

# Alameda Point Infrastructure Costs

# Infrastructure Costs Outline

- Review Existing Infrastructure Conditions
- Discuss Proposed Infrastructure Systems
- Review Existing Site Constraints
- Discuss Anticipated Costs of the Required Infrastructure
- Discuss Optional Public Benefits and Associated Costs

# Definition of Infrastructure

- Flood and Sea Level Rise Protection
- Utilities ( Storm Drain, Sanitary Sewer, Electrical, and Gas)
- Streets
- Regional Transportation
- Parks and Open Space

# Existing Navy Infrastructure

- Majority of utilities constructed over 60 years ago and approaching the end of its service life
- Constructed and maintained by the Navy on an “as-needed” basis
- Not constructed to current standards and regulations
- Many utilities are located under structures or not within street corridors
- Varying degrees of deterioration from age, weathering, subsidence, sediment, etc.
- City of Alameda, EBMUD and AMP conduct on-going improvements and repairs to maintain service to lessees
- PG&E and EBMUD will not accept the maintenance cost responsibilities for the existing gas and water systems



# Existing Infrastructure

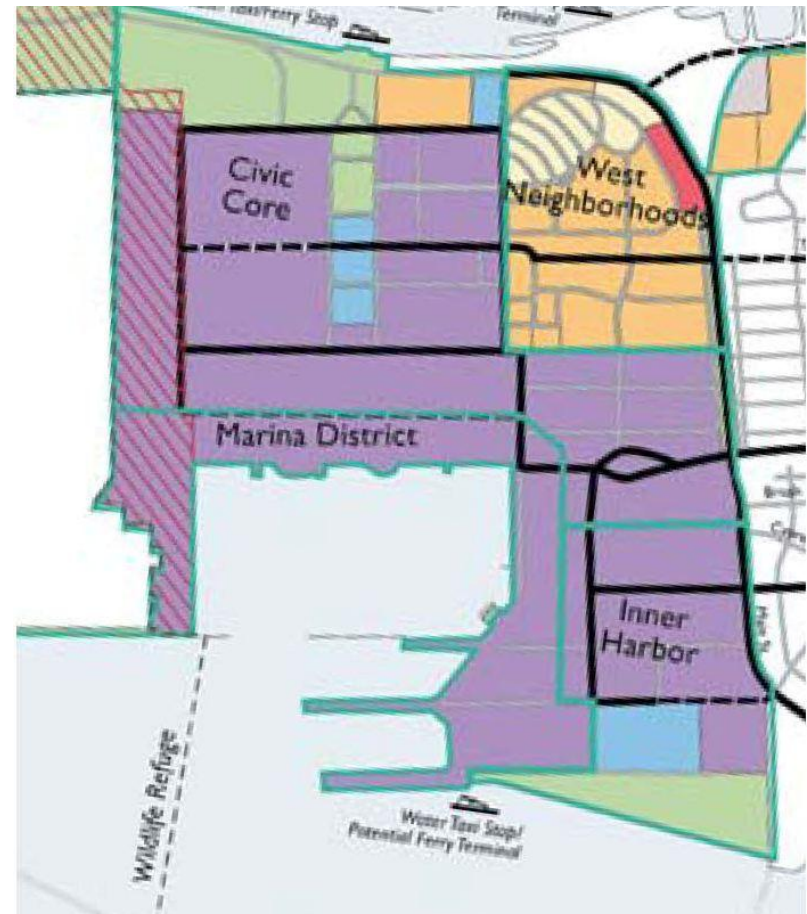
- Typical maintenance issues include:
  - Minor Flooding
  - Water Main Breaks
  - Sanitary Sewer Repairs
  - Street and Sidewalk Repairs
- Examples of Recent Repair Costs Burdened by the ARRA include:
  - Water Main Repairs (\$20 - \$60k)
  - Sewer Pipeline and Manhole Repairs (\$10 – \$15k)
  - Street Pothole Patching (\$10 - \$15k)
- Existing infrastructure is not capable of supporting the redevelopment and reuse of Alameda Point



