

# RESILIENTSR37



## STATE ROUTE 37 POLICY COMMITTEE

9:30 a.m., Thursday, December 5, 2019  
Napa Valley Transportation Authority Offices  
625 Burnell Street, Napa, CA

### MEETING AGENDA

**1. CALL TO ORDER AND INTRODUCTIONS**

**Chair David Rabbitt**

**2. OPPORTUNITES FOR PUBLIC COMMENT**

**3. CONSENT CALENDAR**

3.1. Minutes of the June 6, 2019 SR 37 Policy Committee Meeting\*

**Recommendation:**

Approve June 6, 2019 SR37 Policy Committee Meeting Minutes

**Drew Nichols, SCTA**

**4. DISCUSSION/INFORMATION ITEMS**

- 4.1. Bay Area Toll Authority (BATA) 8<sup>th</sup> Toll Bridge legislation
- 4.2. FASTER Bay Area
- 4.3. Plan Bay Area 2020 update
- 4.4. Status of 2020 SHOPP and beyond
- 4.5. Segment A Caltrans work\*
- 4.6. Segment B Interim Improvements Update

**Andrew Fremier, MTC  
Daryl Halls, STA  
Andrew Fremier, MTC  
Tony Tavares, Caltrans  
Kelly Hirschberg, Caltrans  
Kevin Chen, MTC**

**5. PRESENTATION ITEMS**

- 5.1. Grand Bayway - SR37 Public Access Study Update -
- 5.2. Segment A1 (Marin County) Corridor Adaptation Study\*

**Erik Prince, Atlas Lab &  
Allison Brooks, BARC  
Dan Dawson, Marin County**

**6. COMMITTEE MEMBER COMMENTS/ STAFF UPDATES**

**All**

# RESILIENTSR37

## 7. FUTURE TOPICS

BATA Expenditure Plan  
FASTER Expenditure Plan  
Plan Bay Area 2050 Project Performance  
AA for the Bay – restoration projects in San Pablo Bay  
MTC/Caltrans – Ultimate Environmental Phase Discussion and Segmentation  
Caltrans SHOPP Project Updates  
SB-1 Planning and Adaptation Grant work underway  
Alternative Modes and TDM - Implementation

## 8. ADJOURNMENT

Next SR 37 Policy Committee Meeting: 9:30, Thurs., January 16, 2020 at a location to be determined.

\* Materials included

### Future Meeting Schedule (Pending Approval)

9:30AM, January 16, 2020

9:30AM, March 5, 2020

9:30AM, June 4, 2020

9:30AM, October 1, 2020

### SR 37 Policy Committee Members:

#### **SCTA**

David Rabbitt, Sonoma  
County Board of Supervisors

Jake Mackenzie, MTC  
Commissioner

Susan Gorin, Sonoma County  
Board of Supervisors

#### **NVTA**

Alfredo Pedroza, MTC  
Commissioner

Belia Ramos, Napa County  
Board of Supervisors

Leon Garcia, Mayor City of  
American Canyon

#### **TAM**

Damon Connolly, MTC  
Commissioner

Judy Arnold, Marin County  
Board of Supervisor s

Eric Lucan, Councilmember,  
City of Novato

#### **STA**

Erin Hannigan, Solano County  
Board of Supervisors

Bob Sampayan, Mayor, City of  
Vallejo

Jim Spering, MTC  
Commissioner

#### **MTC**

Therese McMillan,  
Executive Director

#### **Caltrans**

Tony Tavares,  
District 4 Director

# RESILIENTSR37



**State Route (SR) 37 Policy Committee Meeting Minutes  
9:30 a.m., Thursday, June 6, 2019  
Sonoma-Marine Area Rail Transit (SMART) District Office  
Petaluma, CA**

1. Call to Order/Introductions

Vice Chair Erin Hannigan called to order the State Route 37 Policy Committee at 9:54 a.m.

Policy Committee Members Present:

Erin Hannigan, Vice Chair	Supervisor, County of Solano
Judy Arnold	Supervisor, County of Marin
Damon Connolly	MTC Commissioner, Supervisor, County of Marin
Leon Garcia	Mayor, City of American Canyon
Susan Gorin	Supervisor, County of Sonoma
Eric Lucan	Mayor, City of Novato
Bob Sampayan	Mayor, City of Vallejo

Policy Committee Members Absent:

David Rabbitt, Chair	Supervisor, County of Sonoma
Jake Mackenzie	MTC Commissioner, Councilmember, City of Rohnert Park
Alfredo Pedroza	MTC Commissioner, Supervisor, County of Napa
Belia Ramos	Supervisor, County of Napa
Jim Spring	MTC Commissioner, Supervisor, County of Solano

Executive Directors Present:

Daryl Halls, Solano Transportation Authority  
Suzanne Smith, Sonoma County Transportation Authority  
Dianne Steinhauser, Transportation Authority of Marin

Executive Directors Absent:

Kate Miller, Napa Valley Transportation Authority

## 2. Opportunities for Public Comment

N/A

## 3. Consent Calendar

### 3.1. Minutes of the March 3, 2019 SR 37 Policy Committee Meeting

The minutes for the March 3, 2019 State Route 37 Policy Committee were recommended, and approved unanimously, following a motion by Supervisor Judy Arnold, and a second by Mayor Bob Sampayan.

## 4. Presentation Items

### 4.1. San Pablo Bay Active Transportation Access Study – SB-1 Planning Grant

Erik Prince, Common Ground, presented to the committee on the SB-1 Planning Grant awarded from Caltrans and the related work for the San Pablo Bay Active Transportation Access Study.

This work, known as the Grand Bayway, is based on a competition that worked with the Bay Area Resilient by Design.

A set of principles were developed and described to the committee: Identity, Adapting Ground, Mobility, and Expand the Constituency.

Common Ground is looking at an additional grant to expand the scope of this project. Initially the project would address only Segment B, this additional grant would consider the entire corridor from Highway 101 in Marin County to Highway 29 in Solano County.

The scope of the project was described to the committee. The analysis will aim to:

- Develop a set of bike/e-bike, pedestrian and water recreation options that balance public access and protection of sensitive habits;
- Confirm trail design principles, guidelines, and routing alternatives to complete a continuous San Francisco Bay Trail alignment;
- Identify opportunities to increase awareness and environmental education in the Baylands; and

- Deliver prudent and strategic near-term trail and access options.

The presentation today is intended to introduce to the committee the project and Mr. Prince described the upcoming public outreach events to help develop a comprehensive set of trails in the region. Updates will be presented to this committee as they become available.

The project website is available, <https://stateroute37.wixsite.com/thegrandbayway>, to see previous work, interactive maps, and to understand the region and scope.

Steve Kinsey further spoke on with the different studies and work that have been conducted in this corridor and highlighted the importance of continued coordination.

In terms of the entire corridor, staff will continue to develop trail design guidelines and criteria for the selection of trails.

Mr. Kinsey acknowledged the sensitivity of the habitat areas and sea level rise.

There will be a preliminary public access demand analysis to begin to associate what level of activity would be occurring in the corridor to justify the investment of active transportation.

Regarding Segment B, work will continue with local working groups and other partners to develop a draft purpose and a needs statement for active transportation.

Lastly, will be working with Caltrans regarding the SHOPP projects to identify opportunities and see how public access/active transportation will be addressed in these listed projects.

Executive Director Daryl Halls commented that Solano Transportation Authority will be conducting an Active Transportation Plan and expressed the interest to meet and discuss any potential overlap with this project.

#### 4.2. STA – Water Transit Study

Anthony Adams, Solano Transportation Authority, presented to the committee on the Water Transit Study.

The purpose of the study was to identify options to expand or create ferry service for Solano County by looking at Vallejo, Benicia, and Rio Vista, ridership projects, feasibility, and the related costs for infrastructure improvements that would be required.

This study also included the feasibility of ferry service between Marin and Solano Counties that would run parallel to Highway 37.

There was a focused analysis for service between Larkspur and Vallejo. Initial ridership projects suggested that Larkspur-bound ridership from Vallejo is 18% of San Francisco bound ridership. The primary reasons that explain this low demand include similar distance, driving times, and more dispersed employment areas in Larkspur.

Notwithstanding, new service to Larkspur is feasible, especially when considering a private-operator model using smaller vessels such as water taxis or boats that carry less than 100 passengers.

