

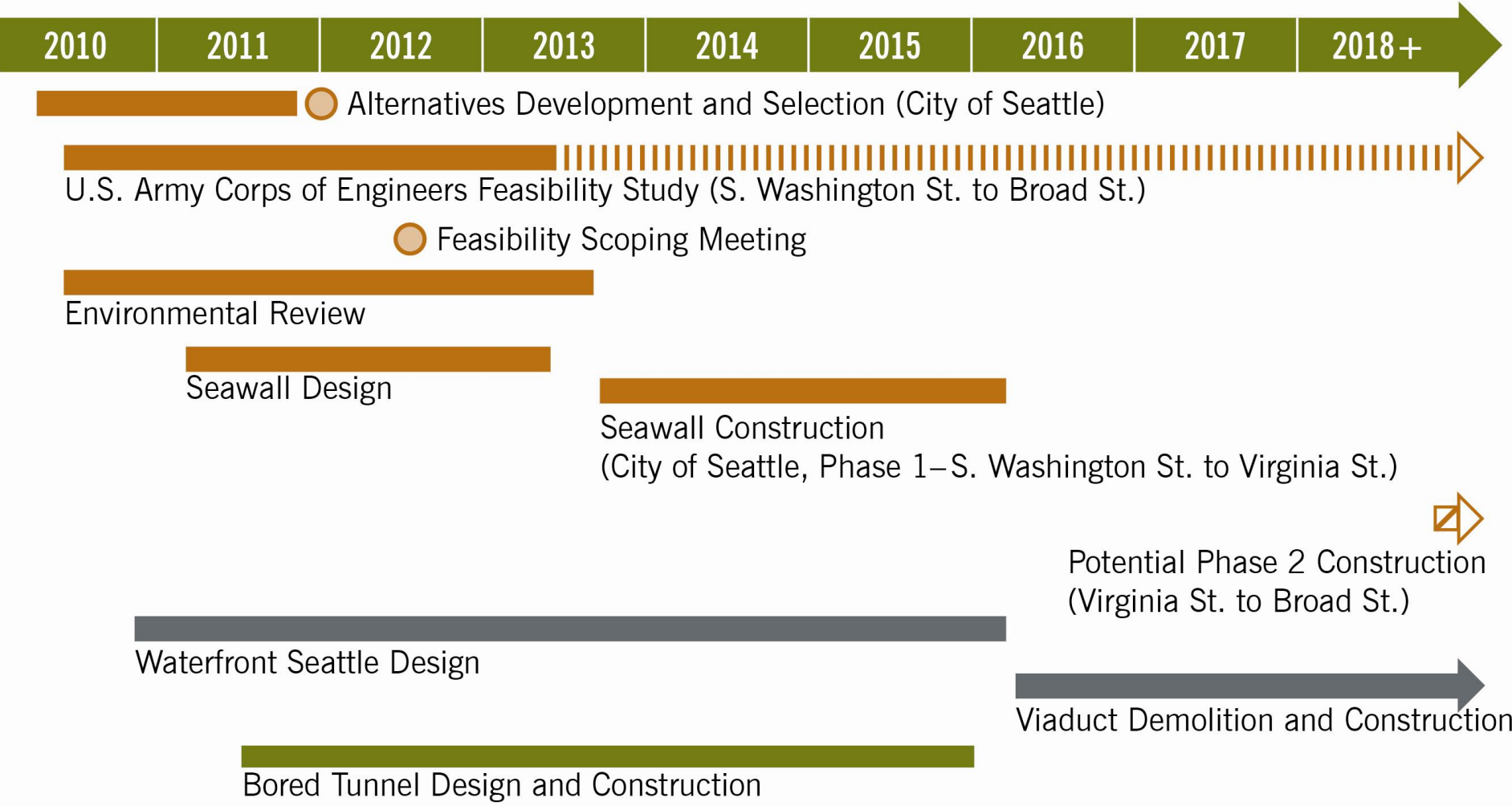
# Elliott Bay Seawall Project

***Seattle City Council  
Special Committee Briefing  
April 23, 2012***

# Topics Today

- Review of recommended design
- Updated 35% cost estimate
- Next steps

# Current Project Schedule



# Project Area



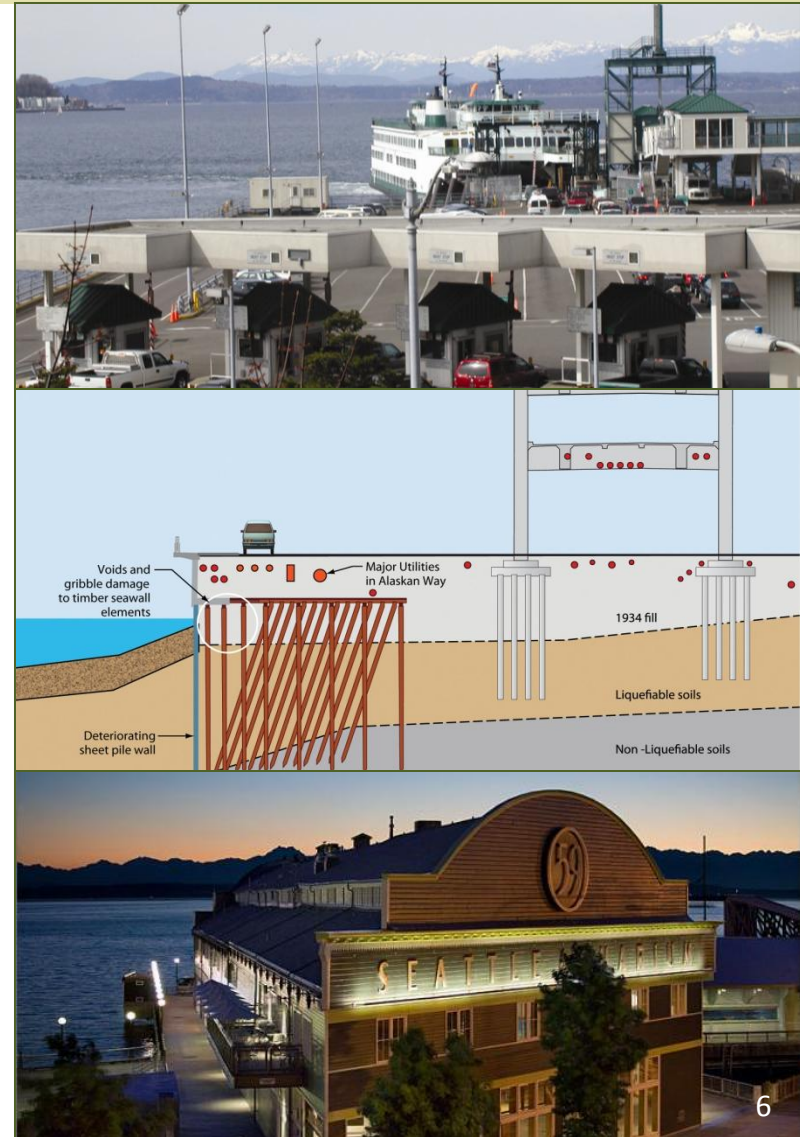
# Project Purpose

- Reduce the risks of coastal storm and seismic damages
- Protect public safety, critical infrastructure, and associated economic activities along Seattle's central waterfront
- Improve the degraded ecosystem functions and processes of the Elliott Bay nearshore in the vicinity of the existing seawall



# What's at Risk?

- Public safety
- Transportation corridor
- Critical utilities
- Residential and commercial structures
- Public recreation
- Tourism and local attractions
- Seattle's front porch





# Strong Public Support

- Address the safety issues
- Get construction started
- Seize the habitat opportunity
- Maintain a responsible budget
- Create more physical access to water and gathering spaces
- Maintain transportation routes
- Consider construction impacts
- Preserve historical and cultural significance



# ***Review of Recommended Design***



# Seawall and Waterfront Design Coordination

June/July

Aug

Sept

Oct

Nov

Dec

Jan - March

Seawall 35% Design

## Focus Area: Habitat

Collaboration on a total habitat and sustainability approach

## Focus Area: Seawall Alignment Refinement

Collaboration on refined alignment that blends Alternative A and Alternative B, working toward a recommended alternative

## Focus Area: Targeted Design Issues

Collaboration on seawall design issues that are informed by the long-term Waterfront Seattle vision, such as:

- Light penetrating surfaces/other sidewalk elements
- Area-specific design elements
- Seawall face treatments
- Temporary spaces
- Riparian plantings

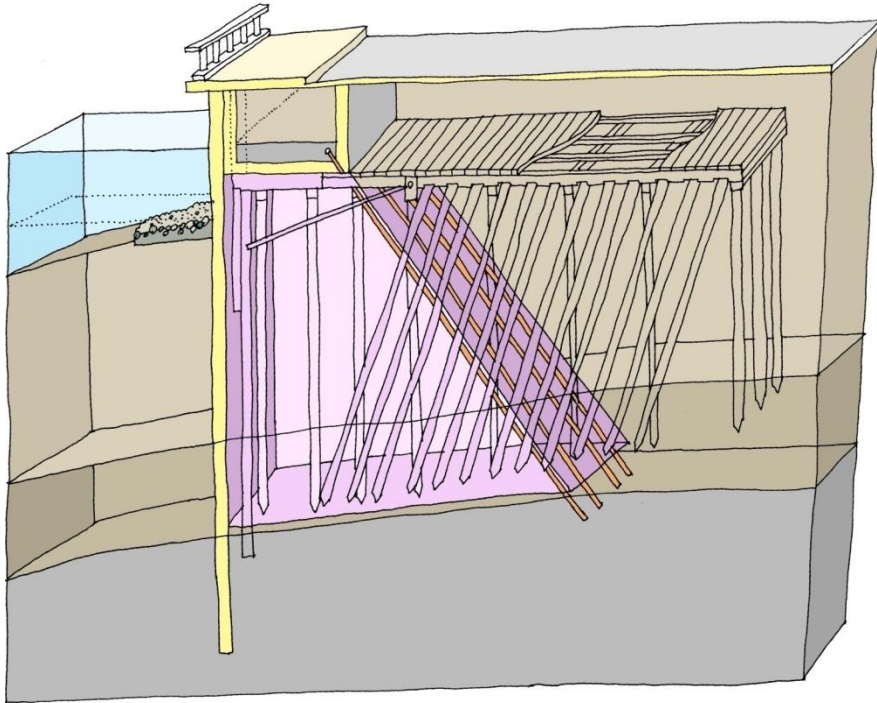
Ongoing Design and Outreach Coordination

# Elements of a Seawall Alternative

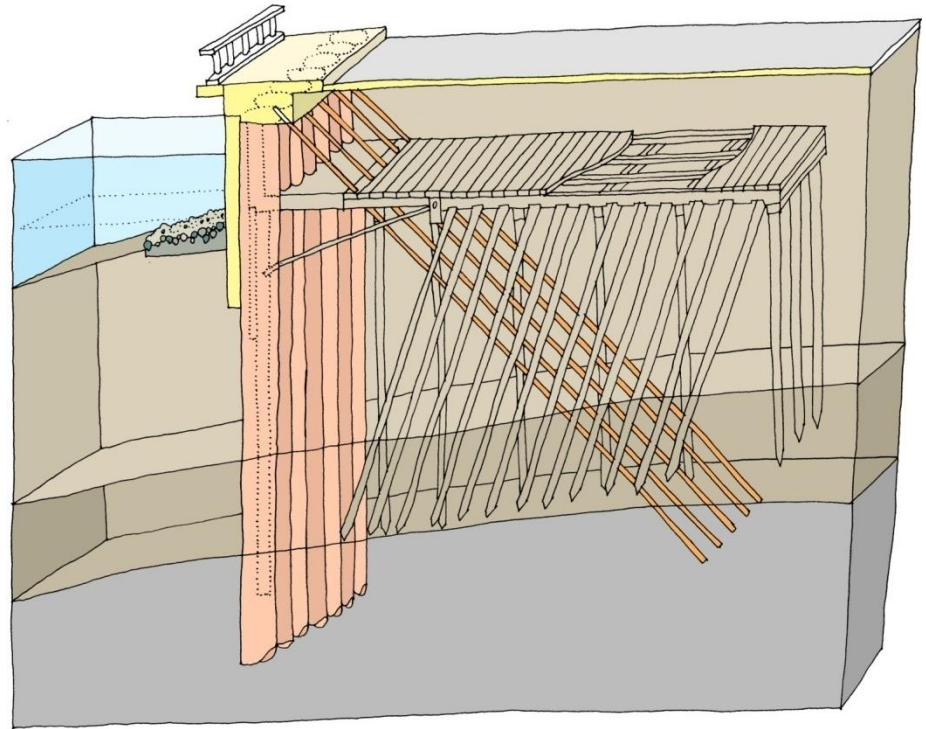
- Structural solution
- Habitat enhancement measures
- Wall location
- Restored roadway and pedestrian/bicycle facilities
- Flexibility for Waterfront Seattle and project partners
- Potential early wins, both in-water and uplands



