

# BLUE GREENWAY

Planning and Design Guidelines

JULY 2012

Streets | Furnishings | Signage & Identity  
Open Space Concepts | Funding & Implementation



A Citywide Interagency Effort



Led by the Port of San Francisco  
[www.sfport.com/bluegreenway](http://www.sfport.com/bluegreenway)

## **Blue Greenway Vision Statement**

*The Blue Greenway is more than a trail; it is a unifying identity for the 13-mile corridor along San Francisco's southeastern waterfront. The Blue Greenway will link established open spaces; create new recreational opportunities and green infrastructure; provide public access and retain and restore natural habitat areas; through the implementation of the San Francisco Bay Trail, Bay Area Water Trail, and green corridors to surrounding neighborhoods; install public art and interpretive elements; support stewardship; and advocate for waterfront access as an element of all planning and development processes over time.*

**Mayor Newsom's, 2006 Blue Greenway Task Force Vision Statement (updated)**

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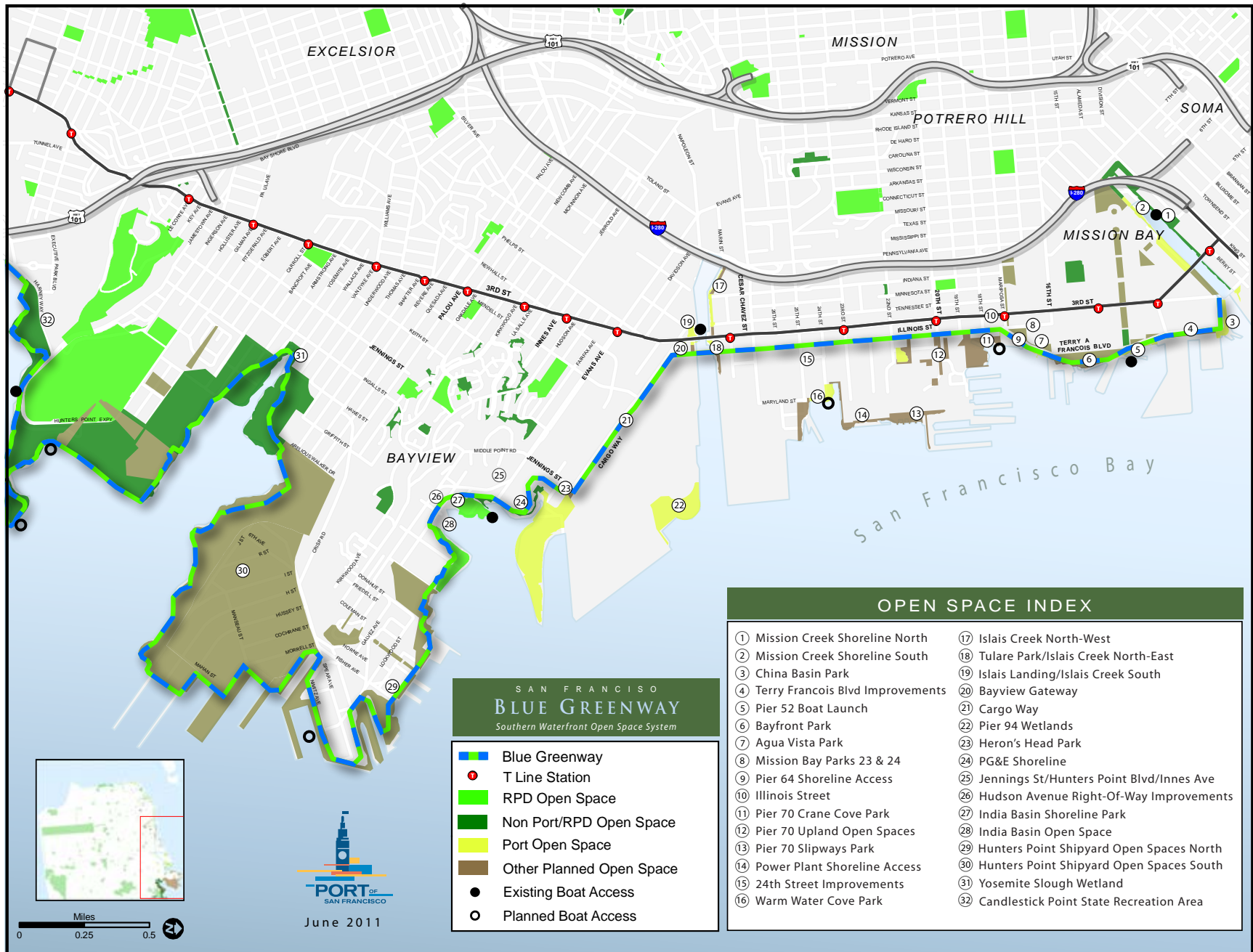


Figure 1.1: Blue Greenway Open Space System Map

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## 1. INTRODUCTION:

The Blue Greenway is a City-sponsored project dedicated to planning and creating a public open space and water access network in southeast San Francisco, from China Basin Channel to the San Francisco County Line (see *Figure 1.1: Blue Greenway Open Space System Map*). Here in the heart of the city's industrial mixed use districts and neighborhoods, many changes are underway. The City is focused on maintaining a viable maritime and light industrial base and directing where new, complementary economic investment can occur. City and other public agencies, and community partners are working together to define how new parks and public spaces will be integrated, with specific focus on the waterfront. In defining where new open spaces should be added to existing waterfront parks, and increasing water recreation opportunities, the Blue Greenway is the latest city project to further realize regional open space and recreation objectives of the San Francisco Bay Trail and Bay Area Water Trail Plans.

### The Blue Greenway Planning Process

San Francisco is fortunate that most of its waterfront is publicly-owned. In this part of town, waterfront lands are managed by several agencies: The Port of San Francisco (Port), San Francisco Office of Community Investment and Infrastructure (OCII), San Francisco Recreation and Parks Department (R&P), and the California State Parks Department. These agencies worked cooperatively from 2008 - 2012 on the public planning process with the San Francisco Planning, Department of Public Works (DPW), Municipal Transportation Agency (MTA), and Mayor's Office to define locations for Blue Greenway parks and improvements, and to integrate these concepts in several different economic and land planning efforts underway in southeast San Francisco. Details of the public planning process are provided in Appendix I.

Because funding and implementation schedules of these efforts will not happen all at once, the Blue Greenway planning process sought to:

1. Identify the locations of existing and new waterfront open spaces, and water access sites;
2. Define the key streets that provide access to and between these park and open space resources (Linking Streets), along the north-south spine of the Blue Greenway as well as between inland neighborhoods and the waterfront (Connector Streets);
3. Design and develop a signage system that establishes a clear identity for the Blue Greenway, and helps the public to navigate along the system;
4. Develop planning and design guidelines that set standards for the type and style of furnishings and site signage, so that each provides common information and orientation while still allowing them to highlight their unique attributes and design opportunities;

Within the framework set through these Blue Greenway Planning and Design Guidelines, City agencies will implement Blue Greenway improvements as integral parts of the various economic development and planning projects in southeast San Francisco, including: Eastern Neighborhoods Rezoning, Mission Bay, Pier 70 Master Plan, and Hunters Point Shipyard and Candlestick Point Redevelopment, Bayview Hunters Point, and Francisco's Better Streets Program, San Francisco Green Connections, and the San Francisco Bicycle Plan. The Blue Greenway planning process has established collaborative interagency relationships to support these efforts. Similarly, the community engagement and partnerships that have emerged during this period also play an important role to ensure that the stewardship of the Blue Greenway has strong City and community support over the long-term.



*Kayakers on Mission Creek*

In 2008 and again in 2012, the City of San Francisco voters passed the Parks General Obligation Bonds (GO Bonds). These Bonds combined included \$78.5 million for the Port waterfront park improvements, of which \$39.5 million is allocated to Blue Greenway projects on Port lands. Because this public investment provides a major boost for the Blue Greenway on the Port waterfront, the Port has taken the lead in directing the Blue Greenway planning process, in collaboration with its sister City agencies, Association of Bay Area Governments (ABAG), State Parks, the San Francisco Bay Conservation and Development Commission (BCDC), and the community at large.

This document is organized by initially outlining guidelines for those elements that span the entire Blue Greenway such as streets, public art, site furnishing and planting criteria, then addresses specific Port open space projects and funding strategies.

## Port Blue Greenway Projects

In the course of leading the Blue Greenway planning process, the Port also has focused its attention on planning and implementing Blue Greenway projects on Port property. In this report, concept design and use criteria are presented for each of the proposed Port open spaces, incorporating refinements that respond to public comments. In addition, this report includes a proposed Funding and Implementation program, recommending which Port Blue Greenway projects should be prioritized for construction, financed by available GO Bond and other funds. In addition to open spaces, the Port is recommending expenditure of GO Bond funds for Blue Greenway signage and public art.

The Port is recommending the following Port parks and open space improvements for implementation:

1. Bayfront Park Shoreline
2. Agua Vista Park
3. Crane Cove Park at Pier 70
4. Warm Water Cove Park
5. Islais Creek Parks including Tulare and Third to Tennessee connection, pile and debris removal and repair of the Copra Crane
6. Bayview Gateway at Third and Cargo
7. Signage and Furnishings for the Port's Blue Greenway sections
8. Public Art

Through this community planning process, the Port solicited public review and endorsement of the open space concepts, funding and implementation proposals for Blue Greenway improvements along the Port waterfront, as presented in this report.



*Volunteers and park stewards at Warm Water Creek, Earth Day 2011*

## Blue Greenway Planning Documents

The Blue Greenway Existing Conditions Report catalogs all existing and potential future Blue Greenway parks and resources throughout the system, across all jurisdictions. This Report is a resource to support other site-specific park improvements undertaken by the San Francisco Planning Department, Recreation and Parks, Redevelopment Agency or other agencies.

In September 2010, the Port, in collaboration with the Department of Public Works published a first draft of the Blue Greenway Planning and Design Guidelines. That report proposed site furnishing concepts for the Blue Greenway system. It also presented open space program uses for Port Blue Greenway sites. *Appendix I* provides an overview of the planning process to date and summarizes the comments received on the previous materials presented.



Volunteers and park stewards at Islais Creek Landing, Earth Day 2011

This Blue Greenway Planning and Design Guidelines were finalized in July 2012 after voters passed the 2012 Park Bond. This final document incorporates refinements in response to public comments and presents the following elements:

- Blue Greenway Linking and Connector Streets
- Design Criteria for the Blue Greenway Signage and Identity System
- Site Furnishing Concepts for the Blue Greenway System
- Landscape Palette and Style
- Open Space Program Uses for Port Blue Greenway sites
- Funding Priorities for Port Blue Greenway Projects

The Blue Greenway Planning and Design Guidelines presents the full program of improvements and implementation strategies.

The Port will incorporate appropriate sections of these Blue Greenway Planning and Design Lands Use Plan Guidelines in its Waterfront Lands Use Plan and Design and Access Element.

The Port of San Francisco would like to thank those that have and continue to support and participate in the Blue Greenway planning process. To continue to track the status of the Port's Blue Greenway projects, visit [www.sfport.com/bluegreenway](http://www.sfport.com/bluegreenway).

For up to date information on the Port's portions of the Blue Greenway project, see: [sfport.com/bluegreenway](http://sfport.com/bluegreenway).





*Above: September 29, 2010 Blue Greenway Community Workshop.  
Attendees at the Meeting*

*Below: May 26, 2010 Blue Greenway Community Workshop. Port  
Commissioner Brandon providing opening remarks*





## 2. LINKING & CONNECTOR STREETS

The city's street grid plays an important part to help define and provide direct connections to and between the Blue Greenway system. The Planning and Design Guidelines take the first step to identify streets to meet this purpose, and propose street signage, public art and design features that convey a clear identity for the Blue Greenway. This approach relies on two types of streets:

- Linking Streets – These streets connect between individual open spaces, creating the spine of the Blue Greenway network. They generally run parallel to the shoreline edge, and include Terry Francois Boulevard, Illinois Street, and Cargo Way alongside the Port's southern waterfront.
- Connector Streets - Streets that connect the Blue Greenway to adjacent neighborhoods and nearby public transit.

