TREASURE AND YERBA BUENA ISLAND

SAN FRANCISCO, CA

PARKS AND OPEN SPACE PLAN

JUNE 28, 2011

TREASURE ISLAND COMMUNITY DEVELOPMENT

PARKS AND OPEN SPACE PLAN CONTENTS

Vision

For a brief, exhilarating moment during the Golden Gate International Exposition, the world's spotlight shined brightly on the picturesque Yerba Buena Island and the newly minted Treasure Island, transfixing San Francisco with a bold vision of urbanity and progress. With America's entry into the Second World War in 1941, that spotlight faded as the islands were redeployed as a Navy base for national defense, a task they fulfilled for over forty years. Now redevelopment will reestablish both islands as a vital part of the City, integrating them into the physical fabric and civic consciousness of San Francisco and rekindling the Exposition's ground breaking vision of the future. Key to this redevelopment plan is an exceptional park system with a diverse array of urban public spaces that are integrated with new neighborhood development and provide a connection with the ecological and experiential qualities of the Bay.

Plan Highlights

Parkland

With nearly 300 acres of new parks and habitat areas, Treasure and Yerba Buena Islands are positioned to become an iconic regional destination for Bay Area residents and visitors. The network of parks and open spaces will be both culturally and environmentally rich for all types of recreational activities.

Waterfront

A continuous waterfront will link together a set of distinct and varied open spaces found along the waterfront and will be an integral portion of the Bay Trail that will link the islands' open spaces to the vast network of parks in the East Bay.

Sports Park

The Sports Park will be the islands' active recreation hub and able to accommodate all types of field sports for a variety of ages and recreational levels. Sports fields will be geared towards open lawn sports and recreation activities.

Urban Agricultural Park

A 20 - 25 acre organic farm will provide opportunities to grow a variety of cash crops including; fruits, vegetables, nursery plants and other permaculture products. Programming of the farm is biased towards production but a portion of the farm will be dedicated and open to community farming groups and community gardens.

Yerba Buena Hilltop Park and Habitat Management

An approximately 5 acre Hilltop Park will provide a variety of passive recreational spaces and fantastic overlooks with views to Treasure Island, San Francisco, and the Bay. The plan also features protection of existing ecologically rich habitats and the increased habitat management of degraded areas that will transform the island into an ecologically rich habitat area located in the middle of San Francisco Bay.

INTRODUCTION

Purpose of the Document

The purpose of this document is to describe the oarks and open space program and improvements to be provided as part of the infrastructure and horizontal development of Treasure Island and Yerba Buena Island.

Building on the Treasure Island and Yerba Buena Island Design for Development document, the "Open Space Plan" is intended to clarify Treasure Island Community Development's (TICD) responsibilities for the delivery of the open space program, site, and landscape improvements. The Parks and Open Space Plan defines specific improvements that shall be provided in each open space area. The Plan also establishes basic standards for each type of improvement. Selected content from the "Design for Development" document has been incorporated in the plan to provide an overview of the open space system. In addition, key issues related to the open space improvements such as, sea level rise, open space and shoreline accessibility, project partners, and Tidelands Trust, are addressed.

The Parks and Open Space Plan will be attached to the Disposition and Development Agreement (DDA) between the Treasure Island Development Authority (TIDA) and TICD.

Project Summary

The proposed development project is a 360-acre master-planned urban project proposed on Treasure Island and Yerba Buena Island located between San Francisco and Oakland. The proposed development envisions a new distinct neighborhood on Treasure Island and Yerba Buena Island which include housing, commercial, retail and office uses along with over 200 acres of parks and open space. Sitting within San Francisco Bay, the plan emphasizes an extensive park and open space system, including waterfront parks and trails along approximately 4 miles of shoreline.

Open Space Planning Background

The Treasure Island and Yerba Buena IslandParks and Open Space system and program are the culmination of over ten years of public discussion on how the extraordinary land assets in the San Francisco Bay should best contribute to the City's future. In addition to the public discussion and ongoing work with community members and stakeholders, the Open Space Plan reflects intensive analysis of site opportunities and constraints, natural and cultural resources, Tidelands Trust, sea level rise, infrastructure, transportation, access, and habitat management. Each of these issues is discussed in the Design for Development document and specific issues are included in this Plan for reference. The open space program and type of improvements are the result of extensive work with the TIDA, TI/YBI Citizens Advisory Board (TIYBI CAB) existing residents and stakeholder organizations.

TREASURE AND YERBA BUENA ISLAND CONTEXT PLAN

Relationship of this Plan with other Project Plans

A number of key issues and project improvements related to the Parks and Open Space Plan are more fully addressed in other project plans and documents including:

Design for Development Document

The Design for Development for Treasure and Yerba Buena Islands (Design for Development) – contains the urban design standards and guidelines that will direct all future development on both islands. The Parks and Open Space section of the Design for Development document describes the aesthetic, social, recreational, and ecological opportunities and provides a framework for public parks, open spaces, and natural areas. It also defines specific standards, program requirements, and design guidelines for each open space type and area included in the development plan. In addition to the program and improvements defined in this Open Space Plan, the Design for Development allows for a wide range of improvements and programs as approved by TIDA and consistent with the standards and guidelines.

The Design for Development is the guiding document and the basis for the Design Review and Document Approval Procedure, while the Open Space Plan defines the scope of the improvements to be provided by TICD pursuant to the Disposition Development Agreement (DDA). The Open Space Plan is consistent with the open space frameworks, standards, and design guidelines defined in the Design for Development.

Design Review and Document Approval Procedure

The Design Review and Document Approval Procedure (DRDAP) sets forth the procedures for submitting, reviewing, and approving the designs, plans and specifications for Infrastructure and Vertical Improvements in the Project Site. The Authority shall review such designs, plans and specifications to ensure that they conform to and are consistent with the Redevelopment Requirements, and coordinate with applicable City Agencies for review.

Infrastructure Plan

Many aspects of the open space system are closely linked with infrastructure, for example: storm drainage systems, storm water treatment features, and street design. Infrastructure and Open Space planning have been coordinated and integrated throughout the planning process. Key areas for ongoing coordination during the design and construction phases include earthwork and grading, marine engineering, storm drainage systems, stormwater treatment features, and streets. In addition, the San Francisco Public Utilities Commission (SFPUC) will be responsible for the design, construction and operation of the wastewater treatment and recycled water treatment facility located on the northeast corner of the island. Further coordination on the exact size and location of the SFPUC parcel for the wastewater treatment facility, as well as ongoing coordination of the design will be required to ensure that the facility is cohesively integrated with the surrounding park area. The Environmental Impact Report and the Infrastructure Plans include a tertiary wastewater treatment wetland as a project alternative. The wastewater treatment wetland would be owned and operated by the SFPUC. Additional coordination will be required should the SFPUC elect to pursue the alternative. In addition, the inclusion of a stormwater treatment wetland may require recycled water flows from the wastewater treatment facility. For details on the infrastructure system refer to the Infrastructure Plan.

Transportation Plan & Streetscape Master Plan

Certain components of the open space system such as bike and pedestrian trails and pathways are also a component of the transportation system. Conversely, many of the streets are designed with enhanced streetscapes which function as part of the public open space system. Public transportation and automobile access are also important to the park system. A complete description of the project's transportation system is found in "*Transportation Plan*". The streetscape concept including street types, typical street sections, standards, and guidelines are included in the Design for Development document. In addition, "*Streetscape Master Plan*", as specified in the DRDAP shall be completed as part of the infrastructure design process.

Stormwater Control Plans

Stormwater Control Plans documenting the proposed stormwater management and treatment measures are required by the SFPUC Stormwater Design Guidelines. Stormwater Control Plans will be submitted with Major Phase Infrastructure Plans and will identify the size, type, and design of stormwater features to be incorporated in park and open space areas. The design of stormwater treatment systems and open spaces shall be coordinated to ensure aesthetic and programmatic consistency.

Yerba Buena Island Habitat Management Plan (YBI HMP)

The YBI Habitat Management Plan describes adaptive management strategies for the preservation, restoration, and enhancement of ecological resources and habitat on Yerba Buena Island. The goals and strategies outlined in the plan are an integral part of the YBI open space program. This Open Space Plan includes the trails, overlooks and developed open space areas that will be provided as part of the project as compared with the ongoing and long term management of biological resources, to be managed pursuant to the YBI HMP.

Sustainability Plan

The design of the parks and open space system is closely related to many project-wide sustainability issues including, site design and land use, community, energy, transportation, waste, and economic vitality. A framework for these issues, including goals, strategies, commitments and aspirational targets are fully discussed in the Sustainability Plan. Sustainable site design methods including, water efficient landscaping, organic soil amendments, recycled materials, habitat creation, and stormwater management will be addressed as part of the implementation process.

Schedule of Performance and Phasing Plan

The open space program and construction sequence will be defined by the "*Schedule of Performance*" and Phasing Plan attached to the Disposition and Development Agreement. In general, Open Space Areas and Programs will be delivered with the completion of adjacent horizontal development. Interim landscape areas and pedestrian and bicycle circulation will be provided to ensure a cohesive and complete open space experience and continuous access.

OPEN SPACE PLAN OVERVIEW

The redevelopment of Treasure Island and Yerba Buena Island provides a unique opportunity to create a world class open space destination in San Francisco Bay that will attract visitors from the region and the world and provide a valuable amenity for Island residents. The design intent for open space on Treasure Island and Yerba Buena Island is to create a contemporary landscape that engages the neighborhoods as well as civic and retail uses with the Bay. The Parks and Open Space Plan has been developed to address the following goals and principles. These principles are organized in relation to planning, design, and process.

Planning

- **Connectivity**

Create connections between parks, streets, and public opens spaces.

- **Accessibility**

Provide public open space within a short walking distance of neighborhood residents and visitors and ensure parks and open spaces are easily accessible by transit.

- **Cohesion and Diversity**

The open space is intended to be experienced as a single cohesive park made up of many interesting different places. The open spaces on Treasure Island and YBI will have two distinct and unique identities. The parks and open space experience will cohesive but will take users through many different and varied experiences that provide a wide range of recreational and open space programs.

Design

- **Create compelling places**

Reveal and magnify the natural and cultural forces that influence this specific place in the San Francisco Bay. The design will create place-specific landscapes and recognize the Island's unique qualities by amplifying the constructed edge, engaging the natural forces of the Bay, and creating landscapes that respond to these conditions.

- **Engage the waterfront**

Visually, experientially, and ecologically, bring people to the water's edge to fully appreciate being on the Bay.

- **Provide a unique and comprehensive system of neighborhood public open spaces**

Design open spaces that are integrated into an island-wide public open space network. Create social vibrancy within open spaces, including the pedestrian street network, by providing ample spaces for people to gather and interact in a broad variety of activities.

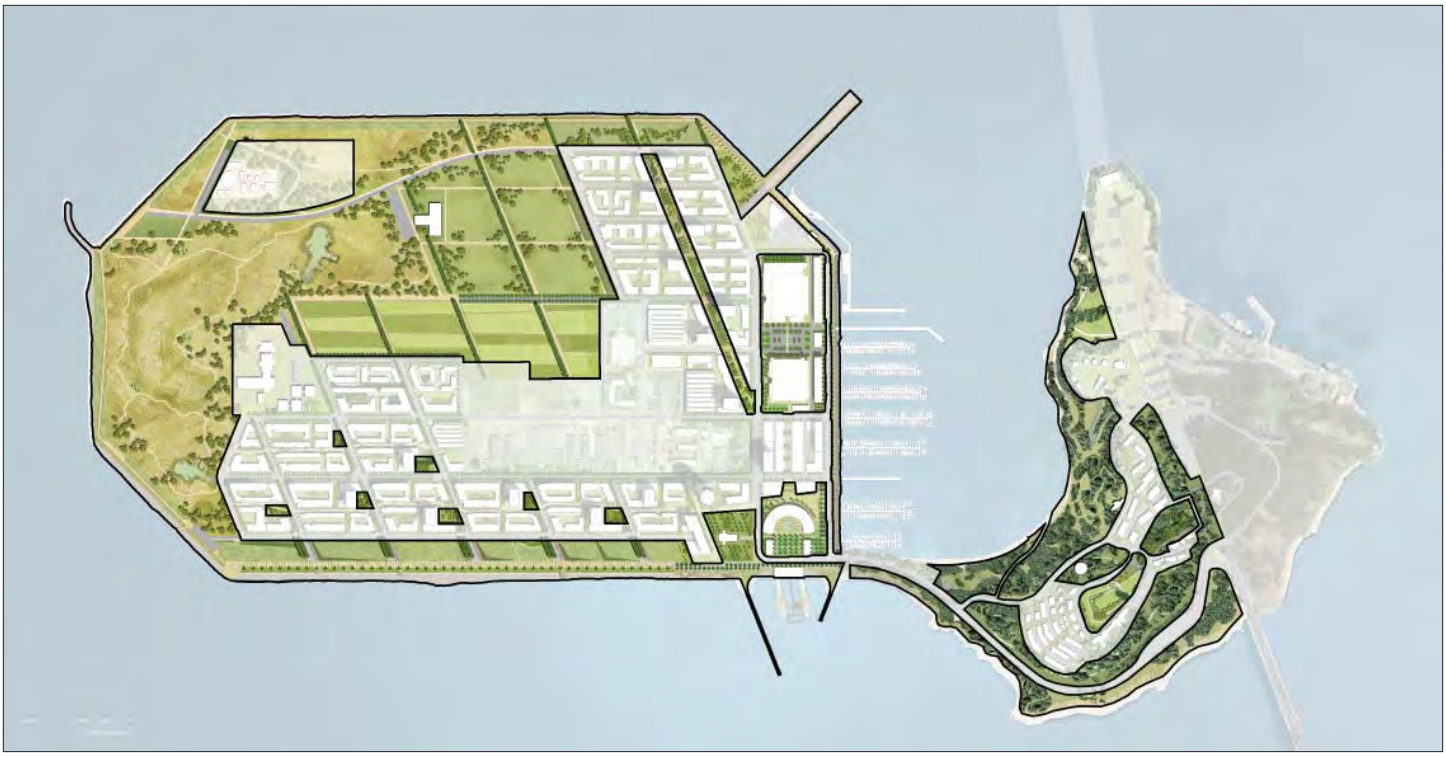
- **Create a high-performance sustainable landscape**

Stormwater management, food production, habitat creation, water conservation, and integrated pest management are primary areas of performance.

Process

- **Community Involvement and Stewardship**

Encourage ongoing stewardship by involving the community in the design process for individual parks and opportunities to accommodate community-based programs and partnerships.



TREASURE AND YERBA BUENA ISLAND OPEN SPACE PLAN

- **Integration with Development**

Integrate park, open space, and habitat concepts with adjacent uses, private development, and street design.

- **Interpretation and Education**

Provide park facilities and opportunities that support learning about cultural history, ecology, and urban sustainability, and provide for discovery and personal connection with the natural and cultural resources and to achieve environmental literacy.

- **Ecological Infrastructure**

Integrate urban infrastructure with natural process to support urban sustainability. Parks and open spaces are a part of the 'green infrastructure' and will help regulate climate, control storm-water, and provide habitat. Program and design the Northern Shoreline Park and Wilds to create a robust ecology that encourages biodiversity.

- **San Francisco Bay Ecology**

Enhance wildlife habitat to support the ecology of the San Francisco Bay, its wetlands, and the adjacent uplands.

- **Adaptability and Evolution**

Like many large redevelopment projects, the construction of Treasure Island and Yerba Beuna Island will happen in multiple phases lasting several years. As such, a philosophy of adaptive management and flexibility has directed the open space design, allowing for changing uses, varying design approaches, and evolving landscape typologies. The illustrative open space designs shown here are conceptual and the final design process will be the result of the DRDAP and

Major Phase and Sub-Phase Application process.

PARKS AND OPEN SPACE TYPOLOGY

The Islands' diverse open space program is made up of eight distinct landscape types – six for Treasure Island and two for Yerba Buena Island – which give the Islands' landscape both structure and experiential variety. The conceptual designs shown for these landscape typologies are not regulatory, but are guiding visions to be implemented by the standards and guidelines of the Design for Development document.

The primary landscape typologies are:

Treasure Island

Shoreline Park
A series of waterfront parks that wrap western, northern and eastern edges of Treasure Island, characterized by The Waterfront Plaza at The Transit Hub, Pier 1, a continuous waterfront promenade, water access, and sculpted topography.

Sports and Recreation Park
An active park designed specifically for sports recreation.

Urban Agriculture Park
A park devoted to the production of food and/or nursery stock and with opportunities that provide an educational outreach program.

Northern Shoreline and The Wilds
Constructed habitats that integrate stormwater management, education and limited passive recreation.

The Urban Core
A series of plazas and open spaces that help activate the retail core and The Transit Hub. These areas include Waterfront Plaza, Clipper Cove Promenade, Marina Plaza and the Cultural Park.

Pedestrian Network & Neighborhood Parks
Social spaces and amenities specifically designed for residents.

Yerba Buena Island

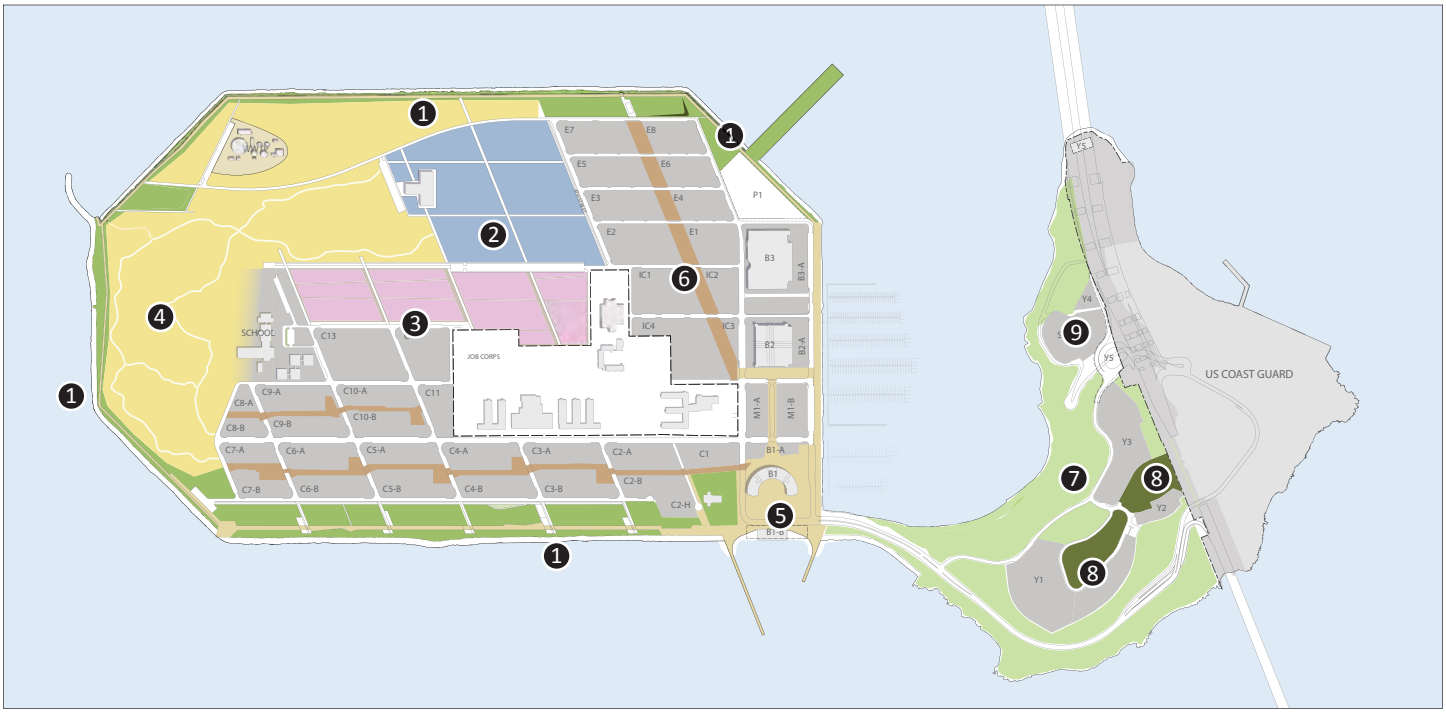
Hilltop Park
A regional and neighborhood serving park with passive recreational areas, overlooks, and picnic areas.

Regional Open Space - Habitat Managment Areas
The majority of the island's open space is dedicated to habitat management and associated recreational uses such as hiking, biking, and picnicking.

Trails and Overlooks
A continuous network of rustic hiking trails will provide access to the island's open space areas and overlooks.

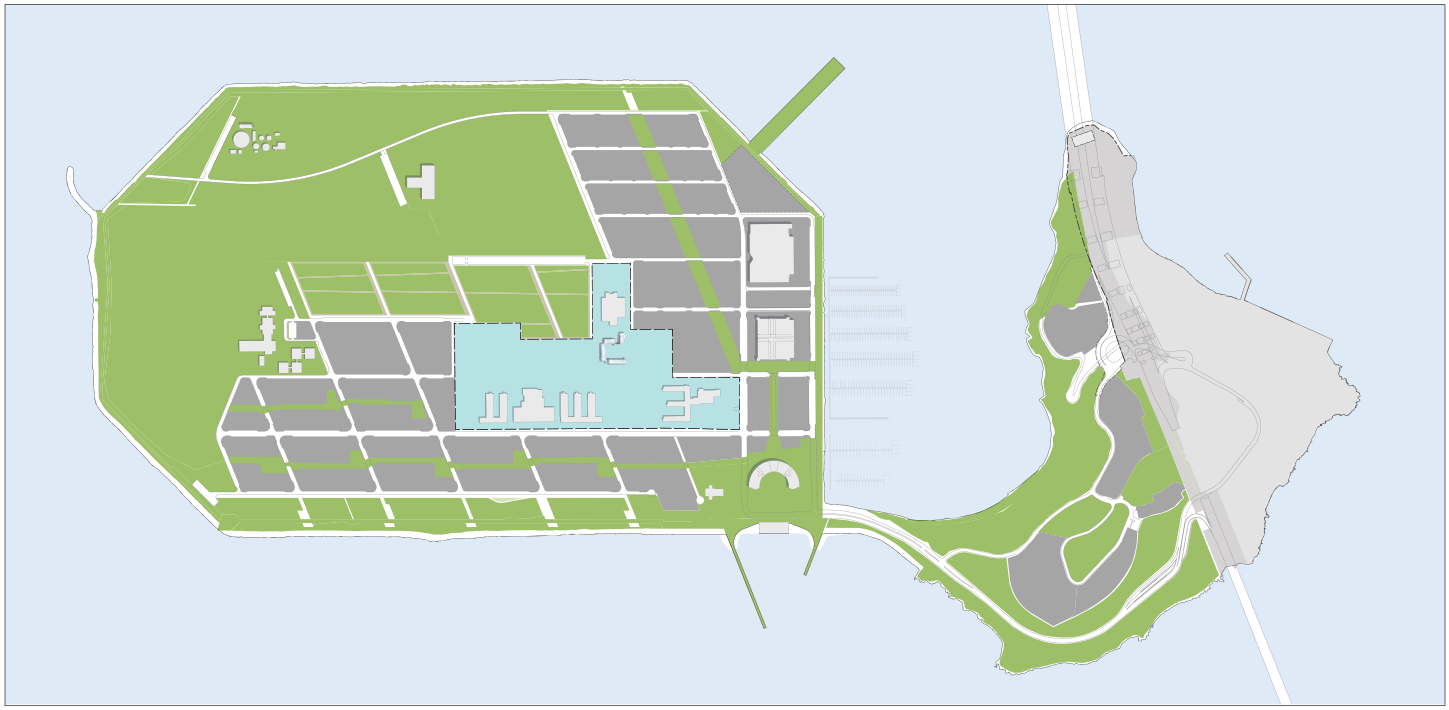
Senior Officers Quaters Historic District
Existing gardens surrounding the historic Senior Officers Quaters.

TREASURE ISLAND AND YERBA BUENA ISLAND PARKS AND OPEN SPACE PLAN



TREASURE AND YERBA BUENA ISLAND PARK TYPOLOGY

1. SHORELINE PARK
2. SPORTS AND RECREATION PARK
3. URBAN AGRICULTURAL PARK
4. NORTHERN SHORELINE AND WILDS
5. URBAN CORE
6. PEDESTRIAN NETWORK & NEIGHBORHOOD PARKS
7. YERBA BUENA ISLAND HMP AREAS
8. YERBA BUENA ISLAND HILLTOP PARK
9. SENIOR OFFICERS QUARTERS HISTORIC DISTRICT



TREASURE AND YERBA BUENA ISLAND LAND USE

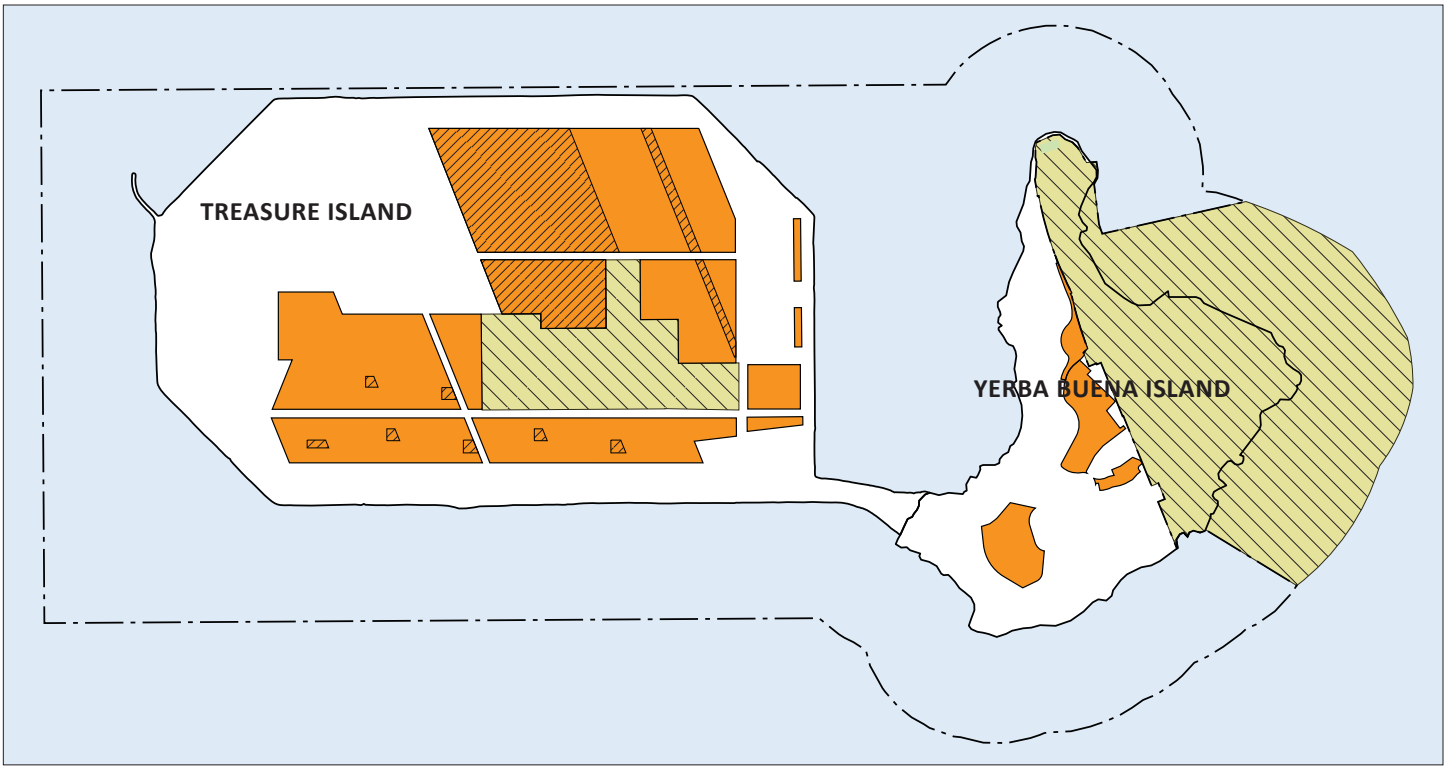
OPEN SPACE | DEVELOPMENT PARCELS | JOB CORPS

TIDELANDS TRUST

Treasure Island is subject to the Tidelands Trust doctrine administered by the State of California. Under the Tidelands Trust doctrine, title to tidelands and lands under navigable waters is held in trust by the State for the benefit of the people of California. The Tidelands Trust effectively acts as a type of zoning by limiting the permitted uses of lands subject to the Trust. Uses of Trust lands are generally limited to waterborne commerce, navigation, fisheries, water-oriented recreation, including commercial facilities that must be located on or adjacent to water, and environmental preservation and recreation, such as natural resource protection, wildlife habitat and study, and facilities for fishing, swimming, and boating. Ancillary or incidental uses that promote trust uses or accommodate public enjoyment of Tidelands Trust lands are also permitted, such as hotels, restaurants and specialty retail. Residential and general office uses are generally not permitted uses on Tidelands Trust lands. Parks and open space in the Trust must be designed so that their uses are consistent with the purpose of the Trust. Park lands that are within the public trust must be designed to serve visitors from throughout the region and beyond, and may not be designed primarily to serve city or neighborhood users. TIDA is the trustee for the Tidelands Trust, pursuant to the Treasure Island Conversion Act of 1997, enacted by the State legislature.

The State Tidelands Trust diagram shows the areas within Treasure Island that will be subject to the Tidelands Trust and those excluded from it upon completion of the Tidelands Trust exchange authorized under the Treasure Island Public Trust Exchange Act (Chapter 543, Stats. of 2004). These Tidelands Trust areas are designated on the diagram as a “Tidelands Trust Overlay Zone.” Within the Tidelands Trust Overlay Zone, any use that is “Permitted” or “Special” in the underlying zone is also subject to a determination by TIDA that the use is consistent with the Tidelands Trust. For more information regarding Tidelands compliance refer to the Design for Development document.

The majority of the open space areas on Treasure Island and Yerba Buena Island are subject to the Tidelands Trust, with exception to the following areas: Sports Park, the southeast portion of the Urban Agriculture Park, the Cityside Neighborhood Parks, and the Eastside Commons. Trust and non-Trust areas are identified and tabulated in the Open Space Areas section of this Plan.



STATE TIDELANDS TRUST LANDS MAP

BOUNDARIES OF TREASURE ISLAND DEVELOPMENT AUTHORITY (***TIDA***) PROPERTY

EXISTING WATERFRONT LINE

LANDS WITHIN ***TIDA*** PROPERTY SUBJECT TO THE PUBLIC TRUST UPON COMPLETION OF THE EXCHANGE - TIDELANDS TRUST OVERLAY ZONE

LANDS TO BE FREE OF THE PUBLIC TRUST UPON COMPLETION OF THE EXCHANGE

OPEN SPACE AREAS TO BE FREE OF THE PUBLIC TRUST UPON COMPLETION OF THE EXCHANGE

LANDS OUTSIDE OF ***TIDA*** JURISDICTION

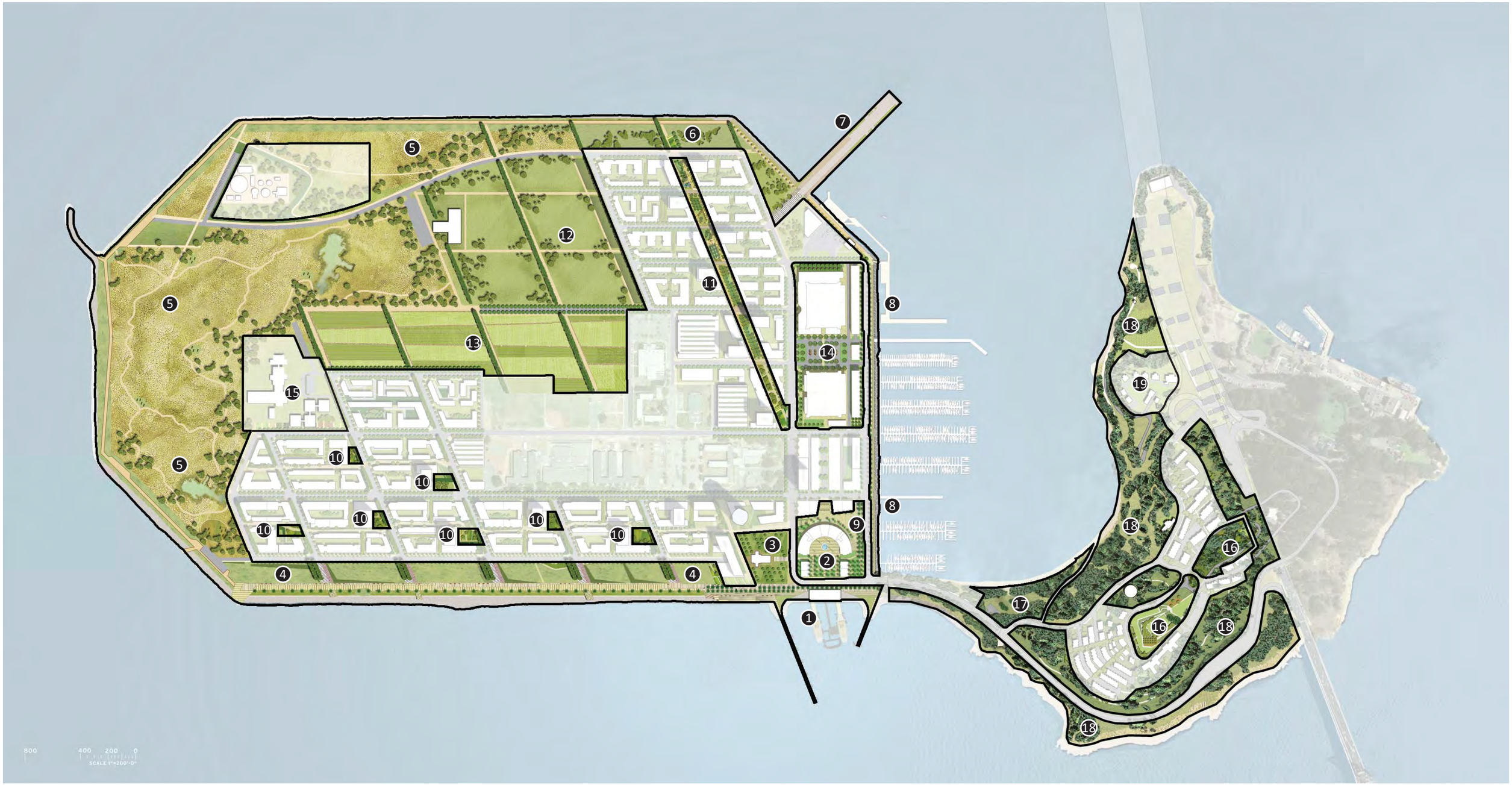
PARK AND OPEN SPACE AREAS

Nine broad landscape types are found on Treasure and Yerba Buena Island which contain 19 specific open spaces. This map locates those spaces in relation to one another, and is the location key for the description of each space that follows.

PROPOSED PARKS AND OPEN SPACE

	TREASURE ISLAND		ACRES	
1	Waterfront Plaza		2.4	PG 20
2	Building 1 Plaza		2.4	PG 22
3	Cultural Park		2.4	PG 26
4	Cityside Waterfront Park		24.2	PG 28
5	Northern Shoreline Park and The Wilds		103.0	PG 30
6	Eastern Shoreline Park		9.8	PG 32
7	Pier 1		2.7	PG 34
8	Clipper Cove Promenade		2.0	PG 36
9	Marina Plaza		2.0	PG 24
10	Cityside Neighborhood Parks		1.6	PG 36
11	Eastside Commons		2.9	PG 38
12	Sports Park		21.0	PG 40
13	Urban Agricultural Park		25	PG 42
14	Building 2 and 3 Historical Landscape		4.8	PG 44
15	School District Open Space		6.3	NA
		SUBTOTAL	*212.5*	
		TOTAL	**212.5**	

	YERBA BUENA ISLAND			
16	Hilltop Park		5.4	PG 46
17	Beach Park		0.8	PG 48
18	YBI Trails and Habitat Management Areas		66.7	PG 50
19	Senior Officers Quarters Historic District		4.77	NA
		SUBTOTAL	*77.67*	
		TOTAL	**290.2**	



TREASURE AND YERBA BUENA ISLAND PARKS AND OPEN SPACE PLAN

OPEN SPACE IMPROVEMENTS

AREA DESCRIPTIONS

The following Parks and Open Space Improvements section describes the improvements to be provided by TICD as part of the horizontal infrastructure development in each open space area. General Requirements for each type of improvement are provided at the end of this section. The conceptual designs included in the Plan for each area are guiding visions to be implemented according the Standards and Guidelines defined in the Design for Development document. It is expected that the final park designs will be refined as part of the the DRDAP and Major Phase and Sub-Phase Application process, which will include further coordination with existing and future recreational users, City agencies and potential partners.

Waterfront Plaza

The Waterfront Plaza is the primary point of arrival for visitors and residents to Treasure Island and an ideal location to orient oneself with the islands vast network of public open spaces. The flexible plaza is intended to provide a strong sense of arrival, facilitate numerous types of events and support the various modes of transportation options. With amazing views of the San Francisco skyline the plaza will be the hub of a vibrant commercial district that will provide visitors and residents with both daytime and nighttime attractions. It is envisioned that the design of The Waterfront Plaza will work in conjunction with the program needs of the Ferry Terminal and have continuity with Building One Plaza and the Cultural Park.

PROGRAM & DESIGN CHECKLIST

(Items Required by the TI & YBI Design for Development)

- A paved plaza that accommodates pedestrian movement between all types of transit services.
- A mixed-use pathway for pedestrians and bicycles.
- Overlook areas located at the waterfront.
- A sheltered bike storage area integrated into the design of the ferry terminal building.
- A restroom facility will be provided within the Ferry Terminal.

LANDSCAPE ELEMENTS

(Items consistent with the Design for Development)

Paving
- Integral colored concrete and/or unit pavers for pedestrian circulation and gathering areas.