# Land Use Assumptions

## 2003 General Plan Amendment

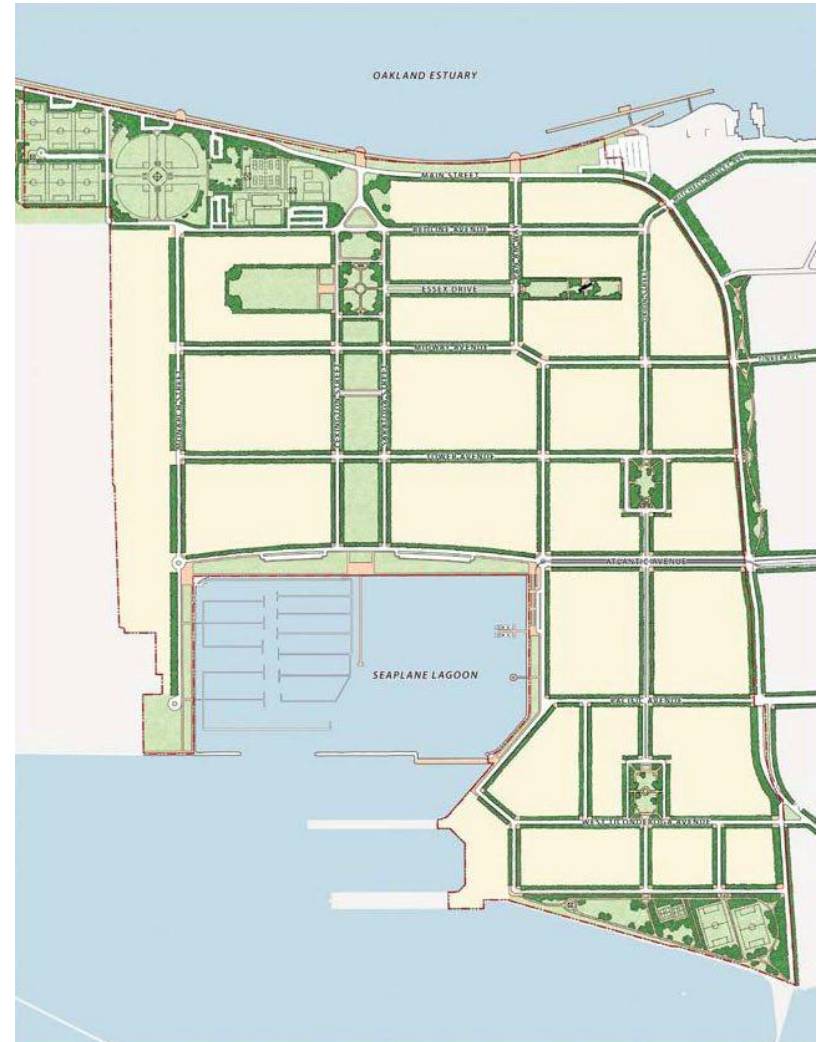
- Big Whites Remain
- Building 5 Remains
- Relocate and Consolidate Collaborative Housing
- Approximate Land Use Summary
  - 2,000 Housing Units
  - 2.3 Million SF of Commercial Uses (Office, R&D, Retail, Etc.)





# Backbone Infrastructure Assumptions

- Framework of Roadways and Utility Corridors
- Provides Organized Structure for Overall Reuse and Re-Development
- Maintains Similar Grid Pattern Extending into the Surrounding Neighborhoods
- Reinforces Original NAS Alameda Framework
- Prepares Development Sites Allowing for Flexibility of a Variety of Land Uses



# Backbone Infrastructure Costs Include:

- Site Preparation Including Demolition Where Appropriate
- Flood and Sea Level Rise Protection
  - Grading
  - Drainage
- Sanitary Sewer
- Potable and Recycled Water
- Electrical, Gas and Telecom (Dry Utilities)
- On-Site Streets
- Off-Site Street Improvements
- Regional Transportation Improvements
- Parks and Open Space
- Contingency, Construction Management, Professional Services, Fees, Etc.