The Linking and Connector streets fall into multiple jurisdictions including the Port, DPW, MTA, OCII, and San Francisco Planning Department. *Figure 2.1: Blue Greenway Linking and Connector Street System Map* catalogs the six Linking Streets through the entire Blue Greenway system. Because these streets provide multiple functions, cross many jurisdictions and can only be improved with specific types of funds, multi-agency coordination is required to support street improvement projects. The key agencies likely to lead various street improvements are:

- Terry Francois Boulevard - Port, OCII, MTA and DPW
- Illinois Street - Port, MTA and DPW
- Cargo Way - DPW, Port and MTA ;
- Jennings, Hunters Point Boulevard and Innes Avenue - DPW, OCII, and MTA



### Linking Streets

The following briefly describes existing conditions and concept plans for Linking Streets in the northern and Central subsection of the Blue Greenway, the streets within the Southern subsection are within the Hunters Point Shipyard and Candlestick areas and are not reviewed in this document.

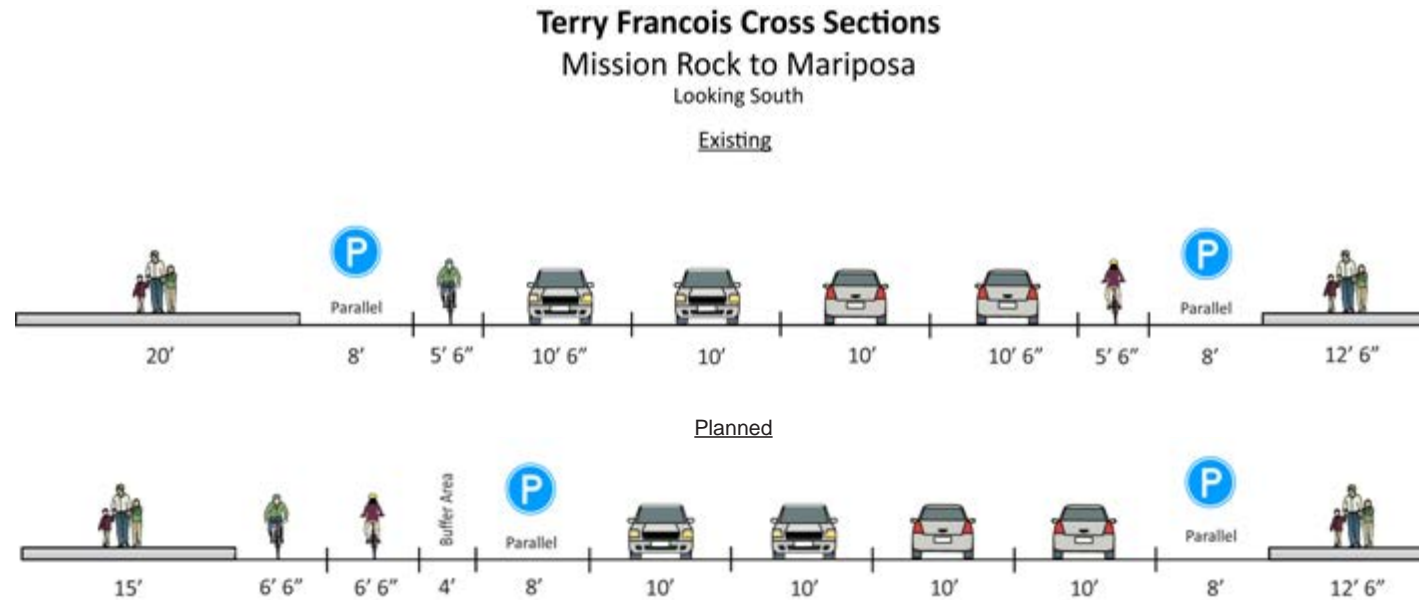
The concepts presented in the following pages highlight improvements to existing streets primarily for bicyclists. While bicyclists are an important users of the Blue Greenway, the concepts when implemented will also include improvements consistent with the City's Better Streets Plan. The improvements must balance the needs of all street users, and reflect the understanding that the pedestrian environment is about more than just transportation – that streets serve a multitude of economic, social, recreational and ecological needs that must be considered when deciding on the most appropriate design.

## Terry Francois Boulevard

Terry Francois Boulevard is the northern most Blue Greenway Linking Street. The existing conditions and planned section for Terry Francois Boulevard is illustrated in *Figure 2.2: Terry Francois Boulevard Planned Profile*.

The existing design was prepared as a part of the Mission Bay Redevelopment Plan adopted in 2001. While this concept greatly improved bicycle and pedestrian access along this portion of the Blue Greenway, lessons have been learned specifically about an improved approach for bicycle facilities. Utilizing the lessons learned, the Port working with the OCII and SFMTA have developed an alternative design concept that will improve the bicycle amenities on Terry Francois Boulevard without compromising capacity or parking. The new design for an improved Terry Francois Boulevard is illustrated in *Figure 2.2*.

Because of the phased approach to reconstruct the roadway, the Port will continue to work with OCII and SFMTA on implementation of this improvement.



*Figure 2.2: Terry Francois Boulevard Planned Profile*

## Illinois Street

Illinois Street is a Linking Street that connects Mission Bay to Bayview Hunters Point. The profile for Illinois Street is changing with the addition of bicycle lanes and is illustrated *Figure 2.3: Illinois Street Planned Profile*. The planned profile of Illinois street was developed in 2005 through an interagency and community effort between the Port, SFMTA and local stakeholders. The concept was a compromise in that Illinois Street serves multiple users and is programmed to support pedestrian, bicycle, parking, industrial, loading, light rail and until recently freight rail users. The current design was developed with the assumption that no major investment in new infrastructure or curb alignments would occur. The bicycle improvements were completed in the summer of 2011.

Working with SFMTA as a part of the Blue Greenway planning process, the City has investigated alternative concepts as to how Illinois Street may be improved to more efficiently accommodate all modes of traffic and users.

Based upon the analysis it was determined that the concepts developed in 2005 and being implemented now are the best configuration. Ultimately, some improvements could be gained for bicycles if sidewalk widths are reduced, but currently the significant costs outweigh the gains required to do so.