Lighting
- Path Lighting
- General Area Lighting

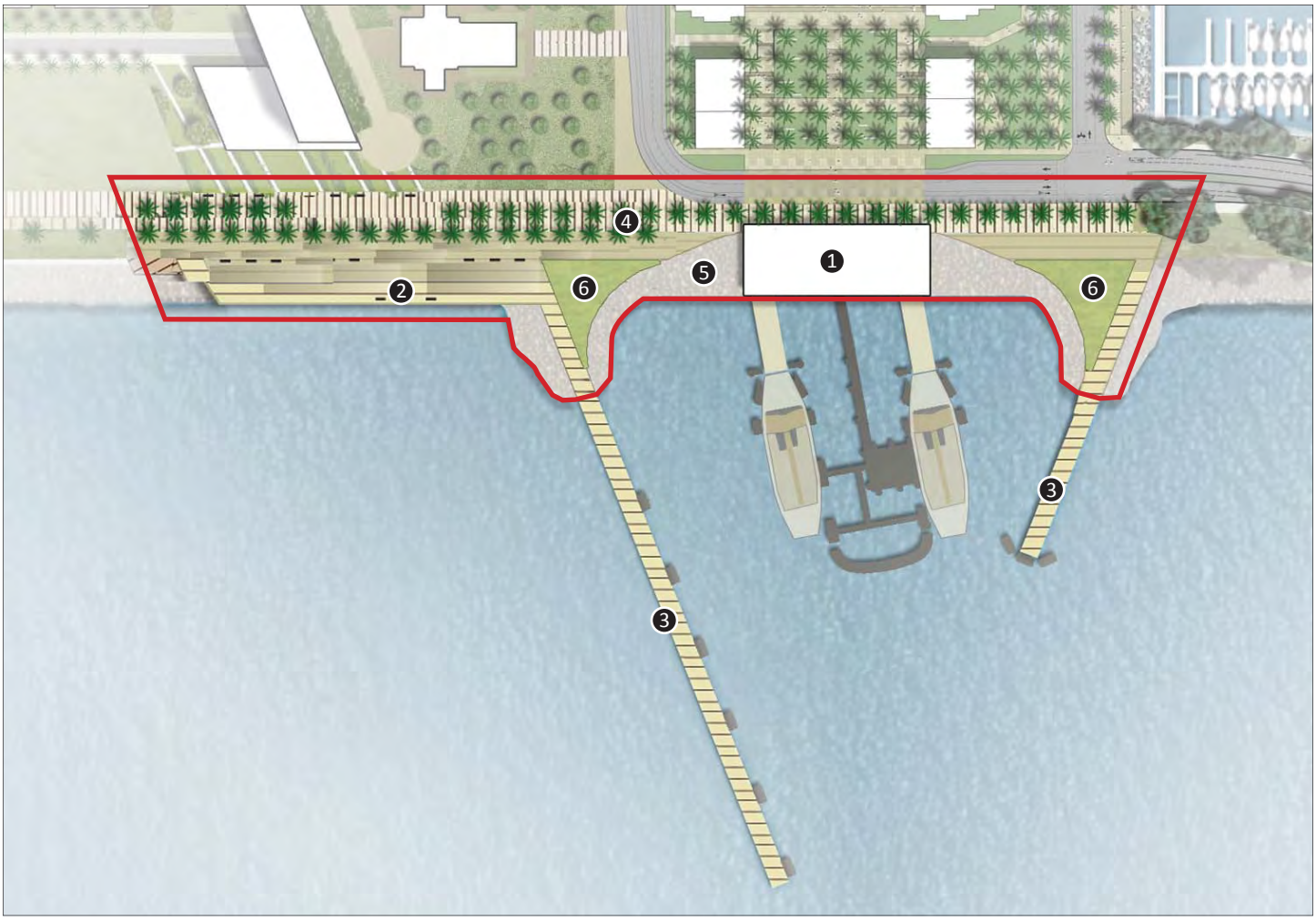
Grading and Drainage
- As defined by General Requirements.
- Ornamental planting areas in selected areas.

Soil Preparation & Fine Grading
- As defined by General Requirements.
-

Planting
- Palms – matching size and form will be used.
- Ornamental planting areas in selected locations.

Irrigation
- Fully Automatic system for all planting areas and trees.

Furnishing
- Benches and Seating Elements
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk and Wayfinding Signage



WATERFRONT PLAZA PLAN

N 0 200

1. FERRY TERMINAL
   (INCLUDES RESTROOMS AND BICYCLE STORAGE)
2. OVERLOOKS
3. BREAKWATER
4. PALM TREE ALLEE
5. SHORE PROTECTION
6. PLANTING

Building 1 Plaza

The Building 1 Plaza will be both a gateway to Treasure Island's history and a celebration of its revival. As a threshold entrance to Treasure Island, it is intended to be designed so that it is vibrant with activity day and night. Retail activities are envisioned spilling out onto the Plaza, which will be designed to provide a wide range of seating and gathering opportunities to take advantage of the views to San Francisco. The plaza is composed of three separate spaces The Lower Plaza, The Terrace and The Upper Plaza. The Lower Plaza is dominated by a Palm Grove. The Terrace provides wonderful views towards the City and provides spaces for seating and gathering along stepped gardens and lawn panels. The Upper Plaza is intended as a forecourt to Building 1, with an open and flexible plaza space that provides outdoor seating for activities such as dining and gathering.

PROGRAM & DESIGN

(Items Required by the Design for Development Standards)

- A plaza that accommodates pedestrian movement from the Waterfront Plaza to Building 1.
- Level paving and lawn areas on the lower and upper plazas.
- Locations reserved for the placement of pavilions on the Lower Plaza.
- Steps and accessible ramps connecting the Lower and Upper Plazas of Building 1.
- The Upper Plaza shall provide a flexible plaza forecourt to Building 1.
- Flexible seating adjacent to retail and eating establishments.
- Terraced panels of paving, lawn and/or ornamental plantings shall be incorporated to create a beautiful space for seating and viewing San Francisco.

OPEN SPACE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving
- Integral colored concrete and/or unit pavers for pedestrian walkways and plazas.

Lighting
- Path Lighting
- General Area Lighting
- Accent lighting at stairs and seat walls.

Grading and Drainage
- As defined by General Requirements.

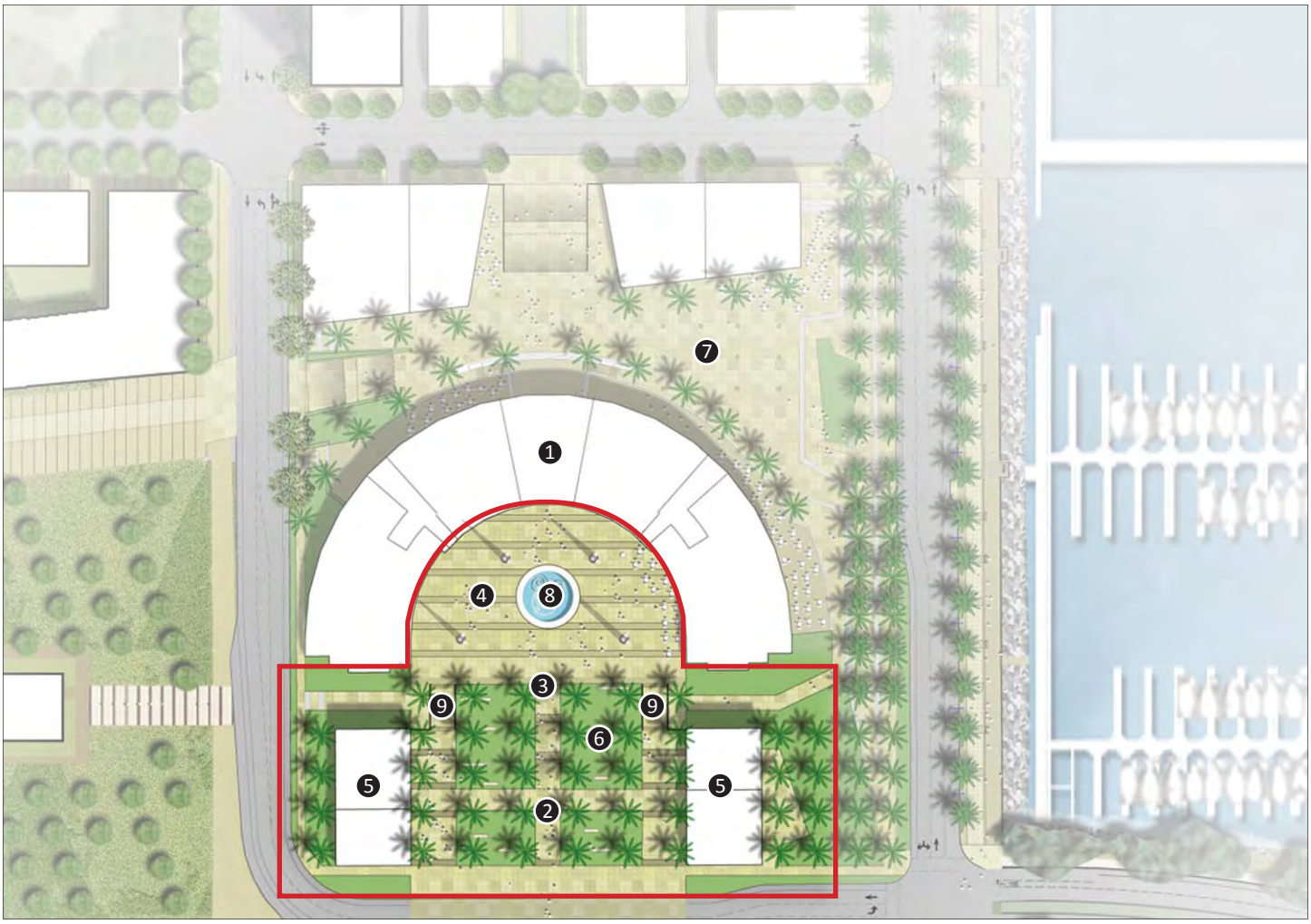
Soil Preparation & Fine Grading
- As defined by General Requirements.

Planting
- Lawn panels will be provided where flexible seating or events are anticipated.
- Elegant ornamental planting will be provided at select locations throughout the Building 1 Plaza.
- Lower Plaza Palm grove: matching size and form.

Irrigation
- Fully Automatic system for all planting areas and trees.

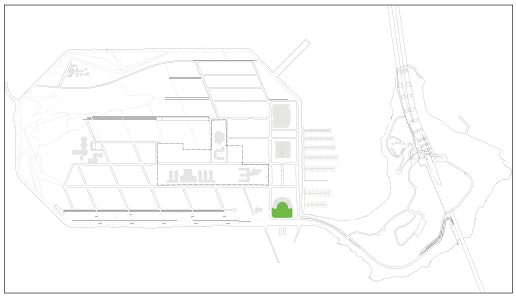
Furnishing
- Built-in site seating elements will be integrated at select locations.
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk and Wayfinding Signage

Special Features
- A Water Feature located on the upper level of the Building 1 Plaza



BUILDING 1 PLAZA PLAN

1. BUILDING 1
2. LOWER PLAZA / PALM GROVE
3. TERRACE STEPS
4. UPPER PLAZA
5. KIOSK / PAVILION
6. LAWN / PLANTING
7. MARINA PLAZA
8. WATER FEATURE
9. STAIR AND RAMP ACCESS



Marina Plaza

Located at the intersection of the Retail Street, Historic Building 1 and Clipper Cove, Marina Plaza is intended to elegantly combine the unique characteristics of each of these districts into a public plaza designed for entertainment and social gathering. It is envisioned as inviting and welcoming at all hours of the day. Palms that line buildings and frame the public plaza will define and strengthen the character of the plaza, while views overlooking Clipper Cove and towards Yerba Buena Island will make it an ideal location for outdoor cafes, seating, entertainment and as a performance space. Along the edge of Building 1 and the other proposed buildings, Marina Plaza is intended to facilitate areas for outdoor seating for dining and cafes, with generous access down to the Main Retail Street provided with a sloping walkway or ramp.

PROGRAM & DESIGN CHECKLIST

(Items required by Design for Development Standards)

- Flexible paved areas to support events and support adjacent retail activities on the plaza.

OPEN SPACE IMPROVEMENTS (Items consistent with the Design for Development)

Paving
- Integral colored concrete and/or unit pavers.
- Plaza stairs, integral color concrete .

Lighting and Site Electrical
- General Area Lighting
- Accent lighting at trees and special features.
- Electrical Service and Outdoor Receptacles adequate to support event programs in a variety of locations.

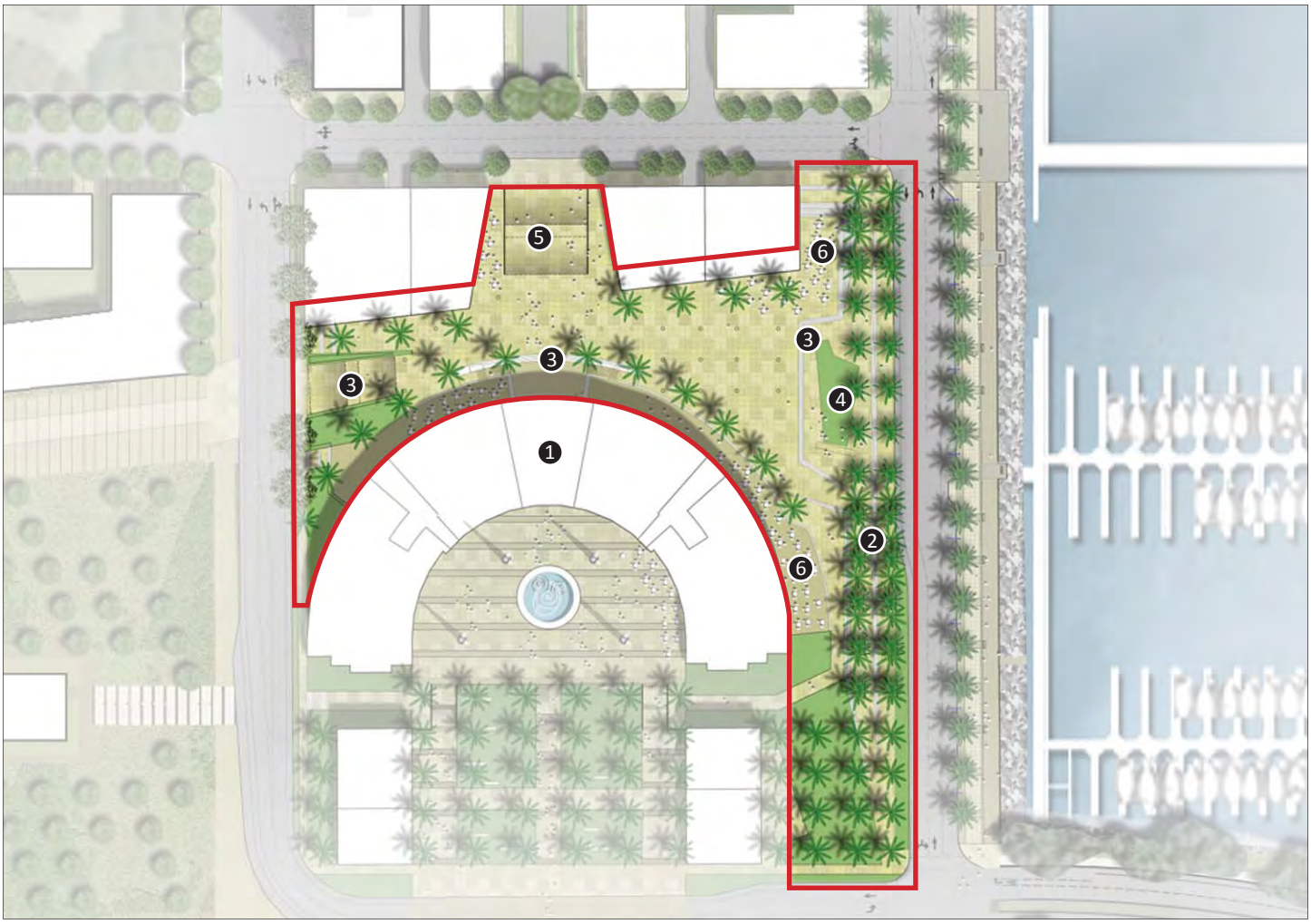
Grading and Drainage
- As defined by General Requirements.

Soil Preparation & Fine Grading
- As defined by General Requirements.

Planting
- Palm planting to match the front of Building 1.
- Ornamental accent planting in selected locations.
- Turf panels for casual seating and event space.

Irrigation
- Fully Automatic system for all planting areas and trees.

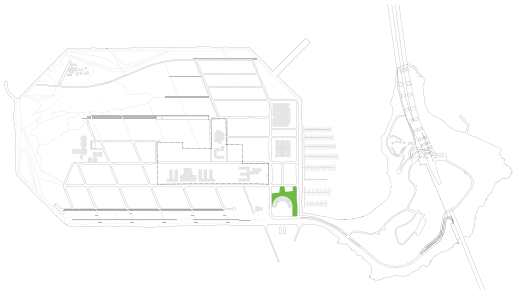
Furnishing
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk and Wayfinding Signage



MARINA PLAZA PLAN

N 0 100

1. BUILDING 1
2. PALM GROVE PLANTING
3. TERRACE STEPS
4. LAWN / PLANTING
5. STAIR AND RAMP ACCESS
6. OUTDOOR SEATING



Cultural Park

The Cultural Park is the keystone of the entire open space network on Treasure Island bringing together the Island Center District, Cityside Neighborhood and Waterfront Plaza. The preservation of the existing Chapel will create a distinct destination within the park for cultural events and private parties. The Shared Public Way begins at the south east side of the Park and continues through the Park as a mixed pedestrian and bicycle path.

PROGRAM & DESIGN

(Items required by Design for Development Standards)

- A universally accessible waterfront promenade that provides waterfront access for both pedestrians and bicycles (Standard provided as part of the Waterfront Plaza, refer to pg. 21)
- A cultural or community serving building.
- Service, loading and parking access integrated into the design of the park.
- A flexible open space able to accommodate full range of events.
- An accessible pedestrian path connecting the Ferry Terminal to the Shared Public Way through the Cultural Park.

OPEN SPACE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving

- Integral colored concrete and/or unit pavers for pedestrian walkways and plazas.
- Stabilized crushed stone paving at areas for large multi-use flexible areas such as picnic areas and large group gathering locations.

Lighting

- Path Lighting

Grading and Drainage

- As defined by General Requirements.

Soil Preparation & Fine Grading

- As defined by General Requirements.

Planting

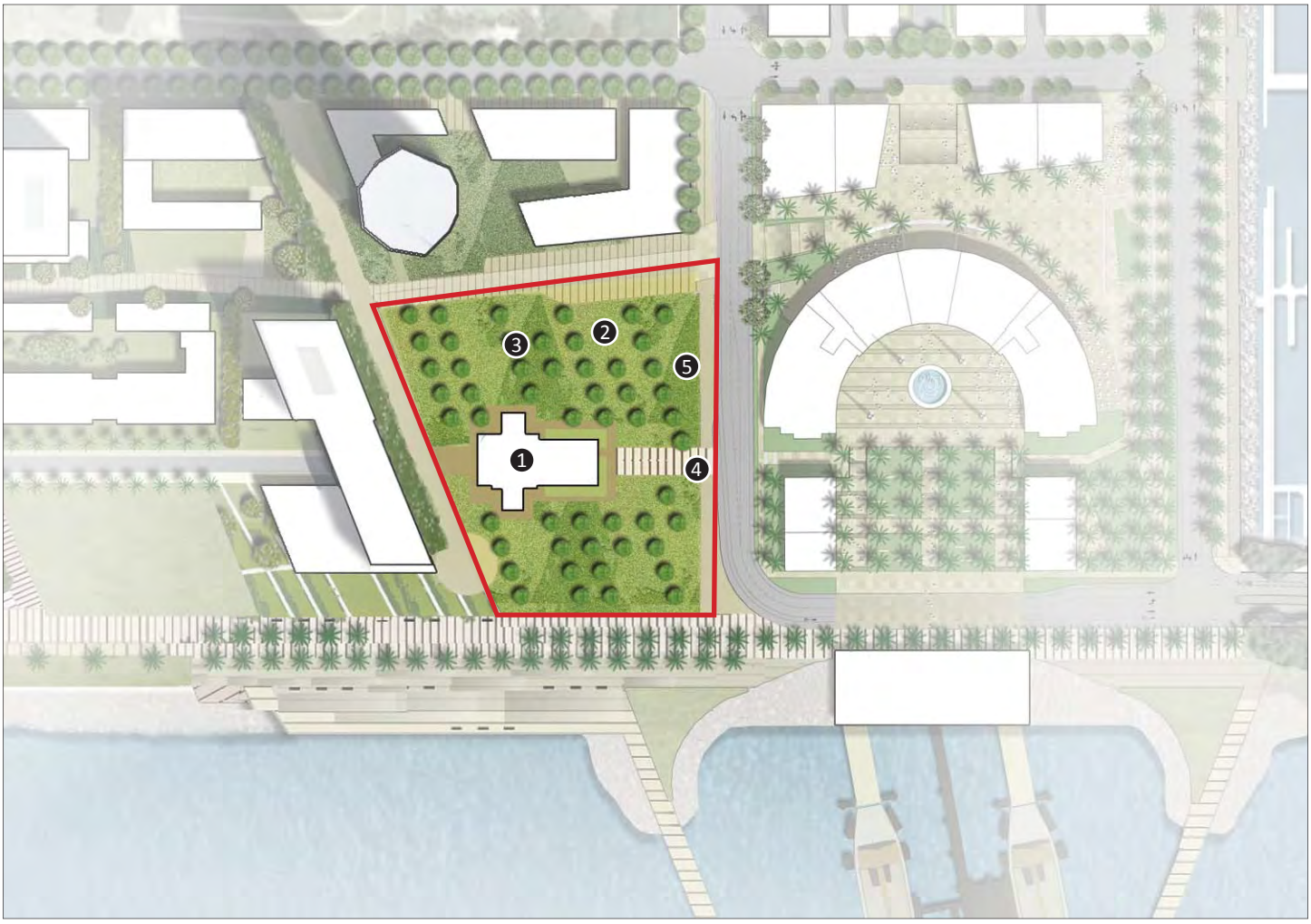
- Turf panels will be used for flexible use areas.
- Existing trees will be preserved during early phases and gradually replaced based on arborist recommendations.
- Where feasible historic olives trees will be relocated in the park.
- Ornamental planting areas in selected areas.

Irrigation

- Fully Automatic system for all planting areas and trees.

Furnishing

- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk and Wayfinding Signage



N 0 200

CULTURAL PARK PLAN

1. EXISTING CHAPEL BUILDING
2. FLEXIBLE OPEN SPACE
3. ORNAMENTAL GROVE
4. NEW CIRCULATION
5. ORNAMENTAL PLANTING

Cityside Waterfront Park

The Cityside Waterfront Park is intended to be the iconic and the most highly visited park on Treasure Island, with an open and simple design allowing dramatic views. A promenade along Cityside Waterfront Park will offer ample areas for both pedestrians and bicyclists to enjoy the Bay and views. Landforms, windrows and the promenade are all key elements of the overall Treasure Island open space system, and are designed to be consistent with other areas in which those elements occur. Seating and gathering areas could be included on the protected leeward side of the windrows. Guidelines call for sculpture to be integrated into the park design. Continuity is established throughout the length of the waterfront park by the Multi-use paths, trees, landforms and furnishings.

PROGRAM & DESIGN (Items required by Design for Development Standards)

- A universally accessible waterfront promenade that provides waterfront access for both pedestrians and bicycles.
- Open flexible lawn spaces that accommodate a full range of passive recreational activities.
- Articulated spaces that are sheltered for seating, picnic and group gathering areas.
- Stormwater best management practices shall be incorporated into the design of the park.
- Windrow planting shall be extended into the park.

OPENS SPACE IMPROVEMENTS (Items consistent with the Design for Development)

Paving
- Cityside promenade: The promenade shall be a multi-use path consistent with Bay Trail Standards and shall have a 30' average width. Promenade paving materials shall be a combination of concrete, unit pavers and/or decomposed granite in appropriate areas. Paving type and markings shall be designed to differentiate between travel zones for bicycles and pedestrians.
- Windrow Plazas: Integral colored concrete and/or unit pavers for pedestrian walkways and plazas.
- Secondary Pedestrian walkways: Integral colored concrete and/or unit pavers, crushed stone or asphalt.

Lighting
- Promenade: Path Lighting
- Windrow Plazas: General Area Lighting

Grading and Drainage
- As defined by General Requirements.
- Sculptural landforms throughout park.

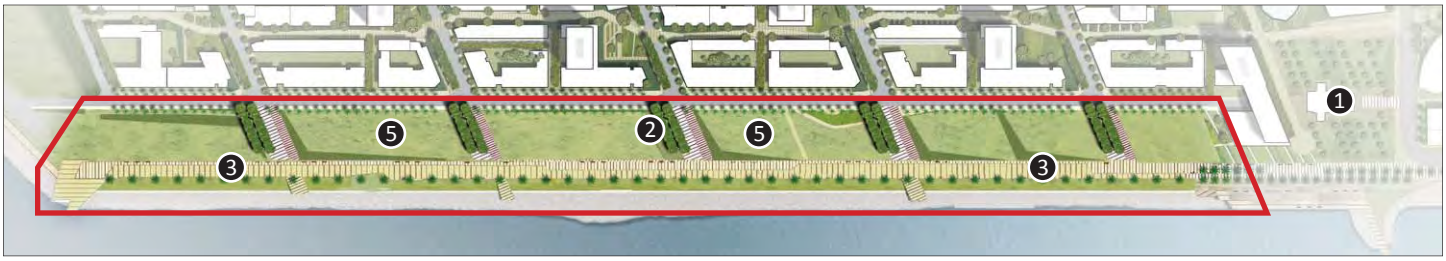
Soil Preparation & Fine Grading
- As defined by General Requirements.

Planting
- Palm trees planted along the promenade and Cityside Avenue, matching size and form.
- Windrow Trees
- Native turf grass panels as primary planting type.
- Native/ornamental plantings in selected locations including stormwater treatment areas and plazas.

Irrigation
- Fully Automatic system for all planting areas and trees.

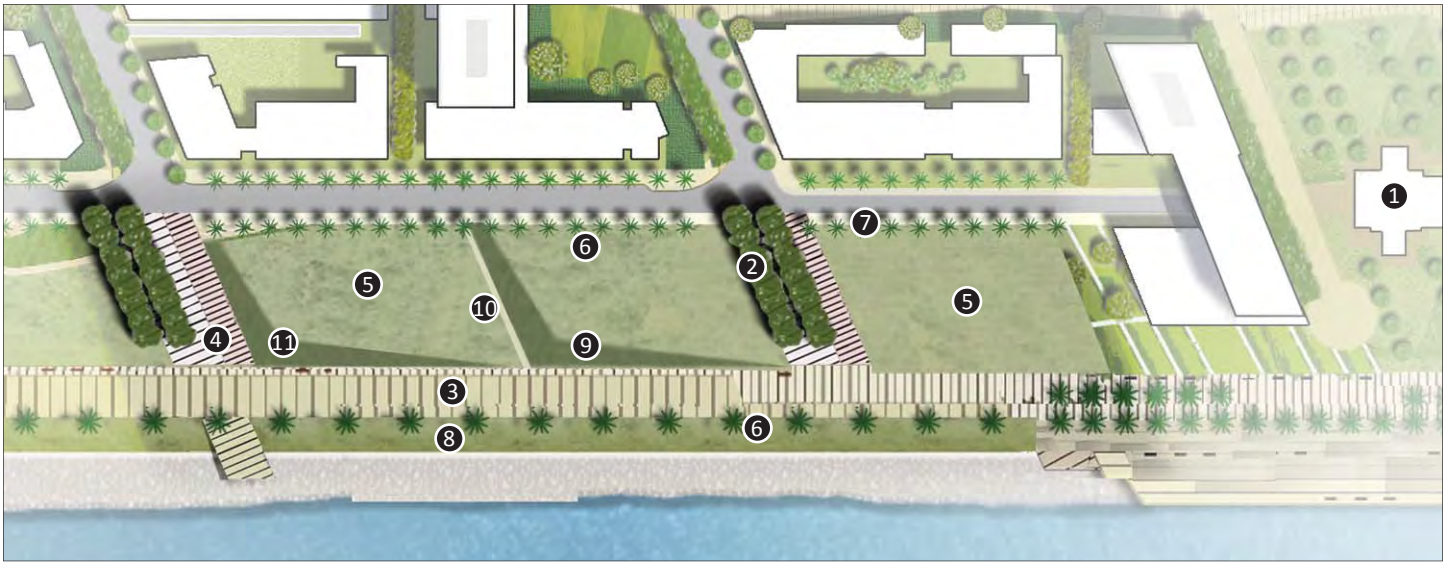
Furnishing
- Built-in site seating elements will be integrated at select locations.
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk and Wayfinding signage.

Special Features
- (4) Wind shelters located at selected picnic/gathering areas



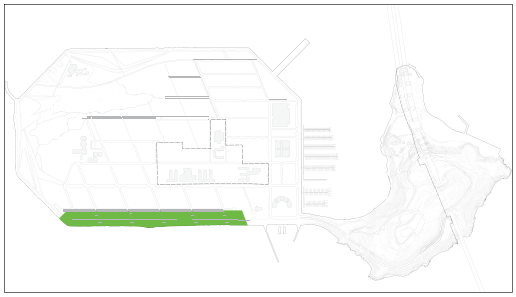
N 0 400

CITYSIDE WATERFRONT PARK PLAN



N 0 200

CITYSIDE WATERFRONT PARK ENLARGEMENT PLAN



1. CULTURAL PARK
2. WINDROW
3. MULTI-USE PROMENADE
4. WINDROW PLAZA
5. FLEXIBLE LAWN SPACE
6. PALM TREES
7. CLASS 1 BIKE LANE
8. PLANTING BUFFER
9. LOW LAND FORMS
10. SECONDARY PATHWAYS
11. STORMWATER TREATMENT

CITYSIDE WATERFRONT PARK SECTION

Northern Shoreline Park and The Wilds

The Northern Shoreline Park is envisioned to be the rustic foil to the Cityside Shoreline Park, unrefined, coarse and natural. The design is intended to take advantage of the dramatic Bay views by continuing the waterfront promenade around the island edge. Two water access points, with areas for parking and loading will be provided to accommodate water recreational sports along the northern edge of the island. Moving away from the water's edge The Wilds are envisioned to be an ecologically valuable habitat area that recalls the once-predominant Bay Area shoreline ecosystems of dune swales and moist grassland. This constructed landscape will mimic natural open spaces around the Bay, supporting activities such as hiking, ecological education programs, and habitat viewing. Seasonal and/or perennial wetlands are planned as part of the stormwater treatment system.

PROGRAM & DESIGN (Items required by Design for Development Standards)

- A universally accessible waterfront promenade that provides waterfront access for both pedestrians and bicycles.
- Asphalt parking lots in two locations. Approximately 75 – 100 parking spaces shall be provided at each location.
- One restroom facility shall be provided, one at the northeast parking area and water access area.
- Amenities for water recreational sports in two locations adjacent to parking lot areas.
- Secondary pedestrian pathways constructed of stabilized decomposed granite.
- Stormwater best management practices shall be incorporated into the design of the park.
- A Habitat Management Plan shall be prepared as part of the Major Phase Application to address habitat creation and managment in the Northern Shoreline Park and Wilds.
- Windrow planting shall be extended into the park.

OPEN SPACE IMPROVEMENTS (Items consistent with the Design for Development)

Paving

- The promenade shall be a mulit-use path consistent with Bay Trail Standards. It shall be a 20' wide path constructed of stabilized crushed stone and/or asphalt, accessible by service and emergency vehicles.
- A network of secondary pedestrian walkways paved with crushed stone will be provided throughout the park.
- Asphalt paving at both parking areas with reenforced grass overflow parking areas.

Lighting

- General Area Lighting at parking areas.

Grading and Drainage

- Rough grading consistent with infrastructure grading plan.
- Minor swales and landforms to create ecological variation and visual interest.
- Natural drainage and infiltration to support habitat creation, with grading provided for overland release.
- Storm drainage infrastructure limited to parking and gathering areas as needed.

Soil Preparation & Fine Grading

- Limited soil preparation consistent with native grassland and dune swale plant establishment.

Planting

- Predominantly, broadcast and/or hydroseeded native grasslands.
- Limited Native dune swale plantings including woody, perennial and herbaceous plants.
- Stormwater wetland grading and planting shall be completed a minimum of one growing season prior to connection to the storm drainage system and stormwater flows to ensure plant establishment and treatment function.

Irrigation

- Fully Automatic system for trees
- No permanent irrigation for grassland or native planting areas.
- Seeding operations will be sequenced with seasonal rains for purposes of establishment.

Furnishing

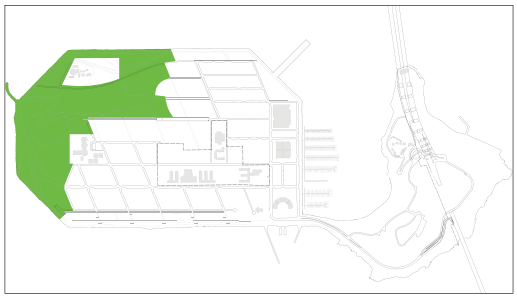
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Small group picnic areas: Picnic tables, grill, Litter and Recycling receptacles
- Wayfinding and Interpretive Signage

Open Space Facilities and Amenities

- An accessible large group picnic area including a windscreen/shade structure, group barbeque, and picnic tables.
- Restroom Facility located at the northeast parking area and water access point.
- Water Recreational Access Improvements including northeast water access ramp, shower, and windscreen.

N 0 400

NORTHERN SHORELINE AND WILDS



1. PEDESTRIAN PROMENADE (WITH EMV AND MAINTENANCE ACCESS)
2. PARKING AREA
3. WATER ACCESS POINT
4. STORMWATER WETLAND
5. PEDESTRIAN HIKING TRAILS
6. WASTEWATER TREATMENT PLANT (4-6 ACRES FOR PUC SITE)
7. PICNIC AREA
8. LARGE GROUP PICNIC AREA
9. BOARDSAILING LOADING AREA OVERFLOW PARKING
10. RESTROOM AND BOARDSAILING AMENITIES

Eastern Shoreline Park

The Eastern Shoreline Park is envisioned to share similar design characteristics with the Cityside Waterfront Park as an iconic, highly visited park on Treasure Island. The design is intended to be open and simple, allowing views to create a dramatic experience. The promenade through the Eastern Shoreline Park is intended to offer ample areas for both pedestrians and bicyclist to enjoy the Bay and views.

PROGRAM & DESIGN

(Items required by Design for Development Standards)

- A universally accessible waterfront promenade that provides waterfront access for both pedestrians and bicycles.
- Open flexible lawn spaces that accommodate a full range of passive recreational activities.
- Articulated spaces that are sheltered for seating, picnic and group gathering areas.
- Stormwater best management practices shall be incorporated into the design of the park as needed.
- Windrow planting shall be extended into the park.

OPEN SPACE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving

- The promenade shall be a mulit-use path consistent with Bay Trail Standards. It shall be a 20' wide path constructed of stabilized crushed stone and/or asphalt, accessible by service and emergency vehicles.
- Secondary pedestrian pathways paved with concrete, unit pavers, crushed stone or asphalt.

Lighting

- Promenade and Secondary Path Lighting

Grading and Drainage

- As defined by General Requirements.

Soil Preparation & Fine Grading

- As defined by General Requirements.

Planting

- Windrow Trees and Native Tree Groves
- Native turf grass panels as primary planting type.
- Native/ornamental plantings in selected locations.

Irrigation

- Fully Automatic system for all planting areas and trees.

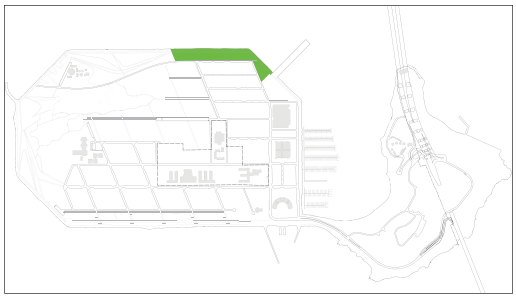
Furnishing

- Built-in site seating elements will be integrated at select locations.
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk

EASTERN SHORELINE PARK PLAN

N 0 200

1. EASTERN COMMON
2. SPORTS PARK
3. WINDROW PLANTING
4. FLEXIBLE LAWN
5. MULTI-USE PROMENADE
6. WINDROW PLAZA
7. SECONDARY PATH
8. PIER PLAZA



Pier 1

Pier 1 is intended to be a water-oriented destination on the south east corner of Treasure Island. The range of programs and configurations that could occupy Pier 1 varies greatly, from a tall ship program to a simple fishing and public access area. It is intended that the design of Pier 1 be integrated with the adjacent Eastern Shoreline Park.

PROGRAM & DESIGN

(Items required by Design for Development Standards)

- A universally accessible waterfront promenade that provides waterfront access for both pedestrians and bicycles.

OPEN SPACE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving

- Integral colored concrete topping slab.

Lighting

- General Area Lighting

Furnishing

- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk

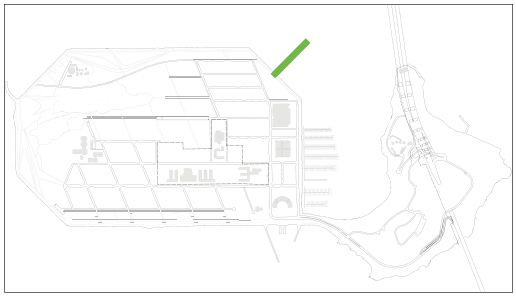
Special Features

- Custom guardrail along the length of the pier.

N 0 200

PIER ONE PLAN

1. GUARDRAIL
2. PIER PAVING
3. SAILING CENTER



Clipper Cove Promenade

Clipper Cove Promenade is intended to provide access along the Clipper Cove waterfront, supporting various water activities and pedestrian/bicycle movement. Opportunities for various seating areas are intended to be provided along the length of the Promenade, to capture views out towards Clipper Cove, Yerba Buena Island, the Bay Bridge and beyond. Street and pedestrian elements such as furniture and signage will be located in the area along the promenade, while vertical elements along Clipper Cove Avenue – such as palm trees, light poles, trash cans, bus shelters, parking meters and street signs – can be designed to minimize obstruction for pedestrians and bicyclists. It is envisioned that efficient movement between marine-related equipment and automobiles will be possible and that any bus loading areas minimize conflicts with other programs. It is also envisioned that a graphically-delineated pathway will be used to make bicyclists and pedestrians aware of one another's movements along the Promenade.

PROGRAM & DESIGN

(Items required by Design for Development Standards)

- A universally accessible waterfront promenade that provides waterfront access for both pedestrians and bicycles.
- Large overlook and small areas located along the waterfront promenade.
- Loading and unloading areas for Clipper Cove Marina patrons.

OPEN SPACE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving

- Integral colored concrete for all pedestrian and bicycle paths.
- Concrete unit pavers for demarcating between pedestrian and bicycle zones.
- Wood decking and/or concrete paving at overlook areas.

Lighting

- Path Lighting
- General Area Lighting at overlooks

Planting

- Palms planted at an interval of approximately 40' along the length of the Promenade.
- Ornamental planting ins selected locations.
- Stormwater planters.

