

An aerial photograph of San Francisco at sunset. The skyline is filled with skyscrapers, with the Transamerica Pyramid being the most prominent. The city lights are beginning to glow, and the sky is a mix of orange, yellow, and blue. The water in the foreground is dark, reflecting the city lights.

USACE Flood Study Update and Next Steps

Port Commission Hearing – Item 12A
August 11, 2026



The Port's Waterfront Resilience Program will take actions to **reduce seismic and climate change risks** that support a safe, equitable, sustainable, and vibrant waterfront.

Embarcadero
Early Projects

Near-Term Actions

San Francisco
Waterfront Flood Study

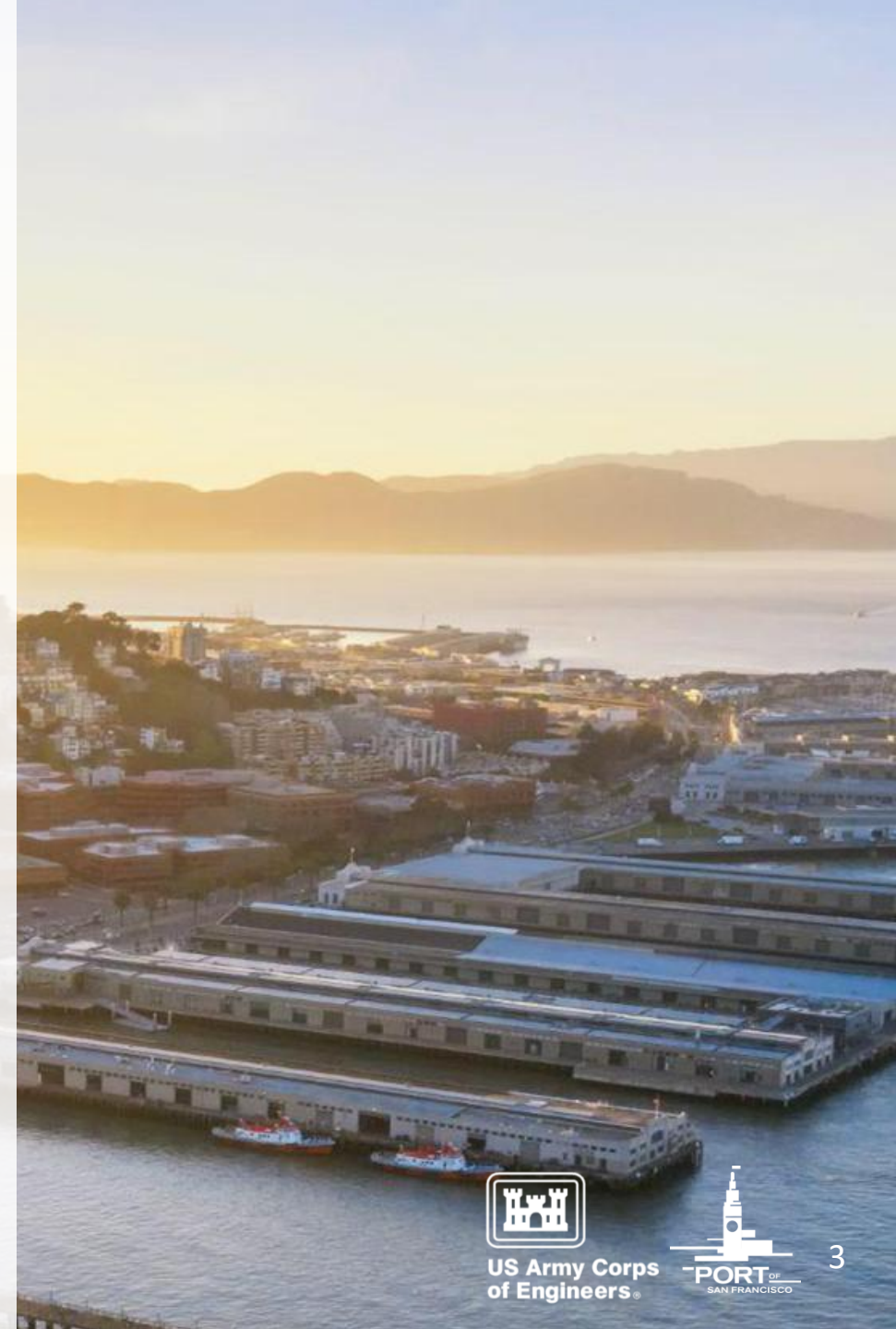
Long-Term Actions

Living Seawall
Pilot Project

Pilot Projects

AGENDA

- 1 Waterfront Risks and Hazards**
- 2 San Francisco Waterfront Flood Study**
- 3 The Recommended Plan**
- 4 Design Maturity and Cost Estimate**
- 5 Plans and Projects**
- 6 Legislative Update**



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1 Waterfront Risks and Hazards



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Rising Seas

Potential Sea Level Rise by 2100

Over 6% of San Francisco's land area is subject to flooding due to sea level rise by end of century.

