

II. INTRODUCTION AND PURPOSE

A. Purpose

The Master Infrastructure Plan (MIP) establishes the requirements and standards for the backbone infrastructure to support the redevelopment and reuse of Alameda Point, the Project Site. The backbone infrastructure is the major framework of streets and utilities. Additional internal streets and local utility systems, “in-tract” and “on-site” improvements, will connect to and be supported by the backbone infrastructure. The MIP describes the required replacement and/or rehabilitation of existing backbone utility systems, streets and open spaces at the Project Site. The MIP includes information regarding the stormwater, wastewater, potable water, recycled water, electrical, natural gas and telecommunication utility systems. Additionally, the MIP describes a “complete streets” transportation network to support a variety of modes of transportation.

The MIP also outlines the required corrective geotechnical and flood protection improvements for the Project Site. Corrective geotechnical measures are necessary to provide seismic stability of the Project’s shorelines and underlying soils. Flood protection improvements including site grading, perimeter improvements and establishing future adaptive measures are necessary to protect the site from the 100-year tidal event and provide long-term protection for sea-level rise due to climate change.

The MIP summarizes the parks and open space system within the Project Site based on the detailed assessment included in the City of Alameda’s Urban Greening Plan. Additionally, the MIP summarizes the proposed off-site street improvements and transit systems that are proposed as part of the Project. This summary is largely based on the City of Alameda’s Regional Transit Access Study and traffic studies prepared as part of the Environmental Impact Report (EIR). The summary information regarding these elements of the Project is consolidated in the MIP to provide a comprehensive overview of the major improvements and framework at the Project Site. The detailed analysis of these elements is provided in the other referenced reports and plans.

B. Project Description and Land Use Program

Alameda Point is the former Naval Air Station Alameda located west of Main Street at the northwest end of the City of Alameda, California. The Project Site includes approximately 878 acres of unsubmerged lands and 1,229 acres of submerged lands, a total of 2,107 acres. It is bound by the Oakland-Alameda Estuary to the north, Main Street to the east, and the San Francisco Bay to the south and west. Certain portions of the Project Site are bound to the south and west by a 624-acre area including former airplane runways that are intended to be transferred from the Navy to the United States Department of Veteran Affairs (VA Property) and are not a part of the Project Site. Conservatively, the infrastructure demands associated with the proposed development within the VA Property are included in the MIP. Currently, the proposed development within the VA Property includes the construction of a VA Outpatient Clinic, Columbarium Cemetery and associated improvements. See Figure 1, Project Site Location.

