Sea Level Rise Adaptation for State Route 37: The Flyway Highway

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Coastal Resilience Network: Adaptation Strategies for Coastal Highways
January 7, 2021
The Flyway Highway

Photo courtesy of USGS
Restoration to Date and Planned

- **State Route 37**
- **Historical Baylands Boundary**
- **Restoration in Progress or Complete**
- **Railroad**
- **Tidal Marsh**
- **Restoration in Planning**

*San Pablo Bay*
State Route 37 Policy Committee

- Elected Officials from North Bay Counties
- Goal: Reconstruct SR 37 to withstand flooding while improving mobility and safety.
The Fear: A Dam Across the North Bay?

The restoration community said “No!”
State Route (SR) 37-Baylands Group

Formed in June 2017 in response to accelerated action by the SR 37 Policy Committee
Sea Level Rise Will Inundate SR 37 in 30 Years

Photo courtesy of The Press Democrat

Marin Audubon
Sonoma Land Trust
Coastal Conservancy
San Pablo Bay NWR
CDFW Napa Sonoma Marshes
Marin Audubon
Novato
Vallejo
Sonoma Land Trust
San Pablo Bay NWR
CDFW Napa Sonoma Marshes

Google Earth 101
Google Earth update/permission Earth engine
Message: Integrate, Don’t Mitigate

Integrate **infrastructure improvements** for SR 37 with existing and future **habitat** planning, conservation and restoration to ensure **healthy ecosystem function** and **resilience** to landscape scale change of the San Pablo Bay.
Baylands Goals Report is the Blueprint
Baylands Ecosystem Habitat Goals Report: Science Update, 2015:

“Elevate Highway 37... to allow the full passage of sediment, water and wildlife.”
SR 37-Baylands Group Goals

- Create and Promote Adoption of Our Guiding Principles
- Influence Transportation and Public Access Planning
- Develop an Ecological Landscape Vision

Photo courtesy of Sonoma Land Trust
Guiding Principles

• **Integrate** improvements to SR 37 with habitat goals
• Improve **ecological connectivity** when reconstructing SR 37
• Develop design solutions **appropriate to the landscape** of the Baylands, considering historical ecology and sea level rise
• Planning should be **corridor-wide**, not in segments
• **SLR projections** should based on the most recent OPC report
• Near-term solutions must protect wetland resources and **leave options open for future restoration**
• **Minimize financial impacts** to low-income commuters
• Include **multi-modal transportation** options and **recreation** opportunities
Plan was prepared for MTC, Caltrans and county transportation agencies, completed in Feb. 2018

- Includes SR 37-Baylands Group’s Guiding Principles
Evolution of the SR 37 Project/Program Purpose

PROGRAM PURPOSE
Deliver a Corridor Program that Results in Community Benefits for All

Sea Level Rise Adaptation
- Improve resiliency of transportation infrastructure to sea level rise and flooding

Transportation
- Improve traffic flow and peak travel times by relieving congestion and increasing person throughput

Equity
- Enhance the quality of life for residents and build stronger local and regional economy for all

Ecology
- Restore ecological and hydrologic flows to enhance productivity of wetlands and Baylands

Public Access
- Provide accommodation for multimodal use and facilitate public access to natural resources

Source: State Route 37 Resilient Corridor Program, Metropolitan Transportation Commission-Led Team, November 8, 2018
Identifying Environmentally Preferred Alternative

State Route 37
Alternatives Assessment Report for the Ultimate Project
State Route 37 from SR 121 to the Mare Island Interchange
Metropolitan Transportation Commission

Segment B DAA, Completed in February 2019
Influencing Public Access Planning
SR 37 Public Access Scoping Report (June 2020)

Acknowledges need to protect “Core Wildlife Areas” and proposes only public access that is compatible with wildlife in those areas.

- Recognizes legal limitations to public access on federal wildlife refuges and state wildlife areas.
- Focuses on connecting urban centers (e.g., Petaluma, Novato, Vallejo, American Canyon, Napa) to the Baylands and surrounding overlooks by improving existing roads, trails, and crossings to better serve bicyclists and pedestrians.
- Supports adding Water Trail sites.

Prepared by Team Common Ground for the Bay Area Regional Collaborative and Metropolitan Transportation Commission
Developing an Ecological Landscape Vision

- Conceptual maps created for Baylands Group White Paper in 2017
- Sonoma Creek Baylands Strategy, completed in May 2020
- Petaluma River Baylands Strategy now underway
Sonoma Creek Baylands Strategy

- Habitat Restoration
- Climate Resilience
- Public Access Guidelines
- Recommendations for SR 37 and SMART Rail Line
HOW To Achieve Goal of “Integrate, Don’t Mitigate?”

**Promoting Highway Design That Enables Restoration:** Participation in Design Alternatives Assessments

**Created Enhancements List:** Wetland Land Managers (subset of Baylands Group) provided MTC and Caltrans with list of near-term and long-term ecological enhancement and restoration opportunities in San Pablo Baylands (created in 2019, updated in 2020)

**Participating in Planning and Environmental Linkages (PEL) Study:** Participation in Caltrans initiated a PEL study to develop a purpose and need statement, identify alternatives, conduct stakeholder engagement and interagency coordination, and address overall corridor mitigation needs

*** Regional Conservation Investment Strategy next?***
RESILIENT SR 37 PROGRAM — PHASED IMPLEMENTATION
CONCURRENT PROJECT DEVELOPMENT. DELIVER EARLY COMMUNITY BENEFITS.

- Flood Protection Project (US 101 – Lakeville Hwy)
- Congestion Relief Project (SR 121 – Mare Island)
- Early Ecological Enhancements
- Transit With Emerging Technology

- SR 37 Corridor SLR Adaptation Project (I-80 – US 101)
- Bike/Pedestrian/Public Access
- Transit With Tomorrow’s Technology

Early Benefits

Transition

RESILIENT SR 37

Source: State Route 37 Resilient Corridor Program, Metropolitan Transportation Commission, State of the Estuary Conference, October 22, 2019
Unanswered Questions

- Where will the money come from? (Estimated cost is $4 Billion)
- Could the highway be moved inland?
- Could a passenger rail line be co-located with the highway on a pile-supported causeway?
Lessons Learned

- Engage with transportation decision makers at all levels, from planners to elected officials, and look for opportunities to “Integrate, not Mitigate”

- Build a broad environmental constituency, including land managers, scientists, advocacy groups and regulators

- Be proactive: Develop an ecological landscape vision to guide recommendations for transportation infrastructure
Thank You!

Photo courtesy of Ducks Unlimited