# Other Costs Not Included

- Land Acquisition
- On-Site / In-Tract Infrastructure
- Vertical Building Construction
- On-Going Maintenance and Operation Costs to Achieve Fiscal Neutrality
- Impact Fees (i.e., State School Fees)

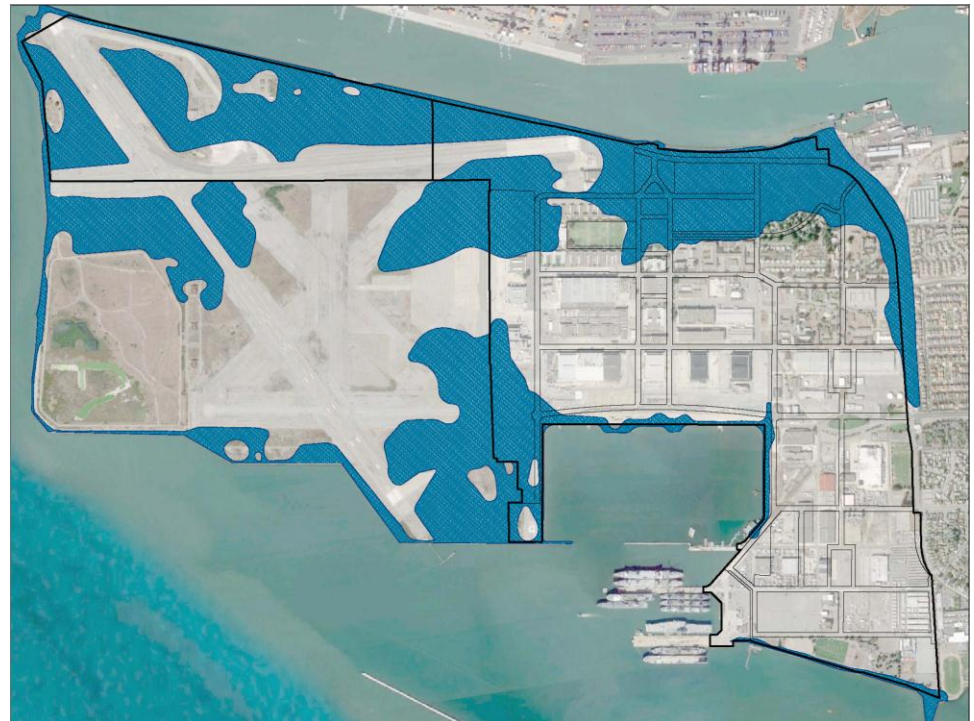
# Site Preparation

- Demolish and Dispose of Non-Historic Structures
- Demolish and Recycle Existing Pavement and Concrete
- Remove / Abandon Existing Utilities
- Site Clearing and Preparation
- **Site Preparation Costs = \$120 Million**

# Flood Protection and Drainage

## Existing Conditions

- Existing Site Drainage
- Existing Flood Protection Features
- 100 Year Tide Areas of Inundation
- Projected Sea Level Rise



# Flood Protection and Drainage

## Proposed Concept

- Provide Protection from 100 Year Tide Plus 18” of Sea Level Rise and Account for Wave Run-Up
- Allow for Future Adaptive Measures to Protect Against Larger Amounts of Sea Level Rise up to 55”
- Alternatives Explored
  - Elevate Site
  - Improve Perimeter System
  - Hybrid

# Flood Protection and Drainage

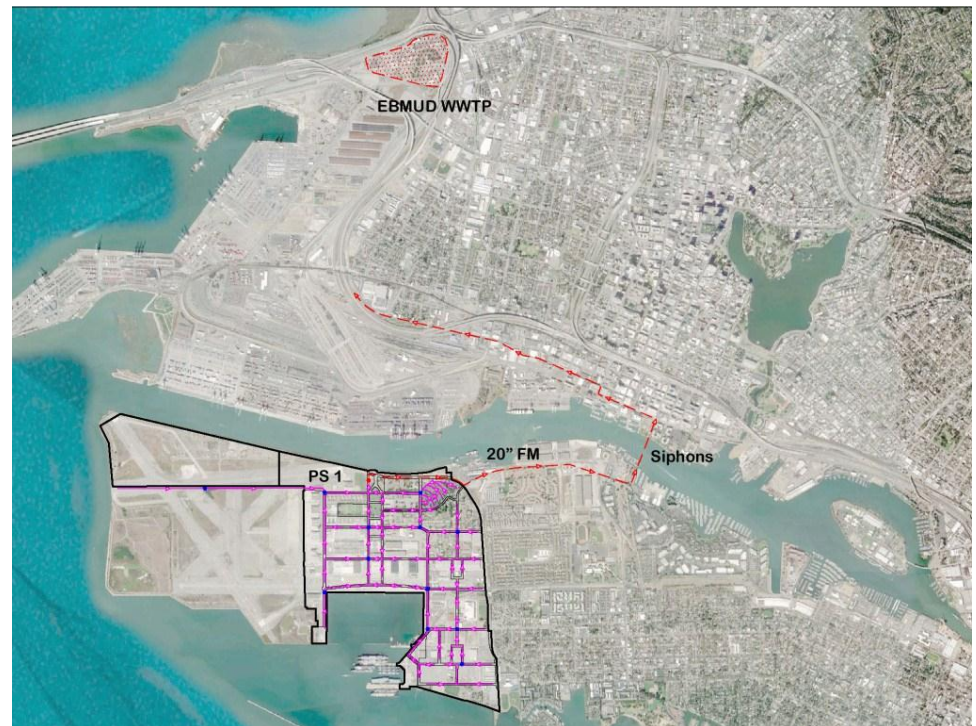
## Proposed Concept – Improved Perimeter System

