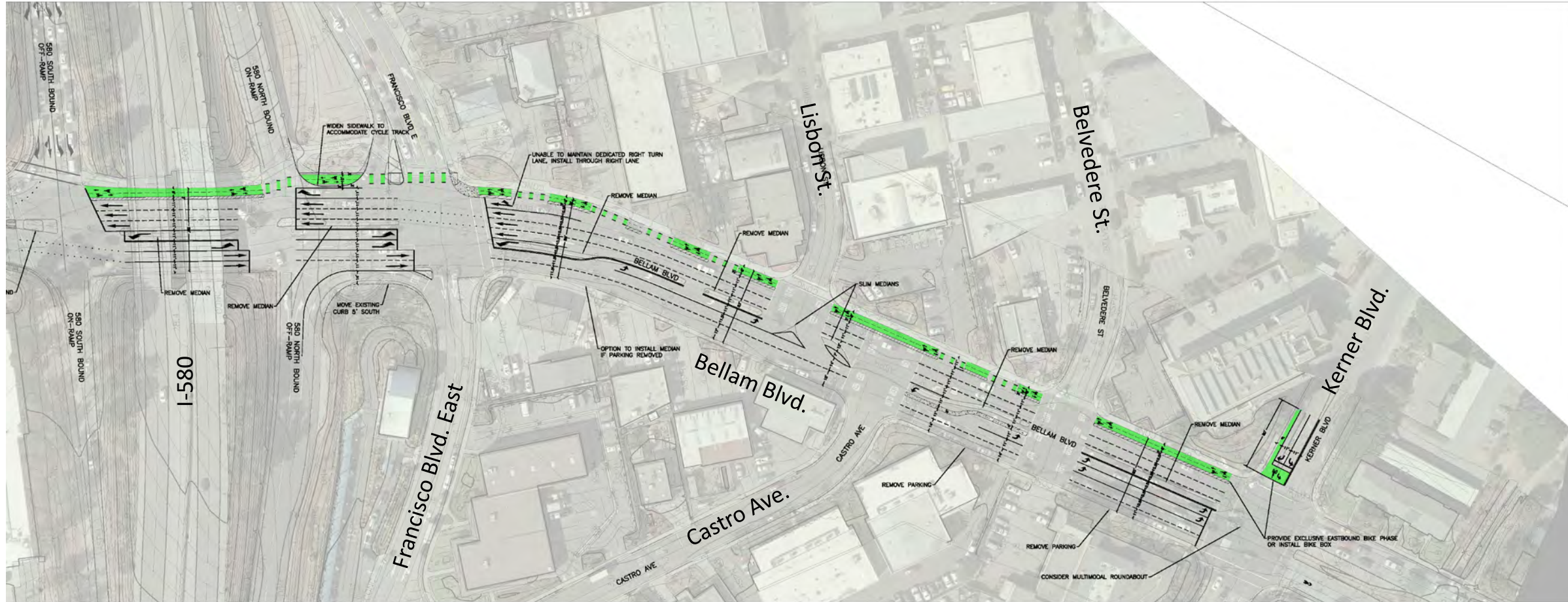
Additional guidance for two-way bikeways:

- On streets where there is not enough room for a one-way bikeway on both sides of the street
- On one-way streets where contra-flow bicycle travel is desired
- On streets where more destinations are on one side thereby reducing the need to cross the street

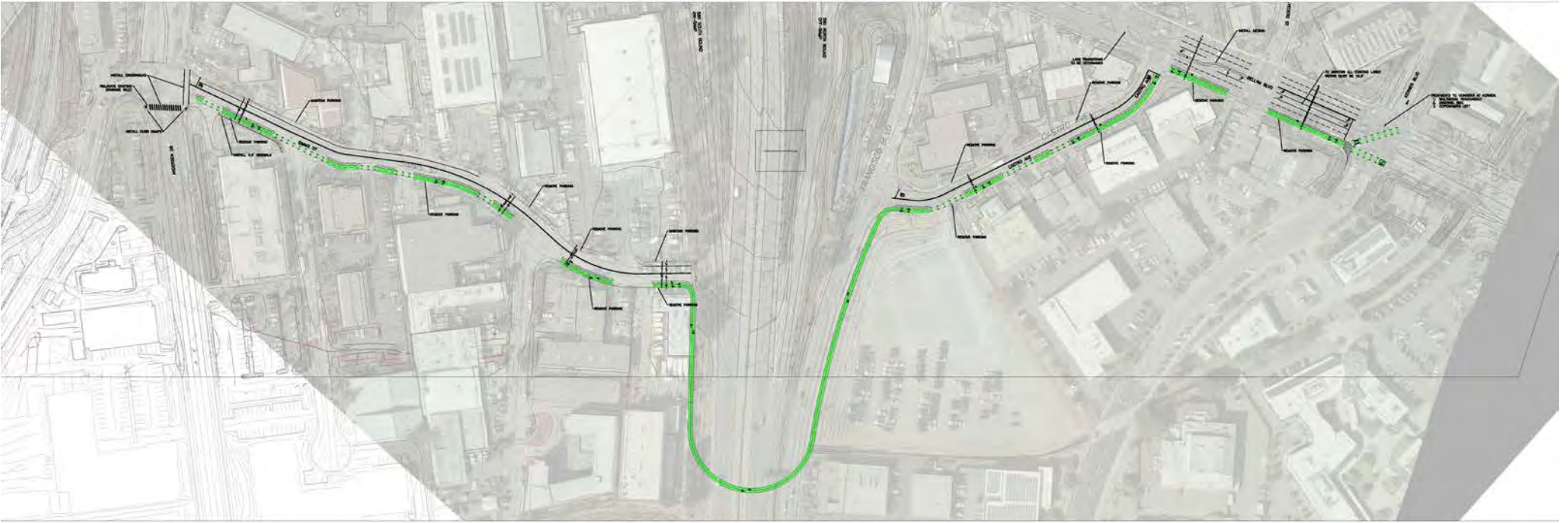
Option 2: Two-way Protected Bikeway – Andersen Dr. to I-580