It would be difficult, however, to meet the 40% farebox recovery required by WETA and landslide improvements would be needed at Larkspur to accommodate WETA ferries. Vallejo would need no improvements.

There is interest expressed by private operators that could provide service to Larkspur. With this, there would be no need for improvements to accommodate the vessels, can target employers and service smaller communities, and federal transit regulations would not be required.

The study recommended further engagement of private operators.

Mayor Bob Sampayan asked about classifications and that small-boats are considered less than 100 passengers.

Mr. Adams confirmed, and larger vessels are considered 100+ passengers. Smaller boats have less draft associated and enter smaller ports, such as Benicia. There was also an interest to look at Richmond and Martinez

Supervisor Susan Gorin commented on where this idea has come from, such as whether passengers or employers are requesting this type of service, and asked what would happen once passengers arrive to terminals.

Mr. Adams responded the first and last mile solutions will be identified, include park-and-ride systems, carpooling, or Lyft/Uber that could be subsidized.

#### 4.3. Ride Amigos

Anthony Adams further reported to the committee on Ride Amigos as an option for transportation demand management on the corridor.

Mr. Adams recalled the previous findings from the Napa Valley Transportation Authority SR 37 Transit Study. The referenced study was presented to the committee on March 7<sup>th</sup>, 2019.

On-demand and pooling is suggested, as opposed to fixed route service, given the many point-to-point locations for riders.

Furthermore, there are Park and Ride systems along the corridor that have capacity and opportunity to be expanded for carpooling.

There is an interest to facilitate formal and casual carpooling along this corridor and to provide streamlined app-based incentives for users.

Lloyd Nadal, Solano Transportation Authority, spoke on Ride Amigos, an online, mobile platform that allows TDM program management and data entry sources.

From the user's standpoint, origin and destination locations are entered, and Ride Amigos will log the trips and provided an opportunity for riders to have access the various incentive programs available.

Mr. Nadal further spoke on the tools available on the platform, including trip planning with alternative mode options listed, ridesharing, incentive programs, and real-time data that has the ability to pair with third-party apps such as Waze.

Mr. Nadal further explained the next steps. In the near-term, partnering with the four North Bay transportation agencies to apply for a Pilot Trip Reduction Program to pilot the SR37 Corridor TDM Program and to establish a pilot universal incentive program for SR 37 commuters. The SR 37 Fairgrounds Drive Six Flags/North Vallejo bus stop will be operating July 1<sup>st</sup> with Solano Express Red Line Service.

In the longer-term, Mr. Nadal explained a SR 37 Corridor express bus service to be deployed with the Segment B interim infrastructure improvements and to further expand the corridor's Park and Ride system.

Dianne Steinhauser commented on the Marin commute program that began in January. This program has received interest by employers in Marin and Ms. Steinhauser spoke on the various first-last mile programs.

Supervisor Judy Arnold also noted that over 2,300 trips using Non-single occupancy vehicles have been used.

Supervisor Susan Gorin commented on the topic and suggested this option for Sonoma County.

Executive Director Daryl Halls added that work is ongoing to have all four counties together so the entire corridor is on the same platform.

#### 4.4. Passenger Rail Service Novato to Suisun City – Study

Bill Gamlen, Chief Engineer - SMART, presented to the committee on the feasibility study for passenger rail service to Suisun City.

Mr. Gamlen explained the purpose of the study. The *California State Rail Plan*, published September 2018, had named SMART as a

potential east-west connector to Amtrak's *Capital Corridor*.

The report examined the technical feasibility of implementing passenger rail service between Novato and Suisun City and serves to document the existing physical condition of the rail corridor.

This study further identified potential infrastructure and environmental challenges and examine schedules and cost estimates. The corridor is owned by SMART from Novato to the Napa River; Union Pacific Railroad (UPRR) owns the tracks from American Canyon to the Suisun City.

Passenger rail service in this corridor is feasible.

Mr. Gamlen explained the two options described in the feasibility study. Option 1: Rapid Deployment – Basic Service and Option 2: Higher Level of Service.

These options include infrastructure improvements which can be built upon in the coming decades with “scalability” to increase service with the addition of vehicles.

##### Option 1:

Option 1 considers utilizing the existing operating freight railroad with eight one-way trips per day with the potential capacity to serve 2,100 passengers (based on an assumed length of trains).

The infrastructure improvements aims to maximize re-use of the existing along this rail corridor. This would include upgrading the tracks to a Class 3 track to allow speeds up to 60 MPH, replace Black Point Bridge over the Petaluma River with a used bridge, and replace 28 existing timber bridges. Mr. Gamlen noted that this work would stay within the existing rail embankment.

Additional infrastructure elements needed include new signals and train control, three intermediate stations, passing sidings, a shared maintenance facility.

The Black Point Bridge was constructed in 1911 and repairing is not a viable option. The study entertained either repurposing a used bridge, or construct a new bridge over the Petaluma River.

However, the vertical lift bridge over the Napa River remains in good condition requiring only a minor set of upgrades.

Mr. Gamlen further explained the vehicle assumptions that includes a fleet primarily of pre-owned locomotives and coach cars and the potential sites (Sonoma Raceway, Schellville, Napa/American Canyon area) for stations.

Regarding the environmental work that is needed, it is assumed that an appropriate level of environmental/permitting review will be conducted since the railway is already in operation and Option 1 stays within the railroad envelope at the (conceptual) cost ranging from \$10 to \$15 million.

This option would take four years to construct for revenue operation at the cost from \$780 to \$900 million. This is a significant capital project.

Option 2:

Option 2 is a more robust evaluation, with more frequency and higher speeds.

The service scenarios includes a total of ten round trips per day with a potential to carry 5,400 passengers (based upon assumed length of trains).

Regarding infrastructure improvements, this option would construct the track to a Class 4 railway that permits up to 79 MPH, replacement of the Black Point Bridge and 20 existing timber bridges, construct four passing sidings, and add new signals/train controls.

Mr. Gamlen further outlines the assumptions for vehicles. This option considers new locomotives and coach cars or Diesel Multiple Unites (DMU's).

Mr. Gamlen also introduced the alternative vehicle technology that could be considered. These options include hydrogen fuel cell, battery, or an electrical multiple unit vehicles.

Option 2 envisions six years to construct and implement passenger rail service at the (conceptual) cost ranging from \$1.1 to \$1.3 billion.

The next steps include evaluating the operating plan, refine the project scope, explore station locations, investigate shared track/corridor opportunities, and prepare the Environmental Report and preliminary engineering.

Mayor Bob Sampayan encouraged SMART to look into the tracks that run through Vallejo that would provide another opportunity for connectivity.

Mayor Sampayan further asked about the track repairs after the recent flooding.

Mr. Gamlen responded the rail line is fixed and is operational.

Vice Chair Erin Hannigan added that there are rail tracks by the Vallejo ferry building.

Supervisor Susan Gorin commented this is an option to extend rail service through Napa Sonoma Valleys onward.

Supervisor Gorin Service championed for service to begin as quickly as possible and asked how service will be affected by the winter weather.

Mr. Gamlen responded that the railway does face the similar challenges as Highway 37 experiences in the wetlands areas, however a full study on those effects has not been conducted.

Supervisor Gorin further asked about other options that would include the need to elevate the tracks given bay level rise and wetland challenges and if service would be to be stopped for the construction.

Mr. Gamlen responded that there would be a parallel track while the elevated track is under construction and that most of the major infrastructure work will be completed prior to the introduction of service.

Mayor Elizabeth Patterson pointed out that doing Option 1 does not prevent doing Option 2 in the

future and added a study by Nelson Nygaard illustrated connections to Benicia and Vallejo.

Mr. Gamlen responded the options are independent options and not as a phased approach.

Mayor Eric Lucan asked what about the challenges that would be faced to construct the railway to a Class 4, citing the replacement of Black Point Bridge.

Mr. Gamlen responded that the bridge will need to be replaced entirely either by bringing in a used bridge, or replace entirely that would permit the ability for a Class 4 railway.

Mr. Gamlen further noted that this study does not distract SMART from providing service to Cloverdale; the SMART Board of Directors are committed to providing service to Cloverdale before going east. This was the first step of the State to look at the feasibility and is up to the State to carry this project to the next level.

Mayor Leon Garcia arrived at 10:48 AM.