- Raise Seawalls and Rock Slopes
- Allocate for Future Expansion of Perimeter Features
- Address Geotechnical Constraints (Liquefaction)
- Maintain Majority of Existing Elevations Interior to the Site
- Install New Storm Drain System with Water Quality Treatment
- **Flood Protection, Site Grading and Drainage Costs = \$ 170 Million**



# Sanitary Sewer

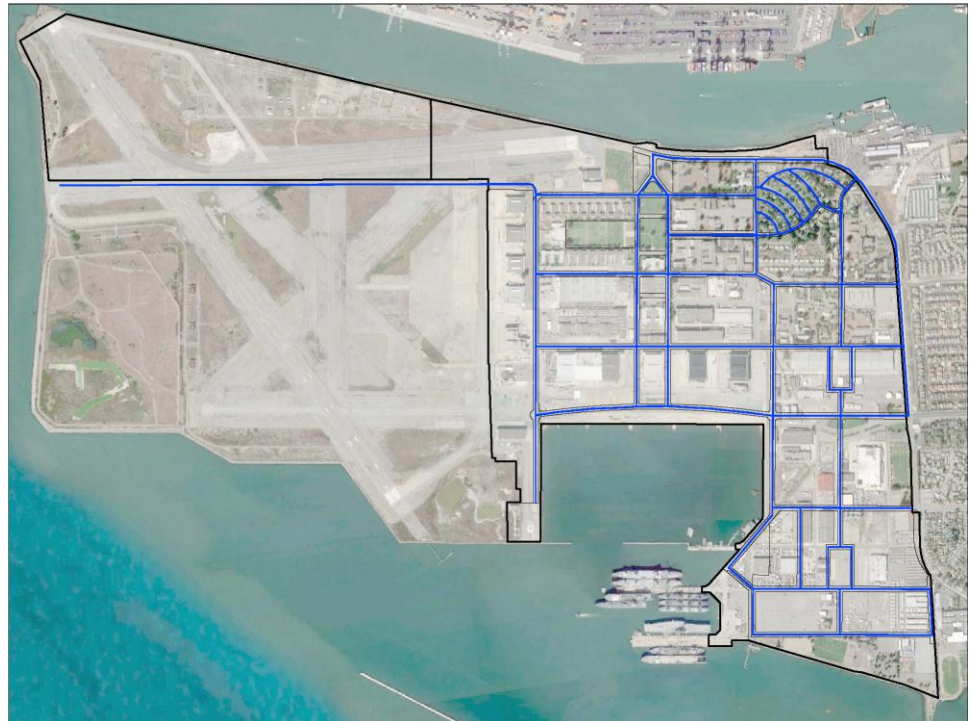
- System of New Pipelines and Lift Stations
- Convey Wastewater to Existing Pump Station 1
- Utilize Existing Off-Site Infrastructure to Convey Flows to EBMUD Treatment Plant
- Improve Capacity of Siphons at the Estuary Crossing
- **Sanitary Sewer Costs = \$55 Million**