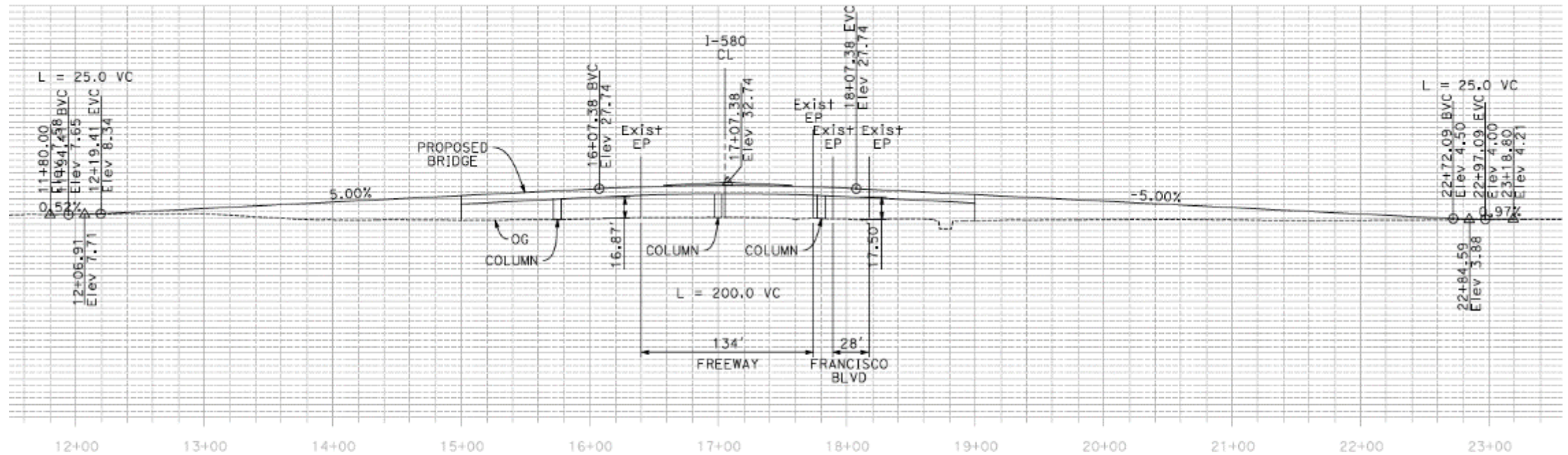
Option 2: Two-way Protected Bikeway – I-580 to Kerner Blvd.



Option 3: Simms/Castro Protected Bikeway and Bridge



Option 3: Simms/Castro Protected Bikeway and Bridge



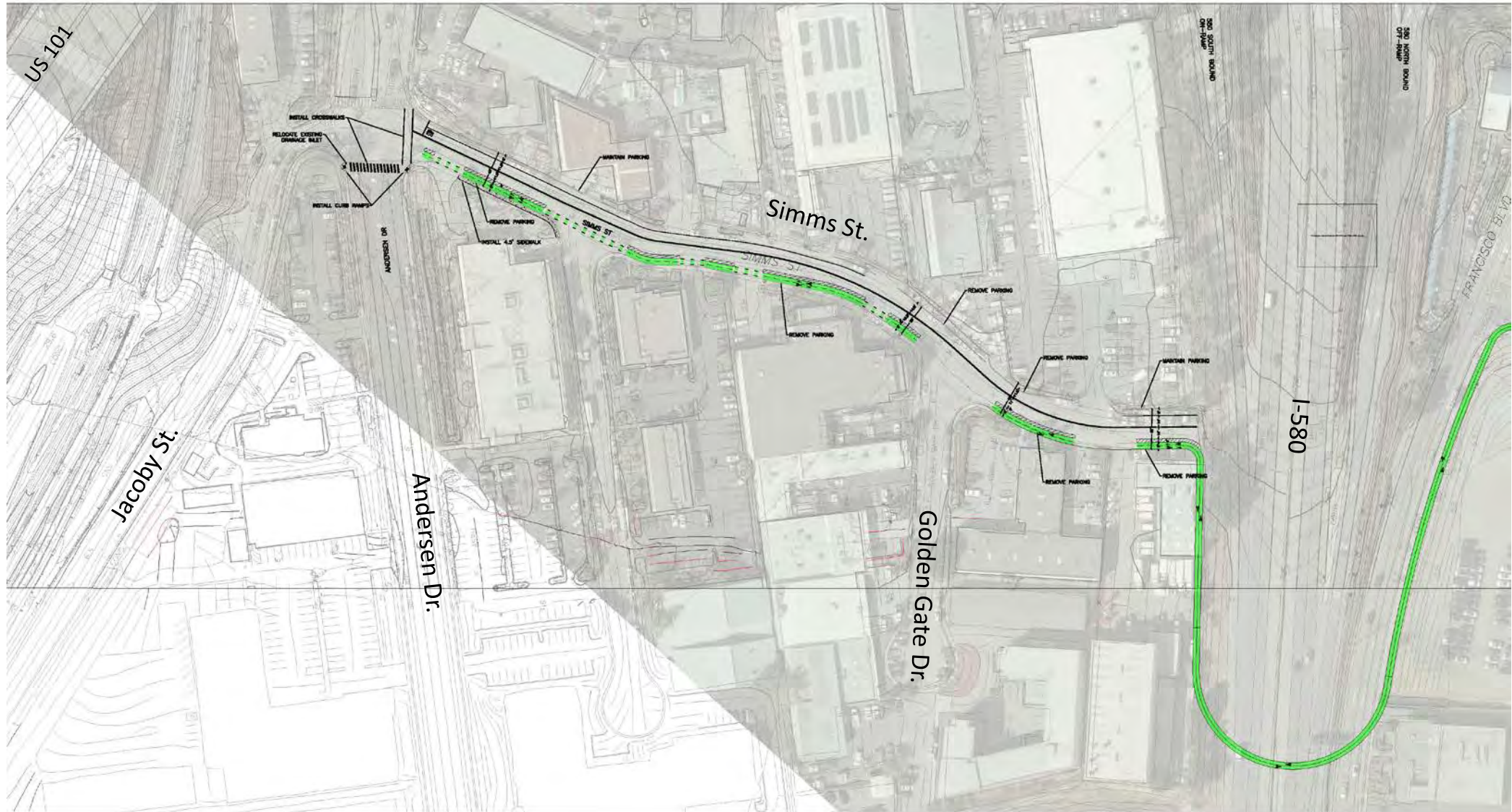
PROFILE
SCALE HORIZONTAL 1:50
SCALE VERTICAL 1:10