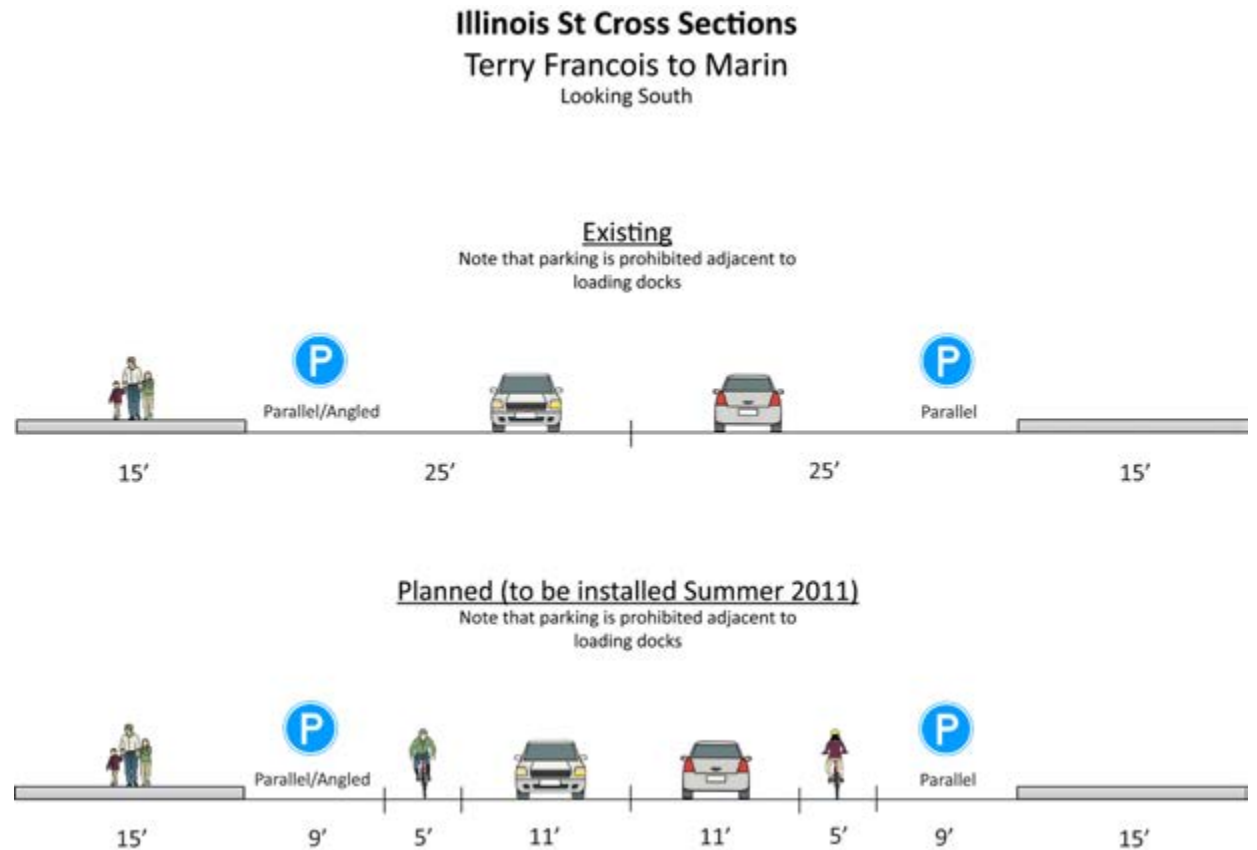


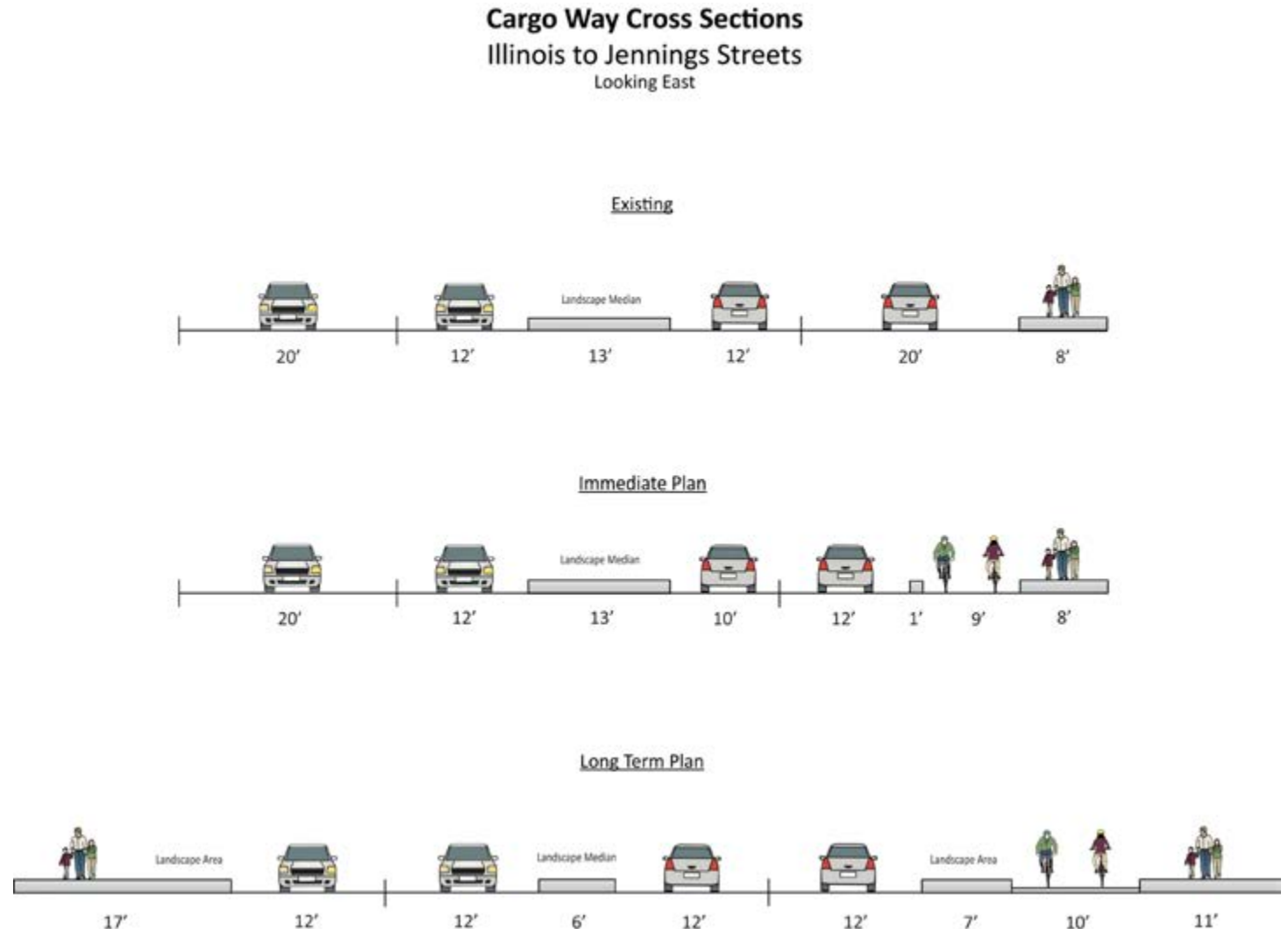
Figure 2.3: Illinois Street Planned Profile

## Cargo Way

Cargo Way is a three-quarter of a mile boulevard that filled a gap in the Blue Greenway system. The roadway is located on Port property and was constructed in the 1970s by the DPW as a part of the India Basin Redevelopment Plan. The roadway was constructed to support the Port's maritime and cargo operations and to support the India Basin Industrial Park. In 2008 through a grant from the ABAG Bay Trail Project a redesign plan was developed to improve the roadway for bicyclist and pedestrians. The plan was developed through an interagency effort and was supported by the community. While the concept developed was well supported, the cost is anticipated to be approximately \$16.5 million and a funding source has not been secured.

The Port working with partner agencies secured a grant to implement an initial phase of improvements that support the 2008 concept.

*Figure 2.4: Cargo Way Existing Conditions and Concepts* illustrates the existing conditions, immediate project and ultimate project. The immediate project was completed in 2012.



*Figure 2.4: Cargo Way Existing Conditions and Concepts*

## Jennings/Hunters Point Boulevard and Innes Avenue.

Jennings Street, Hunters Point Boulevard and Innes Avenue provide a connection from Heron's Head Park to the Hunters Point Shipyard project and open spaces. Some sections of the connection between Heron's Head Park and the Shipyard is provided at the shore's edge on a walking path, but is discontinuous because of private property, physical constraints and the pathway is not accessible to bicyclist. Each of the streets together provide a primary access way into the Hunters Point shipyard project. A component of that project is to improve each of the roadways.

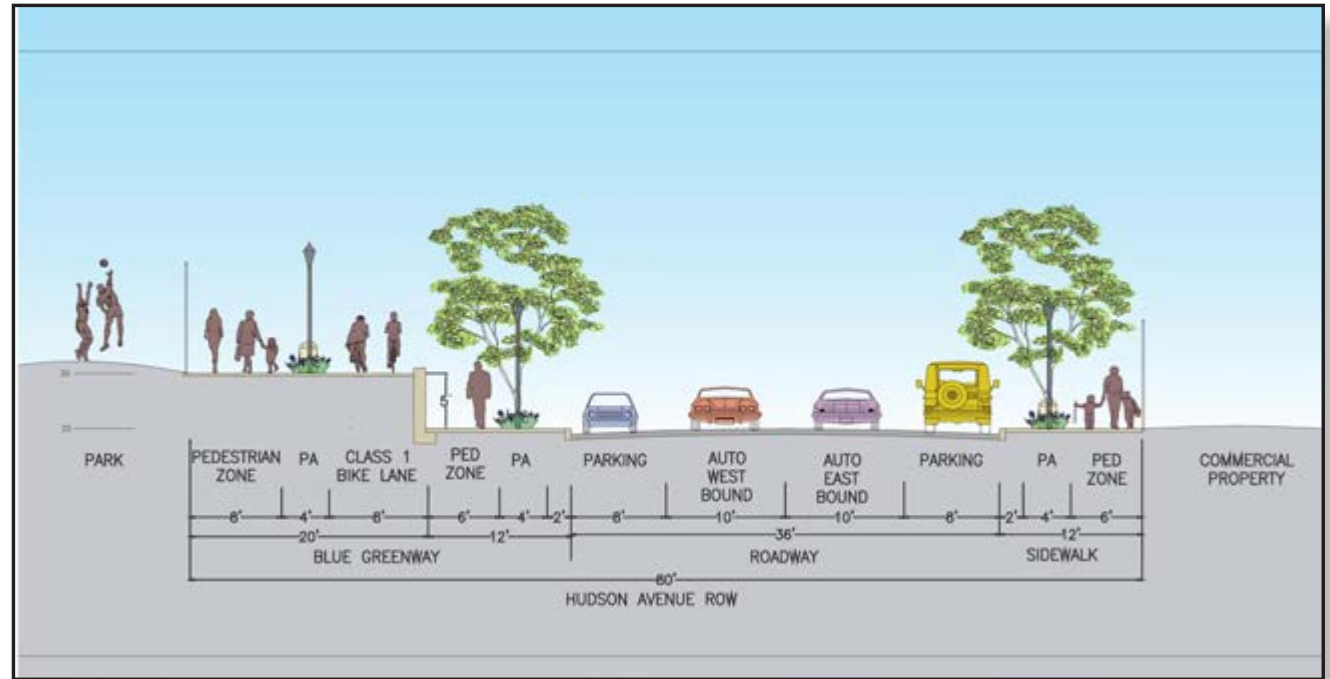


Figure 2.5: Hudson Avenue Roadway Improvement Concept

The proposed concept for Innes, Jennings and Hunters Point Boulevard is to have 10' sidewalks on either side and two travel lanes in either direction, including a 10' lane and a 20' shared bicycle vehicle lane.

It should be recognized that improvements to Innes, Jennings, Hunters Point Boulevard are not expected for several years. Changes in conditions and land uses may require that alternative profiles be examined prior to final implementation.

A future component of providing safe bicycle and pedestrian access between Heron's Head Park to the shipyard may be to improve Hudson Street, which currently is an unimproved public right-of-way. Two concepts for Hudson street have been analyzed and are illustrated in *Figures 2.5 and 2.6: Hudson Avenue Improvement Concepts*.

Improvements to these streets will be implemented through coordination with the SFRA, DPW, SF Planning and the Mayor's office.

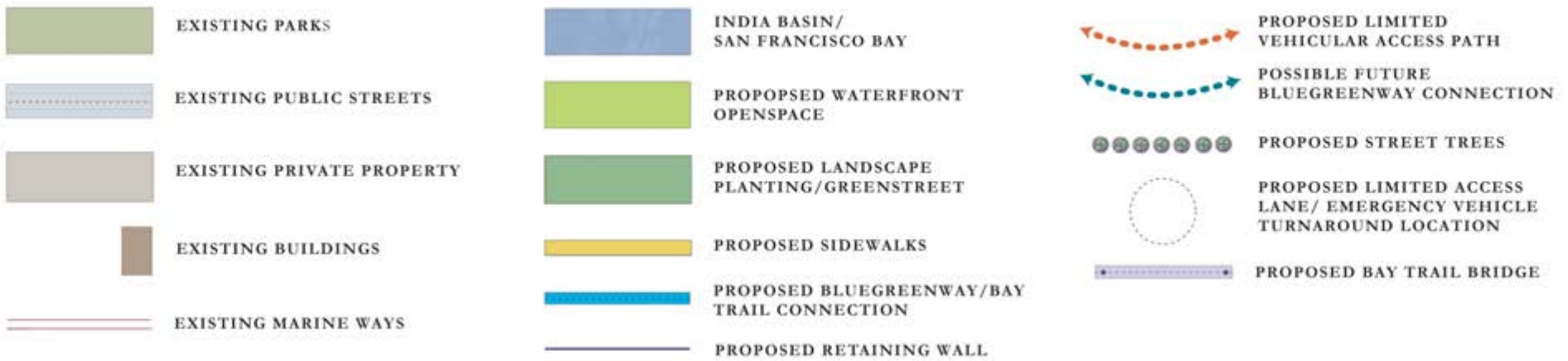
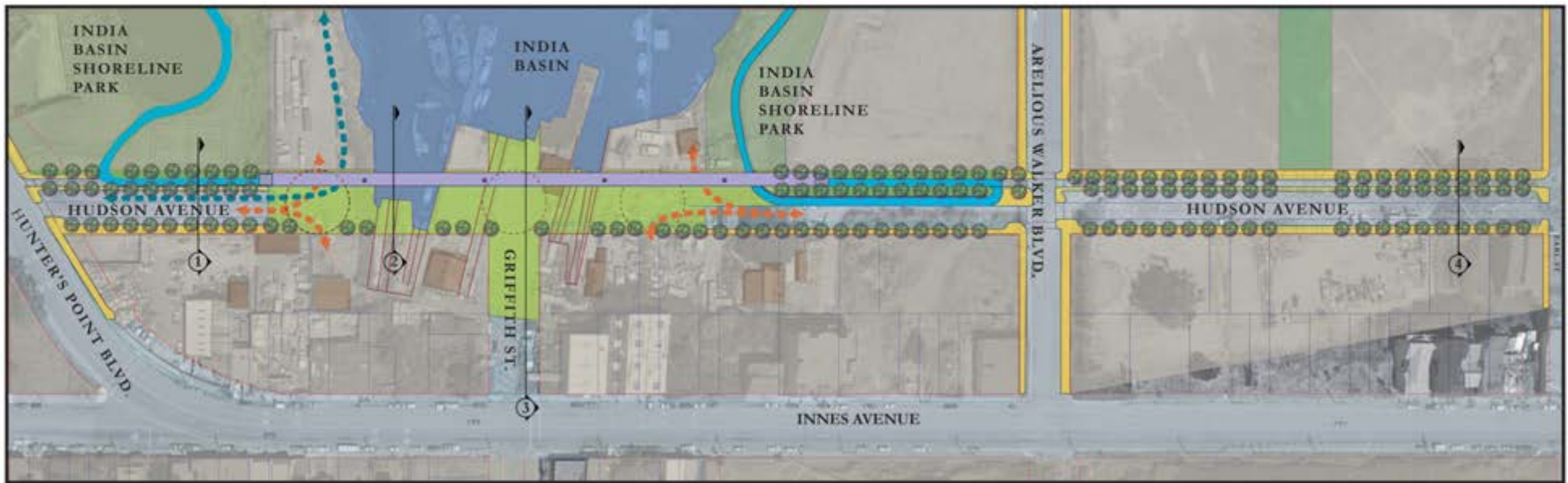
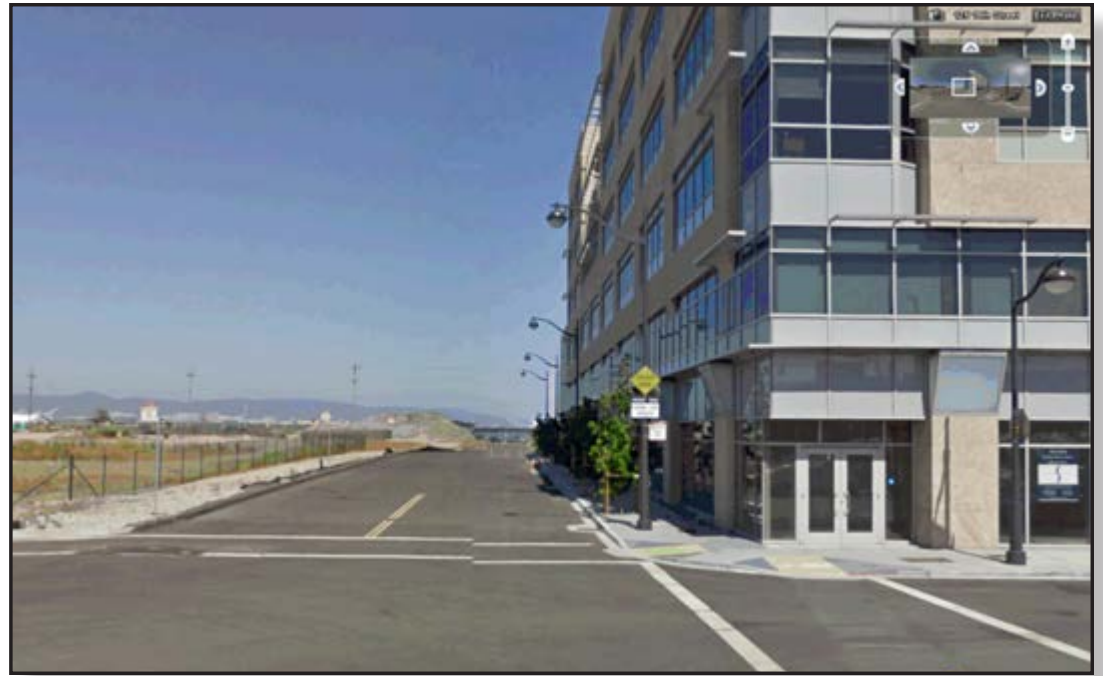


