Beach Boulevard

INFRASTRUCTURE RESILIENCY PROJECT

COMMUNITY & STAKEHOLDER ENGAGEMENT SUMMARY

Prepared by Kearns & West

May 21, 2021

TABLE OF CONTENTS

Contents

1. Project Background and Purpose

To protect essential public infrastructure along the Beach Boulevard promenade, the City is conducting the Beach Boulevard Infrastructure Resiliency Project (Project) to replace the current seawall and outdated infrastructure while building climate resilience. The Project is being designed to create a multi-benefit solution to protect public infrastructure, recreational activities, numerous homes, businesses and the community at large from further impacts due to continued coastal erosion.

As shown in Figure 1, there will be three phases of the Project. At the time of developing this Community Engagement summary the Project is nearing completion of Phase 1: Preliminary Planning and Feasibility, which will culminate in the recommendation of the highest scoring design alternative to be adopted by the City as the preferred design concept, then the Project will move into Phase 2: Design and Permitting. The Project will ultimately conclude after Phase 3: Construction.

Figure 1. Project Timeline

From the outset of the Project, the Project Team (Team) committed to designing and conducting a transparent, community-based planning process that engaged Pacifica community members throughout the development of alternatives for the Project. This began by conducting a series of nine stakeholder interviews in the summer of 2020 that helped to identify the community's interests and concerns related to the Project, results and findings from the stakeholder interviews are included in Appendix B. Information and insights gathered from the interviews then helped to inform the development of the Stakeholder Engagement Plan, which provide a "roadmap" for the stakeholder engagement process and to align engagement activities with key project tasks and milestones. The Plan describes objectives, guiding principles, stakeholder audiences and interests, recommended activities and materials, a proposed process schedule, roles and responsibilities, and metrics for success. The Stakeholder Engagement Plan is included in Appendix A.

The engagement objectives for Phase 1 were to:

- Introduce the Project and begin connecting with Pacifica stakeholders.
- Share information related to Phase 1 project deliverables: Existing Conditions, Multi-Hazard Risk Assessment, and Alternative Design Development and Analysis.

- Collect stakeholder input on Phase 1 project deliverables, and ultimately, solicit stakeholder input that will inform the identification of a Preferred Alternative for the project.
- Share information on other recent, current and/or upcoming projects in Pacifica and how they connect to the Beach Boulevard Infrastructure Resiliency Project.

To achieve the objectives, the Team followed a guiding set of principles to ground the engagement program. These principles included using a flexible and adaptive approach, encouraging transparency, communicating early and often, promoting easily accessible information and processes, and engaging "key communicators" such as community leaders and West Sharp Park residents.

In addition to the early stakeholder interviews, the community and stakeholder outreach and engagement process over the last 10 months has included:

- Four virtual Community Workshops (ranging between 40 and 80 participants per meeting).
    - Workshop #1 – Provided a 'kick-off' to the project community engagement and focused on the Existing Conditions Review (Appendix D1)
    - Workshop #2 – Focused on the Multi Hazard Risk Assessment (Appendix D2)
    - Workshop #3 – Focused on the Alternatives being developed (Appendix D3)
    - Workshop #4 – Focused on the Alternatives Multi Criteria Analysis (Appendix D4)
    - Each of Workshops #2, #3 and #4 included a post-meeting survey for attendees to complete, results of these surveys are included in Appendix E
- A place-based, interactive survey to gain a better understanding of Existing Conditions and community priorities (191 total respondents and 830 individual map responses).
    - Results of the interactive Existing Conditions Survey are provided in Appendix B
- A comprehensive and up-to-date webpage complete with post-Workshop surveys, workshop recordings and summaries, and a public comment form (over 90 sets of comments submitted).
- The convening of six meetings with an Ad Hoc Committee of the Pacifica City Council to advise on the Project overall and particularly on stakeholder engagement messaging, input opportunities and notification.
- Various comments received from community stakeholders through the project website and emails.
    - Communications via email and the City project website are included in Appendix F
- Two meetings with the Project Team and the California Coastal Commission (CCC) were held to keep CCC appraised of the project and the City's plans for developing the project. Feedback was sought from CCC on the Coastal Development Permit application requirements in Phase 2 of the project.

The importance of comprehensive, City-wide outreach was emphasized from the very beginning by City Council members, City staff and community members. Although the Project is focused on a specific section of Pacifica's coastline, it impacts the entire City and all community members should be engaged. The importance of this informed the Team's notification procedures for the Community Workshops and Existing Conditions Survey. Notification included email blasts from the City's listserv, social media posts on Twitter, Facebook and NextDoor, postcards mailed to all addresses west of Highway 1 in Sharp Park (approximately 1,200 businesses and residents), and individual emails and calls to stakeholders.

2. Community Feedback Key Themes

The Pacifica community is incredibly engaged and informed. It was clear from the beginning of Phase 1 that community members were ready to roll up their sleeves and dive into the details of each aspect of the Project.

This was evident in the requests for more detailed design, cost, and timeline information as well as for real-world examples of what the alternatives could look like and how they could function. This was also made clear in how community members stressed the need for the Project to be aligned with other planning efforts in the City, including the Local Coastal Plan, General Plan, and Sharp Park Specific Plan (SPSP). The community also generally appreciates and understands the challenge City staff and the City Council face as they navigate decisions for the Project and would help to articulate and weigh the various tradeoffs.

Overall, community members share a great appreciation for living in Pacifica including its natural beauty as well as its connection to the Pacific Ocean. Many community members also shared that the protection and safety of people, homes and businesses is their utmost and primary concern as it relates to sea level rise. During the first Community Workshop in September 2020 (Workshop #1), community members were asked to share their interests related to Pacifica's adaptation to sea level rise and the replacement of the Beach Boulevard seawall. A summary of Workshop #1 is included in Appendix D1. Figure 2 summarizes the input received which also acts as a high-level summary of input heard throughout Phase 1 (i.e., funding, protection, public infrastructure, the gap at Clarendon, etc.).

Figure 2. Virtual poll results from the September 24 Community Workshop.

While summarizing community input in a general sense can be challenging, particularly as it relates to illustrating important nuances and differing viewpoints, this community input summary as provided below attempts to capture key themes from the input received. These key themes are developed from the detail provided in Appendix B through Appendix F.

1. **General Project Information**
   - Who has the final say on the preferred alternative prior to moving into Phase 2: Design and Permitting.
   - Timeline for project's completion and opportunities for addressing immediate infrastructure improvements in the interim.
   - The need to balance maintaining the non-commercial, seamless connection to the beach the current seawall and promenade provides with integrating significant infrastructure updates, particularly for safety reasons and as a means to modernize the area.
2. **Protecting Public Safety, Property, Infrastructure, Recreation and Economic Investment**
   - The extent to which loss of beaches and recreation amenities, and their corresponding economic value, were quantified in assessing alternatives.

- A modern seawall is needed to ensure protection of existing public infrastructure and private infrastructure as well as ensuring confidence for potential private developers.
- Longevity of existing seawall and infrastructure (e.g. sewage system) until a preferred alternative can be constructed.
- Protection of the Sharp Park Golf Course aids in the protection of a key recreational and economic asset and habitat for protected species.
- Prioritizing infrastructure for North Wall given concerns of its resilience and lack of structural integrity.
- Maintaining and improving amenities along the pier.

3. **Funding and Alternatives Costs**
   - Costs for Alternative 1 (No project) not being accurate as it does not take into account factors like: homes lost and displaced residents; degradation of endangered species habitat; and loss of the beach and its recreational activities.
   - Transparency on how the design, permitting, and construction of the preferred alternative will be funded, including contingency plans should federal and/or state funding not be available and the extent to which residents will be responsible for funding a solution.
   - The extent to which the City is currently setting aside funding for the design, permitting, and construction of the preferred alternative.
4. **Permit-ability and Alignment with Other Planning Efforts**
   - *Coordination with Coastal Commission and Other Regulating Entities*
     - Collaborating with the City of San Francisco to address the Sharp Park berm and impacts to the Sharp Park Golf Course.
     - Contingency plans should the Coastal Commission not approve the preferred alternative.
     - Addressing a recent US Army Corps of Engineers study, which indicates that a new seawall is not worth the investment and they would not contribute funding.
   - *Overlap with Other Planning Efforts (e.g. General Plan, Local Coastal Plan, Sharp Park Specific Plan)*
     - The need to work under the guidance of the 1980 Local Coastal Plan (LCP) as the 2018 LCP has not been certified by the Coastal Commission. The 1980 LCP prohibits seawalls as a mitigation measure for any new development.
     - The extent to which alternatives under consideration comply with the General Plan.
     - Aligning the vision outlined in the SPSP with a decision of a preferred alternative for the Project.
     - The importance of coordinating with the City's Economic Development Committee to ensure the preferred alternative benefits existing or planned developments.
5. **Long-Term Planning**
   - Support for a long-term view that includes near-term fixes to the existing seawall.
   - Resilience of and financing strategy for maintaining existing infrastructure and utilities after the design life of the alternative selected has expired.
6. **Alternatives Under Consideration**
   - The extent to which nature-based strategies and/or offshore structures (e.g. groins) can be integrated into project design.
   - A replacement seawall being the most cost-effective alternative in the long run when compared to ongoing operations and maintenance costs of other alternatives (e.g. beach nourishment). (2)
   - Recognition that a replacement seawall or a hybrid solution that incorporates a seawall provides the highest level of protection.
   - Height and visual impacts of a replacement seawall (e.g. difference in height to existing seawall).
   - Real-world examples of the alternatives being considered and the extent to which they have ensured coastal resiliency.

- Impacts of the alternatives on bordering beaches.
- Importance of keeping the coast accessible for everyone, including the disabled who are dependent on wheeled mobility.

7. **Living Shoreline, Managed Retreat, & Infrastructure Relocation**
   - A living shoreline is too costly and does not provide adequate protection for infrastructure, homes, businesses, etc. Given the inevitability of sea level rise, particularly beyond the design life of the alternative selected, determine to what extent managed retreat should be considered in the long term, including costs (e.g. relocating homes and businesses) and what entities are responsible for paying for them.
8. **Public Space Opportunities**
   - Support for converting portions of Beach Boulevard into pedestrian-only areas.
   - The potential need to elevate Beach Boulevard several feet (along the North Wall) in order to maintain a line of sight to the ocean for those driving in the area.
   - Maintaining safe, reliable access to the beach and Beach Boulevard promenade, including additional seating along the promenade.
   - There is a need for additional maintenance and enhancement (e.g. cleaning, landscaping) of existing features along the Beach Boulevard promenade.
   - Utilizing resilient landscape design and intentional placement of indigenous plants.

3. Next Steps for Community and Stakeholder Engagement

Community members expressed the need for continuing outreach and engagement as the Project moves into Phase 2. As demonstrated above, the community is interested in diving into more details about the alternative's design, cost, impacts, etc. and has consistently stressed the importance of transparency and outreach to all Pacifica residents. Below is a summary of input that is recommended to inform Phase 2.

Topics for Phase 2:

- Additional information on the development of the preferred alternative(s) including structure alignment (relative to existing seawall), design details, additional engineering analysis, and cost estimates.
- Environmental documentation (CEQA/NEPA) and regulatory process updates
- Information on potential funding opportunities
- Feedback on public amenities along Beach Boulevard and Promenade to be incorporated into the preferred alternative.

Phase 2 Community & Stakeholder Outreach and Engagement

- Community engagement recommendations (e.g. key messaging, outreach activities, etc.)
  - Additional targeted outreach to all residents within and adjacent to the project area.
  - Those living in the proximity of the project area need to be asked about the height of a potential new wall.
  - Building support amongst all of Pacifica's residents
  - Building understanding on 1) scope of feasible public space opportunities available under the preferred alternative and 2) the specific timeline for Phase 2 and Phase 3 activities.
- Agency engagement to commence and progress all required permit applications. Agencies that the Project Team anticipates engaging with includes:
  - California Coastal Commission
  - US Army Corps of Engineers

- Regional Water Quality Control Board
- California State Lands Commission
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service

Appendix A: Engagement Plan

Beach Boulevard

INFRASTRUCTURE RESILIENCY PROJECT

STAKEHOLDER ENGAGEMENT PLAN

Prepared by Kearns & West

September 8, 2020

TABLE OF CONTENTS

1. Project Background and Purpose

1.1 Project Background

In 1984, the City of Pacifica (City or Pacifica) constructed an 18-22-foot-tall seawall with a rip rap revetment and promenade along Beach Boulevard north of the Pacifica Pier. The southern section of the seawall was constructed in 1987 using a differing design. Since its construction, the north seawall has experienced failures in multiple locations and continues to be an increasing public health and safety risk for the City. The historic West Sharp Park neighborhood, in particular, which includes the Beach Boulevard Promenade, continues to be at risk of erosion and coastal flood damages associated with coastal processes of the Pacific Ocean.

To protect essential public infrastructure along the Beach Boulevard promenade, the City is conducting the Beach Boulevard Infrastructure Resiliency Project (Project) to replace the current seawall and outdated infrastructure. The Project area (see Figure 1) is located parallel to Beach Boulevard, just west of the Palmetto shopping district. The Project will assess the current infrastructure and seawall, which includes four structures:

- North Wall
- Pier Sheet Pile Wall
- South Wall
- South Gap

Figure 1: Project Area

Project Phases

- *Phase 1: Preliminary Planning and Feasibility* will review existing conditions, project future conditions and risks, develop design alternatives, and ultimately determine a single preferred alternative solution. Phase 1 is expected to be completed by April 2021.
- *Phase 2: Design, Environmental and Permitting* will take place between May through November 2021
- *Phase 3: Construction* timing is still to be determined.

1.2 Project Schedule

The stakeholder engagement process will be planned and implemented around the project timeline and its respective milestones. The overall project schedule is included below.

Figure 2: Project Schedule

1.3 Engagement Plan Purpose

The purpose of the Stakeholder Engagement Plan (Plan) is to provide a "roadmap" for the stakeholder engagement process and to align engagement activities with key project tasks and milestones. The Plan describes objectives, guiding principles, stakeholder audiences and interests, recommended activities and materials, a proposed process schedule, roles and responsibilities, and metrics for success. The Plan is intended to be an internal, living document that will be revisited and updated throughout the process.

The Plan details an engagement approach for Phase 1 and outlines high-level objectives for Phases 2 and 3. The engagement objectives and approach for Phases 2 and 3 will be refined as the Project progresses.

A Note on COVID-19

At the time of writing, there are many unknowns about evolving health, economic, social, and political impacts from the COVID-19 pandemic and social distancing requirements. The health and safety of Pacifica community members is of the utmost importance. Project engagement will adhere to local social-distancing and shelter-in-place requirements, and there will be greater reliance on virtual engagement strategies.

1.4 Plan Development Process

This Plan is informed by interviews with stakeholders representing a broad range of interests in Pacifica. The stakeholder engagement approach is intended to be responsive to their interests and preferences around communications and engagement in support of the Project.

The stakeholder perspectives consulted to help inform development of this Plan include members of the following:

- West Sharp Park residents
- City of Pacifica Parks, Beaches, and Recreation Commissioner

- Pacifica Climate Committee member
- Pacifica Beach Coalition member
- San Francisco Public Golf Alliance representative

This Plan is informed by input from City of Pacifica staff and Kearns & West's prior experience working with stakeholders in Pacifica, as well as professional best practices for stakeholder communication and engagement.

1.5 Related Efforts in Pacifica

The Project overlaps in geography and focus with other efforts underway in Pacifica. These efforts, when combined, will help establish Pacifica's future for development and preservation for decades to come. It is important to help stakeholders understand how these efforts align (or diverge), and ensure that staff responsible coordinate closely to avoid confusion or fatigue for stakeholders. These efforts are summarized below.

- **Plan Pacifica:** In early 2019, the City of Pacifica commenced an effort that was titled Plan Pacifica and comprised of three separate, but related, long-term planning efforts including updating the General Plan, updating the Local Land Use Coastal Plan, and developing a Specific Plan for the Sharp Park neighborhood. Information on the current progress of the Plan Pacifica effort can be found at https://www.planpacifica.org/.
    - **General Plan:** The General Plan, last updated in 1980, is the "constitution" for the city and guiding document for development and policy making in a wide range of topics. There was an extensive effort to update the General Plan between 2009 and 2012, but the Draft General Plan was not adopted by City Council. Plan Pacifica aims to update and complete the 2012 Draft, shape a forward-looking vision for Pacifica, and provide the City with a regulatory document that responds to our contemporary issues and legal context.
    - **Local Coastal Program:** The Local Coastal Program (LCP) consists of two components, the Land Use Plan and the Implementation Program.
        - *Local Coastal Land Use Plan (LCLUP):* Specifies the kinds, locations, and intensities of land uses; the applicable resource protection and development policies; and where necessary, a listing of implementing actions.
        - *Implementation Program*: Consists of zoning ordinances, zoning district maps, and other legal instruments needed to implement the Land Use Plan. The current planning process in Pacifica does *not* include the development of an Implementation Program.

      A LCP, certified by the California Coastal Commission, provides a local jurisdiction, such as the City of Pacifica, the ability to issue coastal permits for most new development in the Coastal Zone, subject to the standards established in the certified LCP. The LCLUP was last updated in 1980. In February 2020, the City Council approved a draft LCLUP to be sent to the Coastal Commission for certification.
    - **Sharp Park Specific Plan:** The Sharp Park Specific Plan will establish a vision for a vibrant, community-focused heart of the City in the historic Sharp Park neighborhood. The Specific Plan will address and provide implementation guidance for economic development, transportation, land use and housing opportunities in the neighborhood.

- **Beach Boulevard Promenade Public Plaza:** The Public Plaza along Beach Boulevard Project will rejuvenate the sandy regions adjacent to the Beach Boulevard Promenade between Birch Lane and Clarendon Road. Amenities being considered for installation include: exercise furnishings, hard-scaped plaza, bicycle parking, stone animal play structures, and new concrete benches. The project is currently in the design phase and is anticipated to be a short-term project.
- **Proposed Developments:** Several commercial and residential developments are being considered in or near the Project area, including a hotel near the current seawall. The long-term viability of many of these projects require a protected coastline along Beach Boulevard, which the Project aims to provide.

2. Stakeholder Engagement Objectives and Guiding Principles

2.1 Stakeholder Engagement Objectives

The City is committed to designing and conducting a transparent, community-based planning process that allows stakeholders to provide ideas and comments that inform the development of alternatives for the Project. The Project will provide the City and the West Sharp Park neighborhood, in particular, with the opportunity to develop a solution that not only addresses the infrastructure resiliency issues, but also reinvigorates the Beach Boulevard Promenade into an exciting space that the Pacifica community will proud of.

This Plan aims to achieve the following **stakeholder engagement objectives**:

- Engage a wide range of Pacifica stakeholders, particularly those located in or near the West Sharp Park neighborhood and those that regularly use the Beach Boulevard Promenade, to build a broad understanding of the project's purpose and scope, and how they can participate in the process.
- Provide stakeholders with multiple, meaningful opportunities to participate in the project development process and provide input.
- Align engagement opportunities with key project milestones and deliverables to ensure that stakeholder input can be incorporated to the extent feasible.

Specific engagement objectives by Project phase include:

Phase 1: Preliminary Planning and Feasibility

- Introduce the Project and begin connecting with Pacifica stakeholders.
- Share information related to Phase 1 project deliverables: Existing Conditions, Multi-Hazard Risk Assessment, and Alternative Design Development and Analysis.
- Collect stakeholder input on Phase 1 project deliverables, and ultimately, solicit stakeholder input that will inform the identification of a Preferred Alternative for the project.
- Share information on other recent, current and/or upcoming projects in Pacifica and how they connect to the Beach Boulevard Infrastructure Resiliency Project.

Phase 2: Design, Engineering and Environmental

- Coordinate with regulatory agencies on necessary permits and secure permits by end of Phase 2.
- Share information and collect stakeholder input on potential protection, mitigation and Enhancement (PM&E) measures and other design features (i.e., amenities, aesthetics, uses, access).
- Complete public participation requirements of CEQA not completed in Phase 1, including scoping and public comment periods on the Draft and Final EIR.
- Solicit input on how stakeholders would like to stay informed on construction status.

Phase 3: Construction

- Share information and notify relevant West Sharp Park residents and businesses and users of Beach Boulevard Promenade of construction related impacts (road closures, restricted access, etc.)
- Share project information through the project website and social media.

2.2 Guiding Principles

To achieve the objectives identified above, the Project and outreach team (Team) will follow the guiding principles of engagement listed below.

- **Use a flexible and adaptive approach:** The Team fully appreciates that the current COVID-19 shelter in place policy will impact the Team's ability to engage stakeholders in the near-term, particularly as it relates to in-person meetings and workshops. We understand that stakeholders will want to be engaged in different ways, and we will aim to be flexible and responsive to their needs. In addition, the Team will identify barriers to effective engagement early in the process (should they occur) and adapt the engagement process as needed.

- **Encourage transparency**: The Team will conduct stakeholder engagement in an inclusive, open, and transparent way. Transparency is a key component for building trust.

- **Communicate early and often**: The Team will introduce the Project to stakeholders as early as possible to build partnership and collaboration. The Team will share regular Project updates and provide opportunities for stakeholder input.

- **Promote easily accessible information and processes:** For both project information and outreach activities, the Team will use a variety of methods to ensure those interested in the project can access information when convenient for them. The Team will use up-to-date technical data in the stakeholder engagement process and translate this information into more easily accessible language for a general,

non-technical audience. We intend to attend or speak at events where stakeholders are already gathered.

- **Engage "key communicators":** In addition to conducting direct engagement, the Team will leverage engaged stakeholders, particularly West Sharp Park residents, as "key communicators." These key communicators will extend the reach of engagement efforts as they communicate with their respective networks and ensure their interests and priorities are included in Project discussions.

3. Stakeholder Audiences and Interests

The protection of the City of Pacifica's coastal communities and resources is of significant interest and concern. This Plan organizes stakeholders into the following eight audiences recognizing that there will be different levels of interest and influence among stakeholders, and that the stakeholder engagement strategy should be designed to accommodate this reality.

- West Sharp Park residents
- Local businesses
- City of Pacifica Administration and City Council
- Fishing and Recreation
- Conservation
- Regional, State and Federal Regulatory Agencies
- The broader Pacifica community and the Bay Area as a whole, including environmental justice populations

Overarching Stakeholder Interests

- Generally, there is broad support for replacing the current seawall with modern infrastructure that will allow West Sharp Park to thrive in the future. Concerns about the Project mainly center around the City's ability to pay for the project (and how other priority projects might not get funded if the Project does go through), and potential environmental impacts.
- Stakeholders have stressed that the Project should: protect residents' homes; allow for continued economic growth; maintain recreational opportunities along the coastline; and help protect the natural environment.
- Stakeholders want a transparent process that builds understanding among Pacifica residents regarding the need and importance for rebuilding coastal infrastructure, and tradeoffs between the Project alternatives that will be identified.

Below are descriptions of the stakeholder audiences and summaries of their interests with respect to the Project. These interests were informed by stakeholder interviews and additional discussions.

- **West Sharp Park Residents**

  Local residents have a direct public health and safety interest in the Project, and they are overwhelmingly supportive of it happening. Due to failing existing infrastructure, the West Sharp Park neighborhood is susceptible to erosion and coastal flood damages. They are also passionate about the City and neighborhood in which they live – they treasure their proximity to the ocean and the natural beauty that makes Pacifica so special. Residents also value the recreational opportunities and health and safety benefits that updated infrastructure would provide.

- **Local Businesses**

  The West Sharp Park neighborhood, including the Beach Boulevard Promenade, serves as the City's civic core and is home to many unique businesses. The Pacifica business community has a vested interest in the safe and profitable operation of their businesses in the Project area as well as potential future economic growth.

- **City of Pacifica Administration and City Council**

  The City's primary goal for the Project is to protect essential public infrastructure along the Beach Boulevard promenade. The City is committed to the public health and safety of its citizens and visitors in and around the historic West Sharp Park neighborhood and the preservation of its coastline in the area. The City is also committed to conducting a transparent, community-based planning process that is designed to create a multi-benefit solution to protect public infrastructure, recreational activities, numerous homes, businesses and the community at large, from further impacts due to continued coastal erosion.

  There are a variety of other City departments that have a keen interest in coastal flooding and erosion issues, including Public Works, the Planning Department, the Parks, Beaches and Recreation Department, and the Pacifica School District.

- **Fishing and Recreation Interests**

  Recreational use in the Project area is wide ranging and includes walkers, joggers, cyclists, beachgoers, surfers, fishermen and others who use the Beach Boulevard Promenade daily. Recreational interests in the Project include maintaining current recreational activities and protecting the viability of these activities in the long-term. The recreation community includes beach and ocean users such as the Surfrider Foundation and Pedro Point Surf Club, and users of the Sharp Park Golf Course.

- **Conservation Interests**

  Interests of the conservation community regarding the Project include prioritizing the health of habitat and species within the Project Area and the protection, conservation and enhancement of coastal resources. The Sharp Park Golf Course in particular provides freshwater habitat for endangered species, including the California red-legged frog and San Francisco garter snake.

- **Regional, State and Federal Regulatory Agencies**

  The Project's focus and geography overlap with the jurisdictions of various regional, state and federal natural resource and regulatory agencies, and these agencies will play an important role in validating the technical information that will be used in the Project and, ultimately, issuing permits that will allow

the Project to proceed to construction.

Relevant agencies include (but is not limited to):

- California Coastal Commission
- California Department of Fish and Wildlife
- California State Lands Commission
- National Marine Fisheries Service
- San Francisco Recreation and Parks Department
- San Francisco Regional Water Quality Control Board
- US Army Corps of Engineers
- US Fish and Wildlife Service

- **Broader Pacifica Community**

  The broader public includes Pacifica residents and organizations that are not located in or directly focused on the Sharp Park area, or focused on the issue of coastal resiliency. These stakeholders may not track the Project as closely as others, but they would like to be updated periodically and receive information that is easy to understand and helps explains the Project's impacts on their lives and livelihoods. Residents across Pacifica want to know how the Project will be funded, and whether they will be expected to contribute through a tax measure or other similar means. The California Coastal Commission's Environmental Justice Policy acknowledges climate change and sea level rise hazards will have disproportionate impacts on vulnerable communities and may exacerbate existing environmental injustices. Because of this, the Project will support environmental justice in its planning and in how it engages with frontline communities within and in the neighboring communities around Pacifica.

- **Bay Area Community**

  Pacifica's beaches and coastal resources are a popular destination for residents across the Bay Area, including inland visitors, and they want to continue having access to Pacifica's attractions. In addition, there are agencies and organizations who are tracking coastal protection efforts across the Bay Area, and they may have resources and expertise to contribute. This includes OneShoreline, i.e. the San Mateo County Flood & Sea Level Rise Resiliency District.

4. Phase 1 Stakeholder Engagement Activities and Schedule

4.1 Phase 1 Timeline

Consistent with the overall engagement strategy, the Phase 1 (Preliminary Planning and Feasibility) stakeholder engagement process will be planned and implemented around the project timeline and its respective milestones. The Phase 1 timeline (including stakeholder engagement activities) is included below.

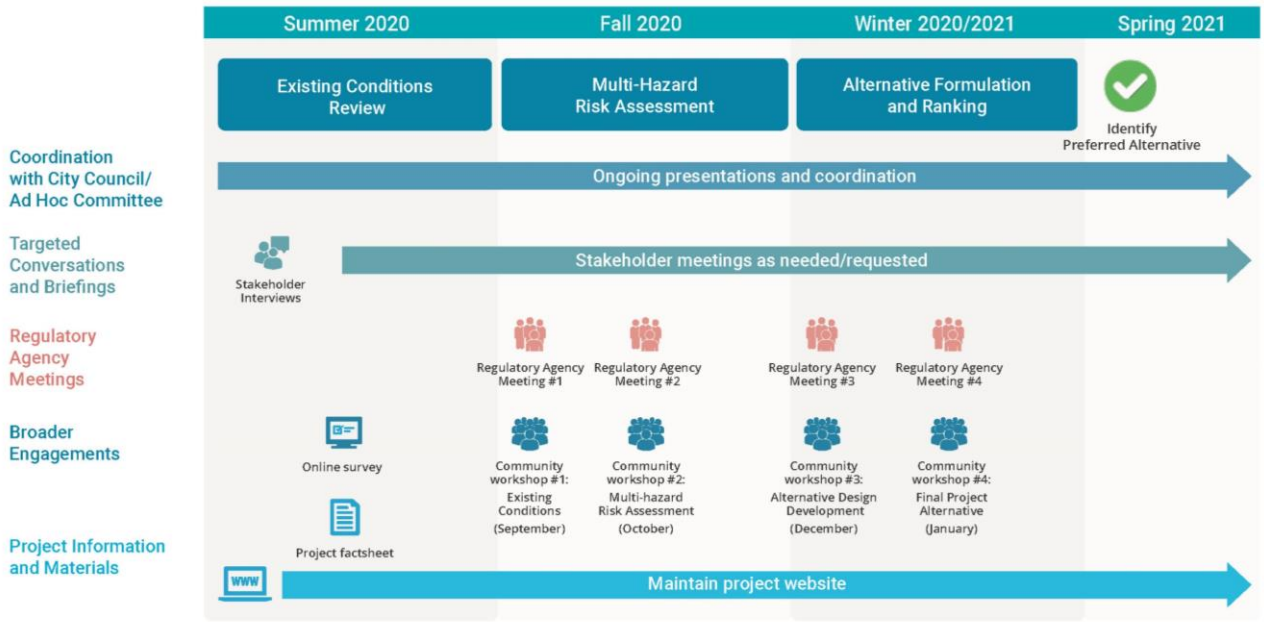


Figure 3: Phase 1 Timeline

4.2 Overview of Phase 1 Components and Input Sought

Phase 1 includes three main components: Existing Conditions; Multi-Hazard Risk Assessment; Alternative Formulation and Ranking. What follows are descriptions of the three components, the information provided for each component, and the input the City will seek.

Existing Conditions	
Overview	**Information Shared and Input Collected**
Existing Conditions will review and evaluate existing data sources on the current seawall and identify any information gaps. The project team will review engineering as-built and past inspections information, and conduct a visual inspection and topographic survey to determine the most current above-water condition of the wall and surrounding infrastructure. The findings from this task will be detailed in a memo describing the data, sources and insights gained.	○ Share information on the Existing Conditions task including approach and status. ○ Collect input from stakeholders on problem areas as they exist today ○ Collect input on how stakeholders interact with or use the project area, and what they value most about it.

Multi-Hazard Risk Assessment	
Overview	**Information Shared and Input Collected**
The Multi-Hazard Risk Assessment (MHRA) task will analyze flood, earthquake, utility, environmental and economic impacts of the project alternatives versus the no Project condition. The results of these analyses will inform the response of the existing seawall and potential project alternatives. Data and studies performed under this task will be used to assess the direct and indirect impacts of the project alternatives as a Benefit/Cost analysis.	○ Share information related to MHRA deliverables the project team is developing, the approach for studying hazards, and how the MHRA will inform alternatives development. ○ Collect stakeholder input on priorities and concerns as they relate to the data presented and gather initial input on potential project alternatives at a conceptual level. There will be less emphasis on discussing the specific methodology, models, etc., and more emphasis on what the resulting data/information means for stakeholders.

Alternatives Design Development and Analysis	
Overview	**Information Shared and Input Collected**
Based on the existing conditions and the potential risks, the project team will develop five different project design alternatives, including no project and sand nourishment alternatives. The project team will develop and use a multi-criteria decision matrix comparing the advantages and disadvantages of each alternative considering topic areas such as environmental impacts, visual impacts, flood reduction, habitat creation, recreational opportunities and initial and maintenance costs. The project team will identify three alternatives to study further before selecting a preferred alternative.	○ Share information on the Alternatives Design Development and Analysis task including approach and timeline. ○ Share information on each alternative under consideration and the criteria that will be used to identify the preferred alternative. ○ Solicit stakeholder feedback on the Project features and amenities toolbox which will inform the development of Project alternatives. ○ Collect stakeholder input on criteria and the alternatives under consideration.

4.3 Phase 1 Engagement Activities

What follows are descriptions of the engagement activities the City will implement to inform Phase 1 documents and decisions.

Coordination with City Council and Ad Hoc Committees

The project team will periodically present to, solicit input, and coordinate with the Pacifica City Council which will be particularly focused on having effective community engagement for the Project. The City Council may also designate an Ad Hoc Committee to focus specifically on the Project.

Community Workshops

The City will convene four community workshops during Phase 1 to provide information and gather community input. Workshops will be open to the public and will begin with a presentation designed to educate participants on relevant topics, followed by a structured exercise to solicit input. Workshops will be conducted virtually or in-person depending on COVID-19-related restrictions at that time.

The anticipated focus and schedule of the public workshops are as follows:

Workshop	Date	Topic
Workshop #1	September 2020	Project Kick-off and Existing Conditions
Workshop #2	November 2020	Multi-Hazard Risk Assessment
Workshop #3	January 2021	Alternatives Design Development and Analysis
Workshop #4	March 2021	Final Project Alternative

The project team will notify Pacifica residents of upcoming workshops through a variety of channels, including email notification, social media, coordinating with local organizations to help spread the word, and potentially sending invitations via postal mail to West Sharp Park residents.

Coordination with Regulatory Agencies

While the City will not be seeking permits from regulatory agencies until Phase 2, it will be critical to keep them informed and gather their feedback in the process of developing project alternatives in Phase 1. Coordinating with the California Coastal Commission, a state agency with quasi-judicial regulatory oversight over land use and public access in the California coastal zone, will be particularly important. Other agencies include the US Army Corps of Engineers (USACE), the California State Lands Commission (SLC), and the San Francisco Regional Water Quality Control Board (SFWQCB).

The anticipated schedule of Phase 1 coordination with regulatory agencies is as follows:

Meeting	Date	Topic/Audience
Meeting #1	September 2020	Project kick-off with CCC staff
Meeting #2	September 2020	Introductory briefing(s) with USACE, SLC, and SFRWQCB
Meeting #3	December 2020	Meet with CCC Staff to present findings and solicit feedback on and question re: alternatives
Meeting #4	January 2020	Meet with USACE, SLC, and SFRWQCB present findings and solicit feedback on and question re: alternatives

Stakeholder Interviews

Kearns & West conducted stakeholder interviews in July 2020 to inform the Project's stakeholder engagement strategy, and future interviews may be conducted to gather feedback on a specific topic or series of topics. This one-on-one engagement allows for detailed information gathering on specific issues, opportunities, constraints and solutions, and can be conducted at various times throughout the Project. The one-on-one setting allows for direct and nuanced input, and the interviews help to build trust and contribute to long-term relationship building.

Targeted Stakeholder Meetings and Presentations/Briefings with Community Groups

The project team will organize and conduct strategic, targeted conversations between project team members and influential or active stakeholders or organizations to solicit their input on Project content and the overall process. These targeted meetings will allow for honest, direct feedback and help to foster productive working relationships with key stakeholders. They can be used to vet potential solutions and test the level of support before sharing broadly. In addition to scheduling targeted meetings, the project team will also consider identifying opportunities to attend community group-hosted events and provide information and updates on the Project, including upcoming workshops and other opportunities to provide input. Attending existing meetings is a resource-efficient way to meet with stakeholders and demonstrates a willingness to show up and listen.

Online Surveys

The team will customize and disseminate online surveys to gather input from stakeholders on their experiences and priorities as they relate to the Project. Online engagement can be an effective method for building community support and awareness, and serves to collect public feedback to inform the Project. The survey tool will feature a fast and effective online experience, and it can be leveraged strategically with the County's social networking tools. The team will develop and disseminate an online survey in August 2020 to inform Existing Conditions. The team will consider additional online surveys later in Phase 1.

Additional Engagement Activities to Consider

The project team will consider implementing the following additional engagement activities, depending on stakeholder and Project needs.

- **Pop-up Workshops**
  Mobile, or "pop-up," workshops are an effective engagement tool for bringing information to community members and asking for their input. Pop-up workshops can serve as an alternative or supplement to large public workshops. The Team will consider conducting at key gathering places (e.g., farmers markets), and will accommodate social distancing requirements for the pop-up workshops as needed.
- **Site Tours**
  Site tours help foster a deeper understanding of project needs and alternatives. The Team will consider hosting site tours to get stakeholders out onto the Project site. Self-guided audio tours, combined with an online comment form, could also be developed.
- **Community Working Group**
  A Community Working Group (CWG) could provide ongoing input for the Project during Phase 1 in an advisory capacity to the City. The CWG would reflect the diversity of interests in Pacifica, and while the CWG would not have decision-making authority, it would help the City stay connected to key stakeholders and organizations.
- **Project Team "Office Hours"**
  "Office Hours" allow stakeholders to ask questions of project team members in an informal and one-on-one fashion.

5. Outreach Materials and Resources

The Team will develop and disseminate Project materials to share information and ensure a common understanding of the Project's purpose and scope and promote awareness of opportunities to participate in upcoming events. This will include the following activities:

Project Webpage
The City will update and utilize the Project webpage to provide easily accessible information to stakeholders. The webpage will be updated regularly throughout the process as more information becomes available. The webpage will include a sign-up form so stakeholders can be added to the Project distribution list, and it could also potentially feature an online comment form to gather rolling feedback throughout the process, particularly around Project milestones.

Information Materials
Providing consistent messaging about the Project's purpose, scope and status will be a critical component of the outreach effort. The Team will develop outreach materials including a Project Overview factsheet, and other brochures/factsheets as needed, that will be posted on the Project webpage and will be distributed during stakeholder meetings. The development of outreach materials will include translating technical information into a more accessible format for the public. The Team will explore translating information materials, as needed, into other languages prominently spoken throughout Pacifica, including Spanish and potentially Chinese and Tagalog.

E-News Updates and Notifications
The Team will leverage the City's stakeholder database and send email updates to the listserv throughout the Phase 1 process, focused around Project milestones or the release of publicly accessible Project documents. The Team will also encourage partner agencies and organizations to share Project updates through their respective email distribution channels, further extending the reach of Project communications

Updates regarding the Project could also be included in the City's Connect with Pacifica e-newsletter.

Social Media
The project Team will leverage the City's existing social media channels, including as Facebook, Twitter, and NextDoor to share information with the general public. In particular, the project team will create and share social media posts to notice upcoming meetings and opportunities to provide comment. Since social media is meant to reach a broad range of stakeholders.

6. Measuring Success and Planning Engagement for Future Phases

6.1 Measuring Success

The Team will use an adaptive approach to plan and implement the Project's stakeholder engagement program. It will solicit ongoing feedback from stakeholders regarding the effectiveness of engagement activities and will adjust future activities to be responsive to the extent feasible. The Team will meet periodically to evaluate and discuss the engagement program and may solicit stakeholder input in advance to inform these conversations.

At a high-level, determining whether stakeholder engagement is successful depends on whether the Project's main engagement objectives are met, namely:

- Engage a wide range of Pacifica stakeholders, particularly those located in or near the West Sharp Park neighborhood, to build a broad understanding of the project's purpose and scope, and how they can participate in the process.
- Provide stakeholders with multiple, meaningful opportunities to participate in the project development process and provide input.
- Align engagement opportunities with key project milestones and deliverables to ensure that stakeholder input can be incorporated to the extent feasible

If the above three objectives have been met, then the engagement program is serving its intended function. If they are not being met, the project team will work collaboratively with stakeholders to determine how best to meet them in the future.

Additionally, the following qualitative and quantitative metrics can be used to measure the success of the Project's stakeholder engagement efforts.

Proposed *process-focused metrics* for the engagement activities outlined in this Plan include the following:

- Community workshops
    - Workshop attendance
- Coordination with regulatory agencies
    - Meeting attendance and representation of all invited agencies
- Targeted stakeholder meetings
    - Number of meetings conducted/briefings provided
    - Number of stakeholder constituencies (and individual organizations) involved
- Online surveys
    - Number of online survey responses
- Project website
    - Number of website visitors
- Outreach materials
    - Number of outreach materials produced and shared on the Project website and through other virtual platforms
- E-news updates and social media
    - Number of e-news updates sent related to the Project
    - Reach (i.e., number of recipients) for each communication channel

Additional higher-level, *outcome-focused metrics* include:

- Qualitative and/or quantitative metrics to indicate level of stakeholder support for the Project alternatives and, ultimately, the Preferred Alternative (check-in calls with key stakeholders and, potentially, periodic surveys).

6.2 Planning Engagement for Phases 2 and 3

The project team has developed engagement objectives specific to Phases 2 and 3 (see Section 2), and it will develop more detailed engagement strategies for each phase as these phases approach. And, by guiding stakeholders through Phase 1 and gathering feedback along the way, the project team will be able to bring forward a well-informed approach. The project team will likely conduct stakeholder interviews to inform engagement for Phases 2 and 3.

Appendix B: Interview Findings

Summary of Key Findings

Stakeholder Interviews for Beach Boulevard Infrastructure Resiliency Project

Prepared by Kearns & West

Section 1 – Purpose and Approach for Stakeholder Interviews

The City, with support from GHD and Kearns & West, is committed to designing and conducting a transparent, community-based planning process that engages Pacifica community members throughout the development of alternatives for the Beach Boulevard Infrastructure Resiliency Project (Project). This includes conducting stakeholder interviews to identify the community's current interests and concerns related to the Project. Information and insights gathered from the interviews helped inform the development of the Stakeholder Engagement Plan which serves as a "roadmap" for the stakeholder engagement process.

The assessment approach involved development of a set of questions (which were reviewed and approved by City staff) to be used to guide confidential, individual telephone interviews with stakeholders identified by City staff. The list of stakeholder interviewees is provided in Appendix A; the interview questions are included in Appendix B. Kearns & West conducted the interviews during July 2020 and prepared this draft report for review by the City.

This summary of findings is intended to provide relevant, qualitative perspectives from a discrete set of Pacifica stakeholders. The report is not designed to present quantitative results or analysis. Terms such as "some," "several," or "a majority" are used to distinguish input offered by more than one interview but no attempt has been made to weight or prioritize input as part of assessment design.

Section 2 – Key Findings

What follows are key themes and findings that emerged from the interviews. These findings summarize input directly from the interview participants and do not include commentary or observations from Kearns & West.

Background Information

Interviewees noted how they use the Beach Boulevard Promenade and how it and West Sharp Park reflect the unique character of Pacifica.

- **Recreational uses**, such as walking, biking, running, and observing wildlife.
- Historic **small neighborhood charm** that elicits sentimental value and a sense of community.
- Beach Boulevard serves as a **"first impression"** of the City for those coming in from the North.

Familiarity with Seawall and Related Efforts

Interviewees described their knowledge of the Project as well as their experience participating in other planning efforts in Pacifica.

- Organizing **neighborhood meetings, trail restoration, litter pick-up events.**
- Participating in City-hosted meetings related to the **Local Coastal Plan (LCP) and the Sharp Park Specific Plan (SPSP)**.

- Involvement in the **appeals process** of a proposed condominium development along Beach Boulevard.
- Management of a **community engagement process** intended to educate residents and address misconceptions related to sea level rise and managed retreat.

Interests and Keys to Success

Interviewees noted a variety of interests as it relates to living in Pacifica, uses of Beach Boulevard, and plans for sea level rise resiliency. Interviewees also provided opinions on what project success would entail.

- Durable, long lasting infrastructure that protects:
    - **Property owners** from losing homes, rogue waves, and sink holes
    - **Natural environment** and endangered species
    - **Public infrastructure** (e.g. sewer system)
    - The City's **economic growth potential**
    - Viewsheds
- **Transparency** and **public understanding** of where funding is coming from and tradeoffs associated with project alternatives.
- Enacting r**esiliency measures on the north end of the pier** first, as it is not currently an actual seawall and has subsequently seen the most amount of damage to date.
- **Closing the gap** between the berm at the Sharp Park Golf Course and the south end of the seawall as well as installing permanent pumps in that area.
- Maintaining a wide promenade that is accessible and **maintains the community's ability to recreate**.

Anticipated Concerns and Challenges

Interviewees described several concerns and potential challenges associated with the Project.

- Infrastructure for sea level rise resiliency is a **contentious, polarizing issue**, particularly when the issue is described as either protecting homeowners or the natural environment.
- Lack of **understanding and support**, especially among those living inland and/or residents unwilling to pay taxes for a seawall replacement.
- Concerns that Pacifica will be **lower priority for state/federal funds** compared to other cities in the region/state.
- Historic **disconnect** between City's goals and Coastal Commission regulations.
- Given turnover of staff and elected officials, there is a perception that the City has a **lack of institutional knowledge** on the history of its own planning efforts. This includes a lack of understanding on the initial rationale for existing resiliency infrastructure and how that has led to hazardous conditions for residents and public infrastructure

Section 3 – Recommendations for BBIRP Workshops and Stakeholder Engagement

Interviewee Recommendations

Interviewees provided the following suggestions for the upcoming public workshop and also made recommendations on how best to engage stakeholders throughout the development of the Project.

- **Concise, honest messaging** is important, especially to dissuade fears related to how the Project will be funded, the realities of seal-level rise, and the Project's implications/benefits for the entire City. This could include:
    - Collaborating with existing efforts to mitigate fearmongering (e.g. the Sanchez Art Center's community engagement program).
    - Providing opportunities for conversations that allow residents to (verbally) express fears and for the Project Team to describe the needs for assessing all project alternatives.
- **Engaging *all* of the City's residents** so that they may provide meaningful and informed feedback.
- **Ensuring transparency** throughout the project including costs, engineering reports, and meeting materials (e.g. summaries and accurately capturing stakeholder feedback).
- Outreach opportunities that are **thoughtfully paced and noticed well in advance**, especially given COVID.
- Suggested engagement activities:
    - Meeting advertisements posted on multiple platforms (e.g. Nextdoor)
    - Setting up a project website
    - Going beyond the City's email list
    - Sending postcards/mailers
    - Establishing relationships with local stakeholder groups to notice public workshops and organize voting district or neighborhood-specific meetings
- Utilizing **in-meeting surveys** to mitigate grand standing and to ensure everyone's voice is heard.
- Organizing **site tours** of various parts of the project area.

