

ALAMEDA POINT AND WEST END

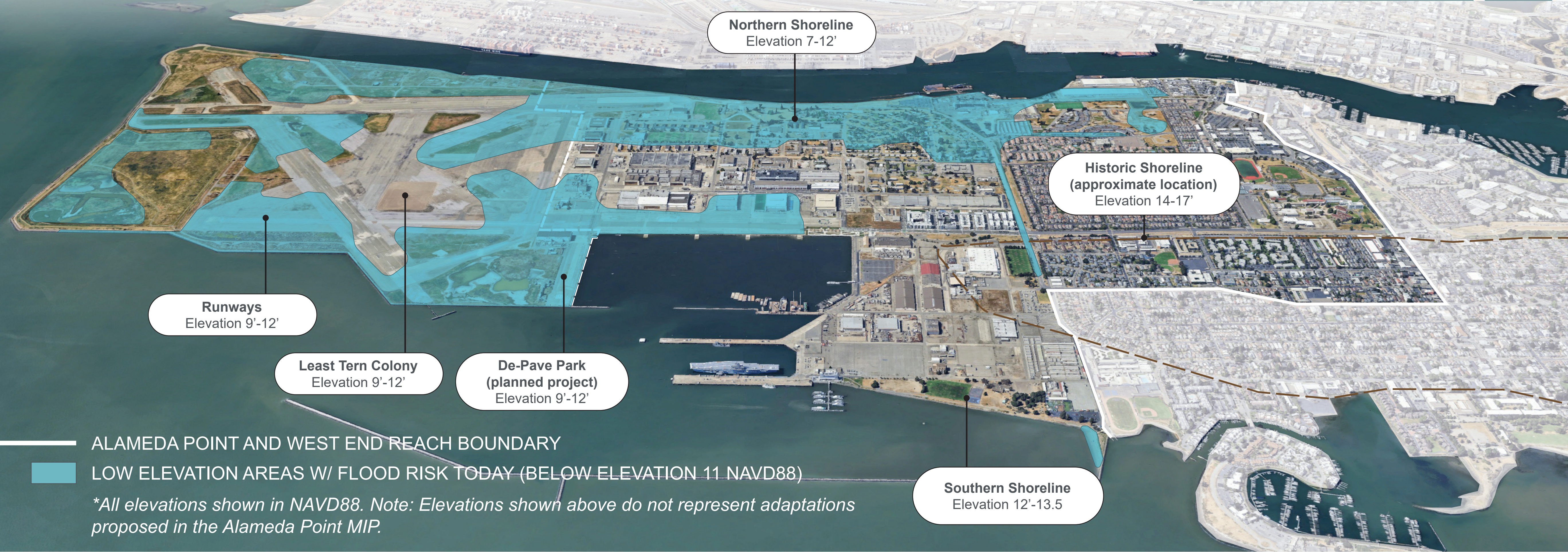
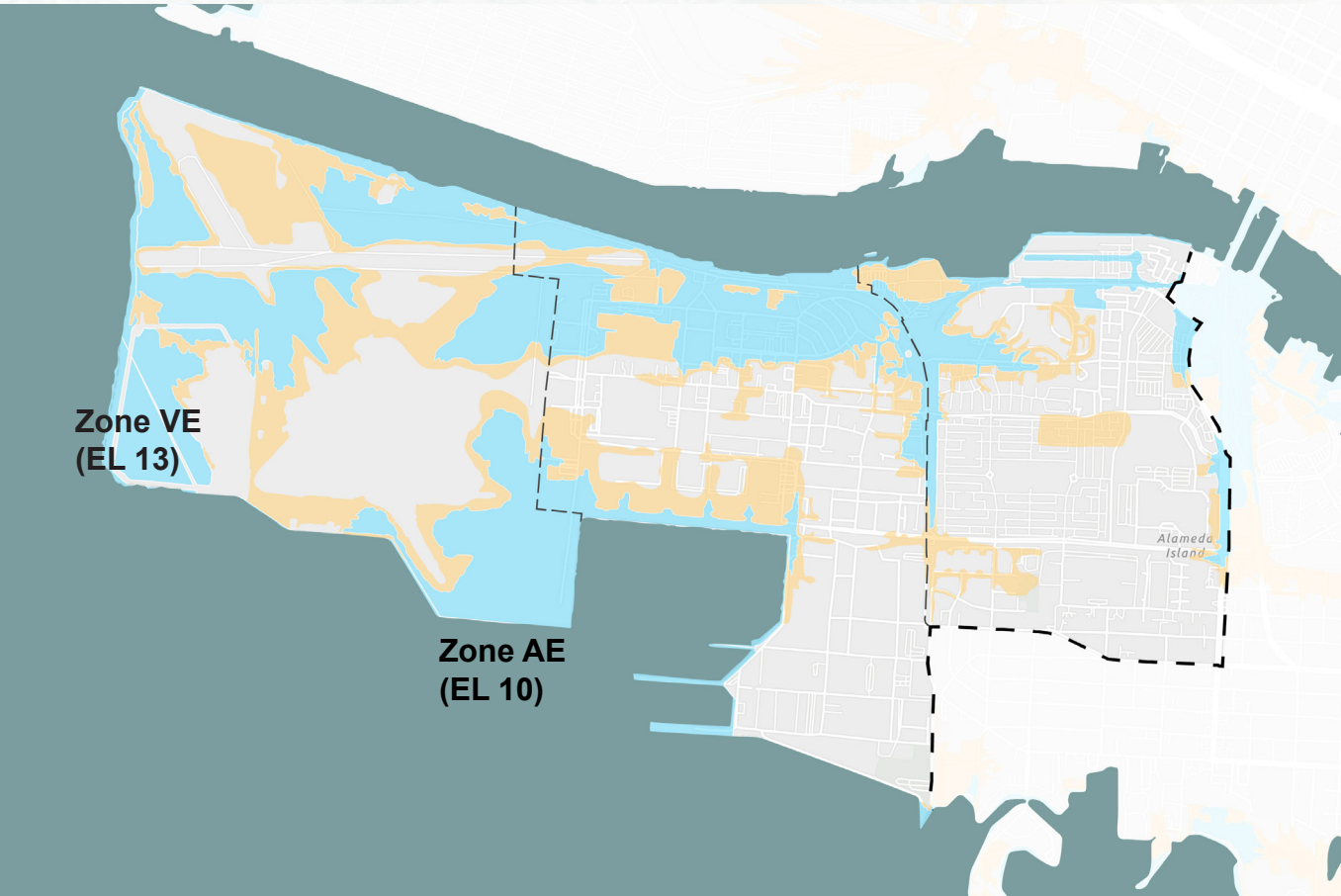
INTRODUCTION

Alameda Point and the West End are diverse neighborhoods with a vibrant history. This area has transformed drastically over the past 150 years -- from mudflat and tidal marsh, to a hub for industry, to the Naval Air Station. The area is currently in the midst of the next wave of transformation -- the redevelopment of the former Air Station into a mixed use neighborhood under the Alameda Point Master Infrastructure Plan.

Today, much of this area is at low elevation and vulnerable to coastal flooding. Resilient housing is a key part of the vision for transformation. Redevelopment plans for Alameda Point include coastal flood protection, which would remove large portions of this area from the flood hazard zone. Additional adaptation planning is required for the West End neighborhood to ensure long-term flood protection.