By 2050, damages could impact up to 500 buildings and assets, including BART and Muni.

By 2140, damages could amount up to **\$23 billion**, impacting 23,000 residents and 3,400 jobs.

2 San Francisco Waterfront Flood Study

Coastal Flood Risk: What is the Flood Study?

- The **San Francisco Waterfront Coastal Flood Study** was initiated under a new start approved by Congress in 2018.
- The Study is a partnership between the **U.S. Army Corps of Engineers** (USACE) and the **City of San Francisco**, with the **Port** as lead agency. The final Study was published by USACE on July 31, 2026.
- The **Flood Study** analyzes **coastal flood risk** and **sea level rise** to the San Francisco waterfront and recommends how to adapt the Port's 7.5-mile waterfront over the next 100 years.
- The **Recommended Plan** consists of coastal flood defenses and floodproofing for the Port waterfront which will inform subsequent stages of funding and design to develop targeted construction projects.
- The proposed solutions are estimated to cost **\$17.8 billion** (2026 \$) and, if approved by Congress, the Federal government may pay **up to 65% of the cost**.



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Where are we in the Flood Study process?

We are here
Recommended Plan



2018 to 2026

**GENERAL
INVESTIGATION &
FEASIBILITY STUDY**

What to expect

**Recommended Plan and Final
Report (2026)**

**SEEK PLAN
APPROVAL AND
FUNDING**

What to expect

Congress considers
declaration of federal
interest and authorization
of funding

2026 to ~2030

**PRECONSTRUCTION
ENGINEERING &
DESIGN**

What to expect

Planning and design framework
for Northern and Southern
Waterfront; Detailed design and
engineering of initial projects