# Soil Stabilization Methods



Jet Grouting

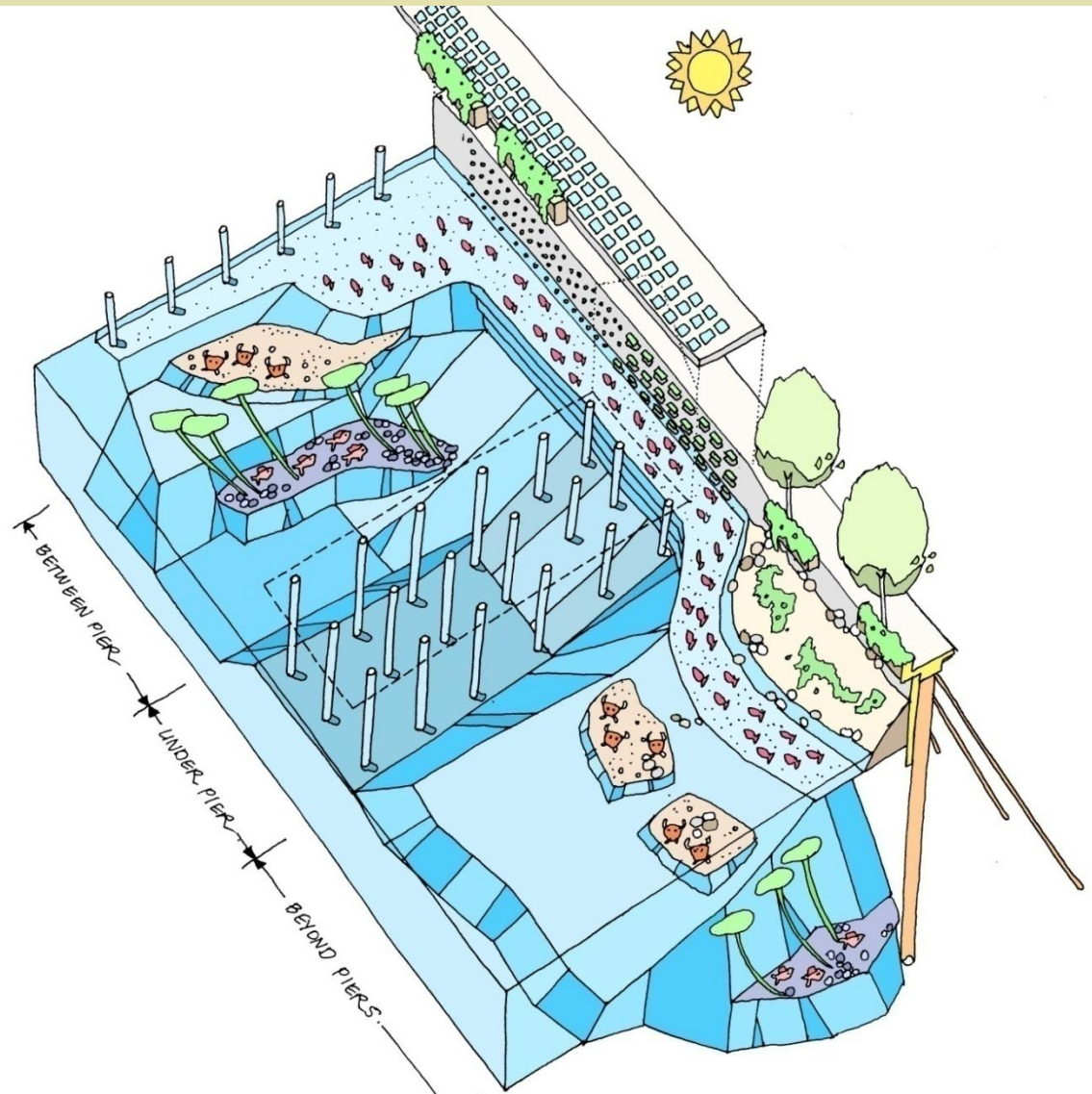


Drilled Shafts



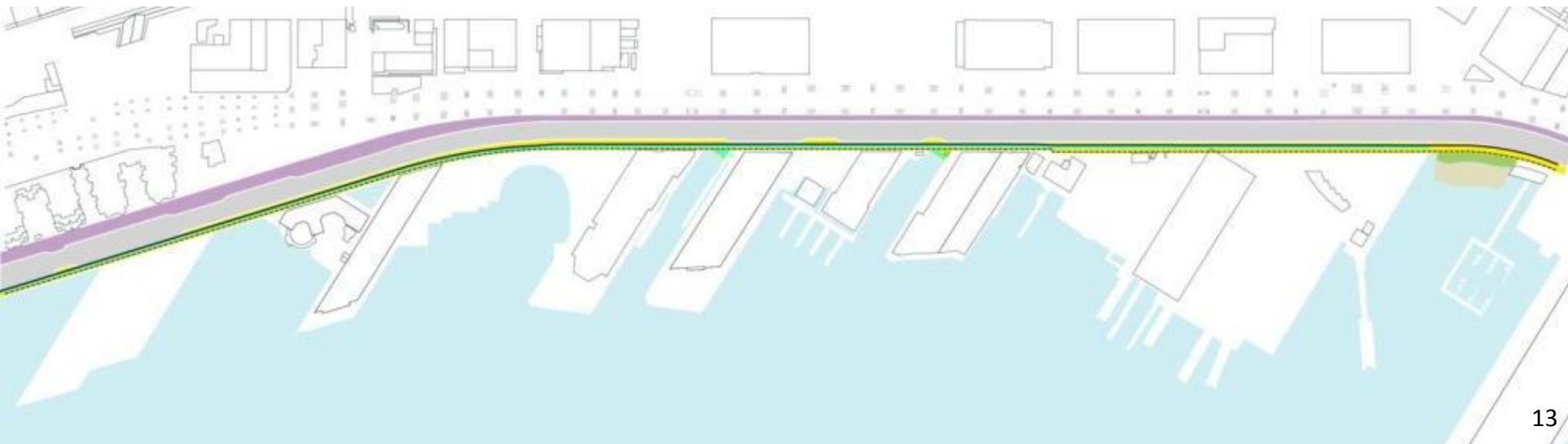
# Potential Habitat Enhancement Measures

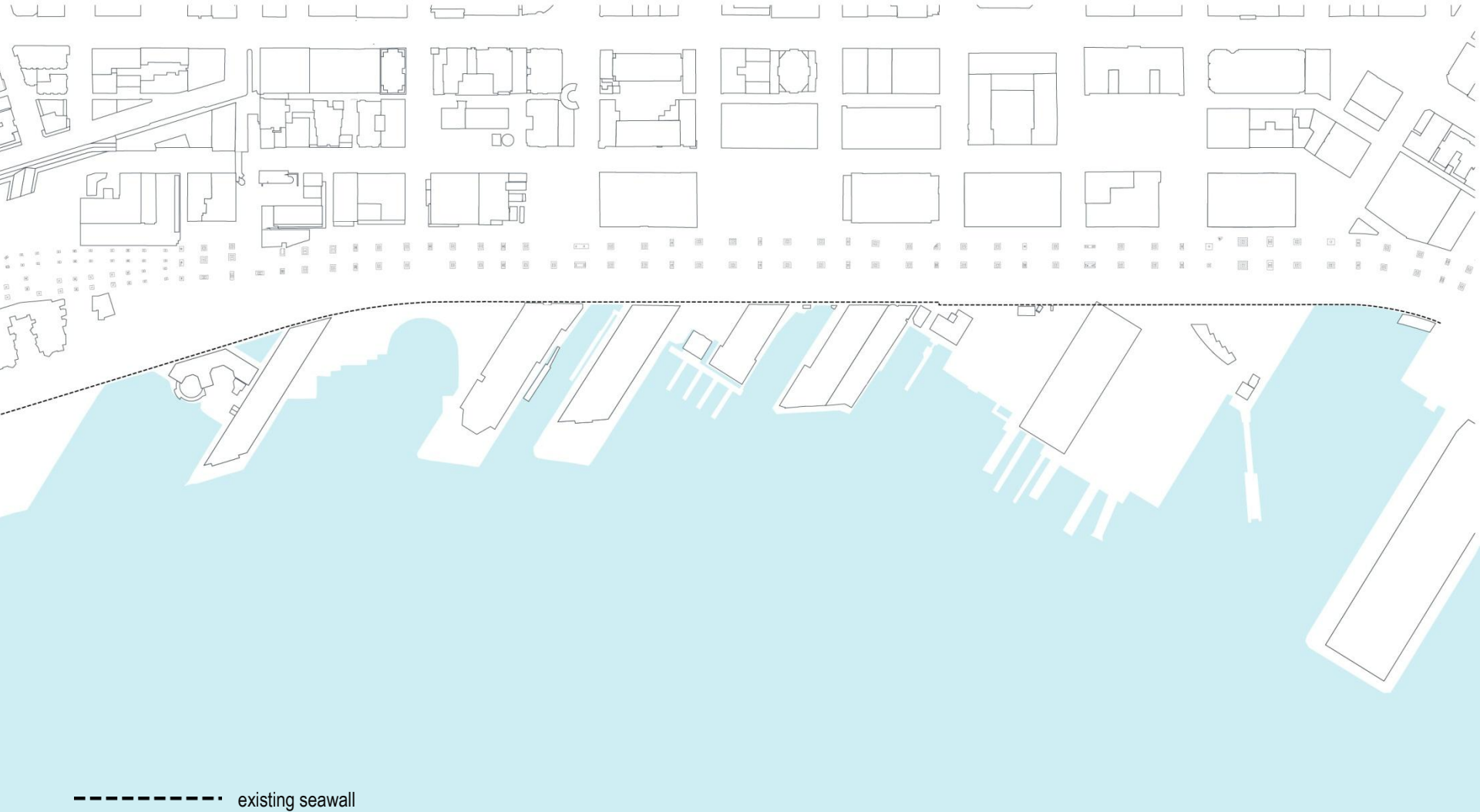
- Textured seawall
- Intertidal corridor
- Lighting
- Riparian vegetation
- Substrate enhancement
- Cobble reefs



# Recommended Design Features

- Face of wall: 10-15 feet inland
- Soil stabilization with jet grouting
- Continuous migration corridor and nearshore restoration
- Restored Alaskan Way and pedestrian/bicycle facilities
- Early program wins



