

# Capitola City Council

## Agenda Report



**Meeting:** June 27, 2024

**From:** Public Works Department

**Subject:** Cliff Drive Resiliency Project

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**Recommended Action:** Receive a progress report on the Cliff Drive Resiliency Project and provide feedback on design alternatives.

**Background:** Cliff Drive serves as a crucial transportation link between Capitola Village and Santa Cruz County. The road runs along steep bluffs that overlook the Pacific Ocean, making it exceptionally vulnerable to erosion. The scenic nature of Cliff Drive not only supports local transportation but also enhances tourism and community access to the coast.

Cliff Drive's history is rooted in the development of the Santa Cruz Railroad in 1876 and subsequent infrastructure improvements, such as the construction of the Stockton Bridge in 1934. Erosion concerns have been noted since the 1960s, leading to initial protective measures like rock slope protection. Despite these efforts, erosion remains a persistent challenge, with significant events occurring in the 1990s and most recently during the winter of 2022-2023, which severely undermined existing protections like the soil nail wall installed in 1997.

City staff secured Federal Emergency Relief Funding to repair Cliff Drive's damaged bluff within the City's right of way. The project must be ready for a construction funding request by September 2025. Additionally, the City received \$450,000 from the California Coastal Commission for an alternatives analysis. On October 12, 2023, the City contracted CSW/ST2 for design services for the Cliff Drive Resiliency Project. Since then, staff has worked closely with CSW/ST2 to develop the project, guided by the following principles.

*Mission Statement: Cliff Drive improvements will serve the mobility needs of all users equitably, maintain access for future generations despite the impact of sea level rise and increasing storm intensities, seek to reduce traffic impacts to the Jewel Box neighborhood, and safeguard environmental resources.*

**Goals:**

1. Provide safe access for all users to and from the coastline.
2. Conform to regional transportation goals.
3. Protect the roadway from erosion under various sea level rise scenarios.
4. Ensure construction feasibility with minimal temporary impact.
5. Protect environmental and cultural resources.
6. Optimize life-cycle cost.
7. Simplify permitting complexity

Staff is in the process of finalizing a feasibility report. The purpose of this staff report is to provide the City Council with a detailed overview of the Cliff Drive Resiliency Project, confirm the approach to various project options, and seek input to move forward with the next steps in the evaluation process to determine the preferred option.

**Discussion:** The feasibility analysis reviews existing conditions and the basis of design to develop project strategies and identify alternatives.