Figure 2.6: Hudson Avenue Roadway Improvement Concept

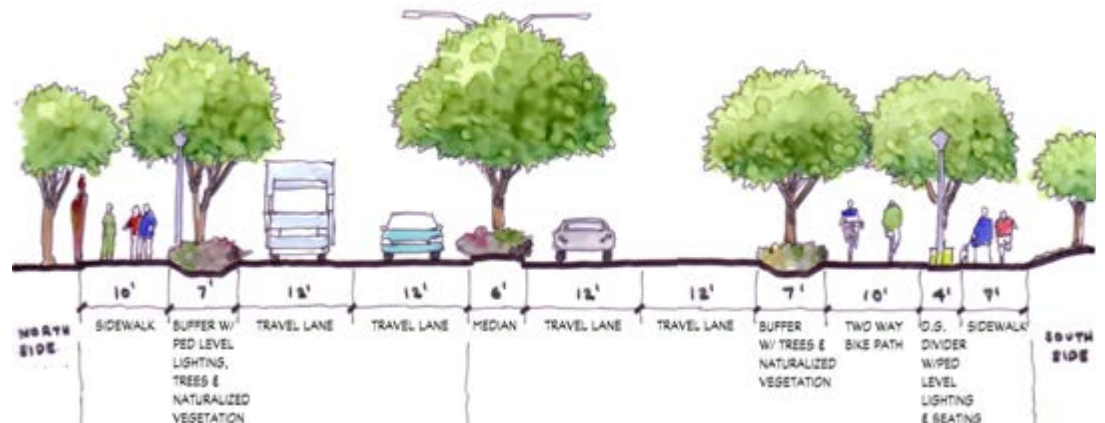


## Connector Streets

Blue Greenway Connector streets provide a direct connection from an adjacent neighborhood or major public transit stop to the Blue Greenway. In addition to providing a direct connection, they can be utilized as a part of a “loop system” offering an alternative recreation opportunity. The Connector Streets are recognized in *Figure 2.1: Blue Greenway Linking and Connector Street System Map*. The Connector streets fall in multiple jurisdictions and as improvement opportunities arise, the San Francisco Planning Department with MTA, DPW and other relevant agencies will coordinate on the improvements consistent with other relevant City plans including Better Streets and Bicycle Plans.



Looking east on 16th street at Illinois Street, ultimate improvement to 16th Street “Connector Street” to include connection to Blue Greenway at Bayfront Park



Cross section of Cargo Way long term plan

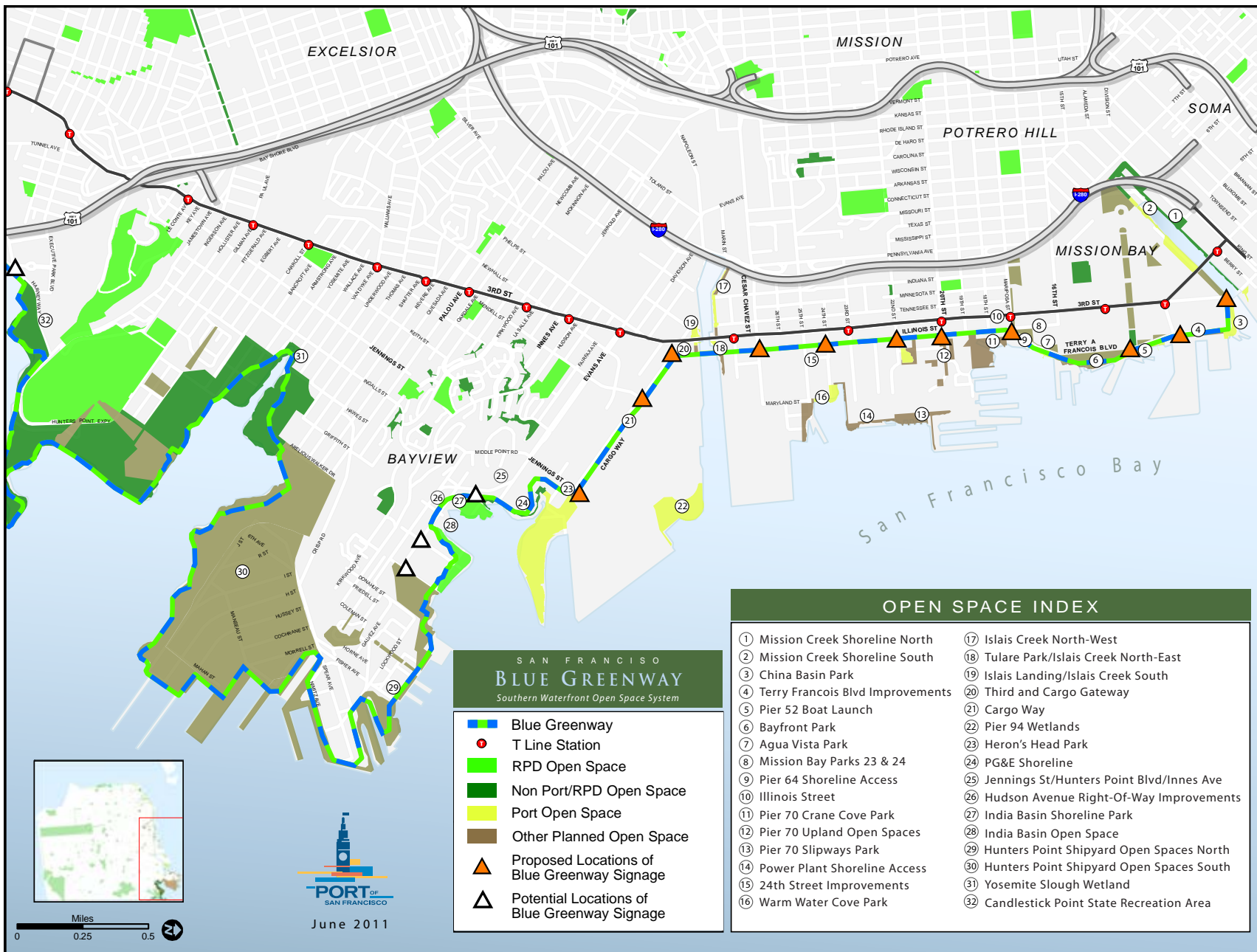


Figure 3.1 Blue Greenway Signage existing conditions sub-areas

### 3. SIGNAGE, INTERPRETATION & ART

In concert with defining the Linking and Connector Streets as an organizing framework for the Blue Greenway, it is also very important to develop signage, public art and interpretive installations that give the Blue Greenway a distinct identity and flavor of its own that complements this somewhat gritty setting and disconnected system, but still stands out. This is especially important in implementing early Blue Greenway projects.

#### Signage

The planning and design vision for signage along the Blue Greenway is to convey an inviting and safe environment in an area that will continue as an industrial and working waterfront interspersed with new development. However, the very nature of an active industrial corridor challenges that objective. The pedestrian and bicyclist uses juxtaposed with the industrial activity of the working waterfront is the wellspring for both the Opportunities and Challenges of creating a successful and unique system experience and signage program for the Blue Greenway.

#### Signage and Wayfinding Design Criteria

The following criteria were developed and used as the basis for creating the Blue Greenway signage concepts

- Be comprised of visually significant streetscape and park elements that respond to the urban, historic and industrial context of the San Francisco waterfront.
- Promote public use of the waterfront by providing directional, orientation, interpretive, regulatory and system information.
- Pedestrian, bicyclist and motorist information will be combined on common signage elements when possible.
- Increase the waterfront's connectivity to adjacent neighborhoods and San Francisco at large by clearly presenting street names, access to public transit stops and trail loop and spur opportunities.

- Increase public awareness of the entire Bay waterfront from Candlestick Point to Golden Gate Bridge, defining established waterfront districts and landmarks;
- Inform public about adjacent waterfront neighborhoods within context of Blue Greenway
- Be sustainable in terms of material specification, product life span and durability as much as possible. Where appropriate, information will be easily and cost-effectively maintained and updated.
- Create a hierarchy of communication and graphic identity

#### Design “The Sail”

The most important task of the sign system is to help users stay on the linking segments of the Blue Greenway and to help establish recognition of the system. Figure 3.1 illustrates the locations selected for the Blue Greenway wayfinding signs. The tall, brightly colored Sail element of the Blaze sign type, as depicted in Figure 3.2, serves that purpose. It contrasts to the back drop of the large and structured industrial features and is visible from a distance. The sculptural form is inspired by the fullness of a Sail on the bay. The curves and volume contrast with the rigid and exposed framing of the industrial structures. The bold color contrasts with muted industrial hues.

#### Hierarchy:

There are three hierarchal components of the Blue Greenway Blaze that establishes the identity and wayfinding for the system as illustrated in Figure 3.2:

1. The Sail that “blazes” the path between parks and open space and helps establish recognition for the Blue Greenway system.
2. The directional information (text and arrows) to “anchor destinations” along the Blue Greenway and a map with the broader city wide context.
3. The interpretive panels that communicate the areas maritime, natural or neighborhood history.

## Placement

The color and form of the Blaze creates big events at intersections with major connector streets and prominent locations that can be viewed from the water. This placement as illustrated in Figure 3.2 reinforces the circulation patterns that exist and that are being planned for the Blue Greenway.

## User Orientation

The south east waterfront does not have consistent views of the Bay to sustain and lead the users. Some of the blocks are long and have challenging hard edge conditions. These bold elements blaze the way for users: cyclists, pedestrian and motorist, and links the bay front opportunities and is illustrated in Figure 3.3.