Appendix A – List of Stakeholders Interviewed

Affiliation	Name	Date Conducted
Pacific Beach Coalition	Lynn Adams	July 23, 2020
Pacifica Climate Committee	Cynthia Kaufman	July 27, 2020
Pacifica Parks, Beaches, and Recreation Commission	Cindy Abbott	July 24, 2020
San Francisco Golf Alliance	Richard Harris	July 27, 2020
Sharp Park Neighborhood Organizer	Margaret Goodale and Stan Zeavin	July 27, 2020
Sharp Park Neighborhood Organizer	Nick Langhoff	July 28, 2020
Sharp Park Neighborhood Organizer	Robine Runneals	July 30, 2020
West Fairway Park Resident	Jeff Guillet	July 24, 2020

Appendix B – Interview Instrument

Background and Introduction:

- Thank you for taking the time to speak with us. I am _____ with Kearns & West, a consultant supporting community engagement for the City of Pacifica's Beach Boulevard Infrastructure Resiliency Project.
- The City is kicking off a multi-year and multi-phased process to replace the current seawall and ineffective and outdated infrastructure. The primary purpose of the Project is to protect essential public infrastructure along the Beach Boulevard promenade.
- The first phase of the Project is the **Preliminary Planning and Feasibility Phase** which aims to review existing conditions, project future conditions and risks, develop design alternatives, and ultimately determine a single preferred alternative solution.
- The West Sharp Park neighborhood, including the Beach Boulevard promenade, is a tremendous asset for the City, providing extensive recreational and business opportunities, and prized ocean views. The West Sharp Park neighborhood also continues to be at risk of erosion and coastal flood damages, and the current seawall infrastructure, built in the 1980's, continues to be a public health and safety risk for the City.
- The City will solicit community and stakeholder input to inform design and engineering plans that use site specific current and future projected sea level rise estimates.
- The purpose of today's interview is to gain a better understanding of community interests, priorities and concerns related to the Project, and to get your input on how best to engage a stakeholders throughout the project.
- We will capture key findings from our interviews in an Assessment Report. The report will not include attribution of specific comments.
- This interview should take approximately 45 minutes. Do you have any questions before we proceed?

Interview Questions:

Background and Familiarity with Seawall and Related Efforts

1. What is your current position and role in your organization?
2. How long have you lived/worked in Pacifica and what do you like most about it?
3. How do you use the Beach Boulevard Promenade area personally?
4. How does this area reflect the unique character of Pacifica?
5. To what extent have you and/or your organization been involved in other coastal or community planning efforts in Pacifica?

6. To what extent have you been specifically tracking the Beach Boulevard Seawall and the City's vulnerability to flooding and sea level rise?

Interests and Keys to Success

7. What are your/your organization's interests as they relate to Pacifica's adaptation to sea level rise and the replacement of the Beach Boulevard Seawall?

8. What do you think a future vision for the Seawall and Promenade could look like?

9. What specific topic areas do you think will be most important for the City to discuss with residents and other stakeholders during the Project planning process?

10. What are the keys to success in development and completing the Beach Boulevard Seawall Replacement Project?

11. What challenges do you anticipate, and how can they be addressed?

Recommendations for Engagement

12. In your view, what are the most effective ways to engage Pacifica stakeholders in the development of this Project? (Ask them to think about during COVID and if/when shelter in place is lifted).

13. How would you like to receive information about the Project, and how frequently?

14. Which stakeholders should be involved in the process?

Other Comments, Questions, or Advice

15. Do you have any other questions, comments or advice?

Appendix C: Existing Conditions Survey Findings

Beach Boulevard

INFRASTRUCTURE RESILIENCY PROJECT

EXISTING CONDITIONS SURVEY RESULTS

Prepared by Kearns & West

October 2020

1. Survey Purpose and Overview of Responses

On September 10, 2020, the City of Pacifica (City or Pacifica) released an online survey to assist in informing the development of the Beach Boulevard Infrastructure Resiliency Project (BBIRP). The purpose of the survey was to gain a better understanding of stakeholder interests, priorities, and concerns related to the project area. The survey was open for three weeks and was circulated to stakeholders via the project website, e-blasts, and social media posts. It was also publicized at stakeholder and community meetings, including the September 3rd Pacifica Collaborative meeting and September 24th BBIRP virtual kick-off Community Workshop.

The map-based survey was developed using the Maptionnaire platform. Sixteen questions were asked including multiple choice, single answer and map-based questions where respondents could place pins indicating places they visit, areas of concerns and areas for improvement. The list of survey questions is included in Appendix A.

The survey closed on October 1st with 191 total respondents and 830 individual map responses. Figure illustrates the age range of survey respondents. 64% of respondents were over the age of 50 while 32% were between 30-49 years. The lowest percentage of respondents came from the under 29 years category, with a total percentage of 4%. These findings indicate that the virtual survey was able to reach a cross-section of stakeholders particularly those over 50 years of age, and that more work could be done to engage stakeholder under the age of 29 including youth, college students and young adults that live in and near Pacifica.

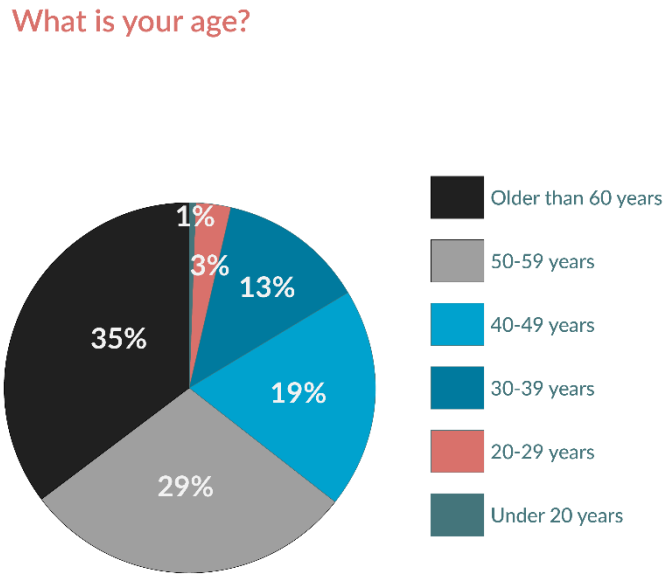


Figure 1: Age range of survey respondents.

Other demographic data collected included residence and occupation location. Only two respondents live outside of Pacifica, both in San Francisco. The other respondents represent a mix of different neighborhood perspectives such as Sharp Park, Linda Mar, Fairway Park, Vallemar, Rockaway Beach and Manor.

2. Key Findings

Key findings from the survey responses include the following:

- Respondents expressed a **great appreciation for living in Pacifica**, including its natural beauty as well as its connection to the Pacific Ocean.
- **Protection and safety of people, homes and businesses was the most commonly expressed concern**.
- Many respondents also voiced concern with **project funding**, particularly if public funds would be used to protect private property.
- Respondents acknowledged that **sea level rise is a significant short-term and long-term issue** for the City.
- Respondents are **active and social people**. They enjoy spending their time along Beach Boulevard recreating, visiting with friends, taking in the ocean and wildlife, shopping, and participating in their local government. Respondents enjoy visiting Beach Boulevard all throughout the year and can typically find places to park and can access the activities they enjoy
- The **need for additional maintenance and enhancement** (i.e., cleaning, landscaping, etc.) was an overarching theme across the majority of survey responses.
- Given past failures of the North Wall section and that it is a reinforced earth retaining wall and not a typical type of seawall, there were concerns shared about the **North Wall's lack of structural integrity and safety**. There were also clusters of feedback focused on the Pacifica Municipal Pier (e.g., replacing it) and closing the gap between the South Wall and the berm at Clarendon Road.
- Survey responses indicate a **range of perspectives in envisioning Pacifica's future**. Many residents and visitors appreciate the non-commercial and seamless connection to the sea the current seawall and promenade provides. Others stressed the need for significant infrastructure updates, particularly for safety reasons and as a means to modernize the area.

Figure 2 summarizes all of the map-based input received on the survey. The map shows where the pin responses are for where people visit, where they park, what concerns they have and what improvements they suggest. The map shows where there were concentrations of responses all along Beach Boulevard and moving east towards and beyond Highway 1. Additional maps of the responses, including individual maps by the four project structures, are included in Appendices B-D.

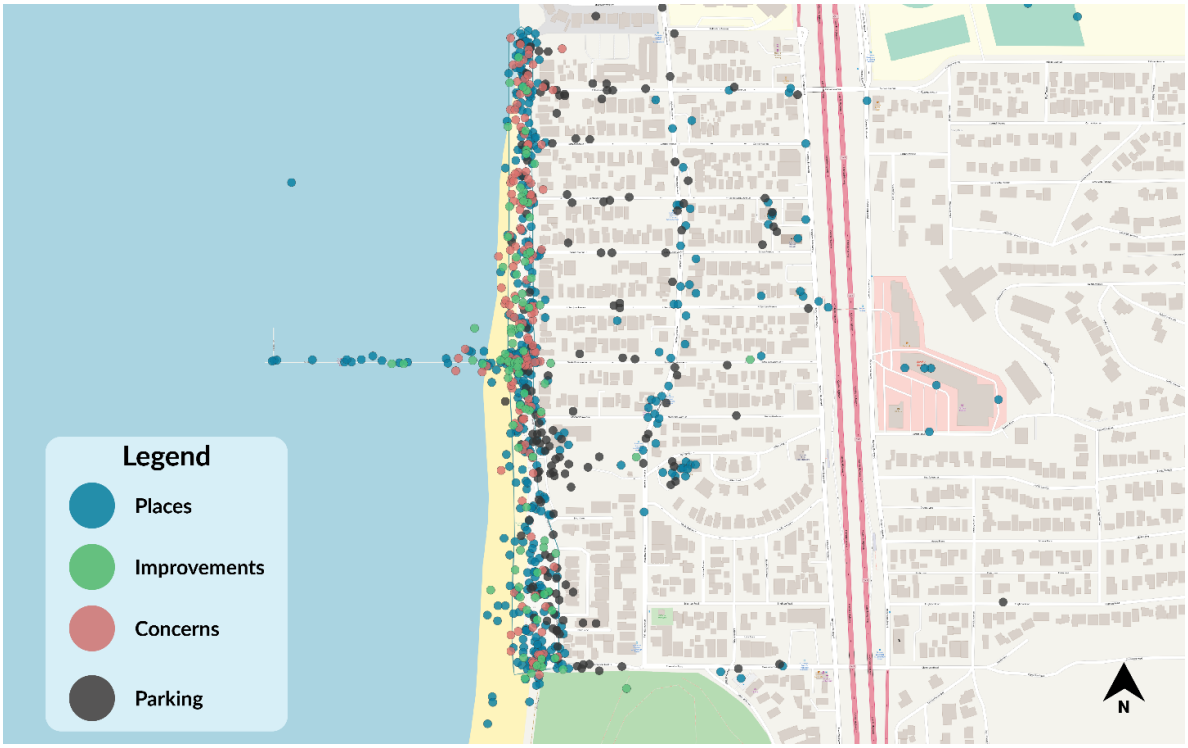


Figure 2: All map-based responses.

3. Current Uses and Pacifica Character

Survey responses indicated that the BBIRP project area is regularly visited. As illustrated in Figure 3, only 17% of survey respondents said they visit the area less than once a month while the remaining respondents visit the area anywhere between once or twice a month to every day. Of the four project structures – North Wall, Pier Wall System, South Wall, and South Gap – 44% of respondents indicate they visit the North Wall while the Pier sees the fewest with 7% (Figure 4).

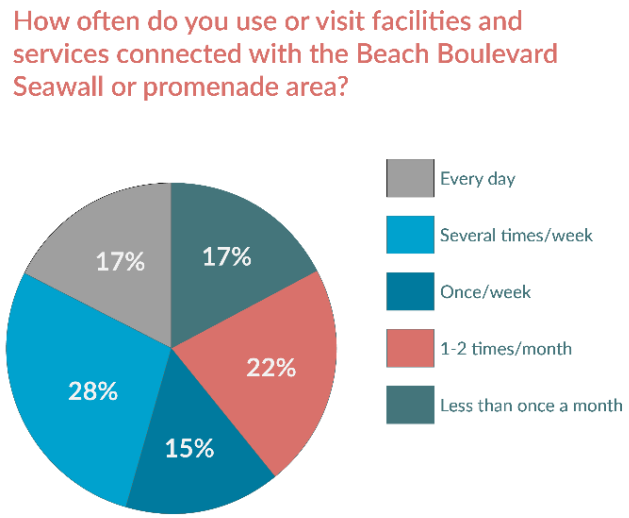


Figure 3: Frequency of visits to BBIRP project area.

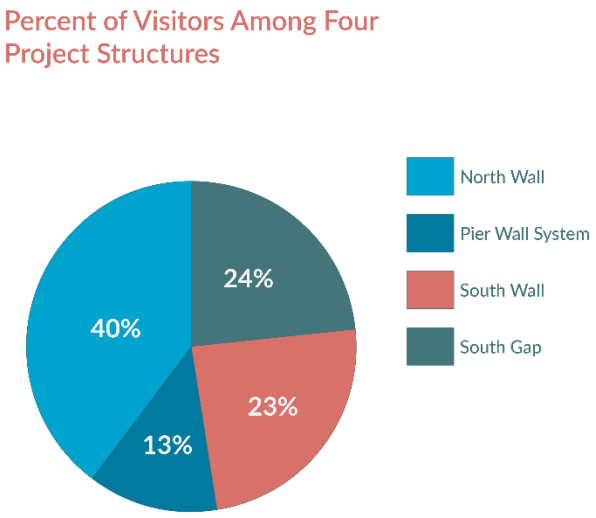


Figure 4: Visitor percentage among four BBIRP project structures.

Survey respondents are active and social. The survey results indicated how people like to spend their time along the Beach Boulevard area, including:

- **Exercise and Recreation:** Golfing, cycling, walking, playing tennis, hiking, running, fishing, surfing, and visiting the beach.
- **Nature and Relaxation:** Sitting and enjoying the views of the ocean and wildlife.
- **Supporting Local Businesses:** Shopping, visiting restaurants, and running errands.
- **Spending Time with Friends and Family:** Whether it be at the beach, along the promenade, on a walk or at a restaurant, survey respondents voiced their appreciation for the Beach Boulevard area as a place to gather, particularly for Sharp Park residents.
- **Community Involvement:** Attending City Council and other government meetings and staying involved and informed.

Parking

Figure 5 highlights where visitors park when visiting the project area. Results indicate that major parking hubs do not exist within the project area, although there are more parking options along the South Wall and close to the South Gap. The majority of pins shows that people can find parking closer to the beach, with approximately 30% of pins spread out along Beach Boulevard. Approximately 60% of respondents said they think parking is sufficient in the area while also noting that parking is dependent on the weather and that it is usually easier to find parking on weekdays than on weekends. There was also acknowledgement that COVID-19 has improved parking availability since there are fewer people visiting the project area.

Figure 5: Map-based responses of parking.

Stairway Access

While approximately 49% of respondents indicated that the existing beach access stairways are sufficient, recommendations were received for cleaning and better maintaining these stairways. Other viewpoints on the existing stairways include:

- More designated access points and accessibility for people with disabilities and those with limited mobility.
- More landscaping.
- More stairs along the South Wall.

Timing of Visits

When asked about the best time (of day or season) to enjoy the promenade, approximately 46% of respondents said that all hours and all seasons are great times to visit the promenade. Weather permitting, respondents have

a shared appreciation for the promenade throughout the day, although late afternoon and early evening (e.g. during sunset) are particularly popular times to visit. There was also a shared theme that early mornings are a popular time to visit since as there are fewer visitors at that time.

Pacifica Character

The survey asked how the current seawall and promenade reflect the unique character of Pacifica. Responses indicated a distinct appreciation of the area, particularly its natural features and embodiment of the community. Some responses include:

- Beautiful small-town feel
- Accessible to all
- Unobstructed path for people to enjoy the coastline, which is a unique feature
- The area reflects Pacifica's artsy nature and expansive natural resources.
- The area reflects the soul and reputation of Pacifica in that it is not overly developed.
- Visitors see, feel, and hear the ocean.

Other respondents expressed sentiments that the seawall and promenade are in disrepair as a result of perceived poor planning and/or neglect. There is a sense that many residents and visitors appreciate the non-commercial and seamless connection to the sea the current seawall and promenade provides while others stress the need for significant updates particularly for safety reasons but also to modernize the area.

4. Existing Conditions

Impacts of Coastal Flooding

Figure 6 represents how respondents' use of the project area has been impacted by coastal flooding. Specifically, 53% indicated that coastal flooding has significantly or somewhat hindered their enjoyment and 47% said coastal flooding has not hindered their enjoyment at all.

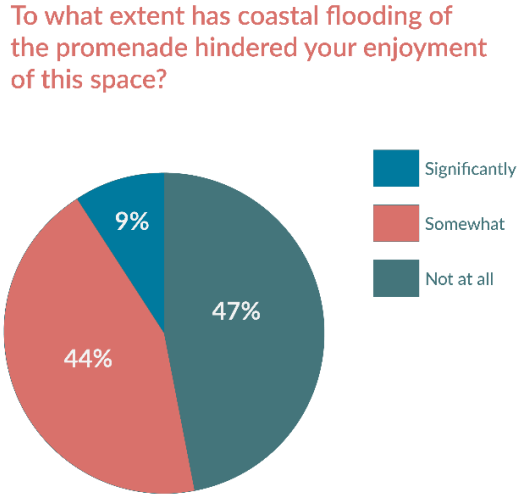


Figure 6: Coastal flooding impact responses.

Concerns

Figure 7 shows all of the pins respondents placed to indicate where they have concerns on a variety of topics. The overarching concern is safety due to overtopping and flooding with approximately 40% of pins placed along the North Wall, 29% along or around the Pier, 15% along the South Wall and 16% at the South Gap.

Figure 7: Map-based responses of concerns.

Key themes and specific concerns include the following:

- **Structure and Safety**
  - Adding more concrete surfaces will not solve the issues (of sea-level rise).
  - Focus on where the wall has given way in the past (i.e., Salada Avenue).
  - Perception that the North Wall is not an actual seawall
  - Failure would disrupt Beach Boulevard with all of its underground utilities and create issues for residents living west of Palmetto.
  - There is past damage from rising seas and bad storms.
  - Flooding and overtopping
  - Erosion
  - The current structure (North Wall) is barely protecting the area now.
  - There are cracks in the street and sidewalk.
  - There is fear about the foundation of the pier abutment wall and it may not last another decade.
  - Close the South Gap between the seawall and the berm.

- **Planning and Funding**
  - There is concern that any expensive attempts to harden the sea wall will not last long enough to justify the expense.
  - There is concern about the use of public funds to protect private infrastructure, such as homes.
  - Attempts for development here have been misguided in the past.

- **Maintenance and Neglect**
  - Sand comes through the South Gap every time there is a storm. It seems like a lot of work for the City to clean it up, sometimes needing to use big equipment.
  - The pier looks neglected and unmaintained.

Recommended Improvements and Future Vision

Figure 8 shows all of the recommended improvements that were provided. The distribution of improvement pins are similar to the concern pins in that the North Wall received the most with 39%. The South Wall and South Gap received more improvement pins than concerns with 36% and 23% respectively, and the Pier only received 2% of the improvement pins. The overlapping distribution of the pins reflect overarching themes of promoting protection and safety. However, responses to this question indicate conflicting viewpoints, particularly on whether or not maintain riprap structures in the area.

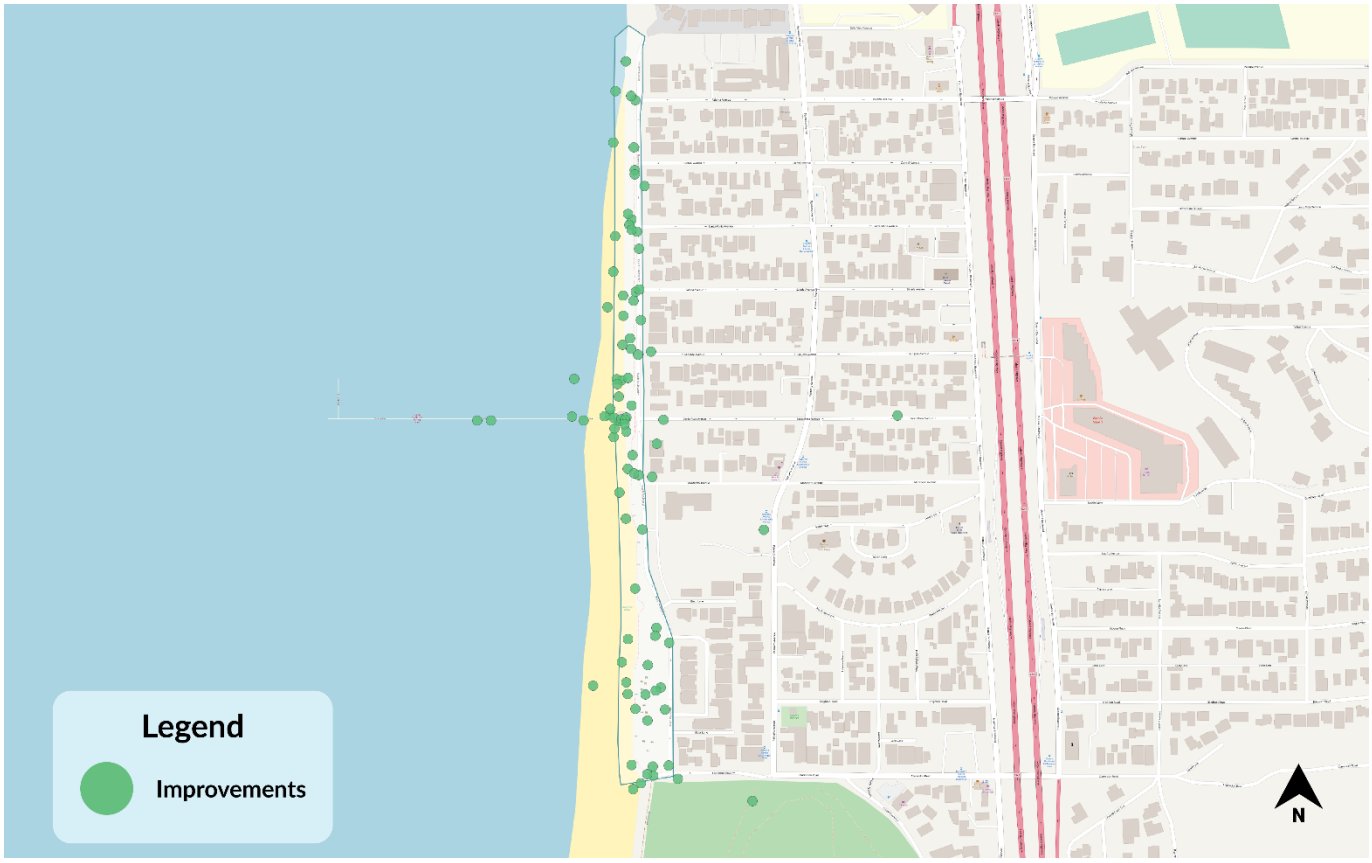


Figure 8: Map-based responses of improvements.

Key themes and specific concerns include the following:

- **Structure and Safety**
  - Protect people, businesses and homes.
  - Replace the North Wall.
  - A whole new state-of-the-art seawall is needed. Scotland and the UK have excellent examples of engineering.
  - Make the seawall higher so that it prevents waves from breaking over and flooding the sidewalk and road.
  - Replace the foundation and retaining wall at the base of the Pier.
  - Areas of cracks need to be re-filled and reinforced.

- **Structure and Safety, Continued**
  - The Clarendon boundary could be improved as a raised berm, where the golf course will serve as emergency buffer to future inundation. It need not ruin or end the use for golf, as it will be occasional and recoverable. This area (South Gap) is a perfect buffer against sea level rise and is almost a basin now. Small additions would make this a major asset.
  - Remove old sewage pipes.
  - Be mindful of unprotected development.
  - Increased riprap and removal of homes
  - Remove the riprap that has destroyed the sandy beach.

- **Modernize, Enhance and Restore**
  - A more warm welcoming design and décor (maybe some wood & additional lights & seating, like the Half Moon Bay Princeton Pier by Barbara's Fish Trap).
  - Beautification and enhancement of promenade and seawall.
  - Close the area to traffic and make it a full park.
  - Expand small businesses by the water.
  - Maybe removal of the Pier should be considered at some point in the future, or creating something in its place. Something that would work with the ocean and the landscape?
  - The City needs to be more creative and consider innovative possibilities instead of the same old way of thinking and doing. Budget is a constraint, however with long-term planning, money can be raised through programs that encourage and support innovative solutions.

- **Maintenance**
  - It would be great if the picnic tables, benches, garbage cans/trash pick-up and the walkway could be cleaned on a regular basis, particularly in the summer months.
  - Rebuild or replace the seawall while also maintain the sandy beach.

Amenities

In addition to improvements, respondents were asked about amenities, specifically, what should be added to enhance public use and enjoyment of the Beach Boulevard promenade/seawall area. Key themes and specific amenities include the following:

- **Infrastructure**
  - Keep the area as natural as possible to maintain Pacifica's character.
  - More seating and benches
  - More dining, particularly outdoor dining
  - More vendors and small businesses (food carts, beach supply and souvenir vendors, etc.)
  - Additional signs and enforcement of people not feeding the birds
  - New library

- **Community**
  - Improved and more picnic areas
  - Better and more areas for community gatherings
  - Art and culture activities
  - Informational/education signage including historical information
  - Music

- **Landscaping**
  - Modernize, update and maintain new landscaping.
  - Preserve and enhance the memorial garden at the end of the berm.
  - Plant more native greenery.

- **Recreation**
  - Kayaking
  - Parasailing
  - Wider walkways for bike and pedestrian movement.
  - Improved pathways
  - More bike parking
  - Rentals - beach umbrellas, blankets, Frisbees, hats, bicycles, Segway's, surf boards, etc.
  - Add a dedicated bike lane

- **Transit, Parking and Access**
  - Increased public transit to area
  - More parking areas
  - Electric car charging stations
  - Rental scooter/bike kiosks
  - More parking

- **Other**
  - Update the public restrooms to include diaper changing facilities in both gender bathrooms.
  - Additional sink areas for people to clean fish after fishing
  - Additional receptacles for garbage, pet waste, recycling and compost – particularly in the picnic areas

5. Stakeholder Engagement

Figure 9 indicates how stakeholders would like to be engaged on the project moving forward. 43% recommended online or virtual engagement strategies such as a comment portal, additional surveys and social media. 35% recommended utilizing existing meetings or convening specific meetings to provide project updates and solicit input. 20% indicated they would be interested in reviewing draft project documents as they become available.

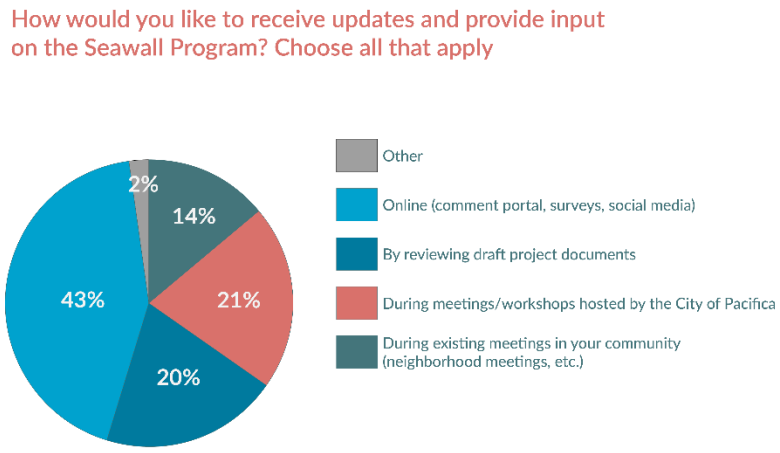


Figure 9: Stakeholder engagement preferences.

Specific stakeholder engagement recommendations included:

- Residents should be "over" engaged. Reach everyone, not just Sharp Park residents, and be thorough.
- Develop a database of historical photos and images to inform future planning.
- More advanced notice of meeting dates, survey deadlines and general project updates.
- More surveys like this one and others that can happen “on the spot” and in the project area, either by setting up a tabling or asking people to complete surveys in real time.
- While in-person meetings are preferred, respondents recognize the constraints and safety priorities related to COVID-19.
- Signs or billboards in and near the project area noticing upcoming meetings or project information.
- Emphasize project benefits, provide information on project alternatives and share consistent updates.

Appendix A

City of Pacifica Beach Boulevard Infrastructure Resiliency Project
Online Survey Questions

Background and Introduction

Thank you for taking the time to complete this survey for the City of Pacifica Beach Boulevard Infrastructure Resiliency Project!

The Project is being designed to create a multi-benefit solution to protect public infrastructure, recreational activities, numerous homes, businesses, and the community at large, from impacts associated with coastal flooding and erosion. It aims to build climate resilience into the most vulnerable segment of the City of Pacifica's shoreline.

The purpose of this survey is to hear from you and gain a better understanding of your interests, priorities, and concerns related to the project area.

General Instructions:

- **To place pin, use your mouse (or fingers) to drag the pin to your desired location. Click the green "check" to save your pin and add your comment. You can place multiple responses for all mapping activities.**

Questions

Current Uses and Pacifica Character

1. How often do you use or visit facilities and services connected with the Beach Boulevard Seawall or promenade area?
    a. Less than once/month
    b. 1-2 times/month
    c. Once/week
    d. Several times/week
    e. Every day

2. When you visit the Beach Boulevard promenade area, where do you typically go, and what activities do you participate in?

Instructions: Please place a pin for each individual place you typically visit and describe the activity you participate in the comment box.

3. If you drive when visiting the promenade area, where do you typically park? Is the existing number of parking spaces sufficient for the enjoyment of Pacifica's shoreline?

4. In your view, are beach access stairways sufficient for enjoyment of the Beach Boulevard area? If not, what else is needed?

5. When is the best time (time of day or season) to enjoy the promenade?

6. How does the Beach Boulevard Seawall/promenade reflect the unique character of Pacifica?

Existing Conditions

7. Where do you have concerns regarding the Beach Boulevard Seawall and current/future impacts to the surrounding community (particularly as they relate to sea level rise and flooding)? Where are improvements needed?

Instructions: Place red pins in the areas you have concerns. Place blue pins in the areas where improvements are needed. Use comment box on each pin to describe the type of improvement needed.

8. To what extent has coastal flooding of the promenade hindered your enjoyment of this space? Please explain.
    a. Not at all
    b. Somewhat
    c. Significantly

    [include space for them to write]

Future Vision

9. How can the future Beach Boulevard promenade and surrounding area best maintain the character of Pacifica?

10. What specific changes or community amenities would you like to see added to enhance public use and enjoyment of the Beach Boulevard promenade/seawall area? This could include infrastructure improvements, recreation opportunities, transportation improvements, etc.

Instructions: Use pins to list amenities, describe the amenity for each pin placed. Multiple pins can be placed for different amenities.

Communication/Engagement Preferences

11. How would you like to receive updates and provide input on the Seawall Program? Choose all that apply.
    a. During existing meetings in your community (neighborhood meetings, etc.) [If yes, name the meeting/group]
    b. During meetings/workshops hosted by the City of Pacifica
    c. By reviewing draft project documents
    d. Online (comment portal, surveys, social media)
    e. Other: [short answer]

12. Do you have any other suggestions on stakeholder engagement for the Beach Boulevard Infrastructure Resiliency Project? (comment box answer)

13. Would you like to opt into our distribution list to receive email updates on the Beach Boulevard Infrastructure Resiliency Project? (choose one)
    a. Yes
    b. No
    [if yes, please provide email address]

Demographics

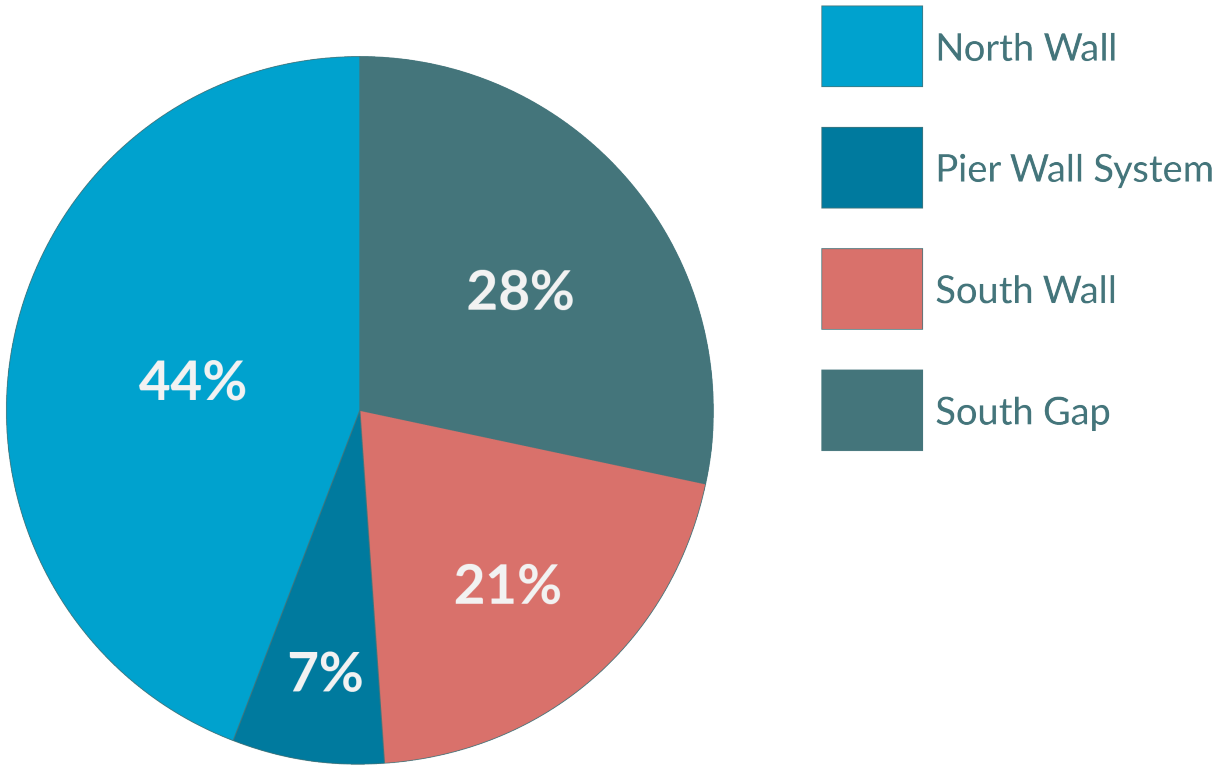
14. What city/neighborhood do you live in (enter zip code)?

15. What neighborhood do you work in? (enter zip code)

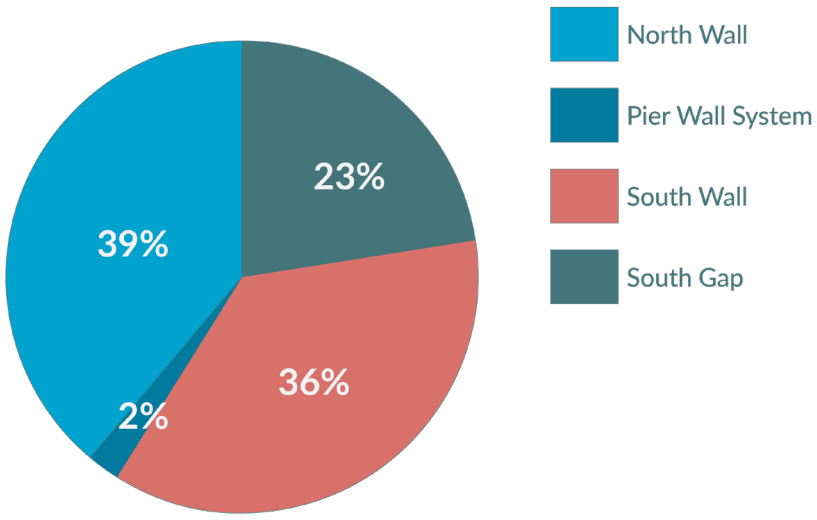
16. What is your age? (choose one)
    f. Under 20 years
    g. 20-29 years
    h. 30-39 years
    i. 40-49 years
    j. 50-59 years
    k. Older than 60 years

Appendix B

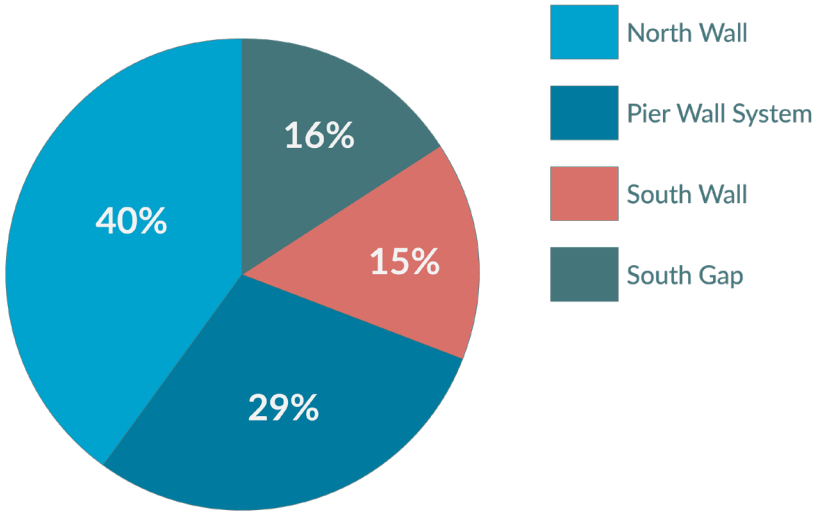
Responses of Places People Visit



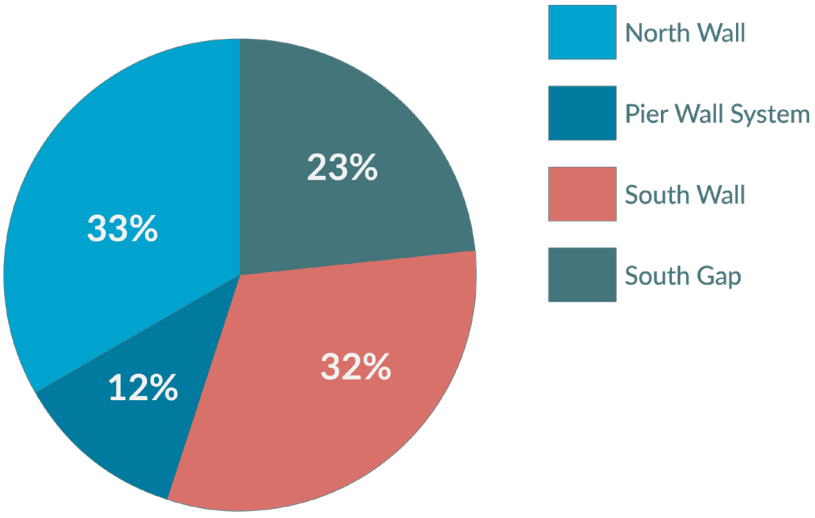
Placement of Improvement Responses



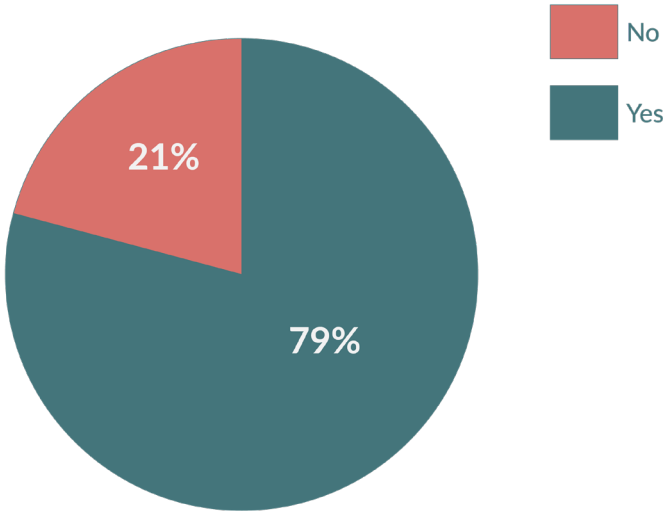
Placement of Concern Responses



Placement of Parking Responses



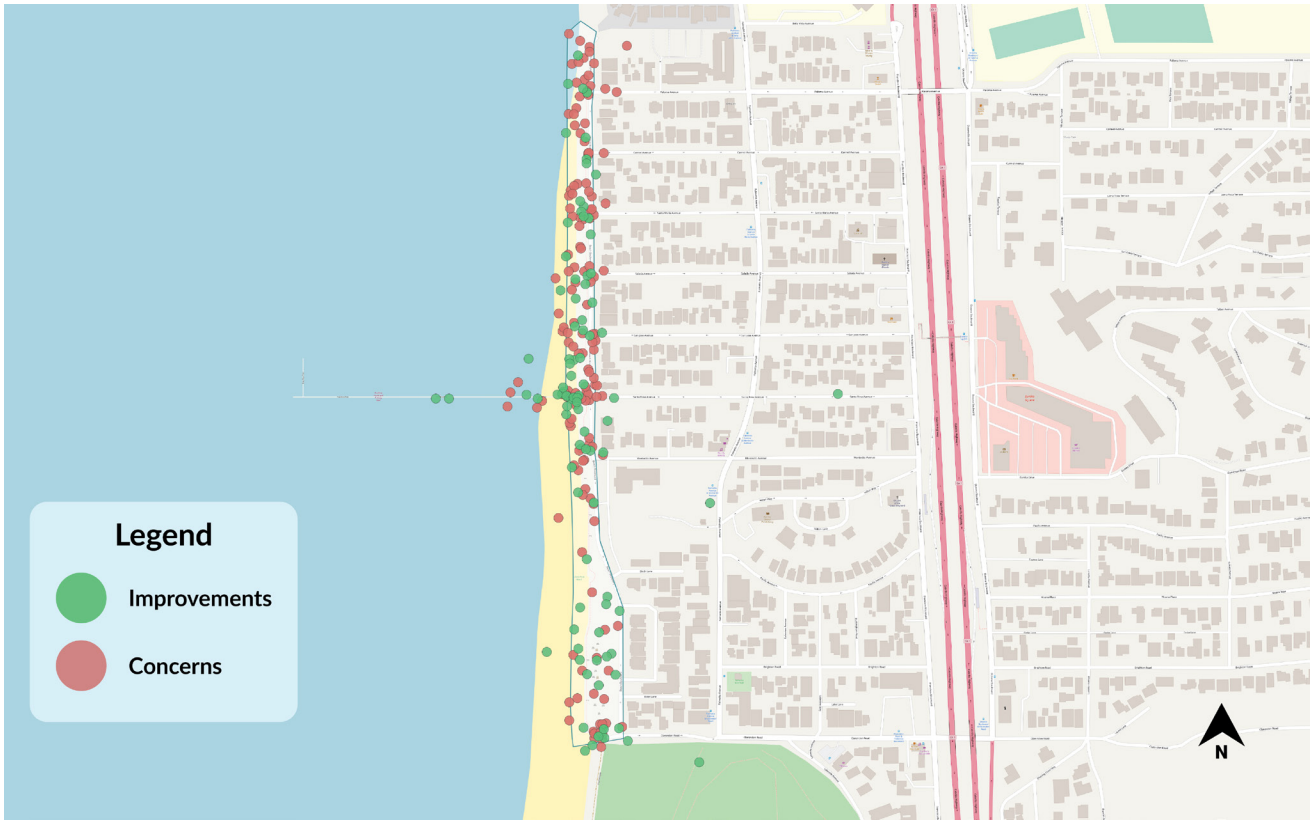
Would you like to opt into our distribution list to receive email updates on the Beach Boulevard Infrastructure Resiliency Project?