Flood Risk Today

- FEMA Flood Hazard Zones
- 0.2% CHANCE ANNUAL FLOOD PLAIN
 - 1% CHANCE ANNUAL FLOOD PLAIN
 - ADAPTATION ZONE
 - REACH BOUNDARY



SHORELINE TRANSFORMATION



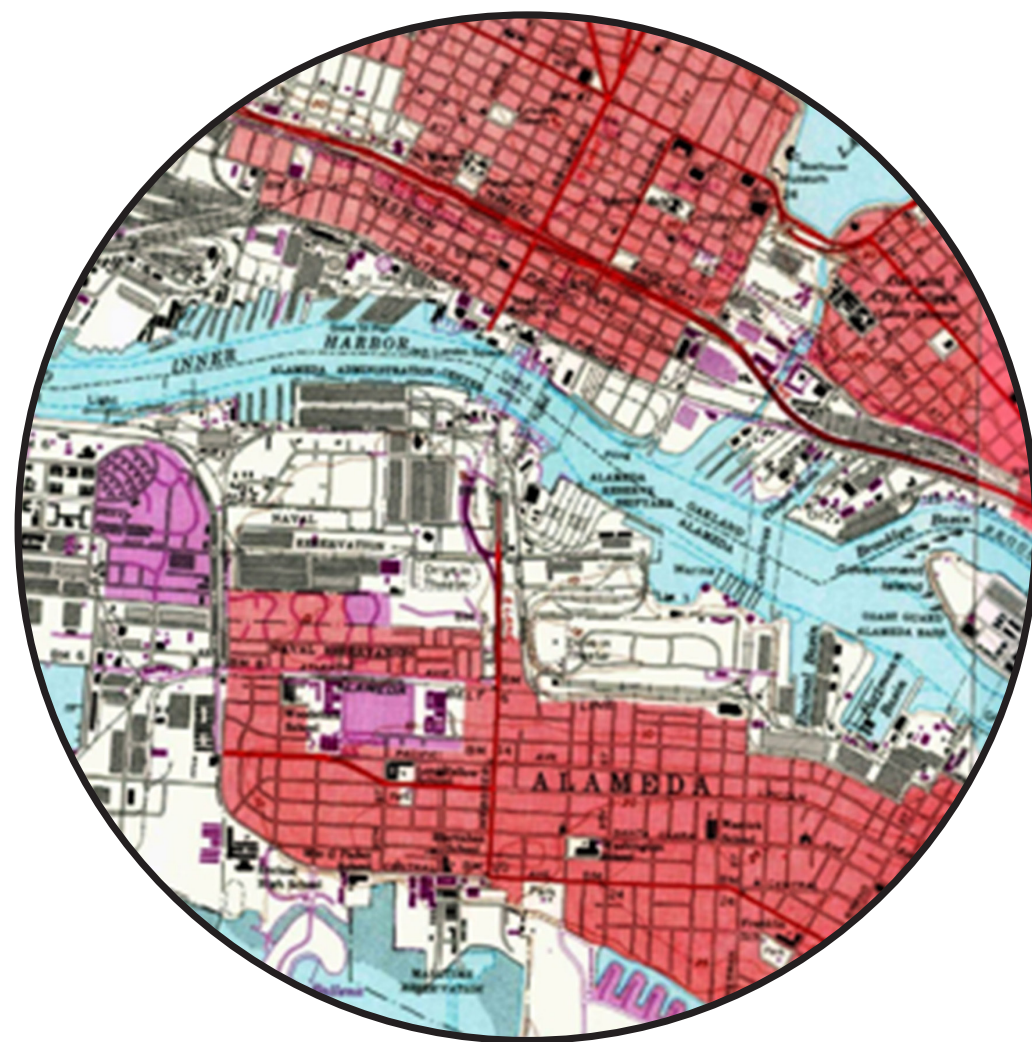
1857



1876



1934



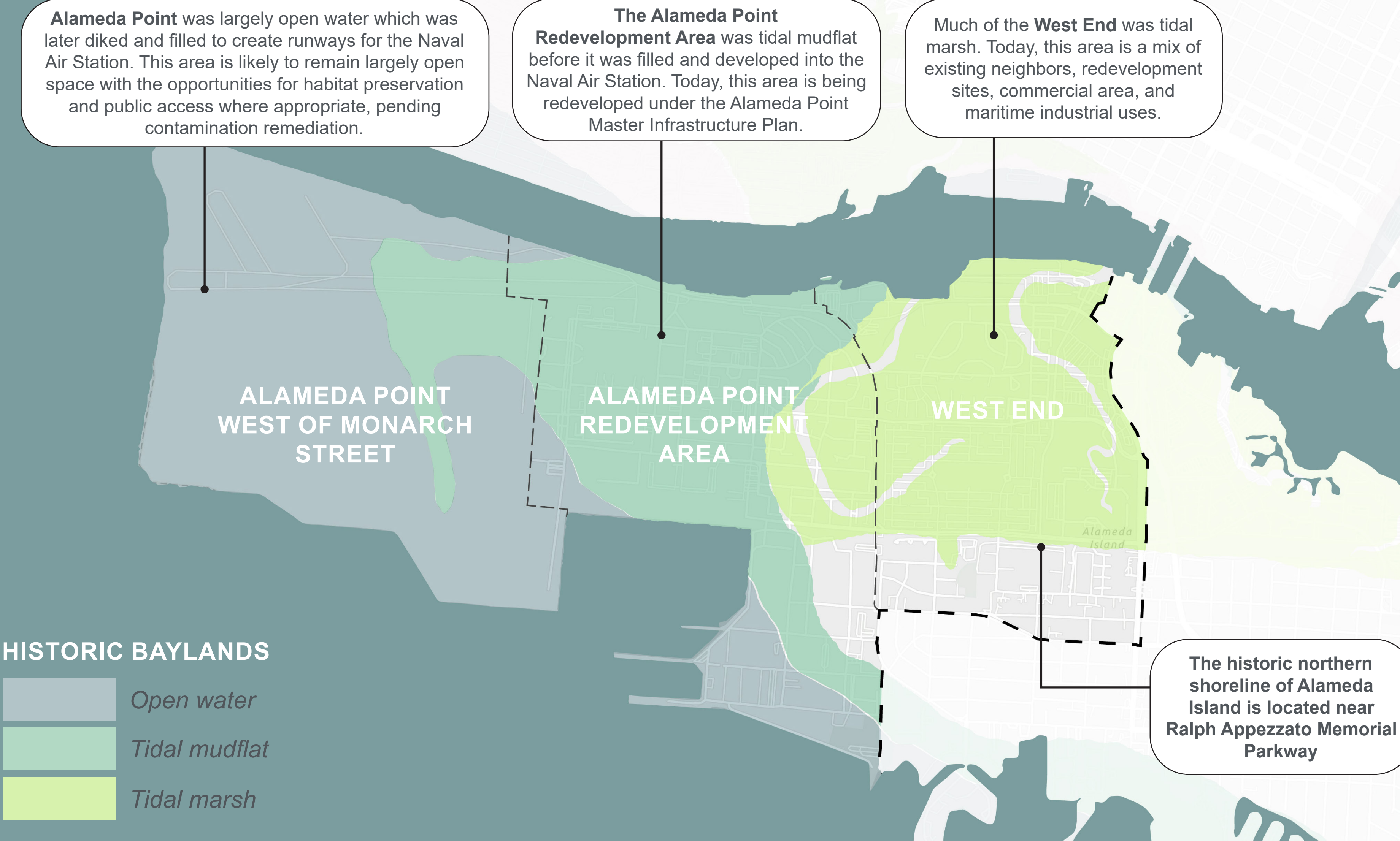
1969

Subareas for Adaptation and Historical Characteristics

Alameda Point and the West End have arguably transformed the most of all the areas within Alameda over the past 150 years. Prior to the 1850s, this area was a tidally influenced landscape -- a mix of tidal marsh, mudflat and shallow open water. The historic shoreline was located adjacent to present day Ralph Appezzato Memorial Parkway.

Over the following decades, the City of Alameda was developed, beginning first in areas of high ground. The first efforts to fill in the tidelands began in the 1890s, driven by the rapidly expanding rail and maritime industries. The area of Alameda Point was filled in 1927 to create land for an airport. During the World War II period, this area became the Naval Air Station Alameda (NAS Alameda). It continued to operate as a federal facility until 1997. Now, the next phase of transformation is already underway with the Alameda Point redevelopment project.

This reach can be divided into three subareas, each with different trajectories for change and associated implications for adaptation. Historical conditions will inform future adaptation.