## Public Art

In addition to Blue Greenway signage, public art is an integral component of the Blue Greenway and will assist in strengthening its identity. The Port working with the San Francisco Art Commission has initiated a process to install an art element on the Pier 92 Grain Silos along Islais Creek and a art component as a part of the Bayview Gateway project. The park concepts reviewed in Section Six and as illustrated on Exhibit 3.3 Blue Greenway Visual Art Locations, identify several locations that are appropriate for both temporary and permanent public art.

The City's Art Enrichment Ordinance requires that 2% of all capital cost of the GO Bond funds go towards the Art Enrichment Program. In addition, the Port proposes that additional GO Bond and Port capital funding be utilized for both permanent and temporary public art. Section Seven reviews project funding and prioritization.

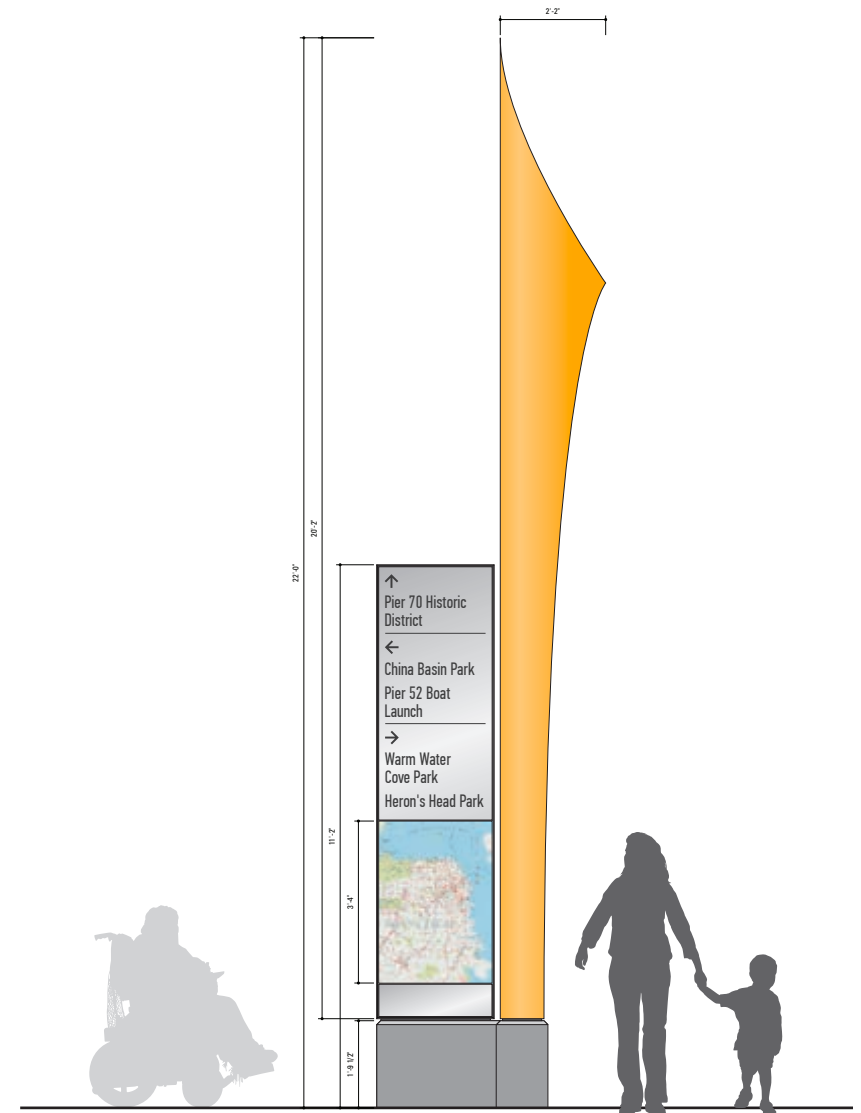


Figure 3.2 Blue Greenway Signage Concept by Kate Keating Associates Inc.

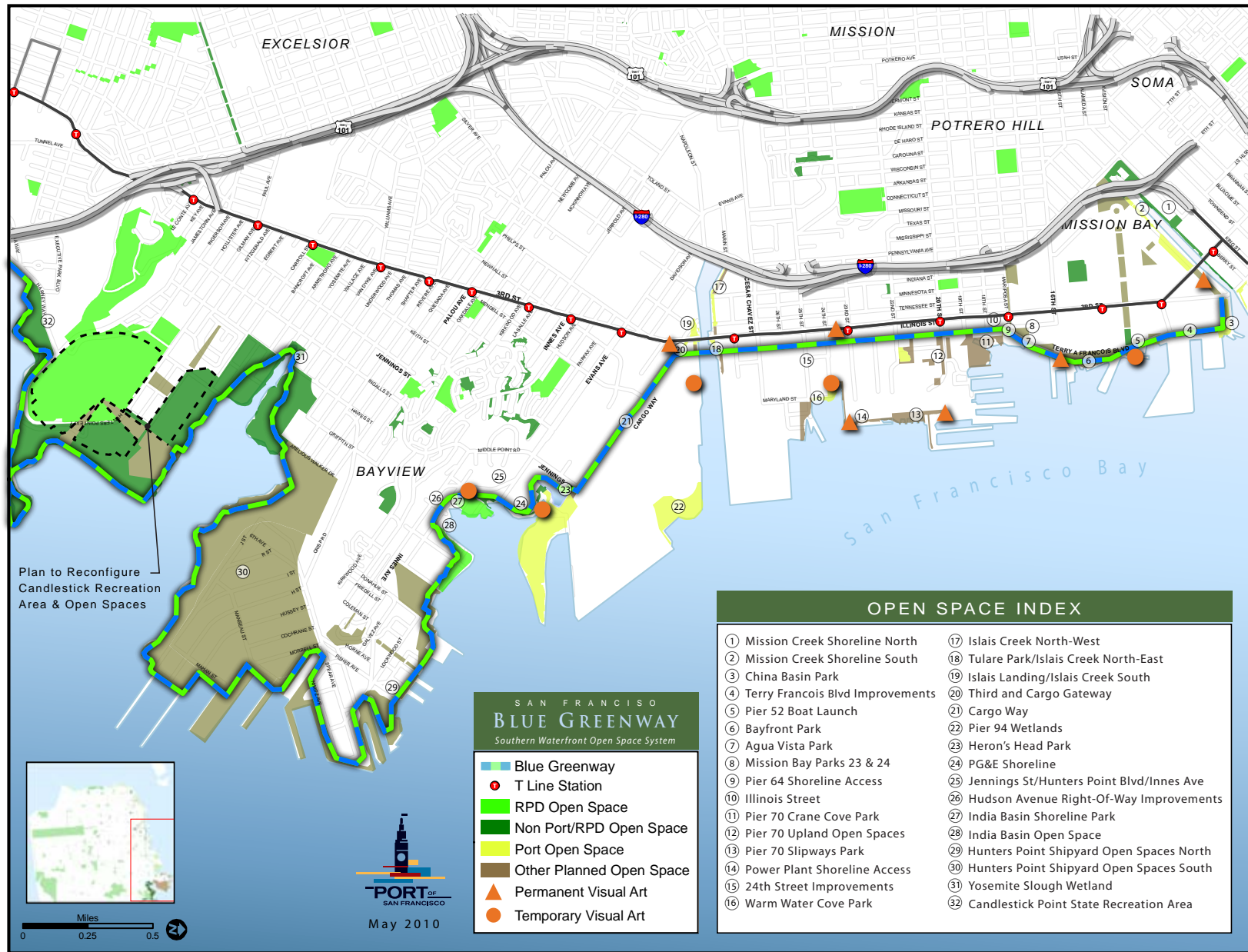


Figure 3.3: Blue Greenway Art Program



*Example of cohesive site furnishings, benches, waste receptacles lighting and bollards, Mission Creek Promenade, North*

## 4. SITE FURNISHINGS

Site furnishings along the Blue Greenway should meet the needs of the various users of the trail system including but not limited to boaters, bikers, walkers, runners, and nearby residents. They will be durable and require low maintenance while reflecting the ecological ethos of the project and the cultural landscape in which they are situated. These guidelines describe the criteria for designers in selecting site furnishings along the Blue Greenway.

The criteria for selection are diverse. They are intended to provide for a certain level of consistency while allowing individual designers some flexibility and creativity. The criteria include general characteristics, material types, and specific furnishings for Linking Streets and some Open Space furnishings.

The intent of these criteria, is to result in site furnishing selection that gracefully and logically transitions between streetscapes and open spaces along the Blue Greenway.

The following pages of this section are organized by: a) General Characteristics; b) Color and Material; c) specific furnishings for Linking Streets (as defined in Section Three); d) specific furnishings for a few common elements for all open spaces; and e) criteria for furnishings for the other individual open spaces.



## General Characteristics

In general, site furnishings should meet the following conditions which were primarily adapted from the BCDC Shoreline Spaces, Public Access Design Guidelines for the San Francisco Bay:

- Provide site furnishings that are consistent with the site's characteristics and overall project design and are appropriate for anticipated levels of use
- Orient seating toward the bay views, vistas of opposite shores, or landmarks, such as bridges or towers,
- Provide durable site furnishings to minimize maintenance requirements
- Furnishings should be designed for achievable maintenance requirements
- Provide enough lighting to create a sense of safety but design to control intensity, glare, and spillover
- Provide custom-made site furnishings where they help to create a "sense of place"



When selecting site furnishings along the Blue Greenway designers should consider the following criteria:

- Site Setting and Architectural Character
  - Be aware of the maritime environment and specify materials that are resistant to atmospheric moisture and salt conditions
  - Utilize the finest materials possible for the specific location while being aware that vandalism and theft are concerns
  - Select textured surfaces to deter graffiti, or be aware of graffiti preventive coatings. Consider that the finished surface may have to be re-painted regularly
  - Include seating in areas other than waterfront locations where feasible orienting it inward towards the parks themselves where other activities may warrant attention
  - Relate to the materials used in adjacent maritime architectural structures
  - Provide completely accessible furnishings for persons with mobility, sight, and hearing impairments
- Sustainability & Durability
  - Utilize locally produced products, wherever possible, for ease of replacement and to reduce transportation related carbon expenditure
  - Specify site furnishings that are comprised of recycled, recyclable, or reused materials where appropriate
  - Identify energy efficient and resource efficient furnishings where possible



## Color and Material Suggestions



Concrete



Concrete - cast



Concrete - textured



Concrete - form finished



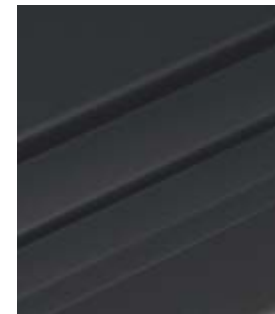
Steel - Stainless



Steel - Weathering



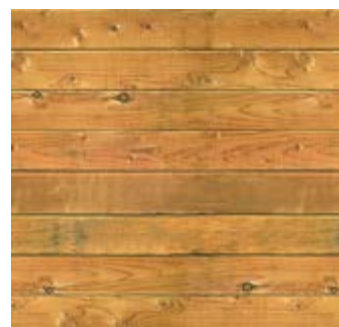
Steel - Galvanized



Steel - Powder Coated



Wood - Sustainably Harvested  
Redwood or Cedar

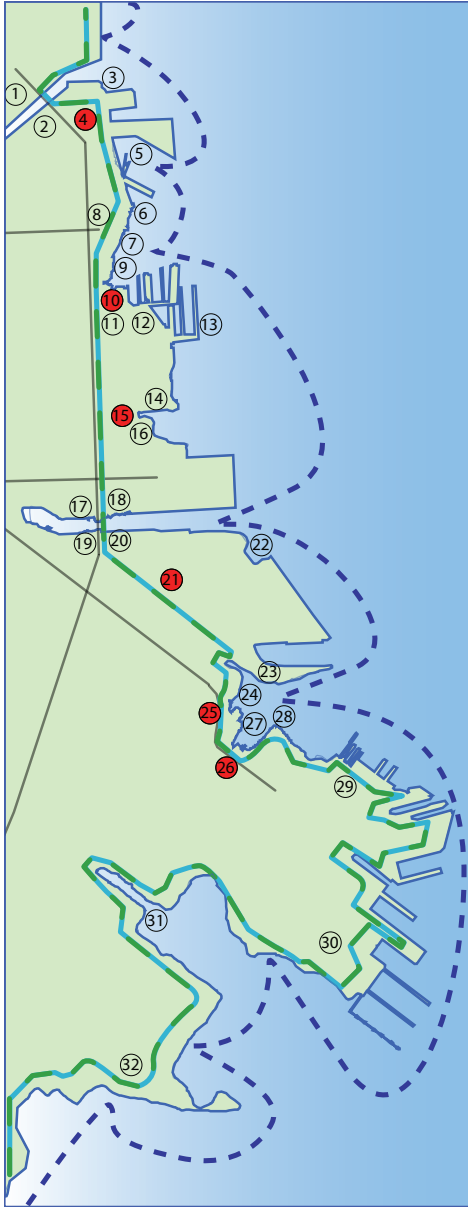


Wood - Reclaimed

### Color Notes:

- Site furnishings should not distract from the primary focus of the Blue Greenway which is Nature and the Industrial Waterfront.
- A neutral, natural color palette based on the industrial materials found in the area would work well.
- Bright colors should be avoided except for interpretive signs, way-finding, and public art.