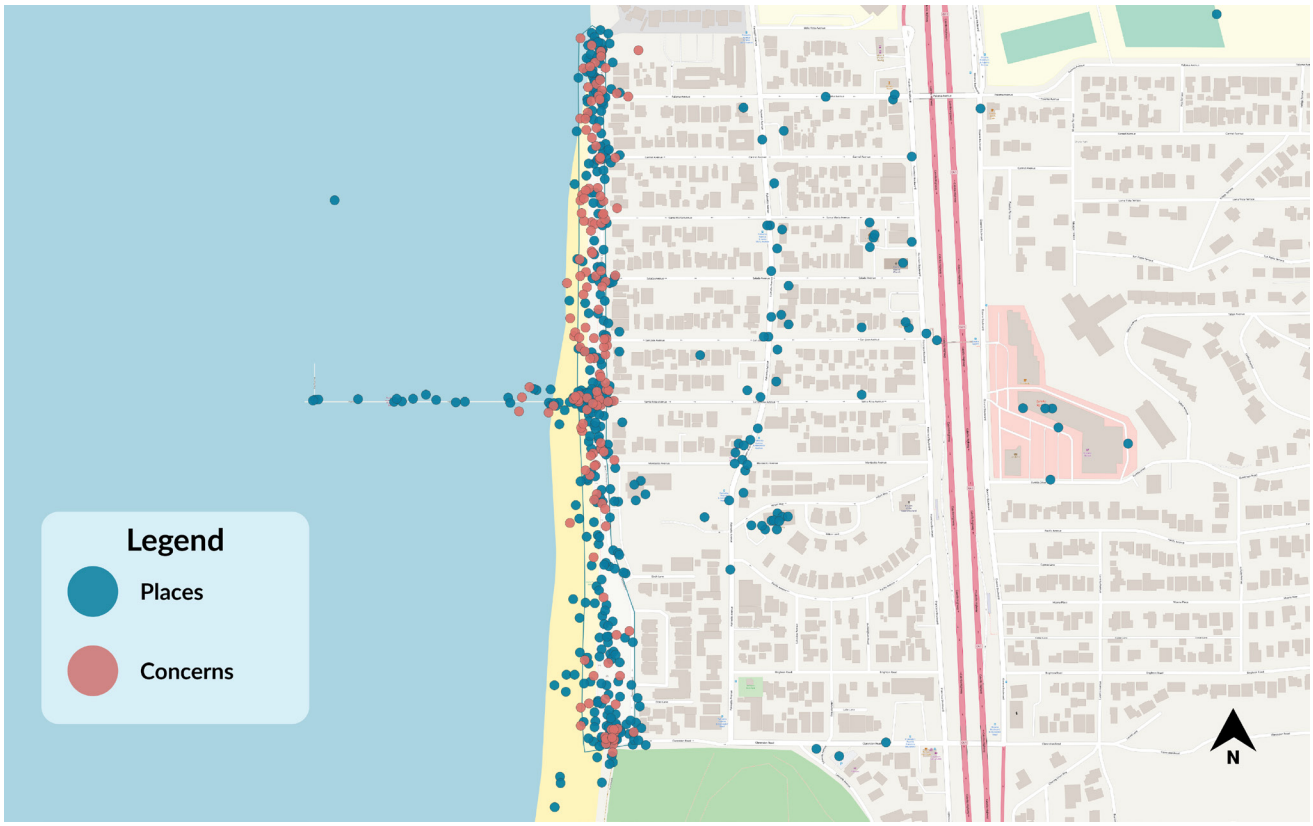
Appendix C

Visited Places Map Responses

Improvements & Concerns Map Responses



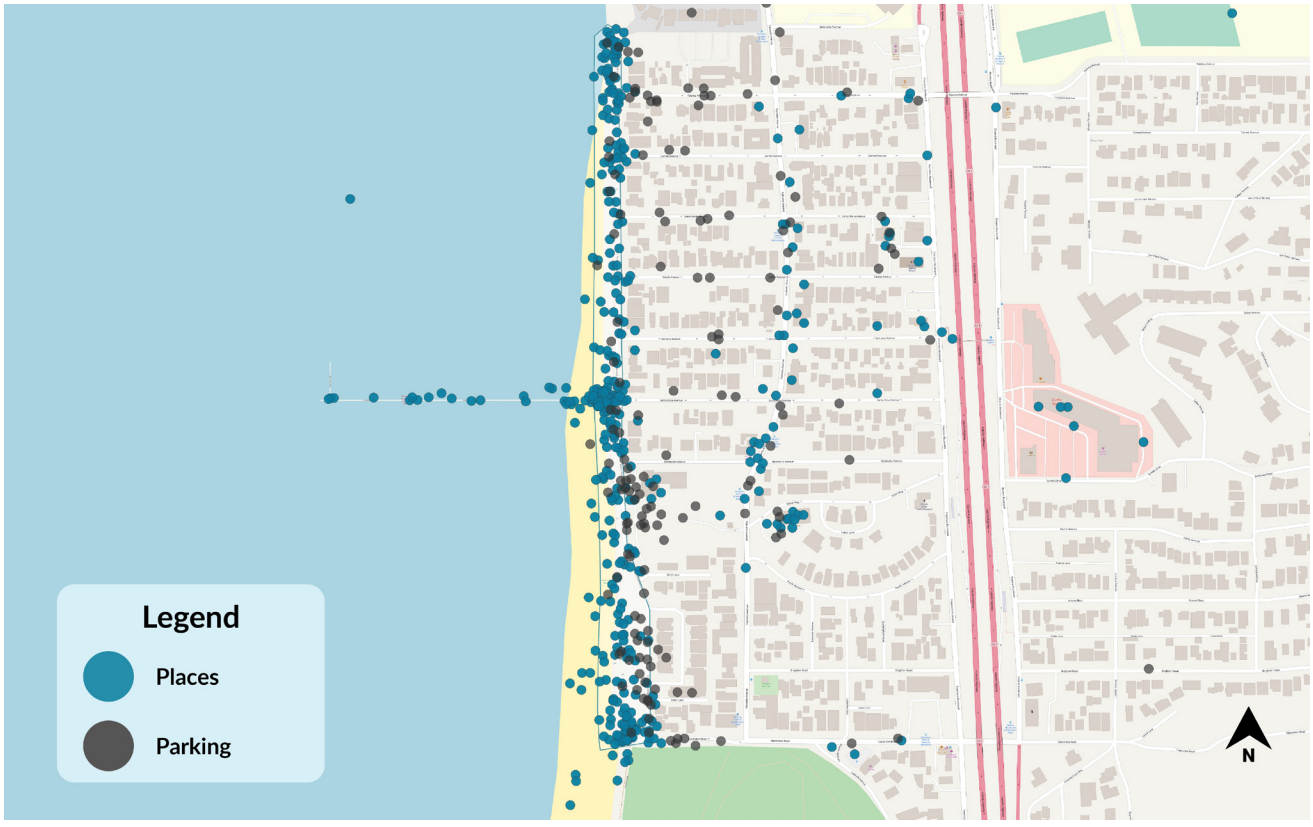
Places & Concerns Map Responses



Places & Improvements Map Responses

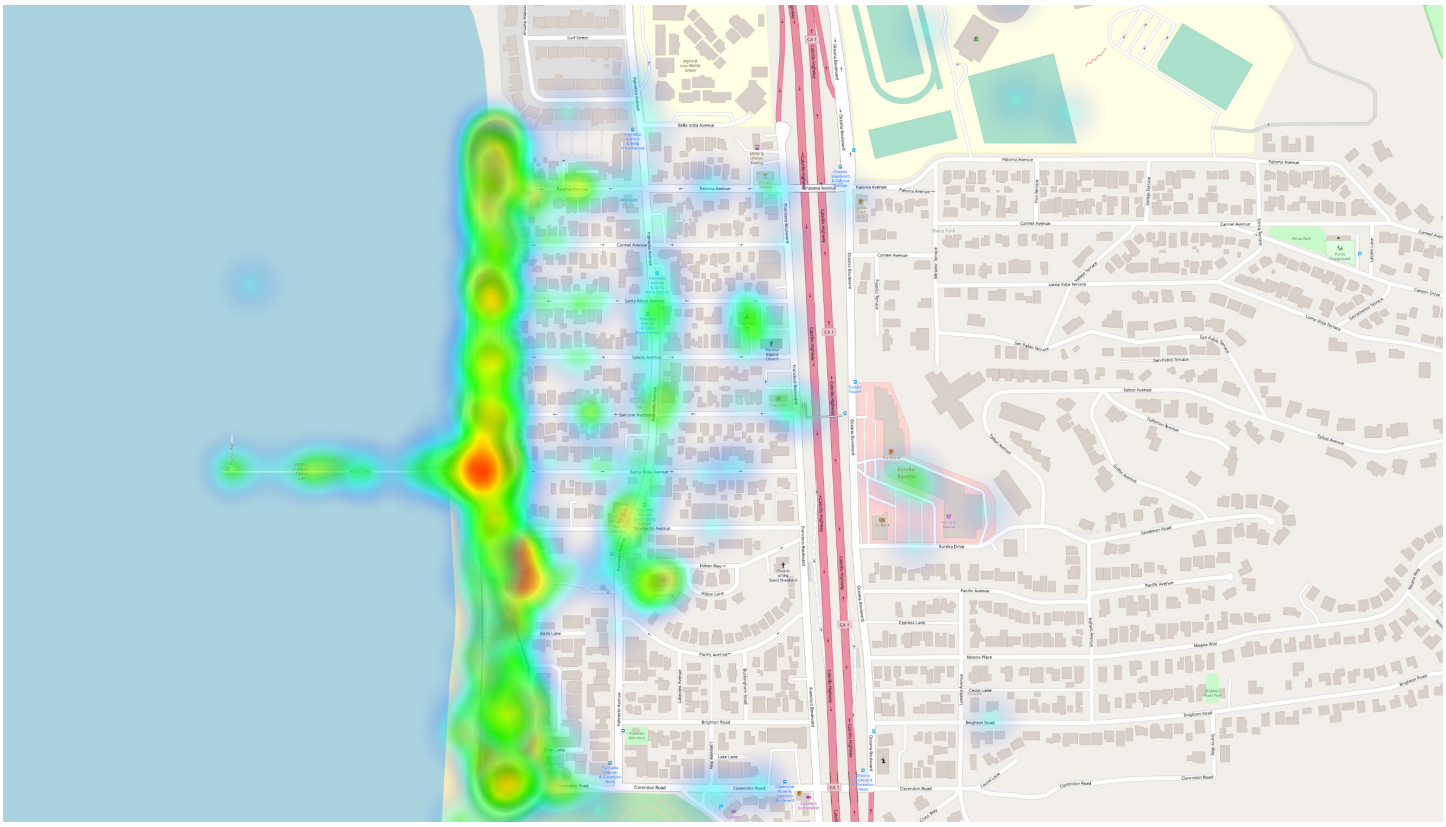
Parking & Concerns Map Responses

Parking & Places Map Responses

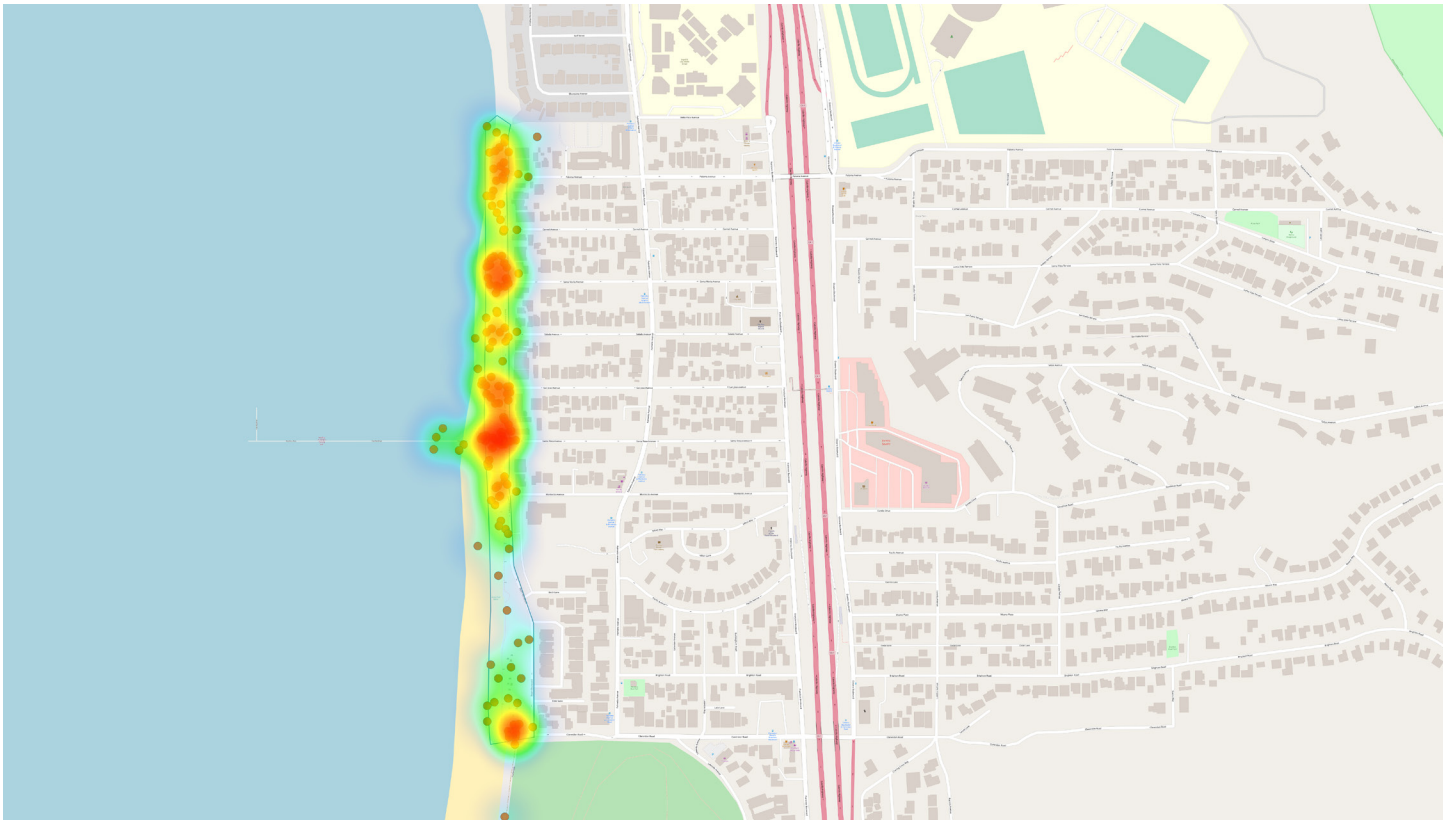


Appendix D

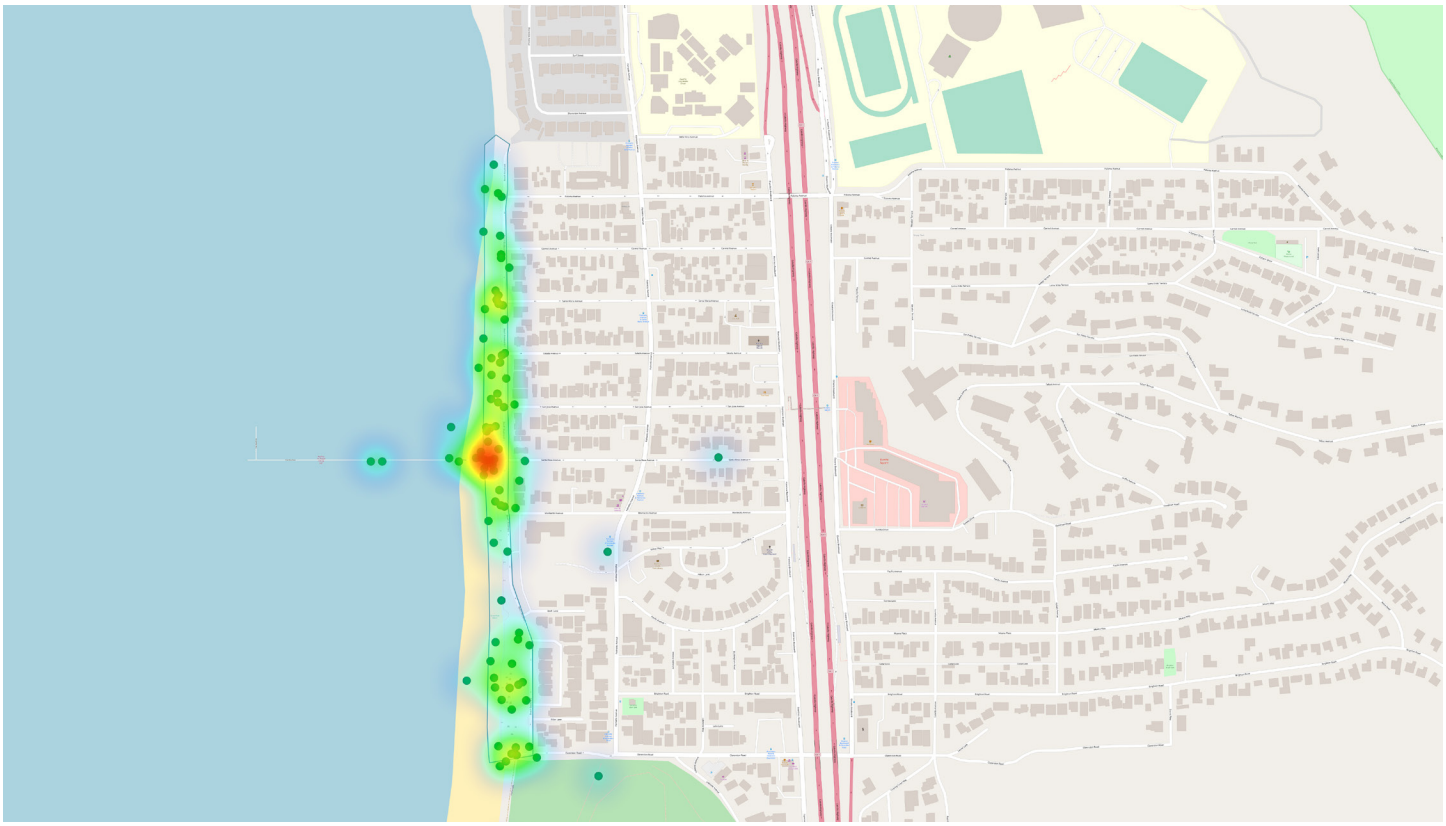
Heat Maps All Layers



Concerns Heatmap with Source Points



Heatmap Improvement with Source Points



Parking Heatmap with Source Points

Places Heatmap with Source Points

Appendix D1: September 24, 2020 Public Workshop Summary

Summary

City of Pacifica Beach Blvd. Infrastructure Resiliency Project

Kick-off Public Workshop

Thursday, September 24th

6:00 – 7:30 p.m.

Welcome, Introductions and Agenda Review

Deirdre Martin, Mayor of Pacifica, opened the meeting by thanking attendees for their participation and emphasizing the importance of the community's feedback throughout the Beach Boulevard Infrastructure Resiliency Project (BBIRP) process. Mayor Martin indicated that the City is committed charting a resilient future for the West Sharp Park neighborhood and Pacifica as a whole.

Sue Beckmeyer, Pacifica Mayor Pro Tem, indicated that the BBIRP is an important building block for Pacifica's future and that community input will be crucial to ensure that the project is consistent with residents' desires.

Kelsey Rugani, facilitator, welcomed attendees and reviewed the meeting objectives, agenda, and ground rules. The workshop objectives included:

- Providing an overview of the Beach Boulevard Infrastructure Resiliency Project.
- Sharing preliminary findings from the Project's Existing Conditions analysis.
- Soliciting participant input that will inform the identification of project alternatives and share priorities and concerns related to the current seawall and project area.

Rugani then introduced a virtual polling exercise designed to collect real time feedback from participants on Pacifica's. The results were displayed as a word cloud, as depicted in Figure 1 below.

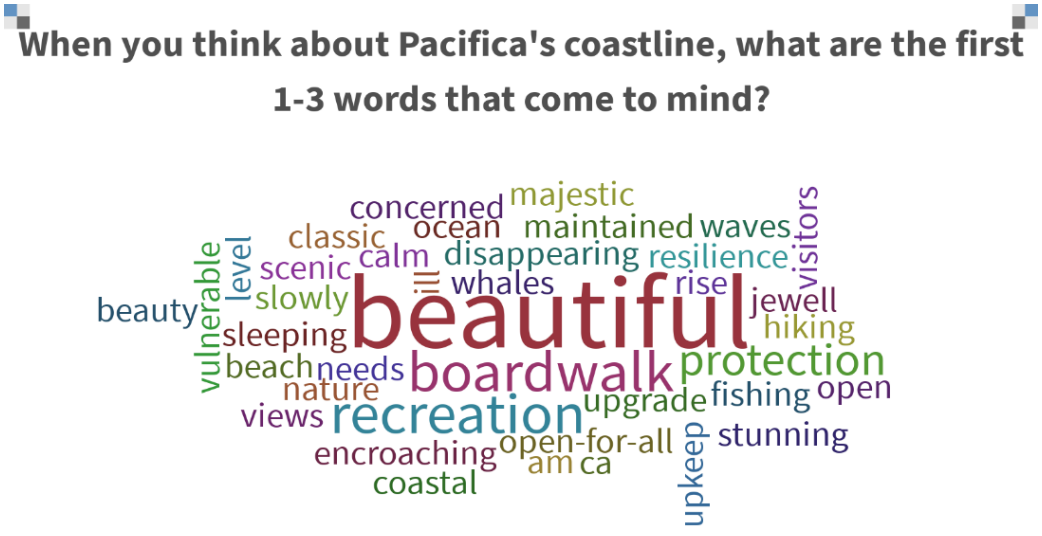


Figure 1 responses from first workshop word cloud exercise.

Overview of Beach Boulevard Infrastructure Resiliency Project

Ryan Marquez, City of Pacifica Public Works Department, provided an overview of the project by introducing the project area and reviewing ongoing City efforts in the Sharp Park neighborhood. The BBIRP is located in northern Pacifica, on the western edge of the historic West Sharp Park neighborhood. The project area is comprised of four different reaches with unique characteristics; the Pier Wall System built in 1973, the North Wall built in 1984, the South Wall built in 1987, and the South Gap. Due to multiple major failures to the North wall between 1984 and 2020 (including foundational and full wall failures), localized flooding and property damage from wave overtopping, and sea level rise projections, Marquez emphasized the need to update these structures in order to protect public infrastructure along and adjacent to Beach Boulevard.

Marquez continued by explaining the intended outcomes of the BBIRP, which include:

- Replacing the current seawall and outdated infrastructure
- Building climate resilience into one of the most vulnerable segments of the City's shoreline.
- Improving public access and use of the Beach Boulevard Promenade.
- Creating a multi-benefit solution to protect public infrastructure, recreational activities, homes, businesses, and the community at large, from further coastal erosion impacts.

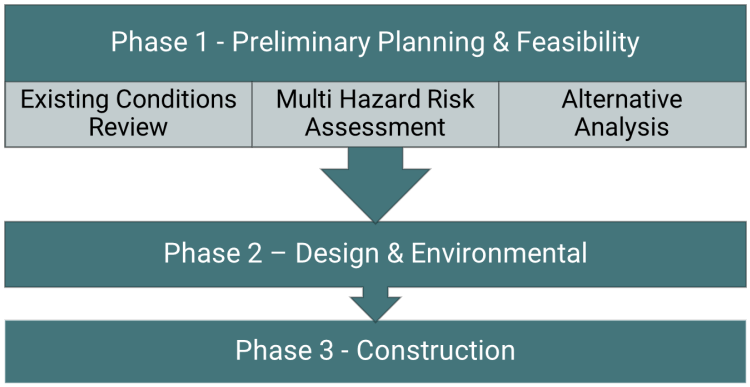


Figure 2 BBIRP project phases

The project is currently in the first of three phases (Figure 2) which focuses on preliminary planning and feasibility and includes reviewing existing conditions, conducting a Multi Hazard Risk Assessment (MHRA), and developing and analyzing project alternatives. Phase 1 is expected to end in Spring 2021.

Marquez indicated that there will be ongoing engagement throughout all phases of the project and that community members will have multiple opportunities to participate in the process, including a total of four community workshops during Phase 1 designed to provide project updates and solicit input. This first workshop focused on sharing information on the existing conditions review. The next workshop, tentatively scheduled for November 2020, will share the approach for studying hazards and how the MHRA will inform alternatives development. The third will provide an overview of each alternative under consideration and the criteria used to identify a preferred alternative, and the fourth will focus on the selected project alternative.

Rugani introduced the second word cloud polling exercise to capture participants' interest in Pacifica's adaptation to seal level rise and the Beach Boulevard Seawall replacements. Results are shown in Figure 3.

Figure 3 responses from second workshop word cloud exercise.

Question and Answer

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included below.

- Question (Q): Will the project proceed even if the California Coastal Commission (CCC) is against seawalls?
    - Response (R): The City Council has approved this project and the project team will work with the CCC to make sure priorities are aligned and that the project can proceed.
    - R: The project has support from the state legislature, which is working on a bond for resiliency.
- Q: How does this project relate to the Local Coastal Plan (LCP) that is currently under review by the CCC?
    - R: The project is consistent with the draft LCP that is in the process of getting certified. Furthermore, the current LCP includes policies that allow for the protection of existing structures.
- Q: How can the City use this project to further interest and level of comfort of private developers to invest in the West Sharp Park neighborhood?
    - R: The project team has worked closely with the planning department and the Sharp Park Specific Plan (SPSP) team. Collaboration will be key to ensure investors are confident about the projects efforts to protect West Sharp Park homes and businesses.

Overview of Project Tasks and Technical Work

Paul Henderson, GHD, described the project tasks and the technical work completed to-date including the existing conditions review that began in June 2020. Henderson reviewed the visual structural condition assessment of the wall, the geotechnical work, and the engineering surveying efforts, including aerial LIDAR and photogrammetry surveying captures by GHD's drone that has been used to develop of high-resolution 3d model to be used in design and future public presentations. This structural condition assessment has shown that the current seawall is experiencing various levels of failure and in

some locations may have a remaining life of as little of 5 years if major preventative maintenance is not completed, or the wall is not replaced.

Brian Leslie, GHD, explained that the MHRA began in August and is intended to identify risks to the seawall and associated infrastructure. This will include assessing risks associated with flooding, earthquakes, utilities, environmental conditions, and potential economic impacts. Leslie indicated that the environmental conditions analysis for the MHRA will include terrestrial biological assessments, marine biological assessments, recreation and visual assessments, and further environmental work to be completed in Phase 2.

Leslie introduced the approach to developing the project alternatives, noting that they will be consistent with Local Coastal Plan's (LCP) Coastal Resiliency (CR) implementation policies. This includes structure elevation (CR-25), beach nourishment (CR-26), and flood protection (CR-27). The alternatives currently being considered include beach nourishment, sand retention structures, seawall replacement, and rock seawall replacement (Figure 4). Leslie also noted that the 'no project' alternative will also be considered and analyzed. Leslie noted that these options are not necessarily stand-alone options and could be combined. For example, sand retention structures would like include beach nourishment, but a seawall replacement could also include beach nourishment.

Figure 4 project alternatives being considered.

Rugani stated that the project team released a public survey focusing on existing conditions. The survey is intended to collect input from community members on their interests, priorities, and concerns related to the project area. The survey was open from September 10th to October 1st and results, which will be compiled and presented at the next workshop, will help inform next steps for the project team in their analyses.

Rugani introduced the last poll of the evening which collected attendees' requests for future workshop discussion topics. Key themes from the survey responses are listed below:

- Project funding and cost to Pacificans
- Workshop attendance
- Moving the sewer lines
- Implementation priority stages
- Moving infrastructure under the street
- Relationship between CCC's approval of the LCP and the likelihood of a new seawall being implemented.
- Impact on infrastructure if nothing is done
- State and local legislative support

Question and Answer

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included below.

- Q: The third alternative presented is a seawall – are those supplements to the new seawall or an alternative of having the seawall constructed?
    - R: Alternatives should not be seen as standalone options; the preferred alternatives may be a hybrid of the alternatives we analyze.

Public Comment

Kelsey Rugani invited members of the public to provide public comments. A summary the comments made is included below.

- Comment (C): I really appreciate the meeting; it is great that the City is involving residents early in the process. It is also encouraging to see the City is looking at replacing the seawall because it needs to be upgraded. The gap at Clarendon needs to be closed as it will protect homeowners. This is a fantastic way of looking out for Pacifica residents.
- C: The vision presented by the SPSP will only be accomplished if the seawall is improved and can protect homes and businesses. We must ensure investors are confident and willing to invest in this area.
- C: Fixing the seawall will help bring investment to the area. It is important for the project team to work with the Development Committee to see how the seawall would benefit existing or planned developments.
- C: Improving the seawall is crucial to helping the City build a vibrant Sharp Park neighborhood.
- C: I support the repair of the seawall as it will protect homes near the coastline.
- C: I would also suggest turning converting portions of Bach Boulevard into pedestrian-only areas.
- C: The cost-benefit analysis performed for the LCP was under funded and was therefore not as detailed as it should have been. I would like assurances that the BBIRP's cost-benefit analysis will be more detailed.
    - R: Unlike the LCP update, which had to look at the entire coastline, the BBIRP will be looking at a specific site and will therefore be able to provide a more detailed

assessment. The project team will provide further information on this during the next workshop.

- C: How can community members get involved to help ensure this project moves forward?
    - R: The project will eventually be submitted to the CCC and they will solicit public comments. Community members are encouraged to follow the BBIRP's development throughout the entire process and provide input when appropriate.
- C: I am concerned about the environmental impacts of some of the alternatives that seem to be very disruptive to the beach, which is the biggest draw to the area.
    - R: One of the alternatives we will consider includes beach nourishment which allows for the possibility of extending the sandy area on the beach.
- Q: Will project construction and implementation be phased?
    - R: There is a possibility that project construction will be phased as a means to identify priority infrastructure improvements.
- Q: I would like to understand how public funding can be utilized to protect private property. Is this project government funded?
    - R: The project will protect public safety infrastructure such as streets and sidewalks that were built in the 1950s, although there will be benefits to some of the homes in the area.
    - R: The City Council has been directing work and seeking potential funding for this project for many years. We were able to get state funding for this phase but recognize that completing the project will require a patchwork of funding sources. By providing more detail on the project specifics we hope to garner more leverage to raise funds from the local, state, and federal levels.

Next Steps

After public comment, Kelsey Rugani recapped action items and presented project next steps.

- Participants were encouraged to visit the project website (https://www.cityofpacifica.org/depts/pw/engr/current_projects/beach_boulevard_infrastructure_resiliency_project/default.asp) to:
    - Fill out a comment form.
    - Find the workshop summary and recording
    - Sign-up for the project email list
- The next Community Workshop will take place in November and focus on the Multi-Hazard Risk Assessment and other project updates.

Appendix D2: December 3, 2020 Public Workshop Summary

Summary

City of Pacifica Beach Blvd. Infrastructure Resiliency Project

Public Workshop

Thursday, December 3rd, 2020

6:00 – 7:30 p.m.

Welcome, Introductions and Agenda Review

Mary Bier, City of Pacifica City Council member, opened the meeting by welcoming attendees and thanking Ryan Marquez and the Beach Boulevard Infrastructure Resiliency Project (BBIRP) team for their continued efforts engaging the community on the project.

Sue Beckmeyer, City of Pacifica Mayor Pro Tem, indicated the importance of the BBIRP project for the protection of the City's interconnected infrastructure and maintaining Beach Boulevard's unique, vibrant, and historical character.

Kelsey Rugani, facilitator, welcomed attendees and reviewed the meeting objectives, agenda, and ground rules. The workshop objectives included:

- Providing a project overview and updates since September Kick-off Community Workshop.
- Sharing the methodology of the Project's Multi-Hazard Risk Assessment.
- Soliciting participant input that will inform the identification of project alternatives and sharing priorities and concerns related to the current seawall and project area.

Overview of Beach Boulevard Infrastructure Resiliency Project

Ryan Marquez, City of Pacifica Public Works Department, provided an overview of the project by introducing the project area and reviewing ongoing City efforts in the Sharp Park neighborhood. The BBIRP is located in northern Pacifica, on the western edge of the historic West Sharp Park neighborhood. The project area is comprised of four different reaches with unique characteristics; the Pier Wall System built in 1973, the North Wall built in 1984, the South Wall built in 1987, and the South Gap. Due to multiple major failures to the North wall between 1984 and 2020 (including foundational and full wall failures), localized flooding and property damage from wave overtopping, and sea level rise projections, Marquez emphasized the need to update these structures in order to protect public infrastructure along and adjacent to Beach Boulevard.

Marquez continued by explaining the project goals of the BBIRP, which include:

- Replacing the current seawall and outdated infrastructure
- Building climate resilience into one of the most vulnerable segments of the City's shoreline.
- Improving public access and use of the Beach Boulevard Promenade.

- Creating a multi-benefit solution to protect public infrastructure, recreational activities, homes, businesses, and the community at large, from further coastal erosion impacts.

Figure 1 BBIRP project phases

The project is broken into three phases. The current phase, Phase 1, focuses on preliminary planning and feasibility and includes reviewing Existing Conditions and conducting a Multi-Hazard Risk Assessment (MHRA) which will inform the development and analysis of the project alternatives. Once a preferred alternative has been identified, Phase 2 will focus on design and permitting. Phase 3 is the construction phase.

Marquez indicated that there will be a total of four community workshops during Phase 1. The Kick-Off Workshop was held on in September 24 and provided an overview of existing conditions of the project area. The third and fourth workshops will cover the alternative design development and will be held in January and March. Online engagement and information will occur throughout the duration of the project.

Marquez then summarized the key feedback received during the September 24 Kick-Off Workshop, which included:

- Project funding and cost to Pacificans.
- Alignment between City's planning efforts (LCP, SPSP, BBIRP) and regulatory agencies.
- The opportunity for the BBIRP to serve as a catalyst for commercial development and private investments in Pacifica.
- Project's construction timeline (e.g. phasing to address priority areas).

Marquez noted that an Existing Conditions Survey was made publicly available between September 10 and October 1. Results of the survey encompassed a range of community perspectives on the project areas, including appreciation for the non-commercial, seamless connection to the ocean as well as the

need for infrastructure updates to ensure public safety reasons. Respondents to the survey also indicated their preferred methods to be engaged during the project, which includes:

- Pursuing additional means for virtual engagement (e.g. comment portals, additional surveys, and social media).
- Utilizing existing meetings or convening additional BBIRP-specific meetings
- Posting draft Project documents online as they become available.

Project funding was noted as a key concern in both the Kick-Off Workshop and the Existing Conditions Survey. Marquez noted the City will be pursuing multiple sources, including those available at the local, state, and federal level. Some of the potential funding sources are listed below.

Level	Opportunity Name	Applicable To
Local	Tax	Whole Project
	Bond	Whole Project
	Parcel Tax	Whole Project
	Assessment District	Whole Project
	Geologic Hazard Abatement District	Whole Project
State	Boating & Waterways - Shoreline Erosion Control & Public Beach Restoration	Erosion control & Nourishment
	Ocean Protection Council - Prop 1	SLR Adaptation
	Department of Water Resources - Coastal Watershed Flood Risk Reduction	Flood Risk reduction w/ fish & wildlife enhancements
	Coastal Conservancy - Various	Coastal Access & Recreation
Federal	FEMA Hazard Mitigation Grant Program (HMGP)	Hazard Mitigation
	FEMA Building Resilient Infrastructure & Communities (BRIC)	Hazard Mitigation
	United States Army Corps of Engineers - General Investigation	Coastal Storm Damage Reduction
	National Fish & Wildlife Coastal Resilience Fund	Restore or expand natural habitats
	NOAA Coastal Resilience Grants	Nature Based Solutions

Question and Answer

Following the overview presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included below.

- Q: Are there any resolutions to the resiliency or permanency to the existing gap in Clarendon, the existing seawall, and the north end seawall?
    - Response (R): While project team has not identified specific solutions to those areas, they will be addressed in our analysis of projective alternatives.

Overview of Multi-Hazard Risk Assessment

Paul Henderson and Brian Leslie, GHD, provided an overview of the MHRA noting it will identify the potential impacts of a range hazards the City is susceptible to. The results of the MHRA will inform the development and analysis of project alternatives, which include: Beach Nourishment, Sand Retention Structures, Replacement Seawall and Rock Revetment.

An overview of the hazards being analyzed in the MHRA is provided below.

- **Coastal hazards** are designated into two categories: 1) flooding hazards, including those associated with wave run-up/overtopping and stormwater system capacity and 2) shoreline/bluff erosion which entails landward migration of beach (e.g. beach erosion) and how deep might the beach recede at the toes of the current structures.
- **Sea-Level Rise** considerations are being assessed by looking at 2ft, 3.5ft and 7ft sea level rise scenarios. These ranges are being utilized to determine risk aversion scenarios for the project's design life.
- **Flooding** occurs when waves overtop the seawall during large, long period waves and coincident high tides. To analyze this hazard, the project team utilizes the EurOtop v. II model
- **Erosion hazards are a risk to** Pacifica's bluffs, which are made of loosely consolidated materials that are highly erodible. To predict how the beach and bluff could erode without sea level rise, the project team used a background erosion rate of 1.6 feet per year. To account how the bluff erosion is going to accelerate with sea level rise, the project team is using USGS' CoSMoS data.
- **Earthquake risks** exist given the City's proximity to the San Andreas and San Gregorio faults. In addition to strong ground shaking and ground surface rupture, additional risks include liquefaction and slope failure of the coastal bluff. Liquefaction occurs when water saturation and pore pressure increase reduces the strength of subsurface soils. Slope failure risks exist as ground shaking can erode coastal bluffs to the extent that they collapse.
- **Utilities** risks relate to the location of infrastructure for sewer, gas, electric, and others within the project area. The project team is assessing the difference in costs for protecting these utilities in their current location versus relocating them.
- In assessing **economic risks**, the project team will be completing a Benefit-Cost Analysis (BCA) of each project alternative under consideration. The BCA will utilize the economic framework established by the National Oceanic and Atmospheric Administration (NOAA) to assess to potential losses property and tax revenue, threats to utilities, and operations and maintenance. The NOAA framework is being utilized given its suitability for the BBIRP as it has a focus on coastal communities. Additionally, in contrast to other economic frameworks, it provides a holistic structure that accounts for intangible benefits like recreation and other social benefits.
- The three primary **environmental risk** categories include marine biology, terrestrial biology and recreation and visual impacts. The project area supports a diversity of marine biology. While any project alternative would cause an impact to this biology, the effects can be mitigated. In regard to terrestrial biology, the project footprint is likely to be confined generally to the existing Beach Boulevard area with minimal impact on special status species, such as the red-legged frog and garter snakes. Additionally, project structures will serve as a means to prevent salt water intrusion into the Laguna Salad Wetland Complex. Since the project will present opportunities in

terms of recreation and visual, the team will be looking for community feedback and ideas on these opportunities.

Henderson concluded by noting that the findings of the MHRA will be presented at the next workshop. These output findings will also inform the design criteria and benefit-cost analysis of the project alternatives.

Rugani introduced a virtual polling exercise to gage what risks are of the most importance to meeting attendees. Results are listed below.

Which of the risks discussed is most important to you?

- Overtopping and Flood Risks: 38%
- Earthquake Risk: 4%
- Coastal Risks: 10%
- Utility Risk: 6%
- Economic Risk: 23%
- Environmental Risk: 19%

Question and Answer

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included below.

- Q: Can we design for a 500 year or greater event?
    - R: Yes, however, the costs and environmental impacts for an alternative that addresses a 500 year event are too great given the low likelihood of an event of that scale.
- Q: Why is loss of beaches and recreation amenities not quantified? Is Pacifica economically sustainable if there are no beaches to come to?
    - R: It is difficult to assign a dollar value to recreation, particularly for non-Pacifica residents that are using the City's amenities. However, the NOAA assessment includes qualitative methods to include the recreational value of the beach.
- Comment (C): If the seawall started eroding, there would be a loss of market value to homes which would consequently result in loss of property tax revenues. Just because recreation is difficult to quantify does not mean it should not be quantified. The seawall has generally worked for the City and it might be the best approach moving forward.
- C/Q: The project footprint does not include the southern gap leading to the golf course. Will this project close the southern gap?
    - R: While the project generally pertains to the footprint discussed, the project team will be assessing the gap.
- Q: Does Eurotop include the effects of a reflective wave as it interacts with the incident wave in front of a structure?

B: It does not consider reflective wave; it considers dynamic water levels. Wave set-up (e.g. tides plus dynamic water level) is what is included.

Public Comment

Kelsey Rugani invited members of the public to provide comments to the project team. A summary of public comments made is included below.

- C: Nature-based strategies should be considered in mitigating sea-level rise impacts.
- C: Based on how things were presented, it seems that beach protection and recreation are lower priorities; I think they should be singled-out as its own category and should be quantified economically. It plays a central part in Pacifica's economic sustainability. We are losing what we have in terms of shoreline and we should return it to a more living shoreline. I think a larger seawall would not make things safer and there is reason to believe it would fail in quicker timing. Beach resiliency is misnomer here as resiliency has to do with natural barriers. When we lose the beach, we lose Pacifica.
- C: We really need to replace the seawall with something that will last for at least 50 years. I do not think we should pursue a living shoreline as we are trying to protect infrastructure, business, and homes. Citizens do not want managed retreat.
- Q: Who decides on what the preferred alternative will be?
    - R: All alternatives will be scored against a set of criteria in order to determine the preferred alternative. The preferred alternatives could be a combination of alternatives. The project team will be discussing the range of alternatives and the criteria used to assess them at the next public workshop.
- C: I love what is planned for Sharp Park, but it is never going to happen without a seawall. Nobody is going to invest in real estate development, which is critical to the City's financial future, without a commitment to a modern seawall. A seawall is the most cost-effective alternative in the long run.
- Q: What can Pacifica do to expedite getting a seawall built? How long will it take until we start building the seawall that we obviously need?
    - R: This project needs to follow a thorough process of analyzing the costs and benefits associated with each alternative, not just a seawall. A timeline for construction will be established once we have identified a preferred alternative.
- C: The approaches discussed for protecting habitats and wetlands sounds like managed retreat, which is a non-starter for residents. We have economic viability along the cost that needs to be protected and a seawall seems like our best option.
- C: I am a Resident and property owner and I have a done a couple of construction projects in the northern section of the project area. We did a study of the seawall to the north wall to determine what means there are updating the current system which we found can be maintained and augmented. It is important to preserve the historic character of Salada Beach.

- C: Pacifica has never been about building infrastructure; the character of this community built on the seamless connection between hills and the ocean. The City should consider moving or upgrading the current infrastructure, so it is safe for decades to come.
- C/Q: There has been a seawall in Sharp Park for decades and residents bought their homes knowing and expecting it will always be there. Are you considering human factors, like those for people who that have built their lives along this shore and trusted the city would take care of it?
    - R: While that is difficult to quantify, we will certainly qualify it and look to discuss it further at future workshops.
- C: I'm a Pacifican who would like to see more alternatives considered and studied. I believe what is being considered is too limited to a seawall, especially when you look at what other cities have pursued for sea-level rise protection. It is only a matter of time until the project area will be subsumed. How much does Pacifica want to pay to preserve the project area for such a short amount of time?
- Q: How long can the current wall last as is?
    - R: Depending on which section of the wall and the severity of storms, it likely would last another 5-20 years.
- Q/C: Are you in communication with the City of San Francisco regarding the Sharp Park berm? The California Coastal Commission has tasked them with repairing the berm. The primary concern was protecting infrastructure in the area and the golf course.
    - R: We are in contact with San Francisco Parks and Recreation, who oversee the berm and the golf course.
- C: An alternative plan to the seawall? Development of a Living Shoreline is practical for unpopulated beaches or areas of beach reclaimed from development. But not for Sharp Park, and it's expensive. An example is on Linda Mar beach in Pacifica. The area just south of the Taco Bell and north of the creek. It had houses on it. In the 90's the houses were condemned and bought out by the city. The city paid to demolished them, brought in sand, created dunes, and planted the area on both sides of the Taco Bell. Two beach parking lots, new restrooms and new pump house were added. It's a beautiful natural looking beach restoration. But it's nothing we could plan or afford to do on the scale of Sharp Park along Beach Boulevard. Right?
- C: If anyone on this zoom call tonight was still considering managed retreat for Sharp Park or Fairway Park. At what cost and how would that be funded? I'm concerned, would it require public funds to acquire and demolish private property? Will the Coastal Commission pay the cost of managed retreat if they require it for Pacifica? I believe protection and continued area development would be more cost effective in the long run to the city.
- C: Seawall height and how long should it last? I'm sure property owners living along Beach Boulevard would gladly give up eight to ten feet of their ocean views if it meant saving their property from sea level flooding. I suggest the only solution must be a replacement wall with a 50-year service life. This is required to protect everything east to the highway. Anything less will mean no Sharp Park plan, no new housing on the historic Palmetto main street. No development in the old sewer plant site. No library, hotel, or new city offices. The economic loss and cost of hundreds of area homes, Hwy 1, and golf course in jeopardy. No one will invest here if City Council does not protect the central core of Pacifica. The new sea wall could be just like the promenade is today, just higher and still providing access to the pier, Sharp Park beach and Mori Point. The new sea wall could be an attraction to visitors unto itself.

- C: Sharp Park beach south of the pier is a beautiful deep beach with plenty of sand in the summer months. Sand replenishment and dunes would help protect it in the future. California could have sand dredges available to service beaches along the coast as needed. Like it's been done in Holland for hundreds of years. Look at those beautiful beaches and how they are constructed and maintained. It can be done here too. Mori Point and Pedro Point are both natural groins that have helped retain sand on Linda Mar and Sharp Park beaches for years. In Holland look at Egmond ann Zee beach, Zuiderstrand, Zuid Holland, Oostkapelle, Zeeland. Also Petten, and Paal 29, Noord Holland, to name a few. It's often an uphill hike to get to the beach in Holland, but it's worth it.
- C: The Golf Course is an important recreational attraction in Sharp Park as well as a refuge for migrating birds. It's also habitat for snakes, frogs and critters that wander out at night into the neighborhood. The levee protects the golf course and the surrounding neighborhoods from flooding. We're all living below sea level here south of Monticeto Avenue. We're dependent upon water pumps working on both sides of Clarendon Avenue to keep us dry during winter storms. When the water table rises and floods in the golf course, it rises in the streets and under homes. However Sharp Park is protected it must include the golf course too.

Next Steps

Kelsey Rugani reviewed the following next steps before concluding the meeting.

- Participants were encouraged to visit the project website to:
  - Complete the post-meeting survey;
  - Find the workshop summary and recording; and
  - Sign-up for the project email list.
  - Submit public comments outside of meeting times
- The next Community Workshop will take place in January and focus on the Alternative Design Development and other project updates.

Appendix D3: February 4, 2021 Public Workshop Summary

Summary

City of Pacifica Beach Boulevard Infrastructure Resiliency Project

Public Workshop #3

Thursday, February 4th, 2021

6:00 – 8:30 p.m.