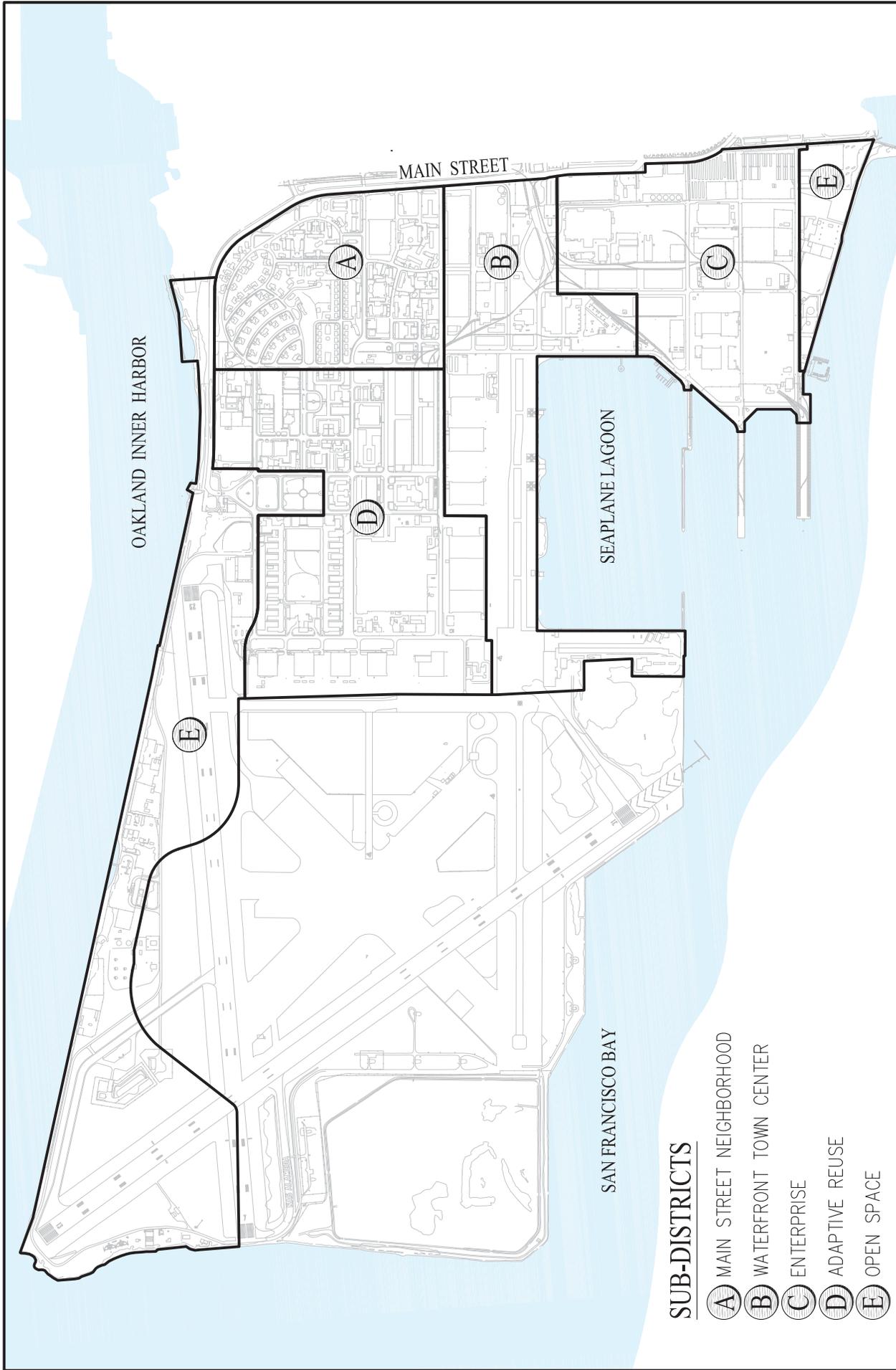
The Land Use Program analyzed by the MIP is generally based upon the NAS Alameda Community Reuse Plan (Reuse Plan), prepared in 1996. The Project is designed to accommodate a mix of land uses, including a combination of newly constructed buildings and adaptive reuse of existing buildings. A Zoning Ordinance Amendment is concurrently being processed by the City of Alameda. This document establishes and organizes the Project Site into various Sub-Districts, Enterprise, Adaptive Reuse, Waterfront Town Center, Main Street Neighborhood and Open Space generally consistent with the Zoning Ordinance Amendment. Table 1 outlines the proposed Land Use Program for each Sub-District. See Figure 2, Alameda Point Sub-Districts.



FIGURE 1 SITE LOCATION

ALAMEDA POINT
 MASTER INFRASTRUCTURE PLAN
 CITY OF ALAMEDA ALAMEDA COUNTY CALIFORNIA
 DATE: OCTOBER, 2013 SCALE: 1" = 4,000'
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SUB-DISTRICTS

- A** MAIN STREET NEIGHBORHOOD
- B** WATERFRONT TOWN CENTER
- C** ENTERPRISE
- D** ADAPTIVE REUSE
- E** OPEN SPACE

**ALAMEDA POINT
MASTER INFRASTRUCTURE PLAN**
 CITY OF ALAMEDA ALAMEDA COUNTY CALIFORNIA
 DATE: OCTOBER, 2013 SCALE: 1" = 1,500'
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**FIGURE 2
SUB-DISTRICTS**