## Site Furnishing Design Criteria - Streetscapes



The Blue Greenway is a system of waterfront open spaces connected by way of multi-modal streets and paths. In most cases the open spaces are connected by Linking Streets (defined in Section Three). Different civic jurisdictions have control of the many Linking Streets within the Blue Greenway project area such as the Port of San Francisco, the San Francisco Department of Public Works, and the San Francisco Redevelopment Agency. The intent of this section of the Design Guidelines is to present a citywide Blue Greenway standard for streetscape site furnishings for Linking Streets.

While the streetscapes run through many land use types, the furnishings of the streetscapes should be consistent, providing a unifying experience along the linear corridor of the street. The streetscape site furnishings will additionally be seen by passengers in vehicles so they may be the most visible of the site furnishings described in this document. Many of the streetscapes along the Blue Greenway are remote so security, maintenance, and vandalism are concerns.

Site furnishings in these areas should have the following traits:

- Based on city standard fixtures for maintenance and durability
- Relate to the existing furnishings on segments that are already completed

The Linking Streets along the Blue Greenway include:

- Site #4: Terry Francois Blvd.
- Site #10: Illinois Street
- Site #21: Cargo Way
- Site #25: Jennings St./ Hunters Point Blvd./ Innes Ave
- Site #26: Hudson Avenue Right-Of-Way Improvements

## Palette for Streetscape Site Furnishings



*Trash / Recycling Receptacle  
Stainless or Powder-coated Steel*



*Bike Rack Stainless Steel  
Square Tube*



*Trash / Recycling Receptacle  
Powder-coated Steel*



*Exercise Equipment Stainless  
or Powder-coated Steel*



*Water Fountain / Bottle Refill Station  
Powder-coated Steel*



*Bicycle Racks*



*Water Fountain / Refilling Station*



*Concrete Block*



*Concrete Block - Detail*

## Specific Open Space Furnishings:

The selection of site furnishings for individual open spaces with the exception of three furnishing types (bike racks, drinking fountains and Blue Greenway Landscape blocks) will be based on the unique characteristics of the individual sites while using the criteria and characteristics established in this section. This is intended to provide for a certain level of consistency while allowing individual designers some flexibility and creativity.

The three pieces of site furnishings specified for the design of the Blue Greenway open spaces are established to help strengthen the identity and system as a whole and ease in maintenance and replacement of the furnishings. The three elements include, bicycle racks, drinking fountains and Blue Greenway landscape blocks, as described below:

### Bicycle racks

- Use tubular square material, in cross section to deter pipe cutting
- Locate in a convenient location, in plain view, and away from the street edge if possible
- Provide enough for anticipated activity in the area

### Drinking fountains

- Provide extremely durable units
- Include a dog bowl option, one per site, minimum
- Incorporate jug filler for refilling personal water bottles

### Blue Greenway Landscape Blocks

- Select from Blue Greenway Customized Blocks (details and options to be defined)
- To be used as seating, retaining or sculptural forms
- To be utilized in all open spaces

## Criteria for Other Open Space Furnishings:

The following criteria for the Blue Greenway site furnishings are based primarily on the Waterfront Land Use Plan Design and Access Element, (Port of San Francisco, 2004, pgs. 36-41.) Designers shall consider:

### Blue Greenway Landscape Blocks

- Select from Blue Greenway Customized Blocks (details and options to be defined)
- To be used as seating, retaining or sculptural forms
- To be utilized in all open spaces

### Benches

- Understand that benches indicate that we are invited to stay in a public area
- Provide a comfortable resting place
- Locate at a designated area of interest or special view
- Install at waiting areas, and intermittently but regularly along the Blue Greenway
- Accommodate ADA requirements with units along major paths of travel having arm rests, back rests, and adjacent spaces for wheelchairs

### Waste and Recycling Containers

- Ensure that they serve their function; contain trash, accommodate recycling, and limit blowing debris
- Locate multiple units as necessary in every open space and be plentiful, especially in areas that are less easily accessible
- Blend them into the background; their design should be noticeable without attracting unnecessary attention
- Assure they are easy to service with front loading swing door for ease of access
- Select units that are not inviting to birds and other wildlife

### Bullrails

- Use along edges of pier aprons and marginal wharves.
- Know they are the preferred edge treatment because of their minimal view blockage, ability to moor boats at them, and maintaining the waterfront character

### Railings

- Use along edges of pier aprons and marginal wharves
- Locate in public access areas along non-maritime edges, or if determined necessary by the adjacent uses.
- Provide a top rail that is inviting to lean on
- Ensure they are not easily climbable
- Create rhythm in the design, for example, through the design of the post spacing
- Consider including a mid-rail slightly below the handrail for added interest;
- Consider using posts that break the line of the handrail to minimize the appearance of alignment imperfections;
- Maximize transparency



## Tables

- Understand that tables indicate that we are invited to gather and eat together
- Provide a comfortable resting place,
- Designate an area of interest or special view:
- Accommodate ADA requirements. Locate units along major paths of travel. Specify tables per manufacturer's recommendations that provide spaces for wheelchairs
- Consider game tables where eating may not be appropriate

## Barbecues

- Provide sufficient quantity and size for adjacent picnic area
- Note primary wind direction and orient downwind of picnic tables and benches if possible
- Assure the physical safety of all users
- Include hot ash receptacles as needed

## Bollards

- Place bollards at the edge of a roadway, driveway, or path so that the bollards do not interfere with normal vehicular movement
- Space bollards typically 2.5-4 feet apart

## Area lighting

- Provide pole-mounted lights where large areas may need added security and illumination
- Utilize solar powered lights with LED fixtures for maximum renewable energy efficiency
- Lighting should be slim and simple in design

## Pedestrian lighting

- Provide pedestrian scaled pole-mounted lights where paths need illumination away from streets but within an urban context
- Utilize solar powered lights with LED fixtures for maximum renewable energy efficiency
- Lighting should be slim and simple in design

## Bollard lighting

- Provide lighting on bollards when low lighting levels is needed on linear pathways away from streets and in natural areas
- Utilize solar powered lights with LED fixtures for maximum renewable energy efficiency
- Lighting should be slim and simple in design

## Landscape lighting

- Provide lighting to accentuate buildings, plants, and artwork in the landscape.
- Be mindful of up-lighting that may illuminate where it is not intended
- Down lighting from trees is preferable to up lighting
- Consider in-ground lighting to illuminate overpasses or tunnels from within or to invite pedestrians down a different path

## Planters

- Utilize in locations where soil is not available or accessible
- Use a variety of shapes and sizes within a family of materials
- Incorporate automatic irrigation for planters wherever possible

## Tree grates and guards

- Locate in urban streetscape and plazas
- Design to match landscape setting



## Exercise equipment

- Provide a variety of self paced exercise equipment along the Blue Greenway
- Consider all age ranges when selecting units
- Ensure a mix of upper and lower body workout machines
- Include both stationary and kinetic pieces

## Kiosks

- Coordinate with way-finding and interpretive graphics
- Provide in areas where community gatherings may take place or where the community may adopt their maintenance
- Materials should reflect the architecture of the surrounding landscape and other furnishings in the area

## Restrooms

- Consider using city standard or composting prefab rest rooms in urban streetscapes and plazas
- Incorporate toilets in natural areas or where there is substantial room



## Site Furnishings Coordination

These guidelines present criteria for the selection of site furnishings for the Blue Greenway. Adherence to them will ensure there is a sense of continuity along the Blue Greenway.

Additionally, designers should coordinate the selection of site furnishings with other landscape features including:

- Waterfront edges
- Paving materials
- Site walls and stairs
- Railings, guardrails, and fences
- Landscape planting
- Public art
- Way-finding and interpretive graphics





*Heron's Head Park*



## 5. PLANTING & LANDSCAPE PLAN

Plant material more than any other single element can shape and define and orient users of shoreline open spaces. Plant material is critical to the success of the park from not only a design aesthetic, but also for the ecological health of the City and the Bay.

Selection of appropriate planting along the Blue Greenway should adhere to the goals written in the Port of San Francisco's Waterfront Land Use Plan Design and Access Element.

Plants should be selected with the intent to enhance the diverse ecological habitat of the landscape and provide an aesthetic experience for visitors to the waterfront. Planting designs shall use continuous planting and other ground surface treatment to physically and visually link the waterfront with adjacent inland areas. These guidelines describe the criteria for the selection and creation of planting palettes along the Blue Greenway. Refer to *Appendix IV* for a recommended *List of Shoreline Plants* published by the San Francisco Bay Conservation and Development Commission (BCDC). Refer to *Appendix V* for a recommended *Vegetation Palette* published in the Port's Stormwater Design Guidelines.

The following pages of this section are organized by the following criteria: a) Typical Bay Shoreline Landscape Today; b) Native Plants & Invasive Plants; c) Water Usage; d) Creating Habitat Conditions; e) Appropriate Planting for the Water's Edge; f) Plants that can Tolerate Salt Inundation; and g) Alternatives to Lawn Recreational Uses.

***(The content of this section was taken from the San Francisco Bay Conservation and Development Commission's Shoreline Plants, A Landscape Guide for San Francisco's Bay (see: <http://www.bcdc.ca.gov/pdf/planning/SPLG.pdf>). We gratefully appreciate BCDC's permission to reproduce this content)***



Heron's Head Shoreline

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## Typical Bay Shoreline Landscape Today

The five types of landscape conditions that are prevalent along San Francisco's waterfront today are identified as natural areas, parklands, semi-urban areas, urban areas, and industrial areas.

### Natural Areas

Natural areas include wildlife reserves and refuges, restoration sites and newly created habitat areas. It is important to consider the following when managing, restoring or creating these types of areas:

- Involve an interdisciplinary team of experts to help with the restoration design.
- Plan for long-term landscape maintenance - includes funding, and monitoring of invasive species.
- Manage the landscape with the protection of wildlife in mind.
- Use planting to separate people from wildlife habitat.
- Control the spreading of non-native species prior to native re-vegetation.
- *Consider the option of not re-establishing plants onto the landscape and leave as is.*
- Chose plants to provide habitat for specific wildlife when possible.