Irrigation

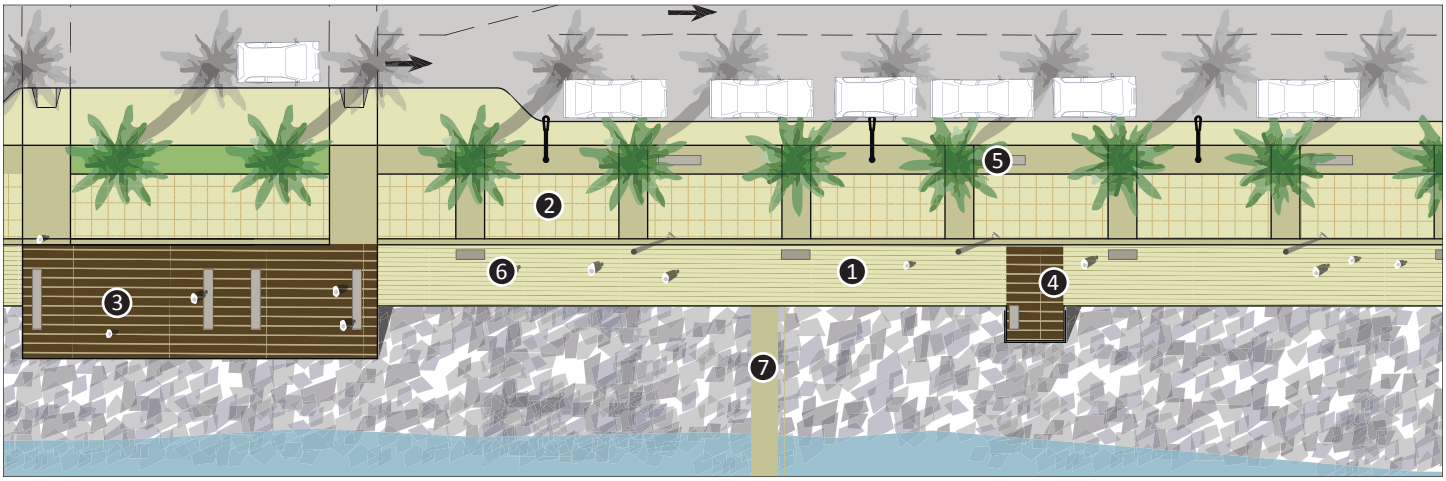
- Fully Automatic system for all planting areas and trees.

Furnishing

- Built-in site seating elements will be integrated at select locations.
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk and Wayfinding Signage

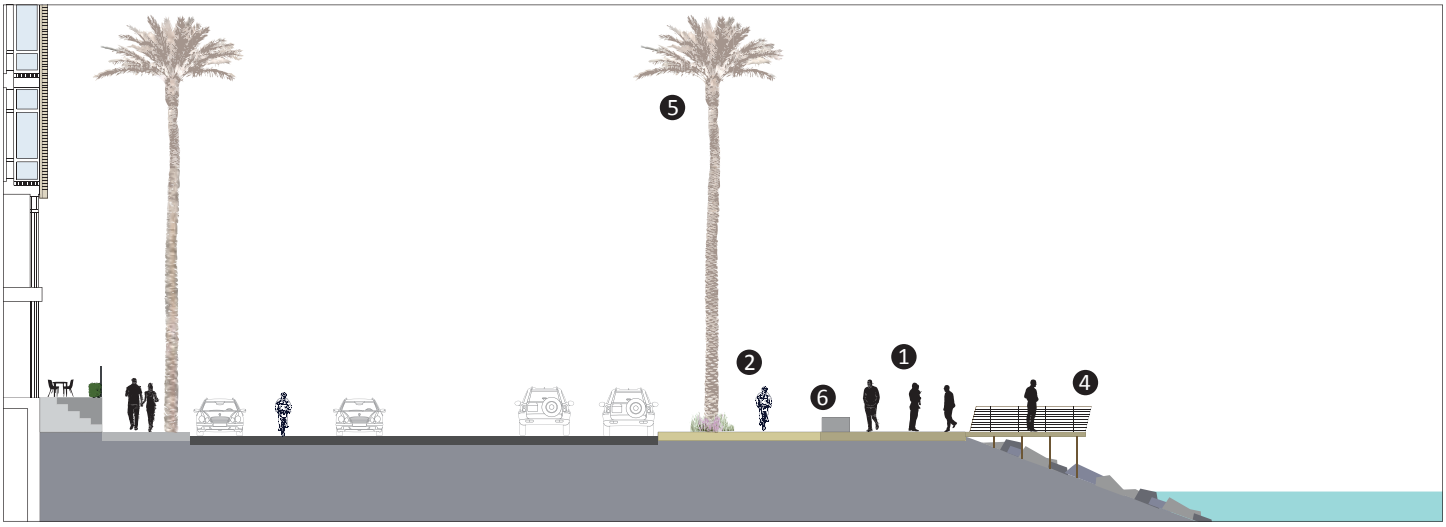
Special Features

- (3) Overlooks with custom galvanized railing.



N 0 20

CLIPPER COVE PROMENADE PLAN



CLIPPER COVE PROMENADE SECTION

1. MIXED USE PROMENADE
2. CLASS 1 BIKE FACILITY
3. LARGE OVERLOOK
4. SMALL OVERLOOK
5. PALM TREE PLANTING
6. PARK BENCH
7. MARINA ACCESS

Eastside Commons

The Eastside Commons are intended to create a grand, vehicle-free, and socially active pedestrian connection from the Island Center to the Eastside neighborhood, serving adjacent residents with a range of facilities varying from tot-lots and picnic areas to passive gardens and tree groves. The Eastside Commons is envisioned as a single park, although it may also be designed as a series of distinct spaces or rooms from block to block. The scale and program of each park is intended to reinforce the primacy of the pedestrian and promote social interaction. A variety of tree species are intended to be incorporated along the length of the Commons. Primary pathways are envisioned at the edges of the park, so the neighborhood-serving activities can occupy the space between the pathways.

PROGRAM & DESIGN CHECKLIST

(Items required by Design for Development Standards)

- Multi-use pathways that provides access for both pedestrians and bicycles.
- Play structures, picnic areas, ornamental gardens, community gardens, plazas, flexible turf areas and other neighborhood serving program located between the primary pathways.
- Access for emergency vehicles.

LANDSCAPE IMPROVEMENTS (Items consistent with the Design for Development)

Paving
- Integral colored concrete for all pedestrian pathways.
- Unit paving at gathering and plaza areas.
- Crushed stone paving and/or permeable pavers in low intensity use areas.

Lighting
- Path Lighting
- General Area Lighting
- Accent lighting at selected locations.

Grading and Drainage
- As defined by General Requirements.

Soil Preparation & Fine Grading
- As defined by General Requirements.

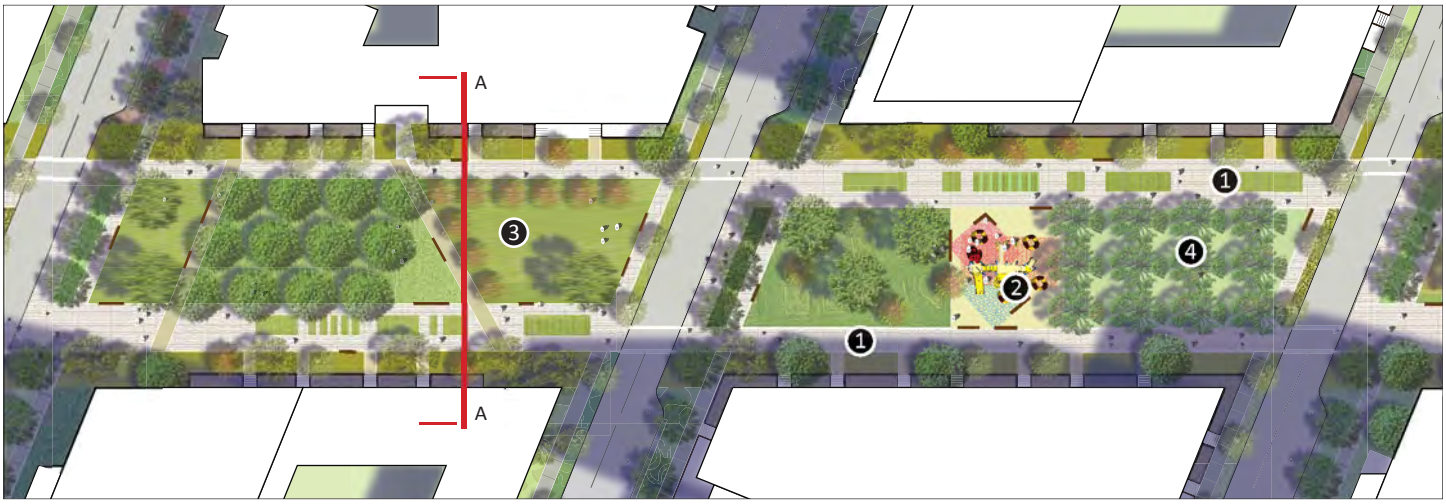
Planting
- Shade trees, including a variety of species.
- Ornamental Planting
- Stormwater planters
- Flexible turf areas for light passive recreation

Irrigation
- Fully Automatic system for all planting areas and trees.

Furnishing
- Built-in site seating elements will be integrated at select locations.
- Benches
- Litter and Recycling receptacles
- Bicycle Racks

Open Space Facilities and Amenities
- (2) Play Areas including fencing, play equipment, and resilient surfacing.

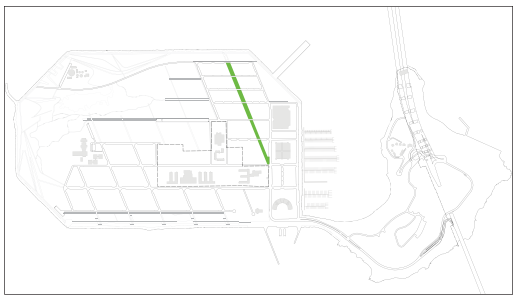
EASTERN COMMON SECTION



EASTERN COMMON PLAN ENLARGEMENT

N 0 40

1. PEDESTRIAN PATHWAY
2. PLAY AREA
3. ORNAMENTAL GARDEN
4. ORCHARD PLANTING



Sports Park

The Sports Park is envisioned to foster a healthy and active lifestyle for residents and visitors, as well as to provide needed regional-service sports facilities and space for large events and gatherings.

It will provide flexible athletic fields allowing a variety of active recreational activities and intensities such as soccer, soft ball, cricket, rugby, Gaelic football and ultimate Frisbee. Priority will be given to existing recreation field users on the island including San Francisco Gaelic Athletic Association, San Francisco Little League, San Francisco Golden Gate Rugby and YMCA.

The facility would be geared toward local leagues, community groups, and families. Car parking is intended to be provided on perimeter streets and limited on-site lots.

PROGRAM & DESIGN

(Items required by Design for Development Standards)

- The Sports Park will accommodate flexible sports fields for active recreational sports.
- Amount of permanent parking will be appropriate for activity levels provided.
- Windrow planting shall be extended into the park.
- Maintenance and storage facilities.
- A restroom facility will be provided within the park or at existing gymnasium

LANDSCAPE ELEMENTS

(Items consistent with the Design for Development)

Paving
- Asphalt paving for all pedestrian walkways.
- Crushed stone paving and/or permeable pavers in low intensity use areas.

Lighting
- Path Lighting

Grading and Drainage
- Rough and Finish Grading of Fields
- General surface drainage

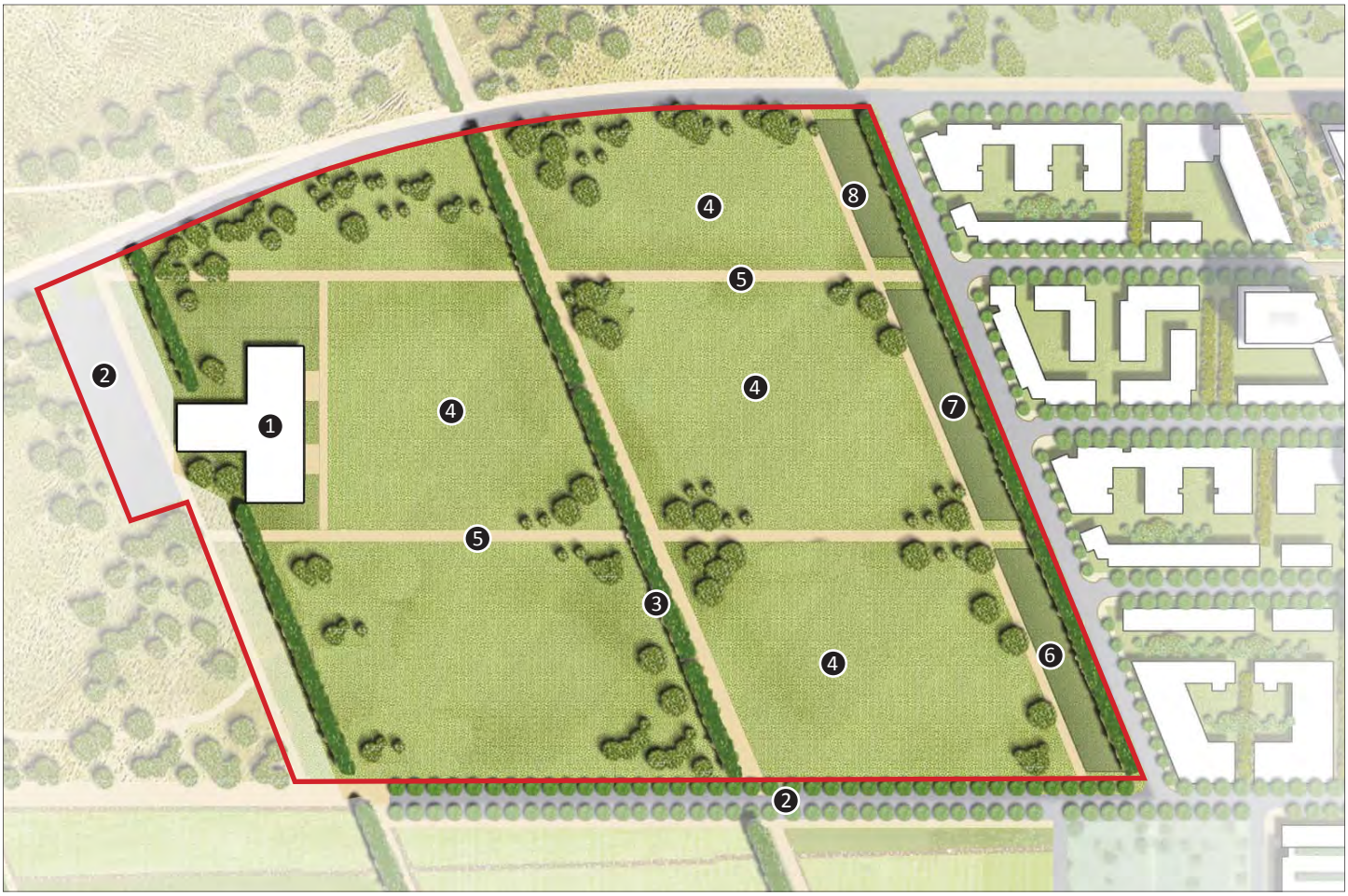
Soil Preparation & Fine Grading
- As defined by General Requirements.

Planting
- Lawn playing fields
- Limited ornamental planting
- Windrow and Shade Trees

Irrigation
- Fully Automatic system for all planting areas and trees.

Furnishing
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information Kiosk and Wayfinding Signage

Open Space Facilities and Amenities
- Basic field amenities to enable shared uses, small bleachers and one area sufficient in size to accommodate a sports field with a dimension of 160 yards x 100 yards will be provided.
- Improvements and amenities do not include tournament-level field improvements. Future improvements to support tournaments, and in accordance with the D4D and OSP, will not be precluded.
- Accessible restroom facility in the existing gymnasium building or as a free standing facility within the Sports Park
- (4) Drinking Fountains



N 0 200

SPORTS PARK PLAN

1. EXISTING GYM FACILITY
2. PARKING AREA
3. WINDROW PLANTING
4. FLEXIBLE SPORTS FIELDS (LAWN)
5. PEDESTRIAN PATHWAYS
   MAINTENANCE CIRCULATION
6. EASTSIDE PARK 1 STORMWATER FACILITY
7. EASTSIDE PARK 2 STORMWATER FACILITY
8. EASTSIDE PARK 3 STORMWATER FACILITY

Urban Agricultural Park

The Open Space Plan includes basic site improvements to prepare the site for farm operations, with the understanding that the Urban Agricultural Park will be managed and operated by a farm operator or non-profit organization.

The Urban Agricultural Park is intended to be a full production urban farm and/or nursery producing fresh produce or nursery stock for project planting and ongoing maintenance and restoration activities. The Agricultural Park will also provide opportunities for educational and recreational amenities. The park is intended to be pragmatic and utilitarian, allowing guests of to experience the process of farming and/or nursery operations. The park shall be open and available to members of the community and will include community garden plots for Treasure Island and YBI residents. The park is intended to be designed with a sequence of walking paths and various areas for interpretation and demonstration, with benches and gathering areas between growing fields which allow visitors to appreciate the agricultural landscapes. Green houses, wind turbines and recycling and composting facilities are envisioned to support sustainable practices. Environmental or horticultural art could also be incorporated into the design.

PROGRAM & DESIGN CHECKLIST

(Items required by Design for Development Standards)

- A 20 - 25 acre organic agricultural farm.
- Farming practices to include small animal husbandry, various crop cultivation, aquaculture and orchards.
- Design and agricultural production shall be controlled so the operation does not create a negative impact on adjacent residential uses.
- Windrow trees shall be planted along the pedestrian pathways within the farm.

LANDSCAPE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving
- Stabilized crushed stone paths for pedestrian pathways and vehicular access.
- Asphalt concrete or concrete paving in limited areas where required.

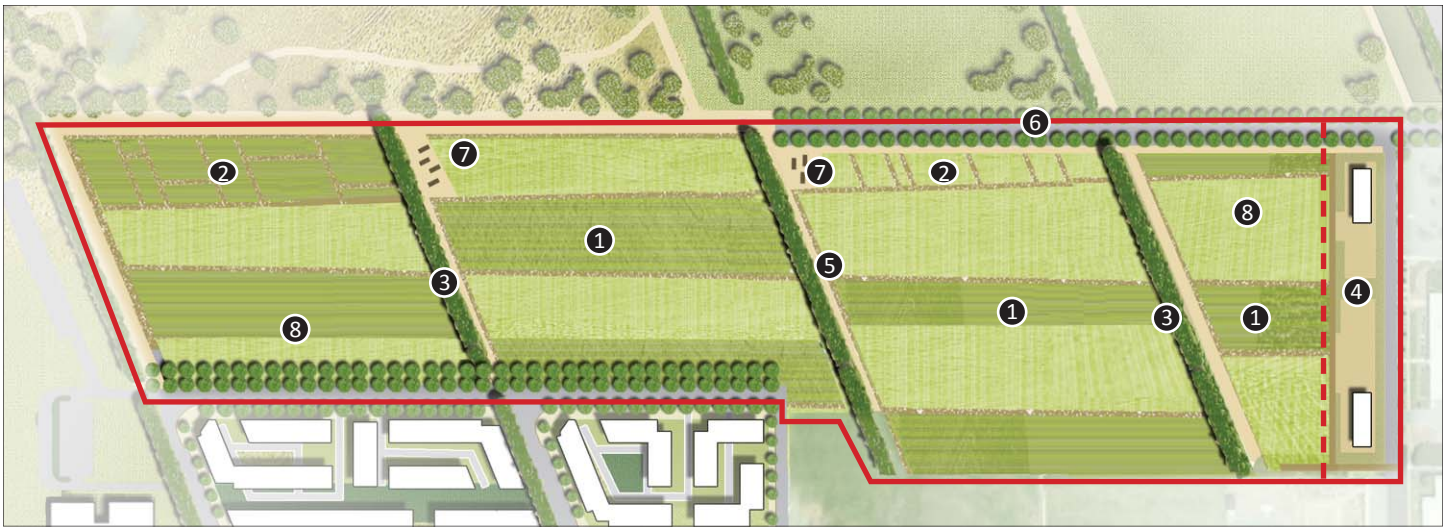
Grading and Drainage
- Rough grading and provision of storm drainage and treatment improvements.

Soil Preparation & Fine Grading
- Soil testing, organic soil amendments and/or import of 6 – 8 inches of topsoil.
- Coordination with 3rd Party operator to determine final soil preparation strategy.

Planting
- Windrow Trees
- Stormwater treatment areas as needed.

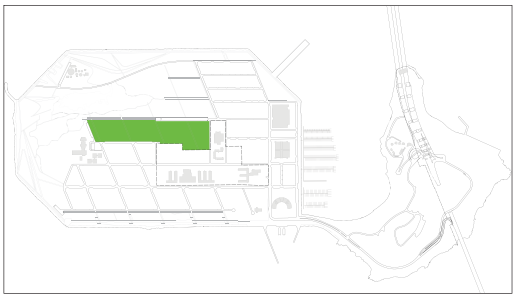
Irrigation
- Mainline and Gate valve for point of connection.

Special Features
- A demonstration educational garden, with interpretive signage.
- Group Picnic Area
- Community Garden Plots



URBAN AGRICULTURAL PARK

N 0 200



1. FARM AREA
2. DEMONSTRATION GARDEN
3. WINDROW PLANTING
4. MAINTENANCE YARD
5. WINDROW PATHWAYS
6. PUBLIC PARKING
7. PICNIC AREA
8. COMMUNITY GARDEN PLOTS (FINAL SIZE TO BE DETERMINED)

Maintenance Yard and Facilities

A maintenance yard with operations and maintenance facilities for all open space shall be located in the Agricultural Park area and will include basic site improvements including utility service and facilities for maintenance. A recycling and composting facility will be incorporated within the maintenance yard area and provided as part of the community facilities program. TICD will continue to coordinate with TIDA and potential project partners to define the open space operations and maintenance requirements and facility needs, including size and layout.

PROGRAM & DESIGN CHECKLIST

(Items required by Design for Development Standards)

- A 1 acre maintenance yard (final size to be confirmed and coordinated)
- O&M Office
- Shop and Storage Facilities
- Space allocation for recycling and composting facilities

LANDSCAPE ELEMENTS

(Items consistent with the Design for Development)

Paving
- Gravel, asphalt, and/or concrete paving areas as needed.

Lighting
- General Area Lighting

Grading and Drainage
- Storm drainage and stormwater treatment improvements.

Open Space Facilities
- O & M Office Space (800 sf building including restroom facilities)
- Corporation Shop (approximately 5,000 sf)
- Storage Shed (approximately 5,000 sf)
- Perimeter fencing

Building 2 and Building 3 Landscape

The landscape concept around Buildings 2 and 3 should support the service within the building. Low planting should be a foreground to the building.

PROGRAM & DESIGN CHECKLIST

(Items Required by the TI & YBI Design for Development)

- Access to building entrances shall be clear and accessible
- Stormwater planters shall be used around the building.

LANDSCAPE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving
- Integral colored concrete and/or unit pavers for pedestrian walkways and plazas.
- Unit paving in special social areas.

Lighting
- Path Lighting
- General Area Lighting
- Accent lighting

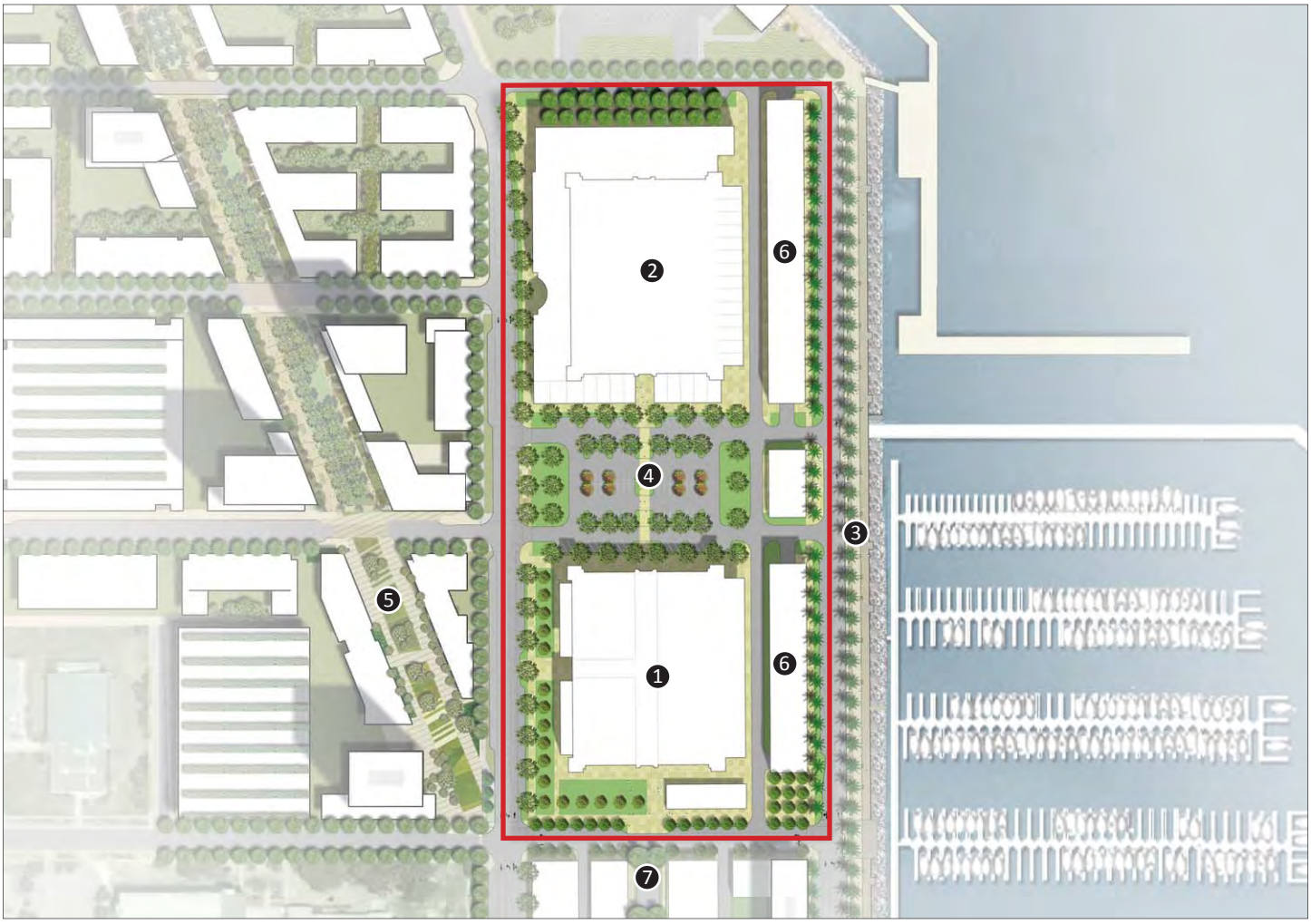
Grading and Drainage
- As defined by General Requirements.

Soil Preparation & Fine Grading
- As defined by General Requirements.

Planting
- Relocated existing olive trees placed along California Street façade.
- Low Planting used along the base of the building with native grasses and shrubs.

Irrigation
- Fully Automatic system for all planting areas and trees.

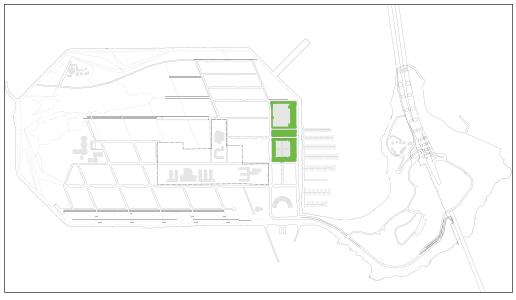
Furnishing
- Built-in site seating elements will be integrated at select locations.
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Information kiosk and wayfinding signage



N 0 200

BUILDING 2 AND 3 PLAN

1. BUILDING 2
2. BUILDING 3
3. CLIPPER COVE PROMENADE
4. PUBLIC PARKING LOT
5. EASTERN COMMON
6. RESIDENTIAL BUILDING
7. RETAIL STREET



Hilltop Park

The exceptional location of the Hilltop Park is intended to be programmed and designed as a local and regional destination with picnic facilities, view overlooks, open lawn areas, and recreation amenities. Prevailing wind orientation, topography and views shall be addressed as part of the park design. Universal access and visitor parking will also be incorporated into the park design.

PROGRAM & DESIGN CHECKLIST

(Items Required by the TI & YBI Design for Development)

- A 5.3 acre regional park that supports picnic areas, overlooks and flexible use areas.
- Parking for 6 - 12 vehicles shall be provided on or off street.

LANDSCAPE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving
- Integral colored concrete for pedestrian walkways and plazas.
- Unit pavers for areas highly visible plazas.
- Poured in place concrete stairs

Lighting
- Path Lighting
- General Area Lighting

Grading and Drainage
- As defined by General Requirements.
- Grading to minimize disturbance of existing features and walls.

Soil Preparation & Fine Grading
- As defined by General Requirements.

Planting
- Retaining existing healthy trees where possible.
- Native grasses and ornamental planting in all landscape areas.
- Drought resistant turf grass at all open lawn areas.

Irrigation
- Fully Automatic system for all planting areas and trees.

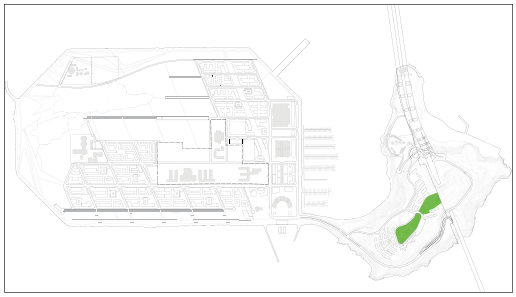
Furnishing
- Picnic Tables
- Barbecue grills
- Litter and Recycling receptacles
- Bicycle Racks
- Information kiosk and Wayfinding Signage

Open Space Facilities and Amenities
- Play Area, including fencing, play equipment, and resilient surfacing.

N 0 200

HILLTOP PARK PLAN

1. HOTEL SITE
2. FLEXIBLE PLAZA
3. LOOKOUT POINTS
4. PUBLIC PARKING
5. FLEXIBLE LAWN SPACE
6. PLAY AREA



Beach Park

The Beach Park will provide access to Clipper Cove and be accessed from a parking lot and pedestrian pathway off of Treasure Island Road.

PROGRAM & DESIGN CHECKLIST

(Items Required by the TI & YBI Design for Development)

- Improved beach access to be provided.
- Existing lot to be resurfaced to accommodate 8 parking stalls.

LANDSCAPE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving
- Integral colored concrete, asphalt and/or stabilized crushed stone paths for pedestrian pathways.

Lighting
- Path Lighting

Grading and Drainage
- As defined by General Requirements.
- Grading to minimize disturbance of existing topography.

Soil Preparation & Fine Grading
- As defined by General Requirements.

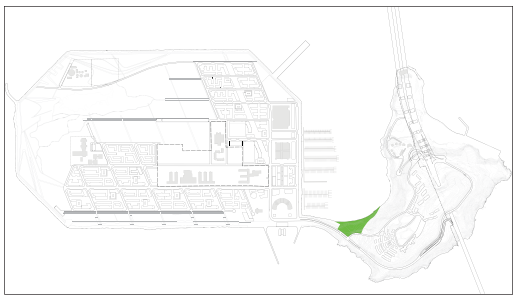
Planting
- Retaining existing healthy trees where possible.
- Native grasses and ornamental planting.
- Drought resistant turf grass at all open lawn areas.

Furnishing
- Beach Access Stair
- Benches
- Litter and Recycling receptacles
- Bicycle Racks
- Interpretive & Wayfinding Signage
- Picnic Tables
- Controlled Access: Signage and/or fencing to protect existing beach habitat areas as identified in the YBI HMP (final type and extent of access control to be determined).

N 0 200

BEACH PARK PLAN

1. OPEN LAWN WITH PICNIC AREA
2. PARKING LOT
3. BEACH ACCESS STAIRWAY
4. BEACH
5. BAY TRAIL
6. POTENTIAL SITE FOR BUILDING 10 RELOCATION



Yerba Buena Island Trails and Overlooks

This Open Space Plan includes the trails, overlooks and developed open space areas that will be provided as part of the project. The trail and overlook improvements will provide pedestrian access to key opens space areas and overlook points on Yerba Buena Island. Trails range in scale from casual hiking paths to paved lookout locations.

PROGRAM & DESIGN CHECKLIST

(Items Required by the TI & YBI Design for Development)

- Existing trails shall to be maintained and refurbished.
- New pedestrian trails to be added to connect open space areas.

LANDSCAPE IMPROVEMENTS

(Items consistent with the Design for Development)

Paving

- Trails range from stabilized dirt paths to concrete paving.

Grading and Drainage

- Trail and Overlook grading to minimize disturbance of existing topography.
- Trail drainage and diversion features to minimize and prevent erosion.

Planting

- Native erosion control seeding and erosion control measures at all disturbed grades.
- Native planting at overlooks.

Irrigation

- Temporary as needed for plant establishment.

Furnishing

- Benches

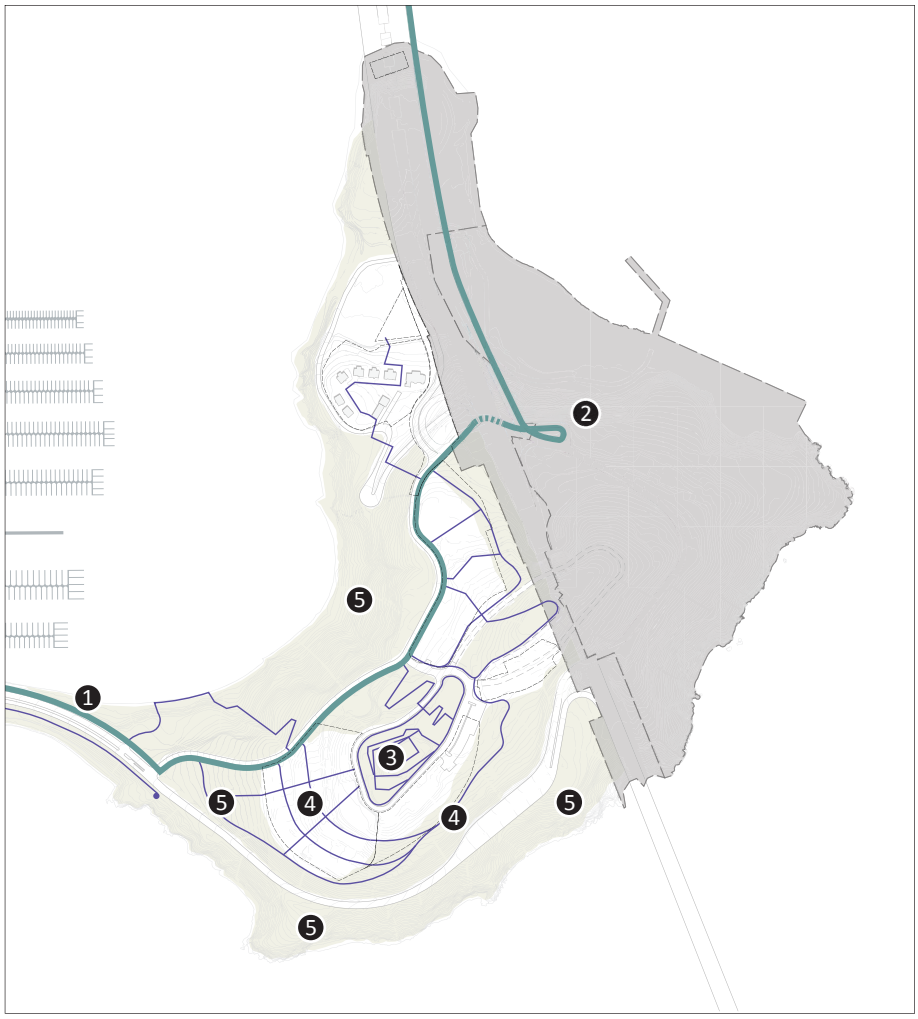
Special Features

- (5) Overlooks at selected locations, including paving, seatwalls, benches, signage, and litter receptacles.

YERBA BUENA ISLAND HABITAT MANAGEMENT

The initial development phase would include specific habitat management efforts carried out by TICD, as part of the master development of the Island. This would likely include efforts associated with site preparation and infrastructure improvements in areas adjacent to the proposed development parcels and/or public rights-of-way. In addition, the Redevelopment budget for the Redevelopment Plan includes funding that could be used, at the discretion of TIDA, either to complete additional habitat management projects on YBI, and/or as seed money to found a parks and open space conservancy organization that would, in part, help to coordinate and manage the implementation of the Yerba Buena Island Habitat Management Plan (HMP) over the long term. Ideally, the initial funding would also allow for the most pressing restoration, enhancement and preservation efforts to be implemented by a professional restoration contractor, as identified in the HMP, Section III, Management Plan Priorities. TICD would also provide funding for on-going operations and maintenance of HMP areas in accordance with a fixed-schedule of payments as specified in the Financing Plan attached to the DDA.

* Refer to Yerba Buena Habitat Management Plan for restoration and vegetation management.



YERBA BUENA ISLAND TRAIL NETWORK

1. BAY TRAIL
2. EAST SPAN CONNECTION
3. HILLTOP PARK
4. PATHS AND TRAILS
5. HMP OPEN SPACE AREA

Yerba Buena Island HMP Open Space

YERBA BUENA ISLAND HABITAT MANAGEMENT

The initial development phases would include specific habitat management efforts carried out by the Developer as part of the master development of the Island. This would likely include efforts associated with site preparation and infrastructure improvements in areas adjacent to the proposed development parcels and/or public rights-of-way. Work would be carried out over time as adjacent parcels are developed.

The Redevelopment budget for the Redevelopment Plan includes funding that could be used to complete habitat management projects on YBI and/or as seed money to found a parks and open space conservancy organization that would, in part, help to coordinate and manage the implementation of the Yerba Buena Island Habitat Management Plan (HMP) over the long term.

The summary project pro forma includes approximately $3.5 MM ($2010) for habitat management and restoration. This budget would allow for the most pressing restoration, enhancement and preservation efforts to be implemented by a professional restoration contractor, as identified in the HMP, Section III, Management Plan Priorities. The summary project pro forma has assumed that ongoing habitat maintenance will cost approximately $350,000 per year.

TIDA and the Developer have developed a joint budgeting and funding process for the long-term management and maintenance of open space in the project, including the maintenance and management of habitat. Funding for habitat management may come from a variety of sources, including developer subsidy and property taxes generated by the Community Facilities District funding. This funding process is outlined in the Financing Plan attached to the DDA.

* Refer to Yerba Buena Habitat Management Plan for restoration and vegetation management.

YERBA BUENA ISLAND TRAIL NETWORK

1 HMP OPEN SPACE AREA

Cityside Neighborhood Parks

The Cityside Neighborhood Parks together with the Shared Public Way, a new street typology that prioritizes pedestrian travel over vehicles, will offer a rich and vibrant pedestrian and open space network within the Cityside Neighborhood. As the Shared Public Way meanders through the residential neighborhood the neighborhood parks are intended to serve the outdoor recreational and social space needs of the adjacent residents with a range of program elements varying from tot-lots and picnic areas to passive gardens.

Each neighborhood park is intended to have a distinct character and programmatic function. Building materials and practices are encouraged to be as sustainable as possible and consider long-term maintenance, durability, and energy utilization. The scale and program of each park is intended to reinforce the primacy of the pedestrian and promote social interaction. The parks will be designed so that they are oriented towards and integrated with the nearby Shared Public Way pedestrian street, rather than the adjacent residential building entrances.

The Design for Development establishes two types of Neighborhood Parks with varying scale and program. Neighborhood Parks Type 1 should be sized and laid out to provide areas for small group gathering, picnic areas and gardening and play areas. The larger Neighborhood Parks Type 2 should be sized and laid out to provide areas for active use by groups of children and families.