ALAMEDA POINT WEST OF MONARCH ST

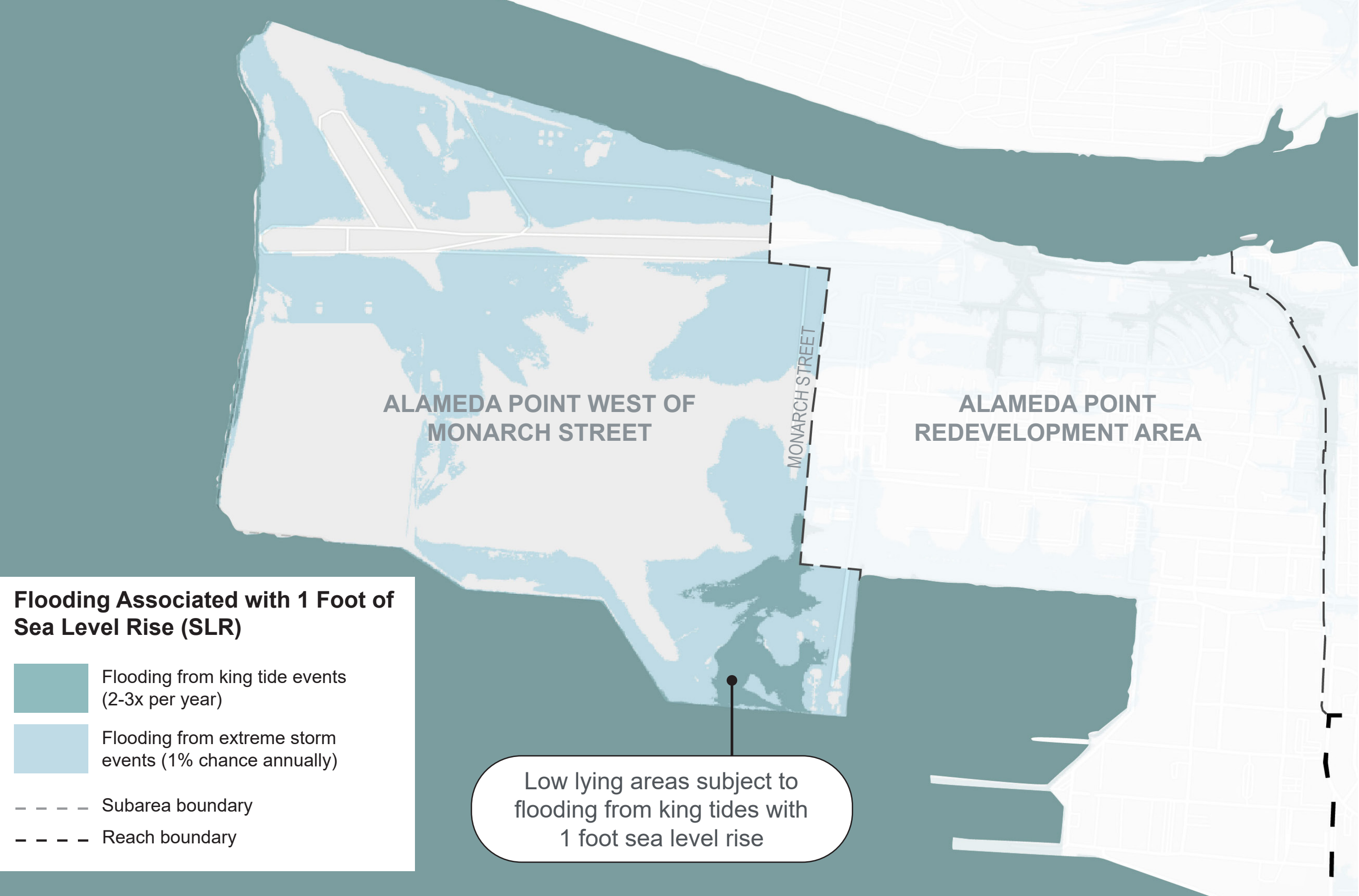
PLANNED PROJECTS

‘DO NOTHING’ ALTERNATIVE

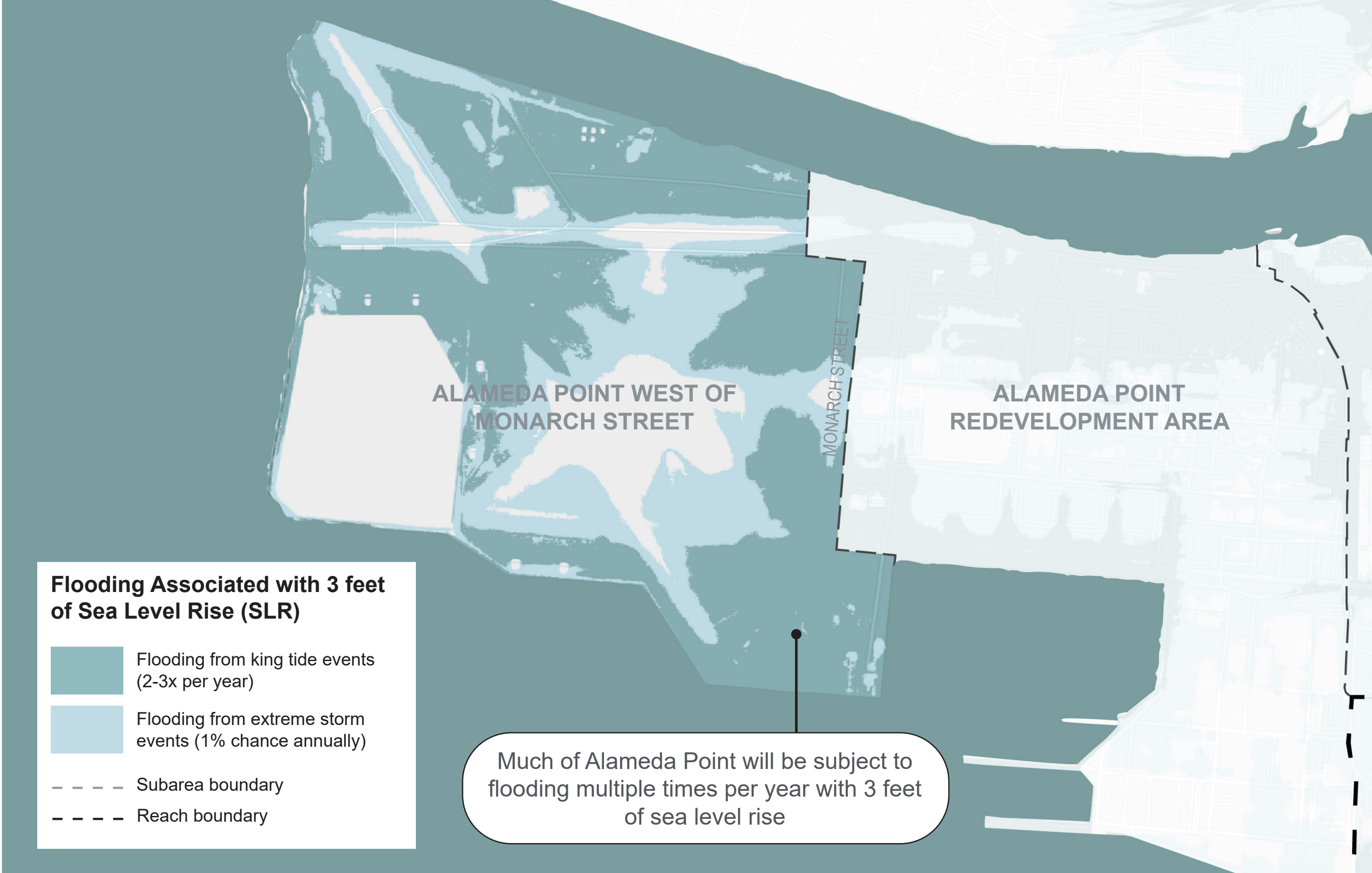
The lowest portions of this shoreline are already at risk of inundation during a major coastal flood. Sea level rise of 1 foot may occur by 2040-2060.* Increasingly frequent and intense extreme rainfall events, combined with rising groundwater, are anticipated to cause flooding in low-lying areas. With 1 foot of sea level rise, king tide flooding will remain confined to the shoreline. However an extreme storm would have major impacts to much of this area’s built environment. By 3 feet of sea level rise (2070-2100) flooding will occur even more frequently and will impact a much larger area. The map below highlights some of the places that would be exposed to coastal flooding under king tide and 100-year storm scenarios with 1 and 3 feet of sea level rise.