### Parklands

Parklands range from small community parks to regional state and federal parks. It is important to consider the following when creating a planting palette for parklands:

- Direct and control public access to the shoreline through planting to protect wildlife, public safety and prevent erosion.
- Provide landscape buffers between recreational use areas and wildlife habitat areas.
- Limit lawn to areas where it is needed for active play.
- Avoid planting trees near tidal marshes and in locations where public views will be blocked.

### Semi-Urban Areas

Semi-Urban areas generally include office and residential developments, light industrial parks or other developed uses that are often placed in a landscape setting. It is important to consider the following when planting in semi-urban areas:

- Select a planting palette that corresponds to user needs.
- Use the shoreline trail as a dividing line between native plantings along the shoreline and a mixture of non-native and native plants on the inland side of the trail.

### Urban Areas

Urban areas are highly developed shorelines that contain mostly hardscape with paving and buildings. It is important to consider the following when planting in urban areas:

- Frame and maintain views to water.
- Use all opportunities to plant.
- Pay attention to hydrology and aeration in urban landscapes.
- Choose plants appropriate for the urban environment and conditions.

### Industrial Areas

Industrial areas include ports, airports or industrial warehouses along the shoreline. It is important to consider the following when planting in industrial areas:

- Plant industrial shorelines to provide habitat.
- Use plants to visually buffer large, unsightly buildings or equipment.
- Remember to maintain the shoreline landscape in industrial areas to protect the health of the surrounding wildlife.

## Native Plants & Invasive Plants

The use of native plants is encouraged. Plants that are native to the Bay Area and San Francisco are best adapted to the climate and rainfall patterns of the local environment. Native plants not only enhance the local flora and fauna of the waterfront but generally require less water usage and maintenance.

Do not include the use of invasive plants. The introduction of non-native invasive plants further deteriorates the ecosystem habitats along the waterfront. Refer to *Appendix IV* for a list of very invasive non-native plants to avoid and websites providing more information.

## Water Usage

Select plants that require minimum water usage or are drought tolerant.

## Creating Habitat Conditions & Value

Create planting palettes that improve habitat conditions and enhance habitat value when appropriate. Habitat conditions include the selection of plants that attract insects, bees, butterflies, hummingbirds, birds and other wildlife. Habitat value includes the selection of plants that provide seasonal color and frame views of the waterfront.

## Appropriate Planting for Water's Edge

Choose plants that are tolerable to waterfront conditions. These conditions include salt spray, high wind speeds, and salt water flooding.

Erosion problems may arise in areas with steep slopes. Consider planting a living shoreline with plants that help limit the rate of erosion in these areas.

## Plants That Can Tolerate Salt Inundation

Choose plants that are tolerable to changing waterfront conditions. These plants must be able to thrive during both high and low tides. Plants that are highly tolerable to salt inundation can be used as a barrier to plants that are moderately tolerant.

Many native plants are highly salt tolerant.

## Alternatives to Lawn Recreational Uses

When appropriate, consider the use of lawn alternatives for recreational use. Plants used as lawn alternatives generally require less watering and blend in with the surrounding natural landscape.



*Islais Creek Planting*

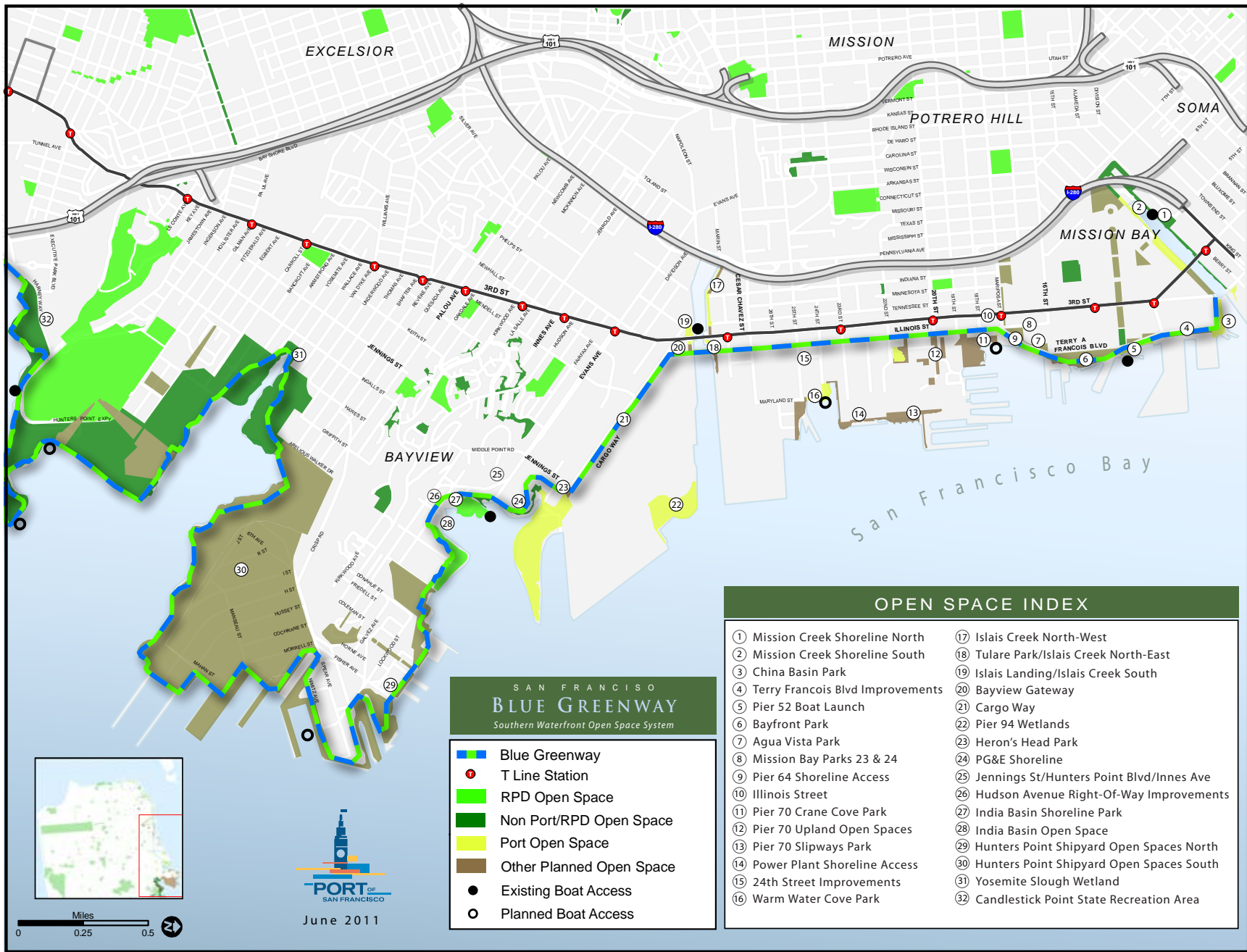


Figure 6.1: Map of Planned and Potential Locations of Blue Greenway Signage

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## 6. PORT OPEN SPACE USE & PROGRAM CONCEPTS

Blue Greenway open spaces are located along San Francisco Bay shoreline, as well as along its upland creeks and sloughs. There are 26 individual sites, owned or managed by the Port, OCII, R&P and the California State Parks Department. Each of these agencies is responsible for securing funds for improving and maintaining their respective open spaces. All of these Blue Greenway sites are shown in *Figure 6.1*, and are cataloged in the Blue Greenway Existing Conditions Report (available at [www.sfport.com/bluegreenway](http://www.sfport.com/bluegreenway)).

To develop an appropriate mix of park programs across all of the Blue Greenway sites, the Port, its partner agencies and the community identified a range of uses and utilized nationally recognized suitability standards and practices to develop a program and use function for each site, this suitability criteria are included in *Appendix II* of this report. The suitability criteria identified appropriate sites and uses based upon national and local standards. In addition, the following general criteria will be applied to each open space:

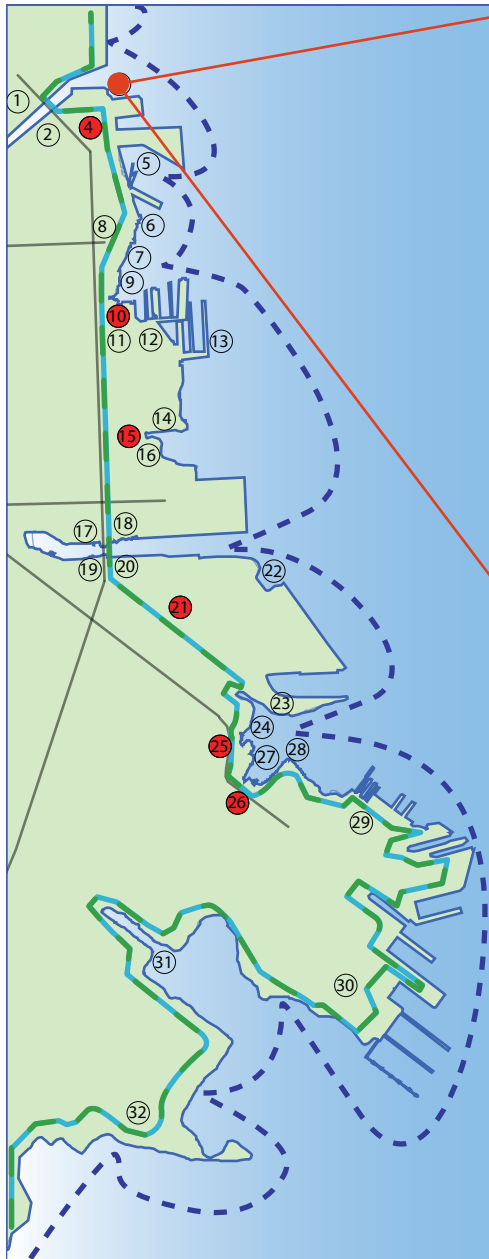
- Uses should anticipate a minimum Sea Level rise of 15" in 50 years
- Park stormwater should be treated within the site
- Provide waterfront viewing areas at all sites
- Amenities for bicyclists should be provided
- A Minimum 15' (20' preferred) multi-use (Bay Trail) trail should be incorporated into open space improvements where feasible
- Mechanical exercise "par" equipment should be integrated into circulation systems (trails/paths)
- Interpretation of waterfront and neighborhood history will be incorporated
- Sites for public art should be identified

The portion of the Blue Greenway waterfront between China Basin Channel and India Basin is managed by the Port of San Francisco.

This is where the heart of the Port's industrial maritime base is located. Within Mission Bay, the Port's maintenance operations are based at Pier 50, and a Public Boat Launch is located at Pier 52. Within the Central Waterfront is the Port's ship repair facility, continuing a 150+ year presence at Pier 70, and one of its major cargo terminals at Pier 80. Along and south of Islais Creek, another launch for water recreation vessels shares waters with bulk cargo terminal, concrete batch plants and construction materials businesses at Pier 92 and Piers 94-96.

While most of these industrial uses are not compatible with shoreline public access, there are still stretches currently and/or slated for future improvements for waterfront open spaces, public viewing, natural habitat and water recreation as part of the Blue Greenway. These Port Blue Greenway sites are presented in this section. The Port has developed concept designs and programs for each, which have been refined in response to public comments received. These park concepts will provide the foundation for ongoing Port planning, design and implementation efforts to expand the Blue Greenway.

The following pages present the use and program concepts for each of the Port's Blue Greenway open spaces. The amount of information for each site varies from site to site.



This site was not identified as a receiver for the 2008 or 2012 GO Park Bond funds. Funding and implementation of improvements are planned as a part of the proposed development of SWL 337 Mission Rock Project.

## China Basin Park - SITE 3

### Recommended Program Concepts

The following uses were identified as appropriate and compatible for China Basin Park. These concepts were developed through the criteria and suitability analysis conducted and described previously in this section and as developed through the SWL 337 planning and development process described on the next page. The use concepts and concept plan will likely change as the entire SWL 337 project evolves.