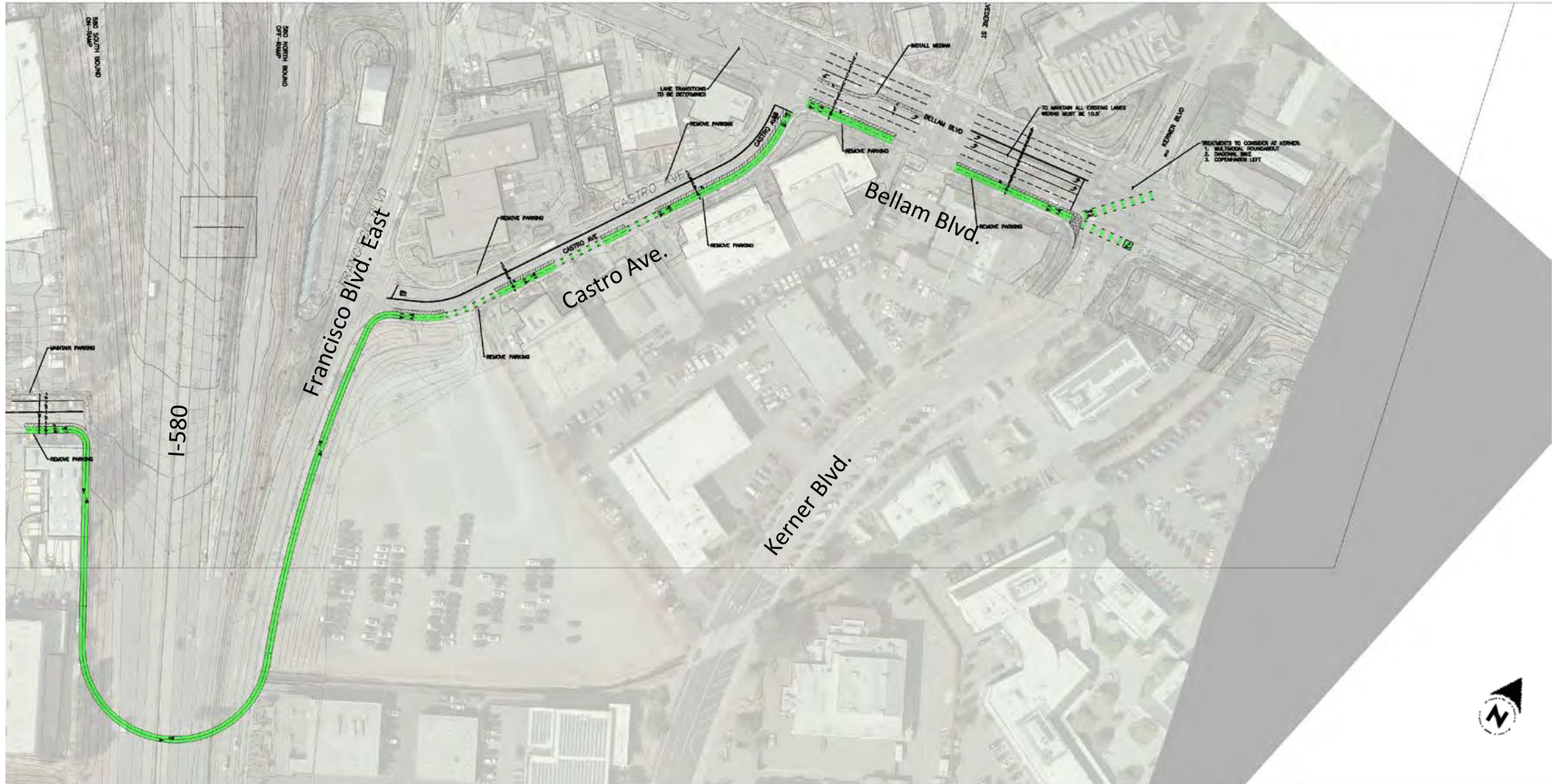
Option 3: Simms/Castro Protected Bikeway and Bridge

- 3,100 feet between Andersen and Kerner, including 1,100-foot overcrossing structure
- Overcrossing assumed to have 5% grade
- Two-way bikeway would cross 10 driveways
- About 30 parking spaces on Simms and 25 spaces on Castro would need to be removed
- Out-of-direction travel for many cyclists; no direct bicycle access to businesses and services on Bellam

Option 3: Simms/Castro Bikeway and Bridge – Andersen Dr. to I-580



Option 3: Simms/Castro Bikeway and Bridge – I-580 to Kerner Blvd.



Bicycle and Pedestrian Intersection and Crossing Treatments

Pedestrian Crossing Safety Countermeasures



ADA-compliant Curb Ramp

Allow all users, including people with mobility-assist devices (wheelchairs, canes, and walkers), strollers, and carts, to make the transition from the street to the sidewalk.



Curb Extension

Help minimize pedestrian exposure to motor vehicles by shortening the street crossing distance and making pedestrians more visible before they commit to crossing.



Median Refuge Island

Located at the mid-point of a marked crossing to allow pedestrians to cross one direction of traffic at a time.



Active Warning Beacon

User-activated illuminated devices that are designed to bring attention to pedestrians crossing the street and to increase the probability that motorists yield to pedestrians at marked crosswalks.



Green Infrastructure

Treats and slows stormwater runoff from roadways, sidewalks, and buildings through bioretention swales, rain gardens, tree box filters and pervious pavements. These strategies help reduce the risk of erosion and flooding which can threaten local creeks and other natural habitats.

Bicycle Intersection Safety Countermeasures



Skip Striping

Intervals of green pavement markings to call attention to conflict areas between motorists and bicyclists at mixing zones during right-hand turns, through intersections, and near driveways.



Two-stage Turn Box

Offer bicyclists a safe way to make left turns at signalized intersections by allowing a bicyclist to proceed through the intersection and to wait ahead of perpendicular motor vehicle traffic before proceeding in their intended direction.



Bike Box

Designated areas at signalized intersections that allows bicyclists to wait in front of queuing motor vehicle traffic during a red light, helping to minimize conflicts between motorists and bicyclists.



Protected Intersection*

Maximize bicyclist comfort and motorist yield rates at intersections through various design elements, such as corner safety islands, mountable aprons, two-stage turning boxes, and marked bicycle crossings ("crossbikes").



Protected Bicycle Signal Phase

Help reduce conflicts between bicyclists and motorists at intersections by allowing bicyclists to enter the intersection ahead of motorists (similar to a "pedestrian leading interval") or at completely different times.

* Protected intersections are an integral part of a comprehensive bicycle network. While specific intersections are not identified as part of this plan, each intersection will be studied as it is due for upgrades.