*Based on approximate High and Intermediate projections (OPC, OST, and CA Sea Level Rise Task Force 2024) in comparison to a 2000 baseline

1 FOOT OF SEA LEVEL RISE (2040-2060)



3 FEET OF SEA LEVEL RISE (2070-2100)

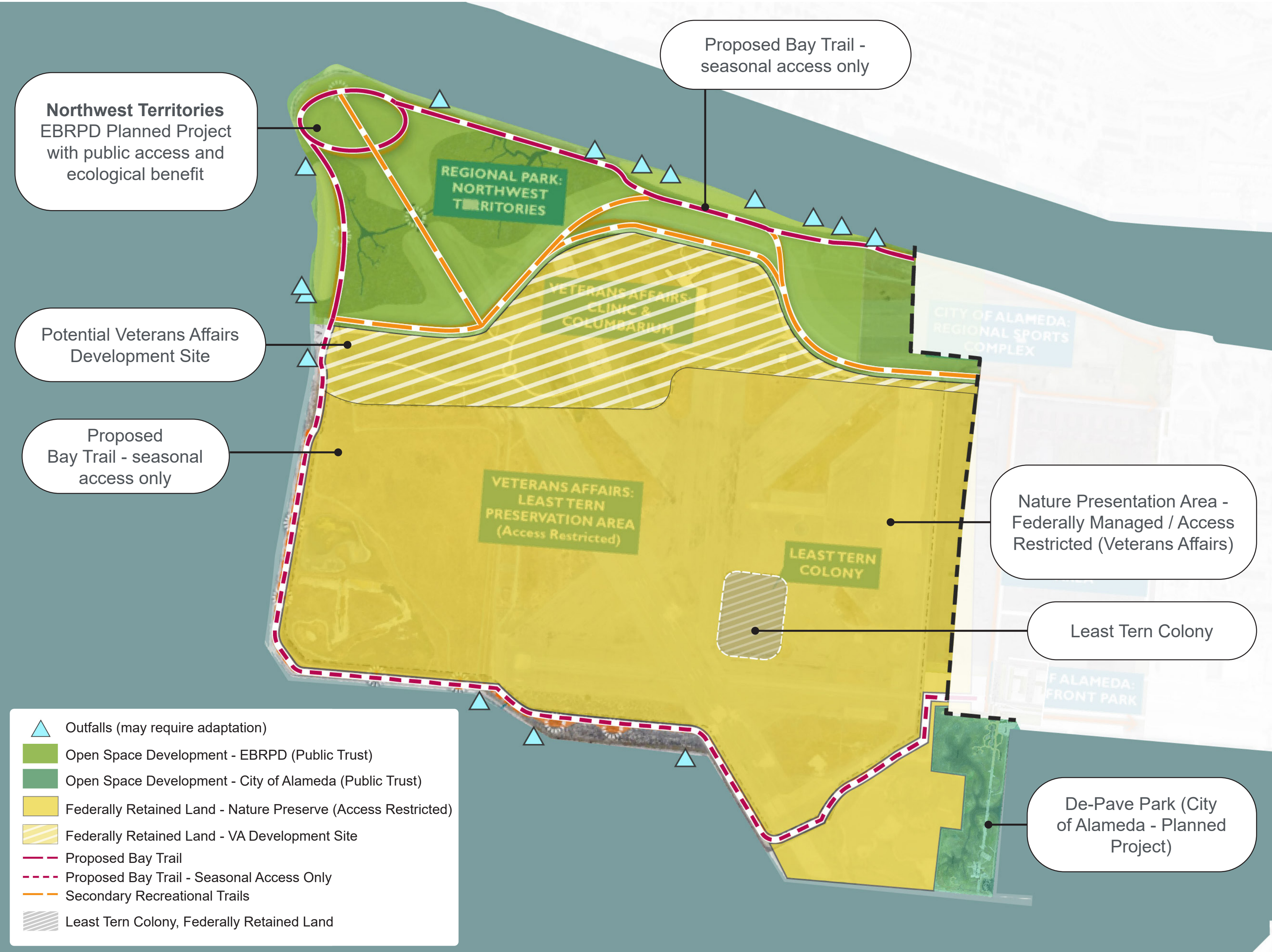
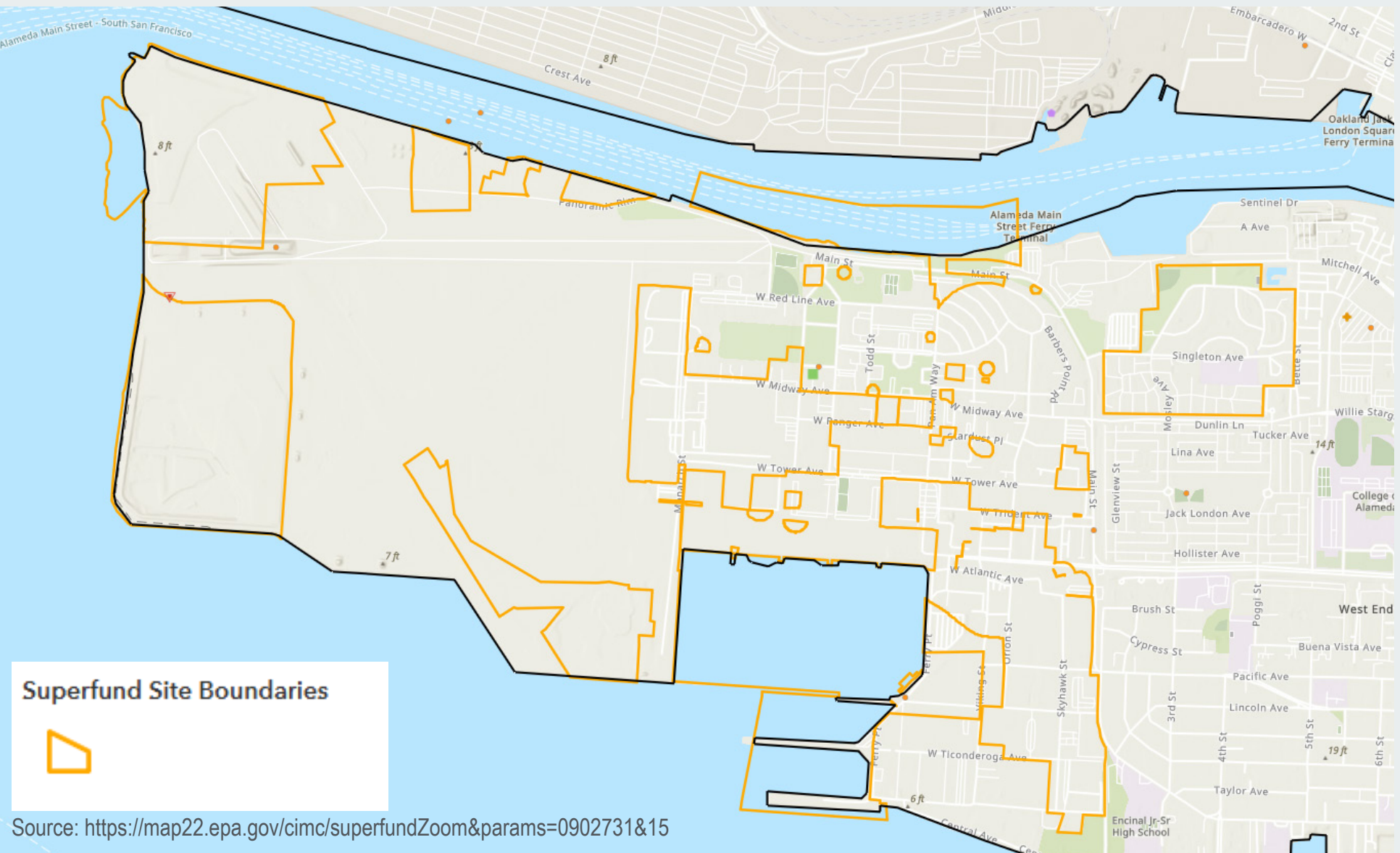


PLANNED DEVELOPMENT AND OPEN SPACE

Alameda Point West of Monarch street falls within the public trust and will be maintained for public use in perpetuity. Portions of the site fall under Federal jurisdiction (Veterans Affairs). Potential VA plans include redeveloping a portion of the site and maintaining the rest as a nature preservation area. These areas will not be accessible to the general public.

East Bay Regional Park District intends to redevelop the Northwest Territories as a public park that includes adaptation measures, a Bay Trail connection, and ecological improvements. The City of Alameda is also working to construct De-Pave Park adjacent to Seaplane Lagoon. This park will include tidal wetlands, public access, and environmental education.

The further planning and completion of these projects is dependent on federal clean up of contaminated sites associated with the Naval Air Station (shown below). Some of the sites shown below have been remediated and transferred to the City.



LONG-TERM ADAPTATION APPROACH



In the long-term, the adaptation of Alameda Point West of Monarch Street includes opportunities to provide public and ecological benefits while reducing risk. This area is an opportunity to implement managed retreat. Paved runway areas could be removed and transition into tidal wetlands. Some areas may be elevated in order to provide public access or maintain ecological uses (such as the Bay Trail or Least Tern colony), and could be designed as flood protection infrastructure. If the Veterans Affairs project moves forward in the near-term, long-term adaptation may be required for the site.

As is the case with near-term adaptation strategies, long-term adaptation is contingent on contamination clean up. The risk of contaminant mobilization will increase as sea levels and groundwater rise. Clean up is a priority in order to protect ecosystems and communities.



