

## MEMORANDUM

July 5, 2018

**TO:** MEMBERS, PORT COMMISSION  
Hon. Kimberly Brandon, President  
Hon. Willie Adams, Vice President  
Hon. Gail Gilman  
Hon. Victor Makras  
Hon. Doreen Woo Ho

**FROM:** Elaine Forbes  
Executive Director

**SUBJECT:** Informational update on the San Francisco Seawall Earthquake Safety and Disaster Prevention Program (Seawall Program)

**DIRECTOR'S RECOMMENDATION:** Informational Only; No Action Required

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### EXECUTIVE SUMMARY

This is a quarterly informational update to the Port Commission on the progress of the San Francisco Seawall Earthquake Safety and Disaster Prevention Program (Seawall Program). The City, through the Port Commission, is endeavoring to make major improvements to the over 100-year-old San Francisco Seawall (Seawall) to better withstand the next major earthquake, improve flood protection, and prepare for sea level rise. The Seawall underpins the Embarcadero Roadway and provides flood protection to over 500 acres of the City, including the Embarcadero MUNI tunnel and BART Transbay Tube.

The Seawall Program is currently budgeted at \$5 Billion with a 30 year implementation timeline. Phase 1 of the Seawall Program is budgeted at \$500M with completion targeted the end of 2026. This initial phase will develop the overall improvement program and construct critical improvements to reduce life safety risk and improve emergency response capacity following a major earthquake or flood. Later phases will continue to reduce seismic and flood risk along the entire Seawall by both strengthening and adapting the Seawall and co-dependent infrastructure.

To advance and carry out the Seawall Program, staff have assembled a dedicated program team consisting of program specific staff, Port operating staff, and two primary consultant contracts, one contract for communications and community engagement

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(awarded to Civic Edge Consulting, or “CEC”) and one contract for planning, engineering, and environmental services (or “PEEC”) awarded CH2M Hill Engineers, Inc. with Arcadis (or “CH2M/Arcadis).

Phase 1 is in the Planning stage and this update will focus on efforts since the last Port Commission updates on February 13<sup>th</sup> and March 13<sup>th</sup>, 2018.

## **BACKGROUND**

The following is a brief summary of prior Port Commission information items and action items related to the SESP.

- On September 13, 2016, staff provided an informational update on the Seawall Resiliency Project to the Port Commission. The update included a summary of the prior studies and a plan to advance the project using dedicated staff and consultant support.
- On January 10, 2017, the Port Commission authorized staff to issue a Request for Proposals to solicit professional public relations and communications consulting services for The Seawall Program.
- On March 14, 2017, the Port Commission authorized Port staff to issue a Request for Proposals (“RFP”) for Program Management / Engineering Consultant Services to support the Seawall Resiliency Project.
- On March 28, 2017, the Port Commission authorized the Executive Director to enter into an FCSA with the United States Army Corps of Engineers (USACE) on a Continuing Authorities Program 103 (CAP 103) Coastal Flood Protection Feasibility Study on a portion of the Seawall from Pier 7 to Pier 22-1/2. The authorization included a maximum of \$500,000 in Port funds as the Port’s cost share contribution.
- On May 9, 2017, staff provided an informational presentation to the Port Commission on the recommendations of the Seawall Finance Working Group.
- On May 18, 2017, the Port Commission authorized Port staff to award a professional services contract to Civic Edge Consulting, LLC, for public relations, communications, media services, and related professional services for the Seawall Resiliency Project in the amount of \$1,695,205 with a contract term of four years with the option to extend the term for one additional year at the Port’s sole discretion.
- On August 8, 2017, the Port Commission authorized Port staff to award a contract to CH2M HILL Engineers, Inc., for planning, engineering, and environmental services for the Seawall Resiliency Project in an amount of \$36,349,740 and authorization for staff to increase the contract amount, if needed for unanticipated contingencies, by an additional \$3,634,974 (10% of \$36,349,740) for a total contract authorization of \$39,984,714, with a term of ten

years and the Port's option to extend the term for one additional year. The contract award was subsequently approved by the Board of Supervisors on September 19, 2017, and staff issued a notice to proceed on November 7, 2017.