PROGRAM & DESIGN CHECKLIST
(Items required by Design for Development Standards)

- Program activities that emphasize adult passive recreation, active child play areas, social gathering and gardening.

LANDSCAPE ELEMENTS
(Items consistent with the Design for Development)

*The Cityside Neighborhood Parks may be constructed above below grade parking areas for adjacent residential development and therefore the improvements outlined in this section shall be required as part of the vertical development concurrent with completion of the adjacent parcel development. Temporary neighborhood park improvements will be provided as needed to ensure a cohesive and complete public realm.

Paving

- Integral colored concrete and/or unit pavers for pedestrian paths and plaza areas.
- Crushed stone paving and/or permeable pavers in low intensity use areas.

Lighting
- Path Lighting
- General Area Lighting

Grading and Drainage
- As defined by General Requirements.

Soil Preparation & Fine Grading
- As defined by General Requirements.

Planting
- Shade trees
- Ornamental Planting
- Stormwater planters
- Turf for play areas is allowed

Irrigation
- Fully Automatic system for all planting areas and trees.

Furnishing
- Benches
- Litter and Recycling receptacles
- Bicycle Racks

Open Space Facilities and Amenities
- A total of (2) Tot lot/play areas located in Type 2 parks, including fencing, play equipment, and resilient surfacing.

N 0 1000

NEIGHBORHOOD PARKS

1. SHARED PUBLIC WAY
2. ADJACENT DEVELOPMENT PARCEL
3. ORNAMENTAL PLANTING
4. LAWN AREA
5. PLAY AREA / GATHERING AREA

TYPE 1 NEIGHBORHOOD PARK

TYPE 2 NEIGHBORHOOD PARK

OPENSPACE IMPROVEMENTS – GENERAL REQUIREMENTS

Codes and Regulations

Applicable Codes and Regulations: The Open Space Improvements will comply with all applicable codes and regulations including but not limited to:

Americans with Disabilities Act (ADA)
California Building Code, Title 24
San Francisco Building Code
San Francisco Mayor's Office on Disability (MOD), Accessibility Policies

Standards and References:

American with Disabilities Act, Accessibility Guidelines (ADAAG)
Illuminating Engineer's Society (IES), Standards for Lighting Exterior Environments
American Nursery and Landscape Association, Standard for Nursery Stock, ANSI Z.60.1

GENERAL REQUIREMENTS

Paving

Materials for paving and pathways will be selected to reinforce the design intent and identity of the park, minimize environmental impact, and maximize durability, longevity and ease of maintenance. These materials may include recycled and salvaged materials such as reclaimed crushed or slab concrete, reclaimed wood, and re-purposed steel bollards and rails. The type and extent of paving will be based on specific program requirements for each open space type and area. Paving improvements will include sub-grade preparation, compaction, and sub-base materials to ensure a durable paving section consistent with proposed uses and loads. Paving surfaces for accessible routes of travel shall be compliant with CBC, Title 24 and ADA requirements for accessibility and slip resistance.

Lighting

Lighting for each open space area and use will be designed to provide illumination for general safety and security as defined by the Illuminating Engineers Society (IES) Standards for Lighting Exterior Environments. Light fixtures will be selected based on suitability for use in public open spaces based on durability, lamp life, and maintenance considerations.

The following site lighting types will be provided as designated in the description of each open space area:

- Path Lighting: Pedestrian scaled pole lights and other fixtures suitable for lighting linear paths of travel.
- General Area Lighting: Pedestrian scaled pole lights and fixtures suitable for lighting gathering areas.
- Parking Area Lighting: General parking area illumination with pole heights ranging from 16 -30 feet.
- Accent and Special Feature Lighting

Fixture Standards and Submittals: Fixture standards for each open space type and area will be developed and submitted as part of the Design Review process.

Grading and Drainage

Earthwork operations and rough grading for each open space area will be coordinated with the Infrastructure Plans and mass grading operations. Grading and storm drainage will be provided

in all open space areas to provide for positive drainage and conveyance of stormwater runoff. The type and extent of storm drainage shall be consistent with standard practices for the proposed landscape types and uses with higher a higher intensity of grading and drainage in smaller parks and planting areas and limited drainage in large open space areas.

Stormwater Treatment

Stormwater treatment best management practices shall be integrated into open space areas as needed to treat open space stormwater flows. The specific type, location, and size of the best management practices will be addressed in the Stormwater Control Plan(s) submitted with each of the Major Phase Applications.

Soil Preparation and Fine Grading

Soil Preparation shall be provided for each open space area and major landscape type. Soil preparation operations shall include import topsoil and/or amendment of existing site soils as required to establish soil texture and fertility levels suitable for each planting type. Existing and imported soils will be tested to ensure suitability. Soil preparation materials and operations shall be consistent with the organic approach to soil and landscape management. Fine Grading and mulching will be provided in all planting areas.

Planting

Landscape planting shall be provided as designated in the description of each open space area. Plant selection will be specific to each location, based on micro climate and soil conditions and program. In general, park and open space plant selection will focus on native and climate-adapted species that require minimal water use and maintenance. Other factors that may influence plant selection include aesthetics, cultural significance, and habitat value.

The size and density of plantings will be consistent with industry standards for each planting type and will be installed to ensure adequate coverage for erosion control and aesthetic purposes. Minimum tree sizes in open space areas will be 15 gallon trees, with specific size requirements as defined by American Nursery and Landscape Association Standards. Landscape planting shall be consistent with the San Francisco Water Efficient Landscape Ordinance (WELO) and will generally use California native or adapted species that require low or infrequent water use. Lawn areas will be minimized and used only in areas where passive or recreational uses require a durable surface.

Irrigation

Landscape irrigation will be provided as designated in the description of each area. In general, high efficiency fully automatic, underground systems with piping, sprinkler heads, drip emitters, valves, controls, and moisture sensors, ET based controllers, central computer control systems will be provided. Irrigation systems shall be consistent with the San Francisco Water Efficient Landscape Ordinance (WELO).

Site Furnishings

Site Furnishings will be provided based on use and program requirements as designated in the description of each open space area. The quantity and location of site furnishings will be consistent with the intensity and type of use. Site furnishings will be of a consistent style and character and constructed of durable materials suitable for use in public open spaces.

Site Furnishing Standards and Submittals: Furnishing standards for each open space type and area will be developed and submitted as part of the Design Review process.

Special Features

Special Features and Amenities consistent with the Design for Development shall be provided as designated in the description of each open space area.

PARKS AND OPEN SPACE AND SHORELINE ACCESS

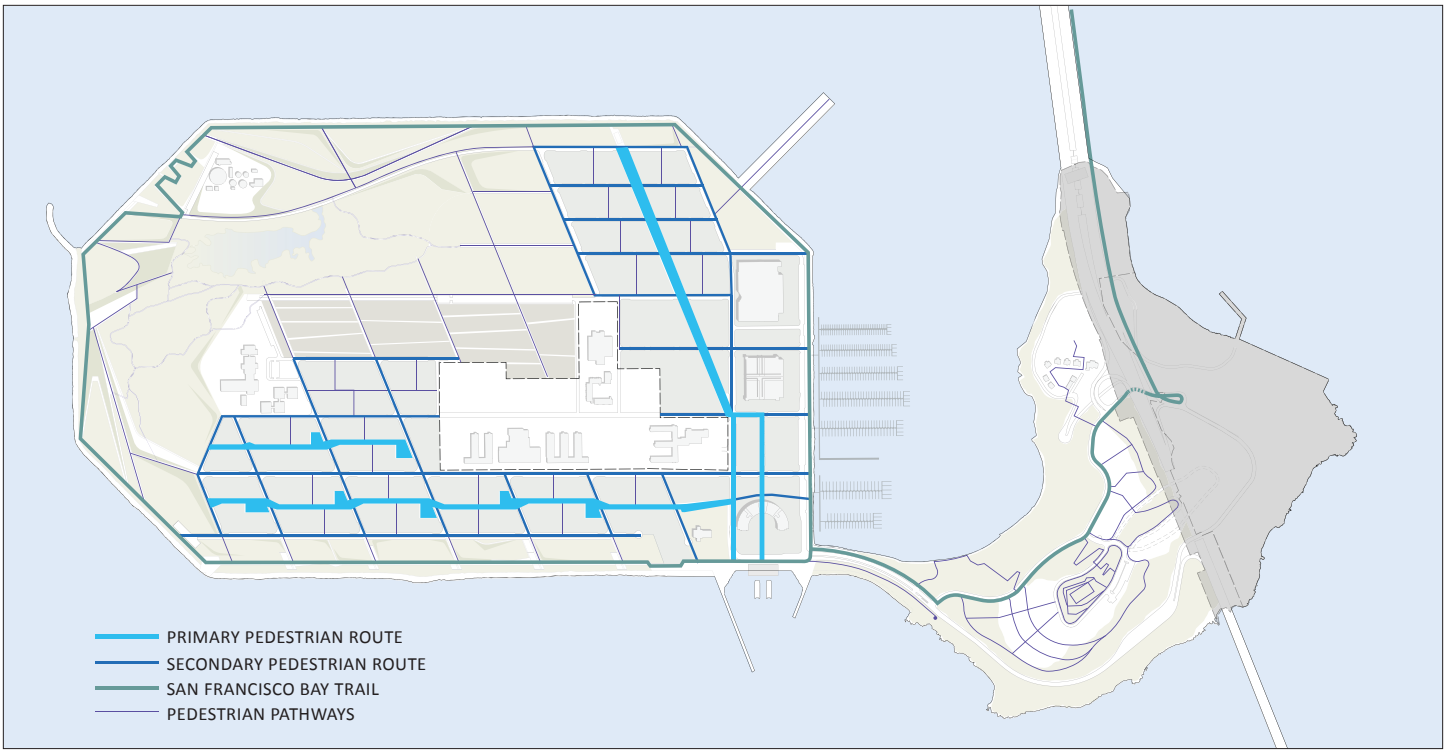
New parks and public spaces will be easily accessible to residents and visitors from other parts of the City and region. Pedestrian, bicycle, and transit improvements will provide sustainable modes of park and shoreline access. Bike and pedestrian access throughout and between park areas will be coordinated to provide continuous access. Note that extreme topographic challenges on Yerba Buena Island make direct bike and pedestrian trail connections more difficult. All open space areas will also be accessible by vehicles with parking facilities provided at key locations, for visitors arriving from more distant areas with large groups, and recreational gear and supplies. For more information on access transportation, and transit services refer to the Design for Development and Transportation Plan.

PEDESTRIAN NETWORK

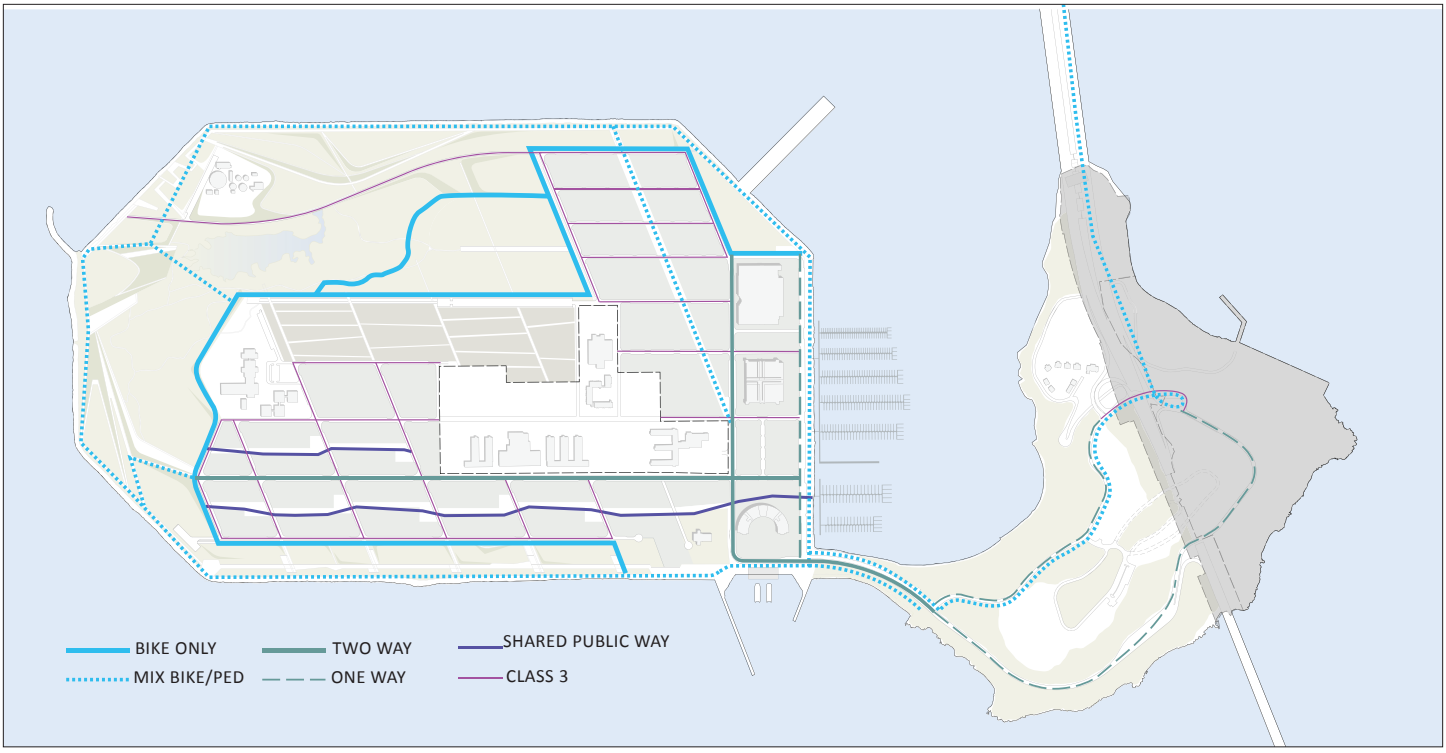
The Islands' various blocks, neighborhoods, parks, and other public spaces are connected by a diverse pedestrian network along a system of urban blocks. Its core consists of primary pedestrian routes leading from the Island Center and Intermodal Transit Hub through the retail area and out to the neighborhoods and open spaces. These primary routes are made up of pedestrian-focused shared streets, park blocks, and pedestrian boulevards intended to invite all-day and year-round use in an active, tree-lined, wind-sheltered environment. The primary pedestrian route leading north from the Transit Hub, called the Eastside Commons, will be a grand pedestrian boulevard connecting to the Eastern Shoreline Park. Primary pedestrian routes west from the Transit Hub will be on a smaller scale and more intimate in character, meandering through the interior of blocks along a number of pedestrian oriented Shared Public Ways. Secondary pedestrian routes, many of them along the Islands' neighborhood streets, enable pedestrians to walk from neighborhood to neighborhood and explore the island. They link directly out to regional open spaces and the Bay on both Treasure Island and Yerba Buena Island. The San Francisco Bay Trail wraps the perimeter of Treasure Island and connects Yerba Buena Island to the Bay Bridge and the bike and pedestrian route to Oakland, via a separated Class 1 multi-use pedestrian/bicycle facility.

BICYCLE FACILITIES

Island planning began with a focus on pedestrians and bicyclists, resulting in a transportation network that provides convenient non-motorized access to all areas of the islands. A Class One bikeway encircles the Island, providing dedicated bicycle access and a full touring route to all shoreline parks and open spaces. Certain Class One routes are shared with pedestrians, primarily around the edge of Treasure Island. Class Two routes are present on many of the Island's streets, with shared bicycle and vehicular lanes on low-speed neighborhood streets. Bicycles are a key transportation option on the islands. Routes are designed to invite riders of all ages and capabilities for trips that range from a daily commute, to a school trip, to convenient shopping and casual recreation. Facilities and services to support bicycle use – such as bike parking, storage, servicing and a bike library – are an integral part of neighborhood and individual building planning.



PEDESTRIAN NETWORK



BICYCLE NETWORK

TRANSIT SERVICE

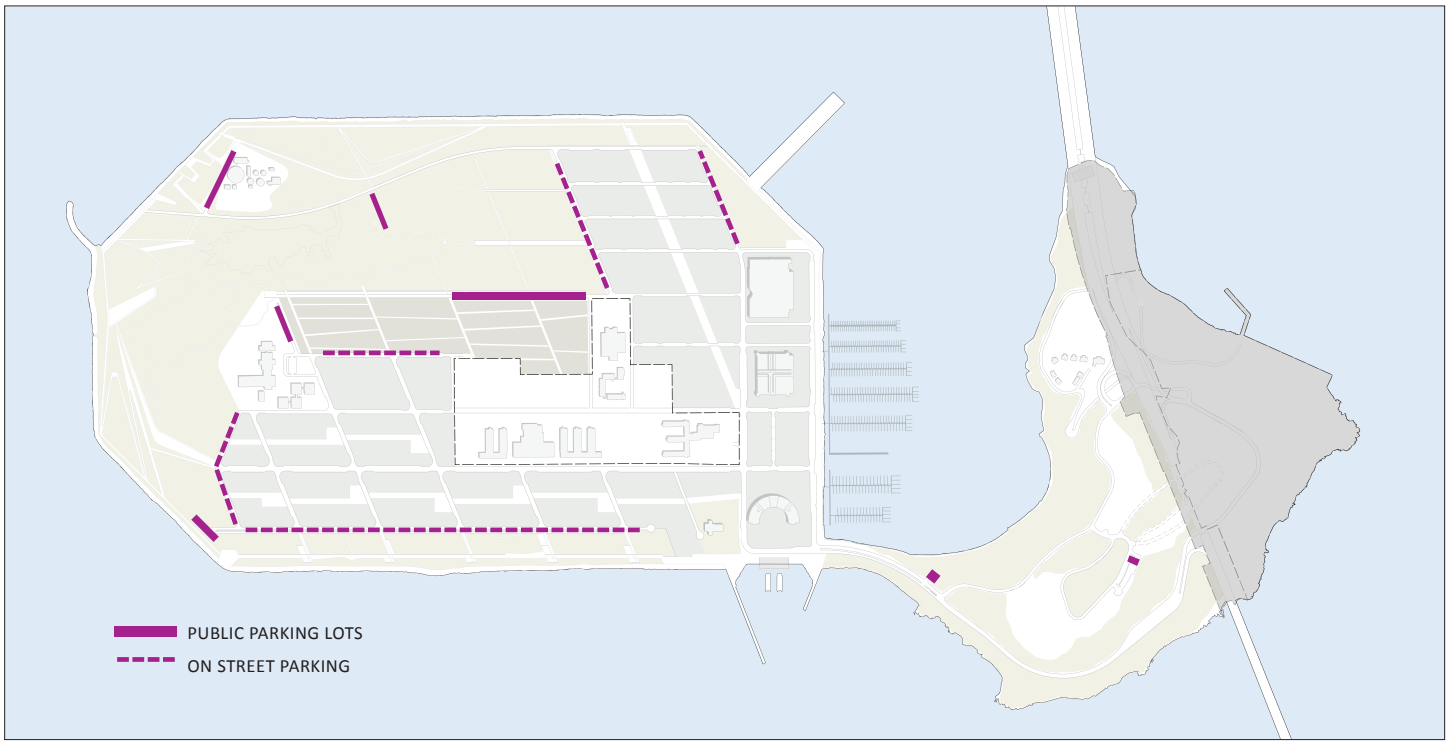
The use of public transportation by significant numbers of visitors, residents, and workers on the islands is essential to meeting sustainability commitments, providing economic opportunity, and providing regional access. The objective is to provide an efficient, attractive hub for transit in the Island Center District, located at the point of arrival from the Bay Bridge and at the junction of the two Islands. An intermodal transit facility will connect all regional, off-island transportation services such as buses and ferries with on-island services such as shuttles, bicycles and attractive pedestrian routes. The intermodal facility is planned to include a ferry terminal facing the historic Building 1 on the shore of Treasure Island. The transbay buses have stops and layover spaces on Island Center streets.

STREET SYSTEM

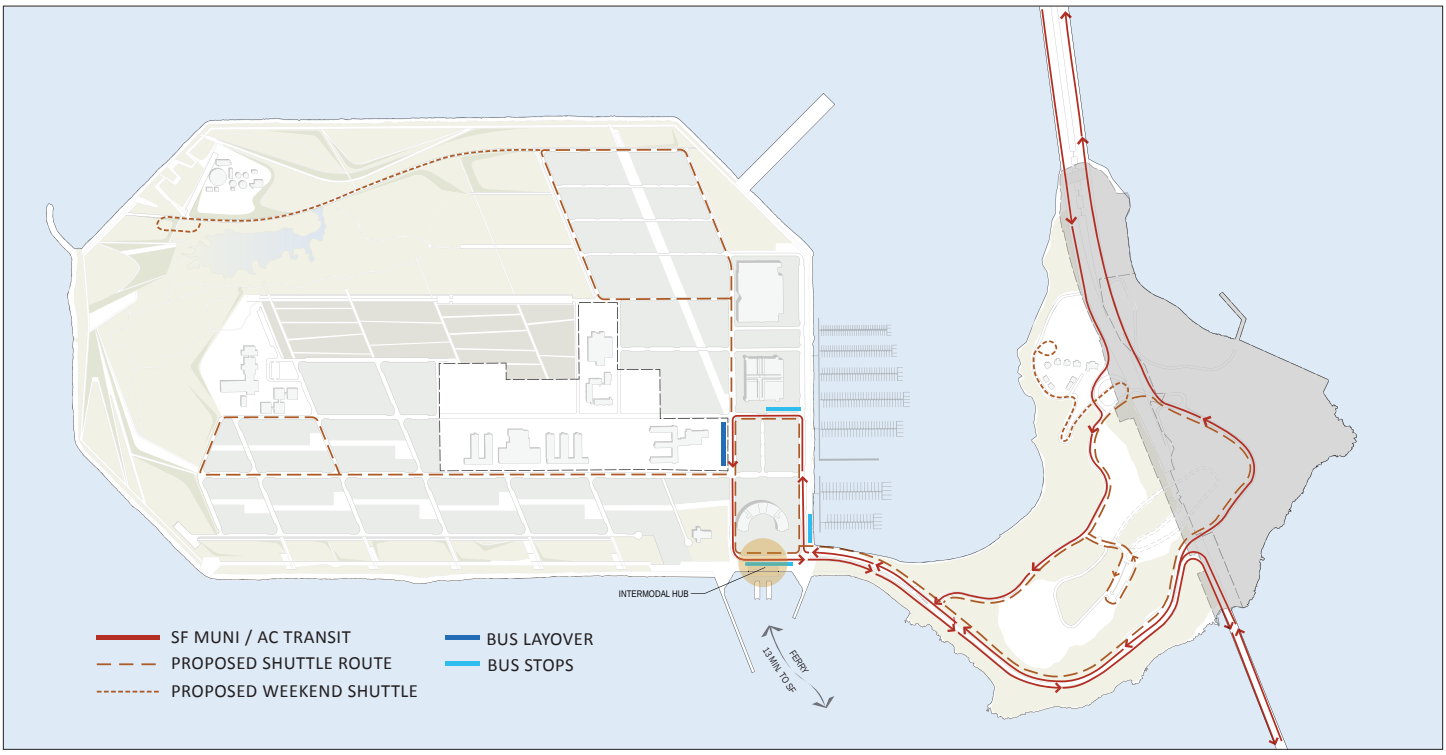
The hierarchy, pattern and design of streets reflect a commitment to a public realm designed first and foremost for bicyclists, pedestrians and transit services, while at the same time accommodating vehicular traffic. Primary access streets are gracious boulevards that provide primary vehicular access to the open space system. Angled neighborhood streets have significantly lower traffic volumes. They provide views, a dramatic orientation to the island setting and equal access into the neighborhoods for pedestrians, cyclists, and vehicles alike. Pedestrian-focused streets with limited vehicular access complete the network. The streets are designed as an integral part of the Islands' open space system and sustainable infrastructure.

OPEN SPACE PARKING AREAS

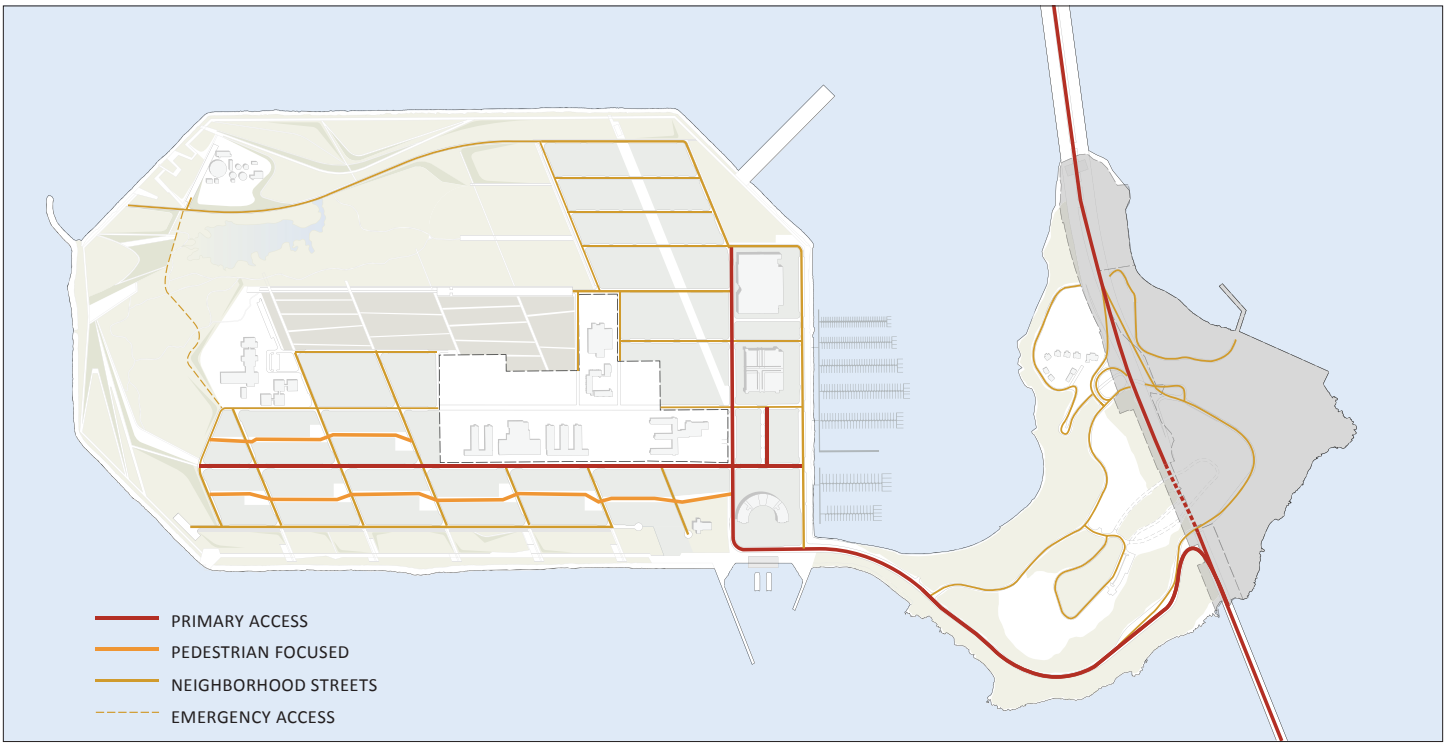
The following parking areas are provided for purposes of serving open space access and recreational uses: Northeast Shoreline Parking (100 spaces), Northwest Shoreline Parking (100 spaces), Sports Park (qty pending final program). Parking access has been limited to encourage transit use. Parking counts for each location will be finalized based on further development of the program and consultation with user groups during the design phases. In addition to these designated parking areas on-street parking is provided along the Cityside Park, Eastern Shoreline Park, and Clipper Cove Promenade.



OPEN SPACE PARKING AREAS



TRANSIT SERVICE



STREET SYSTEM

Attached Originally to the Design and Development Agreement (DDA),As Exhibit GG 2011

SEA LEVEL RISE OPEN SPACE STRATEGIES

Background

Despite a growing global concern and efforts to minimize our carbon footprint, forecasts show that climate change and sea level change have occurred throughout geologic times, and are inevitable in the future. While the severity and speed of sea level rise remains an area of some uncertainty, it is prudent for new development in low-lying areas to consider grading schemes and sea level rise strategies that offer protection for the near- to mid-term horizon, and the flexibility to adapt over the long-term. Currently, there are no City policies or regulations establishing specific elevations necessary to protect the Bay edge.

Moffatt & Nichol, who are the shoreline engineers for the Treasure Island project, developed a comprehensive approach to address future sea level rise. The strategy recognizes guidance from the 2009 Draft Climate Adaptation Strategy report prepared by by the California Natural Resources Agency, the 2009 Living With a Rising Bay report by BCDC, project-specific coastal studies, an extensive review of the literature, and discussions with other City agencies (including SFPUC and DPW). Since the proposed redevelopment project is too large of a project to rely solely on empirical studies or report, the overall approach is to:

-Design and build a project perimeter at an elevation such that high tides, waves, surges, as well as a mid-term rise in sea levels (defined in the above referenced reports as 16 inches by 2050) can be accommodated without any additional adaptation measures until at least the year 2050 and possibly beyond;

-Design and build all significant assets such as building structures and infrastructure at an elevation that is over 3 feet higher than what is required today for a 100-year level flood protection,

-Create a project-specific Adaptation and Funding Strategy for the long-term (defined in the above referenced reports as 55 inches by 2100) that can be implemented after sea levels have risen 16 inches.

The project's Open Space Plan incorporates the following elements to address sea level rise:

Development Strategy

The shoreline edge will be raised to an average elevation of 14' - 16' above NAVD, to protect from tides, storm surges, waves, and tsunamis (the 1% annual chance flood elevation). Based on current projections, this additional elevation would limit the need to make any future shoreline height adjustments during the next 40 to 50 years. In order to provide maximum public access and views to the bay, elevate the pathways and trails along the shoreline such that the perimeter would not obstruct views.

Adaptive Management Strategy

The design of the park system is based upon the ability to respond to future rising sea levels by reserving an adaptive management zone along the island edge. In some areas this zone will allow for waters to rise and new wetland habitats to form. In other areas the zone will allow for mounding up to create protective embankments.

Site-Specific Solutions

It is important to recognize that the diagrams of the development strategy and adaptive management strategy are necessarily generic. Considering the varied environmental, structural, and topographic conditions that exist along the shoreline, the specific improvements that are necessary will result in a large variety of solutions and cross-sections.

SEA LEVEL RISE STRATEGY AREAS

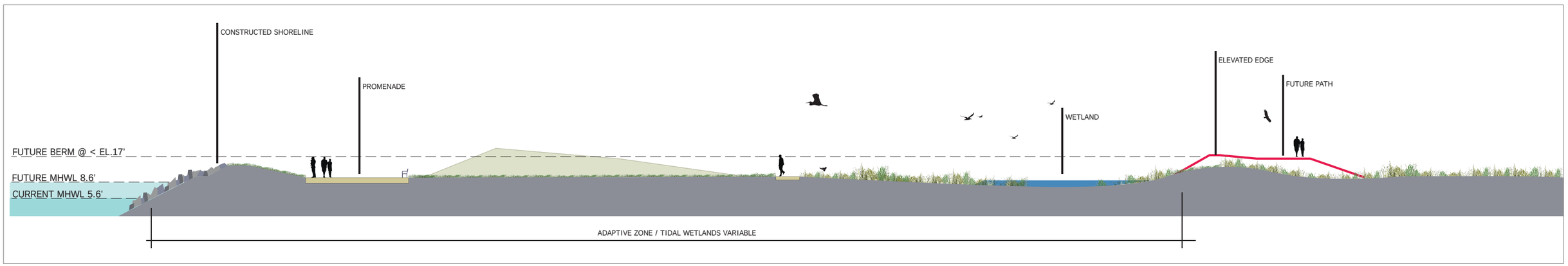
- CITYSIDE WATERFRONT PARK AND EASTERN SHORELINE PARK SEA LEVEL RISE STRATEGY
- NORTHERN SHORELINE PARK AND THE WILDS SEA LEVEL RISE STRATEGY
- CLIPPER COVE PROMENADE SEA LEVEL RISE STRATEGY

PROPOSED CITYSIDE WATERFRONT PARK AND EASTERN SHORELINE PARK IMPROVEMENTS

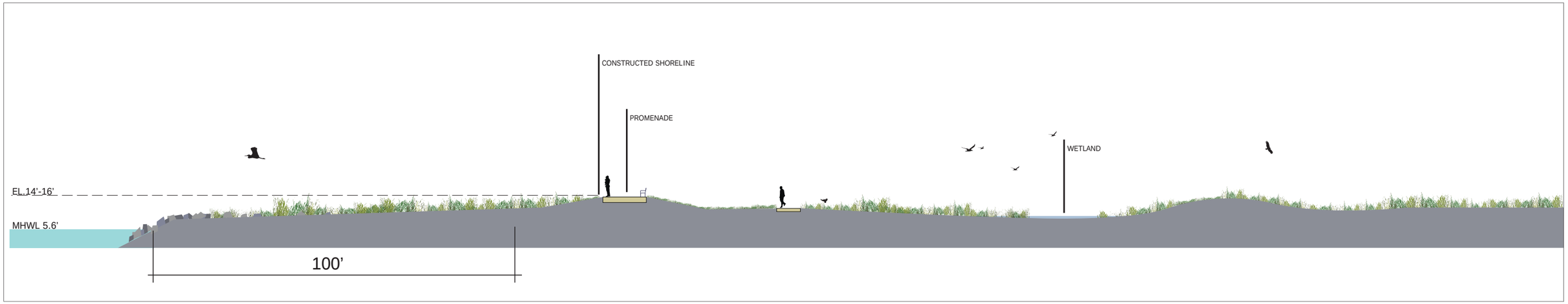
ADAPTIVE STRATEGY FOR CITYSIDE WATERFRONT PARK AND EASTERN SHORELINE PARK

PROPOSED NORTHERN SHORELINE PARK IMPROVEMENTS

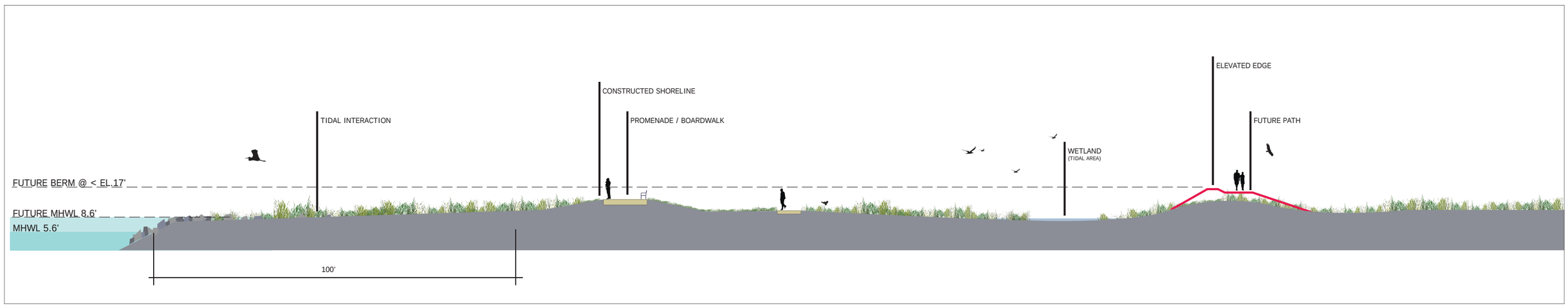
NORTHERN SHORELINE PARK ADAPTIVE STRATEGY ALTERNATE -1



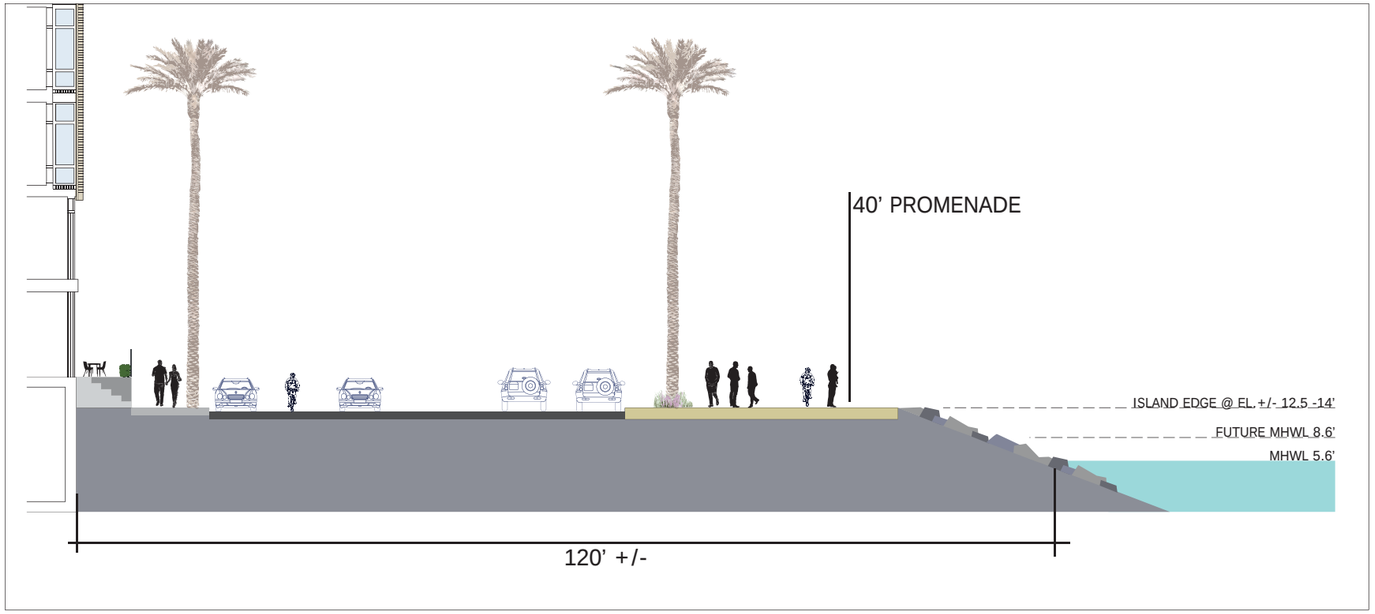
NORTHERN SHORELINE PARK ADAPTIVE STRATEGY ALTERNATE -2



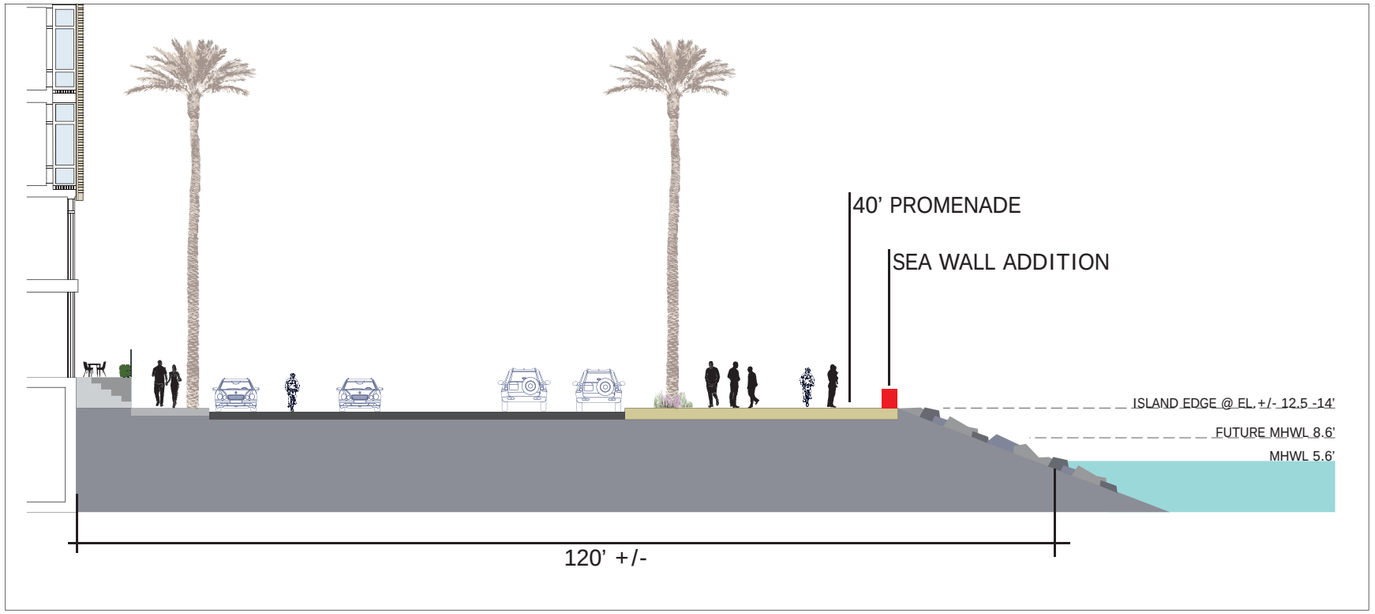
NORTHERN SHORELINE PARK ADAPTIVE STRATEGY ALTERNATE -4



NORTHERN SHORELINE PARK ADAPTIVE STRATEGY ALTERNATE -4



PROPOSED CLIPPER COVE PROMENADE IMPROVEMENTS



CLIPPER COVE PROMENADE ADAPTIVE STRATEGY

ISLAND MANAGEMENT ZONES

- TIDA OWNERSHIP AND MANAGEMENT
- SAN FRANCISCO PUBLIC UTILITIES COMMISSION (FINAL SIZE AND LOCATION TO BE DETERMINED)
- SCHOOL DISTRICT SITE
- TI HOA OWNERSHIP AND MANAGEMENT
- TI HOA MANAGEMENT

OWNERSHIP AND MANAGEMENT

Ownership of Treasure Island and Yerba Buena Island will pass from the Navy to the Treasure Island Development Authority once the Navy has completed any environmental remedial actions necessary to support the LAND TRANSFER. In turn, the Treasure Island Development Authority will transfer to TICD all land intended to be sold to third party developers, and TIDA will own all affordable housing parcels, streets and roadways, and the parks and open space. Within the parcels transferred into private ownership, various parks, plaza's and open spaces will be developed and available for use by the residents and visitors pursuant to this Open Space Plan and the Design for Development. These parks and open spaces - such as the Cityside Neighborhood Parks - will be owned and/or managed a by a Treasure Island Home Owners Association (TIHOA) or adjacent commercial development.