Next Steps and Discussion

- Current bikeway and pedestrian planning will include intersection and crossing treatments, and will consider driveway management
- Project will provide environmental analysis for bikeway and pedestrian options
- The Southeast San Rafael/Canal Priority Development Area (PDA) process will provide deeper long-range planning for key roadways, including Bellem Boulevard
- SWG input sought on options presented today

SWG Discussion of Bellam Bike/Ped Options

- We want to encourage an open discussion on your initial thoughts on bike/pedestrian options.
- Please share your thoughts on advantages and disadvantages:
 - Option 1 – One-way bike/pedestrian lanes on each side of Bellam
 - Option 2 – Two-way bike lanes on the north side of Bellam
 - Option 3 – New bike route with dedicated overcrossing

Design Alternatives

Alternatives Considered



Alternatives Summary

Alternatives	Naming	Design Speed (mph)	Cost	Distance (miles) Tamalpais Dr to RSR
1A	Hillside A	50	\$ 323M	3.74
1B	Hillside B	50	\$ 446M	3.66
2	Simms St	45	\$ 174M	4.22
3A	Low Speed A	35	\$ 131M	4.60
3B	Low Speed B	35	\$ 104M	4.60
4	Swing Out	35	\$ 214M	5.07
5	Medium Speed	40	\$ 179M	4.38

Alternative 2 View from Hill Side West/South of US 101



Alternative 3A Rendering



Span over
existing off-
ramp

TO RICHMOND →

← TO NOVATO

New Cul-de-
Sac at end of
Gary Pl

Combined
Direct
Connector
/Bellam Blvd
Exit

← FROM SAN FRANCISCO

Alternative 3B Rendering

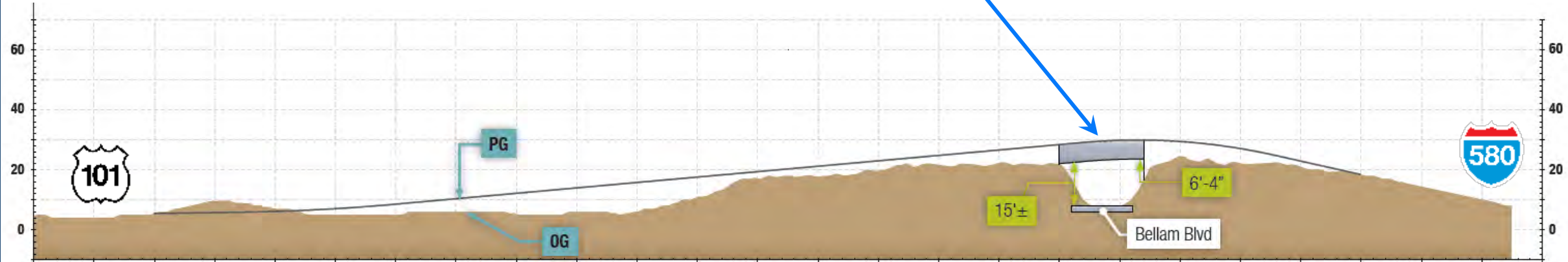


Alternative 5 (Medium Speed)