ALAMEDA POINT REDEVELOPMENT AREA

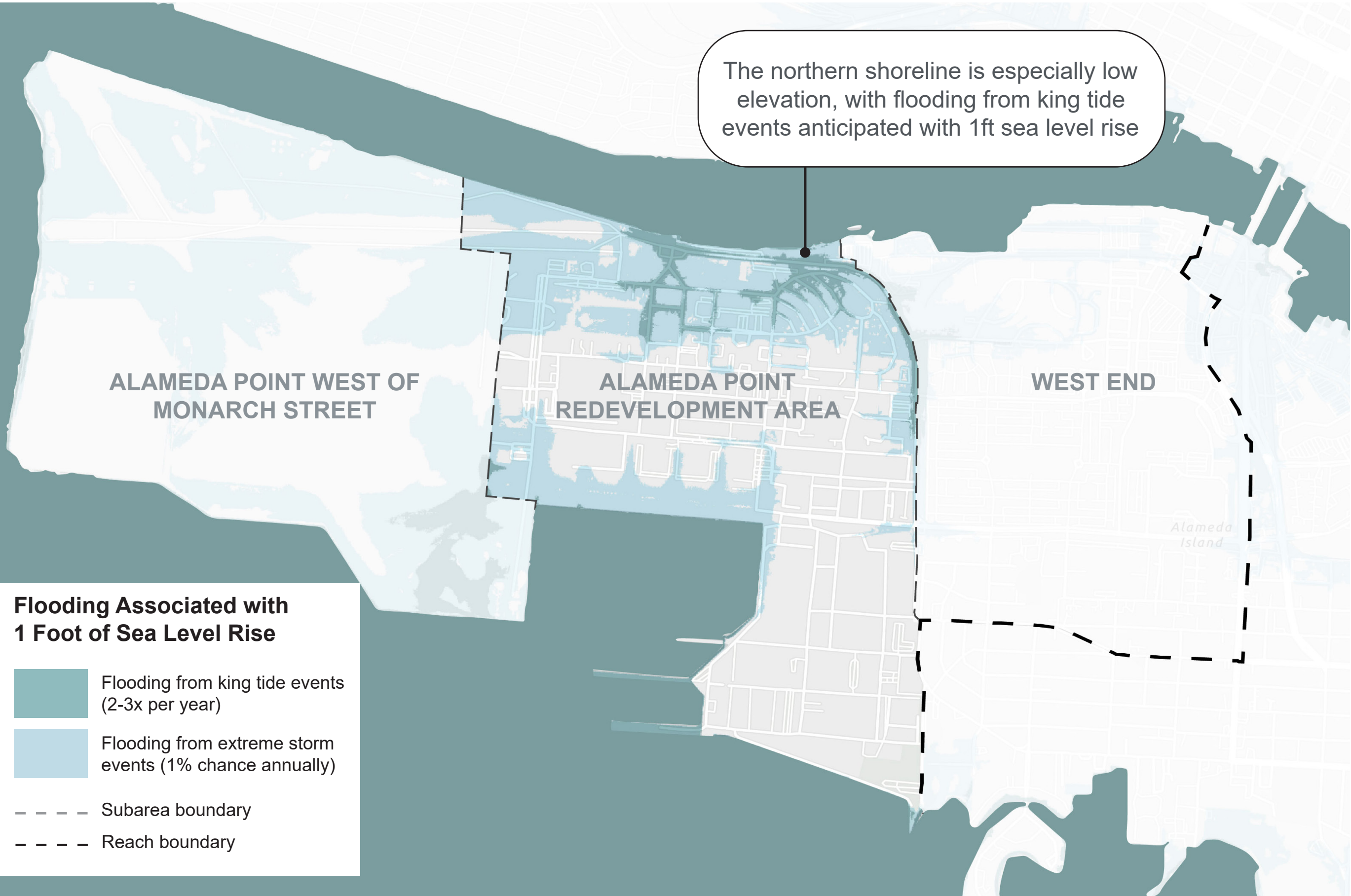
MASTER INFRASTRUCTURE PLAN

‘DO NOTHING’ ALTERNATIVE

The low-lying areas of the Alameda Point Redevelopment Area are vulnerable to coastal flooding under current conditions. The Alameda Point Master Infrastructure Plan includes both near- and long-term planned adaptations. The maps below illustrate coastal flood hazards with 1 foot and 3 feet of sea level rise if adaptation is not completed as planned.

**Based on approximate High and Intermediate projections (OPC, OST, and CA Sea Level Rise Task Force 2024) in comparison to a 2000 baseline*