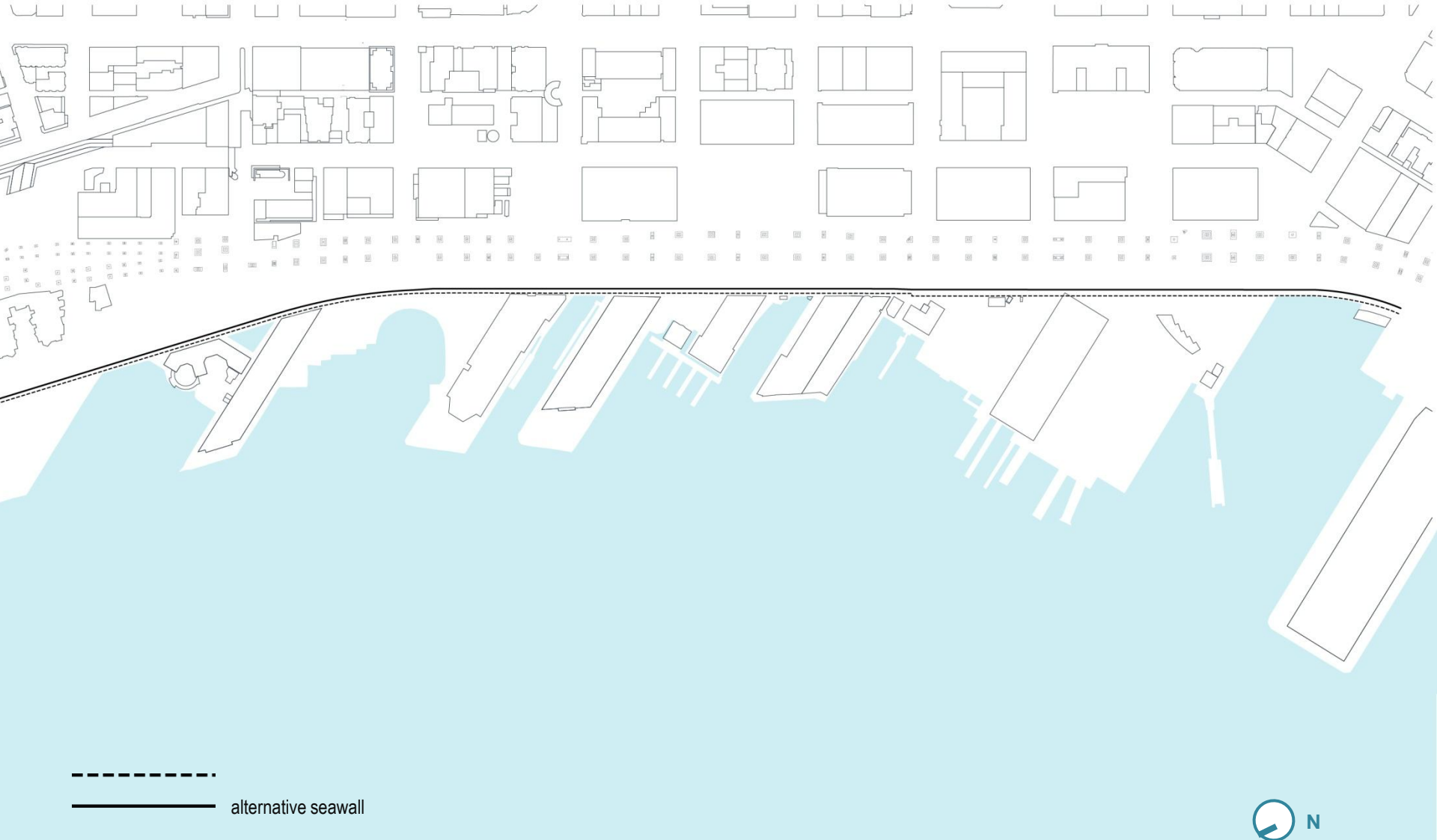


----- existing seawall



# Recommended Design





# Recommended Design



- existing seawall
- alternative seawall
- yellow sidewalk
- purple multi-use path



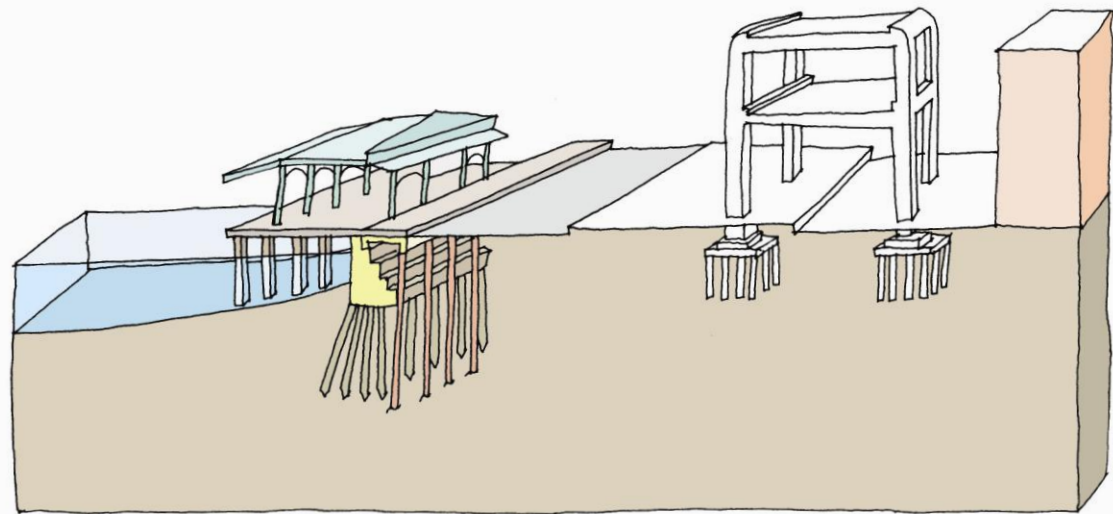
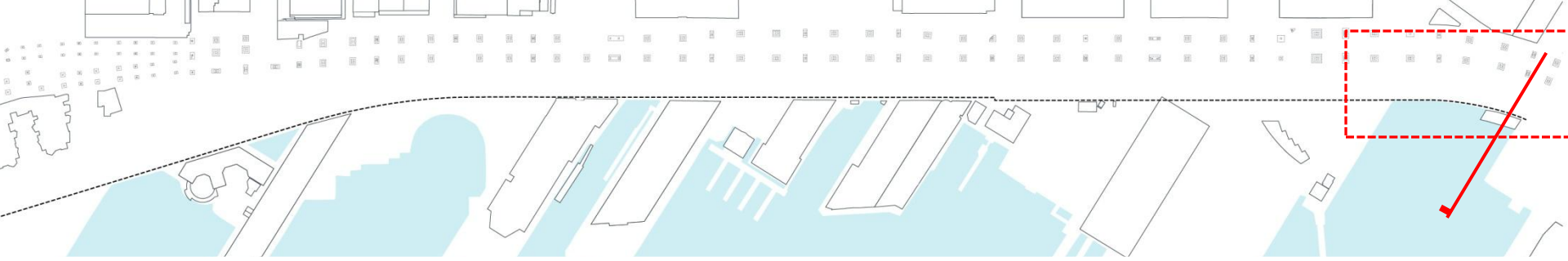
# Recommended Design



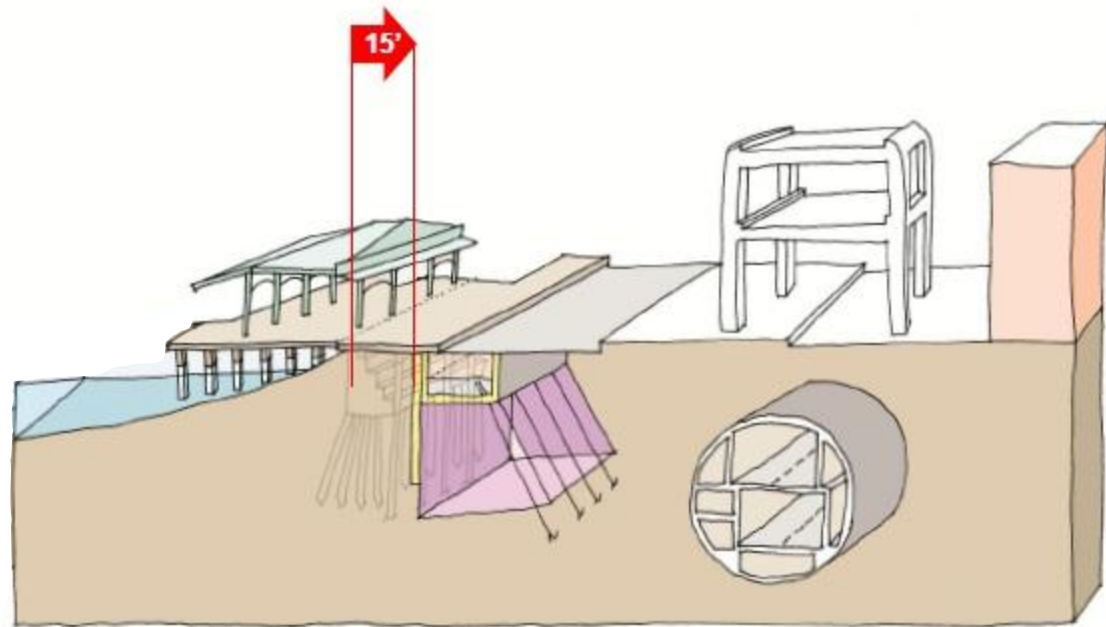
- existing seawall
- alternative seawall
- yellow sidewalk
- purple multi-use path
- cyan habitat corridor enhancement



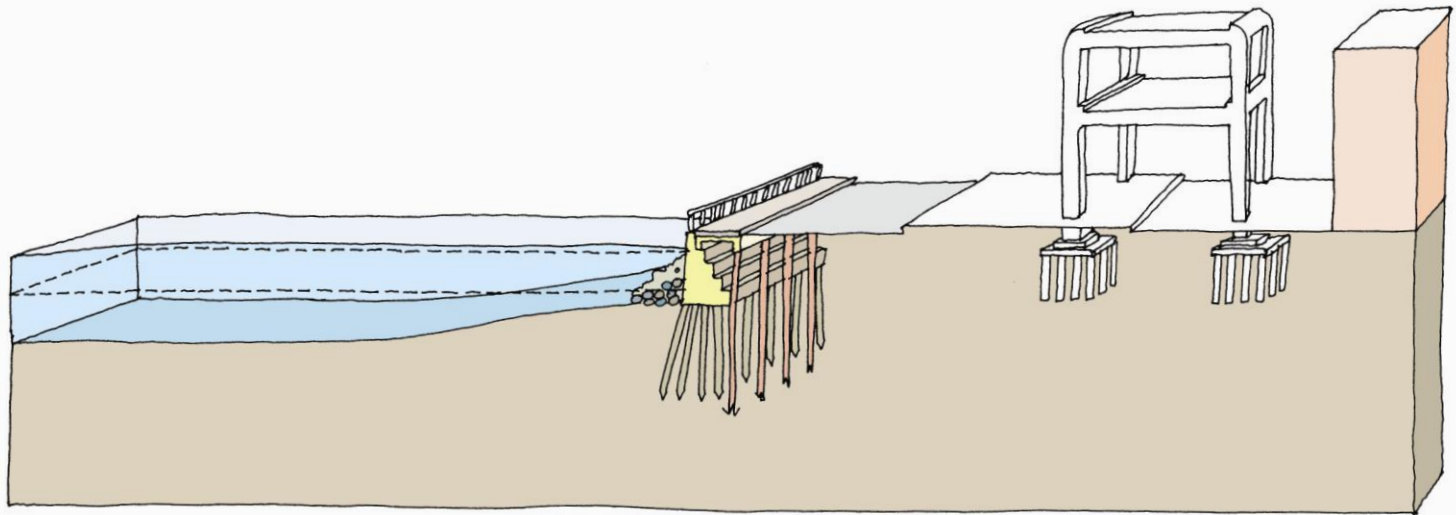
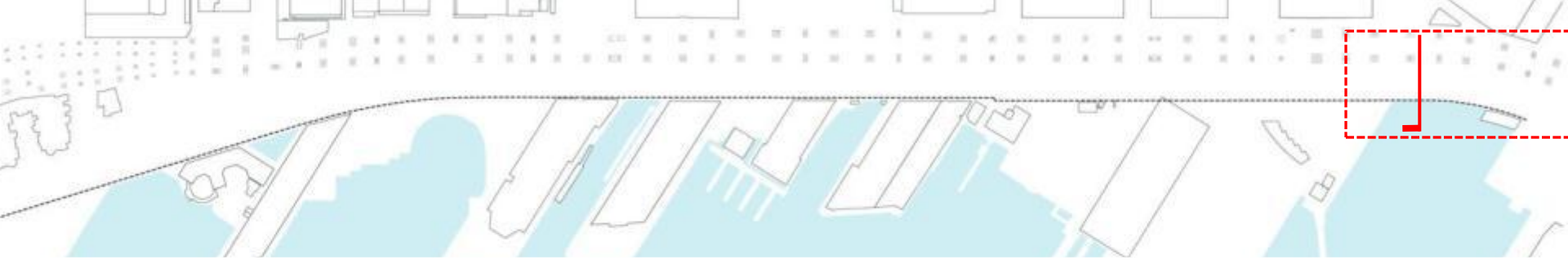
# Recommended Design