# Potable Water

- System of New Distribution Pipelines
- Providing Projected Demands and Fire Flows
- Connects to Existing Water Mains in Main Street
- **Potable Water Costs = \$12 Million**





# Recycled Water

- System of New Distribution Pipelines Required by EBMUD
- Connect to the Future EBMUD Recycled Water System
- Provide Irrigation Water and Other Potential Permitted Uses
- **Recycled Water Costs = \$8 Million**

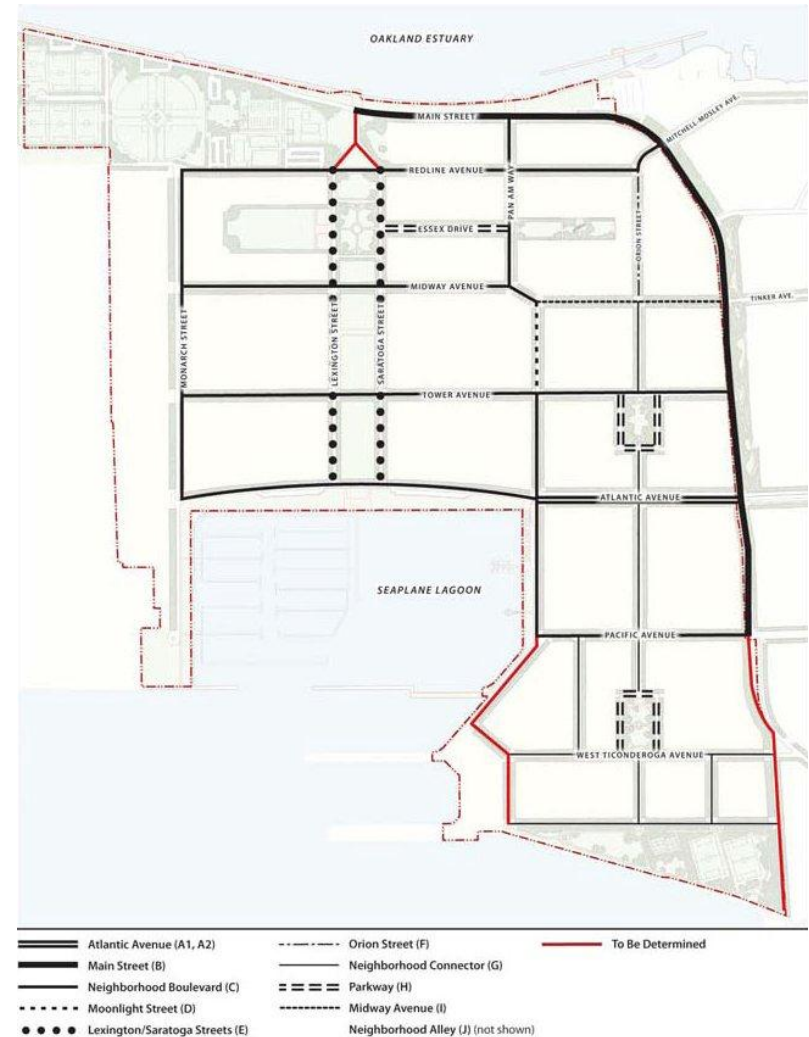
# Dry Utilities

## (Electric, Gas and Telecom)

- System of New Facilities
- Meeting Current Standards and Regulations
- Upgrade Existing Electrical Sub-Station
- **Dry Utility Costs = \$25 Million**

# On-Site Streets

- Construct New On-Site Streets
- Rebuild Existing Streets within Historic Areas
- Construct Bike Circulation Routes, Pedestrian Improvements, and a Truck Route
- Implement Other Necessary Traffic Improvements
  - Traffic Signals
  - Traffic Circles
  - Traffic Calming
- **On-Site Street Costs = \$55 Million**



# Off-Site Street Improvements

- Implement Off-Site Street Improvements to Support Redevelopment
  - Main Street
  - Mitchell Mosley Avenue Extension
  - Stargell Avenue Completion
  - Mariner Square Drive / Marina Village Parkway and Park and Ride
  - Cross Alameda Trail Improvements
  - RAMP Bike Lane and Median Improvements
- **Off-Site Street Costs = \$65 Million**