Executive Director Daryl Halls noted that decisions on station locations are at the county level.

Supervisor Judy Arnold added that the Marin County Board of Supervisors has sent a letter to the State supporting the next step in this study and noted that looking at the differences between the Highway 37 project, the rail project comes out less, unless it is a Private-Public Partnership.

## 5. Discussion/Information Items

### 5.1. SR 37 Project Coordination Opportunities

#### 5.1.1. Segment A1 (Hwy 101 – Atherton in Marin) Update

Kelly Hirschberg reported on the resubmitted SHOPP amendment request that will allow the initiation of the environmental review phase for the preliminary phase that would start the ultimate and interim scope for SR 37.

Work is aimed to begin in fall 2019 and is currently waiting for CTC staff approval.

### 5.1.2. Transportation Permitting Task Force (AB1282) Update

Kelly Hirschberg recalled at the March 7<sup>th</sup>, 2019 meeting the presentation on AB1282 and the related task force. Highway 37 was selected as one of two mega projects through this program and Ms. Hirschberg updated the committee on the upcoming schedule for the task force.

Supervisor Judy Arnold expressed thanks to Caltrans for the understanding that one cannot do anything on Highway 37 without addressing the flooding in Novato.

### 5.2. Segment A1 – SB-1 Planning Grant – Update (TAM)

Executive Director Dianne Steinhauer introduced Nick Nguyen and Dan Dawson, County of Marin, for the Segment A1 update and related planning grant to study the Novato Creek area.

Nick Nguyen recalled the presentation on March 7<sup>th</sup> that reported on the kickoff of this project.

Dan Dawson reported the first part of the study is completed. The focus currently is to look at the numerous studies already completed to date and distill the information for common themes, issues, and gaps identified.

To date, a Technical Advisory Committee group has been compiled and will report to the Policy Committee in the fall on the findings.

### 5.3. Segment A1 and A2 – SB-1 Planning Grant Award

Ashely Nguyen announced that MTC/SCTA has received a Climate Adapting grant to do an environmental stakeholder outreach for Segment A.

Ms. Nguyen thanked all who were apart of the grant application.

## 6. Committee Member Comments/Staff Updates

Executive Director Suzanne Smith announced the retirement of Executive Director Dianne Steinhauer.

## 7. Future Topics

- Segment B Interim Improvements Updates
- AA for the Bay – restoration projects in San Pablo Bay
- MTC/Caltrans – Ultimate Environmental Phase Discussion
- Caltrans SHOPP Project Updates
- SB1 Planning and Adaption Grant work underway
- Alternative Modes and TDM - Implementation

For the committee's interest.

## 8. Adjournment

The committee adjourned at 11:06 a.m.

DRAFT

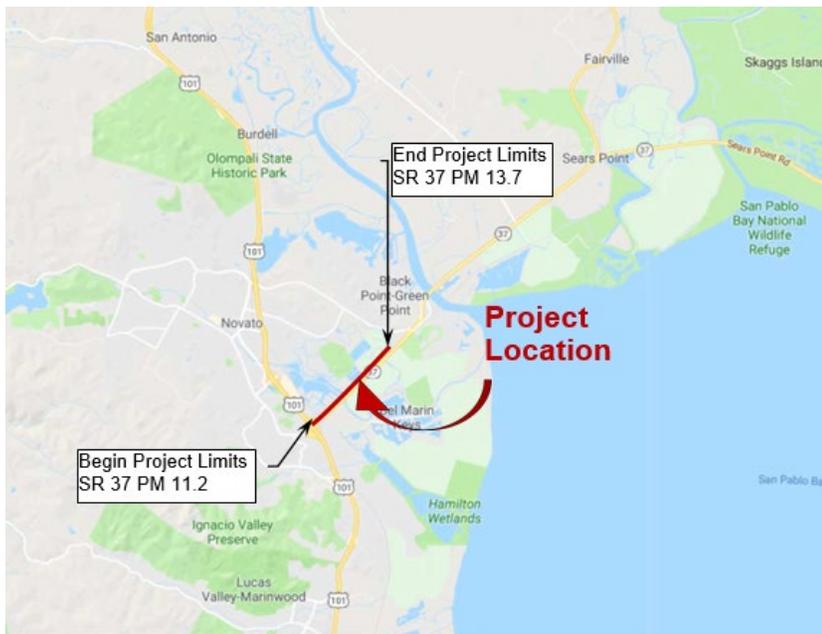


## SR 37 Policy Meeting December 5, 2019 @ NVT

# ITEM 4.5 -Segment A Caltrans work

## Updates on State Route 37 Improvement (Segment A)

### Location Map



### Project Schedule

June 2019 – Fund Allocation for Environmental Phase (PA&ED)

Early 2022 – Public Circulation of Draft Env. Document

Early 2023 – Env. Clearance & Project Approval (PA&ED)

### Project Funding:

\$10M: Environmental Phase (PA&ED)

### Project Description:

The Long Lead project proposes to reconstruct State Route (SR) 37 to address Sea Level Rise (SLR) and recurring flooding while including Complete Streets features to address multi-modal bicycle and pedestrian use.

### Purpose and Need:

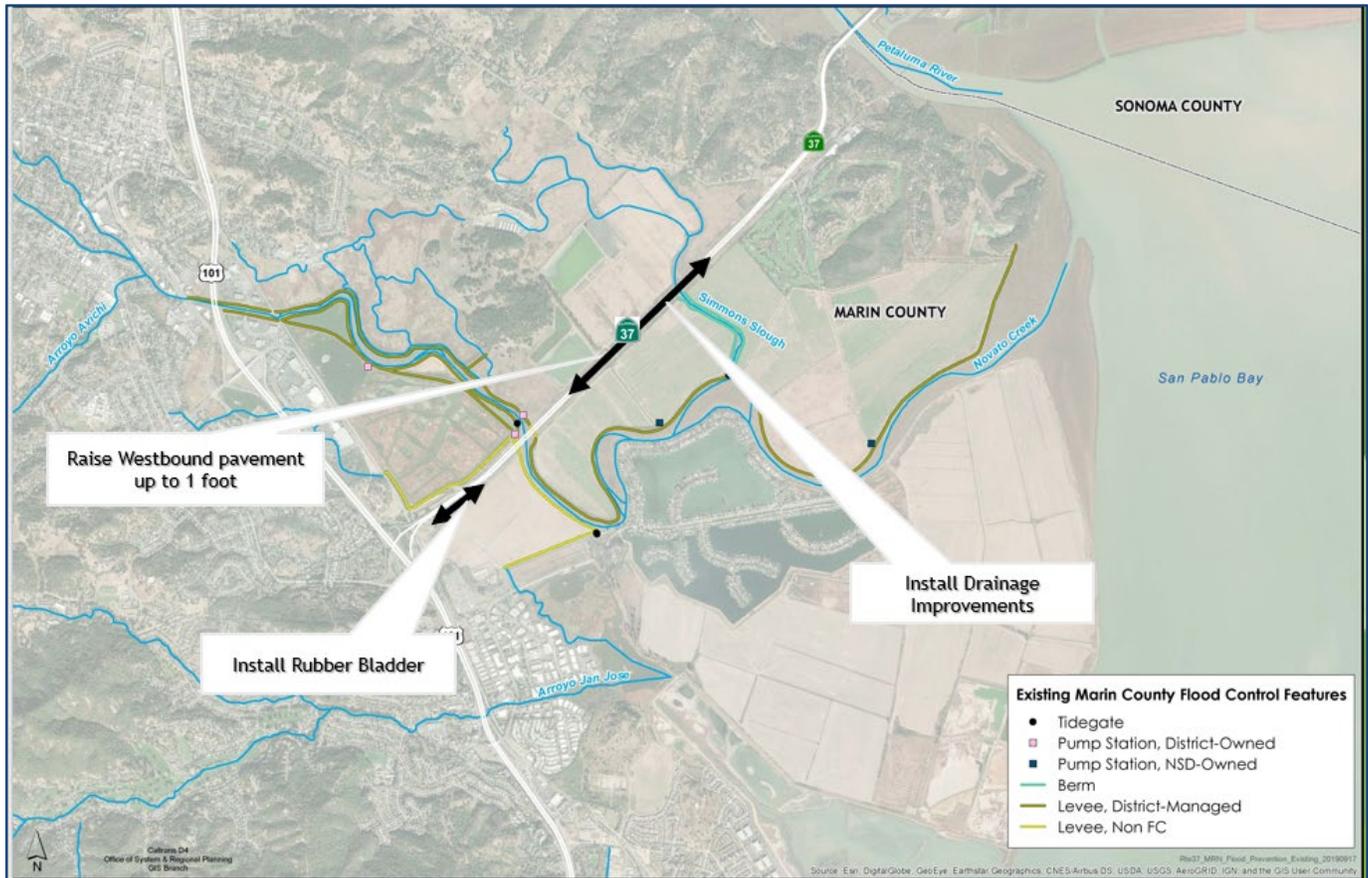
The purpose of this project is to address recurring flooding and future SLR impacts to the existing SR 37 in Marin County. Flooding on SR 37 occurs during seasonal rain and high tide events, causing delays and closures. Over time, the existing road could erode and get inundated permanently, resulting in the loss of a safe, reliable transportation corridor.