TIDA will be responsible for the operations and management all of the public open space and recreation facilities during and following the development process. The operations and maintenance of the Parks and Open Space on privately owned lands will be responsibility of the property owners. It is anticipated that TIDA may elect to contract with future project partners or service providers to provide park management, recreational and cultural programming, and operations and maintenance services.

As noted below, the formation of a Parks Conservancy that would program and manage parks and open spaces may serve an important role as part of the Open Space program. TICD and TIDA will continue to work with stakeholders and potential project partners to address open space programming, operations and management.

PROJECT AND PROGRAM PARTNERS

In addition to existing on-island organizations there are opportunities for future coordination, partnerships, or concession opportunities with organizations and projects such as the following:

Non-Profit Organizations
Urban Agriculture/Farm Operator
Sports leagues and groups
Ecology and habitat restoration groups
Environmental education groups
Museums/historical societies
Neighborhood and Community Organizations
Neighborhood and Community Associations
Ecology and habitat restoration groups

Concessions and Vendors
Sports and recreation facility operators
Water access concessions such as kayaking
Bicycle and skating (rental, bike sharing programs)
Café and food vendors
Event producers (performances and events)

Potential Parks Conservancy
In addition to coordination with individual organizations, TIDA could form a Parks Conservancy to manage and operate all or some of the open space and recreational resources.

The Conservancy would be a private, 501c3 non-profit, park-benefit organization that raises funding independent of TIDA and manages it under a plan of action that is mutually agreed upon with TIDA. The Conservancy would not own any parkland; the land would continue to remain in the ownership of TIDA, and TIDA would retain ultimate authority over everything that happens there. The Conservancy could be involved with the whole suite of parkland activities, from planning through capital construction to maintenance. The relationship between TIDA and the Conservancy would be defined in a memorandum of understanding or a contract that defines the roles and responsibilities between TIDA and the conservancy.

Public Agencies
The final park design will require coordination with a variety of public agencies, including the Bay Conservation and Development Commission (BCDC), the Association of Bay Area Governments Bay Trail Project, Mayors Office on Disability, and the State Lands Commission.

OPERATIONS AND MANAGMENT RESPONSIBILITIES

TICD has prepared a budget for the capital costs of the parks and open space program described in this Parks and Open Space Plan. The costs, in constant 2010 dollars excluding any associated design, permitting, bonding and management costs, are estimated to be $85.5M. Costs are expected to be spent proportionally in each phase of development, although the Developer's budget concludes that a disproportionate share (35%) of the capital will be spent in the first Major Phase of development on Treasure Island to support areas such as the Ferry Plaza and Clipper Cove Promenade.

TIDA and the Developer have developed a joint budgeting and funding process for the long-term management and maintenance of open space in the project. Funding for operating costs will come from a variety of sources including; developer subsidy; property taxes generated by the Community Facilities District financing; residential, commercial and master home owners' association dues; and interim operating revenues. This joint budgeting and funding process is explained in more detail in the Financing Plan attached to the DDA.

Approximately $80.5M, in nominal dollars, has been estimated for the operating and maintenance budget during the project development period. Total funding sources, including as estimated $18.5M funded through Developer subsidy payments, have been identified to be approximately $92.9M, or $12.4M more than the identified costs. Any excess in funds actually collected by TIDA above the required operating costs will be used to pay for other qualified project costs as described in the Financing Plan.

Long-term open space maintenance after the project has been developed is expected to be funded by a combination of property taxes collected through Community Facilities District financing and residential, commercial, and master home owners' association dues. As shown in the chart above, it is estimated that the total funding sources for operations and maintenance on an annual basis will be in excess of the actual funding need. In the event that funding sources are greater than the open space operating budget, any excess funds will be used to fund other eligible open space and community facilities improvements as directed by TIDA.

Open Space Type	Treasure Island Parks and Open Space: Operations & Management Entity / Funding Source					
	TIDA	Master HOA	Commercial District	3rd Party Operator	SF PUC / SF USD	SF DPW / HOAs
Northern Shoreline Park						
The Wilds						
Cityside Waterfront Park						
Eastern Shoreline Park & Pier 1						
Wetlands	Cost share w/ PUC				Cost share w/ TIDA	
YBI Open Space						
YBI Hilltop Park						
YBI Beach Park						
Eastside Commons						
Cityside Neighborhood Parks / SPWs						
Waterfront Plaza						
Building 1 Plaza						
Clipper Cove Promenade						
Marina Plaza						
Cultural Park	Cost Share w/3rd Party			Cultural Institution		
Recreation Sports Park				Community Operator(s)		
Urban Agricultural Park				Urban Ag Non-Profit		
Cityside Waterfront Park - Sculptural Garden	Cost Share w/3rd Party			Sculptural Park Org		
Senior Officers' Quarters Historic District				Center Operator		
Treasure Island Sailing Center Open Space				TI Sailing Center		
School Open Space						
PUC WWTP & 4-6 Acres						
Roadways and Streetscape Elements						

Parks + Open Space Areas Budget	Capital Costs		Operating Costs During Development		Long-Term Operating Costs (Annual) (1)	
Total Costs		**$ 85,500,000**		**$ 80,500,000**		**$ 9,100,000**
Costs funded by Interim Operating Budget				$ 5,500,000		$ -
Costs funded by Residential & Commercial HOA				$ 35,200,000		$ 3,900,000
Costs funded by Developer Subsidy		$ 85,500,000		$ 18,500,000		$ -
Available proceeds from CFD		$ -		$ 33,700,000		$ 12,700,000
Total Funding Sources		**$ 85,500,000**		**$ 92,900,000**		**$ 16,600,000**
Funding Surplus / (Shortfall)		**$ -**		**$ 12,400,000**		**$ 7,500,000**
(1) Long-Term Operating Costs are estimated costs in 2029 shown in inflated dollars						

EXISTING OPEN SPACE AND RECREATION FACILITIES

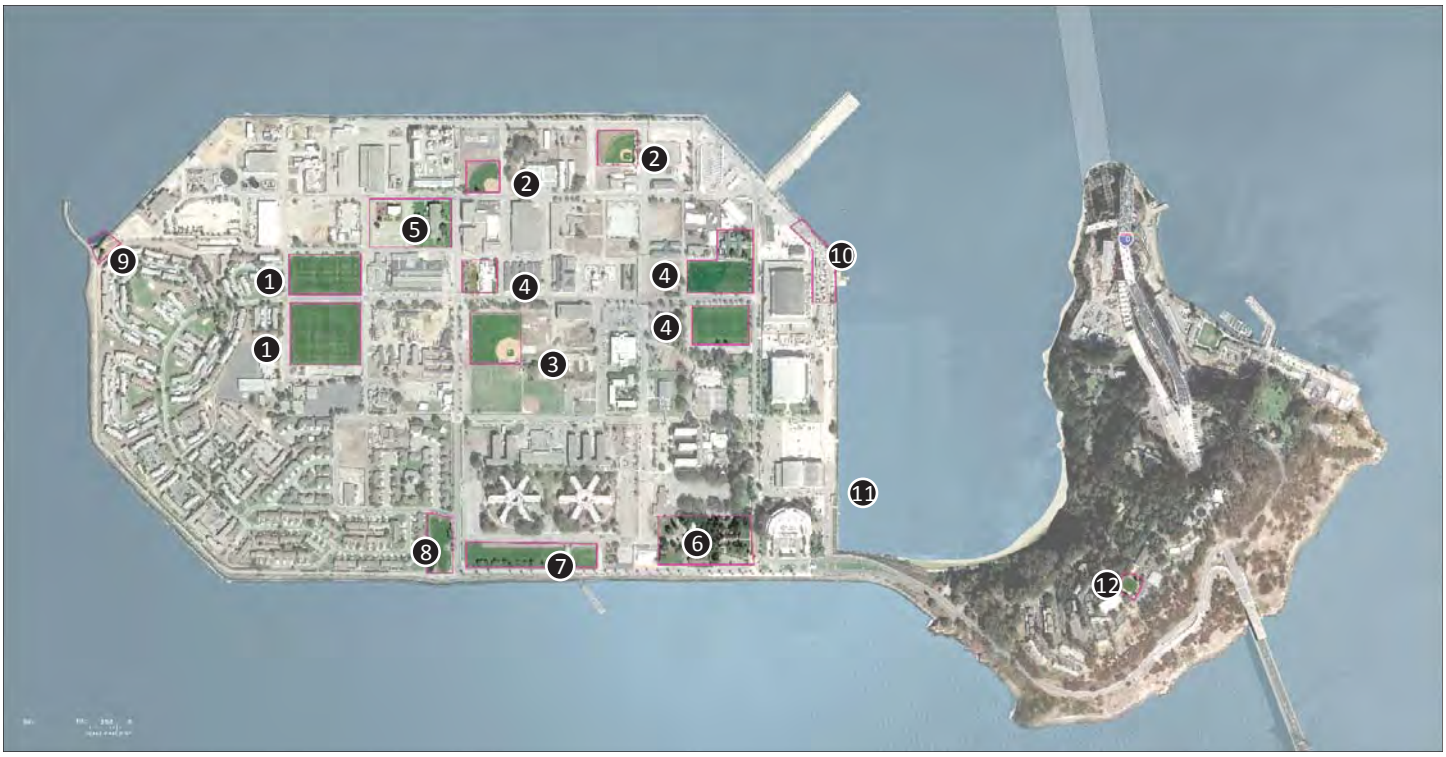
Treasure Island and Yerba Buena Island include several recreational and open space facilities that were constructed by the Navy, along with several new facilities that have been constructed or renovated by TIDA in partnership with non-profit organizations.

These include the existing Gym located in east central area of Treasure Island, several little league baseball fields located on the east side of the island, two Rugby fields, two Gaelic Football fields, and an existing softball field in the center part of the island adjacent the Job Corp campus.

In addition to these athletic facilities there are also several existing open space areas including the park area surrounding the existing Chapel and Library, the great lawn on the western edge of the island, and numerous smaller open spaces located in and around the existing housing area located at the northwestern corner of the island. On Yerba Buena Island, there are several small neighborhood park areas near the hilltop area, as well as large open space areas.

Many of the existing facilities and open spaces will be retained and operated throughout the early phases of infrastructure development. Several of the existing recreational field areas may also be incorporated in the Sports Park area based on further programming and design coordination during the design phases. The Gym facility will be retained as part of the Islands Open Space Facilities and integrated with the Sports Park as part of the final design phases.

To the extent feasible, TIDA will continue to work with existing recreational users to provide access and maintain operation of these facilities during build-out of the proposed project. TIDA will also continue to work with existing recreation users to idendify potential opportunities for them to particpate in the programming and operation of proposed recreational facilities.



EXISTING OPEN SPACES AND FACILITIES

1. GAELIC FOOTBALL FIELDS
2. LITTLE LEAGUE BASEBALL FIELD
3. ADULT BASEBALL / SOFTBALL FIELD
4. RUGBY FOOTBALL FIELDS
5. GYM BUILDING
6. CHAPEL AND LIBRARY
7. GREAT LAWN
8. PARK / PLAYGROUND
9. BOARD SAILING ACCESS
10. TI SAILING CENTER
11. MARINA
12. HILLTOP PARK

OPEN SPACE PHASING

The phasing of open space improvements are defined in the Schedule of Performance and Phasing Plan. In general, phasing of open space improvements will concur with development of adjacent parcels. Open space improvements shall be completed to ensure a cohesive and complete experience and public realm upon completion of each Sub-Phase. During the development period, certain areas of the project site may be inaccessible due to construction activities. Temporary pedestrian improvements could also be provided to ensure continuous shoreline access, as well as circulation to existing and new open spaces and facilities where possible. Additionally, there may be opportunities to partner with community groups to utilize undeveloped park spaces and for interim uses such as community gardens, an urban farm, or a plant nursery that could grow native plants and street trees that could be used on the project or elsewhere in San Francisco.

The Project Phasing is divided into five Major Phases of development as identified in the Phasing Plan. Each Major Phase includes sub-phases. Refer to the Schedule of Performance and Phasing Plan for a detailed description of Phasing Goals and requirements. An illustrative version of the Major Phases relative to existing conditions is included in the following pages.

FIGURE 43: PHASING PLAN (subject to modification)

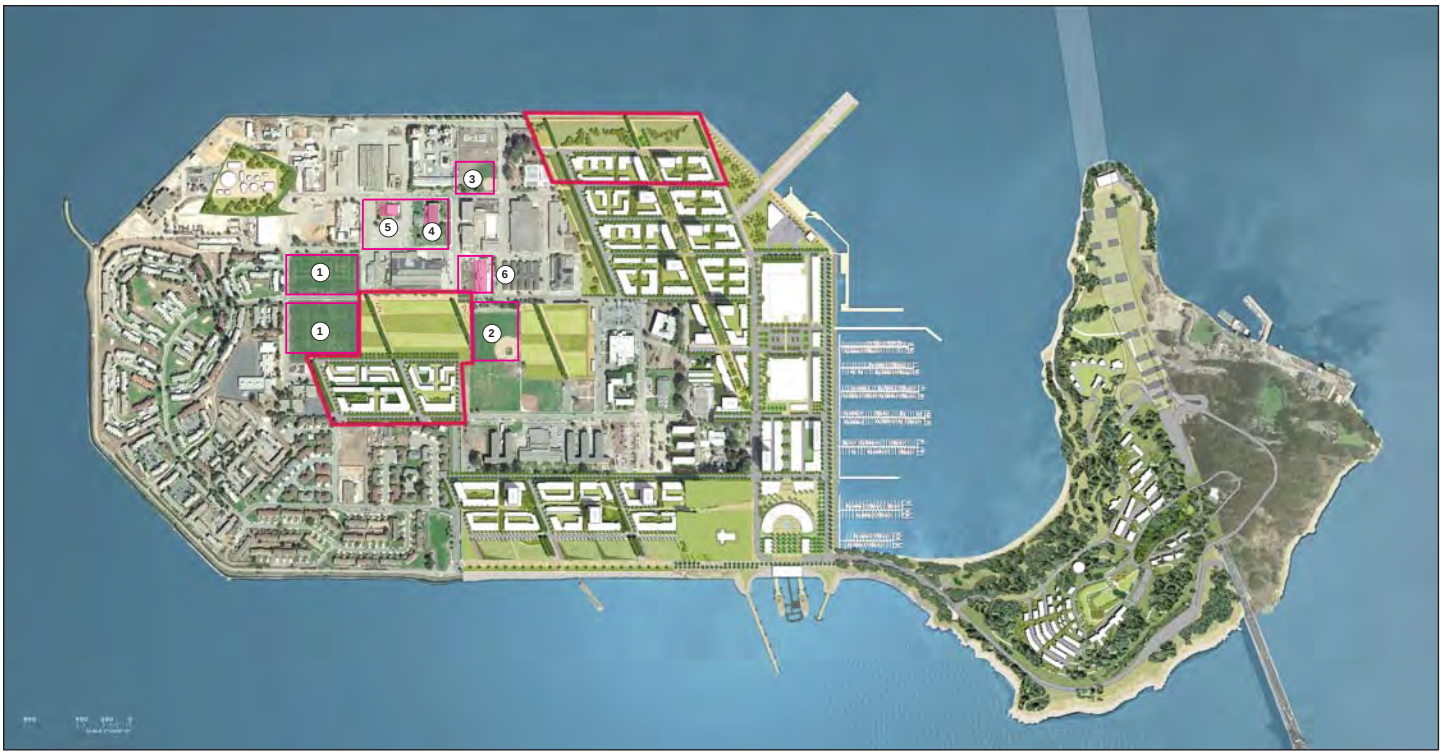
MAJOR PHASE 1
MAJOR PHASE 2
MAJOR PHASE 3
MAJOR PHASE 4

ILLUSTRATIVE PHASING (subject to modification)

EXISTING CONDITIONS

MAJOR PHASE 1

MAJOR PHASE 2



MAJOR PHASE 3

MAJOR PHASE 4

**Stormwater wetland grading and planting shall be completed a minimum of one growing season prior to connection to the storm drainage system and stormwater flows to ensure plant establishment and treatment function.*

Acknowledgments

Treasure Island Community Development

CMG Landscape Architecture
Mithun
Moffatt & Nichol
Perkins + Will
SOM
BKF Engineers

PARKS OPERATIONS & MAINTENANCE:

TIDA ITC - BUDGET REVIEW

TREASURE ISLAND & YERBA BUENA ISLAND

FEBRUARY 18TH, 2020

Operations & Maintenance Manual Goals

- Provide a comprehensive document that defines system-wide and park specific maintenance requirements and guidelines.

- Define ‘Levels of Service’ based on park location, program, and scale.

- Provide specific guidance for Management, Engineering, Landscape Maintenance, and Janitorial Services.

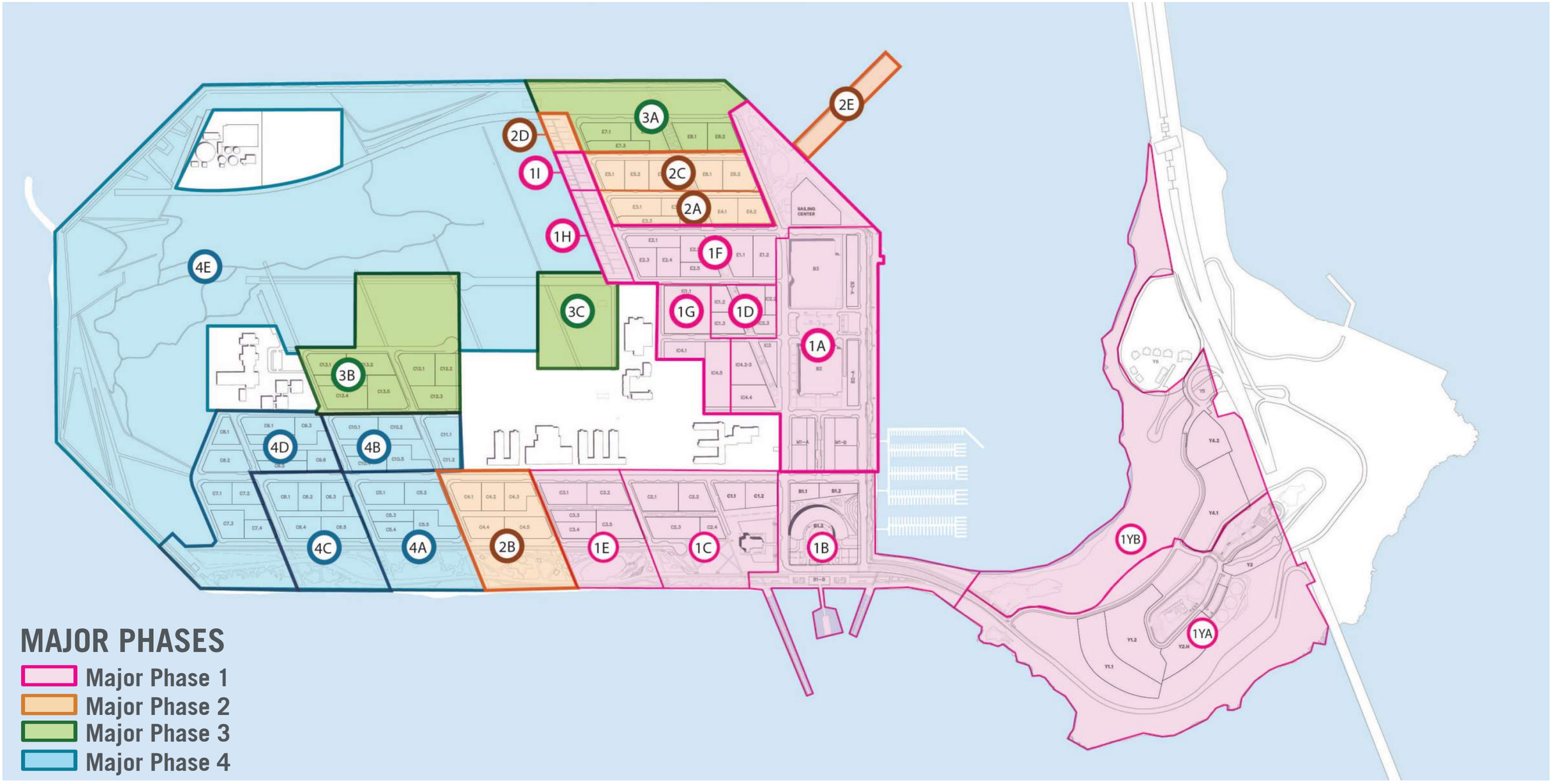
- **Develop a comprehensive O&M budget with detailed estimates for the Stage 1 Parks and projections for parks in future phases.**

- Create a ‘living document’ that is organized to accommodate future phases parks and document updates.

- Structure the document so that it can be used for service procurement and requests and proposals.

Parks & Open Space System

Major Phases



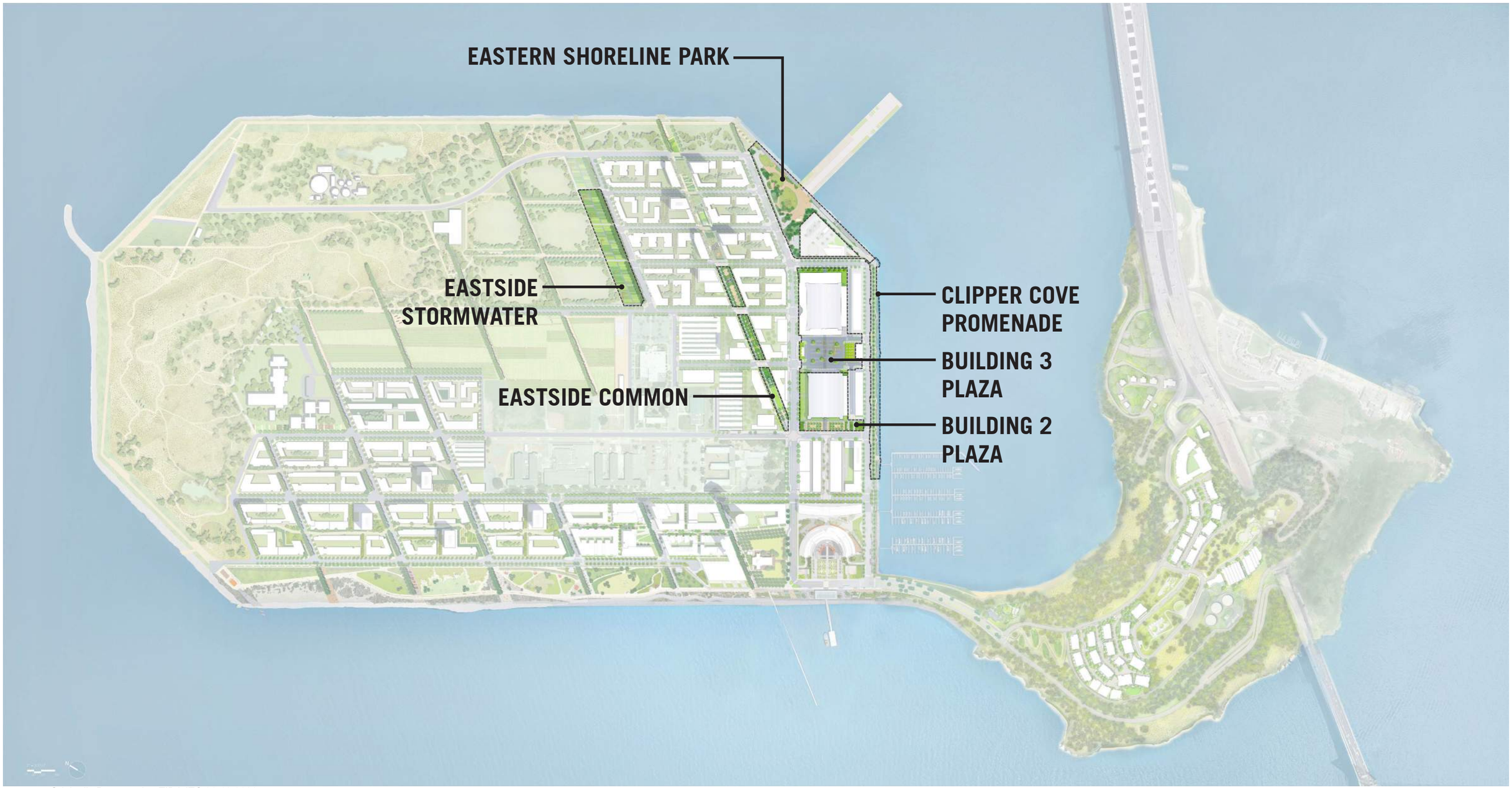
Phase 1 Parks (Sub-phases 1YA, 1YB, 1B, 1C, 1E)

Fiscal Year 20/21 Construction Completion

Fiscal Year 21/22 Construction Completion

Fiscal Year 22/23 Construction Completion

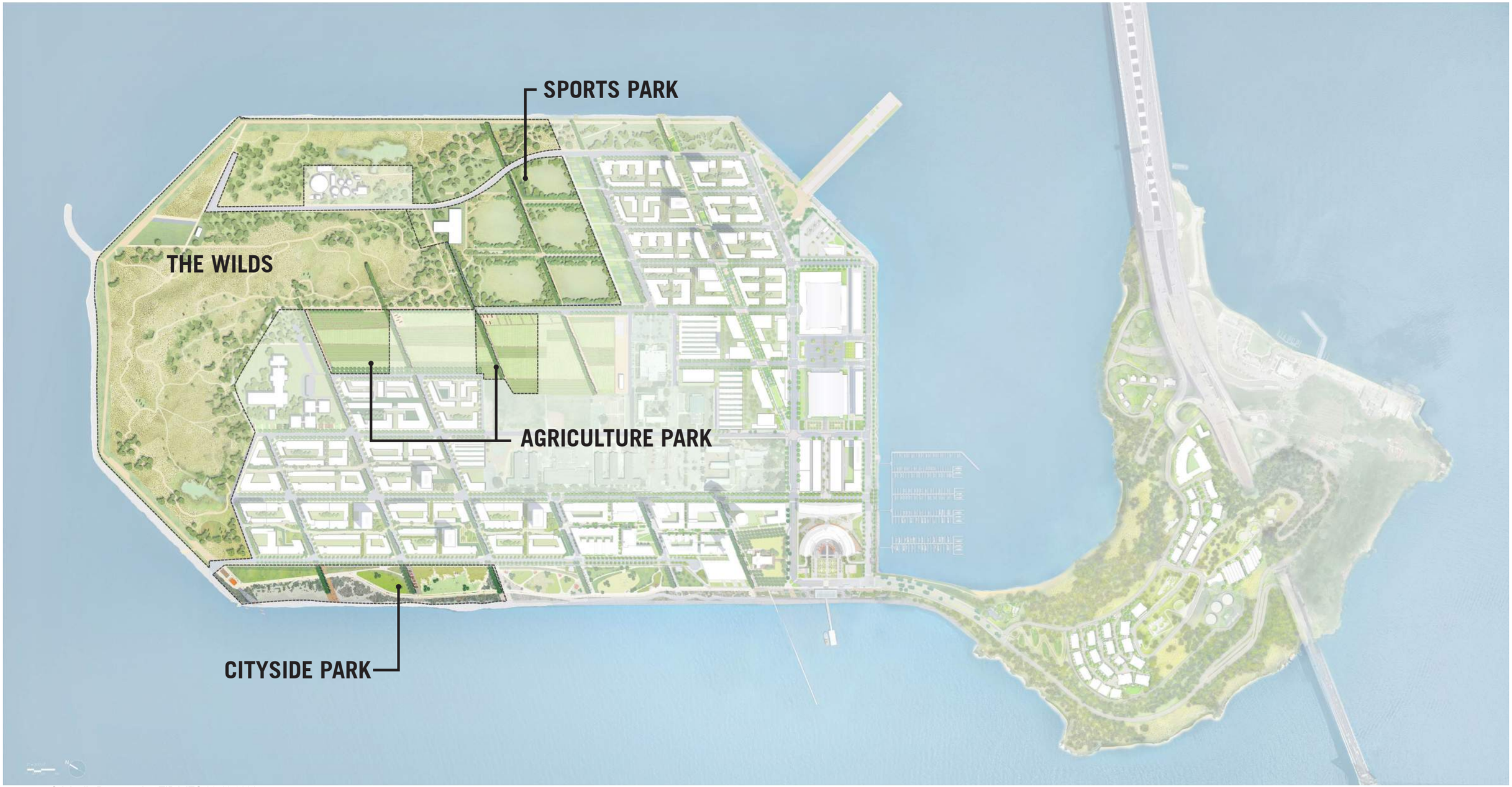
Later Phase Parks, Major Phase 1 (FY 25/26)



Major Phase 2 Parks (FY 26/27)

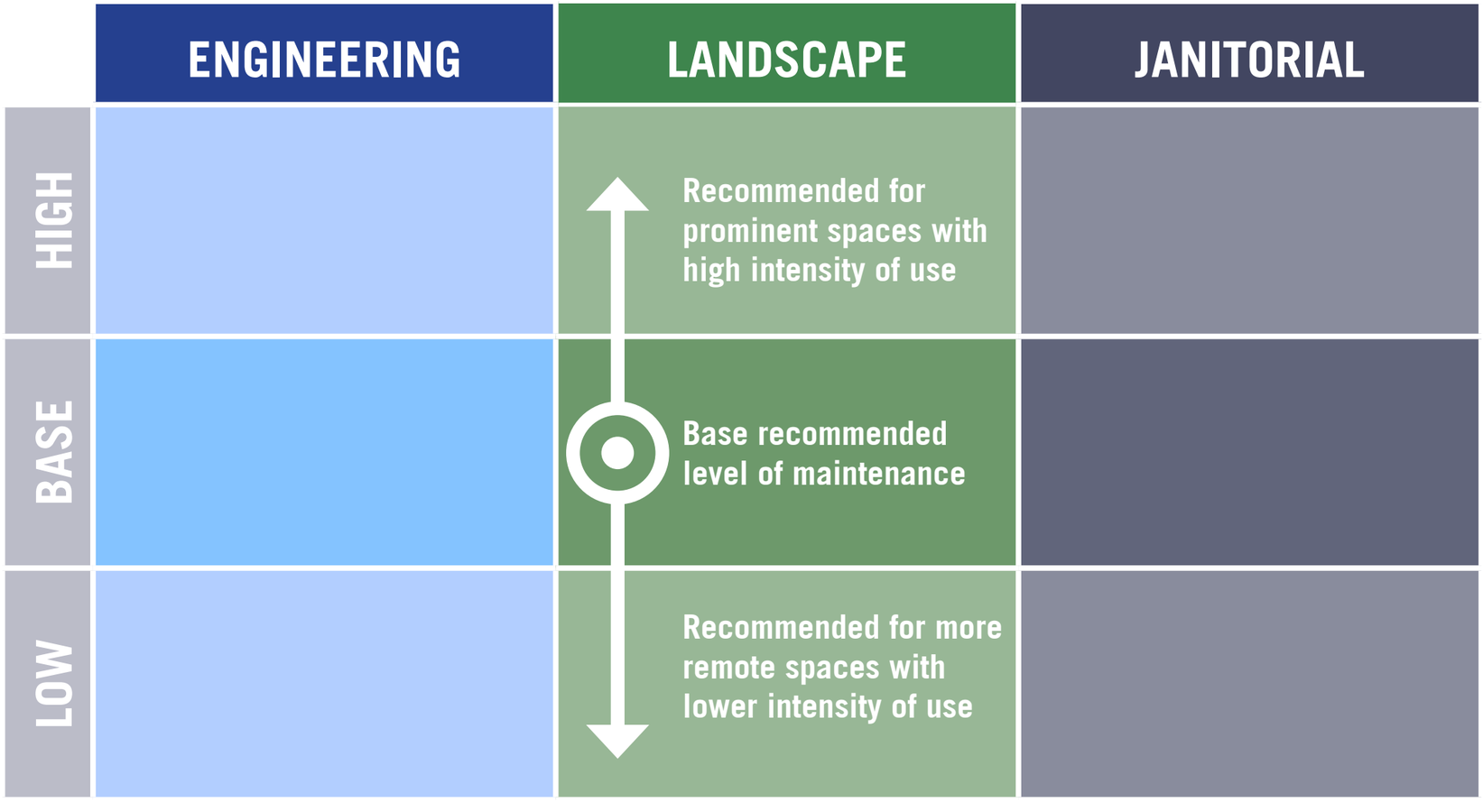
Major Phase 3 Parks (FY 27/28)

Major Phase 4 Parks (FY 30/31)



Budget Methodology

- **Established Levels of Service based on park design, program, and anticipated use**



Budget Methodology

- In conjunction with Levels of Service, budgets determined based on maintenance costs associated with comparable San Francisco Parks in Mission Bay and Yerba Buena Gardens.

What is included in the budget?

- Engineering tasks
- Landscape contract and tasks
- Janitorial tasks
- Utility & equipment costs

What is not included in the budget?

- General administration and management
- Security
- Capital expenses
- Revenue from events

Engineering

	ENGINEERING	LANDSCAPE	JANITORIAL
HIGH	Higher anticipated cost for high use or specific programming		
BASE	Repair and preventative maintenance for the following: • Utility systems • Paving • Restroom facilities • Furniture, fixtures, and equipment		
LOW	Lower anticipated cost for more remote spaces with lower intensity of use		

Levels of Service: Engineering

MAINTENANCE LEVELS	Utility Systems	Paving	Restroom Facilities	Furniture, Fixtures, & Equipment
HIGH	▪ Provide a higher level of inspection, reporting, and repair of utility systems based on intensity of use and importance of public safety and operations. ▪ Start-up to include inspection of all faucets, toilets, lighting systems, and other machinery to ensure all is in working order, and information logged, including any repairs. ▪ Follow a maintenance protocol to routinely inspect all systems and perform minor repairs or adjustments immediately, in advance of problems occurring. ▪ Repairs to all site features should be done immediately with available personnel and materials from back stock.	▪ Higher frequency and intensity of inspection and non-emergency repairs are prioritized.	▪ Provide a high level of inspection, reporting, and repairs to restroom facilities as required to ensure public safety and functionality of restrooms. ▪ Repairs to be scheduled during normal maintenance time and prioritized.	▪ Provide a high level of inspection, reporting, repair and replacement of furniture, fixtures and equipment. ▪ Furnishings to be inspected daily with hazards and graffiti to be repaired immediately, when discovered. ▪ Preventative coatings applied as needed and at least two times per year to any fixtures or furniture.
BASE	▪ Provide inspection, reporting, and repairs to all utility systems as required to ensure public safety, park operations and long-term functionality of systems. ▪ Daily startup includes reading and documenting all utilities and site meters (water, gas, electrical). ▪ Emergencies and hazards shall be identified and repaired as promptly as possible and as needed to ensure public safety and operations. ▪ All non-emergency repairs will be monitored, reported, and scheduled for repair during as needed. ▪ Full monitoring and maintenance program to be implemented weekly, monthly, quarterly, and annually.	▪ Regular inspection and reporting on all paving surfaces to ensure compliance with ADA requirements, safety and durability of surfaces. ▪ Emergencies and Hazards shall be identified and repaired as promptly as possible and as needed to ensure public safety and operations. ▪ All non-emergency repairs will be monitored, reported, and scheduled for repair during as needed during normal maintenance periods.	▪ Provide regular inspection, reporting, and repairs to all restroom facilities as required to ensure public safety and functionality of restrooms. ▪ Repairs to be scheduled during normal maintenance time.	▪ Provide regular inspection, reporting, repair and replacement of furniture, fixtures and equipment. Furnishings to be inspected daily with hazards and graffiti to be repaired within 24 hours. Broken/damaged items to be removed and replaced with backstock during routine maintenance schedule. Painted surfaces or other finishes to be inspected for flaking, rust or other issues, and fixed during routine maintenance schedule. Preventative coatings applied annually to any fixtures or furniture. Wood surface oils applied as needed. Oil finishes performed monthly on furnishings near the water. Equipment: preventative maintenance quarterly, repairs as needed.
LOW	▪ Provide a lower level of inspection, reporting, and repair of utility systems based on intensity of use and importance of public safety and operations. ▪ Read and document all utilities and site meters (water, gas, electrical) once a week.	▪ Lower frequency and intensity of inspection and scheduling of non-emergency repairs	▪ Not applicable: lower standard of care not recommended for restrooms.	▪ Provide a lower level of inspection, reporting, repair and replacement of furniture, fixtures and equipment. ▪ Furnishing should be inspected weekly. Problems identified and minor repairs performed during routine maintenance schedule. ▪ Broken/damaged items must be replaced, with a work order developed to purchase replacements.