Welcome, Introductions and Agenda Review

Mary Bier, Mayor Pro Tem of Pacifica, opened the meeting by welcoming attendees and thanking Ryan Marquez, City of Pacifica Public Works Department, and the Beach Boulevard Infrastructure Resiliency Project (BBIRP) team for their continued efforts on the project.

Sue Beckmeyer, Mayor of Pacifica, indicated the opportunity the BBIRP presents in making the area a unique space for the enjoyment of residents and visitors, protecting the City's interconnected infrastructure, and maintaining Beach Boulevard's unique, vibrant, and historical character.

Kelsey Rugani, facilitator, welcomed attendees and reviewed the meeting objectives, agenda, and ground rules. The workshop objectives included:

- Providing a project overview and updates since December Community Workshop.
- Providing a summary of key findings from the Project's Multi-Hazard Risk Assessment.
- Sharing information on each alternative under consideration and the criteria that will be used to identify the preferred alternative.
- Continuing past Workshop conversations and collect participant input on the Project features and amenities toolbox, as well as the criteria related to the alternatives under consideration.

Overview of Beach Boulevard Infrastructure Resiliency Project

Ryan Marquez provided an overview of the project by introducing the project area and reviewing the City's ongoing efforts in the Sharp Park neighborhood. The BBIRP is located in northern Pacifica, on the western edge of the historic West Sharp Park neighborhood. The project area is comprised of four different reaches with unique characteristics; the Pier Wall System built in 1973, the North Wall built in 1984, the South Wall built in 1987, and the South Gap. Due to multiple major failures to the North Wall between 1984 and 2020 (including foundational and full wall failures), localized flooding and property damage from wave overtopping, and sea level rise projections, Marquez emphasized the need to update these structures in order to protect public infrastructure along and adjacent to Beach Boulevard.

Marquez continued by explaining the project goals of the BBIRP, which include:

- Replacing the current seawall and outdated infrastructure.
- Building climate resilience into one of the most vulnerable segments of the City's shoreline.
- Improving public access and use of the Beach Boulevard Promenade.
- Creating a multi-benefit solution to protect public infrastructure, recreational activities, homes, businesses, and the community at large, from further coastal erosion impacts.

Figure 1 Project Phases

The project is broken into three phases. The current phase, Phase 1, focuses on preliminary planning and feasibility and includes reviewing Existing Conditions and conducting a Multi-Hazard Risk Assessment (MHRA) which will inform the development and analysis of the project alternatives. Once a preferred alternative has been identified, Phase 2 will focus on design and permitting. Phase 3 is the construction phase.

Marquez indicated that there will be a total of four community workshops during Phase 1. The first and second workshops focused on the Existing Conditions of the project area and MHRA, respectively. The final workshop, anticipated to occur in March or April, will present the preferred alternative for the BBIRP. Online engagement and information will occur throughout the duration of the project.

Marquez then summarized discussion topics that have come up during and after previous workshops, which include:

- Project funding and cost to Pacificans.
- Alignment between City's planning efforts (e.g. Local Coastal Plan and the Sharp Park Specific Plan) and the requirements of regulatory agencies.
- The potential for the BBIRP to serve as a catalyst for commercial development and private investments in Pacifica.
- BBIRP construction timeline (e.g. phasing to address priority areas).
- How recreation is being evaluated as project alternatives are analyzed.
- Requests for additional details on economic impact, costs and amenities associated with each project alternative, long-term and large scenario planning and real-world examples of the project alternatives.

Question and Answer

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included in Appendix A.

Overview BBIRP Range of Alternatives

Paul Henderson, GHD, provided an overview of the outcomes of the MHRA and began by describing the hazards and risks the project area faces if not action is taken to update existing infrastructure (e.g., the no project alternative). These include:

- Hazards
    - **Coastal Flooding** is caused mostly by wave overtopping. During a 60-year event, total water levels are significantly higher than the seawall crest creating a flood hazard zone that could extend up to 200 feet landward on the North Wall and 75 feet landward on the South Wall.
    - Pacifica's bluffs are susceptible to **coastal erosion** as they are made of loosely consolidated materials that are highly erodible. To predict how the beach and bluff could erode without sea level rise, the project team used a background erosion rate of 1.6 feet per year.
    - **Scour** is another form of erosion that occurs during flooding events. Rock revetments in front of the existing seawall serve as protection against scour.
    - **Earthquake risks** exist given the City's proximity to the San Andreas and San Gregorio faults. In addition to strong ground shaking and ground surface rupture, additional risks include liquefaction and slope failure of the coastal bluff. Liquefaction occurs when water saturation and pore pressure increase reduces the strength of subsurface soils. Slope failure risks exist as ground shaking can erode coastal bluffs to the extent that they collapse.
    - **Sea-Level Rise** increases the severity of the hazards listed above. The project team utilized 2ft, 3.5ft and 7ft sea level rise scenarios to determine risk aversion scenarios for the project's design life.
- Risks
    - **Public Safety** risks occur given the increase in overtopping events. Specifically, this would entail flooding of the promenade, causing hazardous conditions for pedestrians, vehicle traffic, homes, and businesses.
    - The lack of **shoreline protection infrastructure** imperils the viability of the Beach Boulevard corridor and, subsequently, would result in the degradation of the **environmental and social** assets in the project area.
    - A no project alternative would result in severe **economic** implications, including upwards of hundreds of millions of dollars in property damages by 2100.

Gillian Millar, GHD, provided an overview the range of alternatives currently be analyzed. Millar began by describing the criteria the project team is utilizing to assess each alternative. These criteria include:

- Whole of Life costs (capital and maintenance)
- Safety (pedestrians, vehicles & public spaces)

- Environmental resource protection and promotion
- Public access & recreation
- Preservation of coastal views & community character
- Reliability & resilience to Sea Level Rise
- Adaptability to future challenges

Rugani introduced a virtual polling exercise to collect attendees' feedback on the relative importance of the selection criteria. Poll results are listed below:

Which Alternative Selection Criteria are of most importance to you?

- Life-cycle costs: 40% (17 out of 42 votes)
- Safety (pedestrian & public access): 33% (14 out of 42 votes)
- Environmental resource protection: 52% (22 out of 42 votes)
- Public access & recreation: 36% (15 out of 42 votes)
- Preservation of coastal views & community character: 36% (15 out of 42 votes)
- Resilience to Sea Level Rise: 79% (33 out of 42 votes)

Millar explained that the design criteria used in assessing the BBIRP alternatives include design life, flood protection, and maintenance and operation requirements. This criteria is a non-technical requirement which is used to establish a baseline of performance across all alternatives and their individual technical feasibility.

Millar continued by summarizing the features of each of the project alternatives under consideration as well as tradeoffs associated with them.

- Alternative #1 – No Project: This alternative would entail not taking any action to improve or replace existing infrastructure within the project area, subsequently leaving the area susceptible to all the risks and hazards discussed above. A no project alternative is required as means to establish baseline conditions for analyzing other project alternatives.
- Alternative #2 – Beach Nourishment: This alternative involves maintaining the existing beach through the importation of sand. While this alternative maintains beach access and recreation, there are some tradeoffs, including:
    - High wave movement in the project area, leaving it susceptible to erosion.
    - Large volumes of sand will be needed indefinitely. The source of this sand is uncertain and there is no guaranteed availability of the volume needed in the future.
    - Potential for escalation of cost over the design life.
    - Repairs to the existing seawall will still be required to maintain functionality and flood protection.
- Alternative 3 – Sand Retention Structure: This alternative allows for the slowing of loss of beach materials and reduces the force of wave climate. However, it must to be combined with beach nourishment to be a viable option which increases project costs. Additionally, it poses public safety concerns and, like beach nourishment, would still require repairs to the existing seawall to maintain functionality and flood protection.

- Alternative #4 – Replace Seawall: This alternative maintains the functionality of the promenade and is comparably low maintenance. Tradeoffs for this alternative compared to others include at visually engineered design of the infrastructure and the requirement for specialized, more expensive construction.
- Alternative #5 – Rock Revetment: This alternative is adaptable to projected increases in sea level rise and has the lowest maintenance needs of all alternatives being considered. Tradeoffs with this alternative include a mandatory, impermeable wall behind to alleviate flooding and restriction of public access to the beach.

Millar concluded by noting that, ultimately, these alternatives can be combined as the BBIRP is implemented and constructed.

Question and Answer and Virtual Polling Session

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included in Appendix A.

Rugani introduced a series of poll questions to collect attendees' feedback on the tradeoffs associated with each alternative and an acceptable level of flooding within the project area. Responses to these questions are included below.

A height increase in the protection structure will likely be needed to decrease wave overtopping and accommodate sea-level rise. Understanding that an increase in height may impede existing coastal views, what is an acceptable range of height increase?

- 0 to 2 feet: 21% (10 out of 48 votes)
- 2 to 4 feet: 35% (17 out of 48 votes)
- 4 to 6 feet: 6% (3 out of 48 votes)
- However much it takes to prevent overtopping safety risks: 38% (18 out of 48 votes)

What is an acceptable amount of wave overtopping of a protection structure and flooding of the promenade?

- Water splashing over wall resulting in the promenade or roadway being visibly wet but no ponding water: 35% (17 out of 48 votes)
- Moderate splashing over wall resulting in some ponding water on the promenade and roadway: 48% (23 out of 48 votes)
- Conditions similar to those experienced in December 2020 - Severe splashing and some infrequent waves (flowing water) over the wall. Hazard to walk for vulnerable populations (i.e. elderly, children): 10% (5 out of 48 votes)
- Persistent flowing water over the wall. Hazard to walk for most: 6% (3 out of 48 votes)

Based on your previous answer, what is an acceptable frequency of this event?

- Commonly - Several times a month in the winter (during high tides): 44% (21 out of 48 votes)

- Occasionally - A few times a year (only during highest tides and strong swell events): 48% (23 out of 48 votes)
- Very infrequently - Only a few times every 10 years: 2% (1 out of 48 votes)
- Rarely - Only a few times every 30 years: 5% (3 out of 48 votes)

Public Space Opportunities

Lucas Piper, GHD discussed the options for the use of the public space in the project area. The public space opportunities presented are based on the assumption that a new, elevated seawall becomes the preferred alternative.

The public space opportunities are organized into two zones, as illustrated in Figure 2 below. Zone 1 pertains to the North Promenade and Zone 2 encapsulates the Southern Park.

Figure 2 Public Space Opportunities Sections

Piper explained that the North Promenade is the area between Beach Boulevard and the existing seawall. Existing conditions for sections in Zone 1 include:

- Section A
  - Seven parking spaces between Paloma and Montecito;
  - An approximately 13 foot wide paved promenade;
  - Existing protection structure at an elevation of 30 feet; and
  - Various pedestrian amenities (e.g. benches, lighting, bollards, etc.)
- Section B
  - Seven parking spaces between Paloma and Montecito;
  - An approximately 13 foot wide paved promenade;
  - Existing shoreline protection structure at an elevation of 25 feet; and
  - Various pedestrian amenities (e.g. benches, lighting, bollards, etc.).

Piper then described the three public space opportunities being considered for Zone 1, as summarized below:

- Enhanced Walkway Option: Pedestrian optimized space, allowing for wide, multi-use circulation, gathering, and ocean viewing.
- Green Corridor Option: Balances pedestrian walkway with creation of greenspace planters.
- Parking Access Option: Allows for street-level parking, promenade access, and planting areas at select intersections and designated parking areas.

Rugani introduced a polling exercise to determine attendees' preferences for the public space opportunities at the North Promenade. The poll results are summarized below.

Based on the options provided for the Northern Promenade, please indicate which option you most prefer:

- Parking Access: 14% (5 out of 37 votes)
- Enhanced Walkway: 52% (20 out of 37 votes)
- Green Corridor: 32% (12 out of 37 votes)

Based on the options provided for the Northern Promenade, please indicate your second preferred option:

- Parking Access: 11% (4 out of 37 votes)
- Enhanced Walkway: 57% (21 out of 37 votes)
- Green Corridor: 32% (12 out of 37 votes)

Based on the options provided for the Northern Promenade, please indicate your least preferred option:

- Parking Access: 41% (15 out of 37 votes)
- Enhanced Walkway: 27% (10 out of 37 votes)
- Green Corridor: 32% (12 out of 37 votes)

Piper then provided an overview of the public space opportunities for the Southern Park (Zone 2). The Plaza Park option entails a conceptual landscape design approved by the Pacifica City Council in August 2020. Specific components include:

- Seating and picnic areas
- Trellis shade area
- Public art
- Bike parking
- Fitness workout stations
- Educational signage/kiosk
- Landscaping areas

The Beach Expansion option includes a minimal paved plaza adjacent to parking areas thereby allowing for new beach expansion between the new plaza and the ocean. Specific components of this option include:

- Shoreline protection structure realigned to the east
- Extend the north promenade into park
- Expand beach to new realigned shoreline protection structure
- Beach access
- Entry nodes/kiosk opportunities
- Educational interpretative signage

Rugani introduced a polling exercise to determine attendees' preferences for the public space opportunities at the Southern Park. The poll results are summarized below.

For the Southern Park Area, please choose which option is more favorable to you.

- Plaza Park: 59% (26 out of 44 votes)
- Beach Expansion: 41% (18 out of 44 votes)

Question and Answer

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included in Appendix A.

Public Comment

Rugani invited members of the public to provide comments to the project team. A summary of the public comments made is included below.

- The 2016 San Francisco Littoral Cell Coastal Regional Sediment Management Plan report from the US Army Corps of Engineers notes there are significant data gaps that hamper adaptation planning, particularly for sediment transport. Is there information missing that you need in order to properly evaluate the alternatives under consideration? If those data gaps have been addressed since 2016, can those be made publically available?
- Has modeling been done that shows the impacts of coastal armoring revetments and seawalls in the BBIRP project area and elsewhere in Pacifica?
- We all know that periodically we have a very energetic and active shoreline. What I would like to see are real world examples of the alternatives being considered and the extent to which they have ensured coastal resiliency.
- As it relates to public space opportunities for the North Promenade, it sounds like we may be getting rid of street parking but they will still be vehicle access. With the options presented, Beach Boulevard would need to be elevated several feet in order to maintain a line of sight to the ocean for those driving in the project area.
- I would love to see more outreach conducted to those living along and adjacent to Beach Boulevard. I would also like more clarity on the timeline for the BBIRP's construction. I feel like conditions are getting worse every year and my general understanding is that temporary fixes are being undertaken.
- Those living in the proximity of the project area need to be asked about the height of a potential new wall. If I lived on Beach Boulevard, I would agree to sacrifice the view.
- A modern seawall is fundamental for ensuring the resiliency of Beach Boulevard. The cost of inaction would be hundreds of times more expensive than constructing a new wall, particularly when considering the threat to utilities, homes, small businesses, and tourist attractions in the area. A seawall is also needed for ensuring investments in a future hotel, which is a key component for ensuring financial sustainability. I urge Pacifica residents and our City Council to work together to construct a modern seawall along Beach Boulevard in a timely manner. It is not an exaggeration to say the future of Pacifica rides on a modern seawall along Beach Boulevard.
- A US Army Corps of Engineers study indicates that a new seawall is not worth the investment. Subsequently, they would not contribute funding for one. Does the City know about this study?

- Has the City started planning for renovation needs in the project area on the chance that funding could dry up? Is there anything on paper to show that the City is working to not only protect Beach Boulevard but the majority of citizens? Who will end up with backed-up sewers? Will the pump station be protected?
- It seems that the plans for the promenade will literally cement-in the utilities that this project is designed to protect making it more costly to move this infrastructure in the future. Moving this infrastructure should be part of the plan.
- It seems that the plans for the promenade will literally cement in the utilities that this project is designed to protect making it more costly to move this infrastructure in the future. Moving this infrastructure should be part of the plan. One of the alternatives should be an immediate repair to the existing seawall and long-term considerations for more infrastructure.
- I am supportive of a long-term view of this decision that includes near-term fixes to the existing seawall. Additional criteria I would like the City to consider include costs for moving utilities and a 100-year financing strategy.
- The seawall and promenade are valuable given their economic and communal value. We have not addressed how much taxpayer money would be needed if we moved the utilities in the project area. We cannot acquiesce to managed retreat; we need to move forward. The promenade is a major destination for tourists and locals alike and we need to keep that in mind.
- I have heard some people call for marshes and living reefs, but the project area is too narrow for those features and have safety implications for Sharp Park residents. Maintaining the promenade ensures safety and public access, which are of the utmost importance.
- I would like to second the comment for more outreach to residents within the proximity of the project area. Protecting Beach Boulevard is an urgent matter, particularly given the recent storms. We need to focus on near term solutions, especially since funding for more long-term solutions has not been identified.
- I think I represent the majority of Pacificans insofar as that we are looking forward to seeing a new seawall and preserving utilities and the promenade.
- We cannot ignore that whatever alternative is ultimately selected will impact all of Pacifica's shoreline and beyond. We also need to protect small businesses, many of which, including restaurants, are dependent on those who visit the beach. Pacifica is becoming less and less beautiful with all the more concrete being added; it is harder to enjoy the natural areas of Pacifica with the expansion of the built environment. I would ask the City Council to keep that in mind as they decide which businesses they prefer to support.

Next Steps

Rugani reviewed the following next steps before concluding the meeting.

- Participants were encouraged to visit the project website to:
    - Find the summary and recordings from the September 24 and December 3 Workshops.
    - Complete the workshop worksheet.
    - Sign-up for the project email list.
- The next Community Workshop will take place in March/April and focus on the Final Project Alternative and other project updates.

Appendix A: BBIRP Community Workshop #3

Questions, Comments and Responses Summary

The City received questions regarding the phase of work presented before and during the workshop. Some of these questions were answered live and some were answered post workshop.

In the interest of providing the community with detailed responses, the team has assembled a list of the questions asked and comments provided during the meeting for inclusion in the workshop summary. The questions, comments and responses detailed in this document are not necessarily verbatim, but convey the intent of the questions and comments, and where possible the team has provided more detailed responses than were possible during the workshop.

The entire workshop was recorded and is publicly available on the project website for anyone who wishes to hear the actual questions, and comments and responses.

Questions have been grouped into common themes, along with the associated responses. Again, the entire workshop was recorded, questions can be reviewed in chronological order via the recording if desired.

The BBIRP Workshop #3 recording can found at: https://youtu.be/H1Aqp8x6Op0

Alternatives Analysis

1. (Q) The poll isn't showing all the responses on my screen. You don't offer a response that offers an alternative to the wall.
    i) (A) The design team are currently looking at high-level concept options consistent with Coastal Resilience Sub-area Policies and Programs described in Section 6.6 of the Local Coastal Land Use Plan (LCLUP) Certification Draft – February 2020 (https://www.planpacifica.org/local-coastal-program). The objective of this alternatives analysis is to determine which is more feasible (sand retention, beach nourishment, sea wall or rock revetment). If ultimately a seawall is the selected alternative, different wall types will be assessed. As discussed in the presentation, it is possible that the final preferred project will be a blend of several alternatives.
2. (Q) It is important to consider other alternatives. For example, looking at what we are missing in terms of resilience, thinking about composites/hybrid, etc. so options such as moving the infrastructure and strengthening the wall will be easier and lower cost.
    i) (A) There is a lot of discussion about long-term planning encompassed in the LCLUP. The BBIRP project is focused on a 50-year planning horizon. The project alternatives were developed to be consistent with Coastal Resilience policies described in Section 6.6 of the LCLUP Certification Draft. These policies describe several adaptation strategies that could be implemented to protect public infrastructure and important access and recreational resources like the Promenade and Pier for the likely range of sea level rise expected over the next 50 years (i.e. less than 2 feet of SLR). The objective of the alternatives analysis is to determine which is more feasible (sand retention, beach nourishment, sea wall or rock revetment). Based on the outcome of this analysis, it is possible that the final preferred project will be a composite/hybrid of several alternatives. For example, if a seawall is

selected as the preferred alternative, different wall types will be assessed, potentially in combination with other strategies such as beach nourishment or relocation of sensitive infrastructure.

3. (Q) What is the cost difference between all the alternatives? To give us an idea of upfront and maintenance costs.

    i) (A) Part of the work of developing the alternatives is to estimate the costs. The benefit cost analysis is one of the key tools for comparing and evaluating alternatives. The cost estimates for each of the alternatives will be shared once developed, and at BBIRP Public Workshop #4.

    ii) (A) In general we look at both the cost of initial capital investment (upfront) and operations & maintenance costs (O&M) over the life of the project. Regarding upfront costs the rank from highest cost to lowest cost is likely to be 1. Sand Retention Structures, 2. Beach Nourishment, 3. Seawall, 4. Revetment. Beach nourishment and sand retention alternatives will require ongoing nourishment events to maintain target beach widths, each having significant costs, approximately every 5-10 years (depending on conditions). In comparison, the ongoing O&M costs for seawall or revetment are significantly lower. More detail on the initial cost and life-cycle cost of these alternatives is forthcoming.

4. (Q) Is the berm, south of Clarendon, being considered in these assessments? Whether the berm will be able to protect the community and not degrade further or whether the seawall protection could be impacted by not continuing further south. I am aware the berm is a different jurisdiction (SF) however it's the same beach.

    i) (A) We are in communication with SF Parks & Rec, who own and maintain the berm, regarding this project and their future plans. All of the design alternatives being assessed will address the 'gap' between the existing seawall and the berm to the south. At this time the project is not assessing the current or future condition of the berm. For now, we will be assuming the berm will be maintained in at least in its current condition.

5. (Q) For the Green Corridor Option, it would be hard to maintain the landscaping. We have tried before and it would be a problem. For the two options for Plaza Park and expansion of the beach, it has to be elevated to provide the adequate protection. The way it is now everyone is at risk of flooding. It needs to be the same as the North End.

    i) (A) As part of the assessment of flood protection measures the design team will be assessing the protection height needed to attain the desired level of protection. Of course, the height needs to be balanced with the recreational function of the south plaza, which is also being considered as part of the assessment.

6. (Q) Can we have more conversation around how high this wall is going to be? It looks like visibility from the ocean is being removed.

    i) (A) The height of seawall and impact on view corridors will be a key trade-off to consider for this alternative. Preliminary analysis indicates a seawall crest elevation of 30 feet (NAVD88) would be required to protect against a 60-year return period event in combination with 2 feet of sea level rise north of the Pier. This would be an increase of 0-4.5 feet above the existing crest elevation which varies from 25.5 to 31.5 feet NAVD88 north of the Pier.

7. (Q) Why has the City not done rock mining? Is it apparent that the rocks on the South Wall are not contributing to protection and that they could be broken and used for protection as a short-term solution?

    i) (A) The rock revetment fronting the south wall is essential to the stability of that coastal protection structure. The wall foundation was not designed to withstand scour during extreme storm events. The rock, although sometimes covered by sand is necessary to limit the potential for scour to undermine the concrete wall. It is common for individual stones to be displaced as a revetment is subject to significant wave attack during extreme events. Displaced stones often end up seaward of the revetment. However, these stones do not represent a large quantity of material that could be sourced for other locations. Typical revetment repair and maintenance practices involve excavating the displaced stones and re-integrating them into the rock matrix to form an interlocked and stable revetment to resemble the original design. The City has done such mining from time to time along Beach Blvd.

8. (Q) There was talk about closing the gap between the current seawall and the berm at Clarendon, is that part of this project?

    i) (A) See response to Question 4.

9. (Q) (Cliff) Why don't we have a wall that has a curve back out toward the ocean?

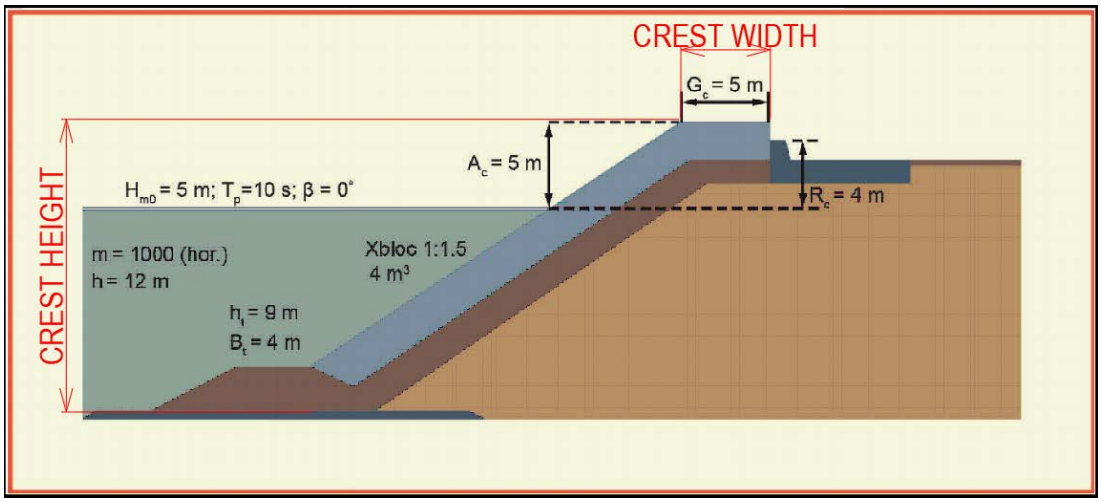
    i) (A) A recurved wall can be an effective feature to reduce the wave overtopping volume. However, the large and long period wave energy experienced along most of the project reach may limit the benefits of this feature. If a seawall is identified as the preferred alternative, different wall types will be assessed, including the use of a recurved feature to reduce the wave overtopping and potentially lower the required crest elevation of the structure.

10. (Q) It seems to me that we have some critical tradeoffs in front of us. If our goal is safety above all else, we would have to accept a higher wall. Keeping the promenade accessible is also critical, but I don't know how we will accept anything else other than the most safe and accessible option. Is there any other option other than a higher wall?

    i) (A) Yes. All of the alternatives being assessed by the team need to be compared in an 'apples to apples' way, meaning that they offer an equal level of protection for comparison. Accessibility and protection are certainly being considered.

    ii) (A) Crest height is not the only metric that changes things. The crest width and crest type also matters, whether we're talking about a revetment, or a wall.

    iii) The following diagram, adapted from EurOtop 2018 is provided to assist with crest heigh and crest width definitions



11. (Q) When we talk about raising the elevation of the seawall, somebody had brought up that the driving views will be blocked? Currently we have handrails, that are the barriers between the seawall and the water, are those still considered? Is it a concrete wall? Can you tell us more about how it would look?

    i) (A) We are not quite there yet, once we understand the preferred alternative, then we will develop barrier types.

    ii) (A) Impacts to views from the road will depend on the design of the preferred protection structure. If seawall replacement is preferred, it is likely that an elevated wall crest will be included to mitigate overtopping. In this case, yes, it is likely that views from Beach Boulevard, including from a vehicle, will be impacted.

12. (Q) Please provide two examples of seawalls in similar conditions to Sharp Park. Please use examples other than Ocean Beach. Those conditions are not similar, except for the south end which SF has decided to abandon. Thank you. (This question was asked a number of times)

    i) (A) See response to Question 16.

13. (Q) In any of those alternatives or combinations of, what happens to the bordering beaches? Does it change wave forces and action on land and neighborhoods that border the geography of this specific project?

    i) (A) Potential impacts to adjacent beaches have not been evaluated in detail, but there are typical concerns associated with each project alternative. For example, shoreline protection structures (revetment and seawall) prevent erosion of the bluffs and therefore have a passive impact on regional sediment supply. A detailed analysis of adjacent impacts is typically conducted during the detailed design phase of the preferred project in support of the environmental documentation and permitting process.

14. (Q) How will the seawall alternative impact beach and bluff erosion (e.g., adjacent non-fortified shoreline like the Sharp Park berm and Mori Point)?

    i) (A) See response to Question 13

15. (Q) Does the pier in any way act as a groin? Are the waves going in and out stopped by the pier supports?

    i) (A) No, the Pier does not act as a groin. The wide spacing of bents and piles does not disrupt the natural flow of sand. However, Pier structures can influence currents in the nearshore resulting in some influence on the location, shape and configuration of sandbars and rip currents.

16. (Q) We all know that periodically we have a very energetic and active shoreline. What I would like to see are real world examples of the alternatives being considered and the extent to which they have ensured coastal resiliency.

    i) (A) The proposed project is still in development and will be further defined as a result of the alternatives analysis. Below are a few examples of where structural solutions have been implemented locally:

    ii) (A) Pacifica Seawall – the Beach Boulevard seawall south of the Pier is an example of an effective shoreline protection structure that still has a dry beach area during summer months.

    iii) (A) Ocean Beach Seawall – another example of a vertical structure providing “last line of defense” protection for upland development

    iv) (A) Rock Revetment – multiple examples north of project area along Esplanade

    v) (A) Sand retention and beach nourishment alternatives are less common in this region but a few examples are provided from southern California. These alternatives would require a wider beach and larger armor stone to be effective in the more energetic wave environment of Pacifica.

    vi) (A) Santa Monica & Venice beaches: Groins & breakwaters provide effective shoreline stabilization. Beach was widened by over 500 feet with multiple nourishments total 14 million cubic yards between 1945 and 1960.

17. (Q) The options presented in the workshop seem very basic or boilerplate. When does a more meaningful analysis of all the alternatives occur?

    i) (A) The alternatives presented in Public Workshop #3 are concepts designed only to a basic concept level for initial consideration. Following Workshop #3 the team is further developing each of the alternatives to meet key design criteria. An example of the design criteria is the acceptable volume of overtopping. Each alternative will be designed to provide the same level of overtopping protection so that we can 'compare apples with apples'. In Public Workshop #4 all of the alternatives will be presented, along with the analysis of each alternative, including materials, geometry, costs, reliability etc.

Long-Term Planning

18. (Q) How were the project objectives determined? Why isn't the objective "climate resiliency at the lowest cost" which seems like the need to me?

i) (A) The project approach, objectives and alternatives were developed in accordance with the goals and policies described in the LCLUP Certification Draft. The alternatives analysis will provide an indication of the relative costs associated with climate resiliency for each alternative. Cost is an important element of the multi-criteria analysis but not the only factor that will be considered.

19. (Q) Is managed retreat still on the table in this discussion?

    i) (A) The project approach and alternatives analysis were developed in accordance the goals and policies described in the LCLUP Certification Draft. Regarding managed retreat, the LCLUP explicitly states "the City has rejected managed retreat as a sea level rise adaptation policy" (LCLUP page 6-11). However, the team recognizes that analysis of managed retreat will be necessary to satisfy California Coastal Commission requirements for environmental reviews. The No Project option does look at a very similar scenario to managed retreat and thus will be compared to the project alternatives to provide a comparison of feasibility and costs associated with this scenario.

20. (Q) None of these alternatives include moving the infrastructure that's at risk. Why not? Shouldn't there be an alternative, maybe a less intense seawall that includes moving the infrastructure?

    i) (A) The alternatives were developed to be consistent with Coastal Resilience policies described in Section 6.6 of the LCLUP Certification Draft. These policies describe several adaptation strategies that could be implemented to protect public infrastructure and important access and recreational resources like the Promenade and Pier for the likely range of sea level rise expected over the next 50 years (i.e. less than 2 feet of SLR). The No Project scenario, described in the MHRA, evaluated the cost of relocating the utility infrastructure in the event existing shoreline protection failed or was removed. Relocation of infrastructure is not a stand-alone alternative because it doesn't address other vulnerabilities along the project reach. Other infrastructure like the Promenade and Beach Boulevard cannot be relocated and would experience damage from erosion and flooding if the coastal protection strategy failed. The alternatives considered at this stage of the project are intended to capture the range of typical coastal protection strategies applied in this type of environment and consistent with the LCLUP. If ultimately a seawall is the selected alternative, different wall types will be assessed, potentially in combination with other strategies such as beach nourishment or relocation of sensitive infrastructure. Relocation or replacement of city-owned utility infrastructure will be considered when a particular asset approaches the end of its useful life and will be informed by the effectiveness of coastal adaptation strategies implemented along the Beach Boulevard corridor and updated sea level rise projections.

21. (Q) I'm confused because I thought we were just looking at replacing the wall at South Park given budget constraints? Are we looking at a long-term plan?

    i) (A) Currently, the scope of this project includes assessing the entire length of seawall along Beach Boulevard, both north and south of the Pier. The BBIRP project is focused on a 50-year planning horizon. The project alternatives were developed to be consistent with Coastal Resilience policies described in Section 6.6 of the LCLUP Certification Draft. These policies describe several adaptation strategies that could be implemented to protect public infrastructure and important access and recreational resources like the Promenade and Pier

for the likely range of sea level rise expected over the next 50 years (i.e. less than 2 feet of SLR). Additional or modified adaptation strategies may be required over longer planning horizons is response to updated scientific projections and the effectiveness of near-term adaptation strategies. Long-term plans will continue to be refined pursuant to monitoring and planning efforts outlined in the LCLUP.

22. (Q) The questions that Peter is posing are quite important. We need to have a long-term plan which would help inform the design and quality of the plan. What is the timeline we are looking for? We need a clearer definition on exactly what we are we planning to solve.

    i) (A) See response to Question 20.

23. (Q) Don't we want to have plans already in place for what to do when things go wrong unexpectedly? Yes, they may be a low probability now, but there would be really dire consequences if they happen. I don't think the justifications offered are convincing.

    i) (A) Yes, the project will have a plan in place to implement additional strategies or modified strategies in response to updated scientific projections and the effectiveness of near-term adaptation strategies. See response to Question 20 for a discussion of planning horizons and the long-term approach to coastal resilience.

24. (Q) The SFLLC says in its conclusion section ES.8 that "there are significant data gaps that hamper future shore conditions and adaptation planning. In particular, sediment transport in Pacifica and Daly City has not been studied in sufficient detail." Again, I just want to make sure that the necessary scientific data for a thorough analysis can be secured prior to decisions being finalized.

    i) (A) Thanks for the clarification. GHD and the City are aware of the Regional Sediment Management Plan. Part of GHD's task was to review existing data and documents and identify gaps that need to be addressed for this project. The project team did not identify that as an area of concern for the project at this time. As the area does not currently supply sand to the littoral cell, a replacement project would not decrease sand supply. Further discussion is also included in the response to Question 51.

25. (Q) A US Army Corps of Engineers study indicates that a new seawall is not worth the investment. Subsequently, they would not contribute funding for one. Does the City know about this study?

    i) (A) The City is aware of the USACE preliminary Federal Interest Determination. That study was limited in scope and funding and was not able to assess the area in the manner the City is approaching it. Just because the USACE didn't find a federal interest at that time, does not mean the project is not justified or needed. This project is a priority for the City of Pacifica City Council."

Project Procedural, Scope, & General

26. (Q) I had given comments and questions through your post presentation survey after the December meeting, but never heard back from anyone. Should I expect a response?

    i) (A) Yes, all questions and comments provided in the post-meeting survey will be addressed.

27. (Q) How much work would we be doing to encase the infrastructure that's there to keep it in intact?

i) (A) One of the primary drivers of the project is to replace the existing wall with a reliable and resilient shoreline protection strategy. In theory, the utilities will not need significant work because they are afforded protection by the new project.

28. (Q) How will businesses be impacted if visitors who come for recreation like surfing, decline as the beaches disappear and the beauty gives way to a concrete and stone shoreline bordered by asphalt?

    i) (A) Recreational opportunities, including surfing, are an important element of consideration in analyzing the project alternatives. Alternatives like beach nourishment and sand retention structures could help mitigate the adverse impacts of long-term erosion and sea level rise on the economic benefits associated with beach recreation and surfing.

29. (Q) What is the timeframe for each of the alternatives? That is a consideration as well. To be more specific - when would each alternative be completed, if done singularly?

    i) (A) Funding and permitting are key items on the schedule for delivery of the project, both of which make providing a defined schedule difficult at this time. Currently the City is hoping to commence construction as early as 2022, with a completion date to be determined, depending on the selected alternative and the construction phasing i.e. the north and south shoreline protection could be built at the same time, or a number of years apart.

30. (Q) Glad to have joined in to see what the City is looking to accomplish for us. I believe we can get to a great solution that will allow us to still access the ocean.

    i) (A) Noted

31. (Q) The Army Corps of Engineers in its January 2018 Federal Interest Determination report on the sea wall said that the sea wall maintenance costs since original construction were approximately 1.75 million. I know the last few years have incurred some fairly major additional repair costs. Can you give us current numbers for wall repair, even if it does not include the other regular maintenance? I've been told that the existing sea walls were supposed to have a design life of 75 years, and yet did not make 1/2 that before major repairs were needed. Where is the accountability and how can we prevent this from happening again?

    i) (A) The City does not have all cost associated with sea wall maintenance since it being built available at this time. From the feasibility documents of the north and south wall, they were expected to have a design life of 50 years. It has been 37 and 33 years since construction of the north and south wall respectively. The existing conditions report projects out 5-20 years of remaining service life on the north wall and 10-20 years remaining service life on the south wall. Those numbers do align closer to a 50-year design life that was originally planned. However, as time goes on the wall damage frequency and magnitude could increase, especially along the north wall where the wall has shown to be more susceptible to failures. At this point, this project is looking holistically at the area to come up with a comprehensive plan rather than analyzing in segments.

32. (Q) Can you also confirm if environmental review will be required once a design direction has been finalized? I think I understand that it is not required for a replacement project, but as the design is not in-kind replacement - potentially deeper footings, taller walls, I would think environmental review would be necessary. Also, what is the backup plan if sea wall funding is not

able to be secured, especially given that the Army Corps was not able to proceed with the project due to such large cost/benefit disparities? Wise planning obviously dictates working on several scenarios in case the preferred option is not viable.

   i) (A) The project will need to undergo environmental review during the design process. Things of course change, but plan b would be to continue to maintain the infrastructure along the area while funds are sought. However, that is why it is important to continue to build the project need with the work we are doing now. This work will be instrumental in supporting funding assistance asks.

33. (Q) Has the City started planning for renovation needs in the project area on the chance that funding could dry up? Is there anything on paper to show that the City is working to not only protect Beach Boulevard but the majority of citizens? Who will end up with backed up sewers? Will the pump station be protected?

   i) (A) This project is doing just that. The work done during this phase is instrumental to showing why protection of the City's infrastructure is vital. This work will serve to support to the City in requesting funding the project

Promenade & recreation features

34. (Q) Right now plants don't survive here.

   i) (A) Planting will need to be carefully chosen for this area, something the team will need to take into consideration.

35. (Q) I'm confused about timelines. When I hear "resiliency", that sounds long-term, but I heard that we are looking to solve this problem now. If landscaping happens now, would it have to be moved?

   i) (A) As part of the presentation, we showed 2 different aspects of the project, one aspect being the shoreline protection, and the second aspect being the landscaping and recreation area behind the shoreline protection. As the project develops and we select a preferred method of shoreline protection the two different aspects will merge and be developed together.

36. (Q) I would love to see options of closing the street all the way to Montecito, and the rest closed for people. I think it's important to take a step back and see how Pacifica is managing traffic. It would be ideal to have BART or localized transit so people could come to sharp park without having a hassle with public transport.

   i) (A) One of the issues of closing Beach Blvd to traffic is that this would take away vehicular access to properties along Beach Blvd. Additionally, emergency access could be impacted and would need to be taken into consideration.

37. (Q) The neighbors living along Beach Boulevard need to be asked this question. "Are they willing to give up 8-10 feet of their ocean views to accommodate a tall seawall, in order to protect their properties." I think that input is important to these discussions and ultimate decisions. Can a greater outreach effort be made to possibly do a door-to-door questionnaire or poll with Beach Boulevard neighbors? I'd volunteer to help you. Thank you.

i) (A) The City knows this is a very important project for all of Pacifica's residents, particularly those along Beach Boulevard. The City has undertaken a significant stakeholder engagement program for the BBIRP that includes public outreach. The City has and will continue to provide residences along Beach Boulevard with the following opportunities to be engaged and provide feedback:

(1) Mailed postcards, social media posts, and email distributions noticing public workshops and other project information

(2) Project signs have been installed along Beach Boulevard

(3) Interviews with residents and community groups

(4) emails containing project information, if signed up to the email list

(5) Polling questions, Q&A sessions and public comment in workshops

(6) Post workshop surveys

(7) Online comment Portal

38. (Q) Please provide the full 3D renderings of the different options, not just Sections A, B, and C. Then we can look at the whole picture.

i) (A) Noted

Road & sidewalk alignment/use

39. (Q) It appears that the seawall option preserves the accessibility to the coast for everyone, including the disabled who are dependent on wheeled mobility. Is this correct?

i) (A) Yes, this is correct. The preferred design alternative will be developed, with beach access being a key feature, and will look to provide ADA compliant access.

40. (Q) Being cognizant of private property rights, does the city-owned width of the street include any further width to the east that would allow moving the street access and east-edge sidewalk eastward several feet to increase the width available for a full or greenway esplanade?

i) (A) That is something that can be assessed in the design phase of work, however having the alternative to use the sidewalk on the east side is desirable, especially during large storm events. Additionally, that may have an increased cost in realigning infrastructure in the area. At this time the City is not investigating purchase of property for use as City Right Of Way (ROW).

41. (Q) Can Beach Blvd. and the eastern sidewalk be elevated at least several feet, particularly in the area where it's currently lower, so that it is still possible to see over the new elevated seawall. Is it possible for the street itself to be elevated?

i) (A) This would of course depend on the elevation increase proposed, noting impact to access for properties on the eastern side of Beach Boulevard and conforming to the side streets. Lifting the road and promenade surface of Beach Boulevard would have significant costs, including utility replacement and/or relocation, for these reasons it is unlikely Beach Boulevard would be raised, but this can be investigated.

42. (Q) Does the City own any additional width of the street, what the city owns is larger than what it looks like, could it be move a little bit eastward?

    i) (A) Refer to responses to Question 39 and 40.

43. (Q) My question about elevating the street was meant primarily for the Northern Promenade area, not the Southern area. Can Beach Blvd. be elevated in Northern Promenade so section A and B would show the road at same level as the elevated Paved Promenade, with ramps of both sidewalks and street occurring on the ends of the East-West streets?

    i) (A) See response to Question 40.

44. (Q) Has it ever been discussed to change the purpose/function of Beach Blvd. to very limited vehicle access? I know people need access to their homes and that emergency and maintenance vehicles need access. If it is made a primarily pedestrian area, would the seawall then be able to be moved eastward and the base could be wider?

    i) (A) Any widening of a shoreline protection structure in the landward direction would require careful consideration to utilities at the same time as considering multi-modal uses and green street components. These concepts are being considered at the high level currently, and will be given further consideration as the project progresses and alternatives are refined.

Sand Supply

45. (Q) When you talk about beach nourishment, I've seen some beach work done in Holland where hey used dredges to bring the sand up and pump it to the beaches, but dredges were not mentioned in the presentation. The sand is a natural barrier to high waves, storm, etc. How can this be combined with a structure behind it? In Holland there is a structure there, but it is hidden. I am hoping we can accomplish something that looks natural but also protects.

    i) (A) We are familiar with the "sand engine" beach project in Holland. This is an excellent example of how large-scale beach nourishment can have regional benefits throughout a littoral cell. If a similar regional solution was implemented in the San Francisco littoral cell it could help provide a natural barrier to coastal erosion and flooding. The coastal setting, wave climate and littoral processes differ greatly between Holland and Pacifica, so this strategy would look different if implemented along the open coast north of Pacifica. The steep coastal bluffs and energetic wave climate make it difficult to retain a wide beach like the one observed at the Holland sand engine. An effective beach nourishment strategy in Pacifica would involve enough beach width to buffer most storm events, but there would likely be a need for a coastal structure behind the beach to withstand extreme events, or a series of moderate storm events. The pros and cons of a local beach nourishment strategy will be documented in the alternatives analysis.

46. (Q) How will sand retention structures affect the beaches that are adjacent on the coast in Pacifica, apart from this beach?

    i) (A) Sand retention structures can result in erosion to downdrift beaches due to the impacts of sand being impounded updrift of the structure and edge effects in the immediate vicinity of the structure. These impacts can be mitigated/overcome within the design of the

structure and sediment management techniques (e.g. Initial/pre-fill beach nourishment and periodic renourishment).

ii) (A) Pacifica is also uniquely positioned from a coastal perspective such that downdrift impacts are not anticipated to be significant. Longshore sediment transport along the City's beaches predominately moves from north to south, and the City is located near the southernmost end of the Littoral Cell (a compartment of sand). Mori Point headland forms a significant barrier to alongshore sediment transport which is the primary reason for the sandy beach that fronts the Sharp Park Golf Course. Therefore, downdrift impacts would likely be mitigated in part by the sediment retention benefits provided by the Mori Point headland. Monitoring and maintenance triggers for downdrift impacts can be established to mitigate these potential effects.

47. (Q) You didn't mention the erosion that occurs behind and underneath the revetment rocks over time. How much will this cost and what impact will it have on this beach and the other beaches in Pacifica, including Linda Mar?

i) (A) Erosion associated with rock revetments will be taken into consideration when developing and comparing alternatives.

48. (Q) The Plaza Park option is the only viable one because the beach alternatives depend on continuous expensive sand supply. But if you're sitting at a picnic table, you can't see the ocean, right?

i) (A) At this stage in the design, we feel that not a lot of additional sand would be needed to hold a beach in this location. This beach appears to be dynamically stable over the last decade as it benefits from the sand buildup along and against Mori Point. More study would be needed to determine the proposed beach's stability and need for sand/renourishment at this location in the short and long-term time horizons with sea level rise. A person sitting at a picnic table in the presented cross section would be able to see the ocean.

49. (Q) Gillian, I was told that Mori Point is a natural groin and helps sand retention annually on Sharp Park beach which accounts for the deep sandy beach it is especially during the summer.

i) (A) Mori Point, Pedro Point and others along the coastline are natural headlands. Groins and man-made headlines are designed to simulate natural features such as these - retaining sediment. The key issue is that there must be sand/sediment to be retained. For a frontage like Beach Blvd, we have to provide the beach material to be retained or we run the risk of either not providing the protection needed or removing sand from the system to the detriment of adjacent coastlines.