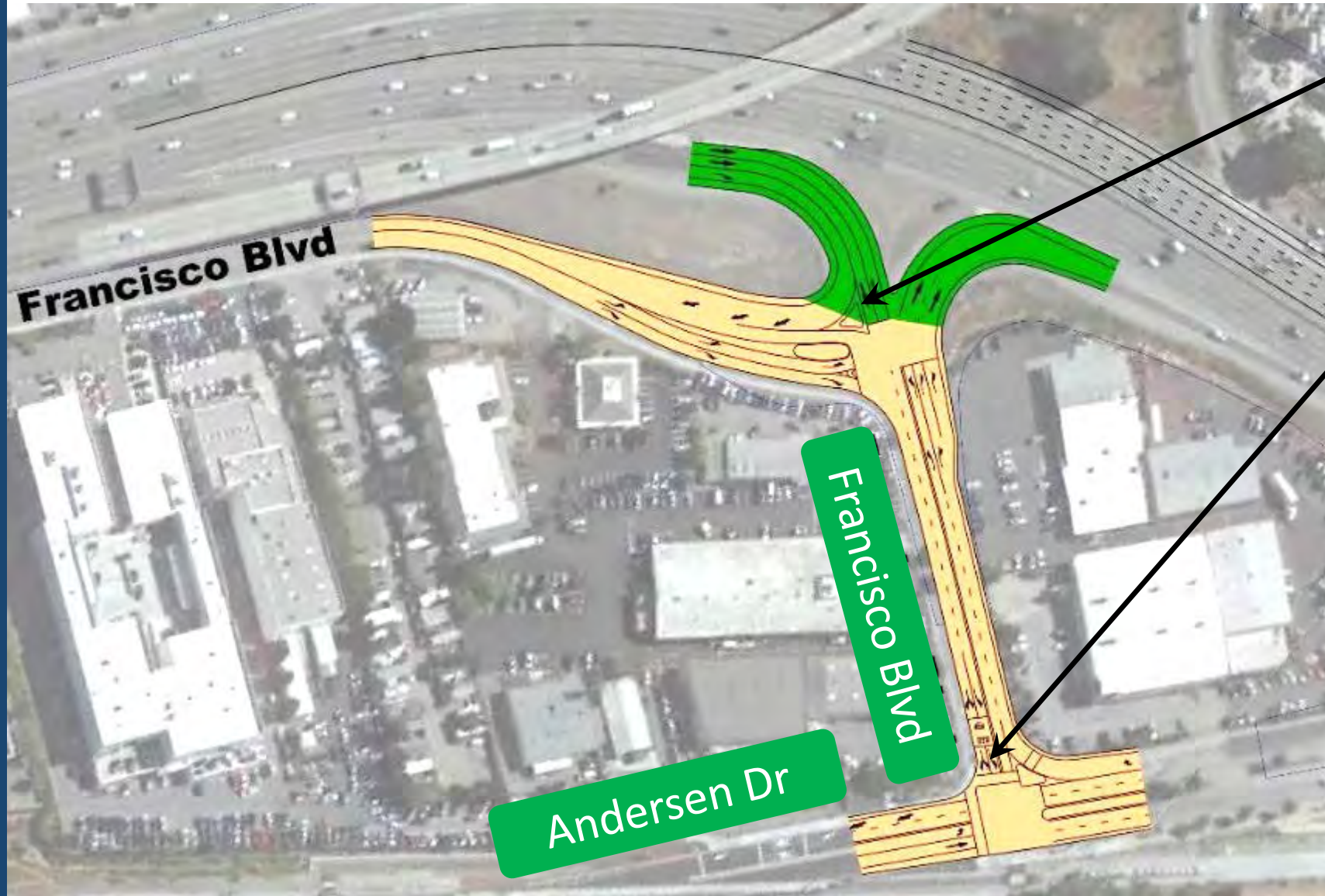
Alternative 3B - Low Speed B

Cost: \$104M
Design Speed: 35 mph
Height: Up to 22 ft



Vertical scale is exaggerated 10:1

Alternative 3B - Modifying Francisco Blvd W

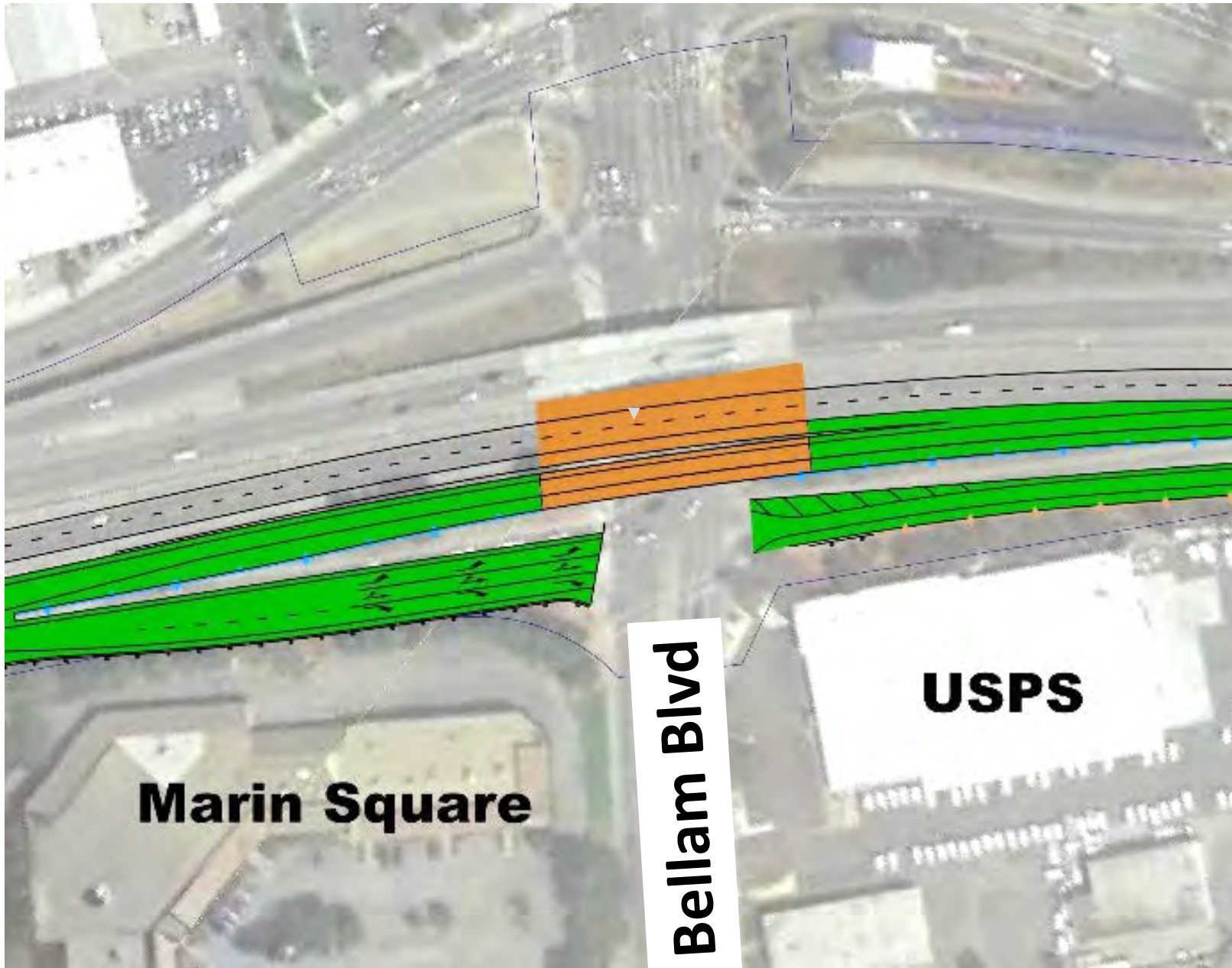


- Modify ramp terminus to two through lanes

- Re-stripe Francisco Blvd to allow dual left lanes

- Closing 580 off-ramp @ Bellam would increase travel time

Alternative 3B - Potential Benefits



- Reduced Weave at the off-ramp
- Reduced turning volumes at 580 off-ramp to Bellam
- Reduced conflicts with bike and pedestrian traffic
- Better profile/Reduced visual impact
- Increased travel time may be reduced by intersection improvements and signal re-timing

Alternatives Right of Way and Business Impacts

Alternative 1A (Hillside A)

Right of Way

- 7 Partial Acquisitions
 - 1-SMART
 - 2- City of San Rafael
 - 3 - Central Marin Sanitation Agency
 - 4 - Marin Sanitary Service

Business Impacts

- A - Marin Sanitary Service Parcels
 - Warehouse Relocation
 - Storage Containers
- B - Central Marin Sanitary Agency
 - Access Modification
 - Parking



Alternative 1B (Hillside B)

Right of Way

- 6 Partial Acquisitions
 - 1 - SMART
 - 2 - Central Marin Sanitation Agency
 - 3 - Marin Sanitary Service

Business Impacts

- A - Marin Sanitary Service Parcels
 - Warehouse Relocation
 - Storage Containers
- B - Central Marin Sanitary Agency
 - Impacts rear of parcel



Alternative 2 (Simms St.)