Existing – Zone 1

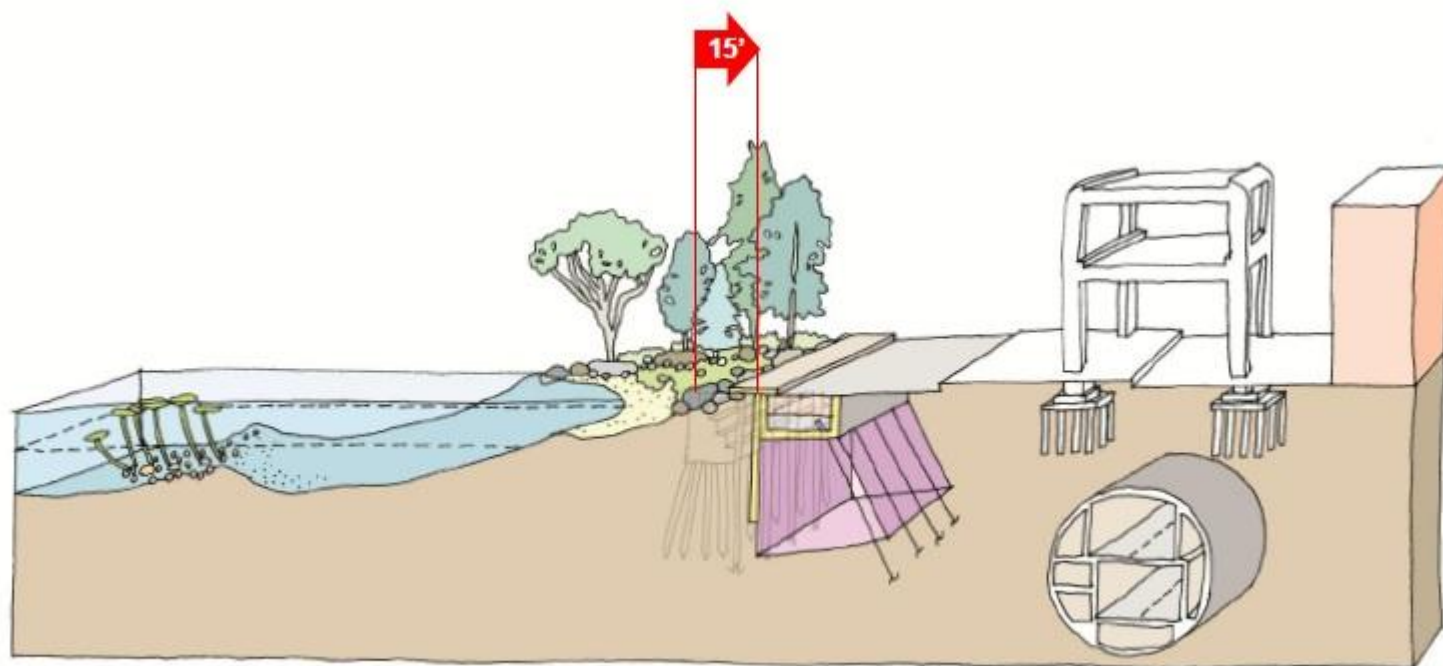
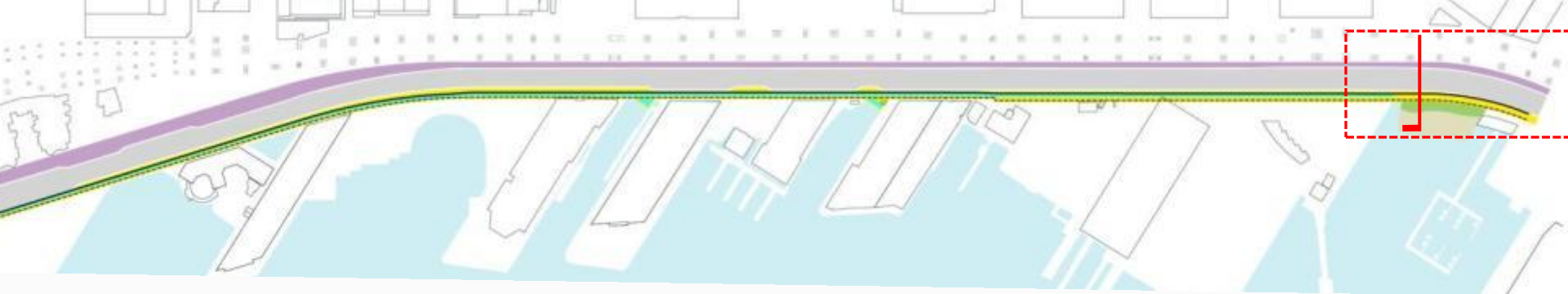


Recommended Design – Zone 1

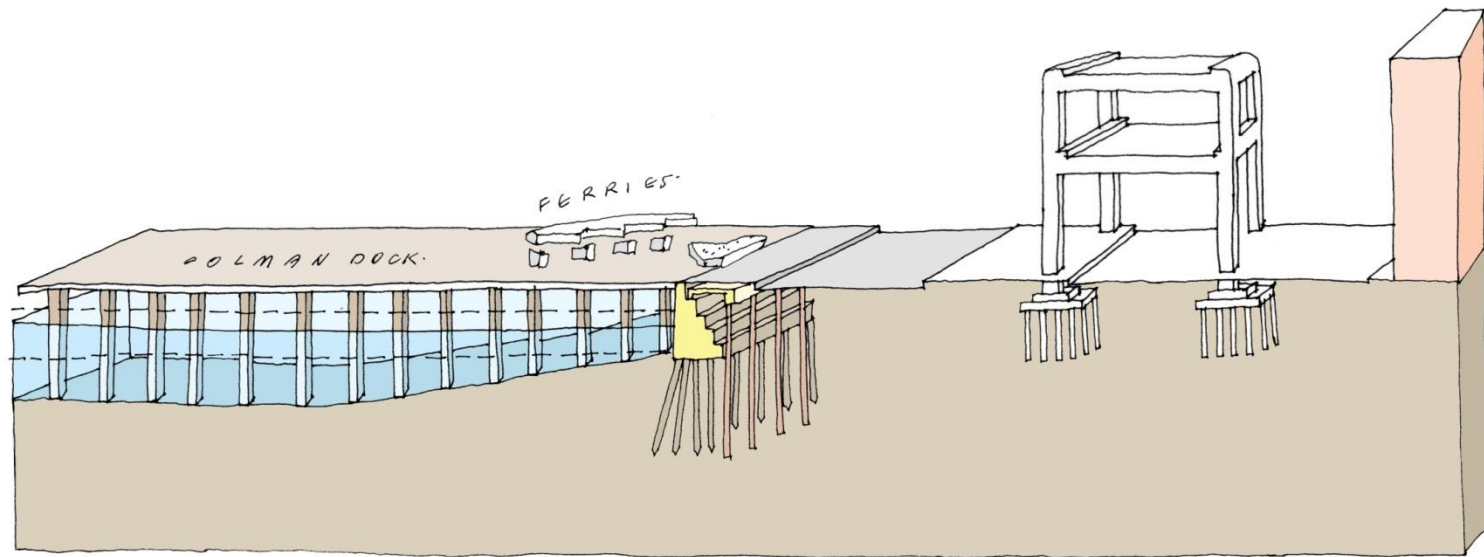
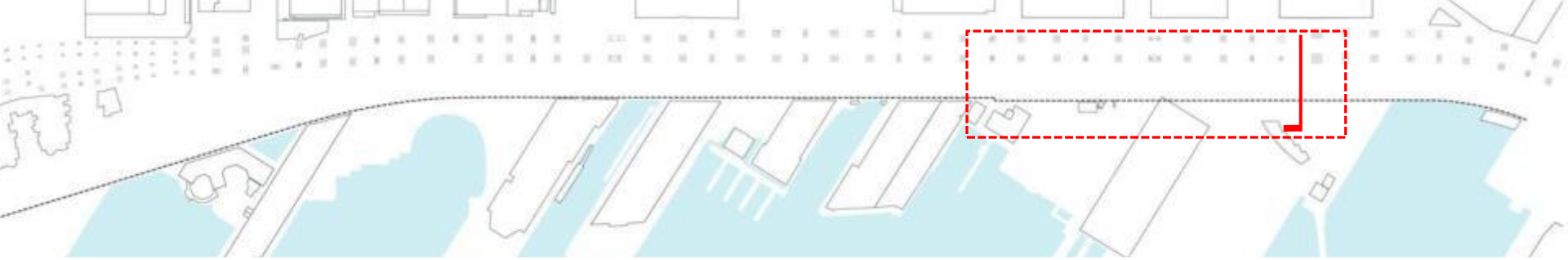