50. (Q) Pedro Point also provides a groin/ sand function to Lina Mar beach. What is your opinion of these groin functions and do you think it has a potential to reduce the loss of sand on our beaches after a new sew wall is constructed in Sharp Park? The groin information came from discussions I've had with Bob Battalio over the years about this area. Thank you.

i) (A) Similar to the previous answer. Man-made headlands are being considered under the sand retention options. The key is the sand source again. There must be sand to retain, without detrimental impact to other communities. There is no doubt that groins 'could'

reduce loss of sand on the beaches. But how effective and where the sand that is retained comes from is part of the technical analysis.

51. (Q) The 2016 San Francisco Open Coast Littoral Cell report from the US Army Corps of Engineers notes there are significant data gaps that hamper adaptation planning, particularly for sediment transport. Is there information missing that you need to properly evaluate the alternatives under consideration? If those data gaps been addressed since 2016, can those be made publicly available?

    i) (A) There are limitations in data and analysis of sediment transport patterns and volumes as described in the Coastal Regional Sediment Management Plan. However, these data gaps are common along the coast of California and are not essential to the concept level analyses at this stage of the project. As the project progresses and a preferred alternative emerges, some additional research and analysis may be necessary to better understand how these uncertainties may affect the design, performance or longevity of the project.

    ii) (A) To our knowledge these data gaps remain and there are no active studies that seek to resolve these uncertainties."

52. (Q) Has modeling been done that shows the impacts of coastal armoring revetments and sea walls in the BBIRP project area and elsewhere in Pacifica?

    i) (A) Modeling of potential impacts to adjacent beaches has not been performed. This is typically conducted after selection of the preferred project in support of the environmental documentation and permitting process.

53. (Q) Is there any sort of landscaping consideration to buffer or mitigate harsh and natural walls? It seems that there is not a lot of attention towards adding anything to the landscape if the beach is no longer accessible?

    i) (A) Later in the presentation, we'll touch on the promenade area, some possible planting, planters, and amenities. Material presented in the features and amenities section responded to this question.

Appendix D4: April 29, 2021 Public Workshop Summary

Summary

City of Pacifica Beach Boulevard Infrastructure Resiliency Project

Public Workshop #4

Thursday, April 29th, 2021

6:00 – 8:30 p.m.

Welcome, Introductions and Agenda Review

Mary Bier, Mayor Pro Tem of Pacifica, opened the meeting by welcoming attendees and thanking the Beach Boulevard Infrastructure Resiliency Project (BBIRP) team for their continued efforts on the project.

Kelsey Rugani, facilitator, welcomed attendees and reviewed the meeting objectives, agenda, and ground rules. The workshop objectives included:

- Providing a project overview and updates since the February Community Workshop.
- Discussing the Multi-Criteria Analysis (MCA) and how it was used to score each alternative.
- Presenting the MCA high-scoring alternative and discuss possible hybrid refinements.
- Building understanding of BBIRP Phase 2.

Overview of Beach Boulevard Infrastructure Resiliency Project

Ryan Marquez provided an overview of the project by introducing the project area. The BBIRP is located in northern Pacifica, on the western edge of the historic West Sharp Park neighborhood. The project area is comprised of four different reaches with unique characteristics; the Pier Wall System built in 1973 rehabilitated in 1993, the North Wall built in 1984, the South Wall built in 1987, and the South Gap. Due to multiple major failures to the North Wall between 1984 and 2020 (including foundational and full wall failures), localized flooding and property damage from wave overtopping, and sea level rise projections, Marquez emphasized the need to update these structures in order to protect public infrastructure along and adjacent to Beach Boulevard.

Marquez continued by explaining the project goals of the BBIRP, which include:

- Replacing the current seawall and outdated infrastructure.
- Building climate resilience into one of the most vulnerable segments of the City's shoreline.
- Improving public access and use of the Beach Boulevard Promenade.
- Creating a multi-benefit solution to protect public infrastructure, recreational activities, homes, businesses, and the community at large, from further coastal erosion impacts.

The project is broken into three phases. The current phase, Phase 1, focuses on preliminary planning and feasibility and includes reviewing Existing Conditions and conducting a Multi-Hazard Risk Assessment (MHRA) which will inform the development and analysis of the project alternatives. Once a preferred alternative has been identified, Phase 2 will focus on design and permitting. Phase 3 is the construction phase.

Marquez indicated that this workshop is the fourth and final community workshop for Phase 1 of the project. The first and second workshops focused on the Existing Conditions of the project area and MHRA, respectively. The third workshop focused on providing an overview of potential alternatives for the BBIRP as well as public space opportunities for the project. Marquez noted that the project will enter Phase 2 once a preferred alternative (PA) has been identified. This phase will focus on the design and permitting of the PA.

Marquez then summarized discussion topics that have come up during and after previous workshops, which include:

- Project funding and cost to Pacificans.
- Alignment between City's planning efforts (e.g., Local Coastal Plan and the Sharp Park Specific Plan) and the requirements of regulatory agencies.
- The potential for the BBIRP to serve as a catalyst for commercial development and private investments in Pacifica.
- BBIRP construction timeline (e.g., phasing to address priority areas).
- How recreation is being evaluated as project alternatives are analyzed.
- Requests for additional details on economic impact, costs and amenities associated with each project alternative, long-term and large scenario planning, and real-world examples of the project alternatives.
- Direct outreach to residents within the project area.
- The extent to which the BBIRP's preferred alternative impacts surrounding beaches.
- Parallel planning efforts to address short-term needs and develop long-term solutions.
- Balancing tradeoffs between protecting businesses, residents, homes, and infrastructure with recreation, accessibility, and natural aesthetics.

Question and Answer

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included in Appendix A.

Overview of BBIRP Alternative Analysis

Multi Hazard Risk Assessment Review

Paul Henderson, GHD, provided a recap of the Multi Hazard Risk Assessment (MHRA) which identifies the hazards and risks the project area faces if no action is taken to update existing infrastructure (e.g., the no project alternative). These include:

- Hazards
    - **Coastal Flooding** is caused mostly by wave overtopping. During a 60-year event, total water levels are significantly higher than the seawall crest creating a flood hazard zone that could extend up to 200 feet landward on the North Wall and 75 feet landward on the South Wall.
    - Pacifica's bluffs are susceptible to **coastal erosion** as they are made of loosely consolidated materials that are highly erodible. To predict how the beach and bluff could erode without sea level rise, the project team used a background erosion rate of 1.6 feet per year.
    - **Scour** is another form of erosion that occurs during flooding events. Rock revetments in front of the existing seawall serve as protection against scour.
    - **Earthquake risks** exist given the City's proximity to the San Andreas and San Gregorio faults. In addition to strong ground shaking and ground surface rupture, additional risks include liquefaction and slope failure of the coastal bluff. Liquefaction occurs when water saturation and pore pressure increase reduce the strength of subsurface soils. Slope failure risks exist as ground shaking can erode coastal bluffs to the extent that they collapse.
    - **Sea-Level Rise** increases the severity of the hazards listed above. The project team utilized 2ft, 3.5ft and 7ft sea level rise scenarios to determine risk aversion scenarios for the project's design life.

Henderson continued by providing an overview of the Economic Risk Assessment stating that findings suggest that the cost of inaction may lead to the loss of Beach Boulevard by 2030, the loss of 50 buildings in the project area by 2050, and the loss of more than 160 buildings by 2100. Infrastructure, critical utilities, and other amenities will also need to be relocated. Specific risks include:

- Non-Monetized Impacts
    - **Anxiety and discomfort** occur due to road closures and the uncertainty of the future of property access.
    - **Recreation** risks occur due to loss of access to the Beach, Pier, and Promenade.
    - **Environmental** risks including adverse impacts to the Laguna Salada Wetland.

- Monetized Impacts
    - **Primary Impacts**
        - Relocation of sewer
        - Property loss
    - **Secondary impacts**
        - Business interruptions
        - Debris cleanup

A no project alternative would result in severe economic implications, including over $305 Million by 2100. These costs include the relocation of infrastructure, namely the sewer system, and property loss and damage. Further information on the economic risks is detailed in the MHRA on the City's website.

Alternatives

Aaron Holloway, GHD, provided a recap of the alternatives currently being analyzed. Holloway began by describing the criteria the project team is utilizing for design of each alternative (except the no project alternative). These criteria include:

- Design life of 50 years out to roughly 2070.
- Ability to withstand a design event (similar to the 1983 El Nino Storm)
- Protection against 2ft of Sea Level Rise in combination with the design event.

Holloway explained that the design criteria above over a 60-year return period has a low joint probability of exceedance within the design life of the project. Holloway shared a graph with the projected sea level rise over the next 50 years and showed how these design criteria would factor against future conditions. The low probability of exceedance was determined based on the design criteria withstanding the projected Sea Level Rise of the next 50 years. Holloway explained that having each alternative with the same criteria means they would have the same level of protection.

Holloway continued by summarizing the features of each of the project alternatives under consideration as well as tradeoffs associated with them.

- Alternative #1 – No Project: This alternative would entail not taking any action to improve or replace existing infrastructure within the project area, subsequently leaving the area susceptible to all the risks and hazards discussed above. A no project alternative is required as means to establish baseline conditions for analyzing other project alternatives.
- Alternative #2 – Beach Nourishment: This alternative involves maintaining the existing beach through the importation of sand. This alternative requires a 100ft wide beach to provide storm protection with initial nourishment needed to create a 200ft wide beach. While this alternative maintains beach access and recreation, there are some tradeoffs, including:

    - Large volumes of sand will be needed indefinitely to maintain the 100ft wide beach. The source of this sand is uncertain and there is no guaranteed availability of the volume needed in the future.
    - Potential for maintenance cost escalation over the design life.
    - Repairs to the existing seawall will still be required to maintain functionality and flood protection.
- Alternative #3 – Replace Seawall: This alternative provides a new seawall to uphold Beach Boulevard and is comparably low maintenance to nourishment. It includes a 5ft diameter of reinforced concrete pile wall with no scour protection.
- Alternative #4 – Rock Revetment: This alternative is adaptable to projected increases in sea level rise and has the lowest maintenance needs of all alternatives being considered. Tradeoffs with this alternative include a mandatory, impermeable wall behind the rock revetment to alleviate flooding and restriction of public access to the beach. This structure is much higher and wider than what exists today with a crest elevation of 25.5ft and overall footprint of 85ft
- Alternative #5 – Sand Retention Structure: This alternative allows for the slowing of loss of beach materials and reduces the force of wave climate. This includes two offshore parallel rock structures with low-crested breakwater or a multi-purpose reef. This alternative still requires Beach Nourishment, however, lengthens the time needed between nourishments by double.

Holloway provided an overview of alternatives considered but are not presently evaluated. These include:

- **Living Shoreline**
    - **Oyster reefs, marsh restoration, and a horizontal levee** are not applicable in an open coast environment like Pacifica.
    - **Sandy beach and restored dune** is applicable and are a possible solution with the Beach Nourishment and Beach Nourishment & San Retention alternatives.
- **Managed Retreat** is not included as a City adaptation policy.
- **Infrastructure Relocation** does not address a variety of risks described in the MHRA (including public safety, access, and property).

Holloway described the Alternatives Monetary Cost Comparison which analyzes the differences in costs associated with each alternative. The project alternative with the greatest lifecycle costs includes the no project alternative and sand retention, at $244M and $235M, respectively. The project alternative with the lowest lifecycle costs includes rock revetment and a new seawall, at $102M and $120M, respectively.

Holloway provided an overview of the Multi-Criteria Analysis used to score the project alternatives. These include 13 criteria organized into 3 categories that reflected public feedback from the Public

Workshop #2. The alternatives were weighed and scored by a 13-member MCA workshop panel including representatives from the Planning, Coastal engineering, Environmental Science, Construction management, Civil & structural engineering, Coastal science, and Geotechnical engineering sectors. This workshop panel included members from the City, including Public Works, Planning, and the consulting team ranging from a wide variety of disciplines. The panel weighed the project alternatives by category out of a total available score of 100%. These alternatives were then divided out into the three categories, and then scored on a scale of 1-5 between the 13 criteria.

The 3 categories include:

- Technical Performance (40%)
- Financial (30%)
- Environmental (30%)

The 13 criteria (under each category) include:

- Technical Performance
    - Flood protection (20%)
    - Erosion protection (20%)
    - Reliability 20%
    - Operability 10%
    - Constructability (10%)
    - Sea Level Rise Adaptability (20%)
- Financial
    - Lifecycle costs (70%)
    - Grant Funding Potential (30%)
- Environmental
    - Marine Bio Resources (20%)
    - Terrestrial Bio Resources (20%)
    - Visual Resources (20%)
    - General Recreation (20%)
    - Coastal Access (20%)

Holloway continued providing an overview of the MCA of each project alternative based on the categories outlined above. The MCA of each project alternative includes:

Technical Performance (40% of total)

- **Seawall and Rock Revetment** scored the highest at 35% and 33% respectively. These structural alternatives scored highest because they offered more reliable and adaptable coastal protection.

- **No Project** scored lowest at 10%.

Financial (30% of total)

- **Rock Revetment and Seawall** scored the highest at 26% and 23% respectively. These two alternatives had the lowest O&M costs and are eligible for federal funding programs including FEMA and USACE programs.
- **No Project and Sand Retention** scored lowest at 12% and 13% respectively due to high O&M and capital costs.

Environmental (30% of total)

- **Beach Nourishment and Sand Retention** scored the highest at 26% and 24% respectively due to marine resources, access, and recreation benefits.
- **Rock Revetment and No Project** scored lowest at 12% and 13% respectively due to the large footprint impacting visual, access and bio resources.

Overall Score (out of 100%)

- **Seawall** received the highest score at 75% due to a high technical performance score and medium scores in the financial and environmental categories.
- **Rock Revetment, Beach Nourishment, and Sand Retention** followed at 71%, 66%, and 63% respectively.
- **No Project** scored lowest at 36%.

Holloway continued comparing the project alternative scores while adjusting for category sensitivity. The category weighting sensitivity analysis showed that the Seawall is consistently the highest performing alternative. Beach Nourishment is the top environmental performer and Rock Revetment is the top financial performer. No Project consistently ranked lowest among the different category weighting sensitivities.

Hybrid

Holloway introduced a hybrid alternative refinement which includes components of a seawall, rock scour protection, and Beach Nourishment. The hybrid alternative has been developed to perform to meet the design criteria without the sand in place. When sand is in place it will provide a level of protection that is higher than the design criteria minimum.

Because the wall of the hybrid solution has rock scour protection in front of the wall the structural components of the wall are generally smaller than the standalone seawall alternative, for example the secant piles are smaller in diameter (3ft vs. 5ft) and the piles are shorter (60ft vs. 70ft). While the sand

does provide redundancy for scour protection it is not required for the hybrid solution to perform as required.

The lifecycle cost of this alternative refinement is approximately $114 Million. Cost savings when compared to the standalone seawall alternative are primarily provided by a significant reduction in materials, for example the volume of reinforced concrete is around half in the hybrid when compared with the standalone seawall. These savings can be utilized to help fund the beach nourishment. The beach nourishment included in the hybrid would provide added recreation and access benefits, while also increasing protection. While not formally run through the multi-criteria analysis at the time of this workshop, we anticipate that the hybrid project will score well considering the lifecycle cost and increased environmental and recreation benefits. Further analysis will be conducted, and results presented at a special City Council meeting in June.

Question and Answer and Virtual Polling Exercise

Following the presentation, participants were given the opportunity to ask questions to the Project Team. A summary of the questions is included in Appendix A.

Rugani introduced a virtual polling exercise to collect attendees' feedback on the initial preference of the project alternatives. Poll results are listed below:

Based on your current understanding of the alternatives, which alternative would you say you initially prefer?

- No project: 7% (4 out of 55votes)
- Beach Nourishment: 5.5% (3 out of 55 votes)
- Seawall: 25.5% (14 out of 55 votes)
- Rock Revetment: 11% (6 out of 55 votes)
- Beach Nourishment with Sand Retention: 11% (6 out of 55 votes)
- Hybrid: 40% (22 out of 55 votes)

Public Comment

Rugani invited members of the public to provide comments to the project team. A summary of the public comments made is included below.

- It concerns me that this is the last workshop, and the next public forum is the presentation to city council. I think the pier is iconic and that its end of life might be 2030. I would like reassurances it will not go away.
- The robust seawall is the best alternative but needs more work. Bottom-line, all of these can be rectified with a seawall. A no project alternative will bankrupt taxpayers.
- I am pleased we are taking a positive "let's-do-something" approach and not giving up. Everything that was said regarding cost and damage is agreed on 100%. I am for the seawall.

- I am glad we are looking at other alternatives like the hybrid. Based on the answers to the questions, it needs more study and should include keeping existing seawall and rock revetments. Even though more sand costs a lot, it is offset by cost savings the hybrid provides. Any funding we can get from the Biden Administration for infrastructure should be used for a seawall. The City can also consider fees in the parking lot and fees from tourists to cover the costs of the project.
- With the no-action alternative, the challenge is that we are not including housing lost and displaced residents. We need a seawall to ensure the economic development and sustainability of the Beach Boulevard Promenade. I am glad that we are homing in on the benefits of the seawall and the hybrid option; those two clearly seem to be the best alternatives.
- There needs to be a fix to the seawall to discuss rationally moving sewage from the north of town to the quarry. As the Local Coastal Plan (LCP) developed in 2018 has not been approved by the Coastal Commission, we still must work within the guidelines of that which was approved in 1980. That LCP prohibits seawalls as a mitigation measure for any new development. Will any regulatory agency accept the limitations this city has proposed? When do we start the real work? Any short-term measures taken now will buy us time until a new infrastructure is constructed.
- The city has proposed certain trigger points for taking action on resiliency infrastructure. Is it reasonable to assume that the sewage system can survive projected sea level rise before the BBIRP is completed? We need to make a decision that can protect the sewer system before it becomes inundated.
- I voted for the seawall because a 50-year protection would be best for protecting the core of the city. I agree that a seawall is best, but I would hope it would incorporate natural features and be visually appealing. I would be happy to give up 4-5 feet of ocean view to save the core of Pacifica and this neighborhood. You need to live out here to get the meaning of that. If you raise the wall 4-5 feet, people will still come. I do not understand the issue with the sewer line since it was said that the lines will hold until 2090.
- My home is not threatened by sea level rise but I fully support the need to protect Sharp Park residents. I would point out that those who favored a living shoreline, the real living shoreline is what's behind that seawall: the people, the business and the taxpayers. We should be doing a loss-benefits analysis. What is the total cost of homes in Sharp Park right now and the cost of compensating property owners at market value? I am opposed to any interim solutions. I like the aesthetics of the hybrid, but I am unsure it’s the strongest. We need to protect Sharp Park and hopefully longer than 50 years.
- The 50-year lifespan is short sighted and myopic. Most homes in Pacifica are already older than 50 years. Pacifica has miles of other coastline that will also need protection. We are spending all our money right now on Beach Boulevard. The sea had removed 6ft of sand in 2014 but if the sea wants to take the sand away, it will.
- I would like to see a short-term fix to buy us time to make a good long-term plan. If there will be a bond measure to pay for this, we would like to know more about what it will entail.

- Our LCP and Coastal Act require buildings to have a 100-year life; Seawall will only last for 50 years. I do not see how a developer can build here and overlook these issues; we need protection from sea level rise to bring in investment. Regarding the sewer infrastructure, there has already been $1 million spent on repairs and will need to be moved eventually. The value beaches bring are often lost with tall seawalls. The value of beaches is often lost. Beaches are vital to California's economy, generating $14 billion from tourism per year. From a purely economic viewpoint, California's beaches are more important to the overall economy than the property that shoreline armoring is designed to protect. Shoreline armoring only benefits the small minorities of people who own property directly on the coast while it decreases access to millions who come to access the beach every year. I am not opposed to some armoring, but we need to maintain views and access to the beach and not lose our sand to the design solutions.
- I am heartened to see these options. I appreciate seeing the move to preserve the community of Sharp Park. There is more to this neighborhood than just those of us who have homes here. There is a whole life and community and attraction on Beach Boulevard. I liked the hybrid alternative as it allows for more beach recreation opportunities.
- I want to move forward with a seawall or hybrid option. We need to do all we can to preserve the beauty, recreation, business, and way of life here in Pacifica. The alternative selected also entails an equity issue as people who could lose their homes may not be able to afford a new home in Pacifica.
- Regardless of the alternative selected, what do we do if we cannot get the required funding? It seems misleading to say that funding will come from a variety of sources when this is uncertain. Are we looking at short-term options to reinforce the existing wall while we build large-scale projects?
- I find it interesting hearing people say they do not want to spend money on a seawall when the cost of doing nothing is greater. We need to protect our town.
- I attended a conference called Implementing and Scaling Resilience in Coastal California in which the Federal Emergency Management Agency (FEMA) was a panelist. FEMA indicated there are lots of neighborhoods looking for funding for shoreline armoring and it is unclear whether they would fund short-term solutions. Without clear local funding, I am unsure where we go from here. It is helpful if we are realistic and balancing addressing the near-term realities of sea-level rise by looking for a longer-term plan.
- I submitted letters to the City, substantiated by a leading appraiser, which indicates the value of real property at the Sharp Park golf course to be $70 million by 2050. These costs and the value of the wetlands adjacent to the golf course are not being represented by the cost estimate.
- Our city needs vision and needs to accept science that projects in other locations may be prioritized for funding. We need to consider what the backup plan is. I was encouraged by the hybrid option but would like to see more studies on it. The amenities offered do not offset the loss of view of the ocean.
- Our downtown area is being developed and revitalized as a central attraction for residents and visitors. We need to protect our downtown, so the projected economic growth comes to fruition. Most people selected the hybrid during the virtual polling exercise. Are there other

hybrids out there that are not being considered? Can two different hybrid approaches be analyzed at the same time?

- I appreciate all the studies and process, but we need to take the next step forward. I support protecting the existing seawall while a new seawall is built.
- I am hearing comments raising the concern that there is no backup plan. I am all for moving forward, but what if we never get funding? What is the solution then? What if a bond measure fails? Not having a backup plan concerns me. Doing nothing is also not an option.
- The promenade is a main street with lots of activities. Palmetto Avenue is our designated historic main street, and it should be protected. I think the costs for no-action are grossly underestimated due to loss of property. I am looking forward to getting the seawall or hybrid approach built.
- This is a huge and important undertaking for the City. I hope that with such a huge price tag, some of which potentially coming from residents, the alternative selected provides opportunities for entertainment and instils confidence in private developers. I want to see more elements of how the seawall can be more than what it already is. Can we fix it and make it bigger and better for the next generation to enjoy?
- I am fully in support of the seawall proposal or a hybrid solution that includes the seawall. Not crazy about the rock revetment alone based on the aesthetics. I think we are moving in the right direction.
- This is a complicated and emotional issue. There is a property aspect to this that will catch up to homeowners eventually. The market will catch up to communities that better plan for sea level rise. More damaging solutions of the seawall and revetment will lead to more damage in the future and will be more difficult to recover from. If we sacrifice beaches, Pacifica will not be the same place.

Next Steps

Marquez reviewed the following next steps before opening into the public comment period.

- Participants were encouraged to visit the project website (CityofPacifica.org/beachresiliency) to:
    - Find the summary and recordings from past Workshops.
    - Complete the post-meeting survey.
        - **Note**: Responses to questions asked in the post-meeting survey are captured in Appendix B.
    - Sign-up for the project email list.
- Next Steps
    - Bring the preferred alternative to City Council at a special City Council meeting in June (meeting date to be announced). This meeting includes another opportunity for public comment.
    - Once a preferred alternative is approved, a scope and budget for Phase 2 will be put together and brought again to the City Council for approval.

    - External City Funds will likely be needed.
- Phase 2 includes
    - Design of the preferred alternative.
    - Permitting (environmental studies & coordination with agencies)
    - Community engagement around the amenities considered.

Closing Remarks from Mayor Sue Beckmeyer

Sue Beckemeyer, Mayor of Pacifica, shared her appreciation of the attendees' time, open-mindedness, and thoughtful comments. Beckemeyer reiterated the June City Council meeting will provide an additional opportunity for the public to provide comments on the alternatives. She thanked attendees for their widespread interest and support in moving the BBIRP process forward.

Appendix A

Public Workshop #4 Question and Answer

Overview of BBIRP: Question and Answer

- Question (Q): What examples of seawalls from other locations were looked at as part of your analysis?
    - Response (R): We referenced the Ocean Beach seawall in San Francisco as well as seawalls and bluff stabilization techniques in Santa Cruz.
- Q: Does the replacement of "outdated infrastructure" include replacement of underground sewer lines and utilities?
    - R: While relocating or replacing that infrastructure was analyzed in the MHRA, we are not putting forward an alternative that would do so. Relocating infrastructure like storm drains would be assessed once we select a preferred alternative.
- Q: What are the City's backup plans if they cannot get funding from state or federal agencies? And how much will be left over for other issues throughout the City? How much of this is planned to be paid for by bonds from Pacificans?
    - R: While we will be pursuing a variety of funding sources, total funding needs are still to be determined and identifying a PA will help to inform the extent to which public funds are needed. We are not sure exactly how that breakdown will occur yet. In the meantime, the City intends to continue to maintain the area.
- Q: If a seawall is the alternative selected, how will the pier abutments be addressed?
    - R: Addressing pier abutments will likely not be a difficult task regardless of the alternative pursued.
- Q: Are there alternatives that would allow for existing buildings and pedestrians access space to remain as is? What is missing in these reports is an understanding of critical infrastructure, like utilities, that is immediately threatened. How old are the sewer pipes? When is critical infrastructure updates needed for these pipes? Utilities need to be looked at hand in hand with other coastal infrastructure resiliency.
    - R: I am hearing questions about alignment. We are not making any decisions about alignment yet. We need to discover what preferred alternative there is then we can discuss alignment. As far as the conditions of the existing infrastructure, specifically wastewater, the City's Wastewater Division has indicated the Beach Boulevard sewer line may last into the 2090s.

BBIRP Alternatives Analysis: Question and Answer

- Q: Currently and historically, the project area has good public accessibility to the beach and existing infrastructure has maintained views. How will the alternatives presented change this?
    - R: Access will be maintained or improved regardless of the alternative selected. There are opportunities on the pedestrian promenade corridor for greater amenities and increased elevation so that the ocean views are not as impacted.

- Q: Does the Multi-Criteria Analysis consider the resiliency of each alternative? How does each alternative respond to a catastrophic event? What costs more and which is more resilient? And which is easier to fix after an event?
    - R: Yes, we did look at resilience and it was taken into account in the analysis. The seawall and revetment are more resilient.
- Q: What impacts will the alternative selected have on surrounding shorelines? Is removal considered?
    - R: This will be addressed during Phase 2 of the project. Any of the options can be removed and are factored in the decommissioning costs. The policies developed here align with LCP's certified draft policies. Within that document, it provides policies for us to monitor our deadlines, schedule, and timelines to reassess our adaptation plan. This is what we will use at a planning level to reassess whether protection for this area and others is still factored into our decision.
- Q: Glad to hear that the sewer pipes will last until 2090. However, the real issue is not the strength of the pipes, but if the City has a plan for a potential sewage back up?
    - R: Capacity of the pipes are generally not related to wave overtopping. There could be infiltration issues, which is something we will continue to analyze. The City's Wastewater Division is also working on their master plan which will address any capacity of the pipes and look at sea level rise as well.
- Q: How will beach nourishment affect the north end of the pier?
    - R: The key challenge with north part of the pier is the alignment with Beach Boulevard and the pier. The boulevard sticks out further than where a natural beach would be. Sand retention would help adjust that natural shoreline orientation.
- Q: How much higher would the new seawall be than the existing seawall?
    - R: The height relative to the existing seawall will vary because the height of the existing wall varies. The concept North wall brings the section up to 30ft overall. l. Closer to pier where the wall is about 25ft today, there would be an increase of 4-5ft but some sections would remain the same height.
- Q: How does the hybrid model vary in its strength, longevity, and structural soundness compared to just a seawall?
    - R: Under the hybrid alternative, the seawall would be designed in a manner so it could provide protection from wave energy even in the absence of a beach (e.g., in between beach nourishment cycles). The seawall would be stable on its own and thus the differences are negligible.
- Q: Can we emulate resiliency strategies like those in Holland where the water is pumped outward from the beach?
    - R: The physical environment in Holland differs from that of California meaning strategies that work there do not translate well to Pacifica's environment. Additionally, sand for beach nourishment in Holland is paid for by the national government, which is not necessarily an option in California.
- Q: Why are we only looking at a 50-year period?

  - R: A 50-year design life this is a common standard for public shoreline protection infrastructure. There is a difference between 'design life' and 'useful life'. If an infrastructure asset is maintained correctly, it has the potential to have a useful life that extend well beyond the design life, we would not anticipate any structural solution to require demolition at 50 years.
- Q: Will a full analysis be completed for the hybrid alternative?
  - R: Yes, it will go through the same analyses as the other alternatives under consideration.
- Q: If we did not alter the existing seawall and rock revetment, would just pursuing beach nourishment provide adequate protection?
  - R: That would necessitate a substantially larger amount of sand than the beach nourishment strategy, and subsequently be even more expensive. The existing seawall would remain vulnerable to damage from wave impacts during extreme events, particularly at the end of each nourishment cycle. Since the wall is nearing the end of its useful its unlikely to provide adequate protection during these events throughout the design life.
- Q: Were the social and economic benefits of having a beach considered as the alternatives were analyzed? Have you considered feed to use the beach?
  - R: Yes, those were accounted for in the Economic Risk Assessment. No fees for beach use are being considered nor would they be allowed.
- Q: Is the City pursuing funding from the Biden Administration's infrastructure plan?
  - R: Yes, we will be pursuing all funding sources.
- Q: The seawall would go up 5ft higher than the current level of the Seawall near the pier. Does this mean 5ft higher than the existing road? This would block views to pedestrians and autos. Was this impact considered at all?
  - R: Yes, visual, and even more so recreational impacts were considered in the MCA. The seawall received a lower score based on that reason. But there could be added amenities on the other side of the seawall. There are opportunities on the pedestrian promenade corridor for greater amenities and increased elevation so that the ocean views are not as impacted.
- Q: Why was the hybrid not included in the alternatives analysis reports?
  - R: The alternatives analysis report was originally only focused on the four alternatives and the No Project. The hybrid was developed as a result of the original multi-criteria analysis as a way to combine benefits from multiple alternatives. At the time of the workshop, the Hybrid alternative had not been fully evaluated. Once analyses for the hybrid alternative are completed, they will be included in an updated alternatives report.
- Q: Based on what was presented, it sounds like the best alternative is a modern seawall while managed retreat in any form is not an option. The $305 million for the No-Project Alternative is grossly underestimated, particularly as the non-monetized values are not included in this cost. I do not understand why these were not included in the costs for the No Project Alternative,

particularly when you consider things like loss of endangered species habitat, potential lawsuits being brought by property owners, and loss of access to the beach and promenade.

- R: The National Oceanic and Atmospheric Administration's economic analysis framework was used to assess the BBIRP project alternatives. The project team did not want to assign dollar values to intangible components of the project area like recreational benefits of the promenade, pier, beaches and endangered species habitat.

- Q: What in your professional opinion is the "slam dunk" solution to provide protection for Sharp Park?
  - R: Our professional opinion is that the systematic multi-criteria analysis (MCA) should be used determine the best solution – and one of the reasons for the MCA is because it takes one person's 'opinion' out of the equation and assesses both a quantitative and qualitative manner. Notwithstanding that professional opinion, we believe the hybrid alternative presented is the best solution for this project, and this conclusion is largely based on the scoring in the MCA.
- Q: Is it possible to include offshore structure that is parallel to the seawall to disperse the energy before it gets to shore? This seemingly would also lower costs for construction and maintenance of the seawall.
  - R: Yes, these type of structures were evaluated for the Sand Retention alternative. With the retention approach, we developed two models at a conceptual level: groins perpendicular to shore and offshore reefs. Offshore reefs/breakwaters would reduce the number of waves breaking closer to the shore contain the sand to limit the amount moved away from the project site. However, during large storms, these offshore structures will not completely stop wave transmission that comes over and through the breakwater, so you would still have lots of wave action hitting the shore. This alternative proved to be very expensive due to the large quantity of rock required to build the offshore structures and the beach nourishment needed to maintain a sufficient beach width for storm protection.
  - R: The cost of construction of offshore reefs would be significant. The high-level cost analysis completed as part of this feasibility study shows the offshore reef lifecycle cost is approximately double the cost of the new stand-alone seawall alternative and hybrid alternative, and the highest cost of all alternatives other than 'No Project'. Permitting of offshore reef structures would be difficult.
- Q: You talked about ensuring the BBIRP comply with the Local Coastal Plan, however, I am unsure if any alternative for the BBIRP is in compliance with the City's General Plan. Do the current designs for BBIRP alternatives meet the requirements of the City's General Plan?
  - R: The BBIRP will be built in accordance with what is outlined in the Local Coastal Plan, which was adopted by City Council in 2020. The City's General Plan is being updated now and will be adjusted based on comments to the Local Coastal Plan from the California Coastal Commission.

Appendix B

Public Workshop #4 Post-Meeting Survey Question and Answer

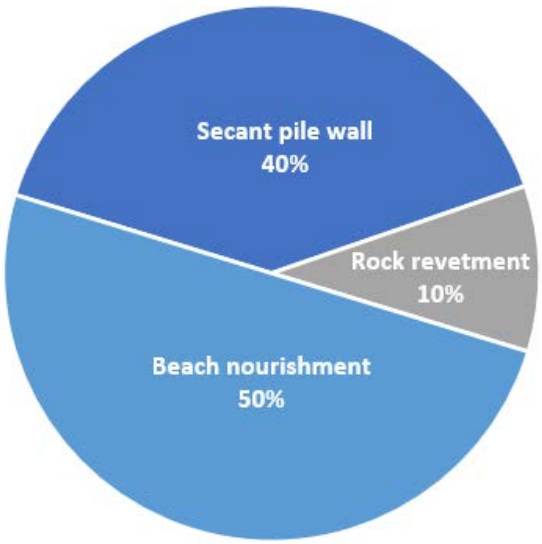
General Project

- Question (Q) Can I get a recording of the meeting?
  - Response (R): Yes, the recording is Youtube here: https://www.youtube.com/watch?v=4qmBVSPL5F0 . It is also posted in the project library on the project webpage. www.cityofpacifica.org/beachresiliency.
- Q: What if the California Coastal Commission (CCC) doesn't approve the selected and designed alternative?
  - R: The City is working with the CCC currently and will continue to do so in future to ensure this does not happen. Additionally, the City believes this area is afforded protection under the Coastal Act and as such does not believe the CCC can outright reject a project here. We are closely considering what would make this project permit-able and striving to ensure the alternative is the least impactful and provides a multi benefit solution.
- Q: What if the plan is never funded? What if a bond measure fails?
  - R: The City would continue to maintain the current seawall in place with the understanding that maintenance costs would increase with time.
- Q: Is the city setting aside money into a special fund each year for this project vs. trying to get all the money in one year for the portion not covered by federal funding i.e. are they doing that now?
  - R: No.
- Q: Pacificans need to know: how will any choice be funded? Will it include all Pacificans to pay? How? A bond? Or a Special District, or what?
  - R: That has not been decided yet.
- Q: Can the public see interim draft of the further hybrid alternative studies before city council meeting in June?
  - R: Yes, the City will release updated reports including the hybrid before the June meeting and will announce it to all on the emailing list.
- Q: Will the presentation to city council be just the first of several, as this is a very complicated project and process?
  - R: There is only one special council meeting planned in June to present and discuss the feasibility study phase. Additional public workshops and council meetings will be scheduled as the project progresses through Phase 2.
- Q: What is the projected time it will take to get to building -- through design, CCC approval, funding? How many years until there is a built project?

  - R: The timeline is variable, particularly with funding and permitting. At this time, it could be anywhere from 2-5 years for the project to be permitted, then 1-2 years to construct.
- Q: What will the City do if a catastrophic storm breached our protection in the next few years?
  - R: The City will continue to monitor the seawall and if there is breach it will be repaired.
- Q: Has Pacifica Public Works or anybody connected with the Project discussed this matter with anyone at City & County of San Francisco, and if so, w/ whom did you discuss it, and what was said in that discussion?
  - R: The City has discussed this project with San Francisco Parks and Rec and has been updating them periodically with the understanding that during phase 2, more coordination would be needed to align the Levee with a preferred alternative.

Alternative Analysis

- Q: Is it a 5 foot high wall above the sidewalk? Won't it block views?
  - R: The seawall alternative does have certain areas where the wall would need to be raised around 5 feet. This may impact views some views, however as was discussed in workshop 3, there may be ways to deal with this elevation change to ensure the promenade still has similar views.
- Q: What is the estimated cost of the recommended hybrid – seawall/revetment/beach nourishment?
  - R: Approximately $114 million. The approximate proportions of cost between the 3 basic elements of the hybrid alternative are displayed in the pie chart below, noting rock from the exiting rock revetment would be re-used:



- Q: Has your team considered the odds of the proposed $110 million dollar hybrid seawall we are considering tonight night actually reaching the end of its 50 year design life? If we need funding for additional repairs, where would that funding come from?
    - R: Probability of key variables such as design storm return period and sea level rise over the next 50 years were considered. The joint probability of the design criteria being exceeded during the 50-yr design life is very low (~0.2%) but not impossible.
    - R: With effective maintenance there is a very high probably the Hybrid alternative will reach its 50-years design life. This is one of the key reasons the Hybrid alternative scored highly in the 'Reliability' criteria in the MCA.
    - R: The design of the seawall and other elements of the hybrid will include materials that have proven durable in the marine environment and will remain functional over the design with regular inspection, maintenance, and repair typical for coastal structures.
    - R: Maintenance is required for all public infrastructure, this project is no different. Funding for repairs and maintenance would need to be planned for by the City, noting repairs can be minimized by regular maintenance.
- Q: Is there any data on combinations of the different strategies of three or more together? I am thinking, for instance, of hybrid structure seawall, plus beach nourishment plus sand retention from off-shore structures? It seems like there is probably a nexus of strategy and situation and luck which might allow superior results.
    - R: There are examples where beach nourishment and sand retention are used in combination with a seawall/revetment along the back beach. Unfortunately, most of these examples are located in milder wave climates and their data may not be directly applicable to Pacifica. Sand retention structures would improve benefits associated with beach nourishment in a hybrid alternative, but also come at a significant initial cost. Based on the feasibility analyses of potential costs, the initial cost of sand retention structures is higher than the cost savings from a reduced volume of beach nourishment.
- Q: Could the seawall be aligned westward to mitigate the height impact on sightlines?
    - R: Seawall alignment will be evaluated in more detail as part of the Phase 2 design and permitting process. A westward alignment of the seawall would likely increase the impact on sightlines. A seawall alignment shifted eastward could partially mitigate the impact on sightlines. This will involve a balance between the benefits of an eastward alignment on views with the desired recreation/access uses along the Promenade.
- Comment (C)/Q: The Report's assumption that perpendicular levees would be built at/near the north and south property lines of the San Francisco-owner Sharp Park Golf Course property, to protect (1) the golf course and (2) the West Fairway Park residents from coastal flooding in the event of "No Project". Questions: (1) Who does GHD think will pay for these perpendicular levees -- San Francisco, Pacifica, or someone else? (2) What are GHD's estimated hard and soft costs for construction of these levees, and what is the basis for the cost estimate?

  - R: The no project scenario does not make assumptions of who will pay for what, but only attempts to show a scenario along with costs to better understand what it may look like. The estimation for those costs can be found in Appendix C of the Multi Hazard Risk Assessment.
- Q/C: Were other sand retention structures considered such as groins to hold a beach fill? The offshore reef and or breakwater structures besides being very expensive will not fly past the Surfrider Foundation and Pacifica surfers. This area both up and down coast of the pier is arguably the best surfing wave in Pacifica for intermediate and expert surfers. I have been surfing there for almost 40 years. Even though the multi-purpose reef could make for a surfing wave, it's not worth the risk to lose it as a surfing site. If the surf was poor or non-existent in this area a surfing reef to create a new break would be sellable. A beach fill with some short retention structures could work.
  - R: Groins were considered as a sand retention structure. There was concern among the coastal engineers that groins (especially short ones) would not provide the retention benefits desired. The primary reason is that the significant wave energy and cross-shore sediment transport at the project site could render a shore-perpendicular structure ineffective at retaining a sufficient beach width to withstand the design event. For this reason the sand retention alternative includes a shore parallel component (low-crested breakwater or multi-purpose reef) to dissipate wave energy and facilitate deposition/accretion behind these structures.
- Q: Sand source for any beach nourishment project or hybrid project. Are you assuming an offshore site or trucking sand in from somewhere else?
  - R: Cost estimates for beach nourishment have assumed it would be sourced from an offshore sand deposit.
- Q: Do the current sea wall/hybrid proposals meet the requirements of the 1980 General Plan that "Seawalls shall not extend beyond the mean high tide line"? I asked the question, but it was not answered.
  - Yes. For purposes of the alternatives analysis the seawall was assumed to follow the existing alignment, which does not extend beyond the current mean high tide line.
- C: Regarding sewer landward pullback project needs to be considered on par with the sea wall, your response that the pipes may last 90 years and that the plan is make them bigger doesn't respond to the problem if they get inundated.
  - R: For clarification, the statement was the sewer pipe along Beach Boulevard may have a useful life into 2090.
  - R: Inundation of sewer lines is unlikely to be an issue since these are closed systems not directly influenced by ocean water levels. Sea level rise can increase groundwater levels, which present a low vulnerability to the sewer collection lines along Beach Boulevard but could potentially increase inflow & infiltration (I&I). This is unlikely to pose a major risk in the near future (20-30 years) but Public Works will continue to monitor sewer

flow rates and any potential increase will be factored into future infrastructure planning decisions.

  - R: Geotechnical investigations show the groundwater is approximately elevation 7ft NAVD88, approximately 1ft higher than the mean higher high water (MHHW) elevation under Beach Boulevard. The lowest sewer line pipe invert elevation on Beach Boulevard (at intersection with Clarendon) is 11.14ft NAVD88. Projected sea level rise being used in this feasibility study is 2ft, which could raise the water table to 9ft NAVD88, still 2ft lower than the lowest sewer pipe invert.

- C/Q: I find it hard to understand how Beach Nourishment can even be contemplated for the whole length Beach Blvd?! Most coastal geology opinions I am aware of consider this untenable for a shore with: NO existing beach (North of the Pier); No chance that the shoreline can retreat; and worst of all the open high energy coast and exposure. Your timeline predicts more sand needed every 12 years. Isn't it possible & increasingly likely that is could mostly disappear in 1-5yrs with "bad luck"? Can you give examples of any successful sand projects with: prior hard armor, no existing intertidal sand, along a coast of comparable exposure/energy to ours?
  - R: As indicated by the alternative analysis, it would take a very large quantity of sand placed along Beach Boulevard for beach nourishment to satisfy the design criteria. Reliability is a concern with beach nourishment and was reflected in the MCA scoring for this alternative. The performance of a specific beach nourishment project can't be accurately predicted because of the numbers of variables involved and the complexity of physical processes occurring in the littoral zone.

    Given the high exposure and wave energy at Pacifica it's difficult to provide a directly relevant beach nourishment example. The USACE sand bypassing program at Channel Islands Harbor is one example where beach nourishment is performed regularly to maintain a beach in front of an armored shoreline along Port Hueneme and the City of Port Hueneme. In this case sand is dredged from the Channel Islands Harbor sand trap (behind breakwater) and placed south of the Port Hueneme entrance channel at an approximate rate of ~2 million cubic yards every 2 years. The photo comparison below shows beach conditions before and after a nourishment event at the City of Port Hueneme.

- Q/C: Are the differences meaningful? Sensitivity Analysis (Fig. 6.1) is an important idea. But I note that it only considers different category weighting. You did not consider uncertainty, something like confidence intervals, on the actual scores. While such multi-step calculations are often improved by a quantitative error propagation analysis, I agree this is not justified here, since CIs on the scores are illusive. BUT, I wonder if you could gather the alternatives in groups by likely significance. It is common in such comparisons to draw "similarity bars" joining the ones that are not significantly different. I am pretty certain that it would show that not all differences are meaningful, given the real uncertainties involved in estimates, here subjective panel consensus. (? I assume the scores were not submitted blindly by panel members?) Can we escape the appearance that the choice of Seawall was predetermined? The change in scope, and slight difference in alternative score just tipping the decision appear to many in the public conspicuous. The addition of a hybrid option to the contrary notwithstanding. Might the final report include a clear statement whether Seawall & Rock Revetment are meaningfully different? I really doubt they are. To those with less quantitative experience, isn't it misleading to cite such numbers without such caveats? Should this not rightfully affect the Final Alternative determination?
    - R: Yes, the sensitivity analysis performed indicates the differences between the alternatives are meaningful. Seawall was not a predetermined choice and was judged in the same manner as other alternatives in the MCA. Although seawall and revetment are relatively close in total score, these alternatives have similar strengths in the Technical Performance category. Therefore, if Technical Performance scores were adjusted up or down for one alternative, they would be adjusted in a similar manner for the other. Revetment received a much lower score in Environmental due to multiple concerns associated with a very large footprint. The differences between these alternatives in the Environmental category are meaningful and were not sensitive to scoring changes. Financial scores were largely based on a quantitative estimate of lifecycle cost and

therefore were less sensitive to subjective scoring than other criteria. This discussion will be added to the revised Alternatives Analysis Report.