### Status:

Started the environmental phase of the project.

Working with HQ and CTC on extending the eastern conform to SR 121 Junction.

**Near Term Improvements, Before Winter 2019/20**



- Completed with initial paving east of Novato Creek to raise the westbound SR 37.
- Continue to work on drainage system work to install culvert and slide gates, target to complete within this month.
- Monitoring weather/storm event for deployment of rubber bladder and tractor pump.





# Highway 37 Corridor Adaptation Study

SR37 Policy Committee Meeting

December 5, 2019

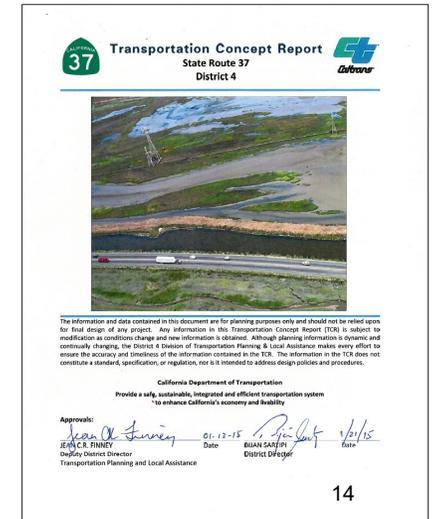
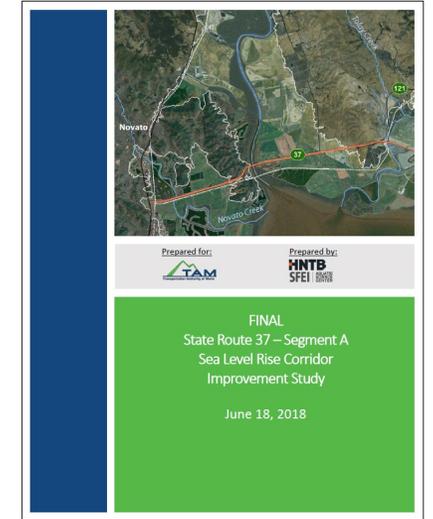
# Study Scope

- Collect previous studies and synthesize contents related to Highway 37 Segment A-1
- Identify additional information needed to identify the “Preferred Approach”
- Provide guidance to Caltrans and MTC regarding Approach Alternatives and priority “Next Steps” to protect the corridor from flooding resulting from high tides, sea level rise, and storm surge



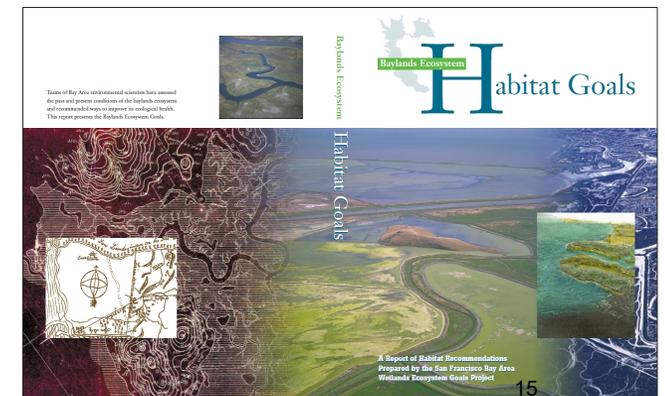
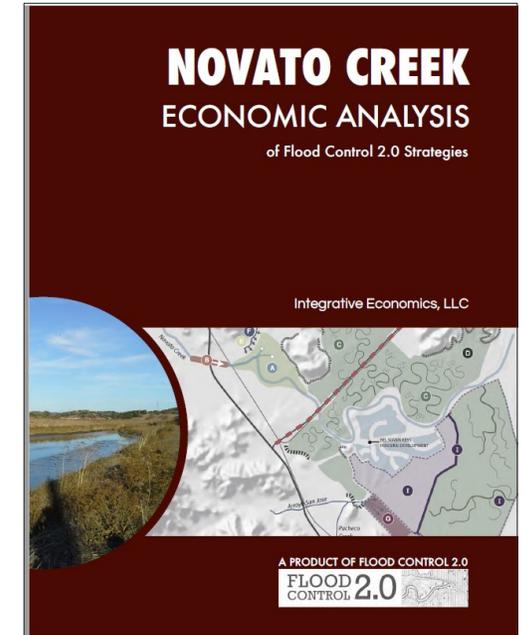
# Key Findings/ Transportation

- Segment A-1 has the lowest roadway elevations in the entire corridor
- Caltrans High Risk Design standards require raising the roadway by 18 to 22 feet
- Interchanges require reconfiguration at U.S.101, Atherton Avenue, Hanna Ranch Road, and Marsh Drive
- California State Rail Plan recommends linking SMART with Capitol Corridor trains by 2040
- Napa Transit study identified feasible micro-transit and 2 express bus routes after Segment B widening



# Report Key Findings/ Habitat

- Novato's Baylands are a priority for restoration and expanded watershed connectivity
- Widening the Novato Creek crossing and increasing tidal marsh would reduce flooding and benefit Bay ecology
- In 2016, County Flood District adopted a plan to reduce flooding and restore marshlands
- Coastal Conservancy is restoring 1600 acres of marshland southeast of Bel Marin Keys
- Marin County is designing 194 acre marshland restoration between Novato Creek and Deer Island
- Novato Sanitary is approved to move its summer irrigation fields to new BMK V Phase 2 lagoon