~2030 onward

**CONSTRUCTION
IN PHASES**

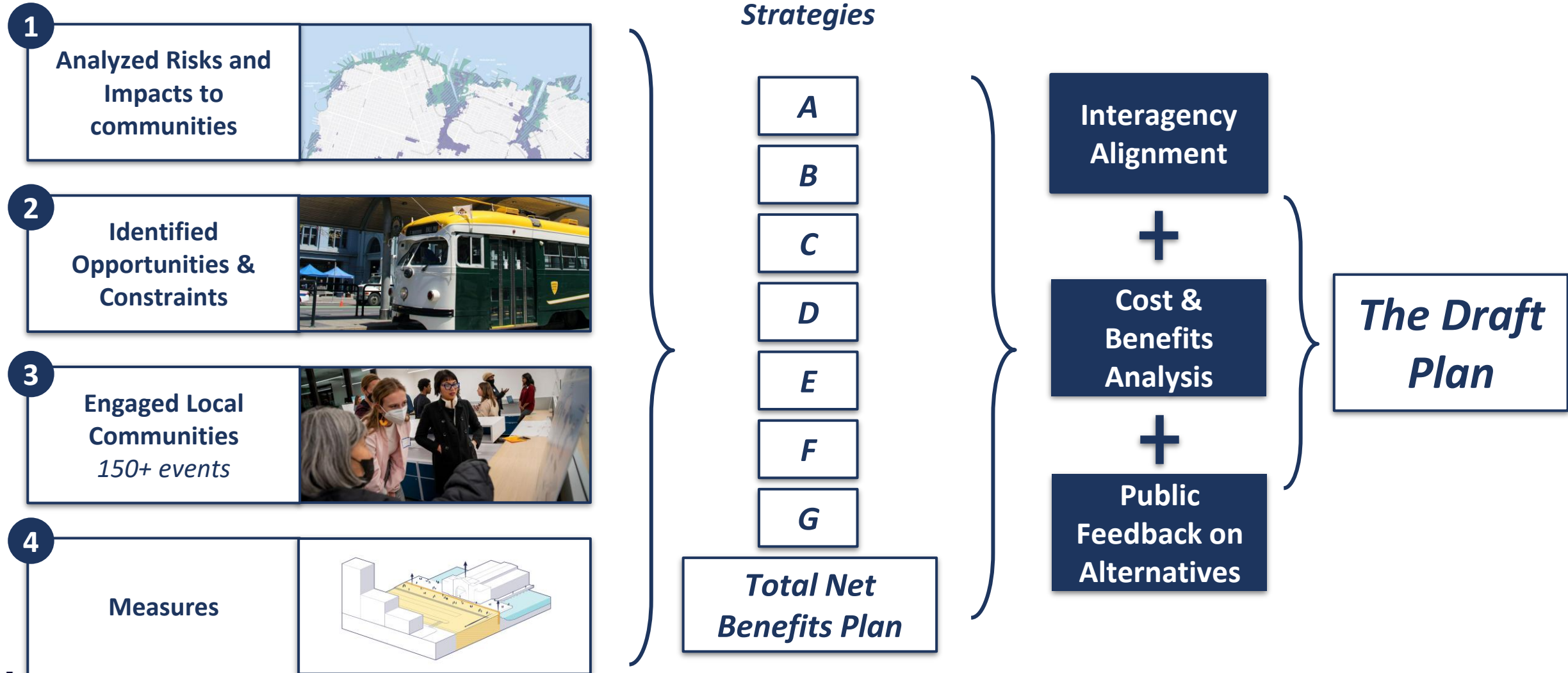
What to expect

Phased construction of coastal
flood protection infrastructure,
related seismic stabilization,
and other improvements

Note: Dates are approximate and subject to change. Projects will occur in phases.

3 The Recommended Plan

GETTING TO THE RECOMMENDED PLAN



KEY FEEDBACK THAT HELPED SHAPE THE RECOMMENDED PLAN

Focus on life safety & emergency response

Put people first

Prioritize housing, disaster recovery facilities, utilities, transportation and businesses

Expand (and maintain) the City's connection to the waterfront