Existing – Zone 1

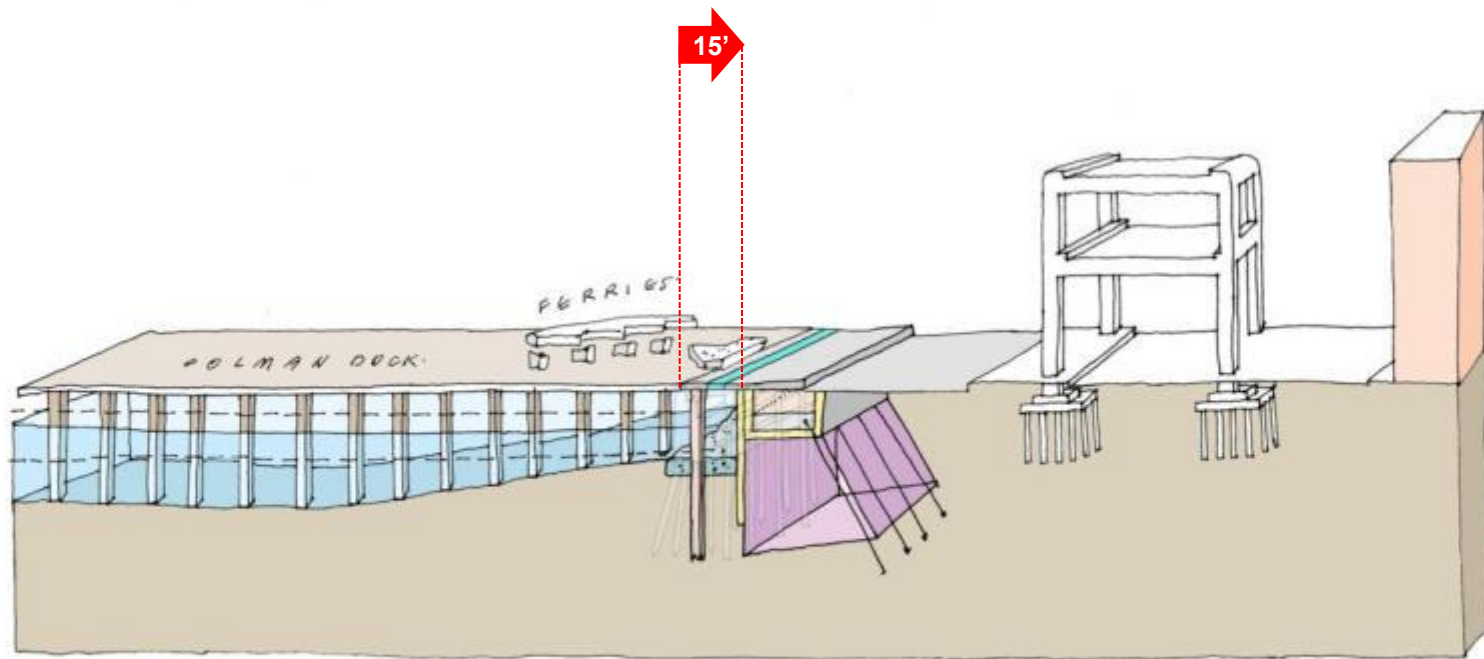




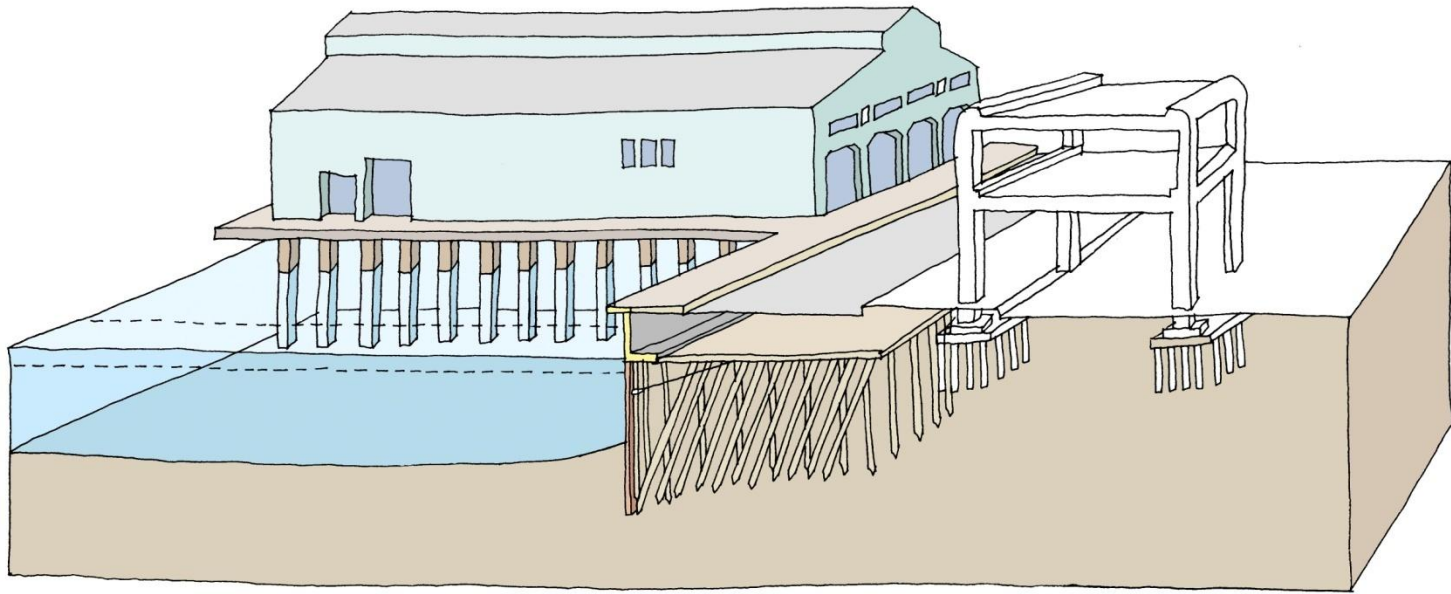
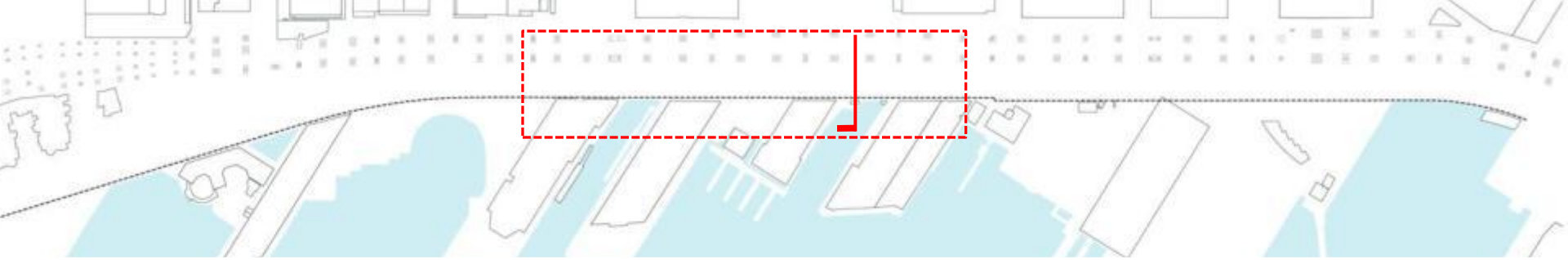
## Recommended Design – Zone 1



## Existing – Zone 2

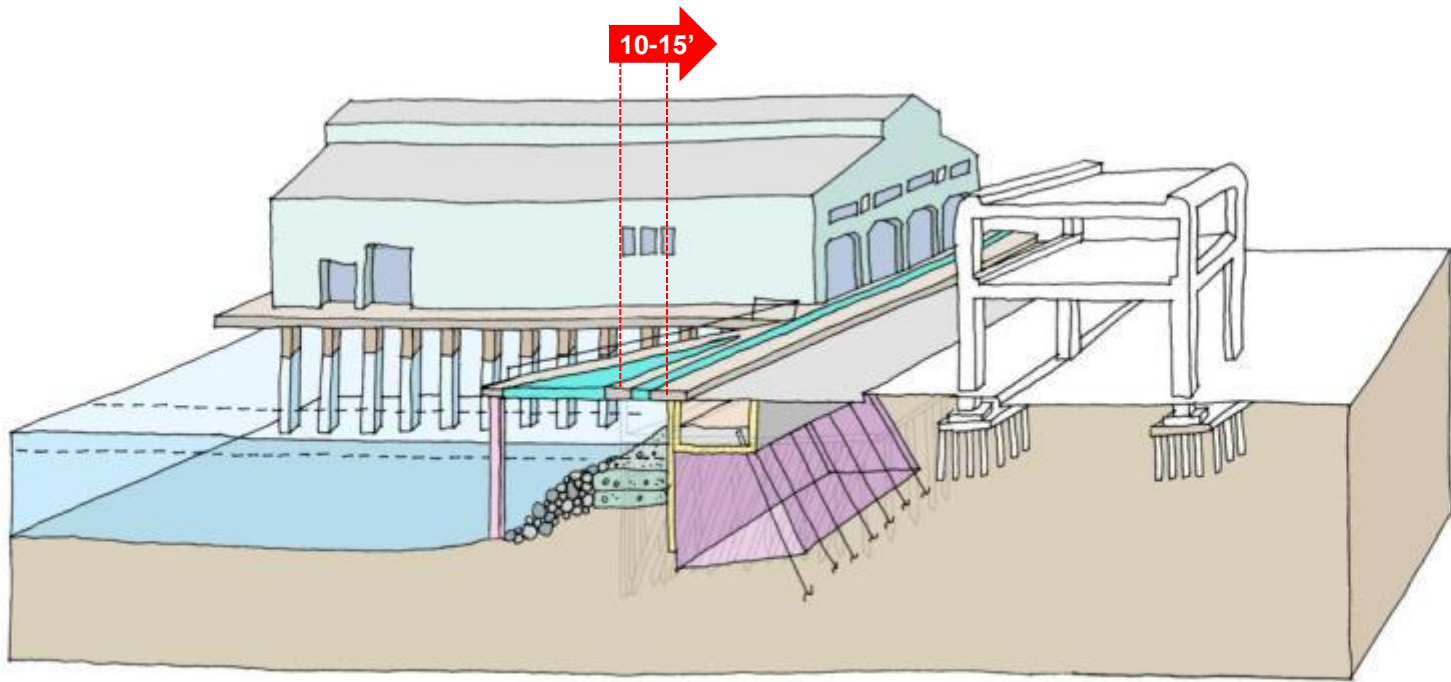


## Recommended Design – Zone 2

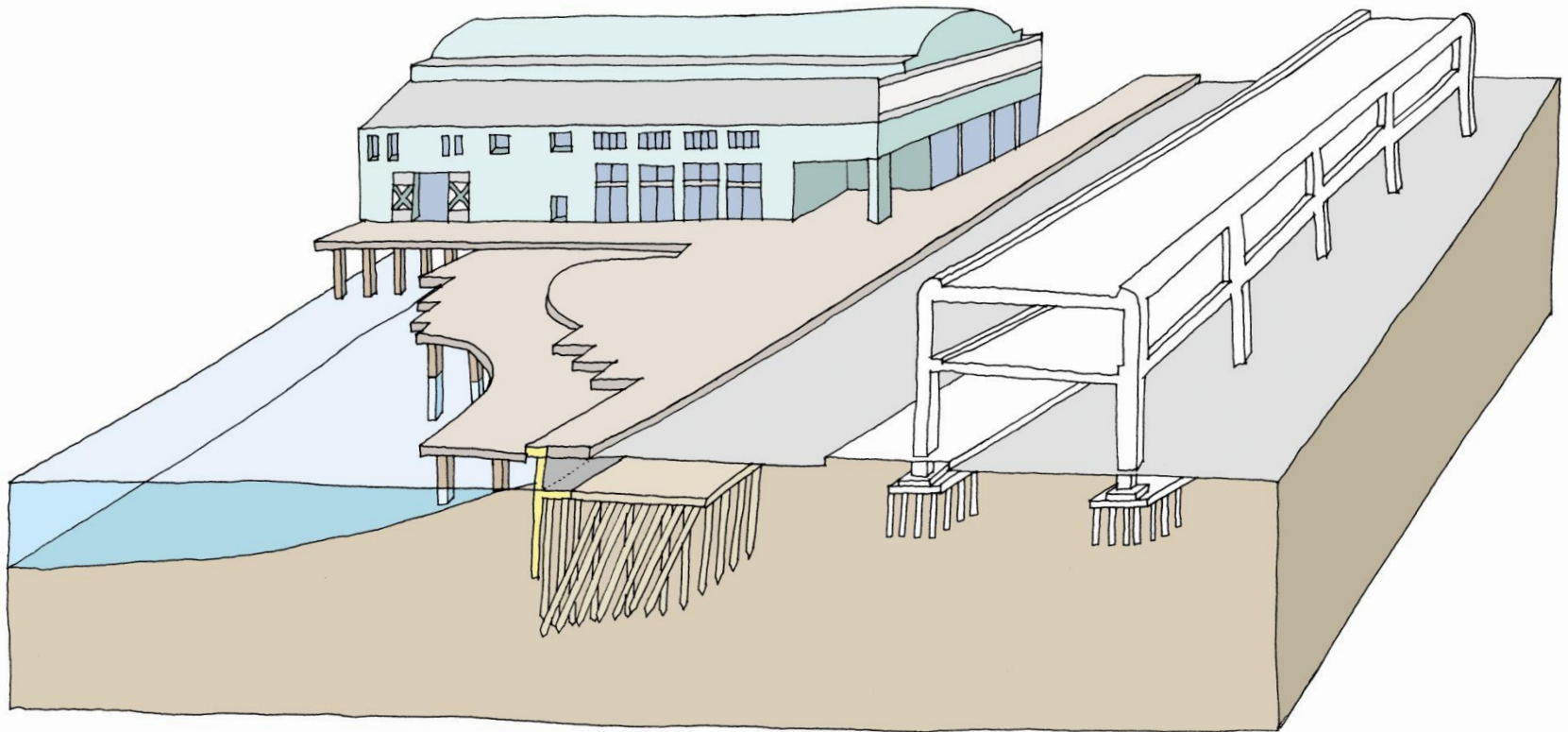
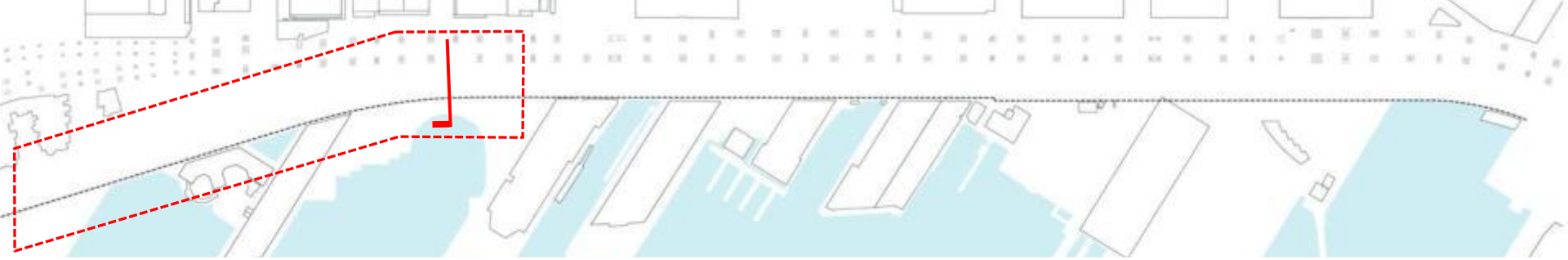