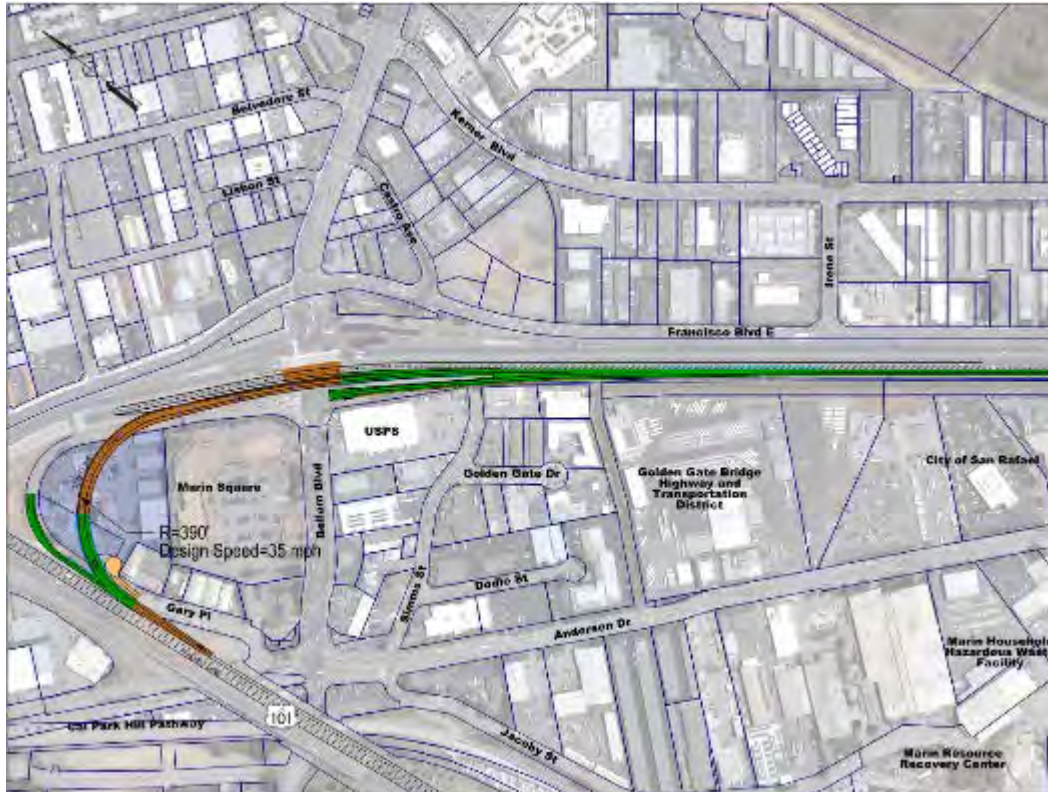
Right of Way

- Right of way impacts to 15 parcels
 - 1 Full Acquisition (San Rafael Sanitation District)
 - 14 Partial Acquisitions

Business Impacts

- Potential 6 business impacts

Alternative 3A (Low Speed A)



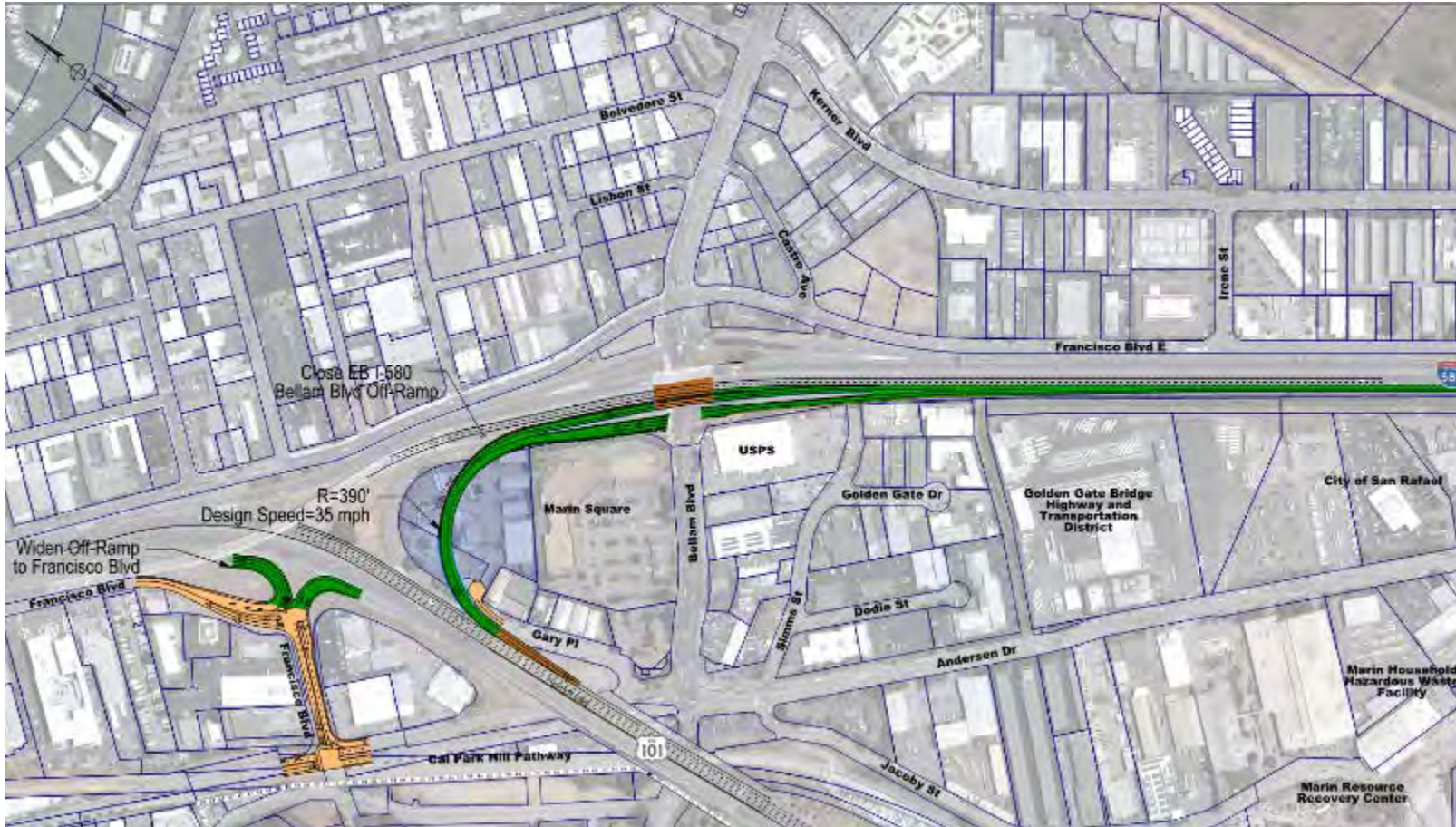
Right of Way

- Right of way impacts to 3 parcels
 - 1 State Owned
 - 2 Partial Acquisitions

Business Impacts

- 2 parcels with 6 potential business Impacts

Alternative 3B (Low Speed B)



Right of Way

- Right of way impacts to 3 parcels
 - 1 State Owned
 - 2 Partial Acquisitions

Business Impacts

- 2 Parcels with 5 potential business impacts

Alternative 4 (Swing Out)