- C: Comparing overtopping between Seawall and Revetment. High surf reaches the height of the Pier already. The proposed seawall design with the upper overhang lip will allow very powerful overtopping impacts when surf exceeds that height. The Rock Revetment (Fig, 4.3) builds a wide rock "ramp" sloping seaward into deep water that dissipates some wave energy, in addition to any reduction from the big waves feeling the natural bottom. The seawall (Fig 4.2) appears as a vertical wall, 70ft in extent, extending deep into the "hardpan" with max elevation 30ft above MLLW). I hope your final analysis evaluates whether big waves would hit a seawall with greater energy than a revetment with energy dissipation by armor sloping offshore? That is, the height of the shore-break on impact to a seawall alone may actually be greater and more likely to overtop, and with higher force than a Revetment. The hybrid seems to add this measure of protection, but then why do you need the seawall (the main reason was narrower footprint).
    - R: Yes, the final analysis will include a detailed assessment of wave run up and overtopping. Any structure (Seawall, Rock Revetment or Hybrid) would be subject to powerful waves during a storm event. It's true that Rock Revetment dissipates more energy than a seawall, thus the need for a higher crest elevation for the Seawall alternative. The Hybrid structure seeks to balance the benefits of each alternative to develop a more economical solution, while reducing overall footprint on the beach. A seawall would be required with or without the rock revetment in order to provide an impermeable barrier behind the structure to prevent erosion of material from beneath the Promenade/Beach Boulevard.

Appendix E1: December 3, 2021 Post-Workshop Survey Results

City of Pacifica Beach Blvd. Infrastructure Resiliency Project
Post Meeting Survey Responses
December 3, 2020 Workshop

Key Themes

Unanswered Questions and Future Topics

- How is the project putting value on and evaluating recreation (day at the beach, golf, hiking/biking, etc.)?
- A more detailed project timeline for Phases 2 and 3: How soon can we build the seawall?
- More details and numbers
    - Details on the economic impact (dollars/visitors coming into Pacifica), costs and amenities associated with each project alternative
    - Number of homes and businesses impacted associated with all project alternative
    - More long-term and large scenario planning (i.e., a 5-year scenario)
    - Real-world examples of the project alternatives
- Who is making the decision? How will community support be gathered and to what extent is it considered in selecting a preferred alternative?

Amenities

- Responses reaffirmed what was shared in Existing Conditions Survey.
- Walking, biking, hiking, benches/seating/views, restaurants, safe beach access, more parking and more bathrooms.

Additional Comments

- A few respondents emphasized that they do not want view obstruction.
- A few respondents mention a “living coastline” and managed retreat while a couple others think these are not practical or long-term alternatives.
- One respondent indicated priorities of increasing the quality of the public’s interaction with coastline and rebuilding the seawall in an environmentally friendly, sustainable and cost-effective manner.

Full Results

Total Responses: 16

How did you hear about this workshop?

- City Email Blast: 14
- Word of Mouth: 1
- Postcard: 1

What city or neighborhood of Pacifica do you live in?

- Sharp Park: 7
- Different neighborhood or "Pacifica" (e.g. did not specify neighborhood): 6
- Non-Pacifica resident: 1

Please rate how engaging the Poll questions were to you.

- Average score: ~4

What additional or unanswered questions do you have regarding the multi-hazard risk assessment?

- Please place significant focus on the natural environment and non-human creatures that inhabit the area with us. We must co-exist. That is why the area is unique and special and of significant value.
- Can we see scenarios for very high level of risk as in 500 year + zones?
- How is the project putting value on recreation (day at the beach, golf, hiking/biking, etc.)?
- How is the project putting a value on residential and city properties the sea wall is protecting?
- How many homes and businesses are impacted by a sea wall failure in Sharp Park?
- How soon can we start building a new sea wall, rather than just talking about one?
- Who is making the final decision on the seawall alternative? Just following consultants' recommendations, or the Elected Reps or community vote?

What amenities do you use and appreciate along Beach Blvd and would like to see discussed at the next workshop? Are there any other topics you would like to see covered in the next workshop?

- Would like to see a timeline on final design and estimated construction start date.
- Natural alternatives that benefit the beach, shoreline and all creatures (not just property owners) - that DON'T include the expensive and never ending short-lived process of beach replenishment. An alternative that includes removing the road to vehicular traffic and infrastructure underneath it -- as the most prudent and long-term wise expenditure of public funds that would update our aging infrastructure while moving out of harm's way and benefitting the natural environment and providing improved coastal access to all.
- Acquiring property and moving infrastructure back.
- My understanding is managed retreat is off the table, but any other responsible ways to face sea level rise head on would be welcomed.
- How to gather community support.
- Wasn't Linda Mar Beach having issues and it was enabled by a cobble solution? What a valuable asset Linda Mar Beach is.
- What data exists that Hoteliers and others have provided about the Public Property on Beach Blvd.? The Brown Field Study took place in 1999. The Swenson Gap was provided several years to complete their Hotel Conference Center. The only thing ever heard in a Public City Council meeting by their representative was that the soil was more squishy than expected. They had planned underground parking. But the kept the contract for years until the city said get back in line. There is more info re: 1999 conference too.
- Sharp Park West is noted as a significant historical neighborhood and as such as an asset. Economic etc. discussions MUST take this General Plan directive seriously.
- Closing the southern gap near Clarendon. Sea wall expected design life.
- Alternatives including analysis on Economic Impact (visitors/dollars brought to Pacifica), Cost, New Amenities to Pacifica.

- Incorporating increased opportunities for recreation and maintaining the beauty of the coastline.
- Include real-world examples of projects done in California, US, and the World of both success and failure with various alternatives. Both structural solutions (sea walls, rip-rap, etc.) but also transformation of basically residential to vibrant mixed use examples.
- A new Seawall on the north side of Beach Blvd.
- Focus on essentials. Cost effective sea wall to protect infrastructure, homes, golf course, recreation and businesses.
- The comment about SF and its mandate did not really cover the full and therefore accurate information. There is much more significant information on that too.

  NOTE: This is in reference to the following question made during the workshop:
  - Q: Are you in communication with the City of San Francisco regarding the Sharp Park berm? The California Coastal Commission has tasked them with repairing the berm. The primary concern was protecting infrastructure in the area and the golf course.
  - R: We are in contact with San Francisco Parks and Recreation, who oversee the berm and the golf course.

What amenities do you use and appreciate along Beach Blvd and would like to see discussed at the next workshop?

- I use this site for walking and hiking.
- Keep it natural, minimal infrastructure with weatherproofed seating. This is actually a small constrained area that is already active and busy with foot and bike traffic.
- A wide surface that allows cyclists and pedestrians.
- The trail/walkway along the sea is nice and visiting the pier. We do sit on the beach but never use the water due to the riptides.
- I live on Beach Blvd, as such it is my life-line conduit to the outside world. I occasionally use its benches and the facilities at the pier and it would be nice if these were maintained and upgraded. But most important for me is that Beach Boulevard itself remains viable and protected.
- Walking paths, seating
- Pier and Chit Chat Cafe.
- Beach Blvd. promenade is a safer option for seniors to walk and enjoy the ocean and sunsets. I've lived here since 1953, and as I strive to age in place, I find it difficult to walk in sand. Hand rails and benches are essential for the experience.
- The ability to walk safely along the ocean and to access it safely. The retention of the Sharp Park Neighborhood historical ambiance and coastal ambiance must continue as referred to above in the Gen Plan. Pacifica assets should not be diluted or dismissed.
- Wide pedestrian/cyclist path. Benches/seating. Sturdy railing.
- Pier, seating, promenade, biking paths, bathrooms, beach access.
- I would appreciate wider sidewalks along the promenade, increased seating, and increased picnic areas. I would also propose removing the parking spaces along the north sea wall and replacing them with benches for seating and increased walking areas. The parking spaces can only accommodate a few individuals, whereas many more can enjoy the beach without them.
- Beach Blvd. Promenade needs to be protected. It's a gem.

- Walking the Esplanade, walking the Pier, Chit Chat Cafe. We need more oceanfront food and beverage options, bars, restaurants, parking.
- The North Seawall. Sports and Leisure activity rental places, food/coffee places.
- Walkway, road, infrastructure (sewer and water and PG&E lines)

Please feel free to add any additional comments.

- A possible 8 foot addition to the sea wall?! -- exactly what will destroy the scenic character of the area, eliminating the view shed from Palmetto to the ocean and all that has been inviting to visitors for over a century of time.
- The city has come a long way from its managed retreat stance for West Sharp Park a few years ago. I am relieved and grateful that this is no longer the prevailing attitude. I am also very impressed by the depth, commitment & thoroughness of the process for identifying and flushing out alternatives that the city has adopted since. It is somewhat humbling and eye-opening to learn, though, how complex the problem really is that we are facing, and how difficult it will be to move forward in a rational, realistic way. Thank you for making it possible for citizens to participate in this process.
- It would be wonderful to finally have the old waste water treatment plant site developed to offer visitor serving amenities.
- A few folks asked about "living shore" barriers as an alternative. This cannot be accomplished without moving existing buildings and infrastructure (managed retreat), which the city has already said is not viable and will not be considered. I suggest this alternative be mentioned, but not considered for this reason.
- Please consider explanations about how green options are being integrated into a new sea wall. The comments from the public about living coastlines do not seem to be practicable, and are not reflective of the feelings of actual residents. Please just focus on increasing the quality of the public's interaction with the coastline and rebuilding the sea wall in an environmentally friendly, sustainable, and cost-effective manner. A sea wall that obscures views is not in the interest of the public.
- Focus more on solutions and less on process. Let’s make something happen and get the infrastructure protected. A sea wall is critical to the entire SPSP. Waste water treatment site will continue to be just an eyesore until we SOLVE the sea wall issue. New Hotel, critical to Pacificans’ economic futures, will never happen until we have a solid plan in place to build a modern sea wall. So, let’s do the obvious.
- There are ~31 residences directly on Beach Blvd. Nice people, but this project is not for 31 families. We could buy them out with $50 million and go another 50+ years. This project is for not only the thousands of Pacifica residents, but the 10s of thousands of Bay Area and California and US and International visitors who already are using the area to walk, bike, do photography. We need to be respectful of those who are in current residences, but expand the Beach Blvd area for visitor-serving commercial use. We need more off-street parking nearby, we need restaurants and bars. Obviously start with the City Hall/Old Sewage Treatment Plant, and link to the Palmetto redesign. Buy out residences as they become available.
- It seems that a lot of money is being paid to consultants to come up with overtopping, sea level rise, and a lot of doomsday scenarios and reasons a seawall won’t work perfectly, so that we don't have to build one. Seems like you could just get bids from companies and try to raise funding using all the CA state reps. that said they would help. While grateful to be part of the process, it seems like "Analysis Paralysis". If you pay a lot of money to consultants with open-

ended questions, then they're going to come up with a lot of what-if scenarios. I would have hoped to focus the consultants' objectives on coming up with a practical structural engineering design, that could be bid out, more of a practical solution orientation, rather than esoteric discussions.

Appendix E2: February 4, 2021 Post-Workshop Survey Results

City of Pacifica Beach Blvd. Infrastructure Resiliency Project
Worksheet Key Themes and Responses
February 4, 2021 Workshop

Key Themes

Alternative 1 – No Project

- The majority of respondents (11 of 20) indicated that a no project alternative is an unacceptable path forward as it entails no pros and all cons.
- The most substantial cons include expedited erosion along the coastline, public safety risks, and the costs associated with relocating utilities, businesses and homes.
- One respondent requested estimates related to the costs for moving existing utilities and infrastructure in the project area.

Alternative 2 - Beach Nourishment

- Roughly half of respondents (8 out of 20) were supportive of this alternative, three of which indicated it should be considered in conjunction with other alternatives, particularly a replacement seawall.
- Pros:
    - Maintains and restores the existing beach.
    - Serves as a means to ensure continued tourists visits and dollars.
    - Limits the efforts of managed-mandatory-retreat.
- Cons:
    - High costs due to ongoing maintenance needs and replenishing sand supply.
    - Uncertainty of sand supply.
    - Does not protect against wave overtopping or wave energy.

Alternative 3 - Sand Retention Structures

- A quarter of respondents (5 of 20) indicated varying levels of support for this alternative. These respondents indicated it should be considered in conjunction with other alternatives and did raise concerns related to costs and long-term maintenance needs.
- Pros:
    - Reduced beach maintenance needs and sand erosion.
- Cons:
    - Very costly, especially since it must be combined with beach nourishment.
    - Requires expensive and unsightly fortification.
    - Adversely affects neighboring beaches.
    - Can introduce unsafe currents.
    - Ongoing maintenance needs, especially due to disruptions in rock placement resulting from high wave energy events.

Alternative 4 - Replacement Seawall

- Nearly half of respondents (9 of 20) indicated support for this alternative noting its practicability as a "one size fits all" solution.
- Pros:
    - Protects private property, utilities, business, and the promenade, which is a major draw for tourists.
    - Ensures vitality and recreational activities of the shoreline.
    - Serves as incentive for future private investment.
    - The most practicable and doable option.
- Cons:
    - Costs.
    - Construction time – homes, businesses, and utilities need protection now.
    - Height requirements and impacts on views for visitors and local residents.
    - Restricts beach access.
    - Adds to the optics of a built environment and takes away from the natural transition from the city to the ocean.
    - Further loss of sand supply.

Alternative 5 - Rock Revetment

- Nearly half of respondents (9 of 20) did not prefer this alternative, particularly given ongoing maintenance needs and a lack of beach access.
- Pros:
    - Relative affordability.
    - Ability to increase the service life of a new seawall.
- Cons:
    - Unsightly and is not a sufficient alternative by itself.
    - Beach erosion.
    - Disruption of the coastline's aesthetics and impedes beach access, which subsequently reduces the appeal to tourists.
    - Does not prevent liquefaction of surrounding areas.

Public Space Opportunities – Northern Promenade

- Requests made for additional information on how these options promote public safety.
- Parking Access Option
    - Invest in space for people, not cars.
    - Parking is not needed on Beach Boulevard north of Montecito.
    - A lack of parking spaces along the promenade means visitors will park in surrounding neighborhoods.
- Green Corridor Option

  - Plants have historically not fared well in the BBIRP project area.
  - Utilize native plants to the greatest extent possible.
  - Offers little value – tourists do not come to Beach Boulevard to see plants.
  - Aids in the beautification of the area as it mitigates the disconnect between nature and the built environment.
- Enhanced Walkway Option
  - Adds to the desirability for visiting the area; benches, lights, and art make it something people will want to visit regularly.
  - Offers opportunities for additional, more expansive community events.

Public Space Opportunities – South Park

- Plaza Park
  - Provides a greater range of amenities, thereby encouraging visitors to the area.
  - Plants are susceptible to wind and sand impacts.
  - Maintains pedestrian and handicapped access from Paloma Ave. to Mori Point's trail system.
- Beach Expansion
  - Not needed in the South Park area given existing beach adjacent to the golf course.
  - Additional beach would susceptible to erosion.

Additional questions/comments on the Range of Alternatives or Public Space Opportunities

- The way the alternatives were presented at the February 4 workshop were misleading – it seems as if each alternative is equally feasible and affordable. The City should pursue an alternative that ensures long-term climate resiliency and the utmost level of beach protection at the lowest possible project lifestyle cost.
- Public dialogue around long term resiliency of the project area is needed. This includes likely difficult conversations about balancing the needs of residents within the project area to the City at large.
- A long term plan regarding the relocation of infrastructure within the project area is needed, as is transparency in assessing the costs associated with that relocation.

General Public Comment

- The City should be prepared to have difficult conversations around what is actually feasible and affordable as the Preferred Alternative is publicized.
- A deeper dive into case studies of similar coastal resiliency projects would help mitigate potential public concerns around the credibility of the BBIRP process.
- There is a need to balance resources (e.g. funding) available for short-term fixes with the long-term needs of the project area.

Full Results

Total Responses: 20

How did you hear about this workshop? (Note – some respondents noted multiple ways in which they were notified)

- City Email Blast: 13
- Social Media: 3
- Word of Mouth: 4
- Postcard: 2
- Physical signage: 3

What city or neighborhood of Pacifica do you live in?

- Sharp Park: 1
- Different neighborhood or "Pacifica" (e.g. did not specify neighborhood): 5
- San Mateo County resident: 1
- Pacifica Property owner: 1
- Mori Point Vista LLC: 1
- Pacifica Historical Society: 1

Alternative 1 - No Project - What pros and cons do you envision with this alternative?

Figure 1: Alternative 1 – No Project

- More damages to the seawall.
- No pros, all cons. Costs of moving infrastructure. Costs of moving thousands of Pacificans. Loss of revenue due to loss of businesses in Sharp Park business district.

- There are only cons, which will only lead to Coastal Commission push for managed retreat. A growing, viable community with an increased visitor, pro-business, and increased sales tax. The seawall IS the attraction. People use, enjoy the promenade more than the actual beach.
- That's not an acceptable option, obviously.
- Disaster; loss of property and financial ruin for property owners.
- Not an option. Homes and businesses need to be protected by a sea wall designed to last at least 50 years. Neglect like this will destroy our community.
- Move-out of Sharp Park residents. Lawsuits. Devaluation of homes across Pacifica.
- Erosion will continue until intercepts the building structures. Upfront cost may be less expensive but will have to maintain and is a short fix.
- No project would be a disaster to the entire Community.
- Not a well thought out question. The existing sea wall can be dismantled, and the natural beach can extend inward beyond Beach Boulevard. Eventually, that is what will naturally happen. In the meantime, use the sea wall and fortification money to compensate affected homeowners for their unfortunate loss.
- This would be unacceptable. The City needs to do some work on this place. Neighboring towns like Half Moon Bay have adequate funding and care for their public beaches.
- Erosion of the road. More overtopping of the "wall" and flooding of the houses nearest the ocean. We would like to know how much to would cost to begin moving the infrastructure instead of trying to "protect" it into the indefinite future.
- Doing nothing is obviously not a valid options; this is a public safety hazard.
- Total disaster if we don't build a modern seawall. Our core issue in the Beach Boulevard Infrastructure Resilience is installing a modern seawall to protect: If we don't, we will certainly lose:
    - Hundreds of millions of dollars in public infrastructure
    - Electric service, natural gas service, sewer service, storm drains, a critical sewer pumping station, council chambers, access to miles of Coastside trails, picnic areas, beach promenade, a golf course… all ride on this
    - Thousands of homes, and the life savings of homeowner … ride on this.
    - 100+ small businesses. Many of them mom & pops
        - A future hotel that represents Pacifica's ability to survive financially as a city!!! Ride on
- Establish a walkable and sustainable Sharp Park "small town… downtown district" for Pacifica… Ride on This
- Building a modern seawall is such a no brainer. It boggles my mind how it can get so bogged down in anti-growth activism and CA Coastal Commission politics.
- I urge Pacificans and our city council to work together to make a modern seawall along Beach Boulevard happen in a timely manner. It's not in the least bit an exaggeration to say the future of Pacifica rides on a modern seawall along Beach Boulevard.
- Doing nothing is obviously not valid option; this is a public safety hazard.
- It's obvious that protection of the current wastewater infrastructure is necessary while the city plans for more sea level rise than is now predicted. SLR will eventually overtake Pacifica so we need to actually plan ahead for how to set up this town for sustainability past what is currently imagined.
- What is Kerns & West's (assume respondent is referring to GHD as the design consultant) estimate of financial loss to Pacifica if nothing is done here? What is the cost of inaction? Is it

just the loss of Beach Blvd, removal of everything we have here today and the Pier? An estimate projected out covering 2030 to 2070 is what we need. The same time frame if a 50 year Sea Wall had been built. If no Seawall is built it would mean possible Ocean erosion east into Pacifica neighborhoods, business and expose Hwy 1. The loss of our future vision and investment potential without protection. No historic main street, old sewer plant project (vacant now for 28 years), City Hall or Library. The cost to residents? Hundreds of homes at risk and millions in infrastructure expense needed at taxpayer's expense. If this center of town, including Fairway Park is retreated, and abandoned to Sea level rise the loss would represent 1/3rd of Pacifica. We would all pay if central Pacifica is damaged.

Alternative 2 - Beach Nourishment - What pros and cons do you envision with this alternative?

Figure 2: Alternative 2 – Beach Nourishment

- Won't last long.
- Beach nourishment is key to limit the efforts of managed - mandatory- retreat. We must have this. The only con is cost.
- Looks nice, but is it doable, affordable and can it be maintained?
- More pro than cons; it should be explored.
- Not feasible and very expensive. Too susceptible to erosion. Not really a long-term solution unless you have limitless access to funds.
- Beach nourishment should be considered in combination with other alternatives. The sand that is needed could be pumped from the sand that lies offshore. This is done on the East Coast in many places and there is no reason why it can't be done here.
- Attraction of visitors. Beautification. Sustainability of future maintenance.
- It's not a long term fix, but I do like that the attractive seawall with water barrier and the expansive wide beach, beautiful, looks inviting.

- This is a good concept but only practically viable if the energy of the wave action is attenuated. Placing underwater structures out into the deeper water to attenuate the wave energy seems the only way to slow the erosion. Doing this also suppresses the need to be more aggressive in fortifying a sea wall so the land maintenance would be less costly.
- Not an acceptable long term solution: requires expensive and unsightly fortification; adversely affects neighboring beaches.
- This would be a great option to restore the beach. I believe that there should be regular beach cleanups and coastal care to many of the beaches in Pacifica. They are often left unkept. I believe restoration into the community would help create a really impactful space for years to come.
- This is a stupid alternative. Beach nourishment does NOT work on coastlines as energetically active as ours. It would be a waste of money, and need to be replaced often.
- Not enough money or source of sand. Moving the wall inland could yield a similar solution thought without those particular downsides. Why is this not being look at? Let's first define exactly what it is we are trying to protect. The City Manager says the project is about protecting infrastructure. What is the infrastructure, what condition is it in, what is its remaining life. Should we be moving some of it away from this most vulnerable area anyway?
- This could be part of the solution. A MODERN SEAWALL IS THE REAL SOLUTION though.
- Cost.
- Much of the Sharp Park neighborhood just north of the Golf Course is below sea level. I don't see this working without a much taller recurved Seawall behind it. The beach sand level needs to be raised much higher above the mean water level in conjunction with a taller Seawall in order to prevent winter storm overtopping and needed flood protection to the south end neighborhood.

Alternative 3 - Sand Retention Structures - What pros and cons do you envision with this alternative?

Figure 3: Alternative 3 – Sand Retention Structures

- We need this and seawall replacement.
- There are concrete honey combs used in UK. I prefer all kinds of sand structures. Cost is only con.
- Also good in conjunction with Alternative 2 but is it doable, affordable and can it be maintained?
- I consider the breakwater in HMB; which has now been in place for 20 years.
- Very expensive, especially since it must be combined with beach nourishment. Can introduce unsafe currents.
- Sand retention structures often have unintentional impacts where one side of the retention structure results in beach preservation while the other side results in beach erosion as it can be seen here in this photo. With that said, a beach retention structure that is thoughtfully planned with regards to how it would impact the beach and is used as a limited strategy (rather than a ubiquitous one) is worthy of consideration.
- Not attractive. But some added protection, and reduction of maintenance and sand erosion.
- This is a temporary solution, requires constant maintenance.
- I like the idea but I only see this as viable if the westerly direction wave energy is attenuated as described in Alternative 2.
- Not an acceptable long term solution: requires expensive and unsightly fortification; adversely affects neighboring beaches.
- This is a great option as well. It integrates the beach nourishment to the next level. This is how the city should move forward.
- Groins are not as good alternative plan to help erosion of a beach. Sand erodes from the upstream side of the groin and erodes from the downstream side. During especially high energy times of the year, the rocks used to construct the groin are likely to be displaced and moved around.
- This could be also part of the solution. A MODERN SEAWALL IS THE REAL SOLUTION though.
- Why can we not look at moving the shoreline back and having natural sand retention like dunes, that worked so well in Linda Mar and actually increased public use and desirability of the beaches. You obviously are considering widening the beach here inland in the landscape proposals.
- Cost.
- Mori Point is a natural groin structure which provides much sand retention on Sharp Park beach. So it too will help retain sand on the beach when a 50 year Recurved Seawall is constructed in place of the current promenade.

Alternative 4 - Replacement Seawall - What pros and cons do you envision with this alternative?

Figure 4: Alternative 4 - Replacement Seawall

- The cost and construction time will be a major factor.
- The sea wall is used more than the beach. This allows visitors to come to enjoy the views. Kevin Mullins got us engineering grant. We must protect private property, large property tax base, and infrastructure. Seawall is totally worth the investment. The only con is the band-aid, patch fix. We need a new, higher one.
- Seems to be the most practicable and doable option. My main concern is the necessary height of the new wall to achieve long-term protection of Beach Blvd. with its infrastructure and the dwellings that line it.
- Depends on other (interlocking) parts.
- This is a best option. A seawall that is designed to last 50 years or more will protect the community and establishes vitality and recreation to the shoreline areas and business areas beyond in Sharp Park.
- A seawall along the whole stretch of Beach Boulevard is a one size fits all solution. I support building a seawall (or replacing the one that is there) where it is needed but not along the entire stretch of beach boulevard.
- The ultimate protection and safety. Increased investment in the area.
- This is the best answer. A con is taking away views from houses on street but it protects their property investment which is the most important thing.
- Yes, replace the sea wall, but it doesn't need to be so aggressive if underwater structures are placed out into the deeper water to attenuate the wave energy seems the only way to slow the erosion. Doing this also suppresses the need to be more aggressive in fortifying a sea wall so the land maintenance would be less costly.
- Too early to say. If there is a presently undiscovered super-solution, maybe then. Currently, the choices will be extremely expensive and unlikely to meet longevity expectations.

- This is not a good solution. This would create a lack of beach access and a cold barrier from the city to the environment. I also think this would cause residents to move out of the area anyways.
- It all depends on how high the wall is, how long it is expected to last, and do visitors get a real beach experience or do they just walk along a coastline of riprap.
- The image [provided below] just shows replacing the open railings with a wall, no net new height by the Chit Chat where I've seen waves recently breach 15'-20' above the existing 4' high wall. An 8' higher wall is apparently necessary from the December presentation and will still have wave overtopping. I do not see how that can be built and maintain public views and use of the beach. What are the implications of a taller wall for the neighborhood to the north and the beach at the berm? A higher wall will impact these areas and may cause further loss of sand and existing berm and rock revetments. We need facts and costs and not misleading pictures to make an informed decision.
- Our core issue in the Beach Boulevard Infrastructure Resilience is installing a modern seawall to protect: If we don't we stand to lose:
    - Hundreds of millions of dollars in public infrastructure
    - Electric service, natural gas service, sewer service, storm drains, a critical sewer pumping station, council chambers, access to miles of coast side trails, picnic areas, beach promenade, a golf course… all ride on this
    - Thousands of homes, and the life savings of homeowner … ride on this.
    - 100+ small businesses. Many of them mom & pops.
    - A future hotel that represents Pacifica's ability to survive financially as a city!!! Ride on This
    - Establish a walkable and sustainable Sharp Park "small town… downtown district" for Pacifica… Ride on This
- Building a modern seawall is such a no brainer. It boggles my mind how it can get so bogged down in anti-growth activism and CA Coastal Commission politics.
- I urge Pacificans and our city council to work together to make a modern seawall along Beach Boulevard happen in a timely manner. It's not in the least bit an exaggeration to say the future of Pacifica rides on a modern seawall along Beach Boulevard.
- Cost and eventual failure, beaches entirely destroyed, tourists have no interesting place to go except Linda Mar which will become untenable for residents and the protected snowy plovers.
- The only 50 year solution to protecting this neighborhood is first and foremost a modernized recurved Seawall. Still providing an elevated pedestrian promenade. Built in conjunction with Beach nourishment, sand retention measures and Rock Revetment. A transition in the seawall with an additional sand dune element going south from the Pier. A more natural looking elevated structure could work to close the southern gap at Clarendon and meet the Levee.

Alternative 5 - Rock Revetment - What pros and cons do you envision with this alternative?

Figure 5: Alternative 5 – Rock Revetment

- Con... unsightly as pictured. Pro, many people come to sit on these rocks.
- Not very pretty but if it's affordable and does the job I'd be for it. It would be my second alternative after the sea wall. On second thought I'd prefer it over the sea wall if it offered the same protection but without the loss of view that an elevated sea wall offering the same level of protection would bring.
- It is not a resilient solution by itself.
- This provides a good protection to the seawall from wave forces. We see this already in areas where it's used. Rock revetment plus a seawall replacement would improve the service life of the new seawall.
- Often times, when a shoreline is hardened, it results in the beach eroding because wave energy bounces off of the hardened shoreline and reflects back out into the near shore waters and, as it does so, carries beach particles - incrementally - back out with it. This phenomena, over time, erodes the beach. In addition, a rock revetment approach would destroy the aesthetics of the beach and interfere with the enjoyment that so many Pacificans and our visitors enjoy so much.
- Still allows water saturation of soil so could result in liquefaction behind the rocks in an earthquake. Good but not as a replacement of the seawall.
- It's unsightly and there's no water barrier to prevent erosion from the wall supports, plus it takes away beach access and use and enjoyment of a sandy beach.
- I don’t like the rocks. They are too dangerous of a liability for the city when people decide to explore on them and get washed out to sea. They look cheap and ugly.
- Not an acceptable long term solution: requires expensive and unsightly fortification; adversely affects neighboring beaches.

- This aesthetically looks more natural. However, it would cut off public access to the water. Currently Linda Mar beach is the city's best kept beach and is also the most crowded. Manor area needs more public investment into parks and beach access. I do not believe this would attract tourists into Pacifica or would be pleasing by residents.
- A rock revetment is a statement of conceding that saving beachfront property is the goal of the stabilization project. The beach itself will be gone.
- Revetments need a lot of maintenance and the Coastal Commission is not allowing the neighbors to the north to increase the height of the revetment at all. There is no coastal access with this option which is a REQUIREMENT. Why are we even talking about this?
- This could also be part of the solution. A MODERN SEAWALL IS THE REAL SOLUTION though.
- No beach again ever, tourists directed to Pacifica State Beach and endless disturbance of the threatened snowy plovers.
- Rock Revetment eventually moves and can block beach access. How it's currently being applied in Pacifica is working for those applications. But not for the entire Seawall structure on Beach Blvd. as depicted.

For the Northern Promenade, the project team is exploring the following: Enhanced Walkway, Green Corridor Option and Parking Access Option. What elements do you like specifically about each of these options?

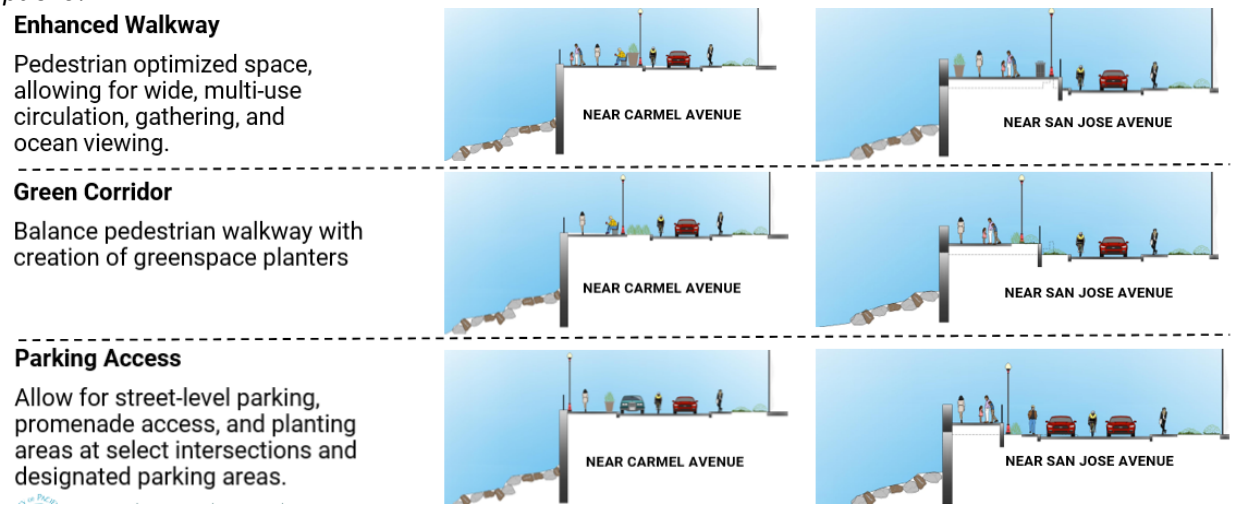


Figure 6: Northern Promenade Public Space Opportunities

- Parking isn't needed along Beach Boulevard north of Montecito. There is currently hardly any parking and we should invest in people, not cars. Also, green corridor? The sea water will eat that up.
- Elevated walk way, increased height is good. Plants have been a big loser here. They just don't do well, salty air, and high winds. And if we don’t offer parking, then visitors will go into neighborhood. Parking super important.
- I'd like the green corridor option with native beach plants for its aesthetics. If that's too difficult and costly to maintain, I'd option for the extended walkway. Sorry cars, I'd rather get you away from the beach promenade.
- More space for people, less for autos.

- Parking is a must. You can build a beautiful area to visit, but if cars have to park in the nearby neighborhoods it will cause problems to those neighbors.
- Enhanced Walkway is beautification of the area, making it desirable for residents and visitors and nearby businesses. Benches, lights, art make it something people will want to walk and visit regularly. Parking is available 1 block away or on the side streets, so don't have to sacrifice the other options for parking when there is an alternative. Greenery is nice, but not in lieu of benches and art.
- Most important is enhanced walkway and enjoyment. A green corridor offers little value, people don't come to the ocean to see plants, plus plants easily die in an ocean environment. I do think parking is important.
- Enhanced walkway with no maintainable plants. Trying to maintain plants there is just a lost cause.
- That is such a minor issue, dependent upon the sea wall decision, that it was hardly anything more than whimsical musings.
- The green corridor enhances the disconnect from nature that will occur if a wall blocking the view to the ocean is erected. I also believe the area in general needs more public green space and parklets. The enhanced walkway creates a boulevard for public arts and community events to happen. The parking access open is least favorable as it is similar to what is in place now. There should be less parking and encouragement for people to park further away and walk.
- It is Important for those walking near the wall to be able to look over it to view the ocean and the waves. The actual beach will have been eroded away. I personally think the "Parking Access" option is the best because often the weather is not nice, but it still nice to sit in your car near the ocean. There is no need for the wide promenade, a modest width is fine.
- Absolutely nothing. What are we doing to protect pedestrians in this area? My dog is smart and refuses to walk in this area north of the pier. As I mentioned in the meeting, in January I saw a strong 30 year old man standing across the street from the sea wall violently knocked down by a wave and thrown against a retaining wall! The force could have killed a child. Raising the promenade is good for visibility for people walking, but cuts off the beach views from Beach Boulevard and the connecting streets to the east. It also increases the risks that people can fall vertically as well as horizontally. Do any of these options reduce risks to injury and possible loss of life? Perhaps pedestrian access here should be limited; it is better suited to the area south of the pier.
- I like the enhanced walkway the best. This alternative maximizes the number of people who can access this important recreation and exercise resource.
- All these are horrible.
- Enhanced walkway is best, but no need to raise the roadway. Keeping the road way at the level it is today keeps driveway access to the properties along the street. These properties will lose some first floor views but retain driveways, and gain protection.

For the South Park, the project team is exploring: Plaza Park and Beach Expansion. What elements of these two options do you see yourself using the most if a hybrid of these options is pursued?

Figure 7: South Park Public Space Opportunities

- Most locals, and visitors, enjoy the seawall/ promenade for ease of use. Plaza and parking tables are used by far more often.
- If the beach expansion option would allow for a lower sea wall at the same level of protection I'd prefer that. If the height the wall or barrier would have to be same to protect Beach Blvd, I'd go with the Plaza Park option.
- Difficult to judge.
- The Plaza Park option works best for this town. The park provides more amenities and is a more friendly way to visit the area. There is already a long expanse of beach to visit south along the berm.
- The Beach expansion and plaza park would benefit from a hybrid approach with beach expansion emphasized over a plaza park approach. In addition, the drawing depicting beach expansion is much less compelling than the drawing depicting a Plaza Park which tips the voting in its favor when, in reality, a wider beach would be greatly valued by the beach going public.
- The beach is nice, but there is beach by the golf course, but no park anywhere else. Having BBQ, benches, fitness spots will make people want to hang out there. Hopefully bring in some visitor dollars, or just increase the value of homes by the reputation of Pacifica being a scenic and desired location.
- People enjoy the South Park - I see family picnics and R&R; it's important and attractive. It's not important to expand the beach here because there is the beach along Sharp Park Golf Course.
- Go with the beach expansion. It’s already been proven that a plaza park with grass and plants is not sustainable with all of the wind and sand that settles in the space.
- The plan for the future interface between land and sea in this area is so far away from being defined, this is like choosing the frosting before the cake.
- The park plaza would be nice for picnics and outdoor gatherings. I find the beach access is great and is appreciated by locals.
- The Plaza Park, with minimal vegetation, makes sense. The "extended" beach of the Beach Expansion alternative will likely erode away quickly.

- I like it the way it is now. Just ADD A MODERN SEAWALL and this valuable resource will be protected.
- Need places for dogs to relieve themselves. Need sand management if you hope to have any living plants or usable facilities in this area. How much time and money does Public Works already spend moving sand here? How will these designs help that situation? And where is the protection for Clarendon Road flooding?
- Allowing a tiny bit of beach is better than none.
- I voted for the Plaza Park with the understanding that the red line along the ocean side walkway represents an elevated Seawall. A Seawall and Dune combo system, more natural looking than engineered for the area yet providing needed flood protection to the southern Clarendon area. And closes the gap at the levee. Maintaining pedestrian and handicapped access from Paloma Ave. to Mori Point's trail system.

What other questions/comments do you have on the Range of Alternatives or Public Space Opportunities?

- I disagree with one of the stated objectives of the project being rebuilding the Beach Blvd seawall. The primary objective should be to build long-term (i.e., >75 years) climate resilience into Pacifica's shoreline at the lowest possible project lifecycle cost to the city and its taxpayers.
- It would be nice to have the same bars for the views to be able to see through if seawall elevation raised. Clarendon seawall extension is a MUST.
- It seems to me the range of alternatives was presented as if they were all equally doable and affordable. That does not seem right and I believe that was also hinted at by the presenters. It would be nice to hear what's really possible and what are dreams. But I assume that reality check will come next.
- We must close the gap between the current end of the seawall and the berm. Where is that in this design?
- I would like to see as much attention paid to preserving and expanding the beach as is currently dedicated to preserving what is east of the beach.
- From the pandemic's requirement to shelter-in-place we've learned to appreciate even more being outdoors for a healthy refreshing walk, and an opportunity to more safely social distance outside with a friend. There's nothing like a walk at the ocean for Pacificans and visitors. This should be a guide.
- Underwater structures will not only attenuate the wave energy coming to shore but also supply an underwater infrastructure for wildlife, mainly fish. Once the Wildlife takes hold around the structures Pacifica will explode with fisherman and use more of the small businesses in the area. This is a win, win, win, everywhere. Surfers don’t use this area the way it is now so they really shouldn’t complain as they prefer different areas to surf anyway.
- It is truly heartbreaking for homes of fellow Pacificans to be threatened along a particular section of our shoreline. But if costing tens of millions of the community at largest taxpayer contributions to alleviate that small percentage's distress, at the expense of supplying necessary services, like wildfire abatement, sanitation, healthy beaches, transportation, etc. to the rest, then the time has probably come to end the guarantees of front row privilege.
- Why isn't there consideration to bringing in local designers and engineers who have worked on projects specifically along the coasts? Have the residents of these areas been informed of a timeline of construction? How will Pacifica create greater access to other public beaches if the access to this one is loss?

- We NEED to have a long term plan about moving the infrastructure, and an honest assessment of what the cost will be (in today's dollars). DO NOT AVOID doing this, even if it is planned to be something that does not happen for another thirty years or so. Long-term planning is necessary. It is also necessary to document that walls such as the kind being proposed are actually successful in holding together alone a high energy coastline such as ours.
- What are our goals Pacifica? The project engineer Gillian Millar made it clear that building a wall was only a temporary fix, whatever we build will need continual maintenance and the ocean will win in the end. The discussions we are having now are not about building resiliency, only about replacing a wall, which will buy us a little time. It's time to start the real discussion about resiliency so we can ensure Pacific can survive for the next generations.
- Until Pacifica is willing to deal with the reality of increasing sea level rise, there is no hope for the town to survive into the next century.
- A public art and exhibition space, music or other smaller public events would work in the plaza space. The picnic area has been useful in good weather, but landscaping has not done well there.

General Public Comment

- The California Coastal Commission's policy guidance on sea level adaptation strategies is particularly relevant as Pacifica considers alternatives for Beach Boulevard (42 pages - https://documents.coastal.ca.gov/assets/slr/guidance/2018/7_Ch7_2018AdoptedSLRGuidanceUpdate.pdf).
- After the southern seawall at Clarendon must be completed, and whole new seawall should be raised. The seawall IS the means to the views for all our visitors. And thanks very much for great program. ****this and other recordings, where are these stored for public to view? When posted?
- Really appreciate the city's effort to include citizens in the planning process. Unfortunately, I suspect in the end the realistically doable options will be very limited. If so, it would be good to prepare the public about limitations sooner rather than let us believe the sky is the limit.
- I don't think building a stronger or higher seawall is a solution, in and of itself. As part of a greater, multi-part plan, it might be a good idea.
- Any idea of a "living reef" or any other form of managed retreat is not a solution. There is no room for this and the costs to the city would be enormous. The current seawall has outlived its useful life. We need to have it replaced with a 50-year wall that extends to the berm.
- The Seawall has worked well for a long time, even the retaining wall has been surprisingly effective. A new seawall is really the best and most surefire option to protect the city and residents and put this behind us. Once that's there, investors can feel confident in investing in the area. Home values will probably increase as well. The discussion should turn from "if", to how high, what type, and what combination of alternatives go along with the new seawall. Personally, I don't see wave overtopping as much of an issue, and hope that we can keep the increase of height minimal, which will also keep the cost reduced.
- Don’t give into the people who want something done immediately. Implement the plan once, and don’t waste money with temporary Band-Aids via public pressure.
- Would very much appreciate the opportunity for Pacifica's citizens to be presented with a series of case studies for similar projects in similar conditions as exist in Sharp Park. Otherwise, how will speculative plans generate the necessary credibility to unite a deeply divided community?

- Invest in beautifying the nature and elements of the town to help foster more community. Treat Manor with equal attention as there is in Linda Mar. Use this as an opportunity to engage with the businesses and fishermen that come the beach each day.
- Long term planning for West Sharp Park needs to take into account that over time there will be more flooding in the area. Encourage new construction to have ground floor construction that accounts for this inevitability. Also, "raising" existing structures will prolong the useful lifetime of these buildings.
- Honestly, in my opinion the presentation this week did not help move the conversation or analysis any further along. I am very disappointed. We were promised a discussion of possible natural solutions, only adding native plants next to the wall was discussed. It feels like a wall replacement has already been decided and we are just wasting our time. Why is this not a city wide conversation with the whole city council present? These are issues that affect all of us now and in the future, in Sharp Park but also along the rest of our coast. We need to start talking about concerted plans for a sea level rise and adaptation, and the hard truth that some structures will be lost. The City has already been forced to remove many structures in Sharp Park, Linda Mar, and Manor. Of course no one likes to have these discussion, but it our reality and it must be addressed. There are other buildings now teetering on the cliff edge of Palmetto behind the French Patisserie. Palmetto Avenue itself is threatened across from the Fish and Bowl. We need visionary leadership that can help residents deal with reality and just put the problem off to the future by hiding.
- We need a MODERN SEAWALL. The future of Pacifica depends on this. Our core issue in the Beach Boulevard Infrastructure Resilience is installing a modern seawall to protect: If we don't we stand to lose:
    - Hundreds of millions of dollars in public infrastructure
    - Electric service, natural gas service, sewer service, storm drains, a critical sewer pumping station, council chambers, access to miles of coast side trails, picnic areas, beach promenade, a golf course… all ride on this
    - Thousands of homes, and the life savings of homeowner … ride on this.
    - 100+ small businesses. Many of them mom & pops
    - A future hotel that represents Pacifica's ability to survive financially as a city!!! Ride on This
    - Establish a walkable and sustainable Sharp Park "small town… downtown district" for Pacifica… Ride on This
- Building a modern seawall is such a no brainer. It boggles my mind how it can get so bogged down in anti-growth activism and CA Coastal Commission politics.
- I urge Pacificans and our city council to work together to make a modern seawall along Beach Boulevard happen in a timely manner. It's not in the least bit an exaggeration to say the future of Pacifica rides on a modern seawall along Beach Boulevard.
- Think longer term. Do we care or not about how future Pacificans can enjoy what we have in this town? Or do we destroy it for profit now?
- Please find us a creative option that combines modern Seawall engineering for lasting safety with art and natural features that will give us 50 years of protection in a uniquely aesthetic promenade structure. Let art, nature and engineering guide us to the best option.

Appendix E3: April 29, 2021 Post-Workshop Survey Results

City of Pacifica Beach Blvd. Infrastructure Resiliency Project
Post Meeting Survey Responses
April 29, 2021 Workshop

Key Themes

Improving the online Workshop experience moving forward

- Visually demonstrating the queue of speakers.
- Refinements to Q&A Sessions:
    - Limit the amount of time each person has to ask a question.
    - Limit the number of a questions an individual is allowed to make.
    - Ensure attendees are only asking questions and save comments for Public Comment.
    - Provide live answers to questions submitted through the Q&A Pod.
    - Differing opinions on length and frequency of Q&A sessions: some respondents requested maintaining the number of sessions and providing additional time to allow all questions to be asked while others
- Ensure future workshops are not scheduled at a time that conflicts with other local, state, and federal government public meetings – there were town halls hosted by Rep. Jackie Speier and State Senator Josh Becker the same night of this workshop.
- Request attendees provide their affiliation and/or whether they are a Pacifica resident prior to speaking.