1 FOOT OF SEA LEVEL RISE (2040-2060)



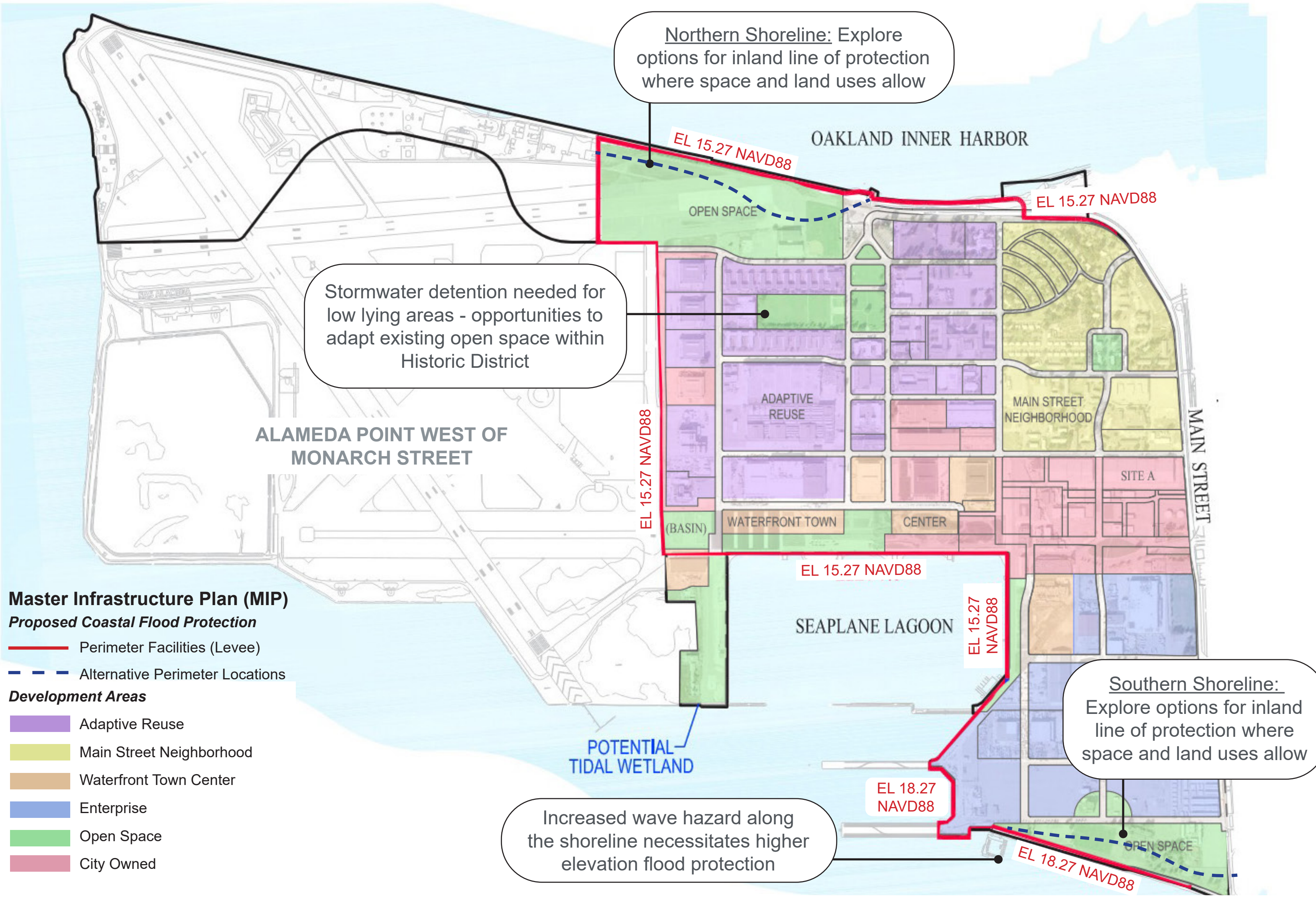
3 FEET OF SEA LEVEL RISE



PLANNED DEVELOPMENT AND ADAPTATION

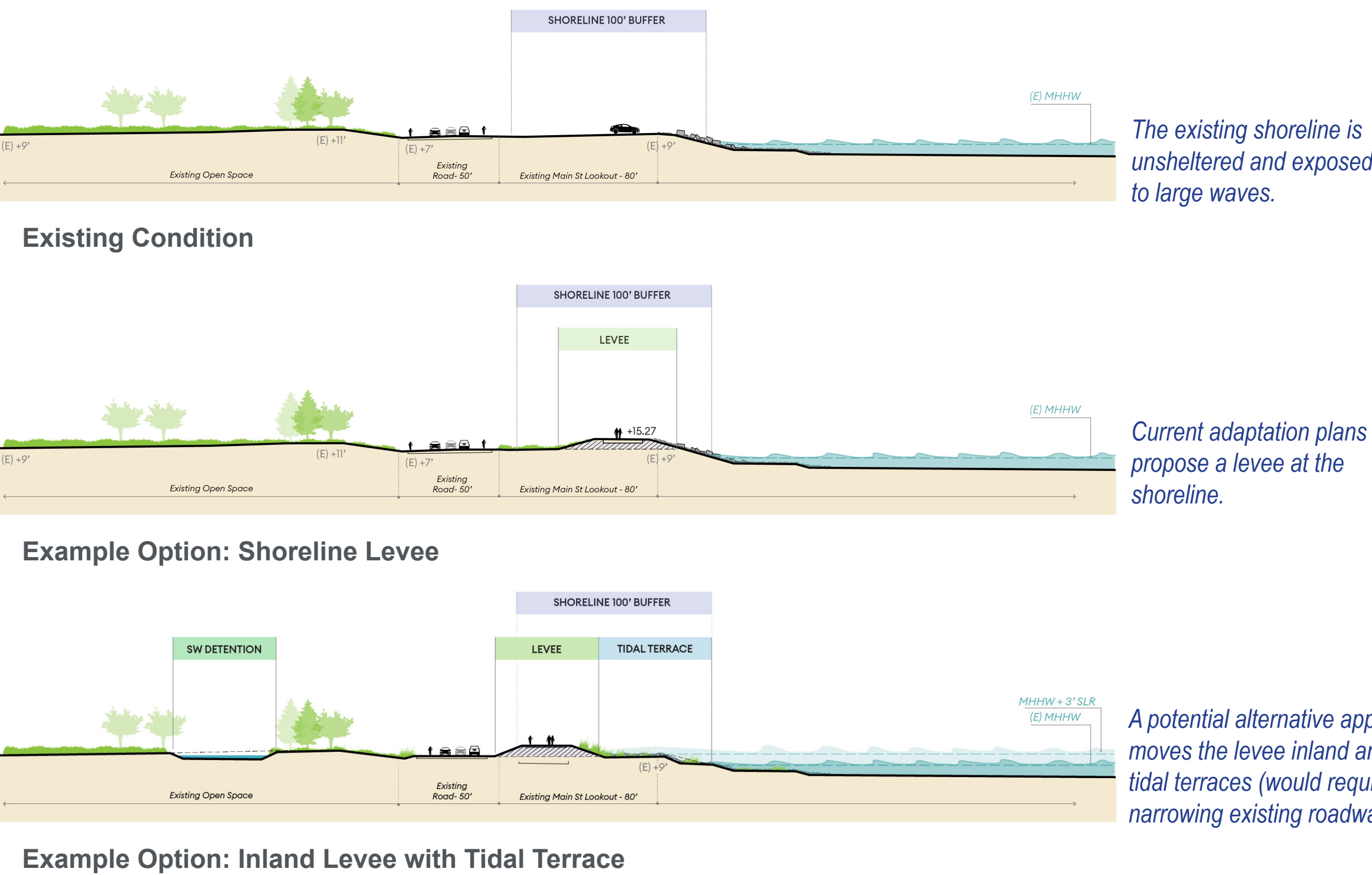
Alameda Point is a large-scale development in the midst of planning, design, and construction. The City is managing the planning and development for Alameda Point—part of the former Naval Air Station Alameda—to create a strong employment and commercial base with a mix of commercial, residential, open space, recreational, and retail uses. The plan also includes adaptive reuse of iconic World War II historic structures.

The Master Infrastructure Plan (MIP - 2020) includes long-term protection for sea level rise consistent with Ocean Protection Council (OPC), City of Alameda, and Oakland Alameda Adaptation Committee (OAAC) criteria. The plan includes perimeter protection in the form of a levee. Inland development areas will also be raised. The MIP also includes adaptive measures to address shallow groundwater considerations associated with sea level rise.