Table 1 - Land Use Program (1996 Community Reuse Plan)

Land Use	Sub-District					Total
	A	B	C	D	E	
Residential (Units)	563	575	70	217	-	1,425
Commercial						
Office / Manufacturing (SF)	-	644,000	1,890,000	2,154,000	-	4,688,000
Retail and Service (SF)	-	374,500	135,500	302,000	-	812,000
Subtotal Commercial	-	1,018,500	2,025,500	2,456,000	-	5,500,000
Open Space (Acres)	3	24	16	8	258	309

The Enterprise uses include a mix of retail, commercial recreation, commercial office, business park, industrial, and institutional. The Main Street Neighborhood uses may include single family and multi-family housing units. The Main Street Neighborhood uses also include the 200 existing supportive housing units managed by the Alameda Point Collaborative, Building Futures for Women and Children, and Operation Dignity (Supportive Housing Providers). The MIP assumes these supportive housing units will be relocated to a new facility located in the northeast corner of the Main Street Neighborhood Sub-District. The Waterfront Town Center Sub-District will include transit-oriented design standards to create a mixed-use, transit-oriented, and walkable waterfront. The MIP assumes the Project will include the construction of a 530-slip marina in the Seaplane Lagoon. The Open Space uses include parks, open space, waterfront promenade, a continuous Bay Trail, historic open spaces and parade grounds, neighborhood parks and recreation facilities, such as on-site parks, walking and bike trails, and on-street sidewalks and bike paths.

C. Development and Reuse Areas

For purposes of the infrastructure planning and MIP, it is important to distinguish the Project Site as two main areas: Development Areas and Reuse Areas. The infrastructure needs and requirements for each of these areas are unique. Accordingly, the MIP describes the planned backbone infrastructure specific for each of the areas.

The Development Areas are those areas within the Project Site that are anticipated to consist of all new construction. The existing structures, streets and utilities within these areas will be demolished. New infrastructure will be installed to support the proposed uses within the Development Areas. It is anticipated that development within the Development Areas will occur in cohesive areas and will be orderly implemented. The Development Areas encompass the majority of the Enterprise, Main Street Neighborhood and Waterfront Town Center Sub-Districts.

The Reuse Areas include the historic areas within the Project Site that are largely intended to be preserved and adaptively reused to the extent feasible. The preservation of the historic buildings and landscapes require specific infrastructure considerations and requirements. It is likely that development within Reuse Areas will be fragmented. The MIP presents the infrastructure systems and flood protections measures required to support the development of the Reuse Areas. A sequenced implementation of interim rehabilitation improvements and eventual replacements of the existing street and utility systems is discussed in the MIP. This sequenced implementation is necessary to allow development within the Reuse Areas to proceed in the near term without being over-burdened with lengthy extensions of infrastructure replacements, all the while establishing a program to ensure that the ultimate infrastructure replacements are orderly implemented within Reuse Areas.

See Figure 3 depicting the limits of the Reuse and Development Areas assumed for the MIP, excluding new open space and park areas.