Prioritize nature and healing the Bay

Consider racial and social equity and environmental justice



The Recommended Plan

Waterfront-wide
stormwater management
adaptations related to
coastal flood defenses

Floodproof piers
and select
buildings

Raise and rebuild
wharves and Ferry
Plaza and BART
protection

Raise the shoreline
with seismically
resilient structures

Incorporate nature
based features,
such as creek
enhancements

Port buildings to be
moved or elevated

FISHERMAN'S WHARF
(REACH 1)

EMBARCADERO
(REACH 2)

SOUTH BEACH/MISSION BAY
(REACH 3)

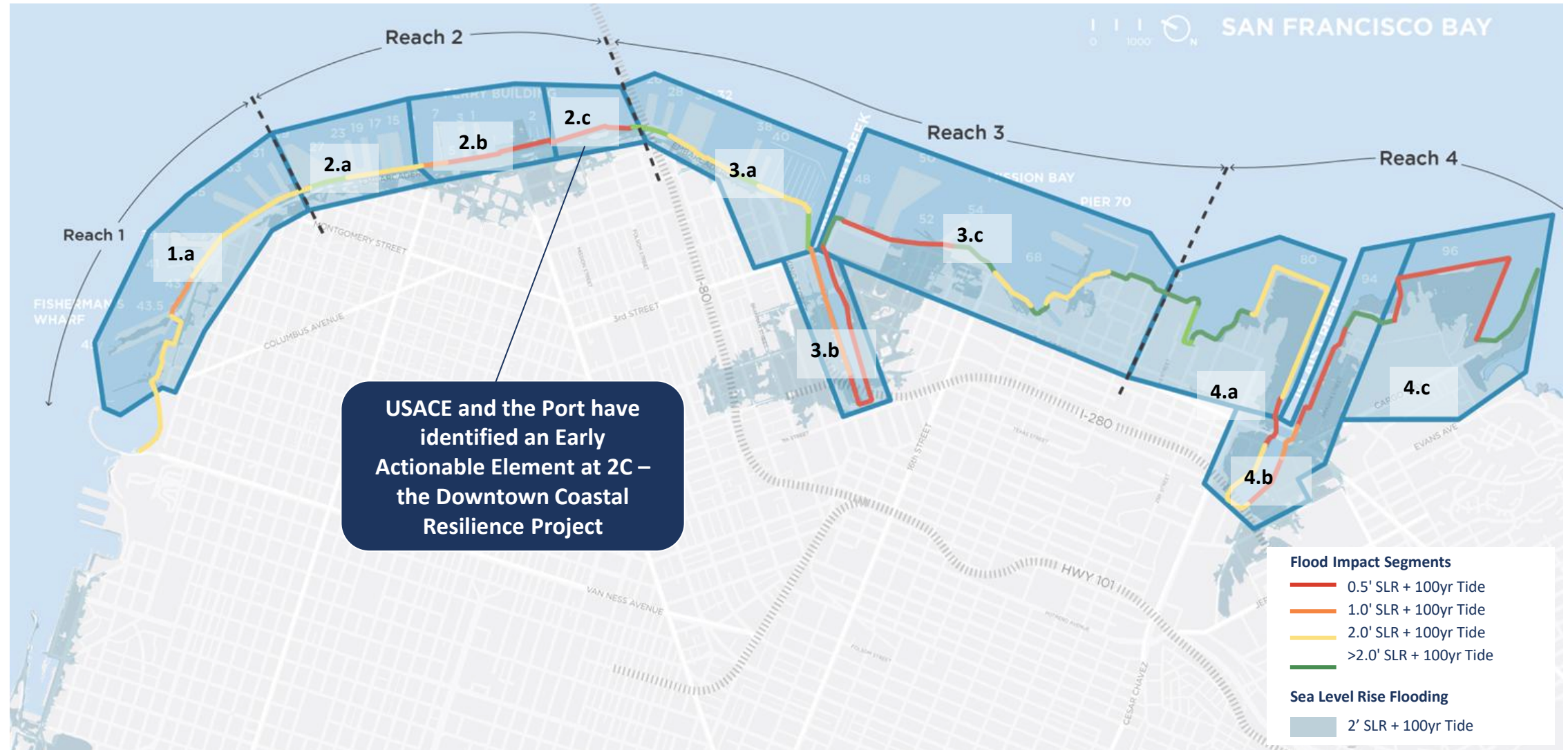
ISLAIS CREEK/BAYVIEW
(REACH 4)