Engineering Frequency Schedule: Hilltop Park

	Daily	X/Wk	Weekly	Monthly	X/Year	Other	Comments
Pavement							
Inspect for lifts/cracks			X				
Repair						As needed	Per specifications
Decomposed Granite							
Inspect for consistency			X				
Infill					2X		
Hardscape pathways							
Inspect	X						
Repair							Immediately
Preventative Maintenance					4X		
Colored asphalt							
Inspect	X						
Repair							Immediately
Preventative Maintenance					4X		
Pavers							
Inspect	X						
Repair							Immediately
Preventative Maintenance					4X		
Bikeracks							
Inspect	X						
Repair							Immediately
Walls and Exterior							

	Daily	X/Wk	Weekly	Monthly	X/Year	Other	Comments
Surfaces							
Apply & maintain graffiti sealant			X				As needed
Clean glass block surfaces				X			
Inspect	X						
Touch-up or repaint						As needed	
Site Furniture							
Maintain			X				
Inspect	X					Regularly	
Lighting and Electrical							
Inventory all light bulbs and build stock							Initially and on an ongoing basis
Replace lamps							As necessary
Clean fixtures				X			
Inspect for maintenance					4	Regularly	Per manufacturers recommendations
Routine maintenance			X				
Perform a preventative maintenance program for mechanical & lighting	X					As needed	Light rounds once per month, visual inspection daily
Plumbing							
Inspect drains				X			
Backflow device testing					1		Annual testing, year round inspection
Inspect water meters				X			
Inspect water pumps	X						
Service water pumps	X						

Landscape

	ENGINEERING	LANDSCAPE	JANITORIAL
HIGH		Higher anticipated cost for high use or specific programming	
BASE		↑ Monitoring, maintenance, and care for the following: • Irrigation systems • Trees and understory • Lawn and turf *Assumes 1 year maintenance period in construction contract ↓	
LOW		Lower anticipated cost for more remote spaces with lower intensity of use	

Levels of Service: Landscape

MAINTENANCE LEVELS	Irrigation/Water Management	Trees & Understory	Lawn & Turf
HIGH	▪ Higher levels of monitoring, irrigation management, and repair based on location, scale, type and complexity of landscape. ▪ Inspect systems and lateral lines weekly for leaks, drips and broken heads. ▪ Daily inspection and management of spray irrigation systems and all lawn areas.	▪ Higher level of monitoring, soils management, pruning, weeding, and plant removal/replacement based on location, scale, type and complexity of landscape. ▪ Semi-annual soil testing and organic fertilization as required based on species. ▪ Annual or semi-annual tree pruning as required to ensure public safety, structure/aesthetic quality and long-term health of trees. ▪ Annual arborist visit and report. ▪ High level of weeding to prevent invasive plant issues and maintenance aesthetic quality of landscape consistent with design intent.	▪ Provide a high level of turf maintenance, mowing, and soil management for high use areas and athletic fields. ▪ Grass height maintained according to species/variety of grass and purpose and water management scheduled around each activity. ▪ Regular inspection, aeration, fertilization and renewal. ▪ Free and clear of weeds and divots at all times. ▪ Athletic Fields will require immediate response to daily restoration needs by scheduled activities, with preparation immediately before and after use.
BASE	▪ Moderate levels of monitoring, irrigation management, and repair based on location, scale, type and complexity of landscape. ▪ Complete annual audit of irrigation systems and water usage ▪ Inspect systems regularly for clogged heads or drip systems and to ensure timers working properly. ▪ Water meters read two times per week to detect any leaks. ▪ Mainline leaks repaired immediately.	▪ Moderate level of monitoring, soils management, pruning, weeding, and plant removal/replacement based on location, scale, type and complexity of landscape. ▪ Annual soil testing and organic fertilization as required based on species. ▪ Tree pruning as required to ensure public safety and long-term tree health. ▪ Annual arborist visit and report, first year and every three years. ▪ Regular weeding to prevent invasive plant issues and maintenance aesthetic quality of landscape consistent with design intent. ▪ Annual review, removal and replacement of understory and groundcover plantings.	▪ Provide regular turf maintenance, mowing, and soil management for general purpose and moderate use lawn areas. ▪ Mowing as needed to maintain appropriate lawn height based on turf type and use. ▪ Weed Control: inspect and hand-pull weeds weekly. ▪ Regular monitoring and treatment for pests through Integrated Pest Management Program. ▪ Aeration, thatching and re-seeding two times annually. ▪ Soil testing annually, amend soil in accordance with test results. ▪ Before events, develop mitigation and restoration plan to occur immediately after.
LOW	▪ Lower levels of monitoring, irrigation management, and repair based on location, scale, type and complexity of landscape. ▪ Applies to natural areas and opens spaces with temporary, limited, or no irrigation.	▪ Lower level of monitoring, soils management, pruning, weeding, and plant removal/replacement based on location, scale, type and complexity of landscape. ▪ Soil testing and organic fertilization as required based on visual inspections and general health of plants.	▪ Not applicable

Landscape Frequency Schedule: Hilltop Park

A.	Lawn Care	Daily	Weekly	Bi-Weekly	Monthly	X/Year	As Needed	Comments
1	Leaf Litter Removal	X						2-3 times a week as needed
2	Clipping Removal		X					When mowing
3	Neat Appearance	X						
4	Weed Control- Hand pulling		X					Weed control inspected once per week
5	Irrigation Programming	X						
6	Irrigation Check		X					Irrigation audit to be conducted each Spring. Systems turned off start of rainy season, turned back on in early Spring.
7	Fertilize				X			Soil testing annually, fertilize based on result of testing
8	Pest Control		X					
	a. Monitor	X						
9	Mow		X					April – Oct weekly, twice month Nov - March
10	Edge		X					
11	Aeration					4		Spot aeration of turf areas after events as needed.
12	Dethatch						X	As Needed
13	Overseed turf after events						X	
B.	**Ground Cover Care**	**Daily**	**Weekly**	**Bi-Weekly**	**Monthly**	**X/Year**	**As Needed**	**Comments**
1	Leaf Litter Removal		X					
2	Trash Removal	X						
3	Neat Appearance	X						
4	Weed Control - Hand pulling		X					
5	Irrigation Programming	X						
6	Irrigation Check		X			1		
7	Fertilize					6		
8	Pest Control							
	a. Monitor	X						
	b. Snails					4		
	c. Other Treatments					4		
9	Prune				X			
10	Edge				X			
11	Cultivate						X	
	c. Other Treatments					4		
9	Prune				X			
10	Edge				X			
11	Cultivate						X	
C.	**Tree & Shrub Care**	**Daily**	**Weekly**	**Bi-Weekly**	**Monthly**	**X/Year**	**As Needed**	**Comments**
1	Leaf Litter Removal		X					
2	Trash Removal	X						
3	Neat Appearance	X						
4	Weed Control - Hand pulling		X					
5	Irrigation Programming		X					
6	Irrigation Check		X			1		
7	Fertilize					4		
8	IPM							
	a. Monitor	X						
	b. Snails		X					Rainy Season
	c. Treat trees					3		
10	Pruning-Size					4	X	
11	Pruning-Tree Roots							As needed
	Inspect shrubs	X						
	Raise plants that have settled							As needed
13	Staking-Remove/Adjust				X			
14	Vine Training				X			
D.	**Paved Area Care**	**Daily**	**Weekly**	**Bi-Weekly**	**Monthly**	**X/Year**	**As Needed**	**Comments**
1	Leaf Litter Removal		X					Pathways to be cleared after mowing
2	Trash Removal		X					Cuttings and other debris to be removed after trimming
3	Neat Appearance		X					
4	Weed Control		X					
G.	**Special Considerations**	**Daily**	**Weekly**	**Bi-Weekly**	**Monthly**	**X/Year**	**As Needed**	**Comments**
1	Site Reviews/Inspections		2X					With Agency staff
2	Landscape Maintenance Report							Includes Water Management
3	Irrigation Report					1		Provide specifics, Re: condition of system
5	Replace Controller Batteries					1		
6	Soil Moisture Checks			X				Bi-weekly - trees
7	Soil Sample Testing					2		
8	Soil Compaction Tests					4		
9	Clean Valve Boxes					1		
10	Equipment Cleaning/Maintenance		X					
11	Mulch Replenishment				X			

Janitorial

	ENGINEERING	LANDSCAPE	JANITORIAL
HIGH			Higher anticipated cost due to intensity of use or specific programming needs
BASE			Janitorial services provided for the following: • Furniture, fixtures, and equipment • Paving • Waste management • Graffiti • Restroom facilities
LOW			Lower anticipated cost for more remote spaces with lower intensity of use

Levels of Service: Janitorial

MAINTENANCE LEVELS	Furniture, Fixtures, & Equipment	Paving	Waste Management	Graffiti	Restrooms
HIGH	▪ Provide daily inspection and cleaning of furnishings.	▪ In high-traffic areas, hardscape should be swept or blown daily or twice daily to ensure a safe and clean surface. ▪ Steam clean twice monthly.	▪ Waste collection for high use areas with monitoring of waste receptacles three times daily. Collection of waste from receptacles at 4/5 capacity in morning, mid-day and afternoon as needed. ▪ Water's edge: Litter and debris removed three times per day, morning and afternoon. ▪ Litter and trash removal at a higher level in picnic areas.	▪ Graffiti inspection should be done daily. Mitigation measures and/ or removal should be completed immediately.	▪ Restrooms cleaned thoroughly three times a day, with spot inspections and restocking every 20-30 minutes during high volume times. ▪ High and low cleaning twice a year.
BASE	▪ Provide a moderate level of inspection and cleaning of furnishings, daily to weekly depending on use patterns.	▪ Hardscape should be swept or blown regularly to ensure a safe and clean surface. ▪ Steam clean monthly. ▪ Report any trip and fall hazards immediately to the engineering department.	▪ Waste collection for moderate use areas with monitoring of waste receptacles twice daily. Collection of waste from receptacles at 4/5 capacity in morning and afternoon as needed. ▪ Hand collection, raking, sweeping and/or blowing of litter should be done early in morning 7 days per week. Hot spots checked throughout the day. ▪ Water's edge: Litter and debris removed twice a day, morning and afternoon. ▪ Extra receptacles provided during special events in strategic locations or specific areas of increased attendance.	▪ Graffiti inspection should be done daily. Mitigation measures and/or removal should be completed within 24 hours.	▪ Restrooms inspected and cleaned thoroughly three times a day. ▪ Paper towel dispensers, soap dispenser and toilet paper should be restocked regularly based on inspections and every hour during high volume times. ▪ Restrooms inspected, stocked, and any necessary repairs reported to engineering department daily. ▪ Large volume events may require a restroom monitor to be on hand for the duration of the event. ▪ Hours of operation should adjusted for both low usage periods and during weather conditions that diminish use.
LOW	▪ Provide a lower level of inspection and cleaning of furnishings, weekly to monthly, depending on use patterns.	▪ Hardscape should be swept or blown as needed to ensure a safe and clean surface. ▪ Steam clean quarterly or as needed based on use patterns.	▪ Waste collection for low use areas with monitoring of waste receptacles once daily. Collection of waste from receptacles at 4/5 capacity as needed. ▪ Hand removal, raking, and blowing of litter and debris on paths and trails should be done periodically as needed to maintain a safe and debris free surface.	▪ Graffiti inspection should be done regular based on use patterns. Mitigation measures and/or removal should be completed within 48 hours.	▪ Not applicable

Janitorial frequency schedule: Hilltop Park

	Daily	X/Wk	Weekly	Monthly	X/Year	Other	Comments
Litter Control							
Control litter	**X**						
Empty trash receptacles	**X**						
Control litter after events						Per event	
Pavement (colored asphalt, concrete, pavers)							
Sweep	**X**						
Steam Clean (excluding pavers)						As needed	
Buff Clean – Pavers						As needed	With stone scrubber machine
Inspect for lifts/cracks			**X**				Provide condition report to Property Mgr.
Walls and Interior/Exterior Surfaces							
Clean Surfaces	**X**						
Remove postings/graffiti	**X**						Immediately
Clean glass Maintenance Building and doors					**2**		
Wipe fingerprints on doors	**X**						
Site furniture							
Cleaned	**X**						
Signage							
Inspect	**X**						
Remove postings/graffiti							Immediately
Clean			**X**				
Interior spaces							
Storage room		**1**					

	Daily	X/Wk	Weekly	Monthly	X/Year	Other	Comments
Mechanical Room				**2X**			
Other incidental spaces		**1**					
Empty trash receptacles	**X**						
High and low cleanings			**X**				
Rest rooms	**X**						
Cleaned	**X**						Continuously
Stocked	**X**						Continuously
Clean janitorial closet & disinfect slop sink	**X**						

Detailed Parks Budgets

- **Materials and supplies**
- **Contractual services (Landscape and Janitorial Services)**
- **Fire/Life/Safety**
- **Additional services**
- **Utilities**
- **Management**
- **Contingency**

Note: preliminary budgets account for anticipated cost escalation.

Detailed Park Budget: Hilltop Park West

Treasure Island and Yerba Buena Island Operations and Maintenance

Hilltop Park West - Operating Expenses

General Account	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
OPERATING EXPENSES										
MATERIALS & SUPPLIES										
Janitorial Supplies		$ 1,500	$ 1,553	$ 1,607	$ 1,663	$ 1,721	$ 1,782	$ 1,844	$ 1,908	$ 1,975
Lighting Supplies		$ 500	$ 518	$ 536	$ 554	$ 574	$ 594	$ 615	$ 636	$ 658
Back flow prevention Maint.		$ 700	$ 725	$ 750	$ 776	$ 803	$ 831	$ 860	$ 891	$ 922
Stone/Hardscape Maint. Supplies		$ 284	$ 294	$ 304	$ 315	$ 326	$ 337	$ 349	$ 361	$ 374
Plumbing Supplies		$ 331	$ 343	$ 355	$ 367	$ 380	$ 393	$ 407	$ 421	$ 436
Electrical Supplies		$ 100	$ 104	$ 107	$ 111	$ 115	$ 119	$ 123	$ 127	$ 132
Vehicle Supplies/Fuel		$ 200	$ 207	$ 214	$ 222	$ 230	$ 238	$ 246	$ 254	$ 263
Hardware		$ 200	$ 207	$ 214	$ 222	$ 230	$ 238	$ 246	$ 254	$ 263
Uniform Supplies		$ 680	$ 704	$ 728	$ 754	$ 780	$ 808	$ 836	$ 865	$ 895
Small Tools & Equipment		$ 800	$ 828	$ 857	$ 887	$ 918	$ 950	$ 983	$ 1,018	$ 1,053
General Maint. Supplies		$ 2,700	$ 2,795	$ 2,892	$ 2,994	$ 3,098	$ 3,207	$ 3,319	$ 3,435	$ 3,555
Pet Waste		$ 1,000	$ 1,035	$ 1,071	$ 1,109	$ 1,148	$ 1,188	$ 1,229	$ 1,272	$ 1,317
TOTAL MATERIALS & SUPPLIES	**$ -**	**$ 8,995**	**$ 9,310**	**$ 9,636**	**$ 9,973**	**$ 10,322**	**$ 10,683**	**$ 11,057**	**$ 11,444**	**$ 11,845**
CONTRACTUAL SERVICES										
Landscape										
Landscape Oversight		$ 18,750	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landscape Contract		$ -	$ 75,000	$ 132,275	$ 132,275	$ 132,275	$ 132,275	$ 132,275	$ 132,275	$ 132,275
Landscape Extras		$ 2,500	$ 2,588	$ 2,678	$ 2,772	$ 2,869	$ 2,969	$ 3,073	$ 3,181	$ 3,292
Landscape - Pest Control		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Landscape	**$ -**	**$ 21,250**	**$ 77,588**	**$ 134,953**	**$ 135,047**	**$ 135,144**	**$ 135,244**	**$ 135,348**	**$ 135,456**	**$ 135,567**
Janitorial										
Janitorial Contract		$ 65,500	$ 67,793	$ 70,165	$ 72,621	$ 75,163	$ 77,793	$ 80,516	$ 83,334	$ 86,251
Janitorial Extras		$ 7,500	$ 7,763	$ 8,034	$ 8,315	$ 8,606	$ 8,908	$ 9,219	$ 9,542	$ 9,876
Total Janitorial	**$ -**	**$ 73,000**	**$ 75,555**	**$ 78,199**	**$ 80,936**	**$ 83,769**	**$ 86,701**	**$ 89,736**	**$ 92,876**	**$ 96,127**
Special Maintenance Projects	**$ -**	**$ 4,000**	**$ 4,140**	**$ 4,285**	**$ 4,435**	**$ 4,590**	**$ 4,751**	**$ 4,917**	**$ 5,089**	**$ 5,267**

Detailed Park Budget: Hilltop Park West

Treasure Island and Yerba Buena Island Operations and Maintenance

Hilltop Park West - Operating Expenses

General Account	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Fire/Life/Safety										
Fire/Life/Safety Testing		$ 828	$ 857	$ 887	$ 918	$ 950	$ 983	$ 1,018	$ 1,053	$ 1,090
Fire/Life/Monitoring		$ 1,500	$ 1,553	$ 1,607	$ 1,663	$ 1,721	$ 1,782	$ 1,844	$ 1,908	$ 1,975
Hazmat Inspections		$ 250	$ 259	$ 268	$ 277	$ 287	$ 297	$ 307	$ 318	$ 329
Bioswale Certifications		$ 1,087	$ 1,125	$ 1,164	$ 1,205	$ 1,247	$ 1,291	$ 1,336	$ 1,383	$ 1,431
Total Fire/Life/Safety	**$ -**	**$ 3,665**	**$ 3,793**	**$ 3,926**	**$ 4,063**	**$ 4,206**	**$ 4,353**	**$ 4,505**	**$ 4,663**	**$ 4,826**
Additional Services										
Pest Control		$ 1,900	$ 1,967	$ 2,035	$ 2,107	$ 2,180	$ 2,257	$ 2,336	$ 2,417	$ 2,502
Stone/Hardscape M&R		$ 1,565	$ 1,620	$ 1,676	$ 1,735	$ 1,796	$ 1,859	$ 1,924	$ 1,991	$ 2,061
Electrical M&R		$ 500	$ 518	$ 536	$ 554	$ 574	$ 594	$ 615	$ 636	$ 658
Plumbing/Drain Maint M&R		$ 500	$ 518	$ 536	$ 554	$ 574	$ 594	$ 615	$ 636	$ 658
Artwork M&R		$ 391	$ 405	$ 419	$ 434	$ 449	$ 464	$ 481	$ 497	$ 515
Steam Cleaning		$ 1,435	$ 1,485	$ 1,537	$ 1,591	$ 1,647	$ 1,704	$ 1,764	$ 1,826	$ 1,890
Total Additional Services	**$ -**	**$ 6,291**	**$ 6,511**	**$ 6,739**	**$ 6,975**	**$ 7,219**	**$ 7,472**	**$ 7,733**	**$ 8,004**	**$ 8,284**
TOTAL CONTRACTUAL SERVICES	**$ -**	**$ 108,206**	**$ 167,587**	**$ 228,103**	**$ 231,457**	**$ 234,928**	**$ 238,521**	**$ 242,239**	**$ 246,088**	**$ 250,072**
UTILITIES										
Electricity-Hetch Hetchy		$ 7,500	$ 7,763	$ 8,034	$ 8,315	$ 8,606	$ 8,908	$ 9,219	$ 9,542	$ 9,876
Water & Sewer		$ 20,618	$ 21,340	$ 22,087	$ 22,860	$ 23,660	$ 24,488	$ 25,345	$ 26,232	$ 27,150
Total Utilities	**$ -**	**$ 28,118**	**$ 29,102**	**$ 30,121**	**$ 31,175**	**$ 32,266**	**$ 33,395**	**$ 34,564**	**$ 35,774**	**$ 37,026**
MANAGEMENT FEES	**$ -**	**$ 15,000**	**$ 15,525**	**$ 16,068**	**$ 16,631**	**$ 17,213**	**$ 17,815**	**$ 18,439**	**$ 19,084**	**$ 19,752**
CONTINGENCY		**$ 21,000**	**$ 21,735**	**$ 22,496**	**$ 23,283**	**$ 24,098**	**$ 24,941**	**$ 25,814**	**$ 26,718**	**$ 27,653**
TOTAL PARK EXPENSES	**$ -**	**$ 181,319**	**$ 243,259**	**$ 306,423**	**$ 312,518**	**$ 318,827**	**$ 325,356**	**$ 332,114**	**$ 339,108**	**$ 346,347**

Budget Summary

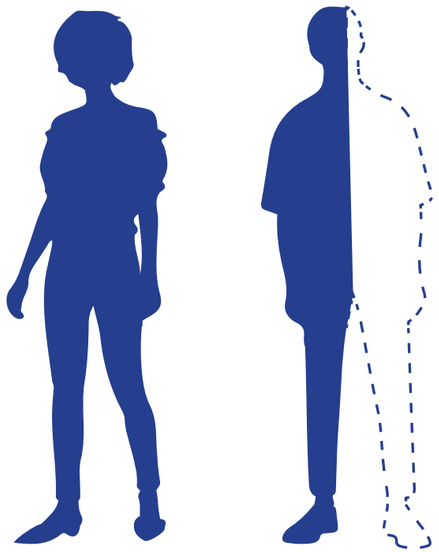
Treasure Island and Yerba Buena Island Operations and Maintenance

Preliminary Budget Summary, 2/5/2020

	FY 20/21	FY 21/22	FY 22/23	FY 23/24	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 30/31
PARK OPERATING and MAINTENANCE EXPENSES										
YBI Natural Areas	$ 168,392	$ 174,286	$ 180,386	$ 186,699	$ 193,234	$ 199,997	$ 206,997	$ 214,242	$ 221,740	$ 229,501
YBI - East Stormwater	$ 24,839	$ 103,404	$ 115,109	$ 119,137	$ 123,307	$ 127,623	$ 132,090	$ 136,713	$ 141,498	$ 146,450
YBI - Causeway Slopes & Beach Access	$ 26,156	$ 117,364	$ 152,910	$ 158,262	$ 163,801	$ 169,534	$ 175,468	$ 181,609	$ 187,965	$ 194,544
YBI - Macalla Stormwater	$ 38,895	$ 157,088	$ 179,198	$ 185,469	$ 191,961	$ 198,680	$ 205,633	$ 212,831	$ 220,280	$ 227,989
YBI - Hilltop Park East		$ 120,076	$ 166,995	$ 172,840	$ 178,889	$ 185,151	$ 191,631	$ 198,338	$ 205,280	$ 212,464
YBI - Dog Park		$ 35,945	$ 40,109	$ 41,513	$ 42,966	$ 44,470	$ 46,026	$ 47,637	$ 49,305	$ 51,030
YBI - Hilltop Park West		$ 181,319	$ 243,259	$ 306,423	$ 312,518	$ 318,827	$ 325,356	$ 332,114	$ 339,108	$ 346,347
YBI - Causeway Stormwater		$ 17,822	$ 17,822	$ 30,769	$ 33,722	$ 36,124	$ 37,388	$ 38,697	$ 40,051	$ 41,453
YBI - Beach Park & Quarters 10		$ 17,822	$ 111,110	$ 137,317	$ 142,123	$ 147,097	$ 152,245	$ 157,574	$ 163,089	$ 168,797
YBI Trails		$ 21,011	$ 74,896	$ 98,217	$ 101,655	$ 105,213	$ 108,895	$ 112,707	$ 116,651	$ 120,734
TI - Cityside Park (Phase 1)		$ 80,897	$ 157,330	$ 200,307	$ 207,317	$ 214,574	$ 222,084	$ 229,857	$ 237,902	$ 246,228
TI - Cityside Park (Stormwater)		$ 18,887	$ 36,887	$ 45,395	$ 46,984	$ 48,628	$ 50,330	$ 52,092	$ 53,915	$ 55,802
TI - Cityside Park (Phase 2)		$ 88,811	$ 318,864	$ 404,948	$ 419,121	$ 433,790	$ 448,973	$ 464,687	$ 480,951	$ 497,784
TI - Waterfront Plaza		$ 65,025	$ 126,668	$ 138,744	$ 143,600	$ 148,626	$ 153,828	$ 159,212	$ 164,784	$ 170,552
TI - Building 1 Plaza		$ 96,599	$ 191,602	$ 237,759	$ 246,081	$ 254,694	$ 263,608	$ 272,834	$ 282,383	$ 292,267
TI - Clipper Cove Promenade		$ 4,996	$ 58,479	$ 75,778	$ 78,430	$ 81,175	$ 84,016	$ 86,956	$ 90,000	$ 93,150
TI - Cultural Park			$ 134,184	$ 191,205	$ 270,365	$ 279,828	$ 289,622	$ 299,758	$ 310,250	$ 321,109
TI - Marina Plaza			$ 29,611	$ 105,001	$ 137,139	$ 141,938	$ 146,906	$ 152,048	$ 157,370	$ 162,878
TI - Later Major Phase 1*						$ 1,419,593	$ 1,469,279	$ 1,520,704	$ 1,573,928	$ 1,629,016
TI - Phase 2 Parks**							$ 733,497	$ 759,169	$ 785,740	$ 813,241
TI - Phase 3 Parks***								$ 723,738	$ 749,069	$ 775,286
TI - Phase 4 Parks****										$ 4,405,794
PARK TOTALS	**$ 258,282**	**$ 1,301,351**	**$ 2,335,419**	**$ 2,835,783**	**$ 3,033,212**	**$ 4,555,559**	**$ 5,443,871**	**$ 6,353,515**	**$ 6,571,258**	**$ 11,202,417**
PARKS TO BE REIMBURSED BY H.O.A										
YBI - East Stormwater	$ 24,839	$ 103,404	$ 115,109	$ 119,137	$ 123,307	$ 127,623	$ 132,090	$ 136,713	$ 141,498	$ 146,450
YBI - Macalla Stormwater	$ 38,895	$ 157,088	$ 179,198	$ 185,469	$ 191,961	$ 198,680	$ 205,633	$ 212,831	$ 220,280	$ 227,989
TI - Cityside Park (Stormwater)	--	$ 18,887	$ 18,887	$ 36,887	$ 45,395	$ 46,984	$ 48,628	$ 50,330	$ 52,092	$ 53,915
Parks O+M Subtotal	**$ 194,548**	**$ 1,021,973**	**$ 2,022,227**	**$ 2,494,289**	**$ 2,672,549**	**$ 4,182,273**	**$ 5,057,520**	**$ 5,953,641**	**$ 6,157,389**	**$ 10,774,062**

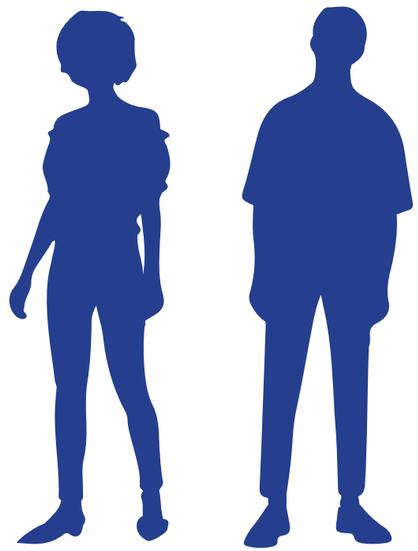
Administration and Engineering Staffing

FY 20/21



Stationary Engineer (F/T)*
General Manager (P/T)*

FY 22/23



Stationary Engineer (F/T)
General Manager (F/T)

FY 23/24

Stationary Engineer (F/T)
General Manager (F/T)
Maintenance Engineer (F/T)
Property Coordinator (F/T)

*Covered by Current TIDA Staff

Operations and Maintenance Schedule

Document and budget refinement .....March 2020

Overall document review (includes parks..... April 2020
specific chapter and budget updates)

Presentation of final document.....May 2020

O+M document complete .....End of May 2020

ADVANCED POLICY ANALYSIS

Spring 2022

Maintaining the Bay's Treasure: Park Maintenance and Staffing on Treasure Island and Yerba Buena Island

A Study Conducted for the Treasure Island Development Authority (TIDA) and San Francisco Office of the Administrator

By Scott W. Miller

Executive Summary:

By 2032, the Treasure Island Development Authority (TIDA) will inherit 290 acres of various new parks and open spaces. This report outlines a literature review and regional practices review that sought to determine whether contracted or in-house workers could best maintain these spaces, what work they should perform on what schedule, and what standards the Authority could use to ensure its parks remained at a world-class level. An evaluation using four criteria (effectiveness, relative costliness, administrative feasibility, and political feasibility) of four alternative staffing models (continuing Rubicon Landscaping's current contract, seeking bids from other contracting firms, establishing a Treasure Island/Yerba Buena Island conservancy, and hiring in-house staff) concluded that a split maintenance system would be optimal due to the two general categories of future parks space. Namely, designed spaces maintenance, with their predefined set of assets and ability to schedule most work proactively, should be contracted out to a private firm through a public Request for Proposals (RFP), as TIDA can trust these firms to perform well without direct field supervision due to the size of the landscaping firm market (created due to the transferability of designed space maintenance tasks and lower entry costs) and the low cost to TIDA of finding a new firm and preparing a new contract if needed. Meanwhile natural spaces, defined by a reactive maintenance approach stemming from their roles in conservation and natural resource management, should be cared for by a conservancy in a long-term, trusting, and collaborative relationship with TIDA, a relationship which is more suitable for the more specialized work needed for the islands' natural resource management and the more hidden nature of that work's results. With this staffing recommendation in mind, the process to create a maintenance plan for each park and open space was provided, along with a recommendation to adopt a mobile app to schedule and report maintenance work. This report concludes with an explanation of the standards accompanying the maintenance plans and their source, and a push to encourage and solicit public feedback on the maintenance work.

1. Introduction

Over the next decade, a whole series of new parks and open spaces will be built on Treasure Island and Yerba Buena Island (TI/YBI) for public enjoyment and natural resource conservation. The 290 acres of new spaces are envisioned to be a world-class destination, both serving the growing population living on the islands in the newly- or soon-to-be developed housing and community spaces, and the various tourists attracted to the islands from both neighboring Bay Area communities and from around the world. These parks and open spaces will include a wide variety of spaces, allowing visitors and residents access to a multitude of potential activities. Notable spaces on Treasure Island (TI) include the Shoreline Parks that create an uninterrupted walking path around TI; the Urban Agricultural Garden in TI to allow for community growing and educational opportunities; a Sports Park around TI's existing gymnasium with general fields for a variety of sports programming; an area set to be known as the "Wilds," where native plants will be allowed to grow into and compliment the trails and other facilities being built in TI's largest conservation-centered space; and a set of developed spaces around TI's historic buildings and new visitors landing. On Yerba Buena Island (YBI), residents and visitors will be able to enjoy the designed Hilltop Park at the peak of the island, a renovated access to Clipper Cove Beach, gardens around the historical Senior Officers Quarters, and a series of trails to see the conservation work being done in YBI's Habitat Management Spaces. Following the guidance of the original development documents from 2011, TIDA plans to assume the responsibility for these spaces after the warranty period from Treasure Island Community Development (TICD) for each space expires (typically one year after the completion of the space), handling these parks independently of other City resources to both foster a sense of community within TI/YBI and to minimize risks of resource reallocation should the City experience budget constraints. Preventing the possible degradation of these spaces due to poor maintenance and protecting a world-class standard in these parks have been named as some of TIDA's priorities in the coming years, upholding both the public's trust and their investments onto TI/YBI. To accomplish this, TIDA and the San Francisco City Administrator's Office have commissioned this investigation into park maintenance practices, standards, and staffing.

This report therefore provides a recommendation on the source of maintenance and custodial staff, guidance on what maintenance activities should be performed across the islands, including the nature and frequency of the involved tasks, and a set of standards maintenance staff

should achieve in their maintenance tasks. It will also be organized in that order, with each topic receiving a major section. Section 1 will conclude with a description of the research techniques used in crafting this report. Section 2 will explore different potential staff models for park maintenance, evaluating the potential benefits and feasibility of each using a set of criteria that include the effectiveness, costliness, and implementation difficulty of each possibility. Section 3 will then explore the maintenance tasks that should be undertaken and considerations for scheduling, with an explanation of how those recommendations were reached. Section 4, finally, will explore the recommended standards TIDA should adopt for its maintenance staff to achieve, and a set of metrics it can use. This report's appendices will include templates and examples of maintenance task sheets and metric sheets that can be used as models for TIDA's future work.

Analytical and Research Techniques

Before moving forward with a discussion of potential staffing models, an explanation of the techniques and sources used for this report is due. Two primary techniques were employed: a literature review and a regional practices review. Both techniques contributed to the recommendations provided in Section 2 (Staffing) and Section 3 (Maintenance Tasks), while the literature review was primarily used in Section 4 (Maintenance Standards). The literature review included an examination of various maintenance plans from across the nation, including the San Francisco Recreation and Parks Department's (SFRPD) guidebook; maintenance review packets from the Presidio Trust; and a National Parks Service (NPS) report that had examined best practices across the world. These maintenance standards and models were compared to a draft maintenance plan that had been prepared by TICD, to further ensure that the general guidance being found across the literature was appropriate to the work being prepared and completed on TI/YBI. The literature review also included an exploration of different staffing modalities, ranging from theoretical works such as Lee Friedman's discussions on various forms of public and private provision of a service (and the merits of each) and Oliver Williamson's work on optimal contracting models in different types of situations, to more current studies of the efficacy of contracting out government services.

In conjunction with this literature review, a review of regional park and open space maintenance was also conducted. This was used to help localize the impressions formed during the literature review, and to see what agencies maintaining open spaces in the same climate and

similar ecologies were doing. Regional actors who were consulted included the SFRPD; the Port of San Francisco; the National Parks Service team in the Golden Gate National Recreation Area (GGNRA); the Presidio Trust; the California State Parks Department; the Golden Gate Conservancy; the San Bruno Mountain Watch; and the Mt. Sutro Stewards. These regional actors, and potential partners of TIDA, were invited to semi-structured interviews to discuss their teams' work, measures, and staffing. While all interviews touched on the staff size and structure of the organization, the general maintenance plan or guidance used by the team to determine its work, the reliance or leverage on volunteer forces, and challenges the team faced in achieving their maintenance objectives, questions were generally open and were changed to suit the particular skills and goals of each park or open space. These interviews were supplemented with email conversations, where documents or specific points of clarity were exchanged.

2. Staffing Model

A key question TIDA is facing for the future park maintenance plan is the staffing organization or structure would best perform the work needed now, as some of the new parks are opened while TI's current parks are phased out, and into the future when all of the forecasted parks are operational. There are multiple ways TIDA can bring in the landscaping and custodial personnel needed to effectively maintain its parks and open spaces, which will be laid out as a set of alternative models that TIDA can choose. Namely, the four alternatives that are currently being considered by TIDA, and which will be considered in this report, include:

- Extending and expanding the current partnership with Rubicon Landscaping (Rubicon): TIDA would simply expand its current contract with Rubicon to include each new park or space as it opens, and all the tasks within; Rubicon would be entrusted to perform these tasks without direct TIDA supervision.
- Issuing a Request for Proposals (RFP) for private landscaping contractors: TIDA would issue an RFP to compare bids across any firms interested in servicing TI/YBI spaces; the contractor would be entrusted to perform these tasks without direct TIDA supervision.
- Establishing a relationship with a TI/YBI Conservancy: TIDA would seek any private conservancy formed on TI/YBI that aims to conduct maintenance and conservation work across the islands, and would form a contract with that conservancy in the form of a lease.
- Hiring internal TIDA staff to perform these maintenance operations.

General Discussion

When considering which staff model might be best to perform the maintenance tasks TIDA is looking for, the nature of the work that needs to be done across the park system is a crucial factor in an evaluation. The wide variety of park and space types TIDA will be inheriting—from parks that fit a traditional idea of an open space with a manicured lawn and planting beds, to habitat management zones tailored for natural space management, to trails system in areas that strike a balance between those two types, and others—means the maintenance staff TIDA employs will need to be flexible in their training and skills. Among the many types of tasks include some that can be considered "transferable;" these could include tasks

such as mowing and edging turf, conducting basic tree trimming, and cleaning fixtures throughout restrooms and ensuring proper plumbing. The training and expertise needed to perform these tasks effectively are not specific to TI/YBI, and a worker performing these tasks could be given simple direction and perform the work (for example, a gardener asked to inspect turf for its health can use their knowledge of turfs from other park districts to accomplish this evaluation). In general, these tasks can also be done with only a few years of training with a qualified entity (training school, colleges, or apprenticeship programs, for example). This combination of the speedier training and the transferability of these tasks and skills between parks and departments can allow individuals seeking to start a landscaping firm to easily establish their businesses and begin seeking clients. The entry costs of landscaping firms that perform transferable tasks, therefore, can be estimated as low. And these low entry costs allow for many competing firms to exist within the market of contracted landscapers, or for new firms and businesses to be opened and effectively compete for clients. Each firm already competing for clients will understand the number of alternatives, or potential future alternatives, for the transferable and non-specific services they provide their clients, and therefore will strive to perform their landscaping and other maintenance tasks at the best quality and lowest cost combination they can achieve.

As Williamson (1979) points out, these circumstances can allow a government agency to comfortably use traditional contracting procedures (i.e., to issue a request for proposals on one or a set of tasks, compare bids, and then select an applicant to perform the task with little-to-no direct oversight) to accomplish its goals via a private-firm provider. The competitive market forces would help drive potential costs to the agency down, and firms would still be incentivized to perform their assigned task at an expected standard without constant and direct supervision and direction in an effort to maintain future contracts from the agency. Since these transferable tasks also have readily observable and measurable results—agency staff and the general public can tell if toilets are clogged, lawns have not mowed, or burned-out light bulbs have not been replaced—the contractors would be compelled to accomplish their tasks as agreed to in the contract. The agency could sign the contract with the firm, inspect assets and spaces when desired, and then either renew the contract for another term or seek another firm capable of performing these transferable tasks. Furthermore, Williamson writes that traditional contracting, with its arms-length approach to agency-firm interactions, might be the optimal means of

providing these transferable types of work. This additional insight is found through consideration of the transaction costs of, or frictions in, contracting; that is, how much time and effort must an agency put into the writing and negotiation of a contract. Because these transferable tasks are often predictable and well detailed, the contract can be written in a proactive fashion that outlines what tasks are to be performed and when, how emergency or ad hoc situations can be addressed, etc. This contract can be issued to any number of firms without many modifications, allowing the agency to swiftly change firms if needed. In the context of this report, this speaks to TIDA's ability to outline all of the transferable tasks it would seek a contractor to perform in a baseline contract and use that template to prepare an individual contract to be signed and executed. If the contracted firm does not perform to TIDA's standards and TIDA seeks a new landscaping provider, it can simply change the name of the contactor on the template and proceed from there—no major administrative burden would have to be taken to rewrite the contract, as the tasks and TIDA's desired standards are already written up, and the transferability of the tasks in question means a new firm can step into the role without additional training and minimal orientation from TIDA staff.