# Highway 37 Corridor Outreach / Stakeholders

## **Outreach Process**

TAG Meeting #1 April 18, 2019

TAG Meeting #2 June 6, 2019

Property Owner Meeting August 22, 2019

City of Novato Meeting August 27, 2019

SCTA Meeting September 5, 2019

SMART Meeting September 6, 2019

Novato Sanitary District September 10, 2019

Caltrans Meeting October 10, 2019

TAG Meeting #3 November 12, 2019

Community Meeting November 21, 2019

## **Technical Advisory Group**

County of Marin

Transportation Authority of Marin

Marin County Flood Control District

Bel Marin Keys CSD

Caltrans

California Coastal Conservancy

City of Novato

Pacific Gas and Electric

Sonoma County Transportation  
Authority

SMART

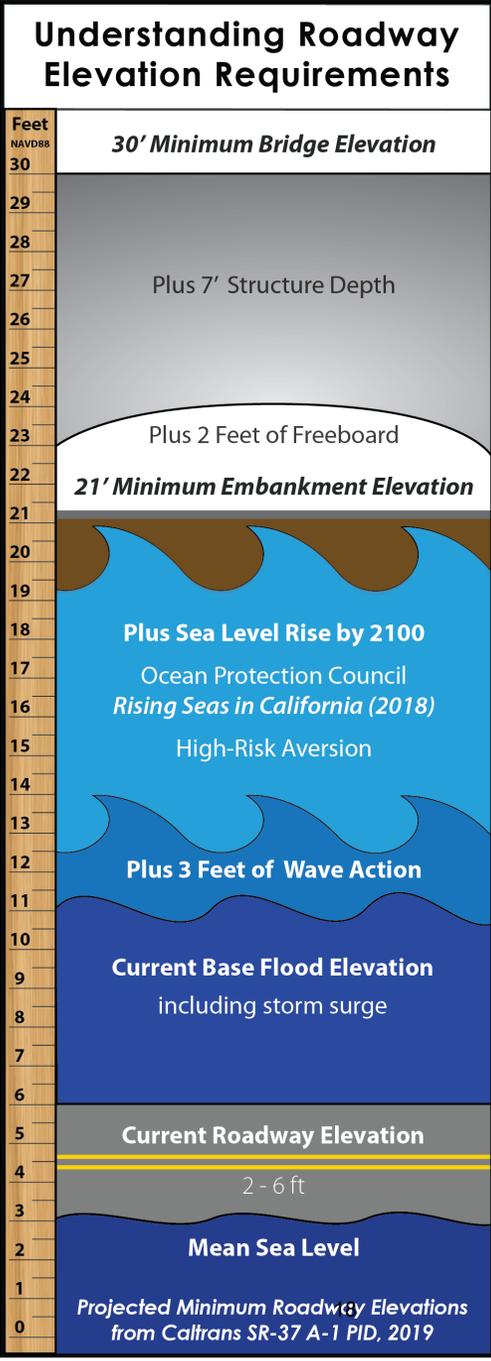
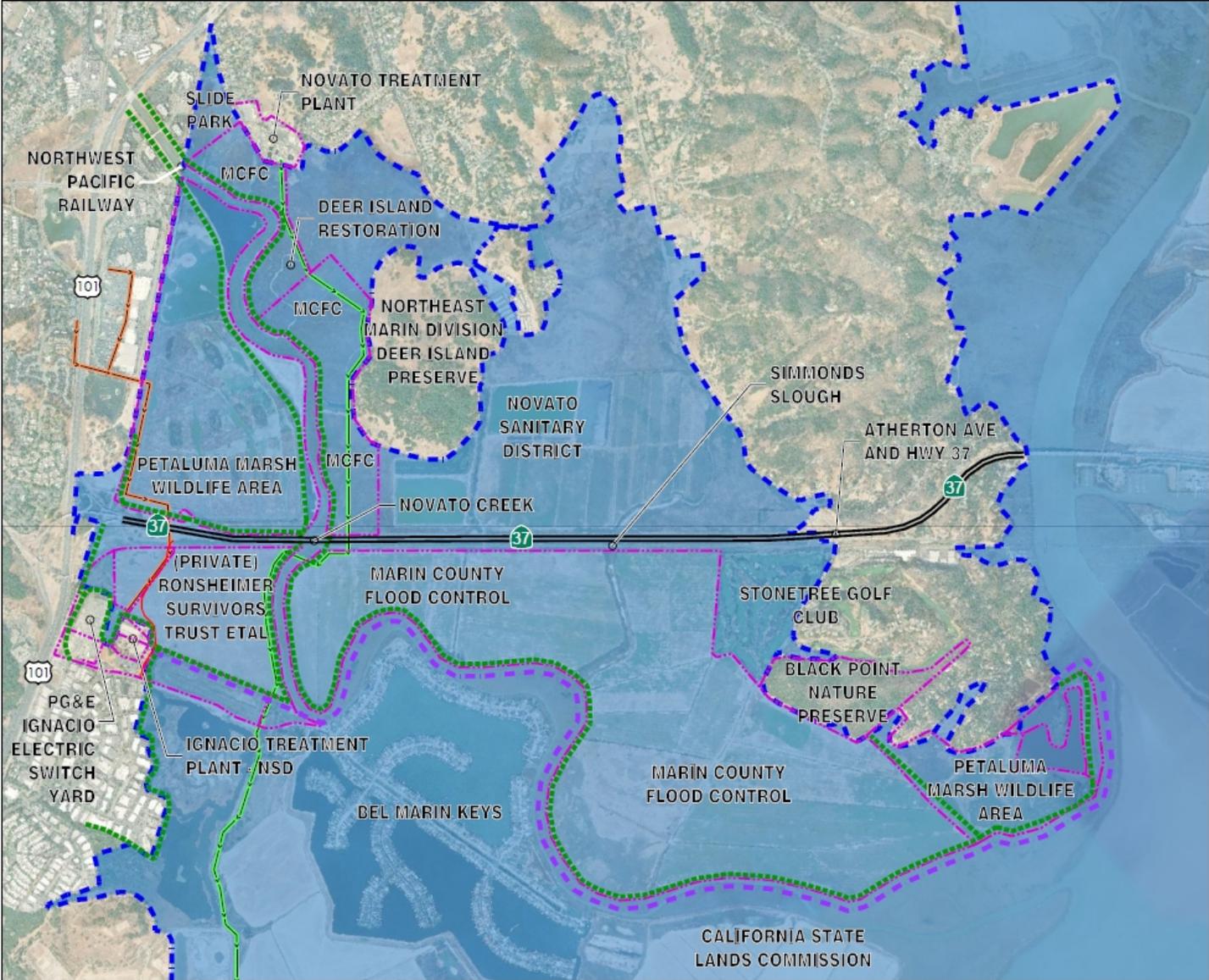
Novato Sanitary District

# Segment A-1 Key Challenges

- Urgent public interest to prevent Highway 37 flooding
- Increasing frequency of flooding / Climate Change
- Highly Sensitive Environmental Setting
- Few Mobility Options currently available
- Long-term ecosystem management
- Funding