- On February 13, 2018, staff and Civic Edge Consulting provided an information presentation to the Port Commission to summarize the communication and stakeholder engagement strategy for the SESP.
- On March 13, 2018, staff and members of CH2M/Arcadis provided an informational presentation to the Port Commission on Planning and Engineering progress for the SESP.
- On April 10, 2018, the Port Commission recommended that the Capital Planning Committee and the Board of Supervisors place a minimum \$350 million Seawall Earthquake Safety BO Bond measure on the November 6, 2018 ballot, and authorized the Executive Director to request an increase in the GO Bond amount in the event the Controller determines that there is additional bonding capacity available to support the Seawall Program.

## **STRATEGIC OBJECTIVE**

This Seawall Earthquake Safety Program supports the goals of the Port's Strategic Plan as follows:

### Engagement:

By regularly engaging in meaningful public participation and incorporate community feedback into Port initiatives, and by keeping the public informed of the financial responsibilities of the Port.

### Livability:

By increasing the proportion of funds spent by the Port with LBE and micro-LBEs.

### Resiliency:

By leading the City's efforts to address threats from earthquakes and flood risk through research and infrastructure improvements to the Seawall and Port property.

### Sustainability:

By enhancing the quality of the Bay water and habitat with the improvements, by limiting construction impacts and waste, and by sustainable design and construction best management practices.

## **UPDATE ON PROGRESS & NEXT STEPS**

### PROGRAM MANAGEMENT

*Program Overview:* The Seawall Program is currently budgeted at \$5 Billion with a 30 year implementation timeline. Phase 1 of the Seawall Program is budgeted at \$500M with completion targeted the end of 2026. This initial phase will develop the overall improvement program and construct critical improvements to reduce life safety risk and

improve emergency response capacity following a major earthquake or flood. Later phases will continue to reduce seismic and flood risk along the entire Seawall by both strengthening and adapting the Seawall and co-dependent infrastructure.

- There are no changes to the overall program framework this quarter.

*Port Staffing:* Commenced recruitment of an Environmental Planner IV, a dedicated program specific position. The recruitment period closed the end of June; interviews are being scheduled for July with an expected start date by the end of August 2018.

*Civic Edge Communications Consultant Contract:* This is a contract for public relations, communications, media services, and related professional services for the Seawall Program. The Port Commission awarded the contract on May 23, 2017 (Resolution No. 17-24) for a not to exceed amount of \$1,695,205 with a term of four years and an option to extend for one additional year.

- Contractor performance continues to be very good.
- There are no modifications or significant changes to report this quarter.

*CH2M / Arcadis Planning, Engineering, and Environmental Support Consultant Contract:* This is a contract for planning, engineering, and environmental services for the Seawall Program. The Port Commission awarded this contract on August 8, 2018, for a not to exceed amount of \$39,984,714 with a term of ten years and an option to extend for one additional year.

- Contractor performance continues to be good.
- No modifications or significant changes to report this quarter.
- Staff is negotiating scope and fee for a geotechnical investigation program with an estimated value of approximately \$2M.

*Executive Steering Committee (ESC):* A program informational update was made to the Seawall Program Executive Steering Committee on June 22, 2018. This was the sixth meeting of the ESC and this group continues to guide the program with considerable and wide-ranging expertise.

## PLANNING and ENGINEERING

- *Program database and GIS:* CH2M/Arcadis continues to develop the Program database and GIS repository of existing data.
- *Geotechnical Investigations:* Geotechnical investigations are needed to refine the prior screening level earthquake hazard assessment and to provide engineering data for advancing the development of alternatives. This quarter, field work was completed for the pilot geotechnical investigation. The pilot is being used to determine investigation techniques and methods that are the most cost-effective for the overall geotechnical investigation program. The pilot included field investigations at Piers 3, 7, and Piers 30-32, both landside and waterside of the Seawall, and used a variety of techniques. Lab work and interpretation of results is currently underway and will inform the overall approach to the program-wide investigation that will start later this year. This effort is on the critical path for the Phase 1 schedule.