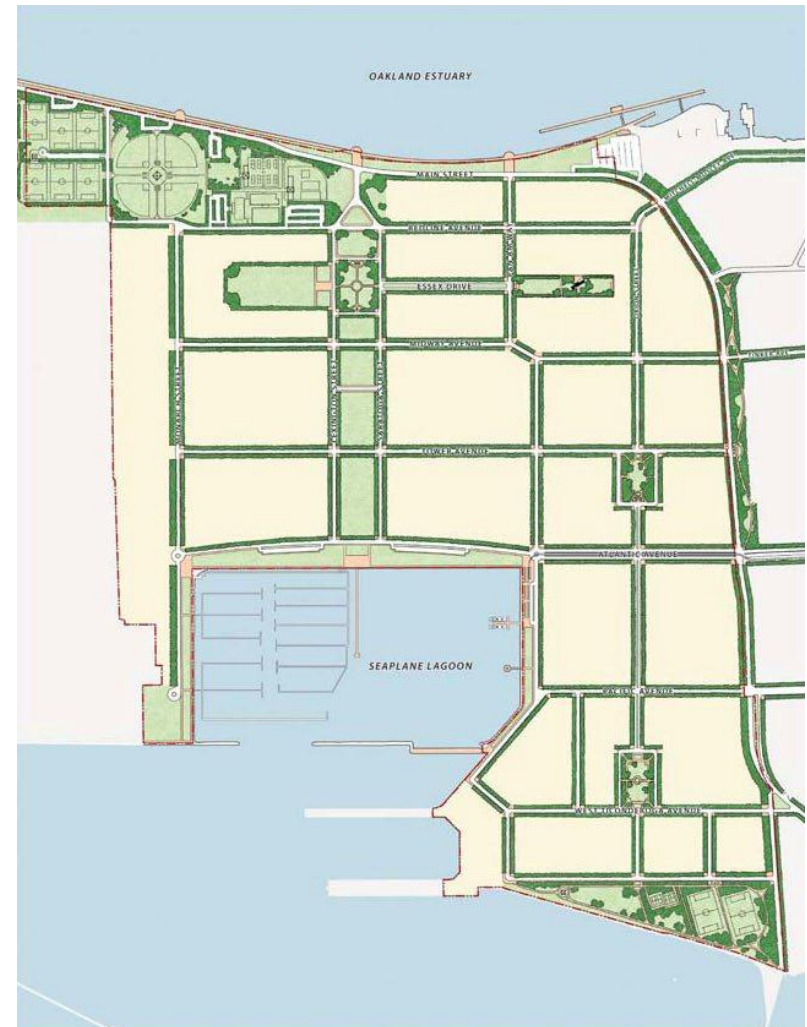
# Regional Transportation Improvements

Regional Transportation Improvements Based on Previous Studies, GPA and Community Workshop Include:

- Shuttle System
- Transit Center
- Bus Rapid Transit
- Ferry Terminal
- Transportation Demand Management (Establish Monitoring Program)
- Access Improvements in Oakland
- **Regional Transportation Improvement Costs = \$50 - 65 Million**

# Parks and Open Space

- Provide Neighborhood Parks and Open Space Areas
- Provide Initial Improvements to Regional Facilities Including
  - Sports Complex
  - Sea Plane Lagoon Frontage
- **Parks and Open Space Costs = \$80 Million**



# Backbone Infrastructure Costs

## (Without Public Benefits and Other Costs)

• Site Preparation	\$ 120 M
• Flood / Sea Level Rise Protection & Drainage	\$ 170 M
• Utilities (Sewer, Waters and Dry Utilities)	\$ 100 M
• On-Site Streets	\$ 55 M
• Off-Site Street Improvements	\$ 65 M
• Regional Transportation Improvements	\$ 60 M
• Parks and Open Space	\$ 80 M
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TOTAL	\$ 650 M



# Public Benefits

- Enhanced Sports Complex (\$15 - \$30 M)
- Enhanced Sea Plane Lagoon (\$5 - \$10 M)
- Additional Passive Open Space (To Be Determined)
- Marina (\$5 - \$10 M)
- Library (\$9 - \$15 M)
- Subsidies for Historic Preservation (Undefined)
- Subsidies for Affordable Housing (To Be Determined)

Questions on  
Alameda Point  
Infrastructure Costs