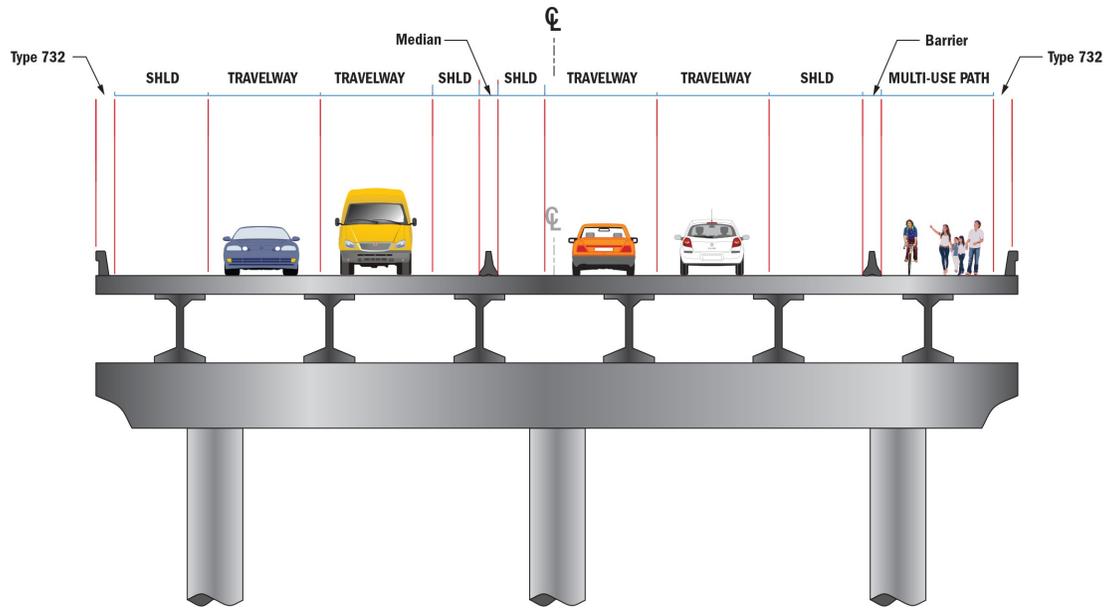


# Flooding Resulting from “Do Nothing”



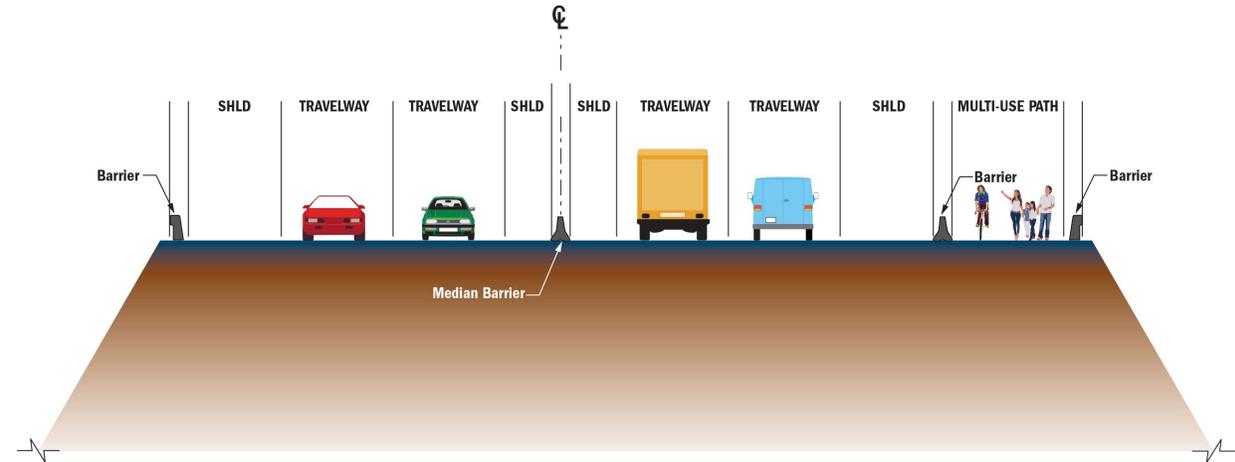
# Caltrans Long Term Study Options

**ALTERNATIVE A1: TYPICAL CAUSEWAY SECTION**



MRN - 37

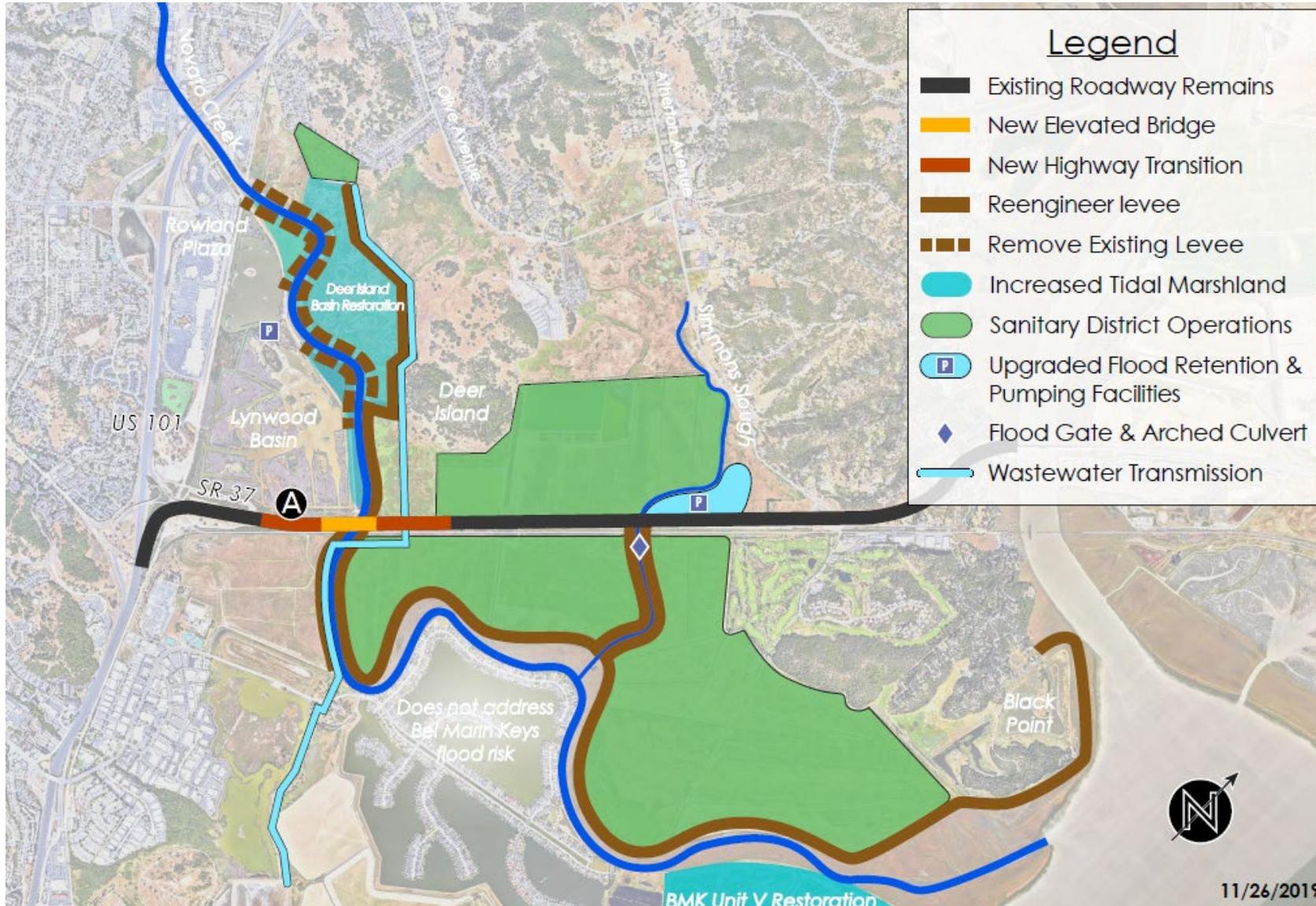
**ALTERNATIVE A2: TYPICAL EMBANKMENT SECTION**



MRN - 37

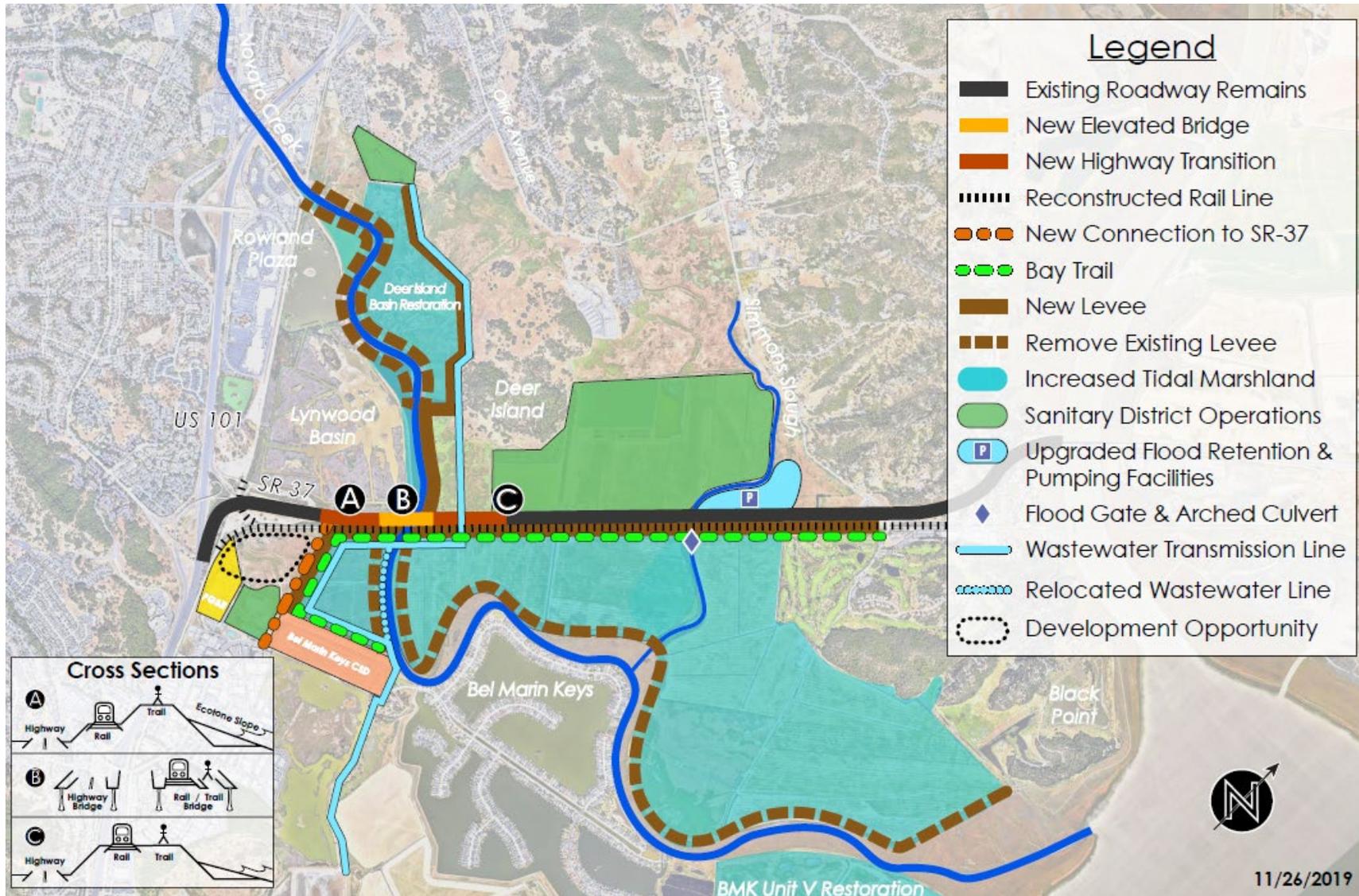
SHOPP grant is targeted to identify a preferred approach by 2023