Right of Way

- Right of way impacts to 8 parcels
 - 3 Full Acquisitions
 - Currently Undeveloped
 - 5 Partial Acquisitions

Business Impacts

- No Relocations
- One business impacted

Alternative 5 (Medium Speed)



Right of Way

- Right of way impacts to 12 parcels
 - 1 Full Acquisition
 - 11 Partial Acquisitions

Business Impacts

- 4 parcels with 5 potential business impacts

Right of Way Summary

Alternative	Parcels Impacted	Full Acquisitions	Partial Acquisitions	# of Parcels with Potential Business Relocations
Hillside A (Alternative 1A)	7	0	7	1
Hillside B (Alternative 1B)	7	0	7	1
Simms St (Alternative 2)	15	1	14	6
Low Speed A (Alternative 3A)	3	0	2	2
Low Speed B (Alternative 3B)	3	0	2	2
Swing Out (Alternative 4)	8	3	5	0
Medium Speed (Alternative 5)	12	1	11	4

Alternatives Environmental Impacts

Alternative 1A (Hillside A)

Low

Moderate

High

- **Biological Resources** - Potential threatened or endangered species
- **Archaeology** - former Bayshore, marsh shore, and undisturbed foothill
- **Visual Impacts** - minimal views from sensitive receptors

- **Biological Resources** - Tree Removal, anticipated loss of trees and wildlife habitat
- **Water Resources** - Emergent wetlands. Potential wetland/stream along I-580



Alternative 1B (Hillside B)

Low

Moderate

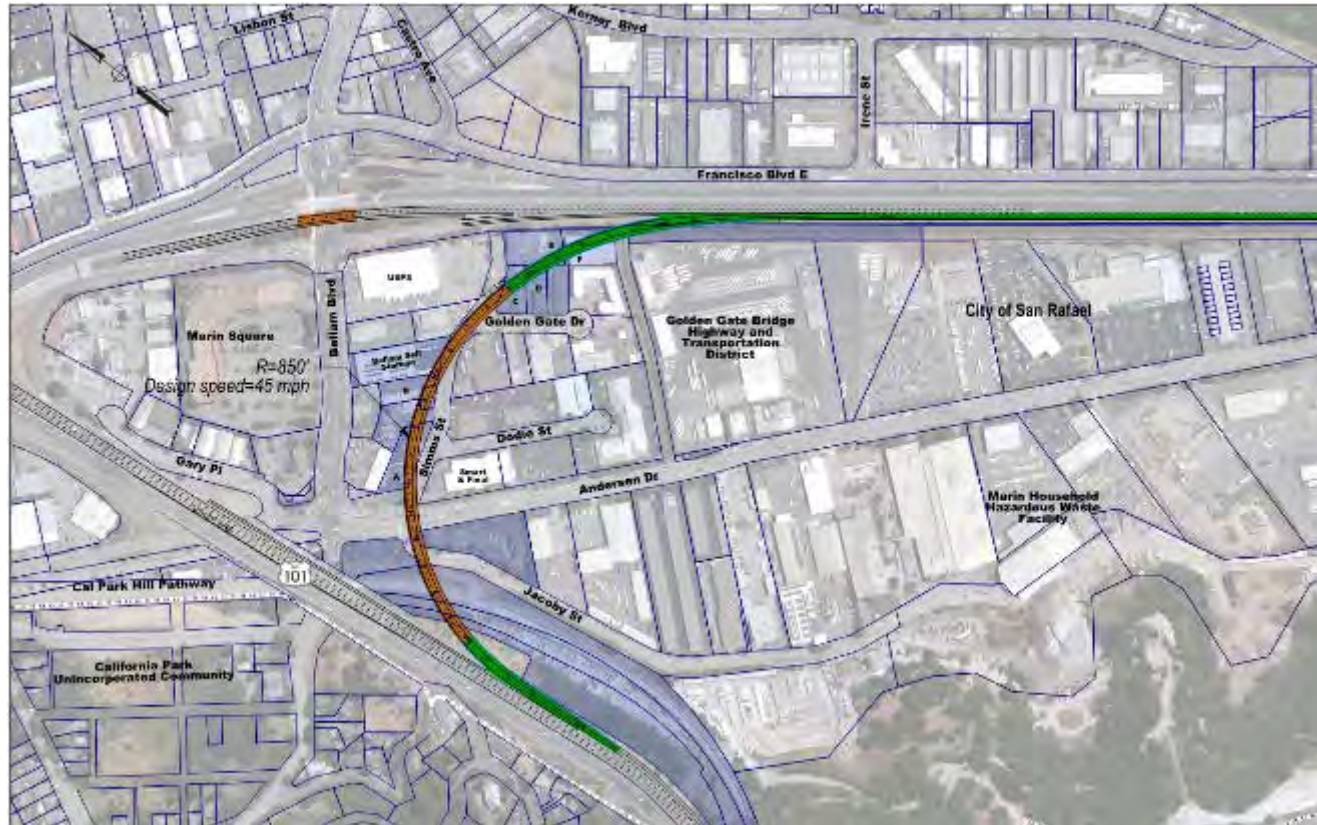
High

- **Biological Resources** - Potential threatened or endangered species
- **Water Resources** - Emergent wetlands.
- **Visual Impacts** - minimal views from sensitive receptors

- **Biological Resources** - Tree Removal, anticipated loss of trees and wildlife habitat
- **Archaeology** - Known shellmound site. Former Bayshore, marsh shore, and undisturbed foothill



Alternative 2 (Simms St.)



Low

- Biological Resources
 - Special status species not anticipated,
 - limited tree removal

Moderate

- Water Resources - Potential wetland/stream along I-580
- Archaeology - Former marsh shore, relatively undisturbed subsurface

High

- Visual Impacts - Elevated flyover would impact views from sensitive receptors

Alternative 3A (Low Speed A)