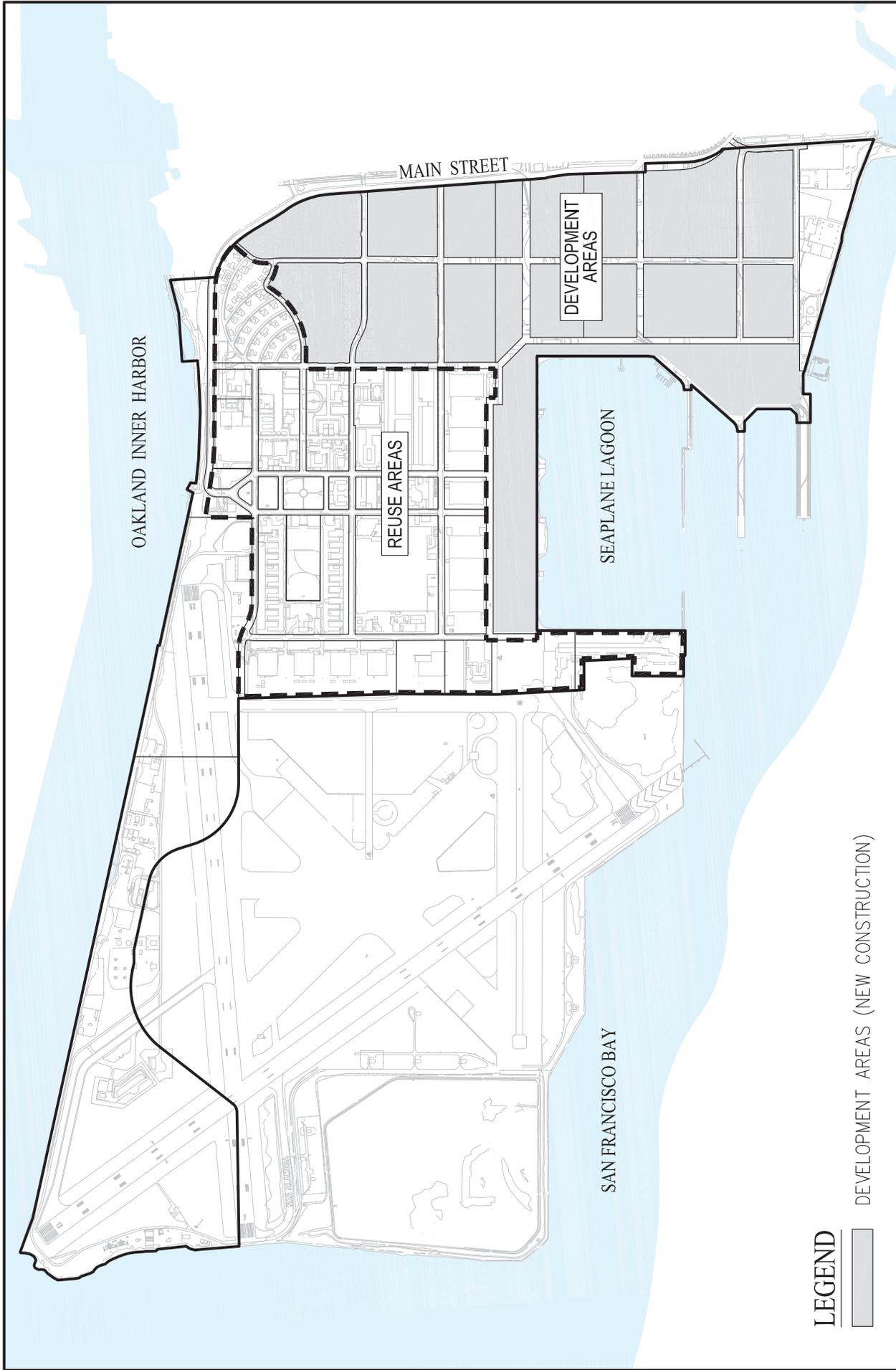


FIGURE 3 REUSE & DEVELOPMENT AREAS

LEGEND
 [Gray Box] DEVELOPMENT AREAS (NEW CONSTRUCTION)

**ALAMEDA POINT
 MASTER INFRASTRUCTURE PLAN**
 CITY OF ALAMEDA ALAMEDA COUNTY CALIFORNIA
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D. Existing Infrastructure

The existing infrastructure within Alameda Point was installed by the Navy. The majority of the infrastructure was constructed over 70 years ago, and is beyond its service life. The Navy installed, maintained and improved the existing infrastructure on an as-needed basis. The active existing utility systems include wastewater, stormwater, potable water, electrical, natural gas and telecommunications. The inactive existing utility systems include industrial waste, steam and fuel. Many of the existing utility pipelines and associated facilities are located outside of the existing streets, within future development areas. The active existing infrastructure is currently operable and services the existing tenants at Alameda Point. However, it is deteriorated and generally unreliable. Additionally, the existing infrastructure does not meet current codes or standards.