Not all of the work needed in the TI/YBI open spaces fit this description of transferable tasks, though. Some of the tasks are site-specific, or may require a greater deal of education or training to be done correctly. Examples of the latter category include invasive species identification and removal planning (at what stage of growth it is appropriate to remove French broom, for example, or Canary Island marguerite) and large-scale tree pruning. Site-specific tasks and knowledge might include planning native species reintroduction or permitted growth to balance TIDA's mission in native habitat restoration versus public use goals, and what species should be seen growing across the two islands. These more complex or site-specific tasks would require a private firm to invest more time and effort into training their workforce and acquiring any tools needed to perform these tasks, raising the cost of a potential firm to enter the competitive bidding market for related contracts. This higher entry cost thereby reduces the number of private firms that might be competing for those contracts. Moreover, any firm that would pursue these contracts would also seek a longer term for the contract, a higher compensation rate, or other factors that would justify their own investment in preparing for these site-specific activities (indeed, a longer contract period might be needed for the firms to fully understand what activities they are asked to perform). Once a private firm would have secured

the contract, their team would develop the specific knowledge to perform the task well—that firm builds the human capital needed in that space. Because fewer firms will be trying to compete for contracts, those contracts will often have longer time periods, and specific knowledge and human capital will need to be developed for a private firm to perform these tasks correctly, the competitive forces that normally keep bids low and performance high are weaker and agencies can have fewer viable alternatives to pursue. In addition, as Williamson points out, agencies can face higher administrative burdens—larger transaction costs—in trying to prepare new contracts for these tasks, as a lot of work must be done to predict events and situations that are often unpredictable if the agency's staff aims to maintain an arm's-length approach to contracting.

Williamson offers that creating a tighter relationship between the contractor and the agency can serve as an effective solution to this dilemma of higher transaction costs and lower market competition. Creating a contracting relationship that could be resolved through arbitration instead of litigation, or a bi-governance structure where the agency and the private firm can come together to plan out solutions and next steps, are both effective ways to create a long-term contract that both sides can be comfortable with. The difference between pursuing a contract-with-arbitration or a bi-governance structure is based on the frequency of the tasks that need to be performed—the more frequently the work needs to be done, the closer the agency and its contractor should interact, and therefore the contract should look to a bi-governance system with agency and contractor personnel exchanging ideas and jointly making decisions on how to proceed. Indeed, recent studies have suggested that this system works effectively in practice. In Illinois, the state has contracted out some of its prisons' rehabilitation programs to a firm trained and specialized in prisoner rehabilitation, education, and training, namely Safer Foundation. The contracts the state formed with Safer Foundation, while as thorough as possible, nonetheless gave Safer Foundation the leeway needed to take action when unexpected situations arose, recognized the firm's competence in the services it was providing, and offered the state's support to a trusted partner when needed. A study of these trusted firms' outcomes show that they are able to achieve larger rates of success in rehabilitating convicts (seen through higher employment outcomes) than state personnel attempting a similar curriculum in different prisons (Jung et al. 2018).

When tasks are site-specific or technically complicated, these weaker market forces are not the only concern agencies would need to keep in mind. The results or outcomes of the contractor's actions can also be hard to directly observe, at least immediately, and an agency can have difficulties in verifying that its contractors have performed the tasks assigned to the agency's standards. TIDA could easily face this predicament in some of the tasks it will assign maintenance crews: for example, would the team assigned to proper removal of a particular weed in the YBI Habitat Management Area have adequately removed all necessary parts of the weed (stem and root, or just stem) without overly disturbing neighboring desired plants, and then properly applied the correct herbicides or other measures to not hamper future conservation efforts. A crew's mistakes in performing these types of tasks could be hard to immediately identify, potentially causing TIDA to miss an appropriate opportunity to correct mistakes and reprimand any malicious parties. Notably, a recent study suggested that contractors might not be the optimal providers of hard-to-measure tasks as related to an agency's democratic, as opposed to managerial, mission (i.e., achieving goals related to the public's trust and implicit mission for an agency, as opposed to the mission given to an agency by statute) (Choi 2020). The question of how to address these uncertain circumstances was raised and explored by Friedman in his work (2002), to determine which entity might actually be most proficient at providing difficult-to-measure services. Comparing for-profit, non-profit, and government providers against each other, he concluded that a non-profit entity would be the best vehicle to provide these types of services or perform these hard-to-measure tasks. The for-profit provider would be hard to trust in these situations, as their underlying profit-seeking motives could lead them to lower the quality of the service they provide if they (the for-profit staff) felt confident that their clients would be unable to discover the lower quality. A non-profit, being explicitly driven not by profit-seeking but by its core mission, would not face the same question of trust. A government agency directly providing this type of service, meanwhile, would be relatively unresponsive, or at least slow to respond, to changes in public preferences, while the potential for a new non-profit to take over the service would keep a non-profit provider flexible in meeting the public's potentially changing goals. Weaving these theories from Williamson and Friedman together, it appears that an agency creating a long-term contract in the structure of joint governance—where the agency trusts its contractor to perform its role, offers resources, and also collaborates with the contractor to make long-term decisions—and specifically entering this relationship with a non-profit entity

can both alleviate the agency's concerns over high transaction costs in contracting and allow it to trust its contractor to perform the tasks it has been given.

Locally, this trend can actually be seen directly in some of TIDA's neighbors. Numerous successful parks programs have utilized conservancies or non-profit partners to achieve the highly rated results in their jurisdictions. The Mt. Sutro Stewards, the San Bruno Mountain Watch, and the Golden Gate Conservancy all serve as agencies' partners on the ground to oversee standard trails maintenance and natural resource conservation work, the latter of which involves a high degree of specialization and knowledge. The overseeing agencies (UCSF, San Mateo County, and the National Parks Service, respectively) have been able to successfully leverage these conservancies to perform the highly skilled work needed by having a close-knit relationship to the groups. Other agencies and groups I spoke with who did not have these types of relationships (i.e., a conservancy or other non-profit group to organize and implement natural resource management work) often saw their workforces spread thin, and were rather reactive due to this limitation. The notable exception to this was the Presidio Trust, who maintained a robust naturalist staff and oversaw many of the day-to-day tasks of natural resource management on its own (it contracts out more routine landscape tasks, such as ornamental and designed space management).

Division of Spaces into Two Categories

With this analytical framework in mind, it becomes clear that TIDA's spaces should be divided into two categories for further consideration. Namely, different staffing considerations should be made for the "designed spaces" opening across TI/YBI than for the "natural spaces" being created or preserved. The latter category, the natural spaces, includes the YBI Trails and Habitat Management Areas and Clipper Cove Beach, along with the TI Wilds. All other parks, including the Hilltop Park on YBI and the Shoreline Parks around TI, the Sports Park, the Urban Agricultural Park, and the landscaping around TIDA's various facilities, constitute the designed spaces. This dichotomy represents the differences in job complexity and the ability of TIDA's team (and the public) to easily evaluate the quality of the work being done. Because the designed spaces will have predefined assets within the park, TIDA can more easily forecast what work needs to be done and when. It can therefore be specific when writing and defining a contract with a private firm, and can more easily inspect those areas to ensure work is being done to TIDA's

standards. In the natural spaces, though, the conservation efforts constituting most of those sites' work is more nuanced, and is often responsive to what flora are already growing in the area. Further, those natural areas often require a higher degree of training or education for staff to adequately determine which plants should be allowed to continue growing, which should be removed (and when), and what new plant life should be introduced.

Evaluation Criteria

This theoretical framework lays important principles to consider the four alternatives facing TIDA. In order to determine which model, or combination of models, would best serve TIDA's interests, though, a more thorough comparison of the alternatives themselves is needed, where the merits and demerits of each are considered. To accomplish this task, this report will evaluate each alternative staffing model along four criteria:

- Effectiveness: the ability of the entity or model being analyzed to perform the work recommended in this report;
- Economy, or costliness; in reference to the other alternatives being analyzed, how much more or less could TIDA expect to spend on the alternative being evaluated;
- Popular support: whether the public might become especially mobilized in favor of the alternative; and
- Administrative ease: how much effort would TIDA staff need to contribute to establish the staffing model and maintain it.

Of these criteria, effectiveness will be given the most weight in the analysis, as it is central to TIDA's mission of preserving the quality of the parks and open spaces being built. The next important criterion would be the costliness of the alternative, but still secondary to effectiveness since the least costly option would not be preferred if it entailed a noticeable degradation in park quality. The following subsections will examine each alternative within the context of a particular type of space, first looking at them within the context of TIDA's designed spaces, and then looking at them within the natural spaces.

Evaluation 1: Within Designed Spaces

As stated above, the designed spaces TIDA will be receiving have more routine and predictable tasks than those in the other category. These tasks, moreover, are fairly standard

across parks in different cities and districts, allowing for maintenance workers to take the skills and tools they use in another jurisdiction's parks to those TIDA oversees. Looking at the potential effectiveness of each alternative to maintain the parks to TIDA's world-class standards, each staffing model being considered could achieve a moderate to high level of success. TIDA-employed gardeners could be expected to achieve these results, as they would be fully incentivized by their employer to adequately maintain these spaces. Applying Williamson's concepts of task complexity and frequency to the work to be done in these designed spaces, it appears that the other three alternatives (Rubicon, other contractors, or a conservancy) could perform the tasks within these spaces well due to the transferable nature of these tasks.

It should be noted, though, that there are a few variables to consider regarding Rubicon's capacity to maintain all of these designed spaces at TIDA's standards. Rubicon's primary mission is to train historically economically disadvantaged individuals with skills they can use to gain more sustainable employment, bringing on new recruits as staff members transition out of the company after receiving adequate training. This hiring practice could mean that the gardening and landscaping teams sent to TI/YBI would be unable to achieve the expertise needed to effectively reach TIDA's maintenance standards. The standards that will be proposed in the following sections of this report were designed for, and are currently used by, teams that had received at least two years of training and education in gardening, horticulture, landscaping, or a similar field (such as an associate's degree, certificate from a qualifying college program, or apprenticeship program with more senior agency staff). Even if the initial crews sent to TI/YBI eventually gained the knowledge needed to effectively maintain these parks, the gardeners and landscapers that would be provided by Rubicon would turnover as their employees gain skills and move onto different firms, being replaced by new workers. While a consistency in supervisors could ameliorate this problem, the open spaces could nonetheless experience degradation during the field crews' training period. Moreover, supervisors might end up being rotated or replaced, which presents new questions as supervisors might not be fully knowledgeable on public parks and open space maintenance. Many of Rubicon's current clients appear to be corporate parks and homeowners' associations—the types of spaces these clients hold, while in some ways similar, do not necessarily endure the same levels of visitor traffic or rough types of use that TIDA's park system will face. This higher and rougher traffic would entail more work for any crews working in the space—for example, turf will inevitably be torn

up by athletes using cleats, forcing maintenance crews to patch the turf and potentially resod sections frequently; children (and even adults) could trample through planting beds and destroy plants, prompting maintenance crews to salvage what they can and replace what is fully destroyed. Extrapolating from Rubicon's current work on the islands is also difficult. At this time, Rubicon's teams tackle TI's smaller designed spaces. While they receive positive reviews for their work in those spaces, it is unclear if their team could fully expand to meet the higher demand in the future park spaces. Taking on responsibility for all of the new spaces across TI/YBI could therefore be a learning period for Rubicon management and staff, as they come to understand the needed work at public facilities simultaneously with TIDA's staff. Due to these variables, this report can only give Rubicon a moderate effectiveness prediction at this time.

Moving on to the potential costliness of each alternative, two alternatives stand out as particularly costly compared to the others. Namely, in-house employees and a conservatory would incur higher costs for TIDA than another private contracting firm. Looking first at the employee alternative, TIDA would likely want to hire a team of ten workers, likely split evenly between gardeners and custodians due to the nature of the designed spaces' assets, to work on these spaces, based on the staffing levels used by parks and recreation departments handling a similar number of park acres (in this case, less than 250 acres) (NRPA 2022). If TIDA pursued this option, with four gardeners, a gardening supervisor, four custodians, and a custodial supervisor, it could anticipate at least $1 million in payroll expenses alone (using the highest rates found in the San Francisco Department of Human Resources' database on compensation rates to prepare a conservative estimate). A conservancy would likely cost TIDA a similar amount, at least for the first years after its establishment, as the conservancy either diverts funding from TI/YBI's community development funding or receives direct subsidies from TIDA as it establishes its own, independent source of funding to perform the work.

Meanwhile, a private firm can be estimated to incur less cost for TIDA using Rubicon's current contract and other contracts issued by the City for landscaping work. Rubicon, or other private contractors, might charge up to $700,000. This estimate for any outside contractor is extrapolated from the City's current contract for landscaping around the Islais Creek Muni Maintenance Facility—a contract which includes the same gardening tasks that TIDA would expect in its designed spaces. That contract is for $28,000 per year to cover 8.3 acres, or about $3,400 per acre per year; applying this estimate to the approximately 120 acres within the

designed space category, a private firm could be expected to cost around $410,000. There are a few factors that distinguish work at the Islais Creek facility from the work on TI/YBI; notably, contractors might incur longer travel costs and transportation expenses to get to the islands, and the nature of the parks' use combined with TIDA's standards would entail more work on TI/YBI than is needed the Islais Creek facility. For these reasons, the estimated cost of a private firm contracted to perform these maintenance tasks must be inflated, leading to the conservative estimate of $700,000 in this report. Given this disparity between this estimate and a TIDA-employed landscaping team or conservatory, those two alternatives will be excluded for the remainder of the designed spaces analysis. Since private firms (either Rubicon or another contractor) can provide a decent quality of parks maintenance at a noticeably lower cost than the other staffing models, we will focus on those two alternatives from here.

Comparing the potential popular support for the two remaining alternatives is a bit murky; it is unclear whether the public would actively track or vocalize support for an RFP process. However, an extension of Rubicon's contract seems more likely to garner some public support than a simple RFP. This is due to the nature of Rubicon's hiring practices and workforce; because Rubicon hires those who are historically unemployed or otherwise economically disadvantaged, members of the public who are supportive of that cause might also vocalize their support of this alternative if TIDA decides to pursue it. How probable that vocal support might be, though, is still low given the highly bureaucratic nature of this decision-making process.

Administratively, simply extending and expanding Rubicon's contract would entail little additional burden for TIDA staff. There would be no competing proposals or contracts to assess and manage; rather, this alternative would simply entail a continuation of TIDA's current interactions with Rubicon, increasing as the number of Rubicon's tasks increase. Issuing an RFP to compare multiple potential contractors, though, would force TIDA staff to dedicate more time around the close date of the announcement as it analyzes and evaluates the proposals it receives. An additional consideration is around the length of the contract: if the contract were for more than ten years, or more than $10 million, then TIDA would also need to prepare to seek approval of the contract from the San Francisco Board of Supervisors. While that process would not likely present an overly large amount of additional work, it would nonetheless present an additional series of administrative tasks that can be avoided if TIDA opts for shorter contract terms. Those shorter terms have the added benefit of giving TIDA more opportunities to seek new contractors,

either to see if there are more proficient landscaping firms interested in TI/YBI, less expensive landscaping firms, or both. For these reasons, this report recommends TIDA keep any contract term with a firm to three years, unless and until it finds a contractor with a competence and cost that it is fully willing to commit the extra effort to forego the benefits of market competition for landscaping services and prepare the proper arguments for the Board of Supervisors. The choice of three years is somewhat arbitrary, and was chosen to strike a balance between the benefits of a frequent bidding process (which could help TIDA more easily change contractors if desired) and the benefits of longer contract durations (which could give contractors a better sense of being trusted to perform their role, and allowing teams more time to become acquainted with any idiosyncratic processes on TI/YBI, both of which could increase the quality of the provided service).

Recommendation for Designed Spaces Maintenance Staffing

After looking at these evaluations, this report recommends that TIDA seek a private firm to contract the landscape maintenance work for TI/YBI's designed spaces. Specifically, TIDA should pursue Alternative 2 and issue an RFP, seeking bids and proposals from various firms to find one that can successfully maintain the spaces to TIDA's world-class standards at the best cost over a three-year period. As noted above, the tasks within these designed spaces are routine enough that the appropriately contracted team would need simple on-the-ground training to perform them to TIDA's standards. While this process would not preclude Rubicon from being awarded the contract, it does provide TIDA an opportunity to compare the teams presented by Rubicon, their qualifications, and their past performances against other firms that might be interested in TI/YBI work and have more experience managing spaces heavily trod and used by the public. Seeking a private firm to perform the maintenance tasks in these designed spaces will also be less expensive than TIDA employing its own teams in these spaces or relegating this work to a new conservancy. In addition, TIDA would not have to worry about the large administrative burden of hiring a full team of landscapers, or the process of detailing the responsibilities of a conservancy. Staying within a three-year period, or any other length shorter than ten years that TIDA might prefer, will also allow TIDA to avoid the extra administrative tasks of presenting to the Board of Supervisors to seek its approval of the contract.

Evaluation 2: Natural Spaces

With the designed spaces being managed by a private contractor, this report now looks to evaluate which of the alternatives would best maintain the natural spaces on TI/YBI. First considering the potential effectiveness of any staffing model within these spaces, it is important to remember that the main evaluative feature that defines these spaces against the designed spaces that were just considered is the complexity of the maintenance work within them. The work generally entails a higher level of training or education than work in designed spaces, as it involves an understanding of the flora and fauna in an area and what ecosystem would achieve conservation goals for the space. It is unclear if Rubicon, or any other similar private landscaping firm, could provide a staff with proficient enough expertise to be entrusted by TIDA with this work without heavy direction and supervision by TIDA staff. This level of direct supervision is something TIDA staff has expressly sought to avoid. Most contractors, including Rubicon, could be expected to have a low effectiveness rating under these circumstances. There are some private firms known to perform the type of natural resource work needed in these spaces well, including some that have recently done work on YBI; however, the ability of these firms to form the long-term and larger commitment TIDA is seeking under this plan is unclear, though. Due to this low predicted effectiveness, an extension of Rubicon's contract and an RFP seeking any contractor for work in the natural spaces (Alternatives 1 and 2) will not continue to be considered in this report.

The effectiveness of either TIDA staff or a conservancy in maintaining TI/YBI's natural spaces can be expected to be comparable, especially if the conservancy has TIDA representatives on its own directing board. The first option, TIDA staff, can be expected to effectively maintain the natural spaces as long as TIDA hires properly qualified individuals (natural resource managers, hereafter referred to as naturalists, arborists, and other personnel knowledgeable about natural resource conservation), as the staff members will be directly tied into TIDA's decision making process and will be directly accountable to TIDA management for their actions. A conservancy, meanwhile, can be expected to effectively maintain these natural spaces due to the long-term and closely collaborative nature of the relationship that will have to have been formed during the conservancy's creation. This long-term relationship can be formed, for example, by structuring the agreement as a lease from TIDA to the conservancy: similar to the Yerba Buena Gardens Conservancy, a TI/YBI conservancy can lease the natural spaces from TIDA with the

rental agreement specifying the work the conservancy needs perform and the standards it is expected to meet for the agreement to continue. This form of agreement, combined with one or more members of the conservancy's directing board being appointed by TIDA, gives the conservancy a degree of trust to perform its potential maintenance role effectively. Even if a conservancy performs the maintenance work, TIDA would still want to maintain a naturalist or other conservation expert on its team to serve as a primary liaison between TIDA and the conservancy and ensure the two work together in close collaboration. A tightknit relationship is essential to the conservancy model being considered, and is crucial to the potential success of a conservancy in this role.

When considering the potential costs of either alternative, an important note must be made about the nature of work within these natural spaces. Namely, the natural resource management required in these areas will often be labor or capital intensive upfront, but require less labor after the work is done. For example, the removal of a eucalyptus tree requires planning beforehand, a large crew and set of machinery to fell the tree, and teams present to clean up the debris; after this, though, maintenance teams would merely have to inspect the remaining stump (if one is left) and cut off any new growth. Similarly, clearing a thicket of French broom might require a full day of hands-on work, but once cleared a worker could periodically check the area to confirm that no new growth is occurring, and if a small weed is found can swiftly remove it. This type of work is not wholly representative of what will be needed in the natural spaces across both islands—indeed, the creation of trails will mean TIDA must look towards trail maintenance goals, and the potential native plant nursery in TI's Wilds creates a set of maintenance tasks of itself—but nevertheless represent a separate set of expenses that could decrease as YBI's environment is restored to a desired space. TI will likely not need a large investment in this type of work, since its natural space is being created during the development process, meaning there should be fewer unwanted flora populations established in the Wilds.

Either of these alternatives would present similar costs to TIDA, at least in the short-term. As explained in the preceding subsection, TIDA would almost certainly have to provide much of the conservancy's funding as it establishes its own funding streams (both through federal and state grant acquisition, and through fundraising efforts). If TIDA were to hire its own staff, which should likely consist of two naturalists and three gardeners in order to properly cover the 170 acres within this category and the various activities within them (such as a native plant

nursery), it could anticipate around $600,000 in payroll expenses alone. These naturalists would likely not perform all of the necessary work, as described above, and so the costs of this alternative would be higher in the next few years due to the one-time or otherwise short-term contracts involved to accomplish the capita or labor-heavy tasks of reestablishing YBI's ecosystems. Even with this team, though, TIDA would likely need some additional hands for activities like trail maintenance and invasive species identification, but those types of activities can be accomplished through the organization of outside volunteers (as is done across almost every park agency spoken with during this report's regional practices review). These volunteers could incur marginal costs for TIDA if it sought to compensate the volunteers through snacks, organized transportation, or small appreciation tokens (pins, T-shirts, canvass bags, etc.). Again, a conservancy would likely cost TIDA a similar amount per year for the first few years after its establishment and the start of TIDA's relationship with the conservancy if TIDA is needed to prop up the conservancy's infancy; in fact, TIDA might need to contribute additional funds for the contracts the conservancy might issue for its early work. The total amount TIDA would allocate towards the conservancy could be anticipated to decrease over time as the conservancy secures its own funding sources.

Moving now to the potential popular support for either model, the conservancy would be more likely to muster advocates and supporters. Since a conservancy represents a way for members of the public to actively participate in conservation and land management efforts, some will be attracted to the potential input and hands-on work a conservancy provides, especially given the Bay Area's widespread environmental conscientiousness. A conservancy could stimulate not just vocal political support from members of the public—indeed, it could serve as a vehicle for more philanthropic commitment to TI/YBI, since members of the public are generally more comfortable donating to a non-profit than a government entity. This type of support would not be expected to form if TIDA were to hire its own set of employees to manage these spaces.

Finally, examining the potential administrative burden of either alternative being considered for this natural space maintenance, TIDA could expect both to present large administrative loads at the beginning of the staffing model's adoption. For a conservancy, TIDA staff would need to negotiate with the conservancy to clearly define roles of the conservancy and TIDA in the maintenance tasks, funding and revenue sharing options, and the governing structure of the conservancy. As mentioned before, this report recommends that any conservancy

entrusted with these natural spaces have at least one TIDA-appointed member on its directing board. This report also recommends that the agreement be framed as a lease, as it would give the conservancy clear governance guidelines and a stronger sense of trust by TIDA. Trust and close collaboration between an agency and a partner organization has been shown by the research above to be vital to the provision of a complicated, specific type of work. If TIDA were to hire its own team of naturalists, meanwhile, it would face an upfront administrative burden in recruiting, interviewing, and then onboarding those new employees. This task, while potentially time consuming, could be less cumbersome than the work establishing a relationship with a conservancy. However, a team of TIDA-employed naturalists would cause an increase in TIDA's long-term administrative capabilities as it manages these personnel.

Recommendation for Natural Space Maintenance Staffing

With all of these factors under consideration, TIDA's long-term goal for a maintenance work provider in these natural spaces should be a conservancy. A conservancy would not only provide this stability and long-term expertise, but also provide TIDA an additional avenue to draw donations and volunteers while not becoming burdened by a large staff of its own. A closely collaborative arrangement between TIDA and a potential conservancy would need to be maintained, though, if this option is adopted and meant to succeed—indeed, this could be accomplished if TIDA still hires a naturalist of its own to serve as a primary liaison between TIDA and a conservancy. This ensures TIDA has the in-house expertise needed to effectively collaborate with the experts who would hopefully staff the conservancy. The conservancy could be left to fundraise, apply for governmental and other grants, recruit and organize volunteers from across the area, and facilitate contracts with private firms for one-time or other short-term tasks that require heavy machinery or other capital TIDA cannot easily procure on its own. A key example of contracts that might need to be procured would be arborist services, for example. The cost of maintaining an arborist team of three personnel on staff would approach $400,000 per year, using compensation and expense examples from current City employees and equipment contracts; the work these staff would perform, though, would likely not entail a whole year of effort, especially as many of the particularly burdensome eucalyptus trees on YBI can be cleared during the current development process. Even in the designed spaces, the new trees being planted on TI/YBI will only begin to mature, and therefore will only require simple pruning and

trimming that can be performed by trained gardeners. On the other hand, contracts with arborists are substantially lower in price (City contracts for a complete tree removal, for example, is often only $12,000 per day, and is a task that maintenance crews should not be performing with any regularity for decades if current maintenance plans are followed) for tasks that are transferable in nature (TIDA or a conservancy would be able to provide guidance within the contract of exactly what tree work would need to be performed). While these types of arborist contracts are one example of tasks a conservancy would contract out, there are other tasks requiring a combination of labor and heavy machinery it could contract out as needed that might appear in the future.

If TIDA decides to establish a relationship with a burgeoning conservancy, it should begin the process needed to establish it as soon as possible. Using the Yerba Buena Gardens Conservancy as an example (chosen due to its recent establishment, smaller acreage compared to the Golden Gate Conservancy, and establishment by the City government), the process of establishing a government-sponsored conservancy through San Francisco governance could take two-to-five years. With TIDA inheriting YBI's natural spaces soon, and with TI's Wilds set to open around 2030, it is therefore imperative that TIDA begin the process to ensure the conservancy is established and fully operational as quickly as possible.

Due to this multi-year establishment process, TIDA will still need a team to manage the natural spaces on YBI in the short-term. TIDA should therefore hire a naturalist and two properly trained (either having apprenticed, or completed two years of training or certification) gardeners to perform the essential duties these natural spaces entail. These employees can be hired as temporary staff, to allow a simple phase-out of TIDA staff as a conservancy becomes established and takes over the maintenance tasks, if TIDA is confident the conservancy agreement would be ready within three years. This TIDA team would likely still need to organize volunteers to help with some of the more time-consuming activities involved in invasive species identification and removal and trails maintenance, and hire contractors to aid with capital-intense projects like tree removal; it should be noted that these types of outside provision would occur under any of the alternative staffing models considered in this report due to the specificity and one-time nature of many of those tasks.

Summary of Recommendations

After dividing TI/YBI's spaces into two general categories based on the nature of the tasks their maintenance requires—designed spaces with frequent, easily predictable tasks that are not specific to TI/YBI, and natural spaces with more unpredictable tasks that are specific to TI/YBI's ecosystem and its natural resources management plan—this report concluded that two separate maintenance staff systems be established. For the designed spaces, TIDA should issue an RFP and seek a private contractor to perform the maintenance tasks in those spaces. A private firm can be expected to perform these tasks well, and will incur fewer costs and administrative hurdles for TIDA. For the natural spaces, meanwhile, TIDA should prepare to enter into a cooperative arrangement with a conservancy, which can take on the maintenance tasks and any contracting required for the natural spaces' sometimes capital or labor-intensive projects. A conservancy can also rally greater popular support for TI/YBI than other alternatives, and offers an additional funding avenue for conservation efforts across the islands. Below is a summary table listing the four alternatives and their evaluation across the criteria used in this report:

Table 1: Evaluation of Each Alternative under Criteria

Alternative:	Effectiveness	Economy	Administrative Ease	Vocal Popular Support
1.Extending/Expanding Rubicon's Contract	Medium/Low	High	High	Medium
2.Opening Public Contract Bidding	High/Medium	Medium	Medium	Low
3.Establishing a Conservancy	High	Low	Medium	High
4.Hiring TIDA Staff	High	Low	Low	Low

Section 3: Maintenance Plan

Once a maintenance staff has been hired or contracted, they should be issued a thorough and simple maintenance plan or handbook before they undertake their work. This handbook can include both general practices and goals, but should also have park-specific guidance as often as possible. This can help ensure that each park's assets (the plants and other features specific to that site) receive the care and attention they require. Fortunately for TIDA, TICD and its teams are already preparing draft maintenance handbooks for the sites it is preparing; this allows TIDA to build off a template and adjust for its own preferences at each site. Below, this report will outline general practices and guidance for creating a handbook; a general, exemplary guide will be included in the appendix. It should be noted, though, that TIDA staff should utilize these resources to prepare specific handbooks based on the assets and assessments for each park upon their completion; since conditions might change between the issuing of this report and the opening of many of TI/YBI's parks, this report will not detail each of the future parks.

As is already being done in TICD's drafts, tasks in the handbooks should be broken down between daily, weekly, biweekly, monthly, seasonal, and annual tasks. This is in line with practices from across the nation. Almost every type of space TIDA will inherit will have tasks that can fall into each of these time-based categories; notable exceptions might include the natural spaces on YBI, for example, where tasks might start at weekly and lengthen in period from there. As noted by TICD's teams, the assignment of tasks into each of these time periods should be done based on their estimated public use, with sites that will be heavily used (such as the ferry terminal, or the sports park) receiving due attention potentially via work repeated throughout each day. Work crews should be aware, though, that not all work can be planned out precisely. Various events might cause teams to perform tasks not already on their work order or within their site-specific handbook; there should be a process (and a budget) for as-needed and spontaneous work to be arranged between field crews who observe a condition, like a large fallen tree branch, and TIDA.

To facilitate work scheduling, and even the spontaneous work-orders just described, TIDA should adopt a mobile app that it can utilize as quickly as possible. A mobile application could allow teams to easily access the handbook for the site(s) they are assigned to, any schedule for work that will be performed, and should allow them to submit records of the work they have performed at the site or work that still needs to be done. The ability of workers to see beyond

their own work schedule, and see what tasks might be done within a site or across the system within a particular day might be beneficial if crews can then adjust the order of their tasks to better fit the work being done around them. TIDA should adopt this app soon to ensure the staff or contractors it brings on will begin using the app right away, and can become comfortable with it early in their work. Those agencies that were interviewed for this report who use apps for this purpose report that, once the system has been set up and workers are familiar with it, use of a planning app is beneficial to their teams' productivities, but that finding a reliable app and setting it up for use took far longer than anticipated. Even when the app was ready for its workers' use, though, the agency faced push-back from its workers who frowned on using an app to receive work schedules and report back the results of their work. When work crews became accustomed to the app, though, the agency saw an overall improvement in the timeliness and the quality of the work being done.

Section 4: Standards and Metrics

With all of the work detailed in the general handbook below, and regardless of the staffing model adopted, TIDA should utilize a clear set of standards for its work to ensure the public resources and investments being placed in its care do not unnecessarily deteriorate. While the metrics regarding natural spaces might be harder to measure due to the nature of the work done there (as discussed above in Section 2), a relational agreement with a conservancy can ameliorate concerns of poor performance. In the designed spaces TIDA would contract out to private firms, though, these metrics will prove important and useful in helping ensure TI/YBI's open spaces are being maintained properly. These standards can also be woven into the maintenance schedules themselves so that workers can easily assess if they are achieving them in the field. This report utilizes the standards issued by the SFRPD and the City's Office of the Controller as the baseline for TIDA's consideration. Not only do these standards reflect a similar biome and types of work TIDA's teams will be performing, but they have also been used as reference and best practices by the NPS in some of its own evaluations (NPS 2007).

These standards should receive attention, and the field work be measured, at least twice. The first inspection of field work should be done by the team supervisor in the field the day the work has been performed, and the result reported to TIDA. In addition to these inspections by field supervisors upon completion of the work, TIDA should also send one or two of its own staff members to perform site inspections at least once per week. Given the scale of TIDA's assets, these inspections will likely only cover some of the parks and spaces that have received work; therefore, TIDA should prepare a list of sites they will inspect, rotating between various sites each week. Rather than definitively schedule when each park or space will be visited, TIDA might opt to decide which spaces are visited during an inspection day by lottery. While this would provide TIDA with the best opportunity to ensure work is consistently being done to standard, and not just before a site is inspected by TIDA, a few precautions need to be considered. First, a pure lottery might end up giving some sites more attention than others, and some might be consistently passed over by chance. This can be mitigated by assigning each space a random number (a task that can be accomplished in Microsoft Excel, for example), and proceeding down that list until all spaces have been visited; each park and open space would then be assigned a new random number, and the process repeats. The second concern to keep in mind is that moving through inspections in an unpredictable manner might foster distrust in workers,

who feel that TIDA and its management team does not trust the workers to perform their jobs consistently. And third, TIDA staff might inherently see some sites more frequently by nature of the spaces' position (for example, staff who commute to TI by the new ferry service will see the terminal near daily, while the Wilds and trails along the northeast shore might receive fewer unplanned visits by TIDA staff). To balance these concerns, this report recommends that an inspection schedule be generated, with half of the sites to be visited to be chosen and planned in advance (these could be planned out across the entire year, for example) and the other half chosen at random shortly (a day or two) before the inspection day.

In addition to this inspection by TIDA staff and the field supervisors, TIDA should also seek public feedback on its maintenance crews' performance and other impressions of the spaces. This expands TIDA's effective oversight of the parks, and can boost planning measures if the public can report an event at the time of occurrence. This public feedback can be similar to, and in addition to, reporting the public may do in natural areas concerning discovery of new plant growth (either alerts of an invasive species outgrowth, or news of a native plant sprouting). Expanding options for public comment to include a section on TIDA's webpage, a designated public-comment phone number, and a designated email address can encourage the public to engage with TIDA and its open spaces, and foster a sense of mutual responsibility for the open spaces. TIDA should also include the maintenance standards and metrics it chooses (such as those listed in this report's appendix) on its webpage, so that the public can easily access it to confirm what and when they should report their opinions on the parks.

5. Conclusion

This report set out to review regional park maintenance and natural resource management practices and existing literature on park maintenance and staffing, to craft a recommendation for TIDA to prepare for the 290 acres of new parks and open spaces it will be inheriting over the next decade. Considering the successes seen in neighboring conservancies and non-profits at the complex task of natural resource management, and the literature's explanation of contracting's efficiency at simple tasks, TIDA should work to create a conservancy to manage the natural spaces on TI/YBI and issue an RFP for contractors to manage the designed spaces across the two islands. TIDA should prepare a series of site-specific handbooks that maintenance crews can use to guide their work in keeping TI/YBI's parks in the world-class condition they open with. And embedded into those handbooks should also be the standards TIDA expects crews to achieve while performing their duties, and the metrics TIDA will use to ensure the work is being done. In the immediate future, TIDA should begin work to foster a conservancy's establishment, and should find a landscaping maintenance app that it can adopt for its future work.

A few additional considerations should be kept in mind as TIDA begins its new role in parks maintenance. First, it is crucial that current residents on TI not be negatively impacted by any potential staffing changes and alterations to TIDA's parks maintenance plans as the new spaces are opened to the public in the coming years. The maintenance plans and standards listed in this report will hopefully allow current residents to continue enjoying quality parks as the islands transition to their new phase of development. Any staffing decision TIDA makes, though, must ensure that TI's current parks are fully covered; this can be through including these parks in any RFP or contract TIDA pursues, or by continuing Rubicon's services to those parks while another contractor assumes the new parks, or some other means dependent on TIDA's staffing decision.

Another key consideration involves this report's outlook on a potential TI/YBI conservancy. The staffing recommendation made in this report presumed that a conservancy would be formed by members of the public within a few years; this is reasonable given both the general enthusiasm felt by Bay Area residents for conservation and the growing population on TI/YBI as the first phases of the development project are completed. If the idea of a conservancy does not gain traction among the public within a few years, though, TIDA should be prepared to bring on permanent staff to cover its work in its natural spaces, or to enter a long-term

relationship with a contractor that specializes in conservation work until a conservancy is formed. Any contract should involve TIDA staff being in the field with contractors to ensure work is being done correctly—for the same reasons, as discussed in Section 2, why this report could not give any contractors a high effectiveness rating—though it should be noted that the pressures that can normally help an agency ensure it contracts at a fair price would likely not be present in negotiating this type of contract, due to the scarcity of conservation-centered firms.

Finally, this report will provide a brief note on concerns of equity. Equity has not been brought up as a primary criterion from this analysis due to its complex application to the alternatives in question, and to the underlying question of this report. On the latter point, this report seeks to help establish a part of a system already being built—it is a maintenance plan for a redevelopment project that have already been designed and are now being constructed. The goal, then, is to maintain these public resources and investments as highly as possible. That is not to say concerns over equity cannot be address—on the contrary, many of these alternatives will actually address inequity in varying ways. For example, Rubicon's hiring practices targets the economically disadvantaged; meanwhile, the hiring standards TIDA would follow if hiring its own staff would be governed by those of the City and County of San Francisco, which prevent discrimination in the hiring process. These are multiple avenues within the larger category of equity, and balancing between them is outside the scope of this report.

This report should be used as another stepping stone in TIDA's progress towards independent parks management. As new spaces are opened and the nature of their assets confirmed, and as best practices and regional examples evolve, so too should the maintenance plans and metrics laid out here. As TIDA starts to expand its park maintenance role, it can continue to revisit the question over staffing, as well, to evaluate the performance of the current maintenance actors, and even consider alternative sources of workers not detailed in this report. Even by just focusing on the actions covered within this report, though, TIDA should be well prepared to maintain its new parks and open spaces at the world-class standards it aims for.

Works Cited

Haeil Jung, Deanna Malatesta, and Robert J. LaLonde, "Should Government Go It Alone or With a Partner? A Comparison of Outcomes from a Work Release Program Using Different Policy Tools," *Public Administration Review* 78, issue 4 (July/August 2018): 545-555.

Iseul Choi, "Does Contracting Achieve Better Performance for Democratic-Constitutional, Procedural Tasks? Evidence From the EEO Discrimination Complaint Process," *The American Review of Public Administration* 50, issue 8 (2020).

Lee S. Friedman, *The Microeconomics of Public Policy Analysis*, Princeton University Press, May 2002.

National Recreation and Park Association, "NRPA Agency Performance Review," April 2022. https://www.nrpa.org/publications-research/research-papers/agency-performance-review/.

Oliver E. Williamson, "Transaction-Cost Economics: The Governance of Contractual Relations," *Journal of Law & Economics* 22, no. 2 (October 1979): 233-262.

San Francisco Department of Human Resources, "Classification & Compensation Database," 2002. https://sfdhr.org/classification-compensation-database.