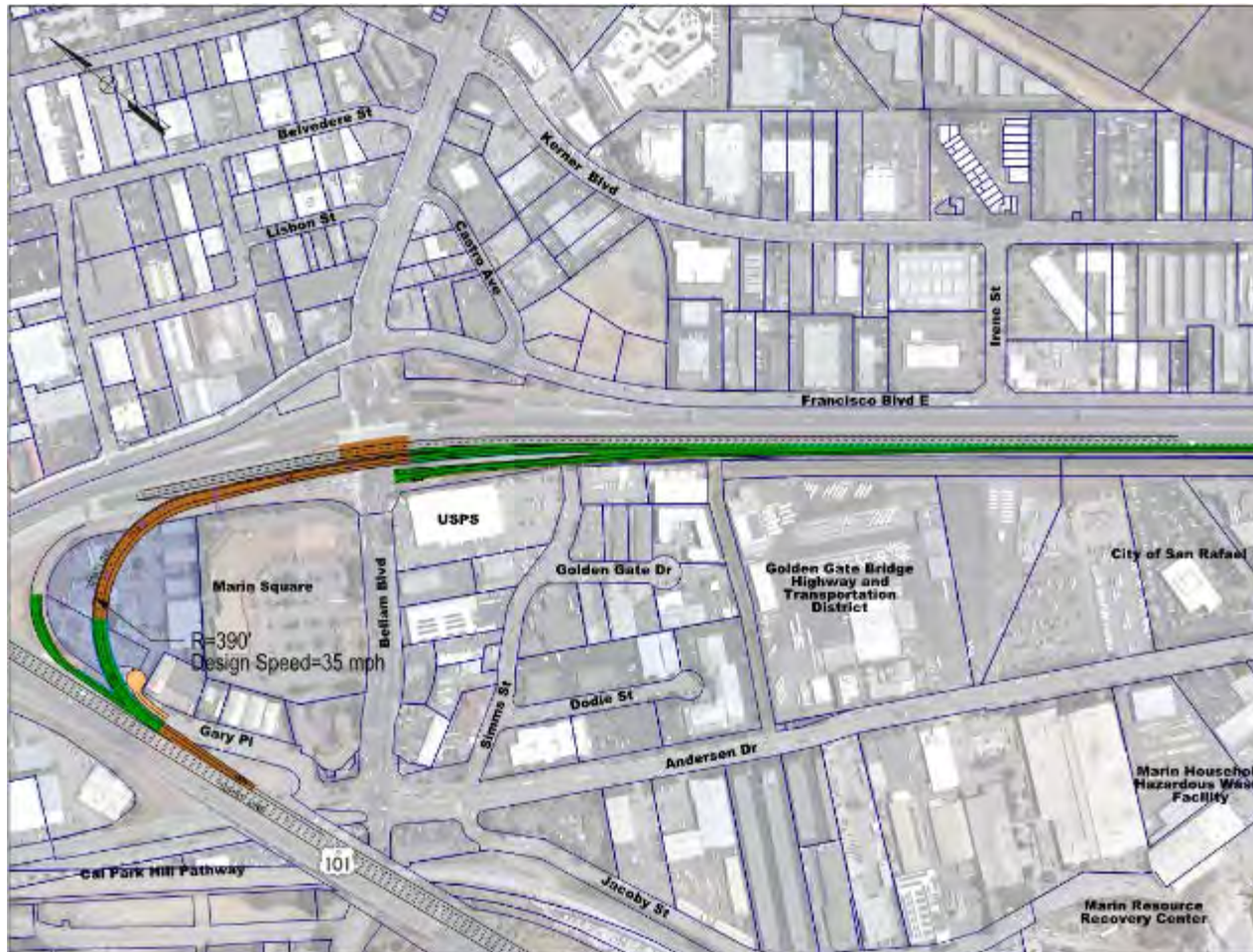
Low

- Biological Resources
 - Special status species not anticipated
 - limited tree removal
- Water Resources - No impacts expected

Moderate

- Archaeology - Former marsh shore, relatively undisturbed subsurface
- Visual Impacts - Elevated flyover would impact views from sensitive receptors

High



Alternative 3B (Low Speed B)



Low

- Biological Resources
 - Special status species not anticipated
 - limited tree removal
- Water Resources - No impacts expected
- Visual Impacts - Connector ramp below existing structures in viewshed

Moderate

- Archaeology - Former marsh shore, relatively undisturbed subsurface

High

Alternative 4 (Swing Out)



Low

- **Biological Resources**
 - Special status species not anticipated
 - limited tree removal
- **Water Resources** - No impacts expected
- **Archaeology** - Further away from marsh or bay shore

Moderate

High

- **Visual Impacts** - Elevated flyover would impact views from sensitive receptors

Alternative 5 (Medium Speed)



Low

- **Biological Resources**
 - Special status species not anticipated
 - limited tree removal
- **Water Resources** - No impacts expected
- **Archaeology** - Further away from marsh or bay shore

Moderate

High

- **Visual Impacts** - Elevated flyover would impact views from sensitive receptors

Alternatives Environmental Impacts Summary

Alternative	Biological Resources (Trees)	Biological Resources (Species)	Archaeology	Visual	Water Resources
Alternative 1A	High	Moderate	Moderate	Moderate	High
Alternative 1B	High	Moderate	Moderate	Moderate	High
Alternative 2	Low	Low	Moderate	High	Moderate
Alternative 3A	Low	Low	Moderate	Moderate	Moderate
Alternative 3B	Low	Low	Moderate	Low	Moderate
Alternative 4	Low	Low	Low	High	Low
Alternative 5	Low	Low	Low	High	Low

Which alternatives appear to be workable, considering issues and tradeoffs so far?

Alternatives	Design Speed (mph)	Cost	Distance (miles) Tamalpais to RSR	Property Impacts (parcels)	Biology (habitat)	Biology (species)	Archaeology	Visual	Water Resources
1A Hillside A	50	\$323M	3.74	7	High	Moderate	Moderate	Moderate	High
1B Hillside B	50	\$446M	3.66	7	High	Moderate	Moderate	Moderate	High
2 Simms St	45	\$174M	4.22	15	Low	Low	Moderate	High	Moderate
3A Low Speed A	35	\$131M	4.60	3	Low	Low	Moderate	Moderate	Moderate
3B Low Speed B	35	\$104M	4.60	3	Low	Low	Moderate	Low	Moderate
4 Swing Out	35	\$214M	5.07	8	Low	Low	Low	High	Low
5 Medium Speed	40	\$179M	4.38	12	Low	Low	Low	High	Low

Public Comment

Comments from Members of the Public

- Raise hand if you have a comment
- Host will call on you and unmute you
- Please keep your comments to 3 minutes

Next Steps/Next SWG Meeting

Team Activities

- Continue initial alternatives evaluation and conduct traffic analysis
- Continue to meet with organizations and groups for information and input
- Present findings and summary of SWG community input at Ad Hoc, ESC, and TAC meetings (Fall 2020)

SWG Meeting #4 – TBD Fall 2020

- Consider alternatives to advance for further evaluation

Contact Information

- Send questions and comments:
 - Molly Graham, Marin101-580@tam.ca.gov
- Project website:
 - www.Marin101-580.com