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Draft Phasing and Implementation Strategy



Design Maturity & Cost

- To decrease cost risk, the USACE Chief of Engineer's implemented a rule in early 2025 that requires projects reach 35% design maturity before they can receive a Chief's Report to Congress.
- The Recommended Plan has a 20% design maturity and a USACE conditionally certified Class 3 cost estimate.

2024 Draft Plan Cost Estimate

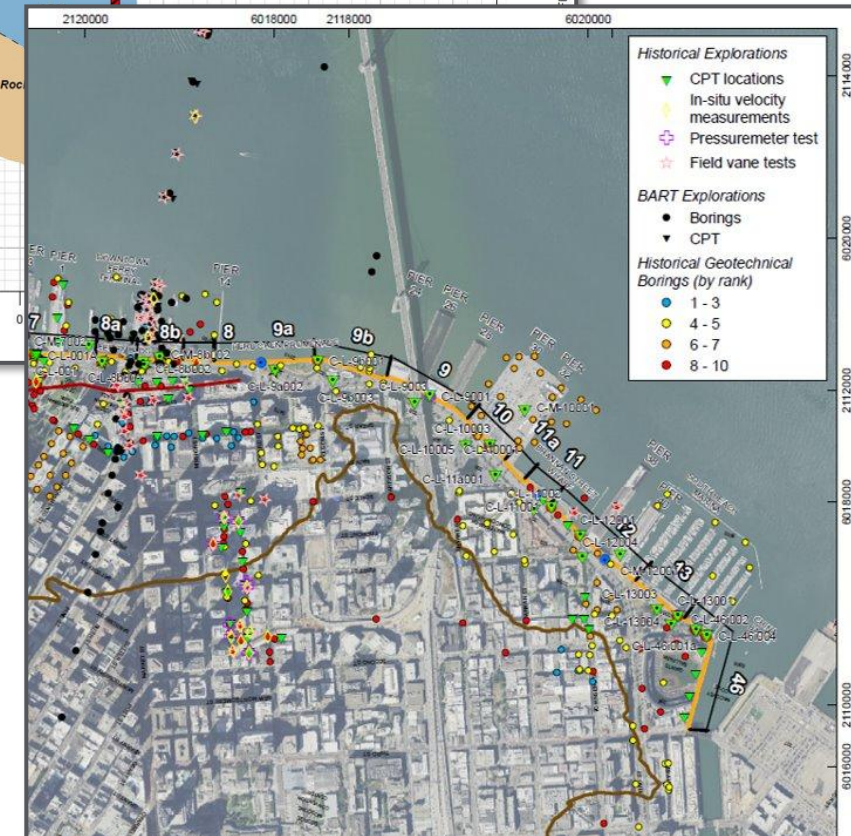
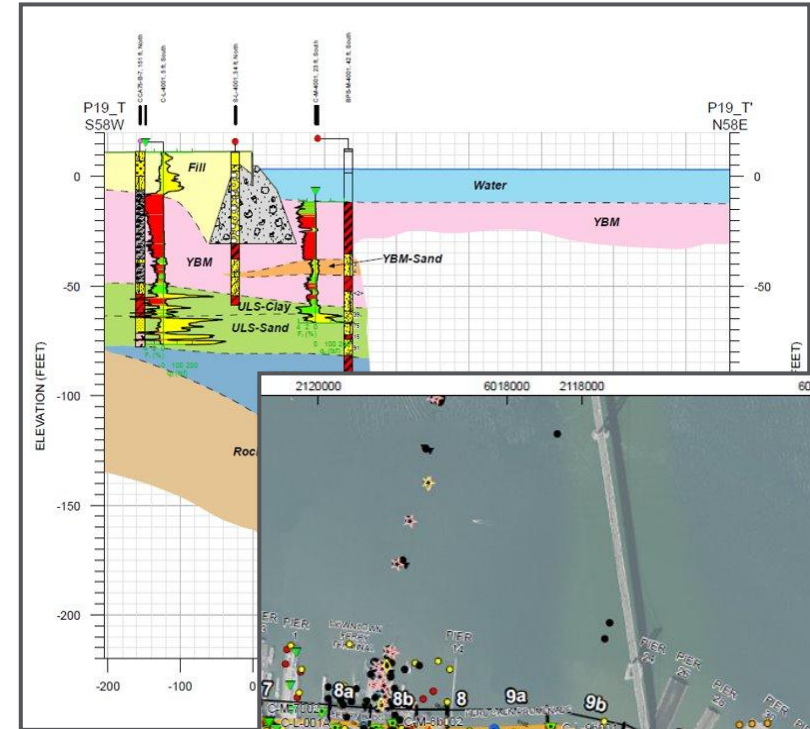
\$13.5 billion (2024 \$)