San Francisco Office of Contract Administration, "OCA TC Log 4-1-2022." April 2022.

San Francisco Office of the Controller, "San Francisco Park Maintenance Standards: The Manual," 2005. https://www.sfcontroller.org/ftp/uploadedfiles/controller/csa/ParkStd012005.pdf.

Contacts from Regional Practices Review and TI/YBI Research

California State Parks, Bay Area District: Naftali Moed

Golden Gate Conservancy: Claire Mooney

Mt. Sutro Stewards: Ildiko Polony

National Park Service, Golden Gate National Recreation Area: Alison Forrestel, Sean Reynolds

Port of San Francisco: Carol Bach

The Presidio Trust: Lew Stringer, Hamid Shahbaz

San Bruno Mountain Watch: Ariel Cherbowsky

San Francisco Department of the Environment: Peter Brastow

SFRPD: Raina Celnik-Hickey, Mark Tilley

TICD: Magdalena Myszka, Jing Ng

TIDA: Bob Beck, Jack Nathanson, Jaime Querubin, Richard Rovetti, Peter Summerville

Appendix 1: Draft Maintenance Handbook

Below is a draft set of maintenance tasks organized by asset type for designed spaces, compiled from TICD's current maintenance documents and drafts and evaluated against guidance seen in other parks districts. TIDA should feel free to copy relevant lines from below to create handbooks for individual parks or spaces, as applicable, to be given to landscaping and custodial staff. Note, there might be other maintenance tasks outlined by TICD or TIDA not included here, as they are not directly applicable to field staff (examples include maintaining supply stocks and tracking expenses). The natural spaces should follow the procedures already outlined in the YBI Habitat Management Plan (2011).

Asset Type	Frequency of Task	Description of Tasks
Art Exhibits	Daily	Inspect for damage or vandalism, and report as needed (avoid repairing unless given guidance by the artist or art restoration specialists)
Athletic Courts	Daily	Inspect for vandalism or damage; repair or remove as able
		Remove trash or debris
		Empty trash bins and replace liners
		Inspect painted lines and other markers, and report any fading or other wear
		Inspect for major cracks, holes, or other damage to play surfaces

Asset Type	Frequency of Task	Description of Tasks
Benches	Weekly	Inspect for vandalism or damage; repair or remove as able, otherwise report it
		Check for cracking or splintering, and report for repair or replacement
Bike Racks	Weekly	Inspect for vandalism or damage; repair or remove as able, otherwise report it
Children's Play Areas	Daily	Remove trash and debris, using hoses as needed clear mats and other equipment
		Remove any chalk, graffiti, or other vandalism
		Wipe down all equipment, and neighboring benches and tables, to sanitize
		Inspect paint and report any peeling, chipping, or major fading
		Empty trash bins and replace liners
		Sweep and rake sand as needed
	Monthly (during spring and summer)	Pressure wash and detail play structures and areas under picnic benches
Dog Parks/Play Areas	Daily	Restock dog bags and empty waste bins

Asset Type	Frequency of Task	Description of Tasks
		Clear areas of any leftover dog waste
		Spray gravel with Consume, and turf areas with Simple Green
		Clean areas around waste bins, benches, fire hydrants, and other fixtures with a hose or other needed equipment
	Seasonally (twice per year)	Redistribute and grade gravel
Drinking Fountains	Daily	Clear trap of any debris, sand, hair, or food
	Monthly	Check for accurate water flow, repair as able
Irrigation	Weekly	Inspect for broken or damaged sprinklers or irrigation equipment; repair as able, and within 24 hours
		Check soil and plant health to ensure adequate watering; report if the soil is overly dry or wet
	Annually	Flush the system to clear any sand or other built-up debris
	Seasonally (spring, or whenever rainy season ends and irrigation is needed)	Run a system-wide start up and check for any leaks or other needed repairs
Lawn/Turf	Weekly	Mow to 2-3.5” in height, depending on season and water needs (longer during summer and dry seasons)

Asset Type	Frequency of Task	Description of Tasks
		Edge lawns away from planting areas and paved areas, careful to not damage neighboring plants
		In general, blow scraps back into turf
		Remove trash and debris
		Report any brown or dry patches and any holes
	Seasonally (summer)	Fertilize with ¼ of total nitrogen fertilizer (~1lb. per 1000 $ft.^2$) or organic fertilizer using a rotary spreader
	Seasonally (fall)	Overseed tall fescue lawns to maintain lawn thickness, using ~4lbs. of seed per 1000 $ft.^2$ and lightly raking soil over the seed
		Fertilize with ¾ of total nitrogen (~3lbs. per 1000 $ft.^2$) using rotary spreader
Lighting	Weekly	Check for burned-out light bulbs, replace as able
		Inspect poles for stickers and graffiti, and remove as able
Office Space	Daily	Vacuum carpets and mop other floors
		Dust desks and other furniture

Asset Type	Frequency of Task	Description of Tasks
		Remove any trash or other debris
		Wipe and clean doors, door frames, glass, switches, and walls to remove smudges
		Clean, sanitize, and/or polish water dispensers
		Empty trash bins and replace liners as needed
	Monthly	Dust low- and high reach areas, such as door frames, window sills, wood paneling, partitions, picture frames, etc.
		Sanitize office phone receivers
	Seasonally (once each season)	Clean window coverings
Parking Areas	Daily	Remove trash or debris
		Empty trash bins and replace liners
		Inspect paint and report any major fading
		Remove any graffiti or other vandalism, as able
Pavement (asphalt or concrete)	Daily	Sweep or hose off any excess dirt or sand
		Identify and remove any graffiti or other vandalism

Asset Type	Frequency of Task	Description of Tasks
	Weekly	Inspect for tripping hazards and cracks; remove as able, otherwise report it
		Check for weeds, and remove or treat any and all as needed (in accordance with Integrated Pest Management procedures and guidelines)
		Inspect for any improper water flow or drainage off paved surfaces
	Monthly (concrete only)	Pressure wash and seal
Pavement (concrete pavers)	Weekly	Inspect for tripping hazards, cracks, or raised and buckled pavers; remove as able, otherwise cone off the area and report it
Picnic Tables	Weekly	Inspect for vandalism or damage; repair or remove as able, otherwise report it
Planting Areas	Weekly	Check for weeds, and remove or treat any and all as needed (in accordance with Integrated Pest Management procedures and guidelines)
		Remove any trash or debris
		Inspect for hard or boggy soil; aerate or incorporate new soil materials if needed in that planting area

Asset Type	Frequency of Task	Description of Tasks
		Trim and prune plants away from paved areas and to promote light penetration and airflow, but allow shrubs to grow into each other, or otherwise shape except as outlined in the space's handbook
	Monthly	Inspect mulch layer to ensure proper quantity (usually 2 -4" deep); replace as needed, keeping organic mulches at least 6" away from most small plants and California desert plants
		Ensure vines are properly tied or threaded to continue vertical growth
		Prune vines to remove tangled growth and dead flowers
	Annually	Cut perennial bunch grasses to 4"; dethatch and rake as needed
		Trim spent flowers and rank on evergreen perennials grasses
		Dead head deciduous perennials around early spring, as needed per species

Asset Type	Frequency of Task	Description of Tasks
	Annually (first three years)	Test soil for texture, pH, air/water content, etc. using procured kits testing the top 6-18" of soil
	*Annually, based on test results	Apply compost tea prepared for the specific area to correct any imbalances; do not use synthetic, quick-release fertilizer
	Every three years (after year three)	Test soil for texture, pH, air/water content, etc. using procured kits testing the top 6-18" of soil
Restrooms	Twice Daily (early in the morning, and again after lunch)	Ensure proper plumbing flow, removing clogs as needed and as able
		Inspect lights and replace burned-out bulbs as able
		Inspect other appliances, like hand dryers, and report any malfunctioning equipment
		Identify and remove graffiti and other vandalism
		Clean mirrors and sinks
		Polish stainless-steel surfaces and all partitions, doors, tile walls, and receptacles
		Sanitize toilets, toilet seats and handles, urinals, sinks and faucets, and showers
		Mop floors with disinfectant

Asset Type	Frequency of Task	Description of Tasks
		Restock supplies (bathroom tissue, hand soap, feminine bags, etc.)
		Empty trash bins and replace liners
	Weekly	Dust both low- and high-reach areas, such as the tops of partitions and mirrors
	Monthly	Wipe down all walls and partitions, leaving them streak-free
		Dust doors, door jambs, trim, and ventilation grills
	Seasonally (once each season)	Scrub all tile floors with approved sealers
Signage	Daily	Inspect for graffiti or other vandalism, and remove or report as able
		Clean any dirt or rust (ex. by using a brillo pad)
	Seasonally (once each season)	Polish signs and their support poles
Storm Drains	Seasonally (once during the summer)	Clear storm drains of any debris, through hand cleaning, snaking or jetting
	Seasonally (rainy season, often November through March), done weekly	Clear storm drains of any debris, through hand cleaning, snaking or jetting

Asset Type	Frequency of Task	Description of Tasks
Trash Bins	Daily	Empty bins and replace liners (as mentioned in other site- and asset-specific guidance)
Trees	Daily (first six months after planting)	Visually inspect to ensure proper watering
	Weekly	Do not remove leaf or other plant litter unless it clogs storm drains or paved surfaces, or covers up understory plant growth
		Inspect mulch layer, and replace with a wood chip, shredded bark, or similar mulch to maintain a 2-4" layer; keep mulch at least 6" away from tree trunk
	Monthly (until tree is established)	Perform arborist inspection of moisture and irrigation data
		Inspect stakes or guys for rubbing or bark wounds; replace any damaged stakes, ties, or guys; remove stakes as they become problematic to tree growth
	Annually (July through January, to be outside of bird breeding season as able)	Prune tree only as needed for fire abatement, path clearance (no branches lower than 4' over a pathway), structural safety, lighting, or aesthetic clearance: do not top off or stub tree growth and spread

Asset Type	Frequency of Task	Description of Tasks
		arbitrarily, and do so in accordance with ANSI A300 Pruning Standards. Any pruning resulting in a cut 3" or larger must be preapproved by an arborist
		Inspect for possible circling or girdling roots, and report for root pruning or replacement as needed
Walls (including buildings)	Daily	Remove any posted materials
	Seasonally (once each season)	Clean glass walls, doors, and windows

Appendix 2: Draft Standards Manual

The following is pulled and recompiled from the San Francisco Office of the Controller's *Park Maintenance Standards*; for the full document, see here: https://www.sfcontroller.org/ftp/uploadedfiles/controller/csa/ParkStd012005.pdf.

What is inspected: Surface condition of landscaped areas, particularly lawns. Lawns that are mowed by hand or by mower trucks are inspected.
Litter under trees is covered in standard 1.1.a, unless trees are located in an ornamental garden or shrubbery area, then refer to standard 2.1.a.

Notes: Weediness is excluded from the park inspection process, because by City ordinance, use of some pesticide products to abate weediness problems is prohibited. (For more information, see Chapter 3-Integrated Pest Management Program of the San Francisco Environment Code.)

PF 1: Lawns

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/ NA
1.1	Cleanliness	1.1.a Turf is free (see notes below) of litter. 1.1.b Turf is free (see notes below) of organic debris that impedes mowing. Notes: • **At a mini park/civic plaza**, the standard is met if **no more than 5 pieces** of litter or debris, lightly scattered**, are visible in a 25' by 25' area or along a 100' lin**e. • **At a neighborhood or regional park**, the standard is met if **no more than 10 pieces** of litter are **visible in a 100' by 100' area or along a 200' line**. • **At all parks, the standard 1.1.a is <u>not</u> met if needles, condoms, broken glass, and/or feces are present.** <u>Examples of litter</u> include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. <u>Examples of debris</u> include limbs and rocks. **Leaves are excluded.**	1.1.a 1.1.b
1.2	Color	80% of turf area is fairly green.	
1.3	Density and spots	80% of turf area is free of bare spots.	
1.4	Drainage/ flooded area	80% of turf area is free of standing water two days after rain or two hours after irrigation. Note: Standard applies all year.	
1.5	Edged	80% of edges are clearly defined and have less than four (4) inches of growth over adjoining landscape.	
1.6	Height/ mowed	Lawns are mowed and kept at a uniform height of less than ankle height.	
1.7	Holes	Noticeable from a ten (10) feet distance, lawns are free of visible holes greater than six (6) inches in diameter and/or depth. Note: Holes greater than six (6) inches (in diameter and/or depth) that are observed during the inspection process should be reported so they can be filled. **The standard is <u>not</u> met if multiple holes and/or mounds caused by any animal (e.g., gophers, moles) are aesthetically unpleasant and/or impede park users from walking or jogging, even if holes are less than six (6) inches in diameter and/or depth.**	
Comments:			

What is inspected: All planted areas, including ornamental gardens, perennial and annual beds, shrubs, and ground covers. **Ornamental gardens or planted areas located in children's play areas or other areas of the park are covered here**. Cleanliness under trees that are part of ornamental gardens or shrubbery/planted areas is covered in standard 2.1.a. **But cleanliness under trees that are part of lawns area is covered in the lawns standard 1.1.a.**

Note: Community gardens, planted areas primarily maintained by the public and devoted to the community's cooperative agricultural or horticultural practices, are not evaluated.

PF 2: Ornamental Gardens, Shrubs, and Ground Covers

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/NA
2.1	Cleanliness	2.1.a Ornamental gardens, shrubs, and ground covers are free (see notes below) of litter. 2.1.b Ornamental gardens, shrubs, and ground covers are free (see notes below) of debris. Notes: • The standard is met if no more than 10 pieces of litter or debris, lightly scattered, are visible in a 25' by 25' planted area on along a 100' line. • **The standard 2.1.a is not met if needles, condoms, broken glass, and/or feces are present.** Examples of litter include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. Examples of debris include limbs and rocks. **Leaves are excluded**.	2.1.a 2.1.b
2.2	Plant health	90% or more of each ornamental gardens, shrubs, and ground covers shows no signs of death or damage (e.g., broken or uprooted shrubs and flowers).	
2.3	Pruned	100% of ornamental gardens, shrubs, and ground covers has appropriate size and shape for their location. Note: The size and shape should be common to species and should not impede pathway nor block sight lines and landmarks, unless they are deliberately designated barriers.	
2.4	Weediness	90% or more of each ornamental gardens, shrubs, and ground covers is free of weeds and 100% free of vines overtaking ornamental plantings.	
Comments:			

What is inspected: Trees surrounding paved paths, play areas, sitting areas, athletic fields, and open spaces –excluding natural areas. (See definition of natural areas in the open space feature, page 10.). Litter under trees is covered in standard 1.1.a (cleanliness-litter of lawns). Cleanliness of area under trees that are located in an ornamental garden or shrubbery area is covered in standard 2.1.

PF 3: Trees

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/ NA
3.1	Limbs	No broken or hanging limbs greater than four (4) inches in diameter are visible or impede passage to pedestrians (see notes below). Notes: • **For mini parks, neighborhood parks and civic plazas or squares**, the standard is met if no broken or hanging limbs greater than four (4) inches in diameter are visible. • **For regional parks**, the standard is met if no more than five (5) broken or hanging limbs are visible.	
3.2	Plant health	All trees are alive and 90% of trees are free of damage (e.g., dead limbs, brown foliage, damaged bark). Note: With the exception of open spaces including natural areas, the standard is not met if any tree is dead.	
3.3	Vines	Vines in trees do not exceed five (5) feet in height from the base of the tree and are not in the canopy of the tree.	
Comments:			

What is inspected: Hardscapes such as paths, sidewalks and surfaces of plazas as well as non-paved surfaces such as trails. These standards cover the hardscaped areas between two park destinations (e.g., play area and picnic area), sidewalks surrounding parks, and yellow (i.e., caution tape) or red marked areas.

PF 4: Hardscapes and Trails

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/NA
4.1	Cleanliness	4.1.a Hardscapes are free of litter and debris (see notes below). The surface of circulation areas adjacent to play areas is free of playground sand, where applicable. 4.1.b Trails are free of litter and debris (see notes below). Notes: The standards are met only if all of the following three conditions are met: • No more than five (5) pieces of litter are lightly scattered in any 25' by 25' area or along a 100' line; • No debris obstructs passage; and • No needles, condoms, broken glass, and/or feces are present. Examples of litter include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. Examples of debris include limbs and rocks that impede passage. **Leaves are excluded.**	4.1.a 4.1.b
4.2	Drainage/ flooded area	At least 95% of observed hardscape area is free of standing water two days after rain or two hours after irrigation. Note**: Standard applies all year.**	
4.3	Graffiti	Hardscape area is free of graffiti. Note: **Recreation and Park Department's policy is no tolerance of graffiti.** If graffiti is observed, it must be reported to the department to be abated within 48 hours.	
4.4	Surface quality	Paved surface is free of irregularities in grade greater than half an inch (0.5'') and is free of cracks and holes greater than two (2") inches in diameter and depth.	
4.5	Weediness	At least 95% of paved surfaces are free of weeds. Note: This standard does not refer to edging or grass growth over adjoining hardscape. Edging is addressed under lawns (standard 1.5).	
Comments:			

What is inspected: Any open space, which is an undeveloped park area that may have a planted area not actively maintained by the department. **Open space is neither an actively used park land nor a designated natural area, such as right of way patches or unimproved lots.**

Notes: This park feature excludes natural resource areas, which are areas deemed to contain remnants of San Francisco's historic landscape including a significant population of rare, endangered or native California flora and fauna. Open space-natural areas are not included in this standards manual, and therefore, are not inspected. Department management decided that natural areas are excluded from park evaluations at this time.

PF 5: Open Space

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/ NA
5.1	Cleanliness	From a 10 feet distance (i.e., from nearest path), open space is free of litter and debris (see notes below). Notes: • The standard is met if no more than 15 pieces of litter are visible in a 50’ by 50’ area or along a 200’ line. • **The standard is not met if needles, condoms, broken glass, and/or feces are present.** Examples of litter include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. Examples of debris include large limbs.	
Comments:			

What is inspected: Natural or artificial turf areas used for sports, such as baseball diamonds and soccer pitches.
Standards 6.2 (color) and 6.7 (height/mowed) do not apply to artificial turf fields.

PF 6: Turf Athletic Fields

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Please, indicate number of athletic field and type. (Use map if available.) #__ #__ #__ #__ Meet standard? Yes/No/ NA			
6.1	Cleanliness	Turf athletic fields are free of litter and debris (see notes below). Notes: • The standard is met if no more than 15 pieces of litter or debris, lightly scattered, are visible in a 100' by 100' area. • **The standard is not met if needles, condoms, broken glass, and/or feces are present**. Examples of litter include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances that impede playing. Examples of debris include limbs, rocks, and any other item that impedes playing.				
6.2	Color	Turf athletic fields are uniformly green.				
6.3	Drainage/ flooded area	Turf athletic field is free of standing water two days after rain or two hours after irrigation. Notes: **Standard applies all year**. Per department's Best Practice for Field Saturation, when field is saturated due to rain, field is to be closed.				
6.4	Fencing	Fencing is functional, free of protrusions, and free of holes/passages along the base.				
6.5	Functionality of structures	90% of available sport-related and support structures are operational for playing or observing sports. Notes: Examples of sport-related and support structures include backstops, goal posts, dugouts, team benches, spectator stands, and lighting system. This standard focuses on functionality, not attractiveness of structures.				
6.6	Graffiti	Turf athletic fields and their sport-related and support structures are free of graffiti. Note: Graffiti on benches are covered under benches, tables, and grills standards.				
6.7	Height/ mowed	Turf is mowed and kept at a uniform height of less than ankle height.				
6.8	Holes	Noticeable from a 10 feet distance, turf field is free of holes. Notes: • **The standard is not met if there are multiple holes or mounds caused by any animal (e.g., gophers, moles), even if holes are less than six (6) inches in diameter and/or depth.** Holes greater than six (6) inches (in diameter and/or depth) that are observed during the inspection process should be reported so they can be filled.				
Comments:						

What is inspected: Paved surfaces designed for playing sports including tennis, basketball, volleyball, and skateboarding.

PF 7: Outdoor Athletic Courts

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Please, indicate No. of court and type. (Use map if available.) #__ #__ #__ #__ #__ Meet standard? Yes/No/NA				
7.1	Cleanliness	Court surface is free (see notes below))of litter and debris. Notes: • At all parks, the standard is met if less than five (5) pieces of litter or debris, lightly scattered, are visible across a 25' by 25' area or along a 100' line. • **The standard is not met if needles, condoms, broken glass, and/or feces are present.** Examples of litter include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances that impede playing. Examples of debris include limbs, rocks, and any other item that impedes playing.					
7.2	Drainage/ Flooded area	At least 95% of observed court surface is free of standing water two days after rain or two hours after irrigation. Note**: Standard applies all year.**					
7.3	Fencing	Fencing is functional, free of protrusions, and free of holes/passages along the base.					
7.4	Functionality of structures	90% of available sport-related and support structures are operational for playing or observing sports. Notes: **Standard is not met if nets of basketball or tennis courts are missing**. Examples of sport-related and support structures include backstops, goal posts, nets, basketball rims, dugouts, team benches, spectator stands, and lighting system. This standard focuses on functionality, not attractiveness of structures.					
7.5	Graffiti	Outdoor athletic courts and their sport-related and support structures are free of graffiti. Note: Graffiti on benches are covered under benches, tables, and grills standards.					
7.6	Painting/ striping	Play lines are clearly visible and worn painted surfaces do not exceed 20% of total court surface.					
7.7	Surface quality	Noticeable from a 10 feet distance, play court surface is smooth, and free of irregularities in grade greater than half an inch (0.5'') and is free of cracks and holes greater than one inch (1") in diameter and depth.					
Comments:							

What is inspected: Children's play areas with play equipment. Play equipment includes independent play equipment (such as swings) and composite structures that may include slides, decks, ladders, bridges, etc. **Ornamental gardens, shrubs, and ground covers located in children's play areas and other areas of the park are covered under ornamental garden standards. Hardscaped areas adjacent to children's play areas are evaluated under hardscapes and trails.**

Notes: If any substandard conditions are observed, they should be reported to the department for abatement. This children's play area evaluation is not a substitute for the safety inspection conducted by a certified playground safety inspector (CPSI). Facilities categorized as "playground" may contain children's play areas.

PF 8: Children's Play Areas

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)		Please, indicate No. of children's play area. (Use map if available.) #__ #__ #__ #__ Meet standard? Yes/No/NA			
8.1	Cleanliness	Children's play area is free of litter, debris, and weeds (see notes below). Sandbox is free of all foreign debris. The rubber surface in children's play areas is free of playground sand, where applicable. Notes: • At all parks, the standard is met if no more than 10 pieces of litter or debris, lightly scattered, are visible in a 25' by 25' area or along a 100' line. • **The standard is <u>not</u> met if needles, condoms, broken glass, and/or feces are present.** <u>Examples of litter include</u> cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. <u>Examples of debris include</u> limbs, rocks, and any other item that impedes use of a play area. **Leaves are excluded**.					
8.2	Fencing	Where applicable, fencing is functional, free of protrusions, and free of holes/passages along the base.					
8.3	Functionality of equipment	At least 80% of intended play equipment is present and functional.					
8.4	Graffiti	Play area and its equipment are free of graffiti. Note: **Recreation and Park Department's policy is no tolerance of graffiti.** If graffiti is observed, it must be reported to the department to be abated within 48 hours.					
8.5	Integrity of equipment	80% of play equipment is free of deterioration, such as rust, rot, splinters, dents, and 100% is free of sharp edges and protrusions. 100% of attachments (e.g., bolts and screws) are secure.					
8.6	Painting	Painted structures are free of peeling or chipped paint.					
8.7	Signage	Signs are legible, free of graffiti, and properly installed in visible locations. Note: Existence, language, and purpose of signage are not evaluated.					
8.8	Surface quality	8.8.a If applicable, sand is loose (not compacted) and the level is at least 12 inches in depth.	8.8.a				
		8.8.b If applicable, 100% of rubber surface around playground equipment is present and adjacent rubber surfaces do not exceed ¼ inch (0.25") of vertical elevation difference.	8.8.b				
Comments:							

What is inspected: **Designated off-leash areas (Only)**

Note: Users of dog play areas are responsible for picking up and disposing of feces, supplying bags for dog waste bag dispensers, and filling holes dug by their dogs before leaving the dog play areas. (For more information, see the Recreation and Park Department's Dog Policy - Resolution No. 0205-001 of May 8, 2002.)

PF 9: Dog Play Areas

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/ NA
9.1	Bag dispenser	Bag dispensers are available, free of graffiti, and fully operational.	
9.2	Cleanliness	9.2.a Dog play area is free of litter and debris (see notes below). 9.2.b Dog play area is free of feces. Notes: • The standard 9.2.a is met if no more than 15 pieces of litter or debris, lightly scattered, are visible in a 100' by 100' area or along a 200' line. • **The standard is <u>not</u> met if needles, condoms, and/or broken glass are present**. <u>Examples of litter include</u> cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. <u>Examples of debris include</u> limbs, rocks, and other items that impede the use of the dog play area. Leaves are excluded.	9.2.a 9.2.b
9.3	Drainage/ flooded area	80% of dog play area is free of standing water two days after rain or two hours after irrigation. **Note: Standard applies all year**.	
9.4	Height/ mowed	Where applicable, turf in dog play area is mowed and kept at a uniform height of less than ankle height.	
9.5	Signage	Park signs for designated off-leash areas are legible, free of graffiti, and properly installed in noticeable locations.	
9.6	Surface quality	Surface is smooth and free of holes greater than six (6) inches in diameter and/or depth.	
9.7	Waste receptacle	Waste receptacles are available and not overflowing.	
Comments:			

What is inspected: Entryway and interior of all restrooms, including standalone or part of buildings restrooms, with entrances from inside or outside of a building.

PF 10: Restrooms

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)		Male	Female	Male	Female	Unisex
				Was the restroom open? (Yes/No)				
				Meet standard? Yes/No/ NA				
10.1	Cleanliness	10.1.a Entryway and interior of restrooms are free of litter, debris, and feces (see notes below). 10.1.b. Toilets, urinals, sinks, and diaper-changing stations are clean. Notes: • The standard 10.1.a is met if no more than 3 pieces of litter or debris are visible on the floor, wall or ceiling of restroom. • The **standard 10.1.a is <u>not</u> met if feces, needles, condoms, or broken glass are present in the interior or entryway of restrooms within a 25' perimeter.**	10.1.a 10.1.b					
10.2	Graffiti	Restrooms are free of graffiti. Note: **Recreation and Park Department's policy is no tolerance of graffiti.** If graffiti is observed, it must be reported to the department to be abated within 48 hours						
10.3	Functionality of structures	All toilets, urinals, partitions, stall walls and doors, diaper-changing stations, water faucets, and sink drains are operational and free of leaks, where applicable.						
10.4	Lighting	90% of lights are operational, where applicable.						
10.5	Odor	Restroom is free of offensive odor.						
10.6	Painting	Painting has uniform coat and is not peeling.						
10.7	Signage	Restroom signs are legible, free of graffiti, and properly installed near entrances.						
10.8	Supply inventory	Restrooms are stocked with toilet paper, paper towel, and soap.						
10.9	Waste receptacles	Waste receptacles are clean and not overflowing.						
Comments:								

What is inspected: Parking lots and roads maintained by the Recreation and Park Department, such as those in Richmond Recreational Center, McLaren Lodge, and Golden Gate Park.

Note: Parking garages are excluded from standards.

PF 11: Parking Lots and Roads

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/ NA
11.1	ADA parking spaces	ADA parking spaces are available.	
11.2	Cleanliness	Parking lots and roads are free of litter and debris. Note: The **standard is not met if feces, needles, condoms, or broken glass are present** Examples of litter include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. Examples of debris include limbs, rocks, and any other item that impedes the use of the parking lot or roads. .	
11.3	Curbs	When present, 90% of curbs in parking lots and roads are intact. Notes: This standard mostly applies to asphalt curbs (a.k.a. berms) in regional parks, but if it is present in other parks, this element should be assessed.	
11.4	Drainage/ flooded areas	Parking lots and roads are free of standing water two days after rain or two hours after irrigation. Note: **Standard applies all year.**	
11.5	Graffiti	Parking lots and roads are free of graffiti. Note: **Recreation and Park Department's policy is no tolerance of graffiti.** If graffiti is observed, it must be reported to the department to be abated within 48 hours	
11.6	Painting/ stripping	75% of parking and road lines are visible.	
11.7	Signage	Signs are legible, free of graffiti, and properly installed in noticeable locations. Note: Examples of signs include directional signs.	
11.8	Surface quality	11.8.a Parking lots and roads are free of potholes greater than six (6) inches in diameter and/or depth. 11.8.b Parking lots and roads are evenly surfaced.	11.8.a 11.8.b
Comments:			

What is inspected: Waste and recycling receptacles, and their surrounding areas. Overall cleanliness of other park features, such as benches and tables should be evaluated in their respective areas.

PF 12: Waste and Recycling Receptacles

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/ NA
12.1	Cleanliness of receptacles	12.1.a 90% of all receptacles are clean and 100% are free of graffiti. 12.1.b Immediate areas surrounding 90% of all waste receptacles are free of litter and debris (see notes below). Notes: The standard 12.1.b is not met if : • more than 3 pieces of litter or debris are present in the immediate area surrounding any waste receptacle**; and/or** • needles, condoms, broken glass, and/or feces are present. Examples of litter include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. Examples of debris include limbs and rocks.	12.1.a 12.1.b
12.2	Fullness	90% of all receptacles are not overflowing.	
12.3	Painting	Painting has uniform coat and is not peeling, where applicable, on 90% of all receptacles.	
12.4	Structural integrity and functionality	90% of all receptacles are free of large cracks or damage that affect their use.	
Comments:			

What is inspected: Surface and surrounding area of benches, tables, and grills.

PF 13: Benches, Tables, and Grills

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/ NA
13.1	Cleanliness	13.1.a 90% of available benches and tables are free of litter, dirt, and rust, and 90% of all grills are free of litter (see notes below). 13.1.b Immediate areas surrounding 90% of all benches, tables, and grills are free of litter, weeds, and debris (see notes below). Notes: The standard 13.1.b is not met if: • more than 5 pieces of litter or debris are present in a 25' by 25' area **and/or** • needles, condoms, broken glass, and/or feces are present. Examples of litter include cigarette butts, tissue paper, food wrappings, newspapers, and larger items like abandoned appliances. Examples of debris include limbs and rocks.	13.1.a 13.1.b
13.2	Graffiti	Benches, tables, and grills are free of painted graffiti. Note: **Recreation and Park Department's policy is no tolerance of graffiti.** If graffiti is observed, it must be reported to the department to be abated within 48 hours	
13.3	Painting	At least 80% of surface of all benches and tables is free of peeling or chipped paint, if applicable.	
13.4	Structural integrity and functionality	90% of benches and tables are structurally sound (i.e., not broken slats), properly anchored, and free of sharp edges and protrusions. Grills are operational.	
Comments:			

What is inspected: Exterior of buildings, amenities, and structures that were not covered in other park features.

Note: Park sector supervisors are responsible for checking interior and exterior of facilities. However, reporting of interior conditions –with the exception of restrooms in the interior of buildings (i.e., recreational centers, clubhouses)- is excluded from this inspection process.

PF 14: Amenities and Structures

(If this park feature is not applicable, mark here ☐ and go to the next one.)

No.	Measured element	Standard description with unit of measure (if applicable)	Meet standard? Yes/No/ NA
14.1	Exterior of buildings	14.1.a Exterior of buildings is free of vandalism and graffiti. 14.1.b 90% of painting of exterior of buildings is of uniform color and not peeling. Note: **Recreation and Park Department's policy is no tolerance of graffiti.** If graffiti is observed, it must be reported to the department to be abated within 48 hours	14.1.a 14.1.b
14.2	Drinking fountains	Drinking fountains are accessible, operational, and free of standing water and debris.	
14.3	Fencing	Fencing is functional, free of protrusions, and free of holes/passages along the base.	
14.4	Gates / locks	Existing gates, latches, and locks are operational.	
14.5	Retaining walls	14.5.a Retaining walls are structurally sound (see notes below). 14.5.b Retaining walls are free of vandalism and graffiti. Note: Structurally sound implies, among other things, that the walls are not leaning and that they are free of large cracks**. If graffiti is observed, it has to be reported to the department to be abated within 48 hours.**	14.5.a 14.5.b
14.6	Signage	Signs are legible, free of graffiti, and properly installed in noticeable locations. Note: Availability, language, and purpose of signage are not assessed.	
14.7	Stairways	14.7.a Stairways are free of litter and debris. 14.7.b Stairways are structurally sound (see note below). 14.7.c 95% of stairways are free of weeds. Note: Structurally sound implies, among other things, that raisers and treads are consistent from top to bottom and that the stairways have handrails.	14.7.a 14.7.b 14.7.c
Comments:			

TREASURE ISLAND
DEVELOPMENT AUTHORITY
CITY & COUNTY OF SAN FRANCISCO
One Avenue of the Palms, Suite 241 San Francisco CA 94130

Exhibit D: Expanded Matrix

Key: Green = High, +1
B/W = Medium, 0
Grey = Low, -1

	Social				Functional					
Management Option +, - **TOTAL**	**Community Orientation:** advancing equity and serving the needs of the local community	**Racial & Social Equity:** Commitment to racial equity in internal hiring and operations	**Transparency:** information is readily available to the public without need for inquiry.	**Accountability:** Responsible to the public, government, members/donors	**Expertise:** Knowledge and competency in park management and operations	**Capacity:** Staffing, infrastructure, and financial resources to effectively manage parks	**Cost:** Relative operating and labor costs across options	**Level of Service:** Ability to maintain excellent park facilities, programming, maintenance	**Agility:** Ability to nimbly respond to changing needs and conditions	**Sustainability:** integrity of natural habitats, plant/ animal diversity, and ecological functions.
TIDA +3, -4 **-1**	+1. High- on-island focus is central to mission	-1. Low - as a development agency, unclear commitment to racial equity in hiring and operations	Medium- while required open government as a city department, the developed reporting structures are less developed than Parks & Rec	+1. High - directly accountable	-1. Low - expertise in development, not parks	-1. Low - small organization	-1. Low - leverages TIDA resources	Medium - dependent on TIDA bandwidth	+1. High - simple management structure	Medium - focused but limited resources
SF Parks & Rec +5, -1 **+4**	Medium – broad, bold public mandate and demonstrated public-minded approach, however the mandate extends beyond TI/YBI.	+1. High - city agency bound by racial equity policies and initiatives	+1. High - required open government as a city agency	Medium - dispersed across city	+1. High - expertise managing large park systems	Medium - extensive but constrained	Medium - fixed city budgets and HR	+1. High - leverages full dept. capabilities	-1. Low - large complex bureaucracy	+1. High - established systems and resources
Private Contractor +3, -4 **-1**	-1. Low - focus on bottom line	Low to Medium - depends on company's DEI policies and practices	-1. Low - no requirements to disclose operations	-1. Low - less transparency and oversight	Medium - brings private sector expertise	+1. High - scales to need	+1. High - must generate profit	Medium to High - depends on contract terms	+1. High - flexible and scalable	-1. Low - drive for profits and revenues
Conservancy +4, -1 **+3**	Medium to High - focus on community needs.	Medium to High - depends on mission and DEI stance	Medium - Form 990 disclosures required but operations generally opaque	Medium - community accountability	+1. High - subject matter expertise	Medium - depends on fundraising	-1. Low to Medium - utilizes donors and volunteers, expensive to administer	+1. High - caters programming and operations	+1. High - mission-driven and innovative	+1. High - dedicated to sustainability
Public-Private Non-Profit Partnership +6, -0 **+5**	Medium to High – community service may prioritized in pursuit of supportive funders. May be oriented towards funders.	+1. High - brings together city policies and additional resources	Medium to High - depends on terms but more disclosure than solely private	+1. High - combined accountability	+1. High - combines strengths	+1. High - optimizes capacities	Medium - shared costs	+1. High - flexibility to customize	Medium - coordination required	+1. High - balances priorities

Memo to the TIDA BOARD
Exhibit D: Expanded Matrix

KEY: In this chart, a "high" ranking is awarded +1, a "medium" ranking is neutral, and a "low" ranking is awarded -1. The qualitative rankings in this assessment provide insights into the various management options. These rankings allow for easy comparison of critical factors related to social, functional, and management aspects. However, it's important to note that these rankings are relative. Instead, they offer a comparative view of how each option performs in different areas.

A narrative description of the considerations in the expanded matrix.

TIDA: TIDA's strong community orientation centers its mission on an on-island focus, but there's an unclear commitment to racial and social equity in hiring and operations. While it maintains open government standards as a city department, reporting structures are less developed than those of Parks & Rec. TIDA's direct accountability is a strength, but it specializes in development rather than park management. Its limited capacity and resources, however, pose challenges. Cost-effectiveness is achieved by leveraging existing resources, but its ability to provide a high level of service is constrained by limited bandwidth and resources. TIDA maintains a simple management structure and focuses on sustainability but has limited administrative resources for supporting endeavors, such as standardized procedures for parks.

SF Recreation and Parks Rec & Parks has a moderately community-oriented approach, with a broad public mandate extending beyond Treasure Island. It is bound by racial equity policies and initiatives, demonstrating a high commitment to social equity. Transparency is a notable strength as it must maintain open government standards as a city agency. Its expertise in managing large park systems is high. Citywide resources are extensive while directed as part of the City's budget, TIDA specific funds may supplement the City's base budget. Rec & Parks leverages its full department capabilities to provide a high level of service. However, it operates within a large, complex bureaucracy. Sustainability is a key focus, with established systems and resources for sustainability.

Private Contractor: Private contractors could have a low community orientation, primarily focusing on the bottom line. Their commitment to racial and social equity varies based on individual company policies and practices. Transparency is low, as there are no requirements to disclose operations. Accountability and oversight are also limited. Private contractors bring medium-level expertise from the private sector and can scale operations as needed. However, their services tend to be costlier as they must generate a profit. The level of service provided varies depending on contract terms. Private contractors are flexible and scalable, but their primary drive is profit and revenue rather than sustainability.

Conservancy: Conservancies exhibit a medium to high community orientation, focusing on community needs. Their commitment to racial and social equity depends on their mission and DEI stance. Transparency is medium, with Form 990 disclosures required, but operations are generally opaque. Conservancies have community accountability and possess high subject matter expertise. They often depend on fundraising, which can result in low to medium costs. However, administration costs can be expensive. Conservancies provide a high level of service, catering to programming and operations. They are agile, mission-driven, and dedicated to sustainability.

Public-Private, Non-Profit Partnership: Partnerships fall into the medium to high range regarding community orientation, often prioritizing community service in pursuit of supportive funders. Non-profit contractors, including TIDA's on-Island partners, can support any governance model and are contemplated most specifically in this category. They excel in racial and social equity by combining city policies with additional resources and direct community knowledge. Transparency varies but typically involves more disclosure than solely private entities. Partnerships share combined accountability and optimize strengths. They maximize capacities and involve shared costs, resulting in a high level of service with flexibility to customize services. Coordination is required, and they maintain a strong focus on sustainability, balancing multiple priorities