- *Bathymetric Survey:* Bathymetry is a term for a topographic survey of the Bay floor and this information is needed for both the detailed seismic hazard analysis and for wave analysis to be used in the flood hazard assessment. Last quarter, existing information was collected, analyzed, and determined to be inadequate. In response, a bathymetric survey program was developed. This quarter, the team completed field survey work for the entire Seawall area and the process of interpreting data and developing survey maps was started.
- *Sub-Bottom Profiling:* Sensitivity studies show that a better understanding of the geometry of the seawall rock dike is needed to improve the seismic hazard analysis. In June, the team tested a sub-bottom profiling technique to determine the bayside extent of the dike which lies below the water and is covered by decades of sediment. The technique, called CHIRP, is a geophysical technique that is quick and relatively inexpensive. Unfortunately, the preliminary results are inconclusive, so it appears we will need to consider other options, such as physical probes to locate the top of the rock dyke.
- *Coordination with Owners/Operators of Co-dependent Infrastructure and Assets:* The Seawall supports utility and transportation infrastructure owned and operated by a host of other agencies. Cooperation from these agencies is needed to understand asset type, location and function; current lifespan and planned capital improvements; and assessment of damage and system-wide impacts from earthquake and flooding associated with the Seawall.
  - This quarter, the team held kickoff meetings and advanced discussions with SFPUC Wastewater Enterprise, SFPUC Water Enterprise, SFPUC Power Enterprise, SFMTA, SFPW, BART, PG&E, and AT&T. Kinder Morgan was identified as an important owner/operator by the Lifelines Council, but in coordination with Kinder Morgan the Seawall Program concluded that no fuel pipeline or storage assets are located within the study area.
  - Next quarter, we expect to advance coordination with those agencies and begin coordination with Caltrain, Caltrans, Comcast, Golden Gate Ferry, MTC, Sprint, Verizon, and XO Communication.
- *Multi-Hazard Risk Assessment (MHRA) Update:* The MHRA is the major effort being used to develop a risk-informed program and target smart investment in alternative development and implementation. The MHRA includes advanced earthquake and flood risk assessments, economic impact assessment, as well as characterization and assessment of other needs, aspirations, and implementation risks. Work this quarter includes:
  - Advancing the overall MHRA approach and methodology.
  - Develop Draft Seismic Basis of Assessment document to define the criteria for seismic analysis (i.e. earthquake size, structure types and ground conditions modeled, etc.) and performance goals during and after the earthquake (i.e. does facility need to remain fully operational?). The Basis of Assessment serves as a guiding document for the program and draws from current building codes, standards of practice and scientific

research. This document is currently being compiled with the oversight and review by the Independent Seismic Peer Review Panel.

- Develop approach and methodology for assessing flood risk and associated consequences, including the combined effect of wind and waves on the stillwater level.
- *USACE CAP 103*: The CAP 103 Project is a USACE led and Port sponsored effort to complete a feasibility study for a potential Federal project to improve flood protection along a portion of the Seawall from Pier 7 to Pier 22-1/2. CAP 103 is a smaller authority and a recommended step as we continue to pursue the larger General Investigation for the entire San Francisco Waterfront. The CAP 103 carries a maximum of \$10M Federal contribution and minimum local match of 50% during the study and 35% during final design and construction of an approved project. The CAP 103 Project is a recommended step in Work this quarter and includes:
  - Refining alternatives and narrowing towards the final array of alternatives to be advanced this summer.