Unanswered Questions

- Project funding:
    - How the project will ultimately be paid for
    - Contingency plans should the City not receive state/federal funding.
    - Whether the City has already began to set aside funding for remaining phases of the project.
    - Where funding for ongoing operations and maintenance will come from, particularly at the end of design life for the alternative selected.
- Whether the public will have access to the full analysis of the hybrid alternative(s) prior to the June City Council meeting.
- Level and type of coordination efforts undertaken to date with the California Coastal Commission and San Francisco's Recreation and Parks Department.

Additional Comments

- Support for a replacement seawall or a hybrid option that includes a seawall, particularly as a means to protect homes and businesses as well as instill confidence in private developers to invest in Pacifica.
- Clarification on the status of the 2018 Local Coastal, including the extent to which it is and is eligible be guide the BBIRP process.

- Requests for more time for the public to review the hybrid alternative(s), including an additional workshop, prior to it being presented to City Council.
- Timing for completion of the project, including 1) whether short-term fixes to the existing seawall are feasible and/or needed and 2) prioritizing construction of replacement infrastructure (e.g. starting with the North Wall).

Full Results

Total Responses: 32

How did you hear about this workshop?

- City Email Blast: 17
- Word of Mouth: 4
- Social Media: 4
- Postcard: 6
- Physical Signage: 1

What city or neighborhood of Pacifica do you live in?

- Different neighborhood or "Pacifica" (e.g. did not specify neighborhood): 16
- San Francisco Golf Alliance: 1
- No response given: 15

Please rate how engaging the Poll questions were to you.

- Average score: ~4

How could the Project Team improve the online experience of Workshops moving forward?

- Restrict comments to residents and people having businesses in Pacifica.
- Missed the Mayor's comments due to technical issues.
- You did not call on me to ask a question.
- It was good.
- I thought they did an outstanding job.
- Limit number of question people can ask.
- A schedule of the meeting would allow working people to plan for engagement better. A queue of people during Q&A and Public Comment would also allow people to plan their engagement around their lives. Otherwise, very good city presentation.
- Great job on the zoom meeting Kelsey - your moderating was super. Thank you for keeping on agenda schedule and letting all to speak. But please check local, state and national calendars when scheduling these public workshops - tonight there were two town halls by Rep. Jackie Speier, and State Senator Josh Becker, and the NFL draft picks program...GHD did a very thorough job.
- Great job on the zoom meeting Kelsey - your moderating was super. Thank you for keeping on agenda schedule and letting all to speak. But please check local, state and national calendars when scheduling these public workshops - tonight there were two town halls by Rep. Jackie Speier, and State Senator Josh Becker, and the NFL draft picks program...GHD did a very thorough job.
- It was rather drawn out but there was a lot of interest and everyone spoke who wanted to.

- Workshop process OK.
- The hybrid interested folks and we know so little. We need a separate workshop or presentation to understand it before you chose a final.
- Actually, it was pretty well run.
- More public interaction.
- More public time for feedback.
- Things went reasonably well other than the few sound issues. It's difficult when you have many people that want to ask questions and share experiences. But, I think for now it's the best you can do.
- (1) Make sure all team members have fast enough computer hardware and internet access that they don't have fade-out and connection problems. (2) Establish limits on numbers of questions from each person at the get-go so that people with their hands up first don't dominate the Q&A periods. (3) Accept online (chat) questions having a moderator read them to the panelists. We're over a year into virtual meetings now and it seems that the team still didn't have things worked out, which detracts from the high quality of the technical work.
- It was well done.
- Only allow one question at a time from public. One person can ask more than 1 question if they take turns. Do not allow speeches in the Q & A. Save that for public comment.
- I thought it was wonderful to see all the research work that went into this workshop.
- It was great to see so many engaged Pacificans. Thank you for extending the comment period so that everyone could speak. I do think it would good to be able to verify who is at these meetings- who actually lives here, who owns property, and therefore whose opinions/votes should really be counted. Tom Thompson for example does not live here. He is involved in the county real estate industry lobby and has given heavily to pro-development city council members like Sue Beckmeyer, Sue Vaterlaus and Mike O'Neill. Does he actually own property in Sharp Park as he said?
- Resist the limitations of our current real estate dominated council and give us reality beyond their blinkered view.
- I thought it worked well.
- Not having questions during each phase. Extends the meeting too long for those that want to listen and go. No reason someone can't remember their question until the end.
- Kudos on GHD's responses to public comments. The online format was fine. I did feel that Wksp#3 was premature. The Alternatives should have been presented to the Public with much more detail, as they were eventually done in #4. As a result of this, there is also now a rush to choose Preferred Alt with inadequate public exposure. I perceive the City's urgency, but the transparency and substantive content is not available to us in an appropriate timetable. Perhaps it is inappropriate to fix the dates for all the steps at the outset, stick to them immutably. Better to slide a bit, keeping a timetable to actual progress.

Are there any questions you would like to share with the Project Team that were not answered in the April 29 Workshop?

- Let's have more info about hybrid.
- Has your team considered the odds of the proposed $110 million dollar hybrid seawall we are considering tonight night actually reaching the end of its 50 year design life? If we need funding for additional repairs, where would that funding come from?
- Can I get a recording of the meeting?

- Is there any data on combinations of the different strategies of three or more together?
- I am thinking, for instance, of hybrid structure seawall, plus beach nourishment plus sand retention from off-shore structures? It seems like there is probably a nexus of strategy and situation and luck which might allow superior results.
- Let's learn more about hybrid option.
- There was an interesting phrase used in the public comment section: Loss Analysis. I understand the difficulty to quantify, but I also think that this is the heart of the issue - lawsuits, fair compensation, insurability, loss of tax revenue...
- Can the public see interim draft of the further hybrid alternative studies before city council meeting in June?
- Not yet, but later once a seawall project is approved I would love to see local community projects to be represented (e.g. a community mosaic wall).
- Could the seawall be aligned westward to mitigate the height impact on sightlines?
- Will the presentation to city council be just the first of several, as this is a very complicated project and process?
- ALL Pacificans need to know: how will any choice be funded? Will it include all Pacificans to pay? How? A bond? Or a Special District, Or what?
- A back up plan. There are so many more hazards in our city, county, state, nation, there are many many more communities that are in harm's way. Money does not grow on trees. We are all going to search for, ask for, plead for financial assistance. We need a back-up plan or people will be in harm's way worse than we expect. It will be our fault if we do not. Most grants even loans require matching funds from Cities. Our city can't compete with many other cities already.
- The Golf Course is the jurisdiction of San Francisco. It seems very reasonable to be in conversation with the City of San Francisco. We cannot claim to gain revenue from any money they take in. It all goes to SF not to Pacifica. The Public at large needs to understand this. SF MUST pump that land well or Pacifica neighbors are flooded. SF and Pacifica have a relationship a good one. Let's honor it. But the public cannot think that we get revenue from any purchases there. If our city gives evidence of not respecting the realities of public and private properties in harm's way due to Sea Level Rise or Fires, no funding agency is going to make us a top priority. Insurance companies are already determining where to continue to insure and where to start pulling out. When reasonable, a city owes it to private owners to help residents in harm's way to face realities early and look for the least expensive ways to protect their financial opportunities before they lose options.
- Paul mentioned the Report's assumption that perpendicular levees would be built at/near the north and south property lines of the San Francisco-owner Sharp Park Golf Course property, to protect (1) the golf course and (2) the West Fairway Park residents from coastal flooding in the event of "No Project". Questions:
  (1) Who does GHD think will pay for these perpendicular levees -- San Francisco, Pacifica, or someone else?
  (2) Has Pacifica Pub Works or anybody connected with the Project discussed this matter with anyone at City & County of San Francisco, and if so, w/ whom did you discuss it, and what was said in that discussion?
- No, it was pretty comprehensive.
- I did have several questions. Were other sand retention structures considered such as groins to hold a beach fill? The offshore reef and or breakwater structures besides being very expensive will not fly past the Surfrider Foundation and Pacifica surfers. This area both up and down coast

of the pier is arguably the best surfing wave in Pacifica for intermediate and expert surfers. I have been surfing there for almost 40 years. Even though the multi-purpose reef could make for a surfing wave, it's not worth the risk to lose it as a surfing site. If the surf was poor or non-existent in this area a surfing reef to create a new break would be sellable. A beach fill with some short retention structures could work. My other question is about the sand source for any beach nourishment project or hybrid project. Are you assuming an offshore site or trucking sand in from somewhere else?

- Would like more information and analysis of the "hybrid" model presented.
- What is the plan if the Coastal Commission does not approve the project? What is the plan if the project is not funded? What is the projected time it will take to get to building -- through design, CCC approval, funding. How many years until there is a built project?
- Do the current sea wall/hybrid proposals meet the requirements of the 1980 General Plan that "Seawalls shall not extend beyond the mean high tide line"? I asked the question, but it was not answered.
- How can managed retreat possibly be equated with the "no project" scenario tear everything down? That equation is terribly counter-productive. Pro-active consideration of retreat can be positive and sustainable.
- My question of what is the city's plan if we don't get enough cash from grants for the project was not answered. Also, when I talked about the sewer landward pullback project needs to be considered on par with the sea wall, your response that the pipes will last 90 years and that the plan is make them bigger doesn't respond to the problem if they get inundated.
- Is the city setting aside money into a special fund each year for this project vs. trying to get all the money in one year for the portion not covered by federal funding i.e. are they doing that now?
- The need for Plan B. I'll take this opportunity to comment (again!) on the narrowed scope of BBIRP. The City's position is that any planning for moving infrastructure (I.S.) has to wait for seawall planning, if not completion. This has delayed consideration, moving I.S. from alternatives specifically included IN the GHD Contract "Considered but not Evaluated" (sec 4.6) with the justification that this facet is inconsistent with City's Project Goals for the seawall sub-project. But this leaves us open to increased risk. What will the City do if a catastrophic storm breached our protection in the next few years? What will we do if we can't get funding, or regulatory approval for armor as short-term protection? It is stated clearly that GHD restricted the Alternatives they considered. It is a shame that we don't know the true professional recommendation of GHD. Funding will be more likely but not guaranteed to communities that make sensitive plans, long term, based on science, and consistent with State law. The natural risks, the insurance industry rates, and the real estate impacts will occur regardless of this short-sighted choice.
- Questioning assumptions. I find it hard to understand how Beach Nourishment can even be contemplated for the whole length Beach Blvd?! Most coastal geology opinions I am aware of consider this untenable for a shore with: NO existing beach (North of the Pier); No chance that the shoreline can retreat, and worst of all; the open high energy coast and exposure. Your timeline predicts more sand needed every 12 years. Isn't it possible & increasingly likely that is could mostly disappear in 1-5yrs with "bad luck"? Can you give examples of any successful sand projects with: prior hard armor, no existing intertidal sand, along a coast of comparable exposure/energy to ours? (P.S. Our case is not at all like the Netherlands, which has in any case

by now given up on their strategy of holding back the sea in favor of adaptation. Thanks to Ms. Millar for correcting that commenter.)

- Are the differences meaningful? Sensitivity Analysis (Fig. 6.1) is an important idea. But I note that it only considers different category weighting. You did not consider uncertainty, something like confidence intervals, on the actual scores. While such multi-step calculations are often improved by a quantitative error propagation analysis, I agree this is not justified here, since CIs on the scores are illusive. BUT, I wonder if you could gather the alternatives in groups by likely significance. It is common in such comparisons to draw "similarity bars" joining the ones that are not significantly different. I am pretty certain that it would show that not all differences are meaningful, given the real uncertainties involved in estimates, here subjective panel consensus. (? I assume the scores were not submitted blindly by panel members?) Can we escape the appearance that the choice of Seawall was predetermined? The change in scope, and slight difference in alternative score just tipping the decision appear to many in the public conspicuous. The addition of a hybrid option to the contrary notwithstanding. Might the final report include a clear statement whether Seawall & Rock Revetment are meaningfully different? I really doubt they are. To those with less quantitative experience, isn't it misleading to cite such numbers without such caveats? Should this not rightfully affect the Final Alternative determination?
- Comparing overtopping between Seawall and Revetment. High surf reaches the height of the Pier already. The proposed seawall design with the upper overhang lip will allow very powerful overtopping impacts when surf exceeds that height. The Rock Revetment (Fig, 4.3) builds a wide rock ramp sloping seaward into deep water that dissipates some wave energy, in addition to any reduction from the big waves feeling the natural bottom. The seawall (Fig 4.2) appears as a vertical wall, 70 ft in extent, extending deep into the hard pan with max elevation 30 ft above MLLW). I hope your final analysis evaluates whether big waves would hit a seawall with greater energy than a revetment with energy dissipation by armor sloping offshore? That is, the height of the shore-break on impact to a seawall alone may actually be greater and more likely to overtop, and with higher force than a Revetment. The hybrid seems to add this measure of protection, but then why do you need the seawall (the main reason was narrower footprint).
- Implications for littoral scour. The prevailing sediment drift is nominally north to south, extending down from the Golden Gate, as you said in the Workshop #4. But often, especially with certain swell directions, sand may move the other way North of Mori Point I understood that nearshore littoral sand drift was south to north. Doesn't this happen, if not predominantly, at least frequently, depending I suppose on prevailing swell direction, and the implications would hinge on the frequency of major storm swell from that direction. This has big implications for the down drift erosion resulting from proposed armor. I was mostly concerned about the impact of the city's on the residential Shoreview neighborhood just north of the end of Beach Blvd. But it occurs to me that increased scour and erosion to the south is also bad as it threatens Sharp Park's diminishing sand beach. To the extent that scour is worst with the steep vertical seawall, this should be added to the list of considerations.

Is there any public comment you would like captured that you did not share during the April 29th Workshop?

- If we want to build a hotel and improve Palmetto as a viable business district, we have to maintain our best resource which is the beach and the ocean.

- The data provided in the reports show that a robust seawall is the real answer. The sooner we act on getting approval and permits, the better for Pacifica.
- I am a homeowner in Fairway and a parent of 2 middle school children who attend Ocean Shore School. We love Pacifica and have great respect for the environment and Pacifica growing in terms of being a city attractive to families, business and eco-tourism. We want Sharp Park to be protected. Please let's move forward with the seawall or hybrid project.
- The City was incorrect in stating that it had a certified Local Coastal Plan.
- As a life-long Pacifica resident, I was pleased to listen to this thoughtful consideration of how to deal with the Beach Blvd. decay. I am in favor of whatever project appears most likely to yield preservation of Beach Blvd.
- Move forward with protection plan for Sharp Park.
- I support armoring the Sharp Park coast. I am currently a fan of the hybrid model. I feel that no action is perhaps the least American solution that I have ever heard. The city has a contract with property owners and, good or bad, cannot turn back the clock on that responsibility.
- In the hybrid solution further study - Keeping existing wall and rock revetment in a hybrid will not only save cost of demolition and reconstruction of new wall and revetment, but not demolishing and rebuilding is the greenest solution by conserving embodied energy and carbon by reducing new construction and demolition disposal and trucking. This savings can be put into costs for adding the sand to create beach and create recreational space on ocean-side of the wall. Also correction on the notes - ALL properties that have immediate benefit - both residential and commercial - should receive a special assessment (Mello Roos infrastructure bond) to help pay for the seawall fix and make up the funding gap from what the Biden infrastructure bill and other federal, state, and county grants. Properties facing waterfront that get most protection would get assessed the most and properties would be assessed less as they move away from the ocean and have less flooding impact. Also the new hotel site where old treatment plant should also have special assessment as part of its Development Agreement and entitlements to help pay for the seawall fix. And having parking fees for outsiders/tourists with neighborhood residential permits will also contribute to help pay for the costs. All of these cost savings combined with all of these revenue methods is how we can afford to pay for a sustainable solution, answering Elisa Boles' financing concern comments and GHD's recognition of funding concerns. In the end the final design needs to be beautiful as the seaside is our greatest asset in Pacifica, both visually and if we need to ask for more grants or make higher assessments to pay for a better aesthetic solution, this should be done, as we will make it up in both local, regional and out of area tourism dollars. And since cost will probably be issue moving into next phase, Pacifica should consider a design/build/integrated project delivery/lean construction/target value delivery contract with the design and construction teams to work within a fixed budget and minimize cost overruns.
- So glad that the city is moving forward finally! Sharp park residents have been sounding off about this for years and years.
- I see this as a community lifesaver and not a development carrot, and am hoping in the meantime we can muster the courage and support to create true beauty in this neighborhood so everyone know it’s worth it.
- We must find a way to build the most robust wall ASAP. Interim measures or temporary repairs are a waste of taxpayer dollars.
- The designers and the council need to look at the reasons, the results, and the cost of the repair/replacement of the Esplanade seawall following the 2016 failure of that wall in its 5th

year, from unanticipated erosion from outside and from within the wall itself. What was probably projected as a 50-year solution failed after 5 years, so I have no faith whatsoever in the projected 50-year lifespan (in itself entirely too short in terms of when Pacifica will have to invest in another "new" solution.

- Just that I would like to see a see wall or revetment be done.
- There was a comment about the federal involvement in beach nourishment in California. There is a project in Southern California in the area around Huntington Beach that is a Federal project. It re-nourishes the area with 1 to 1.5 million cubic yards of sand every 8 years or so. Similar to the quantities proposed for Pacifica. However it all about the Benefit to Cost ration for the Federal government and if the project would generate benefits that the Feds thinks benefits the Nation. As we have seen in the Army Corps report in the last couple of years, Federal benefits may not be enough for Fed involvement. I can discuss more with you if you would like.
- Pacificans need to understand that calling for a Special Assessment District to partially fund any seawall replacement is a very slippery slope. The linear geography of Pacifica lends itself to every project being subject to such demands -- examples (1) Sewer system upgrade and excess flow collection in Linda Mar -- not our problem in Sharp Park, why should we pay for it. (2) Renovation of Sanchez Library Branch -- no benefit to us up north, let them pay for it. (3) Hillside fire safety improvements -- not an improvement for me on the flatlands, let them pay for it. We're a City and need to respond to each of these issues a City, not a bunch of warring special interest groups.
- What is the plan for reinforcement of the existing seawall to buy time until the proposed project is built?
- I'm really confused about Associate Planner Bonny O'Connor's statement last night about the "Certified draft LCLUP". It is my understanding that while the draft was approved by the City Council, it has not been approved or certified by the Coastal Commission, and that there is language missing about managed retreat that should be included. It seems odd that GHD is being required to meet this draft ordinance without an understanding of what the final version will require in the end. In my view, the information in this workshop should have been #3, as another workshop is needed to get public input about the final design options. Does the wall need to move inland, how high a wall is acceptable, what level of risk are we willing to tolerate for public safety if the wall decided upon is shorter than the 5-8 feet that is needed to meet the 50 year design life target? What will public access look like with the hybrid option that includes more revetment boulders? There are still too many moving parts that really need public input before the design can be "finalized". I know this would be an additional item under GHD's contract scope of work requiring additional fees, but it is essential in defining a project that the public understands and can get behind. Any why can you not share the 2019 Collection System Master Plan document with the public, even in draft form? I've been asking for this information since January. This project is about infrastructure resiliency after all, and we have a right to know exactly what, where, and what condition the infrastructure is that is the justification for these protective measures.
- How can managed retreat possibly be equated with the "no project" scenario that simply tears everything down? That equation is terribly counter-productive. Pacifica needs solutions that are sustainable past just two feet of SLR.
- California bill SB83 needs to be watched by the city. It could be a game changer.

- Need to include provision for raising the Beach Blvd road height where possible to be at or near the level of the promenade sidewalk thereby allowing folks in cars to see the view, and to effectively widen the promenade.
- I hope we divide the seawall into smaller projects by priority piece parts. Replacing the retaining wall on the north side of the pier, then protecting homes on the South side with a seawall, then the pier, then the golf course. Better to have some parts completed and making progress than nothing.

Appendix F: Comments received via Email and Project Website

Comments Received Outside of Public Workshops

Date	First Name	Comment	Response	Additional Attachment No
9/29/2020	Richard	Valuation of Sharp Park Golf Course - See attachment 1	Acknowledged	1
9/29/2020	Kai	To the max degree possible we should do the minimum of infrastructure development in areas where Sea Level Rise (SLR) will be putting it at greater risk.	Acknowledged	
12/2/2020	Mark	I suggest the only solution must be a replacement wall with a 50-year service life. This is required to protect everything east. Anything less will mean no Main Street and no hotel. Hundreds of area homes, Hwy 1, golf course in jeopardy. No one will invest if City Council does not protect the central core of Pacifica. I must also note this dec 3 hearing has no obvious link to send a comment via email on the agenda page-- it only features zoom-- if you do not have the time to watch or technical ability to setup zoom you are out. A casual suppression of public comment.	Acknowledged & added comment form.	
12/3/2020	Richard	Objection to Existing Conditions Survey Results not including environmental conditions. See attachment 2	Responded via email, environmental conditions will be assessed in Multi Hazard Risk Assessment document.	2
12/3/2020	Sue	This area of town is a historic area as stated in our Gen. Plan and also stated in the Coastal Commission documents(I have to look the precise language there .I have not doubled checked recently). So during planning that data needs to be noted. City Council did designate in a City Council meeting the term/ designation Historical Area for a specific area..thinking ahead to economic planning. That was done when Cal Hinton and I were on Council and lobbied for it.	Acknowledged, language is in project.	
12/7/2020	Ryann	Ryann's son (10) suggests a recurved seawall to deflect wave engery.	Acknowledged, had video conference call to discuss.	

12/14/2020	John	I was absent from town for about nine months between February and November, and I am again residing on Beach Blvd. I have to commend the planning being done here for an issue that will prove complex and costly over a grueling period of time. This is something that looks far down the road as well as on the ground directly before us. . .a managed retreat (which is inevitable) is only bad if it's not properly planned out. It will be great to stay involved on this, as well as correlating projects, as this is a microcosm for what many coastal communities around the country are experiencing or approaching.	Acknowledged.	
12/15/2020	Jim	I applaud Pacifica's plan to upgrade the Sharp Park Area and promote new businesses, affordable residences, a hotel, a library, and make Pacifica a regional attraction. However, all current planning is for naught if a secure seawall is not guaranteed. In order to attract private investment, we need a seawall guaranteed to stand strong for at least 50 years. But the new seawall's design has yet to be transparent. Public hearings are needed where any business vying to build the seawall present their plans to the public and allow for a period of scrutiny. Five scientific agencies determined sea level rise accelerated to about 0.14 inches/year from 1994 to 2002, but then decelerated to about 0.09 to 2012. Those results were consistent with research showing sea level rise accelerates and decelerates every 20 years, likely due to EL Nino cycles. More rains fall over the ocean and sea level rises during El Nino. During La Nina, monsoons carry more rain to inland Asia and Australia and sea level falls. Higher rates of sea level rise are derived by subtracting the La Nina effect, but that's not the actual rate affecting our coast. Satellite data and San Francisco's tide gauge shows sea level rose less than .08 inches/year since 1980. And a Scripps study finds no change in average storm surge since 1950. Conflicting claims create uncertainty leading to extremely expensive and overly engineered designs. Designs should definitely	Acknowledged.	
1/14/2021	Mark	Agree with project. Support it.	Acknowledged.	
1/19/2021	Mark	Is this part of a larger holistic city plan for Pacifica? If so, what is that plan?	Emailed response	
1/25/2021	Chizoba	resilient landscape design and intentional planting that in indigenous to the region	Acknowledged.	

2/12/2021	James	See attachment 3 for letter	Acknowledged.	3
3/2/2021	Richard	See attachment 4 for letter. Summarized - objection to using draft Regional Sediment Plan and Benefit Cost Analysis from LCP update	Acknowledged & called response.	4
	Anonymous	Submitted visual concept, attachment 5	Acknowledged	5
4/25/2021	Barbara	Dear Council, Unfortunately, I cannot attend the zoom meeting on April 29. However, I strongly encourage you to replace the existing seawall and protect our homes, businesses and infrastructure. We would not abandon those living near the fire danger of the eucalyptus forests in town any more than we can abandon those living near the ocean. All Pacificans are in this together! sincerely, Barbara Petersen, 67 year resident of Pacifica!	Acknowledged	
4/28/2021	Robert	Why has the City put so little info out about the pier damage, closure, repair and reopen the entire pier. Now there's finally a little info up but for over 2 months all there was was a one paragraph press release buried on your website. W all the hush hush secrets about? The city doesn't even mention the Coastal Commission has been directing them as far as partially reopening and more recently approving the Cities (CDP.) The pier is integral to Sharp Park, pacifica and the peninsula. It's on thing that makes us unique. So please make sure the pier is not only maintained but improved by maybe incorporating a few shopsrestaurant on either side of the pier on land	Acknowledged	
4/28/2021	Susan	I appreciate the work that has been done to date. I understand that the project is estimated to last 50 years, that cost has been estimated dependent on the strategy. My questions are these: 1. How will it be funded? 2. Although it has been explained only the short term aspect is the focus of this project, how will we engage in the long-term preparation for relocating infrastructure due to the inevitable process of sea-level rise? 3. What other agencies, like the Coastal Commission, will need to approve the plan and when will they be brought in for feedback? Thank you.		

4/29/2021	Frank	Beach blvd infrastructure needs to be protected and armored at all costs. This is a major infrastructure issue that affects our entire city. If this infrastructure item is damaged it will be financially devastating to the entire city. I encourage that the city manager and city council put forth all efforts that are available to get any assistance possible from the state and county and federal government. Stop the push by the coastal commission that is encouraging managed retreat and is opposing any sort of beach/ocean armoring.	Acknowledged	
4/29/2021	Sue	At every meeting, please be clear about the scope of the work based on what the budget could afford for the Consultant. Please be specific about what can NOT be researched and determined because of that budgeted scope. Please state this info at every meeting at the beggining, in the middle of each meeting and at the end. Thanks so much.	Acknowledged	
5/1/2021	William.Leo	Phase 1 Preliminary Planning & Feasibility: Timeline: I suggest that the timeline needs to be extended. 1) The MHRA is a lengthy and fact filled report, the public needs more time to digest the report, ask questions and understand it fully. 2) More discussion of the Hybrid Alternative that was presented at meeting #4 and it's ranking. The poll taken at meeting #4 the Hybrid Plan received the highest percentage of votes of all the Alternatives. I recommend a continuation of the meeting #4 to review the alternatives. Spcifically, Consultant to present a more detailed explanation of the Hybrid Alternative. Then discuss pluses and minuses. It's a critical stage in the process. The public should be given full detail and explanation. Then we can move forward with selection of the Preferred Alternative.	Acknowledged	
4/29/2021	Richard	See attachment 6. Summarized: objection to cost valuation of Sharp Park Golf Course in the MHRA document.	Acknowledged & called response explaining methodology.	6

	Richard	See attachment 7. Summarized: 1. “Hybrid approach” should be vetted by public review, input, and comment before it goes to City Council for decision. 2. Any design for the Beach Boulevard Sea Wall Reconstruction Project should include consideration and analysis of the new structure’s effects on the beach to the west of the golf course and on the Sharp Park Golf Course levee. 3. The beaches north of Mori Point are steep, dangerous, subject to sneaker waves and rip currents, and are most safely and most popularly experienced from the safety of the California Coastal Trail running on top of the sea wall and the Sharp Park Golf Course levee.	Acknowledged	7
	Kimberly	See attachment 8. Summarized: Opposed seawall and revetment options	Acknowledged	8

SAN FRANCISCO
PUBLIC GOLF ALLIANCE

1370 Masonic Ave., San Francisco, CA 94117 • 415-290-5718 • info@sfpublicgolf.org

September 29, 2020

Pacifica Public Works Department
Attn: Ryan Marquez, Associate Civil Engineer
151 Milagra Dr.
Pacifica, CA. 94044

Pacifica Planning Department
Attn: Christian Murdock, Senior Planner
1800 Francisco Blvd.
Pacifica, CA. 94044

Re: Beach Boulevard Sea Wall Reconstruction Project
Initial Comments of San Francisco Public Golf Alliance

Dear Public Works and Planning Departments,

These are the initial comments on Pacifica's Beach Boulevard Sea Wall Replacement Project (a.k.a. Shoreline Resiliency Project) of the San Francisco Public Golf Alliance, a non-profit, pro-bono organization dedicated to the preservation of affordable, eco-friendly public golf. Among our 6,500-plus members, we number hundreds of Pacifica women, men, senior, and youth golfers and their families.

Executive Summary

The San Francisco-owned Sharp Park Golf Course property is a complex, critical, sensitive, and extremely valuable coastal historical, cultural, recreational, and biological resource. It includes the historic golf course and clubhouse, the Laguna Salada wetlands and its resident endangered and threatened snake and frog species, and the Sharp Park levee upon which runs the California Coastal Trail. The levee protects Pacifica's surrounding West Sharp Park and West Fairway Park residential neighborhoods from flooding. In turn, the golf course property is protected by the Beach Boulevard Sea Wall, and is vulnerable to seawater inundation due to the absence of a sea wall at the Clarendon Gap. The current Beach Boulevard Sea Wall Replacement Planning Process is an opportunity to correct past failures by Pacifica and its consultants to adequately value the complex public assets at Sharp Park Golf Course.

1. The Pacifica-GHD Master Agreement specifically provides for site conditions and economic analysis of the Sharp Park Golf Course property, including wetlands, biological resources, and special-status species.

The Environmental Conditions Survey (Task1.4.4) and Economic Impact Assessment (Task 1.4.5) portions of GHD's project analysis under Pacifica's Master Agreement with GHD for "Planning Engineering and Environmental Services for Beach Boulevard Seawall Replacement Project,"[1] require analyses of the public recreational and cultural historical resources of the Sharp Park Golf Course, as well as the wetlands and endangered species resources at the golf course property.

The Master Agreement provides that "The Team led by ESA" (the Master Agreement also identifies Kearns & West as a member of the GHD "Team") will compile a Site Conditions report (Task 1.4.4) and Economic Impact Assessment (Task 1.4.5) that will, among other things, include "the Sharp Park Golf Course . . . due to its location immediately south of the site and the known existing flooding hazards at that site." The Master Agreement provides that "the Team's biologists will identify terrestrial and marine biological resources, including presence of special-status species, their habitat, and sensitive natural communities which could be affected by project development. Of particular focus for terrestrial biology will be the south wall and south gap portions of the project which are nearest the Sharp Park Golf Course, known to provide habitat for the San Francisco gartersnake and California red-legged frog."[2]

At the May 26, 2020 Pacifica City Council meeting which approved the GHD Master Agreement (attended by GHD project engineer Paul Henderson), Councilman Mike O'Neill asked (1) whether GHD's analysis would include golf recreation, and (2) whether the project planners will obtain input from San Francisco, the golf course owner. Project Manager Ryan Marquez, Associate Civil Engineer in the Pacifica Public Works Department, replied that the study "will definitely take the recreation of the area into consideration," and that San Francisco will be consulted.[3]

2. Sharp Park Golf Course is a treasure of World Golf, an historic architectural and cultural resource identified as a Pacifica landmark and as Historic Resource Property under CEQA by San Francisco.

Alister MacKenzie, history's most famous golf course architect, designed and built Sharp Park Golf Course in the early 1930's. Alister MacKenzie is the architect of several of

---

[1] Master Agreement for "Planning Engineering and Environmental Services for Beach Boulevard Seawall Replacement Project," Scope of Services, Exhibit A to Master Agreement, at Packet Pages 144, 151: https://pacificacityca.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=1299&Inline=True, ;
the Master Agreement was approved by the City Council at its May 26, 2020 public meeting. See Minutes, at page 27: https://drive.google.com/file/d/1dh08ExB0L7WJ8TIxbty6hVzRgDodcm8r/view?usp=sharing

[2] Master Agreement for Planning Engineering, etc., Scope of Services, supra, at p. 151

[3] Minutes of May 26, 2020 Pacifica City Council meeting, at page 10:
https://drive.google.com/file/d/1dh08ExB0L7WJ8TIxbty6hVzRgDodcm8r/view?usp=sharing;
The Minutes were adopted at Council's June 8, 2020 Council Meeting.

the world's greatest courses, including Cypress Point Club and Augusta National, annual home of the Masters Tournament. Sharp Park Golf Course is a designated historic site in the Pacifica General Plan[4]; recognized as a "Pacifica historical and cultural resource" by the City of Pacifica's official historian, the Pacifica Historical Society[5]; designated as Historic Resource Property under CEQA by the San Francisco Planning Department[6]; recognized as a Sensitive Coastal Resource Area by the California Coastal Commission[7]; (6) designated a nationally-significant "At-Risk Cultural Landscape" by the Washington D.C.-based Cultural Landscape Foundation[8]; and (7) listed by Golfweek Magazine as one of America's 50 Best Municipal Courses.[9]

3. In previous environmental studies of Pacifica coastal resources by GDH Team members ESA and Kearns & West, San Francisco has objected to ESA's failure to recognize and honestly evaluate the economic values of the historical, cultural, recreational, and biological resources at the Sharp Park Golf Course property.

In official correspondence relating to environmental studies of the Pacifica Coastal Zone over the past 10 years, the City and County of San Francisco has objected to chronic undervaluation of the economic values at the San Francisco-owned Sharp Park Golf Course property of: (i) the golf course real estate, including the golf course landscape and the Clubhouse, (ii) the public coastal golf recreation at the golf course, (iii) the public coastal walking recreation on the California Coastal Trail atop the Sharp Park levee adjoining the western edge of the golf course; (iv) the Laguna Salada wetlands; and (v) the populations of San Francisco garter snake and California red-legged frog, endangered and threatened species, which reside in Laguna Salada and its wetlands. The economic valuation studies which are the target of San Francisco's objections, have been authored by ESA with

---

[4] The Sharp Park Golf Course and Clubhouse are designated as "Pacifica Historic Sites" in the Historic Preservation Element and Historic Sites Map of the current Pacifica General Plan, at pages 95 and 95a. http://www.cityofpacifica.org/civica/filebank/blobdload.asp?BlobID=3443 .

[5] The City of Pacifica's official historian, the Pacifica Historical Society, by Resolution dated June 14, 2011, designated Sharp Park Golf Course a Pacifica "historical and cultural resource": https://drive.google.com/open?id=0B1h0x8Eg99decmxrMllwSFJwcWM

[6] San Francisco Planning Dept., Historic Resource Evaluation Response ("HRER"), February 15, 2011, at Page 2: https://drive.google.com/open?id=0B1h0x8Eg99deRkJ1X0RhRzgwc00

[7] California Coastal Commission, CDP Application 2-12-014 (Sharp Park Pump House Project), Staff Report, April 3, 2015, at pp. 18-19: http://documents.coastal.ca.gov/reports/2015/4/th8a-4-2015.pdf. In its April 16, 2015 ruling granting a Costal Development Permit to San Francisco, the Coastal Commission unanimously adopted the Staff Report and its findings. Id., April 3, 2015, at page 5.

[8] Cultural Landscape Foundation, "Sharp Park Golf Course": http://tclf.org/landscapes/sharp-park-golf-course; About TCLF: http://tclf.org/about; TCLF Stewardship: http://tclf.org/stewardship/about-landslide?destination=search-results; TCLF At-Risk Landscapes: https://tclf.org/category/landslide-status/at-risk;

[9] Golfweek, Best Municipal Courses (2014) (Sharp Park rated No. 50): http://golfweek.com/news/2014/jun/25/golf-courses-municipal-golfweeks-best-travel/

assistance from Kearns & West – both of which companies are members of the GDH "Team" that is conducting the current Pacifica Beach Boulevard Sea Wall Reconstruction Project. See the eight-page letter dated February 18, 2016, from SF Recreation and Park Department General Manager Phil Ginsburg to the Coastal Sediment Management Workgroup, Kearns & West, U.S. Army Corps of Engineers, and California Geological Survey[10]. (A copy of the Ginsburg letter is attached hereto as **Exhibit 1**.) And see the e-mails dated May 17 and August 25, 2018 from Spencer Potter to City of Pacifica Associate Planner Bonny O'Connor.[11] (Copies of these Spencer Potter e-mails are attached hereto as **Exhibit 2**.)

4. **San Francisco Public Golf Alliance's past objections to gross undervaluations – and total failures to place economic value – by Pacifica's consultant ESA on the Sharp Park Golf Course real estate, public golf recreation, recreational walking on the California Trail on the levee, and the economic valuations of wetlands and special species.**

By letter dated August 28, 2018 to the Pacifica City Planning Department, the San Francisco Public Golf Alliance objected strenuously to the failure of the cost-benefit analysis in Pacifica's Draft Local Coastal Land Use Plan to place economic value on the Sharp Park wetlands or the resident endangered and threatened San Francisco garter snake and California red-legged populations in and around the wetlands, or the value of the golf course property or the values of the golf and Coastal Trail walking public recreation at the Sharp Park Golf Course and its levee.[12] (A copy of the Public Golf Alliance August 28, 2018 letter its attached hereto as **Exhibit 3**.)

At the golf course, golf evaluation expert Gene Krekorian of ProForma Advisors LLC determined a reasonable present value of the golf course to be $31.5 Million, based on costs-of-operation figures from the San Francisco Recreation & Park Department. Mr. Krekorian also determined the separate "recreational value" of coastal public golf at Sharp Park to be $36. Million.[13] Significantly, Mr. Krekorian emphasizes that Sharp Park is a rare low-cost public coastal golf course – one of very few in the State of California – which in the current severely-warming climate provides cool, fresh-air recreation not only locally but to inland dwellers seeking to escape summer heat and bad air. (A copy of the Krekorian letter is attached hereto as **Exhibit 4**.)

---

[10] Letter, February 18, 2016 (8 pages), from Phil Ginsburg, General Manager, to Coastal Sediment Management Workgroup, et al: https://drive.google.com/file/d/0B1h0x8Eg99deOHUxRWZOYmQ4UHM/view

[11] E-mails dated May 17, 2018 and August 28, 2018, from Spencer Potter, SF Rec & Park Department Natural Resources Regulatory Specialist:
https://drive.google.com/file/d/1JoX-puH-mzdo52zfkXvZJZEGdCPEnX9w/view?usp=sharing

[12] San Francisco Public Golf Alliance Letter to Pacifica City Planner Lisa Wehrmeister, Aug. 28, 2018, at pp. 8-9
https://drive.google.com/file/d/17DVcLYaISMk9muqUNBVsQ_GpevmHuSi9/view?usp=sharing

[13] Letter, Gene Krekorian, Pro Forma Advisors LLC, August 27, 2018:
https://drive.google.com/open?id=1z9UzMvNyENpN9yMzGxOFurWdgJNFWfAJ

As to the economic valuation of Sharp Park's Laguna Salada wetlands and resident endangered and threatened California red-legged frog and San Francisco Garter Snake, the Public Golf Alliance in a June 8, 2018 letter to the Pacifica Planning Department[14] suggested a compensatory mitigation-based evaluation approach, which was the subject of public discussion – and seeming agreement between San Francisco Rec and Park Department's Spencer Potter and ESA principal Bob Battalio – at a May 10, 2018 Community Workgroup meeting in the Pacifica Local Coastal Land Use Plan process.[15] But compensatory mitigation at Sharp Park for loss of the Laguna Salada freshwater wetlands habitat for the frog and snake would be extraordinarily expensive, as can be gathered from a 2011 report entitled "Conceptual Ecosystem Restoration Plan and Feasibility Assessment for Laguna Salada, Pacifica, California," co-authored by ESA, with Bob Bottalio as Project Director, which advocated for a "nature bridge" on the Coast Highway and compared such a project to San Francisco's rebuilt Doyle Drive approach to the Golden Gate Bridge.[16]

An "essential concept" of ESA's Conceptual Ecosystem managed retreat proposal is a nature bridge to open up new habitat and a migration corridor for the frog and snake to higher ground east of the Coast Highway -- "a viable HWY 1 underpass or overpass specific to SFGS (San Francisco garter snake) needs".[17],[18] ESA's "Conceptual Ecosystem" study does

---

[14] Letter, June 8, 2018, S.F. Public Golf Alliance to Pacifica Planner Lisa (sic) Wehrmeister, https://drive.google.com/file/d/1xtAbR562iciLq7NGqfjcqyd1C4tZlI5s/view

[15] Id., at page 11

[16] ESA-PWA, Feb. 9, 2011: "Conceptual Ecosystem Restoration Plan and Feasibility Assessment for Laguna Salada, Pacifica, California, https://drive.google.com/open?id=0B1h0x8Eg99deWm9iVmNyV0hoUTA The report was written for ESA's clients Center for Biological Diversity and Wild Equity Institute. Mr. Battalio is identified as Project Director at page 46.

[17] ESA-PWA, 2011, Id., "Conceptual Ecosystem Restoration Plan," etc., at page 37. https://drive.google.com/open?id=0B1h0x8Eg99deWm9iVmNyV0hoUTA
The proposed Highway 1 wildlife-bridge project is discussed at several points in the ESA-PWA 2011 report, including: "The restoration vision developed herein includes . . a viable HWY 1 underpass or overpass specific to SFGS needs. (Page 26) . . . Connective corridor for SFGS and CRLF can be demonstrated in the future by seeking restoration opportunities and partners (e.g., Caltrans) to design either a HWY 1 underpasses or overpasses to promote genetic flow among populations." (Page 27) . . . HWY 1 east of Laguna Salada is a barrier to wildlife movement. Partnerships with Caltrans will need to be developed to secure a future SFGS corridor underpass or overpass of HWY 1 that provides protection, refuge, and safe passage for wildlife." (Page 28). . . Adopt and identify the areas adjacent to and including Sanchez Creek as a future viable SFGS corridor that provides the potential for safe passage, either under or over road and HWY 1. Work towards finding additional funds and partnering with Caltrans.. . modifications to HWY 1 could greatly enhance restoration by reconnecting the ecotone on either side of the roadway. Highway One forms a barrier to wildlife (and people) which is a stressor to the natural east-to-west orientation of the coastal ridges and valleys. Figure 9 shows a connection across HWY 1 for SFRPD lands. . . We recommend that these considerations be incorporated in the HWY 1 planning. . . One example of a multi-objective roadway renovation project is the Doyle Drive Reconstruction in San Francisco, which includes elevated and depressed sections which will allow ecological and pedestrian connections from uplands to the shore. (Pages 29-30). . . Therefore, additional work is recommended to: . . . Consider the adverse effects to SFGS resulting from Highway One, and consider elements to mitigate these adverse effects as part of future Highway modifications." (Page 35)

[18] The proposed wildlife corridor is described by the report as an "essential concept to strive for" (Id., at pg. 26), and is illustrated at the report's Figure 9, a copy of which appears in a September 24, 2015 press release issued by ESA's client, Wild Equity Institute: https://drive.google.com/open?id=0B1h0x8Eg99deZDFLS3F1M1hpMm8

not contain a cost estimate, but it does say that the nature bridge concept will necessitate "partnerships with Caltrans," and it compares its big idea to the $1 Billion-plus reconstruction in San Francisco of the Doyle Drive access to the Golden Gate Bridge.[19]

Respectfully submitted,

San Francisco Public Golf Alliance

Richard Harris

Richard Harris, President

Exhibits: See next page

ccs:

Pacifica Planning Department,
Tina Wehrmeister, Director
Christian Murdock, Senior Planner
Bonny O'Connor, Assistant Pacifica Planner
Pacifica Public Works Department
Lisa Petersen, Director
Sam Bautista, Deputy Director
Pacifica City Manager Kevin Woodhouse
Kearns & West
Ben Gettleman, Vice President
Kelsey Rugani, Senior Director
Spencer Potter and Lisa Wayne, SF Recreation and Park Department
Bo Links, Esq.
Lisa Villasenor, Sharp Park Business Women's Golf Club
Bob Downing, Sharp Park Golf Club

[19] See footnote 17, above, for quotations from the Conceptual Ecosystem Restoration Plan about the need for "partnerships with Caltrans" and the comparison to the Doyle Drive Reconstruction project.

EXHIBITS

1. **Letter, February 18, 2016, with 8-page memo, from Phil Ginsburg, General Manager, SF Recreation and Park Department to Coastal Sediment Management Workgroup, et al: https://drive.google.com/file/d/0B1h0x8Eg99deOHUxRWZOYmQ4UHM/view**

2. **E-mails dated May 17, 2018 and August 28, 2018, from Spencer Potter, SF Rec & Park Department Natural Resources Regulatory Specialist: https://drive.google.com/file/d/1JoX-puH-mzdo52zfkXvZJZEGdCPEnX9w/view?usp=sharing**

3. **San Francisco Public Golf Alliance Letter to Pacifica City Planner Lisa Wehrmeister, Aug. 28, 2018: https://drive.google.com/file/d/17DVcLYaISMk9muqUNBVsQ_GpevmHuSi9/view?usp=sharing**

4. **Letter, Gene Krekorian, Pro Forma Advisors LLC, August 27, 2018: https://drive.google.com/open?id=1z9UzMvNyENpN9yMzGxOFurWdgJNFWfAJ**

SAN FRANCISCO
PUBLIC GOLF ALLIANCE

1370 Masonic Ave., San Francisco, CA 94117 • 415-290-5718 • info@sfpublicgolf.org

December 3, 2020

Pacifica Public Works Department
Attn: Ryan Marquez, Associate Civil Engineer
151 Milagra Dr.
Pacifica, CA. 94044

Pacifica Planning Department
Attn: Christian Murdock, Senior Planner
1800 Francisco Blvd.
Pacifica, CA. 94044

Re: Beach Boulevard Sea Wall Reconstruction Project
Second Community Workshop, Dec. 3, 2020, 6 p.m.