There are numerous issues with the existing infrastructure. It cannot support the redevelopment of Alameda Point without rehabilitation or replacement. Some of the documented major issues with the existing systems include:

- The existing stormwater system allows high tide waters to enter the system and flood low lying areas within the Project Site.
- The existing flood protection measures and stormwater system do not provide protection of the Project Site from sea level rise.
- The sanitary sewer system allows infiltration and inflow into the downstream transmission system during wet weather conditions.
- The water system has been subject to breaks and repairs that are costly and sometimes require that tenants be without water service for up to several days.
- The telecommunications systems are unreliable and existing tenants have experienced breaks in service for multiple days.
- The natural gas system does not provide service to many areas within the site.
- The sidewalks range from good to poor condition throughout the site and many locations do not meet accessibility standards and require replacement.

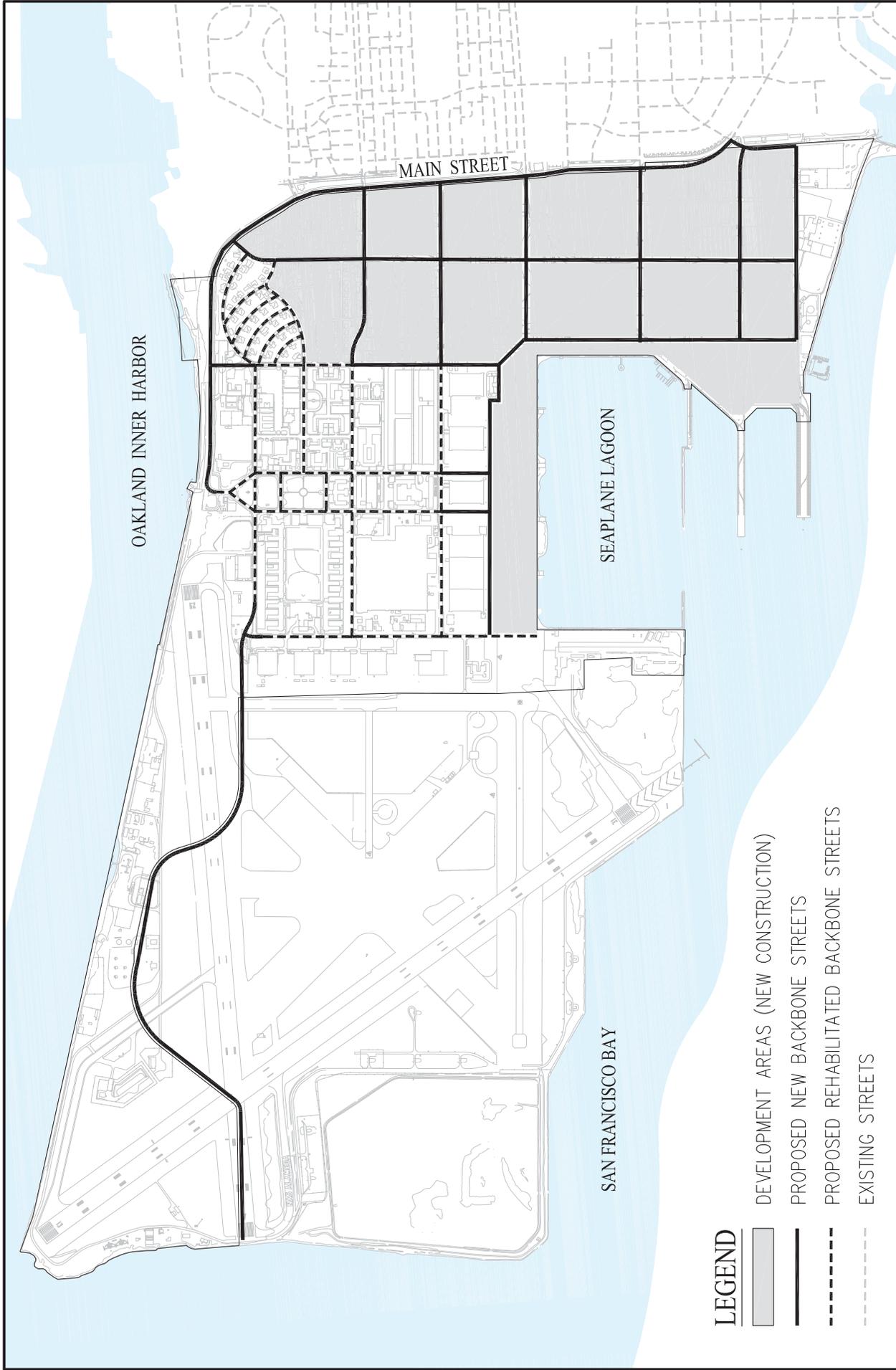
E. Backbone Infrastructure Framework

The MIP establishes a program of backbone infrastructure improvements for Alameda Point. The framework of these backbone improvements is generally based on the grid of streets that comprise the existing street system within the Project Site and the adjoining areas to the east. The framework creates development blocks that range in size from approximately 1.5 acres in the Waterfront Town Center District to nearly 30 acres in the Adaptive Reuse Sub-District. The backbone framework defines corridors necessary to be reserved for infrastructure improvements and ensure the successful phased implementation of the MIP. See Figure 4, Backbone Framework.

Additional internal streets, local utility systems and neighborhood parks, or “in-tract” and “on-site” improvements, will connect to and be supported by the backbone infrastructure. This internal / local infrastructure is dependent on the specific site plan for each development block and will be defined concurrent with the internal developments. The MIP presents general standards for the internal / local infrastructure but does not establish specific locations or provide schematics for this level of infrastructure.