# Vision 1 – Hold the Line



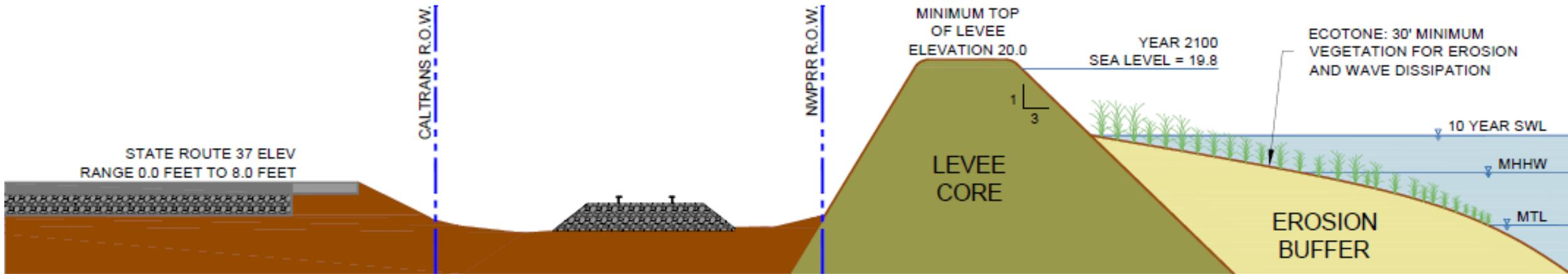
This Vision has 100 year protection for road, rail, new Bay Trail, and sewage facilities by reconstructing levees in their current location. It has the most fill, most flood water pumping, and the least marshland.

# Vision 2 – Move the Line



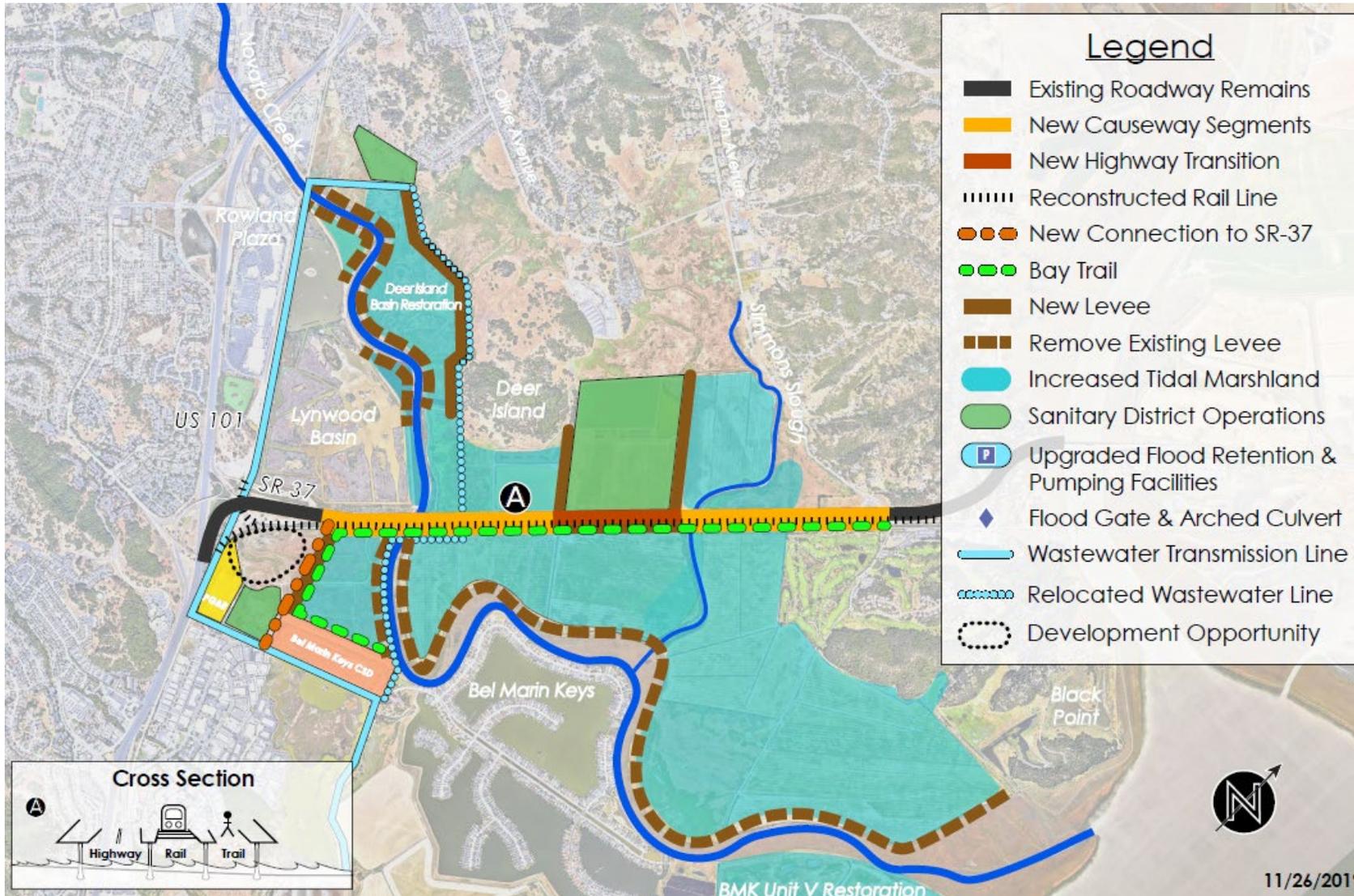
This Vision has 100 year protection for existing road, rail, and new Bay Trail by relocating the levee bayside of the rail. Sewage irrigation sites are restored to tidal marsh south of SR37, but flood water pumping remains a necessity. New connector road from Bel Marin Keys to SR37.

# Vision 2 – Move the Line



Transportation facilities protected by levees

# Vision 3 – Multi-Beneficial



This Vision has 100 year protection for road, rail, and new Bay Trail on a shared causeway, has the greatest marsh restoration and flood protection with the least flood water pumping, but the most sewage facility modification.