Objection from San Francisco Public Golf Alliance that the published "Existing Conditions Survey Results" omit the environmental, recreational, cultural, and commercial conditions at the Sharp Park Golf Course, as required by the City of Pacifica/GHD Master Agreement approved by the City Council on May 26, 2020.

Dear Messrs. Marquez and Murdock and Pacifica Public Works and Planning Departments,

We submit this letter on behalf of the San Francisco Public Golf Alliance, a non-profit, pro-bono organization dedicated to the preservation of affordable, eco-friendly public golf. Among our 6,500-plus members, we number hundreds of Pacifica women, men, senior, and youth golfers and their families. This follows-up on our September 29, 2020 letter to you[1], incorporated herein by this reference**,** a copy of which is attached hereto as **Exhibit 1.**

The Public Works Department's Agenda for the Second Community Workshop (https://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=44670.22&BlobID=17745) advertises that the Dec. 3, 2020 meeting will review the "Existing Conditions Survey Results" (https://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=45142.22&BlobID=17746). However, that document, dated October 2020, is limited to reporting the results of an online survey. It does not meet the requirements of the Consultant GHD's Master Agreement with the City of Pacifica for the Phase I Environmental Conditions report, approved by the City

[1] Letter, SF Public Golf Alliance to Pacifica Public Works Dept, et al, 9.29.20
https://drive.google.com/file/d/1uq5g3eVvco_2bARR-gf26TIwfsqUO05I/view?usp=sharing

Council on May 26, 2020.[2] The Master Agreement specifically requires that the Environmental Conditions report must include "the Sharp Park Golf Course . . . due to its location immediately south of the site and the known existing flooding hazards at that site. . . . Of particular focus for terrestrial biology will be the south wall and south gap portions of the project which are nearest the Sharp Park Golf Course, known to provide habitat for the San Francisco gartersnake and California red-legged frog."[3] In addition to the protected species, the golf course's critical coastal resources include wetlands, historical and cultural resources, and valuable coastal public recreational and commercial resources. Our September 29, 2020 letter (Exhibit 1) – which we submitted within the comment timeframe of the "Existing Conditions Survey" -- provides detailed information about these many aspects of the golf course property. Yet the property and its assets are not discussed or even acknowledged in the "Existing Conditions Survey Results" document.

Se we call our September 29, 2020 letter again to your attention, and urge the City, its Departments, and its consultants to pay serious attention to this valuable and critically-important Pacifica coastal asset at all stages of the Beach Boulevard Sea Wall Replacement project.

Respectfully submitted,

San Francisco Public Golf Alliance

Richard Harris

Richard Harris, President

Exhibit: See next page

ccs: See next page

[2] Master Agreement for "Planning Engineering and Environmental Services for Beach Boulevard Seawall Replacement Project," Scope of Services, Exhibit A to Master Agreement, at Packet Pages 144, 151: https://pacificacityca.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=1299&Inline=True, ;
the Master Agreement was approved by the City Council at its May 26, 2020 public meeting. See Minutes, at page 27: https://drive.google.com/file/d/1dh08ExB0L7WJ8TIxbty6hVzRgDodcm8r/view?usp=sharing

[3] Master Agreement for Planning Engineering, etc., Scope of Services, supra, at p. 151

cc's:
City of Pacifica Mayor and City Council
Pacifica Planning Department,
Tina Wehrmeister, Director
Christian Murdock, Senior Planner
Bonny O'Connor, Assistant Pacifica Planner
Pacifica Public Works Department
Lisa Petersen, Director
Sam Bautista, Deputy Director
Pacifica City Manager Kevin Woodhouse
Paul Henderson, GHD, Inc.
Kearns & West
Ben Gettleman, Vice President
Kelsey Rugani, Senior Director
San Francisco Recreation and Park Department
Phil Ginsburg, General Manager, Lisa Wayne, Spencer Potter
Bo Links, Esq.
Lisa Villasenor, Sharp Park Business Women's Golf Club
Bob Downing, Sharp Park Golf Club

EXHIBIT

1. **Letter, SF Public Golf Alliance to Pacifica Public Works Dept, et al, 9.29.20 https://drive.google.com/file/d/1ug5g3eVvco_2bARR-gf26TlwfsqUO05l/view?usp=sharing**

FROM: James Kremer, Ph.D.
5 Eastlake Ave., Sharp Park District
Pacifica, CA 94044

TO: Pacifica Planning Dept.
Planning Commissioners
Pacifica City Council

DATE: February 12, 2021

SUBJ: BBIRP & Public Workshops

Thank you for the BBIRP Workshop #3. It was well run, and lots of information was presented. I appreciated the frequent encouragement for public participation.

While you are required to offer a forum for our input, I am concerned that the preferred path forward by the city seems set in stone and that lots of reasoned argument with factual evidence and legal concerns will not be taken seriously. (I am aware that in any contentious issue, one side is probably going to feel this way! Still, it need not be that way. If the city wanted to honor some suggestions, they need only broaden the scope of alternatives being considered. Refusing this opens the city up to the criticism that valid ideas were not taken seriously. Maybe I'm wrong.)

I spoke at the Workshop, and posted a comment right after the City's response missed my point. I am writing now to further emphasize my concerns that an adequate set of prudent alternatives are not being allowed into the evaluation analysis. Which leads to my first Question:

1. Range of options. The BBIRP City plan says, *"Options include Nourishment, Sand Retention Structures, Seawall Replacement, Rock Seawall Replacement."* **Was GHD originally asked to recommend a full range of alternatives that would be potentially helpful?** In the workshop, Mr Leslie said, "We're looking at all the options." This is simply not correct. (Task 1.5.3 of the *Scope of Services* is unclear on what guidance was given to GHD in discussions with the city. It seems unlikely to me that omitting infrastructure resilience was their independent decision. ??)

As a coastal ecologist, this seems to me a ***False choice*** to limit consideration to only these. Sand nourishment and Retention Groins are non-starters, historically proven to vastly expensive in perpetuity. No Action is helpful only as a reference point. Therefore, the only options really being considered by our city for plans and costs are forms of hard armoring, which is hoped to be effective for 50 years or longer. I worry that the professional consultants are being constrained by city bias.

2. Resilience. The official TITLE of this project reinforces the very sensible **project goal** of "building resilience". **Resilience** depends on an *adaptive response after damage* – this is the actual definition of the word, but also is consistent with the logic of having responsible plans for the future. I suggest that a seawall is not **resilient**, it

is protection, but only until it fails, at which time it requires expensive maintenance. And maintenance of hard armoring is not resilience.

So my question is, **Is it acceptable, or even prudent, to omit alternatives that include long-term plans to extreme hazards.** Science predicts high risks that might cause the seawall protection to fail, requiring repositioning of infrastructure.

3. Ignoring the obvious. In viewing renderings in the workshop #3, most options proposed an elevated roadway beside the elevated walkway. The position and dimensions appear to enclose all the infrastructure? It seems that all infrastructure has to be upgraded and mounted in a new setting? **If so, we are being asked to tacitly accept major transformation work on or around the infrastructure – moving and stabilizing (?)– yet we will not even investigate other alternative that might extend the life of the infrastructure by planning to move it if necessary some time in the future.**

4. Maximizing our chances for outside funding. In workshop #3, a city staffer (?) said "…completing the project will require a patchwork of funding sources." This is true, and puts us in fierce competition with other cities, counties, and states. Yet the city is knowingly and unnecessarily limiting its options. **Shouldn't we be considering the appearance of this project and building our case to be successful in the political marketplace for outside funding?**

5. Trying to separate the inseparable. In his response to a question, Ryan Marquez stated to the effect of: *"We don't know anything now about details and costs that may be needed for the infrastructure; that will have to wait."* This implies that we should wait until the alternative plans for the seawall and raised roadway have been analyzed before considering the options related to the infrastructure underneath – condition and costs. Is this prudent, or logical? Our decision on, say, height & mass of the seawall depend on the function it will serve and involve work under the roadway; if you hope to consider resilience of infrastructure (adaptation), these decisions should NOT be independent.

A modest proposal. All I am suggesting is that our early planning be less limited, including at this early stage alternatives that consider a legitimate range of potentially useful options.

James N. Kremer

SAN FRANCISCO
PUBLIC GOLF ALLIANCE

1370 Masonic Ave., San Francisco, CA 94117 • 415-290-5718 • info@sfpublicgolf.org

February 28, 2021

Pacifica Public Works Department
Attn: Ryan Marquez, Associate Civil Engineer
151 Milagra Dr.
Pacifica, CA. 94044

Pacifica Planning Department
Attn: Christian Murdock, Senior Planner
1800 Francisco Blvd.
Pacifica, CA. 94044

GHD, Inc.
Attn: Paul Henderson, Project Manager
655 Montgomery Street Suite 1010
San Francisco, CA 94111

Re: Pacifica Beach Boulevard Sea Wall Reconstruction Project
Public Golf Alliance Comment on Existing Conditions Report, January 2021

EXECUTIVE SUMMARY
Problematic Sources and Data Gaps in the Existing Conditions Report:

1. **the 2016 Draft Coastal Regional Sediment Management Plan was never finalized and should not be relied upon; and**
2. **the Cost-Benefit Analysis section of Pacifica's Sea Level Rise Adaptation Plan was disclaimed and expressly "disapproved for any future purpose" by the Pacifica City Council.**

Dear Pacifica Public Works and Planning Departments and GHD,

We submit this letter on behalf of the San Francisco Public Golf Alliance, a non-profit, pro-bono organization dedicated to the preservation of affordable, eco-friendly public golf. Among our 6,500-plus members, we number hundreds of Pacifica women, men, senior, and youth golfers and their families. This follows-up on our letters to you dated September 29, 2020[1] and December 3, 2020,[2] incorporated herein by this reference**,** copies of which are attached hereto respectively as **Exhibits 1 and 2.**

[1] Letter, Sept. 29, 2020, SF Public Golf Alliance to Pacifica Public Works Dept, et al (copy attached as **Ex. 1**) https://drive.google.com/file/d/1uq5g3eVvco_2bARR-gf26TIwfsqUO05I/view?usp=sharing

[2] Letter, Dec. 3, 2020, SF Public Golf Alliance to Pacifica Public Works Dept, et al (copy attached as **Ex. 2**) https://drive.google.com/file/d/1DqVAbSAD1y3RlB2Zt1s0Aa6xanaHLlcN/view?usp=sharing

Pacifica's Master Agreement for Consultant Services with GHD Inc. for the Beach Boulevard Replacement Project is dated May 26, 2020 and was approved by the Pacifica City Council on that date.[3] Phase One of the "Scope of Services" described in that Master Agreement describes Task 3 as an "Existing Conditions Review," which is to include Task 1.3.1, "Data Collection and Review," including "review all data **and describe gaps** in a memo".[4] (emphasis added)

The "Existing Conditions Report," released by the City of Pacifica in mid-January 2020,[5] misrepresents at least two key data sources. At page 18, (22/442), the Report describes "select studies . . . that could be useful to this Project," but its description of two of these reports – both of which were written by the Report's co-author ESA – are misleading, as described below. One of the reports – the "San Francisco Littoral Cell Coastal Regional Sediment Management Plan" – is a "Draft" that was never completed or finalized, and therefore should not be relied upon at all.

From the problematic data sources cited by the Existing Conditions Report, it is apparent that the Existing Conditions Report's list of identified "data gaps"[6] is way too small.

1. **"San Francisco Littoral Cell Coastal Regional Sediment Management Plan (ESA, 2015)" ("CRSMP")** is identified at page 19 (23/442), Section 2.3.1 of the Existing Conditions Report, and described as a "regional study focused on the shorelines of San Francisco, Daly City and Pacifica . . . focused on coastal erosion hazards . . . alternatives were evaluated using a multi-benefit economic analysis similar to what was applied in the City's [Pacifica's] Adaptation Plan. The findings from this economic analysis are similar to those of the Adaptation Plan (ESA, 2018) and provide a useful starting point for developing alternatives for the BBIRP." The Existing Conditions Report does not contain a link to the CRSMP.

   But the Report misrepresents this study. The most recent version of this study, dated "January 2016" was a draft -- and stamped "Draft".[7],[8] That draft

---

[3] Master Agreement for "Planning Engineering and Environmental Services for Beach Boulevard Seawall Replacement Project," approved by the Pacifica City Council May 26, 2020 https://pacificacityca.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=1299&Inline=True, (at Packet Pg. 129, ff); the Master Agreement was approved by the City Council at its May 26, 2020 public meeting. See Minutes, at page 27: https://drive.google.com/file/d/1dh08ExB0L7WJ8TIxbty6hVzRgDodcm8r/view?usp=sharing

[4] Master Agreement for Planning Engineering, etc., Id., at p. 5 (packet pg. 146)

[5] Pacifica Beach Boulevard Sea Wall Replacement Project / Existing Conditions Report GHD, Jan. 2021: https://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=46372.07&BlobID=17958

[6] Pacifica Beach Boulevard Sea Wall Replacement Project / Existing Conditions Report, Id., at p. 37 (41/442)

[7] San Francisco Littoral Cell Coastal Regional Sediment Management Plan Draft -- January 2016 https://default.sfplanning.org/plans-and-programs/local_coastal_prgm/Draft_SFLC_CRSMP_20160104.pdf

[8] The website of the sponsoring agency, the State Parks Department Division of Boating and Waterways, discloses no plan iteration more recent than the January 2016 Draft: https://dbw.parks.ca.gov/?page_id=29339

was then subject to the public comment process, including detailed critical comment letters from the City of Pacifica Public Works Department,[9] the City and County of San Francisco,[10] and the San Francisco Public Golf Alliance.[11],[12],[13] However, these comments have never been formally responded to and no Final Plan incorporating the public comments and responses, was ever published. The public comment letters of the Pacifica Pubic Works Department, City and County of San Francisco, and the San Francisco Public Golf Alliance should accordingly be regarded as identifying "data gaps" for purposes of the Existing Conditions Report.

As stated in then-Pacifica Public Works Director O'Campo's March 3, 2016 letter, ". . . the City of Pacifica is very concerned about . . . significant **data gap and need for additional studies**, especially within our area. There is insufficient scientific basis to accurately characterize the physical system that is to be modified . . . [there is no] well-developed understanding of the littoral cell sediment transport system present along the shorelines of Daly City and Pacifica . . .(Page 1) . . . a definitive study has not been conducted to analyze sand transport and complete a sediment budget analysis. . . [of, among other things] sediment transport volumes, sediment sinks, natural or available sediment sources, and seasonal changes in near-shore sea floor morphology . . . (Page 2)." Also at page 2, Mr. O'Campo's letter contains a 16-bullet-point list of data gaps in the Draft Coastal Regional Sediment Management Plan.[14]

San Francisco Recreation and Park General Manager Phil Ginsburg's February 18, 2018 letter incorporates a seven-page memorandum detailing data gaps in the Draft Coastal Regional Sediment Management Plan regarding the presence and economic value of endangered species and extensive coastal wetlands, as well as significant economic values of public coastal golf and trail-walking recreation, and the property value of the architecturally and historically significant Sharp Park Golf Course.[15]

---

[9] Letter, Van O'Campo, Pacifica Public Works Dept. to Susan M. Ming, Mar. 3, 2016, at p.3 **(Copy, Exhibit 3)** https://drive.google.com/file/d/0B1h0x8Eg99deS1BkVzZzeEFlRGM/view?usp=sharing

[10] Letter, Philip Ginsburg, Gen. Mgr., to Susan M. Ming, Feb. 18, 2016, and attached memo **(Copy, Exhibit 4)**, https://drive.google.com/file/d/0B1h0x8Eg99deOHUxRWZOYmQ4UHM/view?usp=sharing

[11] Letter, SF Public Golf Alliance to Susan M. Ming, et al, Feb. 8, 2016 **(Copy, Exhibit 5)** https://drive.google.com/file/d/16nQyDcoDucJJT4G6R6R3ZSWKXfDZiDml/view?usp=sharing

[12] Letter, SF Public Golf Alliance to Susan M. Ming, et al, Feb. 19, 2016 **(Copy, Exhibit 6)** https://drive.google.com/file/d/1eegmSiJNzGyUsvE97bknQ0fcH2kAkO7F/view?usp=sharing

[13] Exhibits to Letter, SF Public Golf Alliance to Susan M. Ming, et al, Feb. 19, 2016 **(Copy, Exhibit 7)** https://drive.google.com/file/d/1uV0GnyeDbXdrREWjK-AADGLiROzhHuma/view?usp=sharing

[14] Letter, Van O'Campo, etc. to Susan M. Ming, supra, pp.2-3 https://drive.google.com/file/d/0B1h0x8Eg99deS1BkVzZzeEFlRGM/view?usp=sharing

[15] Letter, Philip Ginsburg, etc. to Susan M. Ming, supra, https://drive.google.com/file/d/0B1h0x8Eg99deOHUxRWZOYmQ4UHM/view?usp=sharing

The San Francisco Public Golf Alliance letters of February 8 and 19, 2018, provide extensive analysis, including expert testimony, on the value of the golf course and public golf recreation, and on the mitigation value of the endangered and threatened species at the golf course – all of which data is missing from the Draft Coastal Regional Sediment Management Plan.[16]

A key document in the Pacifica Planning Department's recently-completed Sea Level Rise adaptation planning process – the June 2018 Final Draft Sea-level Rise Vulnerability Assessment, states expressly that the "results" of the Draft Coastal Regional Sediment Management Plan are **not used or relied upon** by Pacifica's sea level rise study.[17] The Vulnerability Assessment is itself incorporated as Appendix A into Pacifica's September 2018 Final Draft Sea-level Rise Adaptation Plan.[18] The

2. **"Sea-level Rise Adaptation Plan (2018), City of Pacifica,"** is identified at pages 18-19 (22-23/442), section 2.3.1 of the Existing Conditions Report, and described as "a vulnerability analysis . . . and a multi-benefit economic analysis of adaptation alternatives. . . conducted to identify costs, benefits, net benefits and revenues for comparison between strategies." **But the Existing Conditions Report significantly fails to report that the cost-benefit section of the Sea-level Rise Adaptation Plan was on February 24, 2020 expressly disclaimed and disapproved "for any future purpose" by the Pacifica City Council**, when Council adopted Pacifica's Consultation Draft Local Coastal Plan for submission to the California Coastal Commission.[19],[20]

"**The cost-benefit analysis section of the Adaptation Plan was not adopted or approved by the City of Pacifica**. . . . . **The cost-benefit analysis shall not be used for any future purpose by the City of Pacifica or its planning processes, including implementation of the Local Coastal Program, public infrastructure investment, permitting or other regulatory purposes.**"[21] (emphasis added)

[16] See San Francisco Public Golf Alliance letters, February 8 and 19 (including Exhibits), 2019, supra

[17] Final Draft Pacifica Sea-Level Rise Vulnerability Assessment, Appendix E, p. 12, Question 7: https://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=67369.96&BlobID=14459

[18] Final Draft Sea Level Rise Adaptation Plan, September 2018, at p. 5 (9/115): https://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=58348.79&BlobID=14632

[19] Minutes, Pacifica City Council Meeting Feb. 24, 2020, at pgs. 40-41: https://pacificacityca.iqm2.com/Citizens/FileOpen.aspx?Type=15&ID=1241&Inline=True

[20] Pacifica Local Costal Plan, Consultation Draft, Feb. 20, 2020, Chpt. 6, pp. 6-9 (165/222), 6-11 https://cityofpacifica.egnyte.com/dl/EPskSdDwa4/?

[21] Pacifica Local Costal Plan, Consultation Draft, Id. , Chpt. 6, p. 6-9 (165/222)

CONCLUSION

The February 2018 letters from then-Pacifica Public Works Director Van O'Campo, San Francisco Recreation and Parks Department General Manager Phil Ginsburg, and the San Francisco Public Golf Alliance identify and discuss significant data gaps which need to be addressed. The Cost-Benefit Analysis Section of Pacifica's Sea-level Rise Adaptation Plan has been disapproved by the Pacifica City Council and may not be used for any purpose in the analysis of the Beach Boulevard Seawall Replacement Project. And the January 2016 Draft San Francisco Littoral Cell Coastal Regional Sediment Management Plan has never been finalized, so should not be used or relied upon in the current Beach Boulevard Seawall Replacement Project.

Respectfully submitted,
San Francisco Public Golf Alliance

Richard Harris

Richard Harris, President

Exhibits: See next page

cs: See next page

Copies:

City of Pacifica Mayor and City Council
Pacifica Planning Department,
Tina Wehrmeister, Planning Director, Christian Murdock, Senior Planner
Pacifica Public Works Department
Lisa Petersen, Director, Sam Bautista, Deputy Director, Ryan Marquez, P.E.
Pacifica City Manager Kevin Woodhouse
Kearns & West
Ben Gettleman, Vice President, Kelsey Rugani, Senior Director
San Francisco Recreation and Park Department
Phil Ginsburg, General Manager, Lisa Wayne, Spencer Potter
Bo Links, Esq.
Sharp Park Business Women's Golf Club
Leslie Davis, Helen Duffy
Bob Downing, Sharp Park Golf Club

EXHIBITS

1. **Letter, Sept. 29, 2020, SF Public Golf Alliance to Pacifica Public Works Dept, et al**
https://drive.google.com/file/d/1uq5g3eVvco_2bARR-gf26TIwfsqUO05I/view?usp=sharing

2. **Letter, Dec. 3, 2020, SF Public Golf Alliance to Pacifica Public Works Dept, et al**
https://drive.google.com/file/d/1DqVAbSAD1y3RlB2Zt1s0Aa6xanaHLIcN/view?usp=sharing

3. **Letter, Van O'Campo, Pacifica Public Works Dept. to Susan M. Ming, Mar. 3, 2016**
https://drive.google.com/file/d/0B1h0x8Eg99deS1BkVzZzeEFlRGM/view?usp=sharing

4. **Letter, Phil Ginsburg, Gen. Mgr., to Susan M. Ming, Feb. 18, 2016, with memo**
https://drive.google.com/file/d/0B1h0x8Eg99deOHUxRWZOYmQ4UHM/view?usp=sharing

5. **Letter, SF Public Golf Alliance to Susan M. Ming, et al, Feb. 8, 2016**
https://drive.google.com/file/d/16nQyDcoDucJJT4G6R6R3ZSWKXfDZiDml/view?usp=sharing

6. **Letter, SF Public Golf Alliance to Susan M. Ming, et al, Feb. 19, 2016**
https://drive.google.com/file/d/1eegmSiJNzGyUsvE97bknQ0fcH2kAkO7F/view?usp=sharing

7. **Exhibits to Letter, SF Public Golf Alliance to Susan M. Ming, et al, Feb. 19, 2016**
https://drive.google.com/file/d/1uV0GnyeDbXdrREWjK-AADGLiROzhHuma/view?usp=sharing

SAN FRANCISCO
PUBLIC GOLF ALLIANCE

1370 Masonic Ave., San Francisco, CA 94117 • 415-290-5718 • info@sfpublicgolf.org

April 28, 2021

Pacifica Public Works Department
Attn: Ryan Marquez, Associate Civil Engineer
151 Milagra Dr.
Pacifica, CA. 94044

GHD, Inc.
Attn: Paul Henderson, Project Manager
655 Montgomery Street Suite 1010
San Francisco, CA 94111

Re: Pacifica Beach Boulevard Sea Wall Reconstruction Project
Multi-Hazard Risk Assessment Public Review Draft

Executive Summary:
San Francisco Public Golf Alliance supports rebuilding the Sea Wall and filling the Clarendon Gap, but notes that the Draft Multi-Hazard Risk Assessment understates the cost of No-Action by omitting an accounting of the economic Costs – far exceeding $100 Million – of damage to the Public Infrastructure at the Sharp Park Golf Course and the related but separate damage and loss to the business, cultural and historical assets, public coastal recreation, wetlands, endangered species, and the Sharp Park Levee reach of the California Coastal Trail.

Dear Pacifica Public Works Department and GHD, Inc.,

San Francisco Public Golf Alliance is a non-profit, pro-bono organization dedicated to the preservation of affordable, eco-friendly public golf. Among our more than 7,000 members, we number hundreds of Pacifica women, men, senior, and youth golfers and their families.

The first sentence of the first paragraph of the Executive Summary of GHD's Multi-Hazard Risk Assessment Public Review Draft (March 2021) proclaims that the report "provides a comprehensive understanding of risks from natural hazards to the Beach Boulevard Seawall and associated assets (i.e. infrastructure and resources) in the City of Pacifica."[1]

GHD's Master Agreement with the City of Pacifica the Beach Boulevard Sea Wall Resiliency Project provides that "Site conditions related to the Sharp Park Golf Course will . . . be described due to its location immediately south of the site and the known existing flooding hazards at that site. . . .

[1] GHD, Beach Boulevard Infrastructure Resiliency Project Multi-Hazard Risk Assessment Public Review Draft (March 2021), pg. 1 (5/242) https://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=40180.24&BlobID=18221

The Team will review available data on the existing recreational site conditions and access to walking, jogging, fishing, ocean viewing, beach combing and parking opportunities. . . "[2]

At the May 26, 2020 Pacifica City Council meeting that approved the GHD Master Agreement, City Councilman Mike O'Neill asked (1) whether GHD's analysis would include golf recreation, and (2) whether the project planners will obtain input from the City and County of San Francisco, the golf course's owner. Project Manager Ryan Marquez, Associate Civil Engineer in the Pacifica Public Works Department, replied that the study "will definitely take the recreation of the area into consideration," and that San Francisco will be consulted.[3]

As a public park and a constructed recreational landscape – built on the ground for use on the ground – the golf course is public infrastructure and comes within the definition of a "structure" found at Pacifica Municipal Code Title 9, Chapter 4, Article 2, Section 9-4.278.[4] Sharp Park Golf Course is a hugely valuable asset to Pacifica (where it is designated in the General Plan as a historical site), to San Francisco (whose Planning Department has determined the course to be "historic resource property" under the California Environmental Quality Act), and to the national and world golf communities (as a rare public seaside links designed by history's best-known golf architect Alister MacKenzie, ranked by Golfworld Magazine as one of the Best 50 Municipal Courses in America). [5] Together with the Pacifica Pier and the California Coastal Trail, the golf course is the most heavily used recreational infrastructure in the Sharp Park District**.**

But in its assessment of the risks and of the potential losses and damage to Pacifica infrastructure the Multi-Hazard Risk Assessment fails to place monetary value on the potential losses at the Sharp Park Golf Course. This is a major oversight and failure of the Multi-Hazard Risk Assessment. It is also not new: Pacifica and its consultant ESA, Inc. have repeatedly failed in studies over the past several years to appropriately value the risk of loss to the infrastructure and public resources at the Sharp Park Golf Course property. This failure has been repeatedly noted and challenged by both the City and County of San Francisco and by the San Francisco Public Golf Alliance, including the San Francisco Public Golf Alliance letter to Pacifica Planning Department, et al, dated September 29, 2020,[6] a copy of which is attached hereto as **Exhibit 1.**

---

[2] Master Agreement for "Planning Engineering and Environmental Services for Beach Boulevard Seawall Replacement Project," Scope of Services, Exhibit A to Master Agreement, Task 1.4.4 (Environmental Conditions Survey), at Packet Page 151: https://pacificacityca.iqm2.com/Citizens/FileOpen.aspx?Type=1&ID=1299&Inline=True.
The Master Agreement was approved by the City Council at its May 26, 2020 public meeting. See Minutes, at page 27: https://drive.google.com/file/d/1dh08ExB0L7WJ8TIxbty6hVzRgDodcm8r/view?usp=sharing

[3] Minutes of May 26, 2020 Pacifica City Council meeting, Id.: O'Neill/Marquez exchange at pp. 10-11; approval at p. 27 https://drive.google.com/file/d/1dh08ExB0L7WJ8TIxbty6hVzRgDodcm8r/view?usp=sharing;
The Minutes were adopted at Council's June 8, 2020 Council Meeting.

[4] The golf course is a constructed landscape, built on the ground for use on the ground and as such comes within the definition of a "structure" under the Pacifica Municipal Code, Title 9 (Planning and Zoning), Chapter 4 (Zoning), Article 2 (Definitions), Section 9-4.278. - Structure, which reads: "Structure" shall mean anything constructed or erected the use of which requires location on the ground or attachment to something having location on the ground."

[5] Letter, Sept. 29, 2020, SF Public Golf Alliance to Pacifica Public Works Dept, et al, pages 2-3, at footnotes 4-9 https://drive.google.com/file/d/1uq5g3eVvco_2bARR-gf26TIwfsqUO05I/view?usp=sharing

[6] Letter, Sept. 29, 2020, SF Public Golf Alliance to Pacifica Public Works Dept, Id., pages 3-4, footnotes 10-11 https://drive.google.com/file/d/1uq5g3eVvco_2bARR-gf26TIwfsqUO05I/view?usp=sharing

Submitted with our September 29, 2020 letter to the Public Works Department et al. was an August 27, 2018 appraisal letter from Pro Forma Advisors LLC, a leading golf course appraiser, evaluating the present value of the historic and architectural landmark seaside public **golf course itself at $31.5 Million**. The **coastal golf public recreational value is assessed separately at $36 Million**. The figures are conservative values, based on San Francisco's reported cost of operating the golf course and public use and greens fee statistics.[7] A copy of Pro Forma Advisors' August 27, 2018 appraisal letter is attached hereto as **Exhibit 2.**

These figures represent only the golf course property and recreation values, and do not include the values of the California Coastal Trail or public hiking recreational use along the top of the half-mile-long Sharp Park levee, or the values of the Laguna Salada wetland and the endangered San Francisco Garter Snake and California Red-legged Frog which make their home in the wetlands.

In sum, we support rebuilding the sea wall and filling the Clarendon gap as necessary measures to protect the Sharp Park District from the sea. But we note that the Multi-Hazard Risk Assessment far undervalues the potential economic costs of loss of infrastructure and public resources at the golf course property. Accordingly we reiterate our request that the City of Pacifica and its consultant GHD include in the Multi-Hazard Risk Assessment and all subsequent evaluations of the values of the infrastructure and at-risk resources protected by the Beach Boulevard Sea Wall, the economic values of the Sharp Park Golf Course property – including but not limited to the golf course improvements on the real estate, the golf business and the public coastal recreation value, the wetlands and their resident San Francisco Garter Snake and California red-legged frog populations, and the Sharp Park levee with the California Coastal Trail infrastructure on top.

Respectfully submitted,
San Francisco Public Golf Alliance

Richard Harris

Richard Harris, President

Encls.
ccs:

City of Pacifica Mayor and City Council
Pacifica Planning Department,
Tina Wehrmeister, Planning Director, Christian Murdock, Senior Planner
Pacifica Public Works Department
Lisa Petersen, Dir., Sam Bautista, Deputy Dir., Ryan Marquez, P.E.
Pacifica City Manager Kevin Woodhouse
Kearns & West
Ben Gettleman, Vice President, Kelsey Rugani, Senior Director
San Francisco Recreation and Park Department
Phil Ginsburg, General Manager, Lisa Wayne, Spencer Potter
Bo Links, Esq.
Sharp Park Golf Club, Bob Downing, President,
Sharp Park Business Women's Golf Club, Leslie Davis, President, Helen Duffy, Vice President

[7] Letter, August 27, 2018 from Pro Forma Advisors, etc., Id., at third unnumbered page https://drive.google.com/file/d/1QbVHOIbcW-_wpqSUUGKYe71JOHcehbYw/view?usp=sharing

EXHIBITS

1. **Letter, Sept. 29, 2020, SF Public Golf Alliance to Pacifica Public Works Dept., et al, https://drive.google.com/file/d/1uq5g3eVvco_2bARR-gf26TlwfsqUO05l/view?usp=sharing**

2. **Letter, Gene Krekorian, Pro Forma Advisors LLC, August 27, 2018: https://drive.google.com/file/d/1QbVHOlbcW-_wpqSUUGKYe71JOHcehbYw/view?usp=sharing**

SAN FRANCISCO
PUBLIC GOLF ALLIANCE

1370 Masonic Ave., San Francisco, CA 94117 • 415-290-5718 • info@sfpublicgolf.org

May 3, 2021

Pacifica Public Works Department
Attn: Ryan Marquez, Associate Civil Engineer
151 Milagra Dr.
Pacifica, CA. 94044

GHD, Inc.
Attn: Paul Henderson, Project Manager
655 Montgomery Street Suite 1010
San Francisco, CA 94111

Re: Pacifica Beach Boulevard Sea Wall Reconstruction Project
Multi-Hazard Risk Assessment and Alternatives Assessment Public Review Drafts

Follow-up comments by SF Public Golf Alliance to the April 29, 2020 Public Workshop:

1. **"Hybrid approach" should be vetted by public review, input, and comment before it goes to City Council for decision.**
2. **Any design for the Beach Boulevard Sea Wall Reconstruction Project should include consideration and analysis of the new structure's effects on the beach to the west of the golf course and on the Sharp Park Golf Course levee.**
3. **The beaches north of Mori Point are steep, dangerous, subject to sneaker waves and rip currents, and are most safely and most popularly experienced from the safety of the California Coastal Trail running on top of the sea wall and the Sharp Park Golf Course levee.**

Dear Pacifica Public Works Department and GHD, Inc.,

San Francisco Public Golf Alliance is a non-profit, pro-bono organization dedicated to the preservation of affordable, eco-friendly public golf. Among our more than 7,000 members, we number hundreds of Pacifica women, men, senior, and youth golfers and their families.

1. **The yet-to-be-seen "hybrid approach" is a black box and should be subject to public review, questions, and comment before it is presented to City Council for decision.**

As we understood it, the takeaway from the April 29 community Zoom workshop was that the Public Works Department and the GHD team of consultants would, in addition to the sea wall, revetment, and other alternatives analyzed in the draft versions of the Multi-Hazard Risk Assessment and Alternatives Analysis that were subject of the April 29 community workshop, develop a new "hybrid approach" that has not yet been the subject of public review and comment. And that this new "hybrid approach" would then be presented at a City Council meeting at an unspecified future date,

hopefully in June, for combined public comment and City Council decision. This approach seems rushed. If a yet-to-be-seen "hybrid approach" is to be developed by Public Works and the GHD-led consultant team, that "hybrid" should be subject to the public vetting process of a public workshop before it is presented for decision to the City Council. Based on experience, it is safe to say that a meeting that attempts to serve the dual function of presenting a previously-unreviewed design to the public and as a decision-making meeting by the City Council would be long, confusing, and exhausting all around, and would not be conducive to clear thinking by decisionmakers or public acceptance by the community. If a new "hybrid design" is to be developed, let that "hybrid" go through a reasonable public review, comment, and vetting process before it is set before the City Council for decision-making.

2. **The effects of the design alternatives on the Sharp Park Golf Course levee should be fully analyzed before the Public Works Department and Consultant Team recommends, and before the City Council adopts, a "preferred alternative".**

The greater Sharp Park neighborhood – including residential neighborhoods both north and south of the golf course – are protected from the ocean by the combination of the Beach Boulevard Sea Wall and the Sharp Park Golf Course levee. These structures are interdependent in protecting the Sharp Park District, the Fairway Park residential neighborhood, the golf course, and the Laguna Salada lagoon and wetlands and endangered species. And so any design for reconstruction of the Beach Boulevard Sea Wall and for filling the Clarendon Gap must take into consideration the new structure's effects on the soundness of the Sharp Park Golf Course levee. If, for example, a new sea wall or a new rock revetment structure along Beach Boulevard were to affect shoreline currents or were to divert increased volumes of seawater south towards Mori Point, then such currents or increased surf volumes would provide additional stress on the Sharp Park Golf Course levee. The City of San Francisco should be consulted, and its engineers and consultants given reasonable time and information to enable San Francisco to analyze and comment on any design before such design should proceed into the next phase of development.

3. **The Sharp Park beaches are famously dangerous. By far the safest and most popular way that the public enjoys these beaches is from the safety of the California Coastal Trail along top of the sea wall and the Sharp Park Golf Course berm.**

The beach west of the Beach Boulevard Sea Wall and the Sharp Park Golf Course levee, between the Pacifica Pier on the North and Mori Point on the south, is subject to chronic, notoriously dangerous surf conditions – sneaker waves and powerful rip currents – that have made this stretch of beach the site of frequent drowning deaths over the years.

The Sharp Park Beach homepage on the City's Parks, Beaches and Recreation Department's website warns: ". . this beach is famous for its treacherous riptides."[1] Because of the known dangerous surf conditions, Sharp Park Beach is not a good surfing beach. "People die out there" is one of the several negative social media comments.[2]

[1] City of Pacifica. Parks, Beaches & Recreation Department website, Sharp Park Beach homepage: https://www.cityofpacifica.org/depts/rec_department/parksbeaches/beach_and_park_info_and_rules/sharpbeach.asp

[2] Reddit, 2017: "Does anybody surf Sharp Park or Pacifica Municipal Pier?" https://www.reddit.com/r/surfing/comments/6i3uhp/norcal_does_anyone_surf_sharp_park_or_pacifica/

News reports of drownings at Sharp Park Beach when people were surprised by sneaker waves and riptides include three drownings in 2010,[3] three 2016 drownings in February,[4] August,[5] and December 2016,[6] and most recently the December 10, 2020 drowning of handyman David Barba swept from the rocks near the pier and drowned while on his lunch break.[7],[8]

In a written public comment submitted in in 2018 in the City of Pacifica's Local Coastal Planning Process, Sharp Park District resident Robine Runneals commented that the Sharp Park beaches ". . . between the Pier and Mori Point . . . has an undertow and a history of drownings, and they are posted as dangerous. Most people stay off the sand and keep to the trail on top of the sea wall and the levee."[9] In its official written response, the Pacifica Planning Department admitted: "We understand beach use is lower in northern Pacifica and that people mostly use the trails there."[10]

Respectfully submitted,
San Francisco Public Golf Alliance

Richard Harris

Richard Harris, President

Copies: See next page

---

[3] San Jose Mercury News, March 30, 2010, "Dangerous Surf at Pacifica Beach Claims another victim . . .": the news report describes three drowning deaths at Sharp Park Beach in February and March 2010, and quotes one local resident calling Sharp Park Beach "the people-eater": https://www.mercurynews.com/2010/03/30/dangerous-surf-at-pacifica-beach-claims-another-victim-officials-to-put-up-new-signs/

[4] KGO TV News, Feb. 9, 2016, "Pacifica Man Dies Trying to Save Wife Swept Out by Big Waves" "Pacifica resident and wife walking on Sharp Park Beach, wife pulled into the surf by a sneaker wave, husband drowns trying to save her, wife survives: http://abc7news.com/news/pacifica-man-drowns-trying-to-save-wife-swept-out-by-big-waves/1193987/

[5] Bay City News, Aug. 15, 2016, "Dead Body Found in Water at Sharp Park Beach": https://sfbay.ca/2016/08/15/dead-body-found-in-water-at-sharp-park-beach/

[6] San Francisco Chronicle, Dec. 6, 2016, "Dead Man Washes up on Pacifica Beach": http://www.sfgate.com/bayarea/article/Dead-man-washes-up-on-Pacifica-beach-10778519.php

[7] SJ Mercury News, Dec. 9, 2020, "Man drowns after being swept from the rocks one-half mile north of the Pacifica Pier, " https://www.mercurynews.com/2020/12/08/coast-guard-searching-for-man-reported-to-have-been-swept-away-by-peninsula-ocean-waves/

[8] San Francisco Chronicle, May 1, 2021, Page 1: "A boy was swept into the Pacific Ocean. His story reveals the hidden danger of California's sneaker waves." https://www.sfchronicle.com/local/article/California-ocean-sneaker-waves-beach-16139756.php (among others, reporting that handyman David Barba, 31 years old, was "snatched from the rocks beneath the Pacifica pier" and drowned Dec. 8, 2020.

[9] Pacifica SLR Adaptation Plan - Appendix K: Response to Comments on Adaptation Plan Phase, Letter from Robine Runneals, at page 119: https://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=58348.8&BlobID=14635

[10] Pacifica Planning Department, Appendix K: Response to Comments," Appendix K, Id., at [age 19. Response to Comment 46: https://www.cityofpacifica.org/civicax/filebank/blobdload.aspx?t=58348.8&BlobID=14635

Copies:

City of Pacifica Mayor and City Council
Pacifica Planning Department,
Tina Wehrmeister, Planning Director, Christian Murdock, Senior Planner
Pacifica Public Works Department
Lisa Petersen, Dir., Sam Bautista, Deputy Dir., Ryan Marquez, P.E.
Pacifica City Manager Kevin Woodhouse
Kearns & West
Ben Gettleman, Vice President, Kelsey Rugani, Senior Director
San Francisco Recreation and Park Department
Phil Ginsburg, General Manager, Lisa Wayne, Spencer Potter
Bo Links, Esq.
Sharp Park Golf Club, Bob Downing, President,
Sharp Park Business Women's Golf Club, Leslie Davis, President, Helen Duffy, Vice President

***This public comment submitted online via the project webpage. Due to the length of the comment, staff believes it is more readable in its own attachment.**

Dear

The San Mateo County Chapter of Surfrider Foundation is dedicated to protecting all 60 miles of the County's beautiful coastline. The Surfrider Foundation is a non-profit, environmental organization dedicated to the protection and enjoyment of the world's oceans, waves and beaches for all people. Our local San Mateo County Chapter submits the following comments on the City of Pacifica's Beach Boulevard Project Alternatives as presented in the Beach Boulevard Project Workshop #4.

After a review of the Alternatives Analysis document, it is clear that the alternatives analysis only very briefly considers living shorelines and managed adaptation, and prematurely rules out these options. There was no review of a managed adaptation element or a combined managed adaptation and living shoreline option.

Over the course of the four workshops many local residents have commented that this process appears to be an "all or nothing" project predetermined by Pacifica's City Council as they limited the consultants to analyze and consider only options that the City Council had already decided upon in advance, rather than exploring all possible options. The consultants verbally confirmed City Council's request for a limited scope at workshops #3 and #4, in spite of significant local community interest expressed at these workshops in alternatives to hard armoring solutions.

None of the Beach Boulevard alternatives nor the other projects currently being considered in Pacifica have taken into account moving sewer and utility lines located close to the shoreline under the street. These are in jeopardy and will need to be addressed at some point, and opportunities to move them could happen as upgrades occur. Surfrider encourages the City to prepare a plan for moving at risk utility and sewer lines rather than continuing to upgrade and maintain them in their current location, thereby creating a false justification for hard armoring and enabling more development in a hazard zone. This should have been included as part of any consideration of alternatives in Phase 1.

Additionally, as many workshop attendees mentioned during Workshop #4, this project does not consider a long enough planning horizon. The preferred alternatives of a seawall designed for a 50-year planning horizon, would perpetuate maladaptive development in a coastal hazard zone.

Surfrider urges the City of Pacifica to look for solutions that will restore Pacifica's beach. The beach once was, and still can be, the City's greatest asset - but this proposal favors a sidewalk and roadway over protecting the coast itself. Coastal access is meaningful when there's a coast and beach to visit. Hard armoring such as a seawall or riprap exacerbate erosion. Before the seawall was put in place in the 1980's, Pacifica had much more beach space. This beautiful beach that has been lost could be in our future if we set the vision for it today. Photos of the beach from 1979 bear this out. The consultants stated during workshop #4 that if the more damaging solutions are chosen (seawall and/or rock revetment), the result is more damage to the shoreline in future and less likelihood of restoring any kind of beach or offshore habitat once that scouring has occurred, as the trough created will produce irreversible damage. Hard armoring will also possibly increase impacts to the shoreline and beaches further north and south of the area precipitating erosion of Pacifica's remaining beaches and a

perceived need for expanded armoring. From a whole landscape perspective, this perpetuates a destructive cycle.

The issue of sea level rise isn't going to go away and it deserves a holistic approach and consideration as part of all infrastructure decisions in Pacifica. There is no perfect solution to any of these dilemmas, but there are ways to approach them with long-term planning to nurture the coastline while ensuring Pacifica has a more resilient future (both environmentally and financially), that preserves the beauty and culture of the place, and does right by the long-term residents whose properties will eventually be impacted.

As part of a long-term planning process, any new development should be required to be constructed outside of coastal hazard zones, however the Pacifica City Council members have made comments during these workshops and during City Council meetings, that there are significant new real estate projects (hotel, affordable housing, and private development) proposed that are dependent on the seawall and revetment alternative. Allowing risky new development to drive these decisions, without serious consideration of long-term planning and alternative solutions for adaptation is counter to the California Coastal Commission's guidance and will potentially place more people at risk in future.

Many municipalities are looking at the issue of sea level rise as an opportunity to plan for a more resilient and stable future that confers economic, cultural, health, and environmental benefits to their cities. The City of Half Moon Bay is one example in this regard. It is also possible that as markets recognize the liability of real estate in coastal hazard zones, areas that continue to invest in hard armoring and development in hazard zones will fall further behind economically and will incur greater costs over the long term. Grant dollars and other funding mechanisms are already beginning to favor planning and projects that offer more sustainable solutions and ideas with forward-thinking visions for the future that preserve shorelines and coastal habitat and provide beaches for visitors to enjoy. Beach recreation activities are an important visitor revenue stream for many businesses in Pacifica including restaurants, hotels, coffee shops, grocery stores, pharmacies, surf shops, and gas stations among others.

Surfrider Foundation's San Mateo County Chapter opposes the seawall or rock revetment alternatives presented in this analysis, and we instead advocate for solutions that include living shorelines, managed adaptation or a combined managed adaptation and living shoreline strategy. We recognize that a temporary minimal stop-gap renovation of the seawall north of the pier as an interim approach may be necessary, and we would only support this short-term bandaid as part of a longer-term plan with a specific transition timeline for that section.

Thank you for considering our comments.