F. Backbone Infrastructure Phasing

The MIP divides the Project Site into three major phases of development as a means of analyzing and illustrating the implementation of the infrastructure improvements. These major phases correlate to the Sub-Districts established by the Zoning Ordinance Amendment. Ultimately, each major phase will be further separated into smaller sub-phases as development occurs. The MIP discusses three “Phase 1” scenarios and presents the necessary infrastructure to be installed in each respective phase scenario. The intent of presenting these multiple scenarios



LEGEND

- DEVELOPMENT AREAS (NEW CONSTRUCTION)
- PROPOSED NEW BACKBONE STREETS
- PROPOSED REHABILITATED BACKBONE STREETS
- EXISTING STREETS

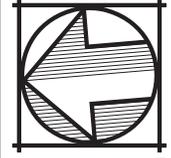


FIGURE 4
BACKBONE FRAMEWORK

ALAMEDA POINT
MASTER INFRASTRUCTURE PLAN
CITY OF ALAMEDA ALAMEDA COUNTY CALIFORNIA
DATE: OCTOBER, 2013 SCALE: 1" = 1,500'

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is to outline the infrastructure requirements and coordination associated with the different potential scenarios and to inform future decisions regarding how to phase and develop the Project Site.

Each phase of infrastructure will provide corrective geotechnical measures, flood protection improvements and either new or rehabilitated street and utility systems required to support and serve the associated areas within that subject phase. The new infrastructure constructed with each phase will connect to reliable existing infrastructure systems as close to the proximity of each phase as possible. In most cases, permanent or temporary connections to the new systems will be required to maintain service to existing land uses to remain during each phase. Any connection to unreliable existing infrastructure systems will need to provide for the appropriate measures to protect the integrity of the new systems.