**Existing and Environmental Conditions:**

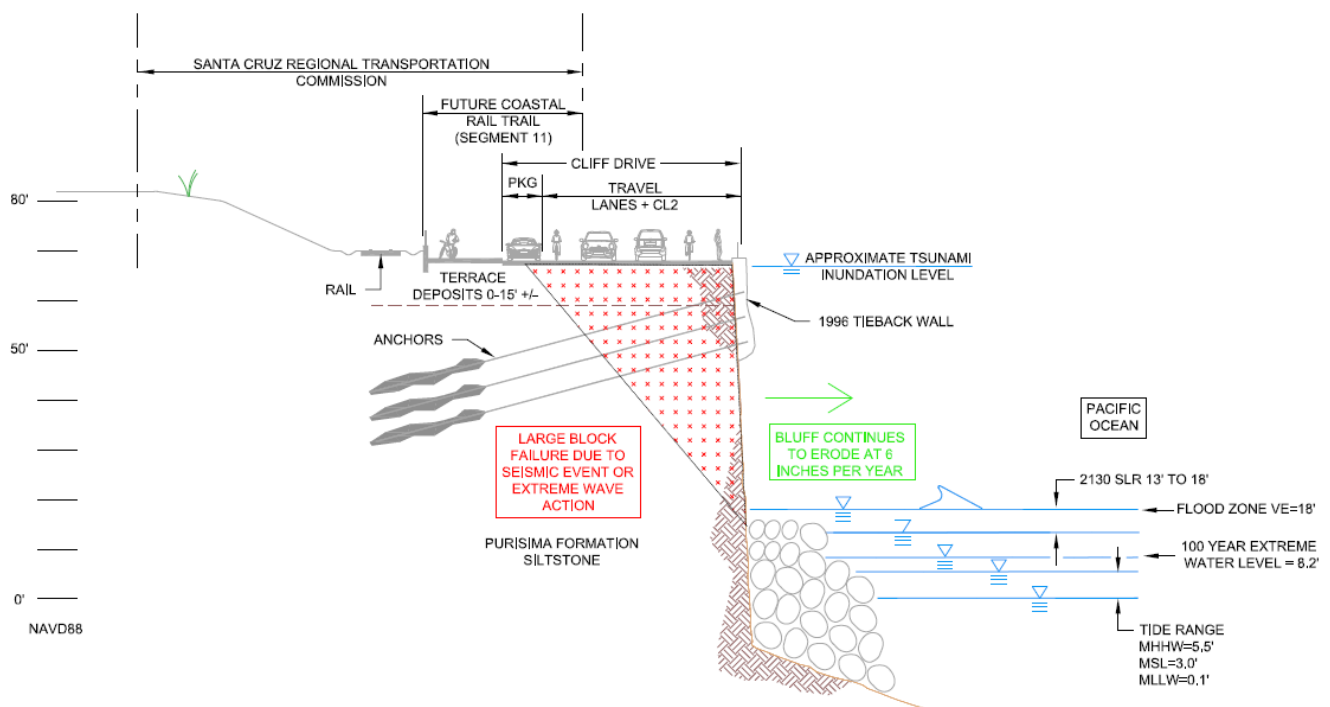
- Geological Composition: Erosion rates vary from 0.3 to 1.3 feet per year.
- Traffic and Infrastructure: Cliff Drive is a two-lane street with asphalt paving, including Class 2 bicycle lanes.
- Hydrological Factors: The area is classified as being within a Tsunami Hazard Area. Projected sea level rise estimates indicate potential elevations of 3.1 to 6.6 feet by 2100, impacting bluff erosion rates and infrastructure vulnerability.
- Sand Supply: Sand supply dynamics are influenced by wave action, local erosion rates, and sediment contributions from rivers and dredging activities.
- Cultural and Biological Resources: Environmental assessments are ongoing to identify and mitigate impacts on local flora, fauna, and cultural heritage, ensuring compliance with CEQA and the National Historic Preservation Act.

### Basis of Design:

- Roadway Standards: Enhancing Cliff Drive to align with “Complete Streets” principles involves developing Class IV protected bicycle lanes, which require a width of 38 feet. Additionally, there is consideration for a multi-use walkway on the bluff side of the roadway that serves both pedestrians and bicyclists, accommodating diverse transportation needs.
- Expected Life of Facility: Given Cliff Drive's vulnerability to bluff erosion exacerbated by sea level rise, ensuring a service life of 100 years is crucial for maintaining continuous transportation access. Phased adaptation strategies based on triggers such as time, sea level rise, or bluff recession are recommended.
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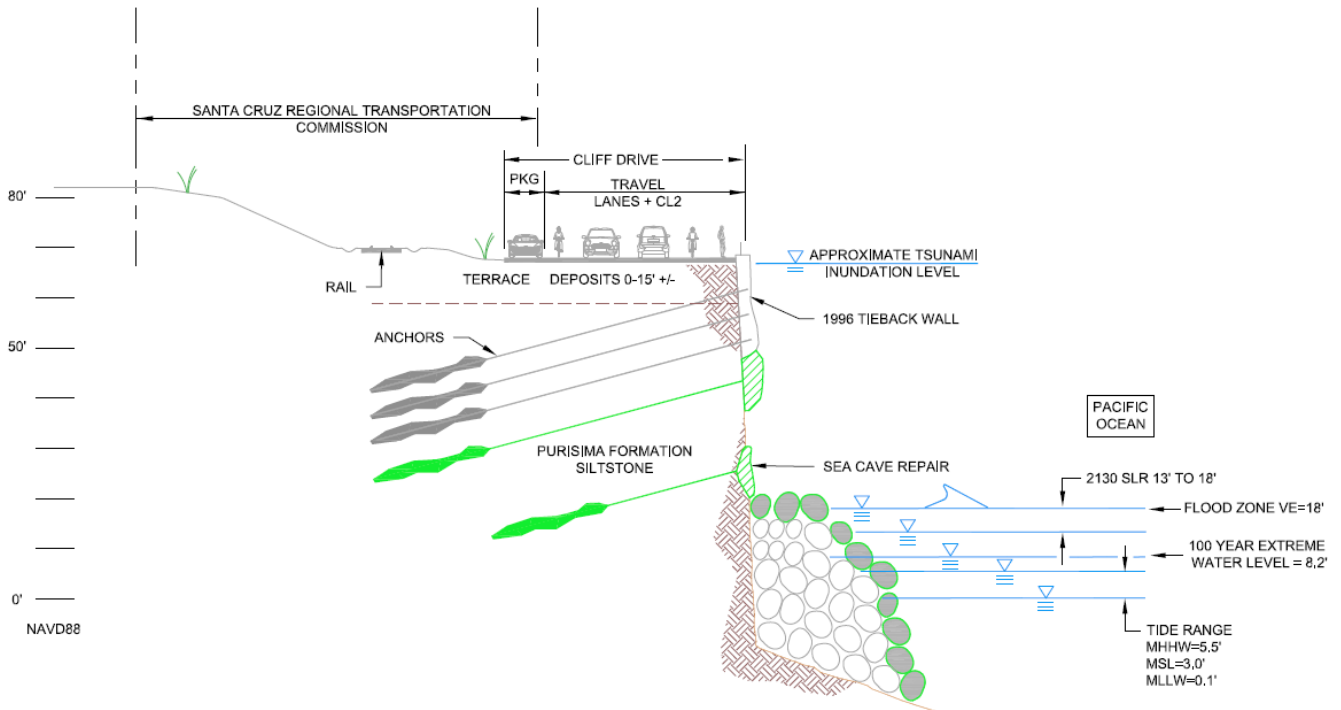
### Project Strategies and Alternatives Considered:

- Strategy 1: Managed Retreat
  - Alternative 1: Do Nothing: No action to mitigate erosion and bluff instability. Continued bluff erosion will lead to episodic failures and potential closure of Cliff Drive, requiring traffic to be redirected to inland routes.



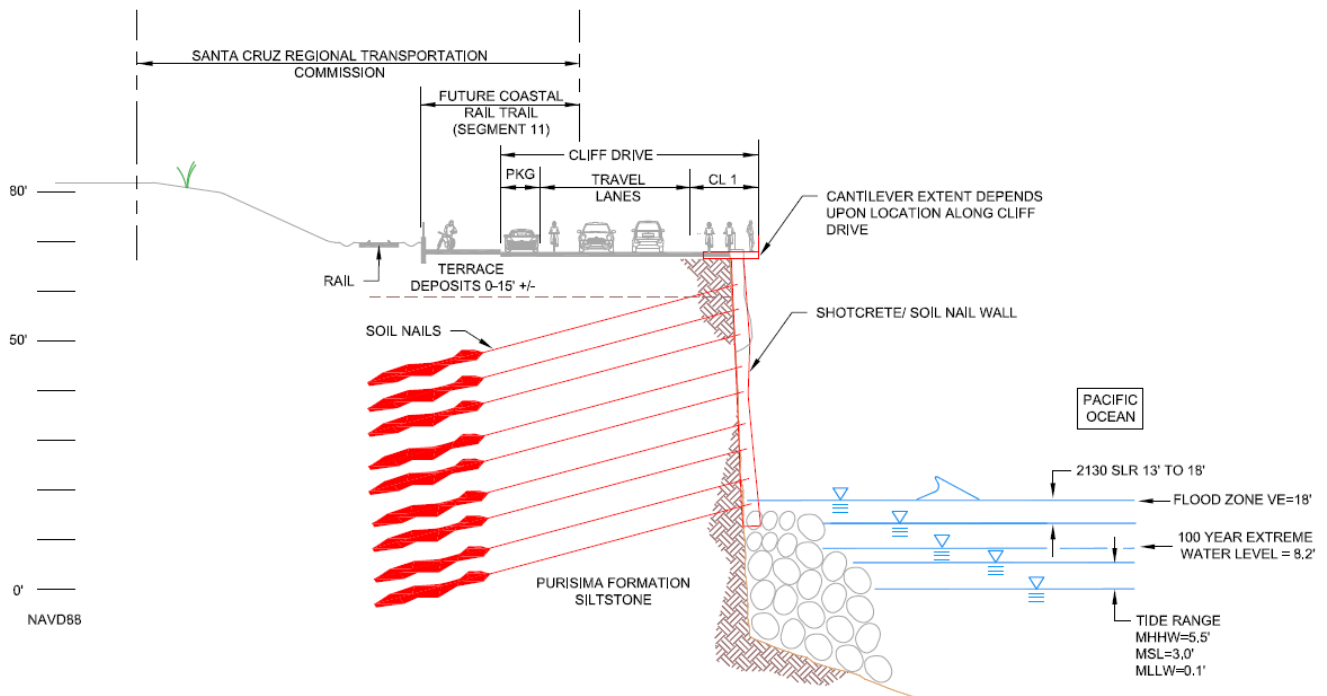
- Strategy 2: Adapting to Sea Level Rise