Existing – Zone 3



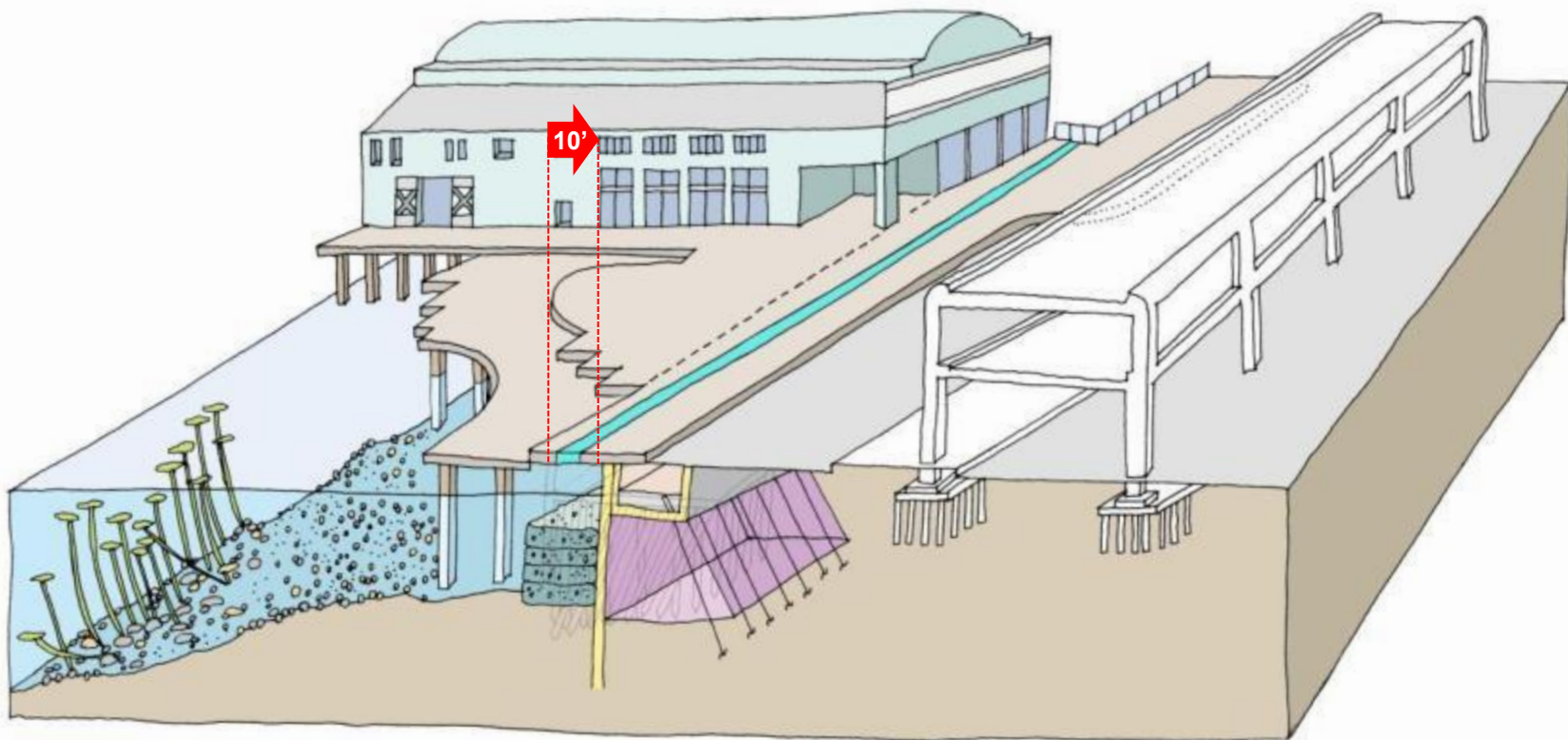


Recommended Design – Zone 3

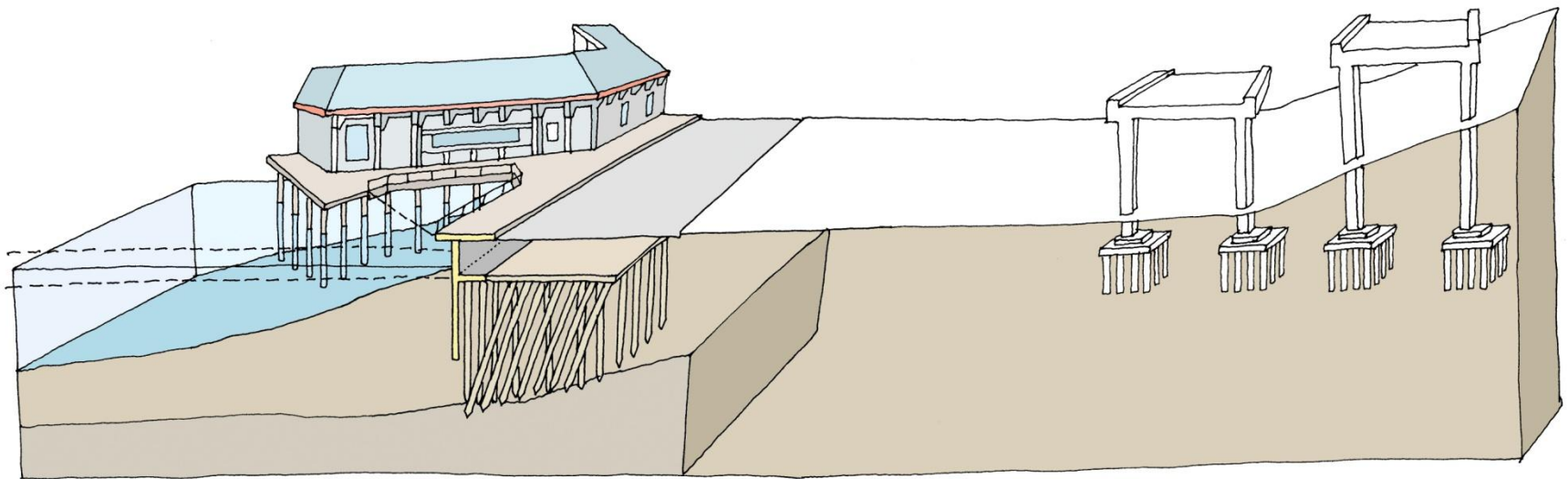
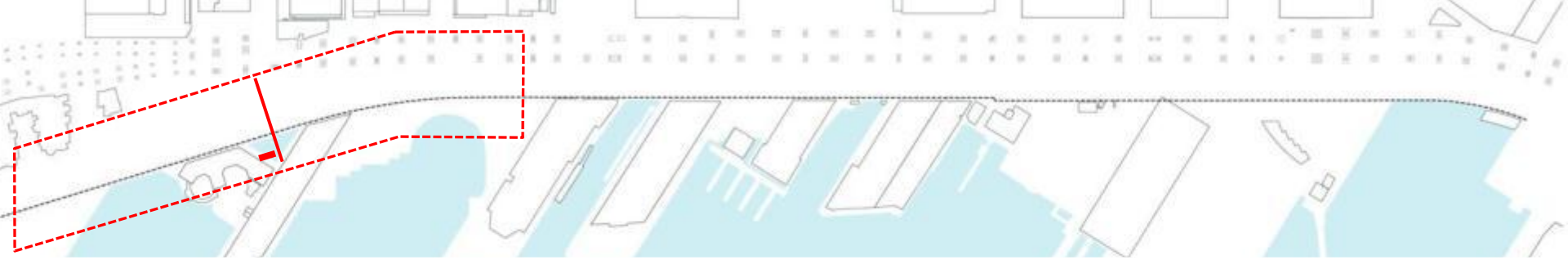


Existing – Zone 4

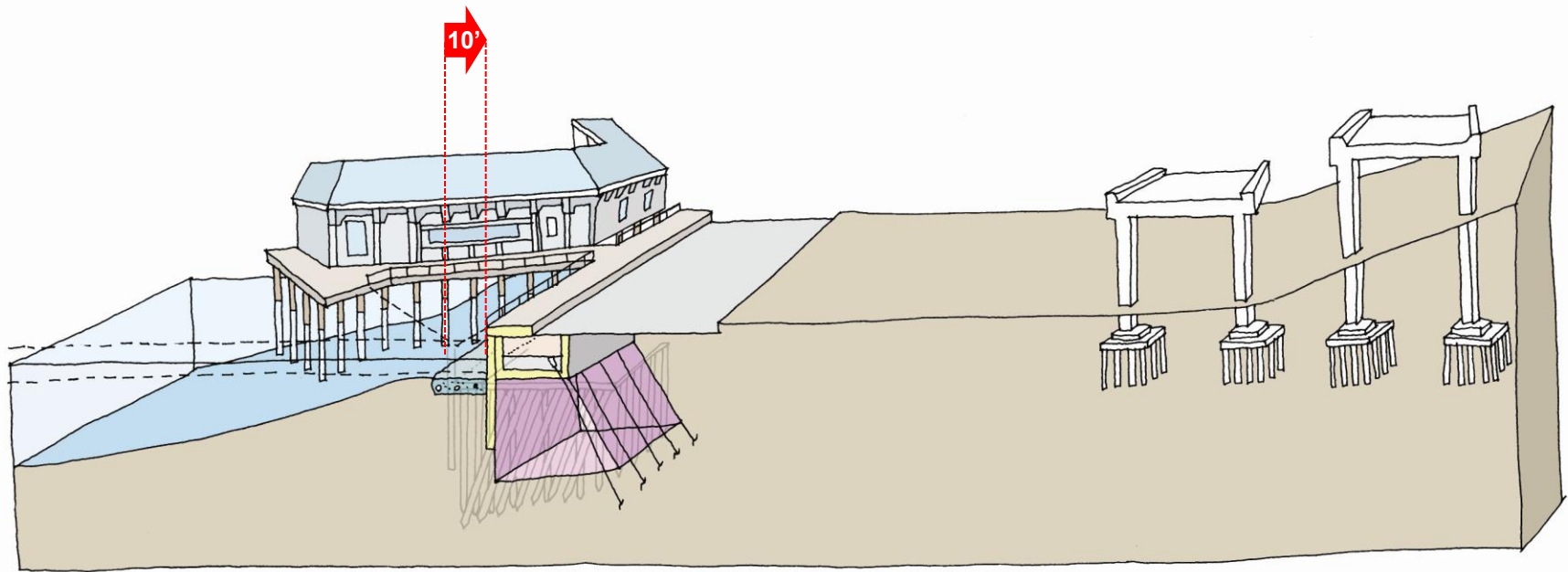
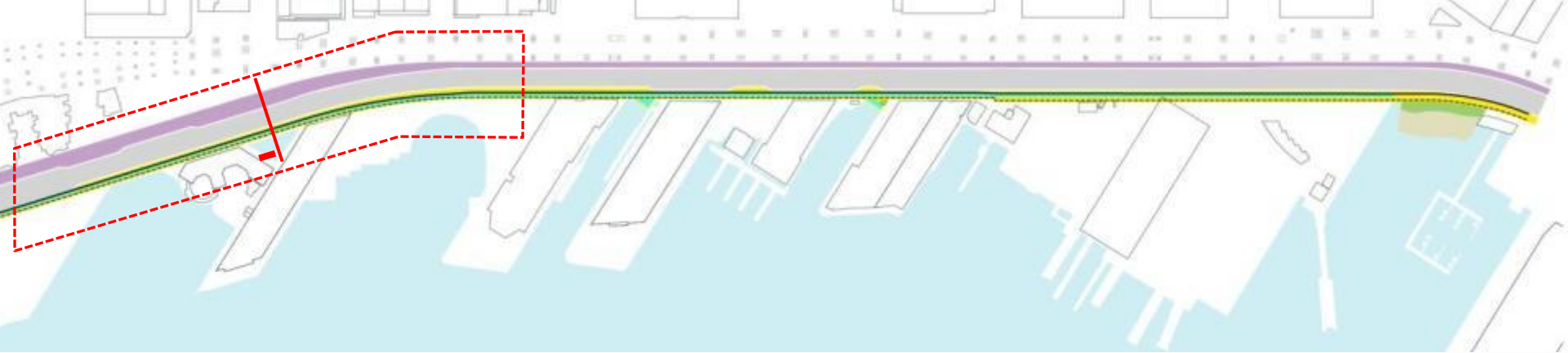