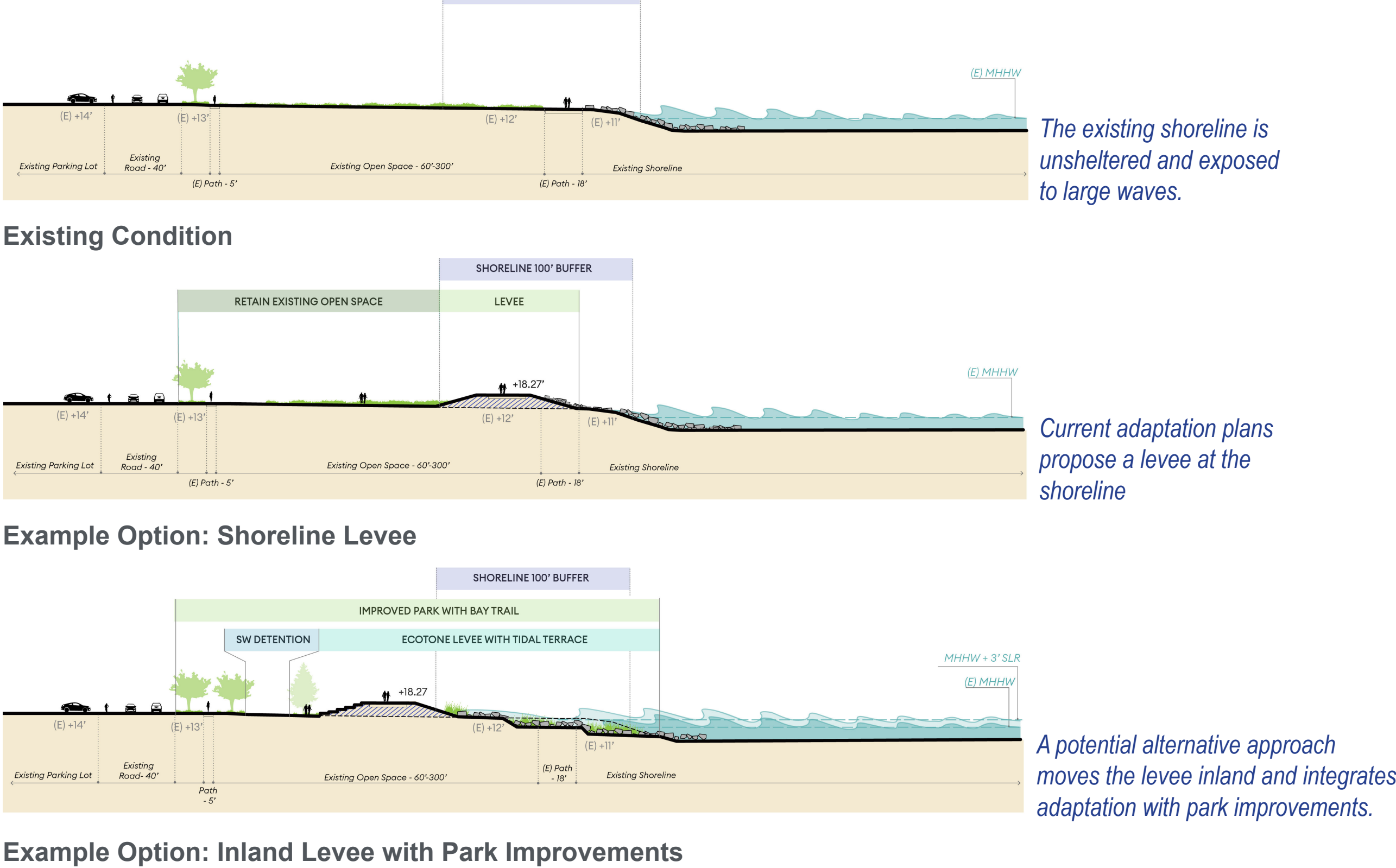


ADAPTATION ALTERNATIVES

Northern Shoreline



Southern Shoreline



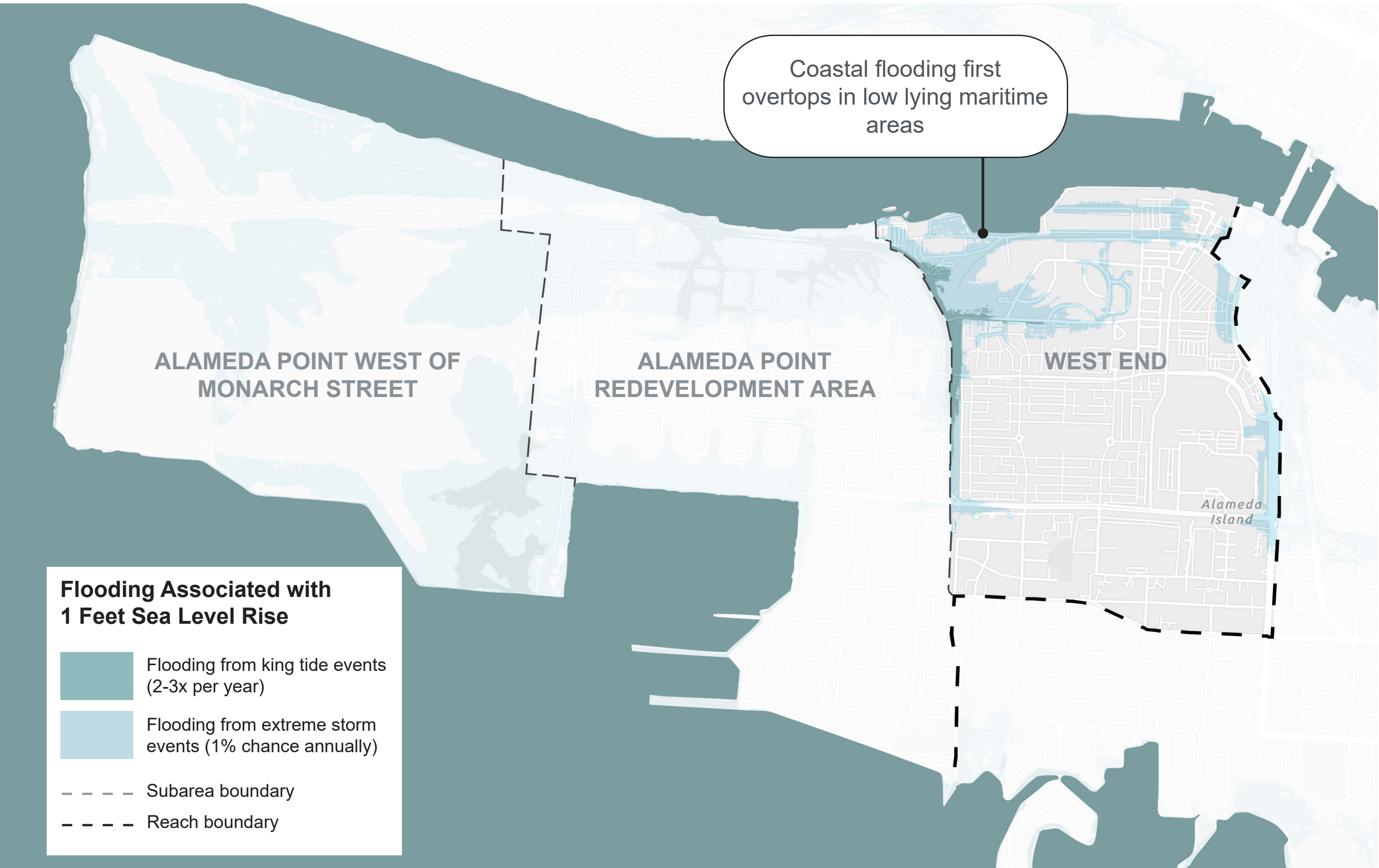
WEST END

FUTURE ADAPTATION APPROACHES

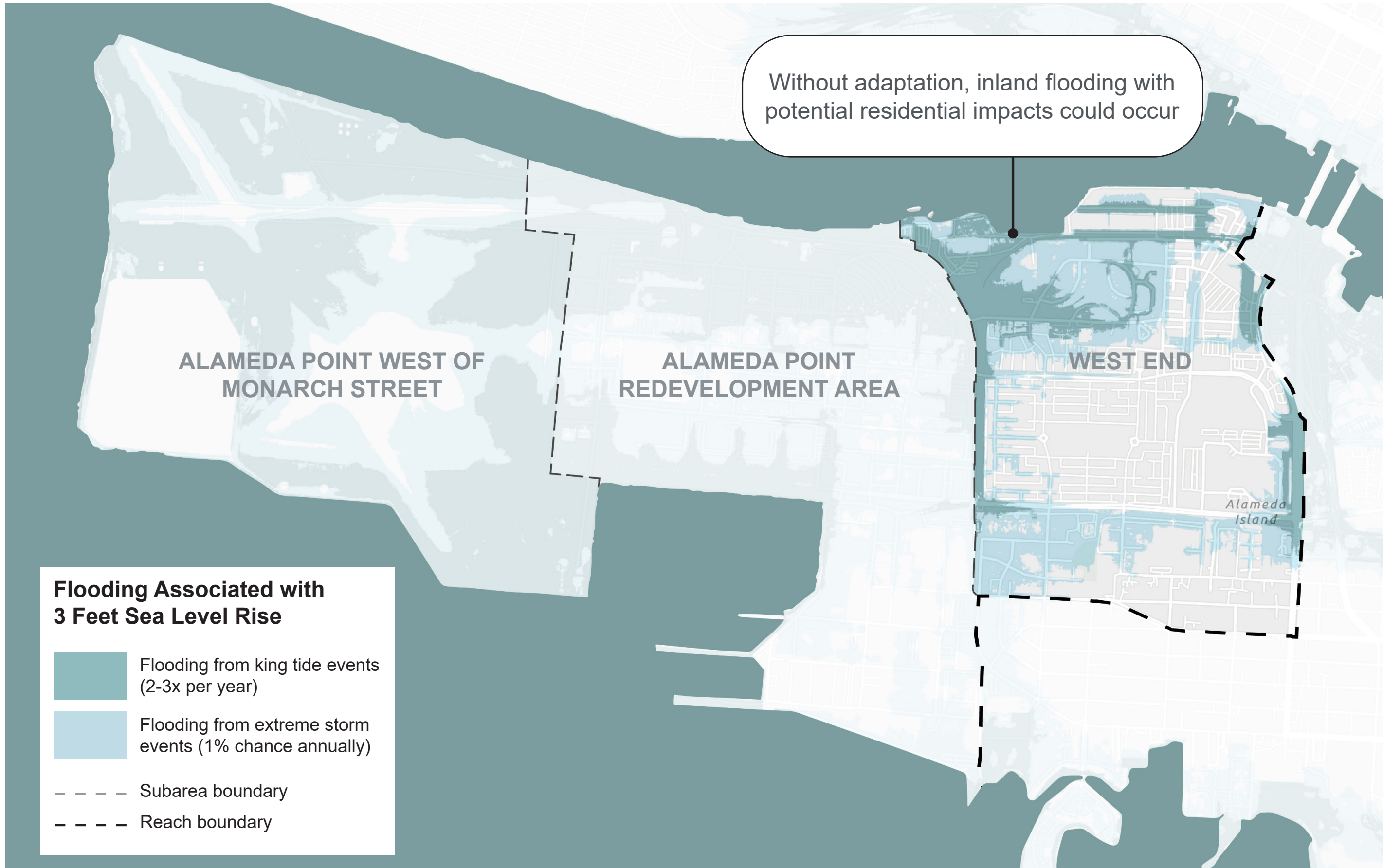
‘DO NOTHING’ ALTERNATIVE

The West End neighborhood is higher elevation than some other parts of Alameda Point, with more limited near-term vulnerability. Certain areas of the shoreline have already been adapted as part of completed development projects (Bohol Circle Shoreline Park). However, flood impacts are still possible, and will become more frequent as sea levels rise. Future shoreline adaptation that connects to other planned projects, including the Alameda Point Master Infrastructure Plan and the US Army Corps of Engineering project to widen the Port of Oakland Turning Basin, will be required in the mid- to long-term.