- Alternative 2: Adapt: Short-term adaptive measures with provisions for future structural changes. Additional rock slope protection, repair of sea caves with concrete facing, and potential future installation of a secant pile structure to create a barrier. A long-term alternative could involve reconfiguration of Cliff Drive to a one-way westbound street.



- Strategy 3: Protecting the Bluff

- Alternative 3: Protect: Maintaining Cliff Drive in its current location, enhancing it as a complete street. Installation of a full-faced soil nail wall, rock slope protection, development of a Class 1 multi-use trail, and conversion of existing parking to parallel parking with accessible stalls. Creation of new overlooks and improved access points.



A decision matrix has been used to objectively evaluate each alternative based on criteria such as safety, regional transportation goals, erosion protection, construction feasibility, environmental impact, cost, and permitting complexity.

	Option 1 Do Nothing	Option 2 Adapt	Option 3 Protect
Service Life	Marginal/ Negligible 🕒	🔄	🔄🔄
Capital Cost	\$0	💰	💰💰💰
Life Cycle Cost	🔄(💰)🔄(💰)🔄(💰)🔄(💰)	🔄(💰)🔄(💰)	🔄(💰)
Coastal Access	No change or loss	🏖️	🏖️🏖️
Traffic Impact	🚗🚗🚗	🚗🚗	No change

Although the analysis suggests Alternative 3 (Protect) as a strong candidate, the final decision will be made after completing further analysis and stakeholder consultation.

### Community and Stakeholder Outreach:

- On Tuesday, February 27, 2024, the City held a community meeting at the Capitola Community Center to review the Cliff Drive Resiliency project based on the above preliminary information. Roughly 20 residents attended, discussing potential solutions such as protecting the bluff, closing Cliff Drive, and hybrid solutions converting it to a one-way street.
- Feedback Summary:
  - Strong preference for retaining two-way automobile travel.
  - Emphasis on quickly advancing the process.
  - Concerns about shifting traffic into adjacent neighborhoods.

- Interest in improving bicycle and pedestrian infrastructure due to expected increases in trips.

### **Next Steps:**

The immediate next steps consist of finalizing the evaluation of each alternative using the decision matrix analysis and stakeholder feedback. This comprehensive analysis will help us determine the preferred option for the Cliff Drive Resiliency Project. Staff will continue with public outreach efforts to solicit input from residents, businesses, and other stakeholders, ensuring that the final decision reflects the community's needs. During the development of the preferred option, staff will further develop other design elements such as long-term resilience plans for Hoopers stairs and informal evacuation paths.

Future Tasks – September 2024 to September 2025:

- LCP Amendment Related to Coastal Access: Update the Local Coastal Program (LCP) to align with proposed changes to coastal access and infrastructure, ensuring compliance with local regulations.
- Finalize Preliminary Engineering for the Preferred Option.
- CEQA IS/MND.
- Permitting.
- Final Design: To be completed within the required timeframe to request FHWA construction funding.

Fiscal Impact: The City was awarded federal ER funding amounting to \$839,408 for professional engineering and environmental services, of which 88.53% (\$743,127) will be reimbursed by FHWA/Caltrans LA, and 11.47% (\$96,281) will be supported by a City match. The City match must be non-federal funding, which can be covered by the \$450,000 grant from the Coastal Commission, resulting in a total project budget of \$1.2 million.

The current available funding for the capital construction of this project is approximately \$8.4 million, which will also be reimbursed at a rate of 88.53% with federal funding, requiring a City match of approximately \$96,000.

Staff continues to seek additional funding for the project in the form of grants and other sources.

Report Prepared By: Jessica Kahn, Public Works Director

Reviewed By: Julia Gautho, City Clerk; Samantha Zutler, City Attorney

Approved By: Jamie Goldstein, City Manager