## Recommended Design – Zone 4



Existing – Zone 4



Recommended Design – Zone 4



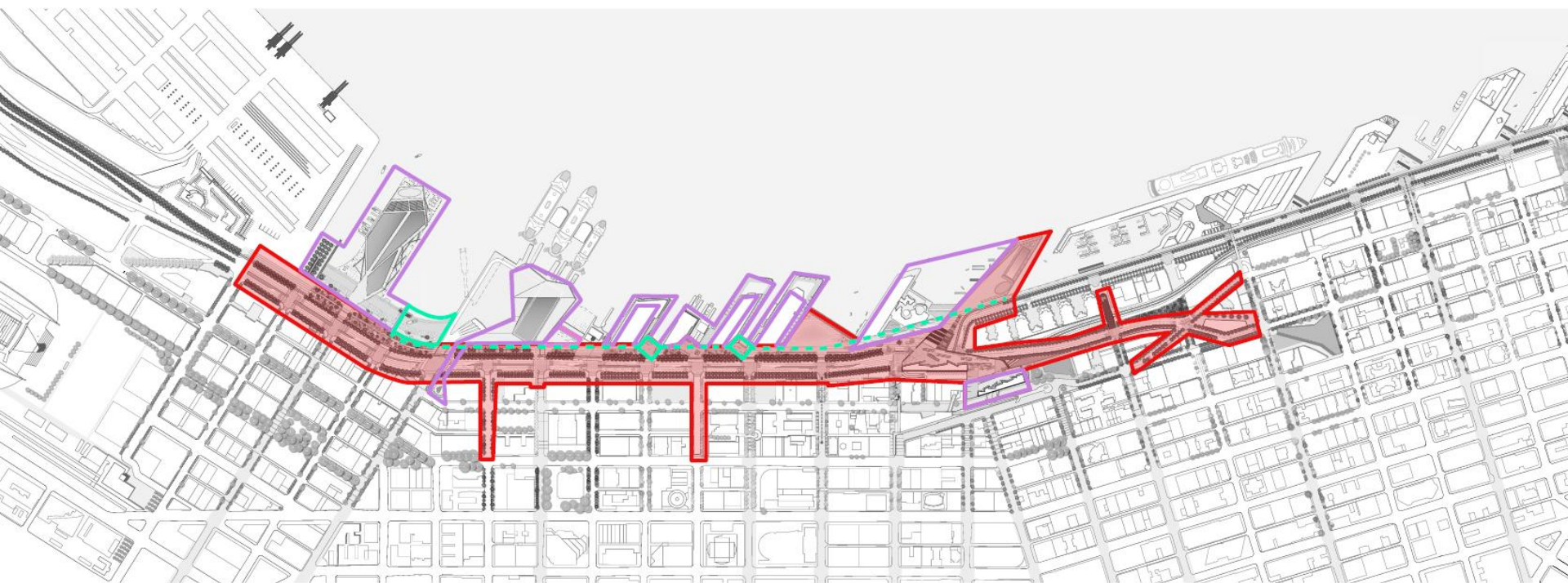
# Construction Contracting Considerations

- Conduct risk analysis to determine preferred approach
- Means and methods for jet grouting
- Responsiveness to stakeholder needs/concerns
- Managing change orders and cost reduction incentive proposals
- Panel (with new designers) to convene in late May



# ***35% Design Cost Estimate***

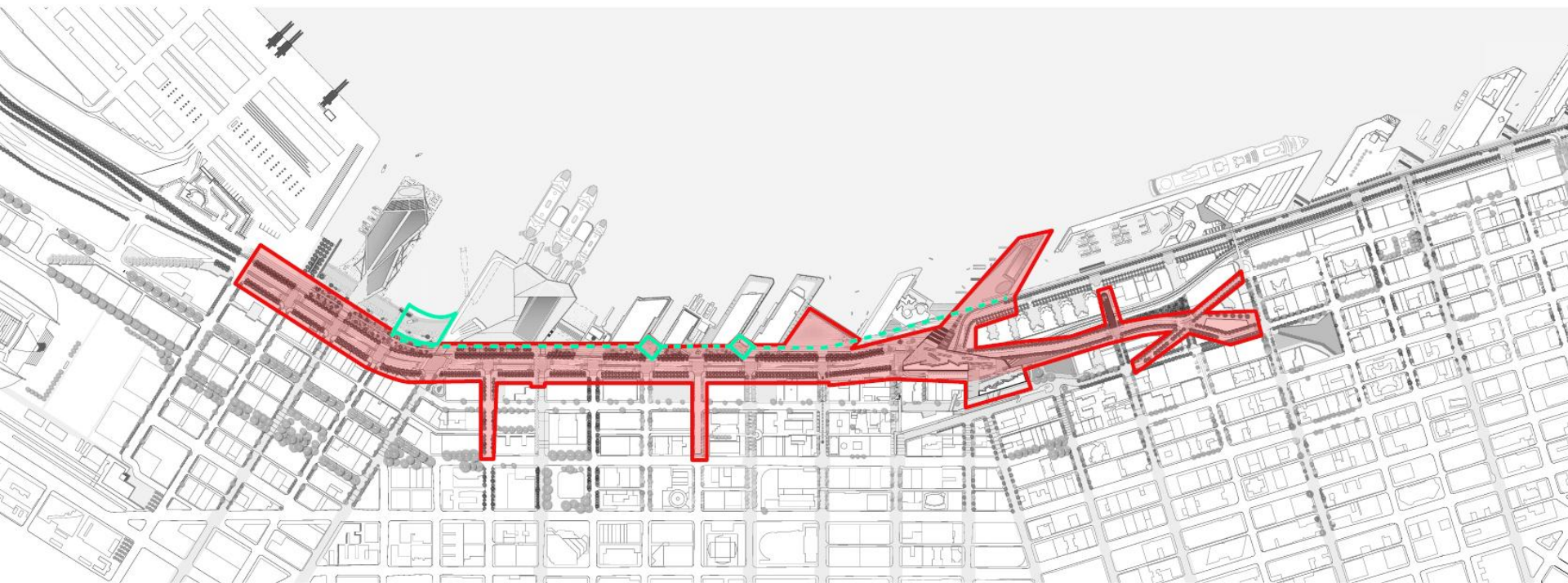
# Foundation of the Waterfront Program



-  **MAIN CORRIDOR + CENTRAL PUBLIC SPACES**
-  **PARTNER PROJECTS**
-  **SEAWALL PROJECT**



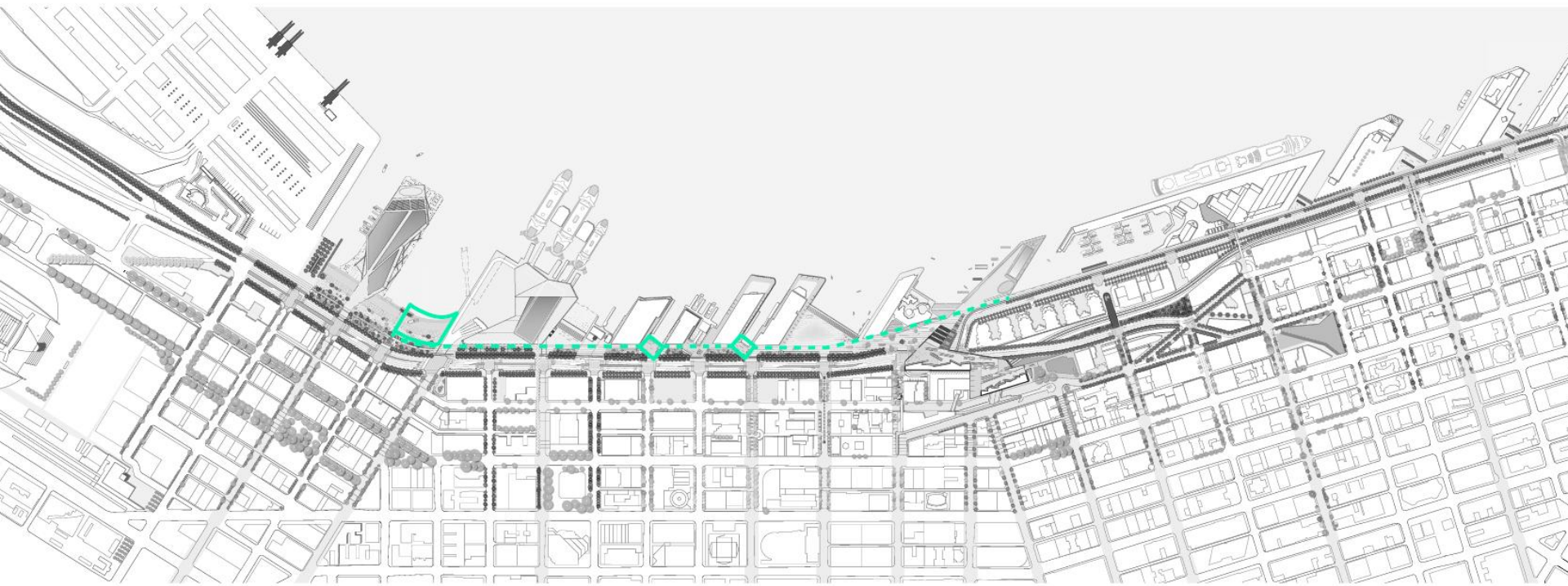
# Foundation of the Waterfront Program



 **MAIN CORRIDOR + CENTRAL PUBLIC SPACES**

 **SEAWALL PROJECT**

# Foundation of the Waterfront Program



SEAWALL PROJECT

# Foundation of the Waterfront Program





# What Elements are “Final”?

- 100-year design life for structural elements
- In-water habitat restoration features
- Restored Washington Street Boat Landing
- Pocket beach near Washington Street, with potential for seamless expansion
- Historic pier slips
- Railing
- Promenade with light penetrating surfaces
- Full flexibility for ongoing work with project partners, such as the Seattle Aquarium

# Central Seawall Costs – 35% Design

Costs in Year of Construction	Alt A	Alt B	Current CIP	35% Design
Environmental and Design	\$35 M	\$40 M		\$40 M
Construction				
Soil Stabilization	\$185 M	\$223 M		\$178 M
Ecosystem Restoration	\$8 M	\$23 M		\$11 M
Roadway and Access	\$19 M	\$23 M		\$23 M
Contingency	\$63 M	\$81 M		\$48 M
<b>Subtotal</b>	<b>\$310 M</b>	<b>\$390 M</b>	<b>\$330M</b>	<b>\$300M</b>
Public Utilities Infrastructure				
SPU Facilities (full cost)	\$6 M	\$7 M		\$6 M
SCL Facilities (full cost)	\$19 M	\$19 M		\$19 M
<b>Total</b>	<b>\$335 M</b>	<b>\$416 M</b>	<b>\$365M</b>	<b>\$325M</b>