\$14.7 billion (2026 \$) -- \$14.6 billion design and construction cost, \$100 million real estate

2026 Recommended Plan Cost Estimate

\$17.8 billion (2026 \$) -- \$14.1 billion design and construction cost, **\$3.7 billion** real estate

Geotechnical Sections



Geotechnical Explorations

4 Plans and Projects

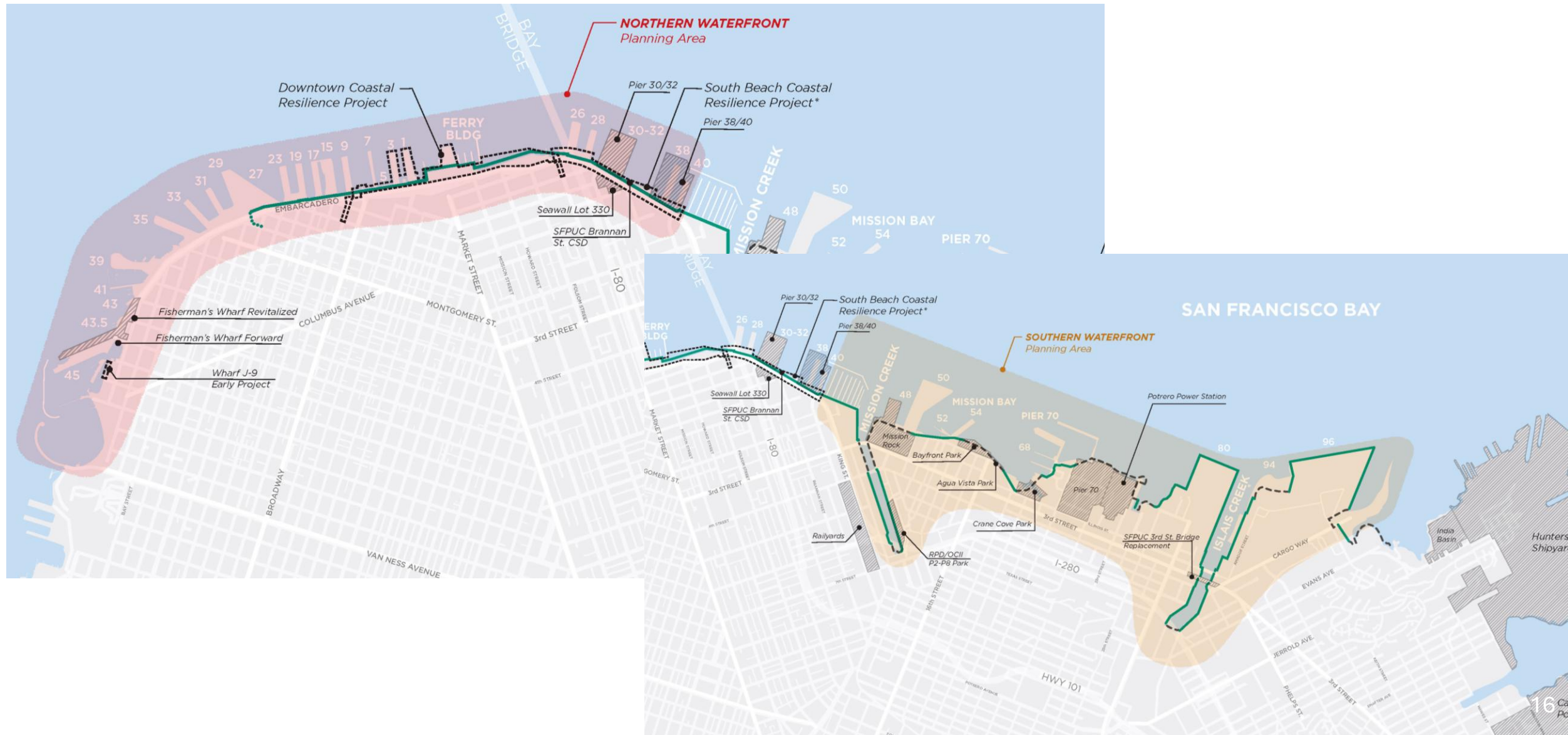


BESHA II
SAN FRANCISCO

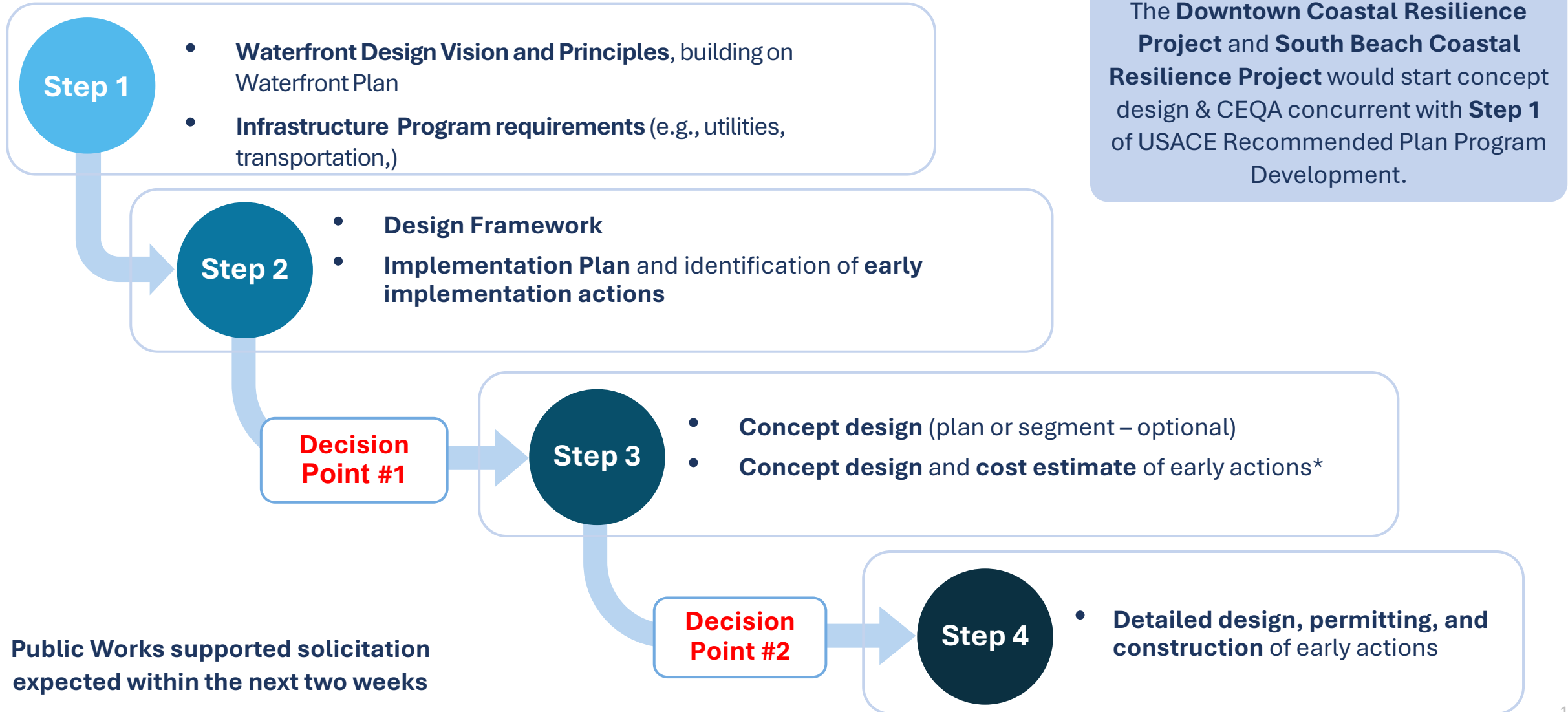
LADY FISH
SAN FRANCISCO, CA



NORTHERN & SOUTHERN WATERFRONT PLANNING AND DESIGN AREA

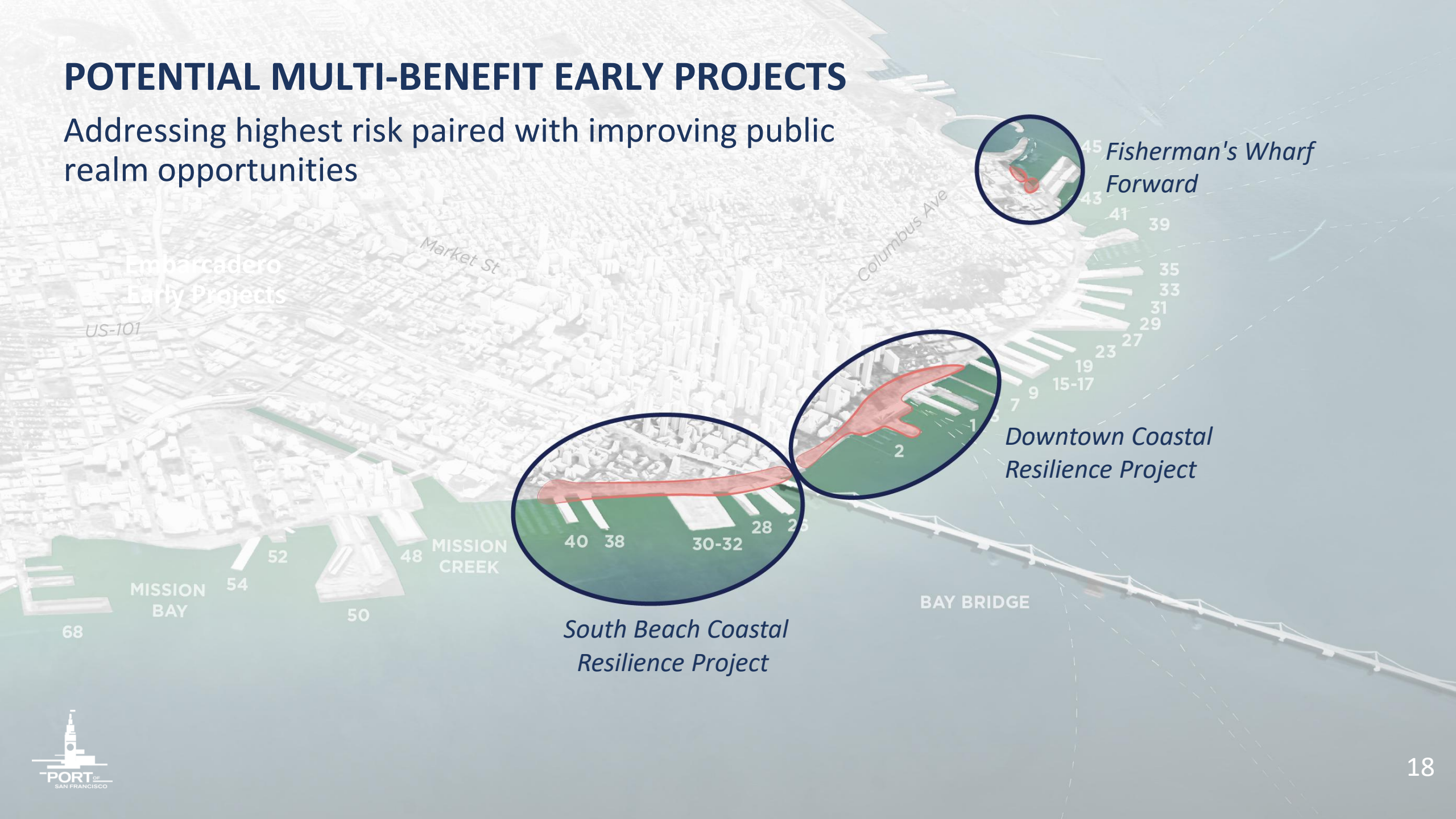


USACE Recommended Plan Preconstruction Engineering & Design Approach

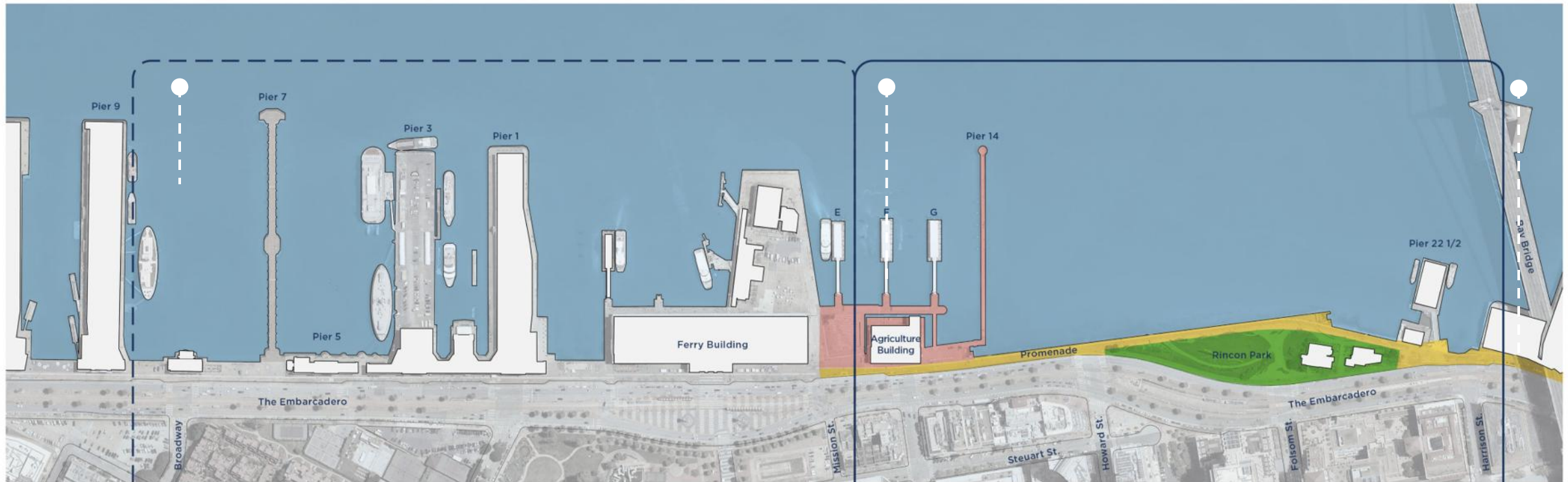


POTENTIAL MULTI-BENEFIT EARLY PROJECTS

Addressing highest risk paired with improving public realm opportunities