## STAKEHOLDER and COMMUNITY ENGAGEMENT

- *Community Presentation Roadshows*: Port staff have given approximately 50 road show presentations at neighborhood and community group meetings. While the primary purpose is to provide a general overview of the Program, we have also received valuable feedback from the community.
- *Seawall Walking Tours*: Port staff have completed three Public Stakeholder Seawall Walking Tours and have an additional five tours planned in the months ahead. The Tours have been full and include a Sea Level Rise visualization at Pier 14 where markers have been placed indicating various amounts of Sea Level Rise through the end of the century.
- *Stakeholder Survey*: An online stakeholder survey has been completed by over 350 stakeholders to date. This information is being used to help tailor outreach efforts and inform the overall planning effort.
- *Online Engagement*: The Program website (sfseawall.com) has been updated to be consistent with overall graphic identity and reflect the latest information. So far the website has received over 15,000 views from more than 7,900 visitors. A monthly eNewsletter began in April. Social media outreach includes 126,000 reached via Facebook; 130,000 impressions via Twitter; and 1,300 #SeawallSnaps likes on Instagram. A recent Twitter conversation with SFMTA, BART, WETA, and Golden Gate Ferry had over 10,000 views of the initial post from BART.
- *Media Engagement*: There have been approximately fifty stories to date on the Seawall.
- *Innovative Outreach*: A key component of the overall Community Engagement Strategy is to engage a multi-generational, cross-section of residents who are less likely to be engaged through traditional channels. Strategies include social media,

collaboration with mapping apps, maker's partnerships, art installations, and collaboration with science museums. Work this quarter included:

- A Snapchat Geofilter pilot.
- Continued use and tracking of Strava Seawall Segments.
- Collaboration with Black Hammer Brewery for a Seawall's Sea Puppy Beer to be released this July.
- Collaboration with Ritual Coffee on a Seawall espresso to be released later this summer.
- *Seawall Program Community Meetings:* On June 21, the Port hosted the first Seawall Community Meeting at the Ferry Building. The meetings are planned to be held every quarter and are intended to educate as well as seek input from the community. The first meeting included an overview presentation, an imagination exercise, and a break out session where people were free to engage in discussion at staffed topic stations: Program Approach, Seismic Risk, Flood Risk, Funding and Finance, and Waterfront Land Use. Future meetings will follow along with development of key aspects of the program, to both educate and seek input along the way.

## LEGISLATIVE AND FINANCE

- *General Obligation Bond Measure:* On June 26, the Board of Supervisors approved a \$425M Seawall Earthquake Safety Program Bond Measure to be placed on the ballot for the November 6, 2018, election. The Bond Report was presented to the Port Commission on April 10, 2018 (Resolution 18-25). This is envisioned to be the primary source of funds for Phase 1 of the Seawall Program.
- *State Assembly Bill 2578, Infrastructure Financing Districts, City and County of San Francisco:* This bill will allow the Port to capture the State's share of tax increment for Seawall Improvements. On February 15, 2018, Assembly Member David Chiu introduced AB-2578. This bill is co-authored by State Senator Scott Wiener and Assembly Member Phil Ting. A press event was held at Pier 14 in March. AB-2578 was adopted unanimously by the California Assembly on May 30<sup>th</sup> and is now in the State Senate.
- *State Budget Request:* The Port has requested \$50M for the Seawall in the State Budget. The request has been reduced to \$5M and is still under consideration.
- *USACE 2018 Work Plan, SF Waterfront New Start:* On June 11, 2018, the Port was notified that the San Francisco Waterfront was awarded one of six New Starts nationwide (one of two nationwide for flood protection) in the United States Army Corps of Engineers 2018 Work Plan authorized by the US Congress and President Trump. The New Start kicks off a USACE process to study the entire Port Waterfront, including the Seawall, for a federal flood protection project and includes \$500,000 in the FY2018/19 federal budget. The study is budgeted at \$3M, cost shared 50/50, and is to be completed within three years. This is extremely exciting and unexpected news.

The next information update to the Port Commission on the Seawall Earthquake Safety Program is scheduled for September 25, 2018. On August 14, 2018, we expect to seek Port Commission authorization to enter into an FCSA with USACE on the SF Waterfront General Investigation Feasibility Study.

Prepared by: Steven Reel, Seawall Program Manager  
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For: Rod Iwashita, Chief Harbor Engineer