# Cost Assumptions – 10% vs. 35% Design

## 10% Design

**Central seawall project boundary extends to Virginia Street**

- Total distance (S. Washington to Virginia): 3,700 lineal feet
- Increased from previous length by 240 lineal feet

**Drilled shafts assumed for soil stabilization**, due to better historic price record and less cost risk

**Ecosystem restoration features included**, range of costs largely due to excavation needs

**Utility costs included**

**30% construction contingency**, standard for early design

## 35% Design

**Central seawall project boundary stays at Virginia Street**

- Total distance (S. Washington to Virginia): 3,700 lineal feet

**Jet grouting for soil stabilization**, with availability to use drilled shafts if needed

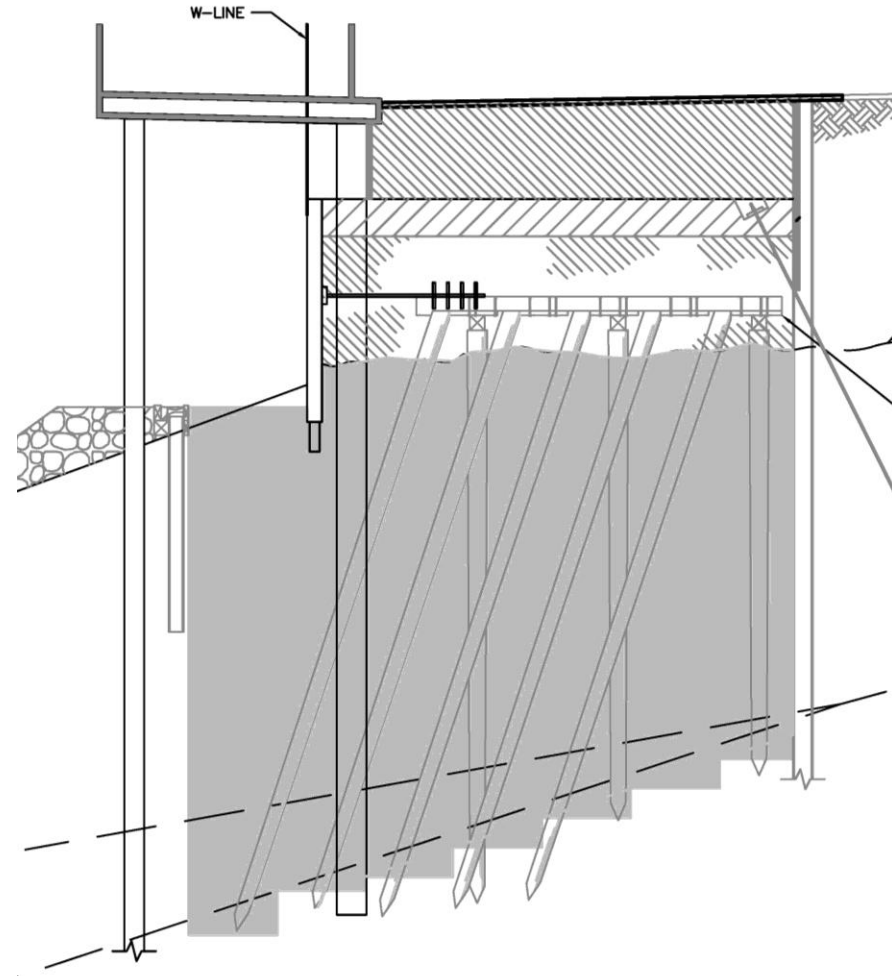
**Ecosystem restoration balances needs and functions**, less excavation needed

**Utility costs included**

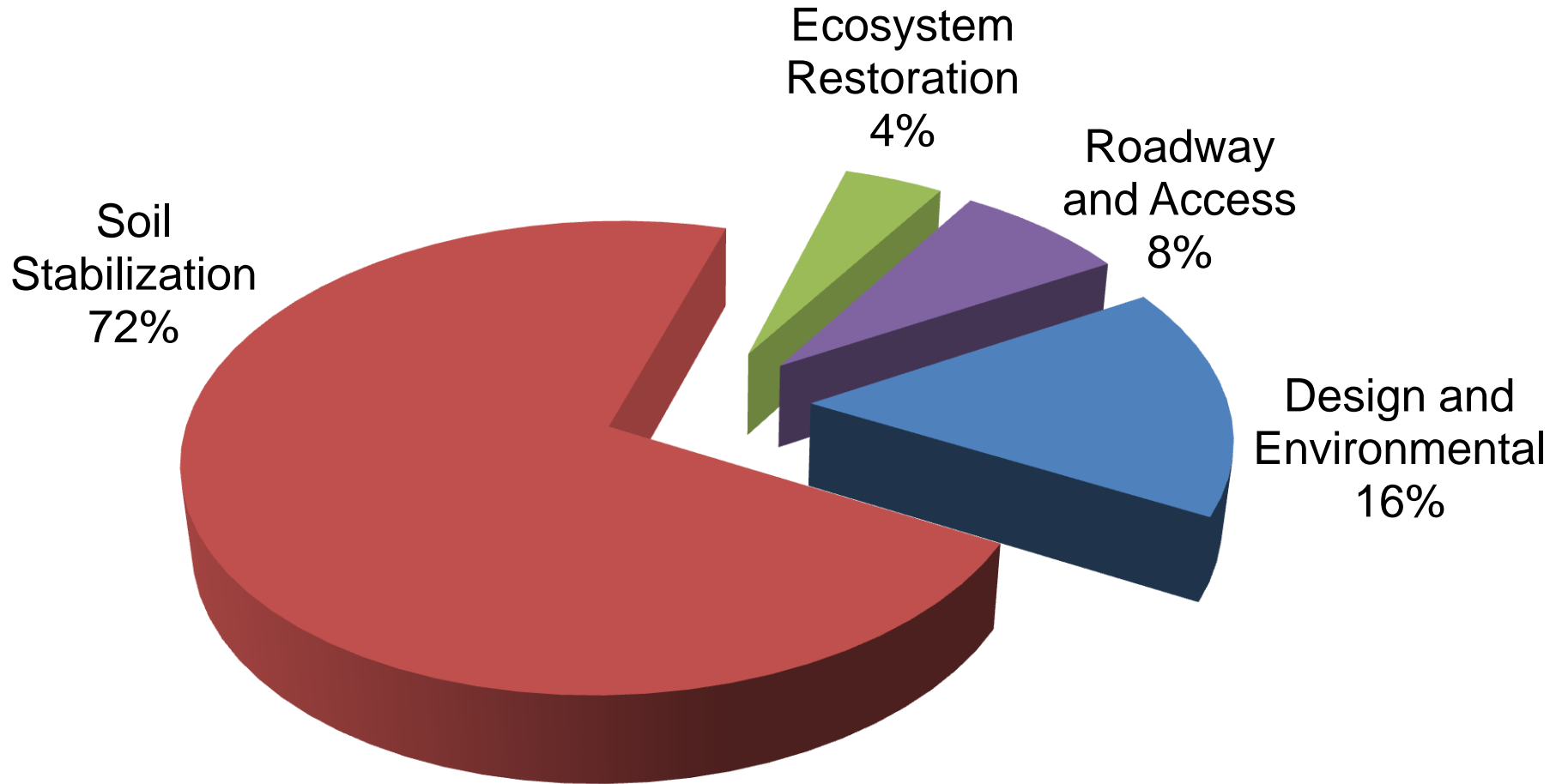
**25% construction contingency**, due to design progression

# 35% Cost Estimate Notes

- Design is under budget
- Cost savings achieved with refinement of the design, particularly in jet grouting
- Estimated budget for habitat features reduced
  - Hybrid of the alternatives
  - Less excavation required
- Reduced contingency from 30% to 25%
- Costs for utilities assumed to be same as 10% estimates



# Breakdown of 35% Estimate



# Other Critical Waterfront Infrastructure

- Pier 62/63 and Waterfront Park badly deteriorated and in need of rebuilding
- Current conceptual cost estimate: \$80-100M



# Upcoming Topics for Council Discussion

- Army Corps and project schedule update
- Waterfront Seattle coordination and integration
- Introduction of final design team
- Jet grouting stabilization technique
- Habitat research progress
- Construction contracting approach



**Waterfront Seattle and Elliott Bay Seawall Project**

Database of scheduled events—8 week look ahead

*Last updated: April 17, 2012***Since the last Council Special Committee meeting**

Date/Time	Activity	Location	Format	Audience
March 28-31 All day	Whether or Not temporary ceramics exhibit (hosted by National Council on Education for the Ceramic Arts)	Pier 62/63	Event	All
March 29 5:15-7:15 PM	Central Waterfront Stakeholder's Group	Seattle Labor Temple	Briefing/discussion	All
March 31, April 1 10:00 AM-4:00 PM	Intercept surveys	Various locations throughout Seattle	Survey	All
April 2 5:45-6:15 PM	Lake Union District Council	History House	Briefing/discussion	All
April 4 7:00-8:00 PM	Southwest District Council	South Seattle Community College	Briefing/discussion	All
April 4 7:30-8:30 PM	Leschi Community Council	Central Area Senior Center	Briefing/discussion	All
April 5 5:00-7:00 PM	Pedestrian Advisory Board	SMT 1600	Workshop	Boardmembers
April 5 7:30-9:00 PM	League of Women Voters	Seattle First Baptist Church	Briefing/discussion	All
April 9 6:45-7:15 PM	East District Council	Shelter House at Cal Anderson Park	Briefing/discussion	All
April 11	Pike Place Market Historical Commission	PPM Conference Room	Briefing/discussion	Commissioners
April 12 9:30 AM	Northwest Universal Design Council	SMT 1600	Briefing/discussion	Councilmembers
April 12 6:35-7:05 PM	Central District Council	Central Area Senior Center	Briefing/discussion	All
April 13 and 14 10:00 AM -4:00 PM	Intercept surveys	Various locations throughout Seattle	Survey	All
April 18 2:30-3:30 PM	Belltown Business Association and Community Council	Millionaire Club	Briefing/discussion	All
April 18 4:30-5:30 PM	Alliance for Pioneer Square	308 Occidental Ave S	Briefing/discussion	All
April 18 7:00 PM	Delridge District Council	Youngstown Cultural Arts Center	Briefing/discussion	All

**Waterfront Seattle and Elliott Bay Seawall Project**

Database of scheduled events—8 week look ahead

*Last updated: April 17, 2012***Next 8 weeks**

Date/Time	Activity	Location	Format	Audience
Now - ongoing	Oral History Project	N/A	Event	Seniors
April 25 6:30 PM	Duwamish District Council	Georgetown City Hall	Briefing/discussion	All
May 2 7:30 PM	Queen Anne Community Council	Queen Anne Manor	Briefing/discussion	All
May 2 7:00-7:30 PM	North District Council	Lake City Library	Briefing/discussion 30 min	All
May 3 7:00 PM	Northeast District Council	Wedgewood Presbyterian Church	Briefing/discussion	All
May 7 5:00-6:00 PM	International District community forum		Briefing/discussion	All
May 9 7:00 PM	Ballard District Council	Ballard Library	Briefing/discussion	All
May 10 8:45-9:30 AM	Downtown District Council	Securities Building	Briefing/discussion	All
May 10 5:15-7:15 PM	Central Waterfront Stakeholder's Group	TBD	Briefing/discussion	All
May 14 7:15-7:45 PM	Magnolia/Queen Anne District Council	Bayview Manor	Briefing/discussion	All
May 23 7:00 PM	Northwest District Council	Greenwood Senior Center	Briefing/discussion	All
May 30 6:00 PM	Environmental Design Research Center	TBD	Briefing/discussion	All
May 31 Time TBD	Seattle Commission for People with Disabilities	Seattle City Hall Room L280	Roundtable	All
June 21 10:00-11:00 AM	Senior Coffee Hour	TBD	Briefing/discussion	All
Late May-early June	Begin waterfront activation events	Various locations along the waterfront	Event	All
May/June Date TBD	El Centro De la Raza	2524 16th Ave S	Briefing/discussion	Board and staff
Mid-late June Date TBD	Waterfront Seattle Large event/public meeting	TBD	Event	All