G. Master Infrastructure Plan Flexibility

Adjustments to the Land Use Program due to a change in economic conditions, market factors or other unanticipated change to the development concept may occur throughout the implementation of the MIP and redevelopment of Alameda Point. The MIP contemplates potential land use adjustments in the MIP Flexibility sections of the document.

In particular, the MIP analyzes “Transit Oriented Mixed Use” and “Less Development” Project Alternatives that are presented in the EIR and presents the components of infrastructure that would need to be adjusted in each alternative. The reductions and additions to the infrastructure systems associated with these Project Alternatives are presented in the Section XIV – MIP Flexibility.

H. Sustainability Considerations

The Reuse Plan established the vision for the redevelopment of Alameda Point as a sustainable development promoting conservation of natural resources, reduction in energy consumption, water usage, greenhouse gases and solid waste generation. The MIP presents the components of green infrastructure and sustainable elements that can realistically be integrated with the major backbone infrastructure systems supporting the redevelopment of Alameda Point. As sustainability technologies continuously evolve, it is expected that Alameda Point infrastructure planning will evolve over time as well and implement sustainable components, where feasible.

I. Backbone Infrastructure Costs & Value Engineering

The backbone infrastructure for Alameda Point described in the MIP is estimated to cost approximately \$550 to \$575 million. The cost estimate in the MIP includes items, such as the amount of parks, that may be subject to future policy decisions by the City Council. Some of these items may also be considered during the preparation and adoption of the development impact / infrastructure fee for Alameda Point, as discussed above. It is critical to implement the backbone infrastructure in phases to maintain financial feasibility. In the Phasing and Implementation Section XIII, the MIP presents three initial Sub-Phase 1A illustrative scenarios, one that establishes 23.5 acres of developable area within the Main Street Neighborhood Sub-District, another that establishes 34.5 of Developable Area within the Waterfront Town Center Sub-District and another that establishes 55 acres of Developable Area with the Enterprise Sub-District. The backbone infrastructure costs are estimated to range from \$40 million to \$67.5 million depending on the location and size of the scenario.

The MIP also presents value engineering opportunities for components of the backbone infrastructure that could reduce the total cost of the backbone infrastructure by approximately \$11.5 million.

J. Project Datum

The elevations presented in this document are based on the City of Alameda Datum. Table 2 provides conversions from the City of Alameda Datum to other published datum.

Table 2 - Alameda Point Vertical Datum Summary

NGVD 29	NAVD 88	City of Alameda	NAS
0.00 Feet	2.70 Feet	-3.41 Feet	104.23 Feet

The difference between the North American Vertical Datum, 1988 (NAVD 88) and the National Geodetic Vertical Datum, 1929 (NGVD 29), based upon the NGS data sheet for PIC HT0880, a brass disc stamped “Main ATL 1947” at the intersection of Main Street and Atlantic Avenue in the City of Alameda, is 2.70 feet. To obtain NAVD 88 elevations, add 2.70 feet to NGVD 29 elevations.

$$\text{NAVD 88} = \text{NGVD 29} + 2.70 \text{ feet}$$

The difference between NGVD 29 and the City of Alameda vertical datum, based upon the “City of Alameda Tide and Datum Chart from U.S.C.&G.S. Jan 1943” is negative 3.41 feet. To obtain City of Alameda elevation, subtract 3.41 feet from NGVD 29 elevations.

$$\text{City of Alameda} = \text{NGVD} - 3.41 \text{ feet}$$

The difference between NGVD 29 and the Naval Air Station (NAS) datum, is 104.23 feet. To obtain NAS elevations, add 104.23 feet to NGVD 29 elevations.

$$\text{NAS} = \text{NGVD 29} + 104.23 \text{ feet}$$