Downtown Coastal Resilience Project



INTERIM FLOOD + SEISMIC IMPROVEMENTS

- Pier Edge Flood Protection
- Seismic Safety Improvements
- No Changes to Ferry Building or Adjacent Buildings

SEAWALL RECONSTRUCTION + SHORELINE ELEVATION

- Raise Waterfront
- Living Shoreline
- Open Space Improvements

4 Legislative Advocacy



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2026 Federal Advocacy



- WRDA brainstorming with USACE Coastal Cities Coalition (2025-26)
- California Marine Affairs and Navigation Conference
- AAPA Legislative Summit
- Engaged Congressional Delegation: Senators Padilla & Schiff, Speaker Emerita Pelosi
- Senator Padilla request for Energy & Water design funding for Downtown Coastal Resilience Project
- Senate WRDA 2026 – 35% design requirement, Section 221 consultation with USACE, expedite SF Study
- House WRDA 2026 – Hazardous waste liability, expedite SF Study





This is a once in a generation opportunity to **reshape the public realm, protect key city infrastructure** such as BART and Muni, **maintain maritime and historic resources**, and create a **safer and more resilient waterfront** for all.

The work over the past 7 years has **set the stage for potential multi-billion investment** over the next 20 years, potentially starting with **3 highly visible areas**, phased and delivered incrementally over time



Thank you

U.S. Army Corps of Engineers | SFWFRS@usace.army.mil
Port of SF Waterfront Resilience Program | wrp@sfport.com



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