1 FOOT OF SEA LEVEL RISE (2040-2060)



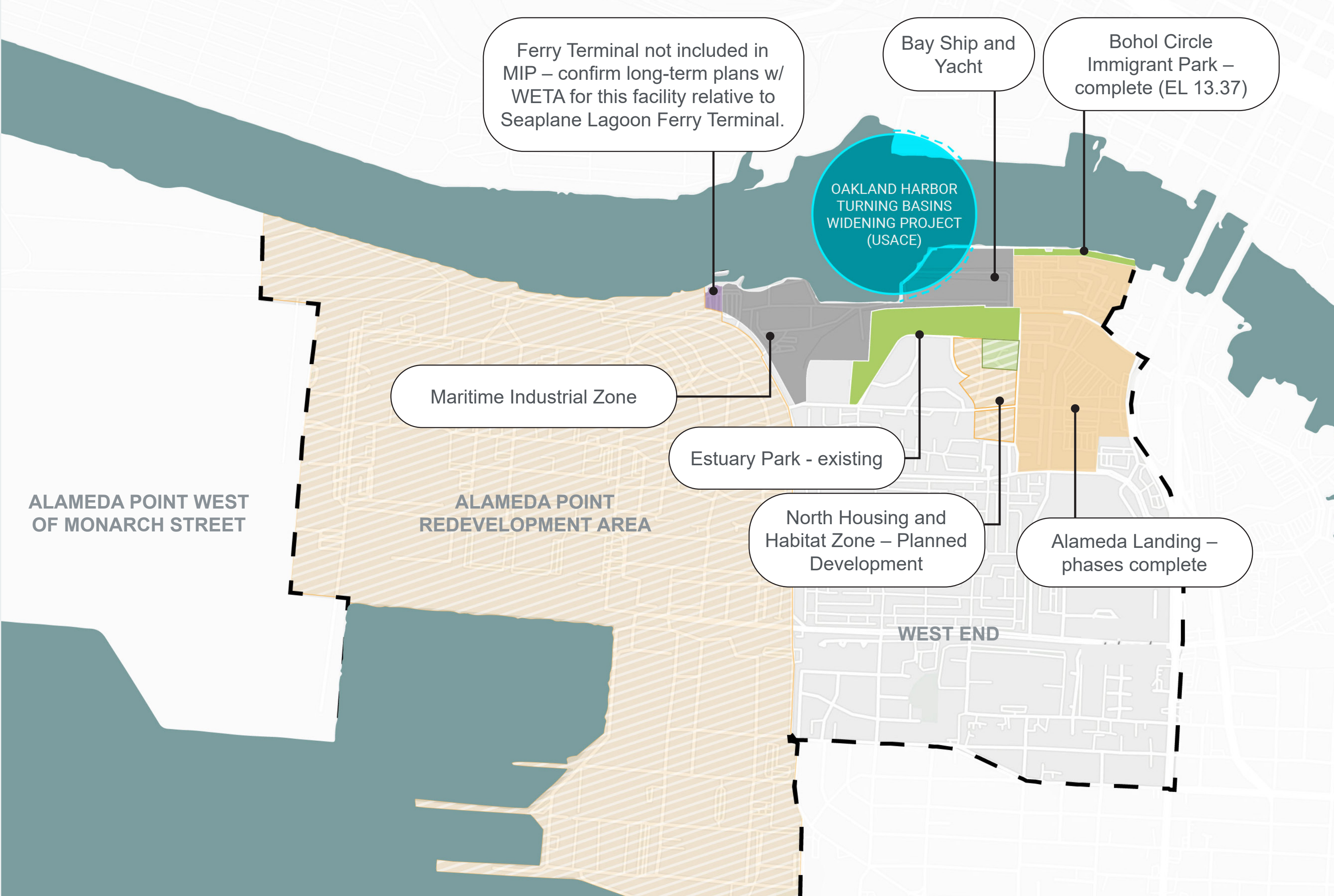
3 FEET OF SEA LEVEL RISE (2070-2100)



ADAPTATION PLANNING - KEY CONSIDERATIONS

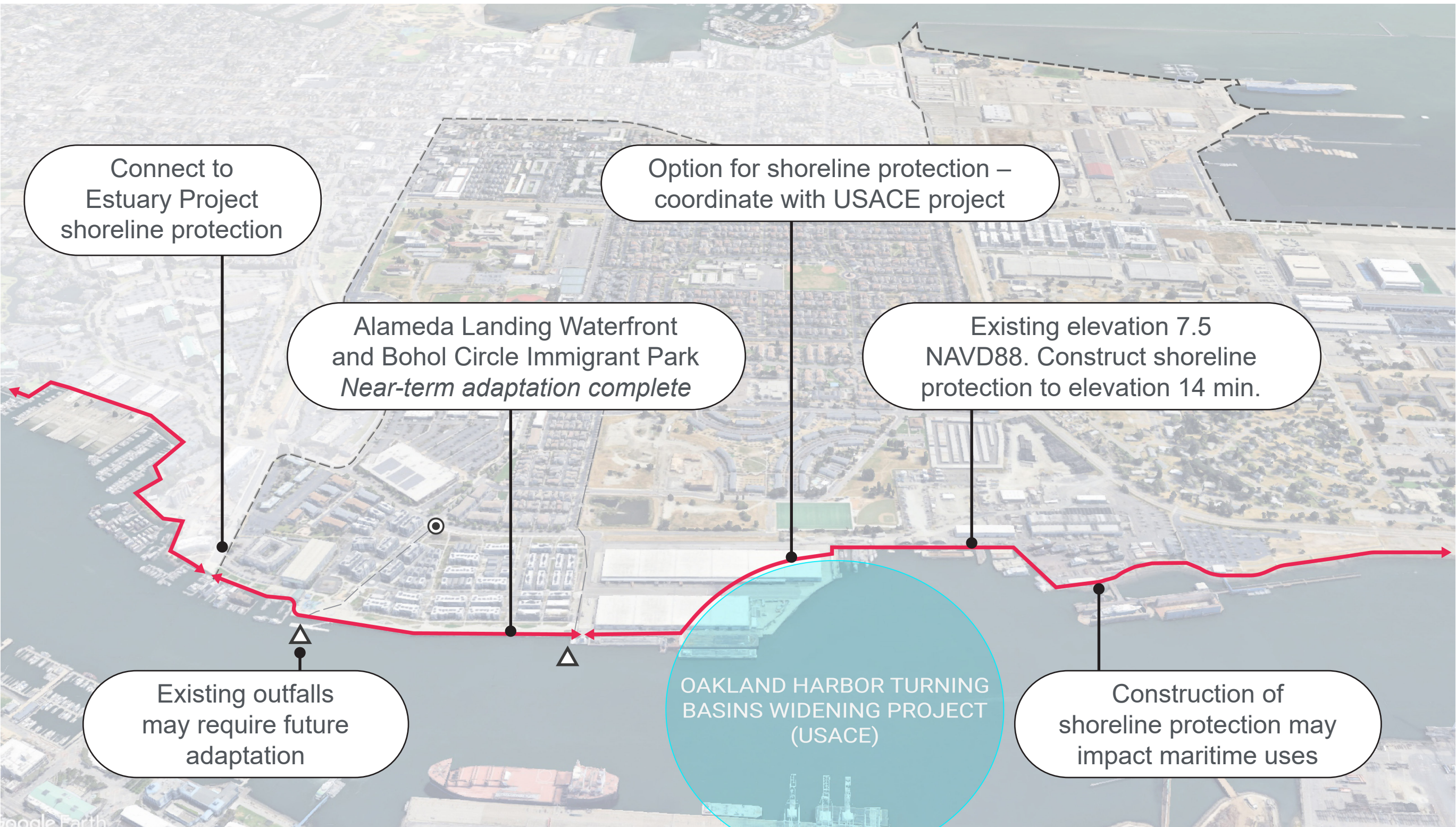
Alameda’s West End is a mix of residential neighborhoods, large scale commercial areas, and one of the remaining maritime-industrial parcels in Alameda. Portions of the shoreline have already been adapted per City of Alameda redevelopment requirements. However, the areas around Bay Ship and Yacht are still low elevation points of vulnerability that could lead to more extensive flooding in the mid- to long- term. Adaptation alternatives should consider the long-term use of these parcels and whether water access will be required.

Adaptation along the West End shoreline must be coordinated with ongoing planning efforts by the US Army Corps of Engineers to widen the Port of Oakland Turning Basin.



ADAPTATION ALTERNATIVES

Shoreline Alternative



Inland Alternative