# Vision 3 – Multi-Beneficial

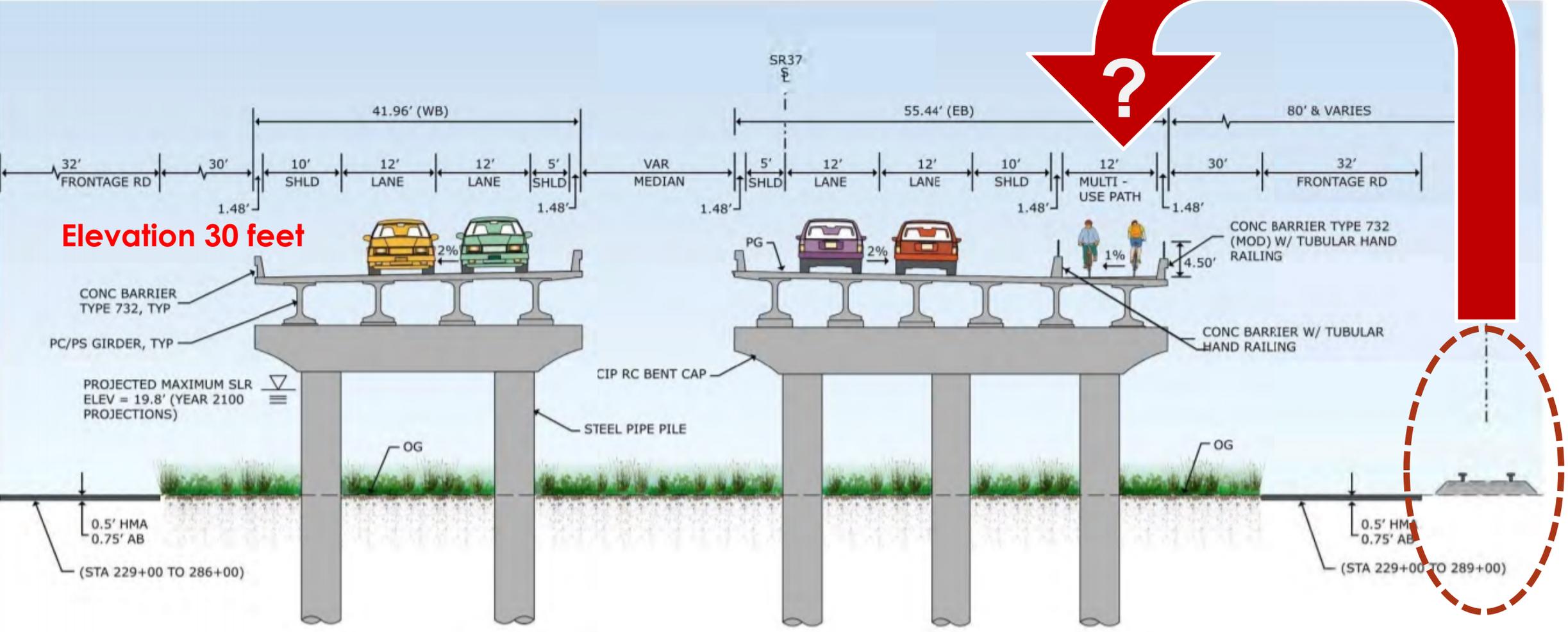
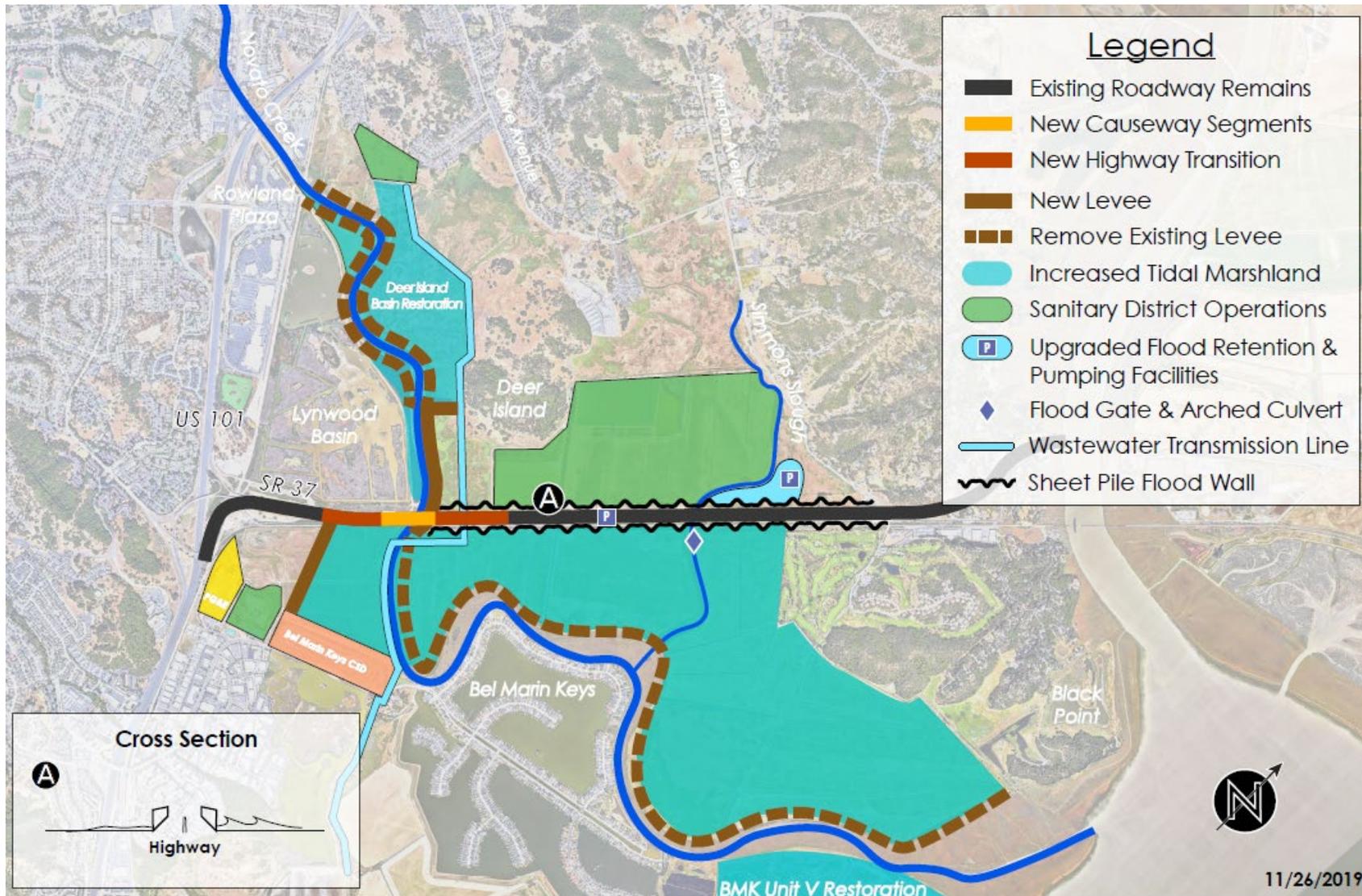


Image from State Route 37 – Segment A Sea Level Rise Corridor Improvement Study

# Conceptual Design Approaches

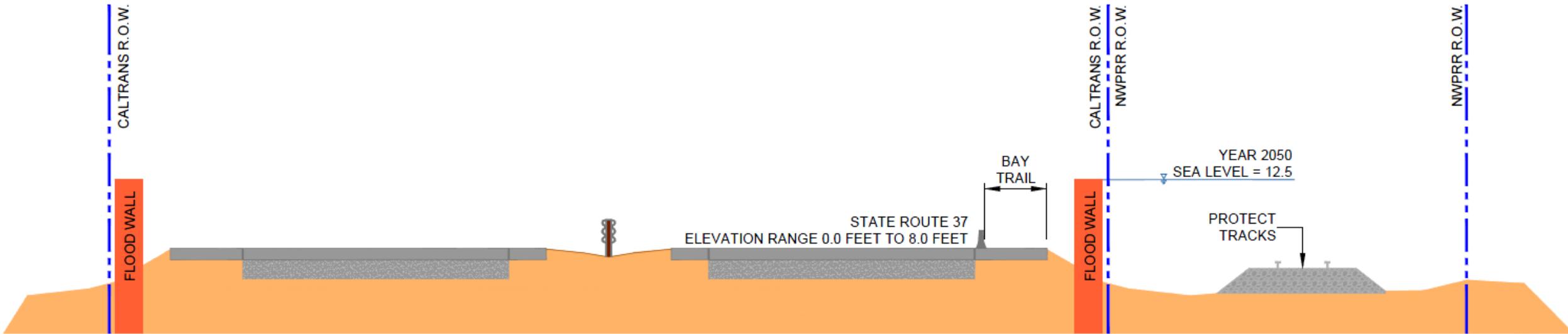
## Vision 4 – Buying Time



This Vision has 30 year protection for road and new Bay Trail by constructing floodwalls at the ROW edge, while a long-term plan is designed and funded. Sewage irrigation sites are restored to tidal marsh south of SR37, but flood water pumping remains a necessity.

# Conceptual Design Approaches

## Vision 4 – Mid Century Option



# Conceptual Design Approaches

## Vision Comparison

Vision	Sea Level Rise Protection	Enhances Env. Resources	Time to Implement	Lifecycle Cost	2019 Cost
Vision 1 Hold the Line				<b>\$\$\$</b>	\$300 MM
Vision 2 Move the Line				<b>\$\$</b>	\$250 MM
Vision 3 Multi beneficial				<b>\$</b>	\$600 MM to \$1 B
Vision 4 Buying Time				<b>\$\$\$\$</b>	\$200 MM



**For more information, please  
contact  
Dan Dawson, Marin County DPW  
415.473.6287  
ddawson@marincounty.org**