- Waterfront Promenade
- Passive Recreation
- Seating and Viewing
- Family-oriented Picnic Area
- Small non motorized craft launch
- Large Public Gatherings
- Public Art
- Cafe / Food Kiosk
- Restrooms

**Project Cost/Funding:** Cost – TBD

## China Basin Park - SITE 3

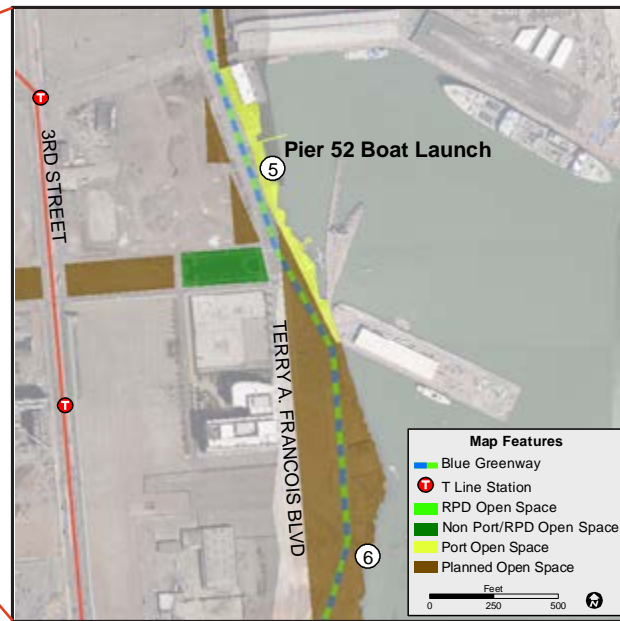
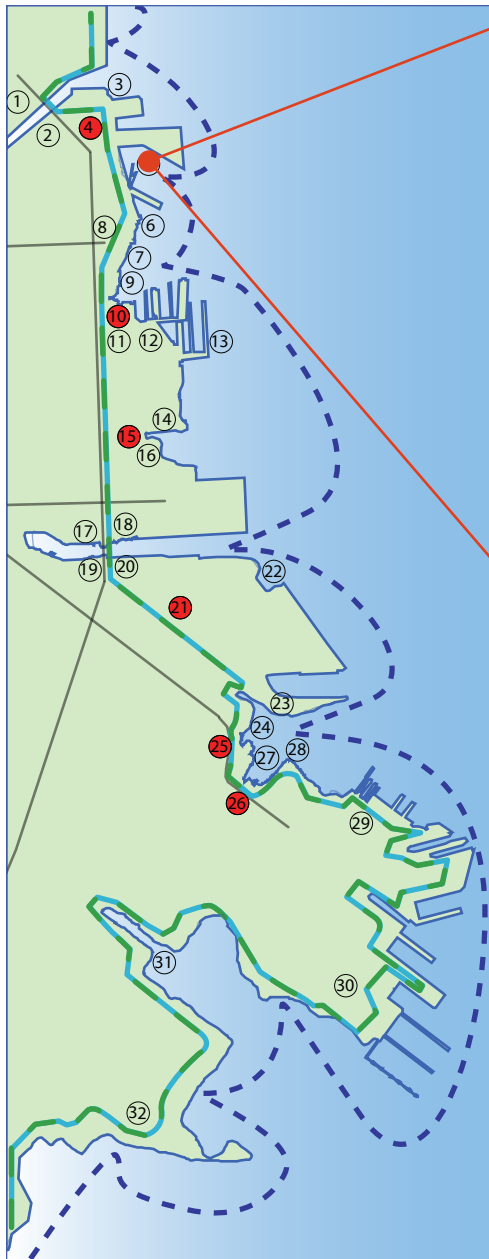
### Overview/Context

Improvements to China Basin Park are associated with the development of SWL 337. Development of SWL 337 is in the early planning and development stages. This concept design is the initial proposal for China Basin Park. The following open space objectives for China Basin Shoreline Park and SWL 337 were identified:

- Develop an open space program that provides substantial visitor-serving public open space, and other neighborhood-oriented open spaces designed to serve the recreational needs of any residential uses developed on the site and provide key components of the Bay Trail and Blue Greenway. These two types of open spaces are not mutually exclusive and may overlap, but must serve discreet needs.
- Expand China Basin Park, and create other public open space amenities that increase public enjoyment and views of San Francisco Bay, AT&T Ballpark, Mission Creek Channel, East Bay hills, Yerba Buena Island and the Bay Bridge, and create a unique and complementary addition to the network of parks and open space along the San Francisco waterfront and in Mission Bay.



*This Concept Plan was prepared by SWL 337 Associates LLC in response to the Port's SWL 337 Development RFP. The plan does not represent a design vetted through a community planning process but illustrates how a program of uses may be applied to the site as a component of the SWL 337 development project, which achieves the objectives outlined in the RFP. This concept will be refined as the development project moves forward.*



**Project Cost/Funding:** \$600,000

This site was not identified as a receiver for the 2008 or 2012 GO Bond funds.

## Pier 52 Boat Launch - SITE 5

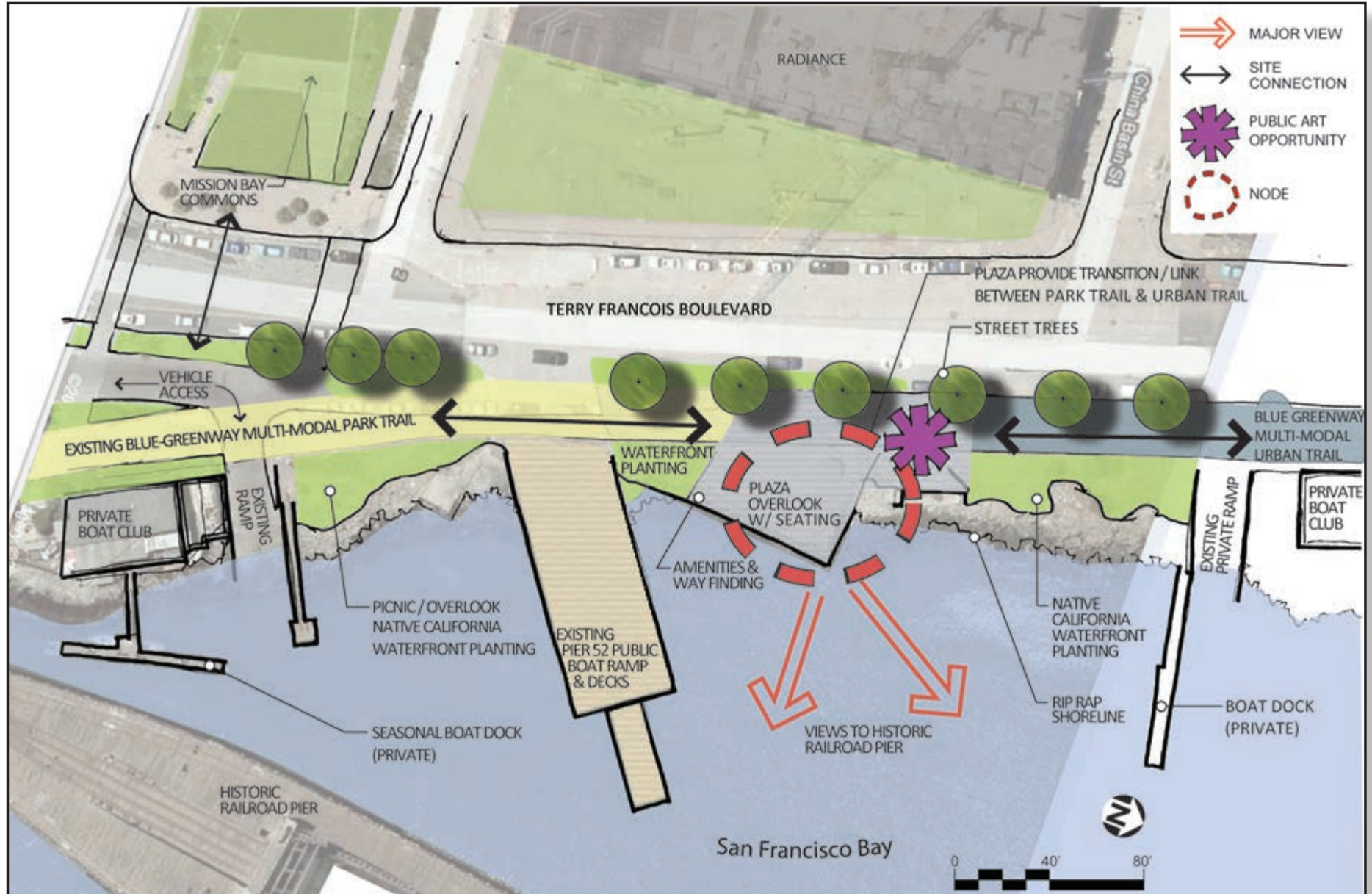
### Recommended Program Concepts

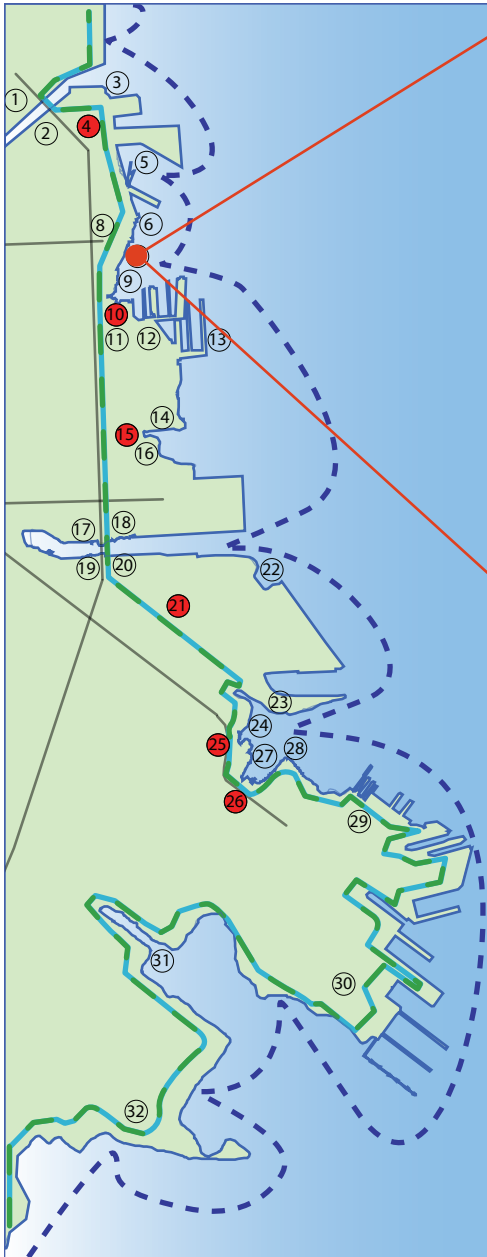
The Pier 52 Public Boat Launch Ramp is the only public boat launch in San Francisco accessible for trailered boats and supports the launching of other small “roof-top” craft. The facility includes a parking lot specifically designed and built to support the launch ramp and boating community. The program concepts developed below are for the launch ramp and adjacent shoreline open space. The program uses were developed through the criteria and suitability analysis conducted and described previously in this section and in the planning and design of the Boat Launch project. The site should be designed for passive recreation and to provide a transition between the China Basin Shoreline Park and Mission Bay, Bayfront Parks.

- Waterfront Promenade
- Picnic Area
- Café / Bait Shop
- Native Garden
- Public Art
- Low Float / Step for Small Craft Launch



## Pier 52 Boat Launch - SITE 5





**Project Cost/Funding:** \$1,500,000

This project is being funded by 2012 Parks GO Bond funds.

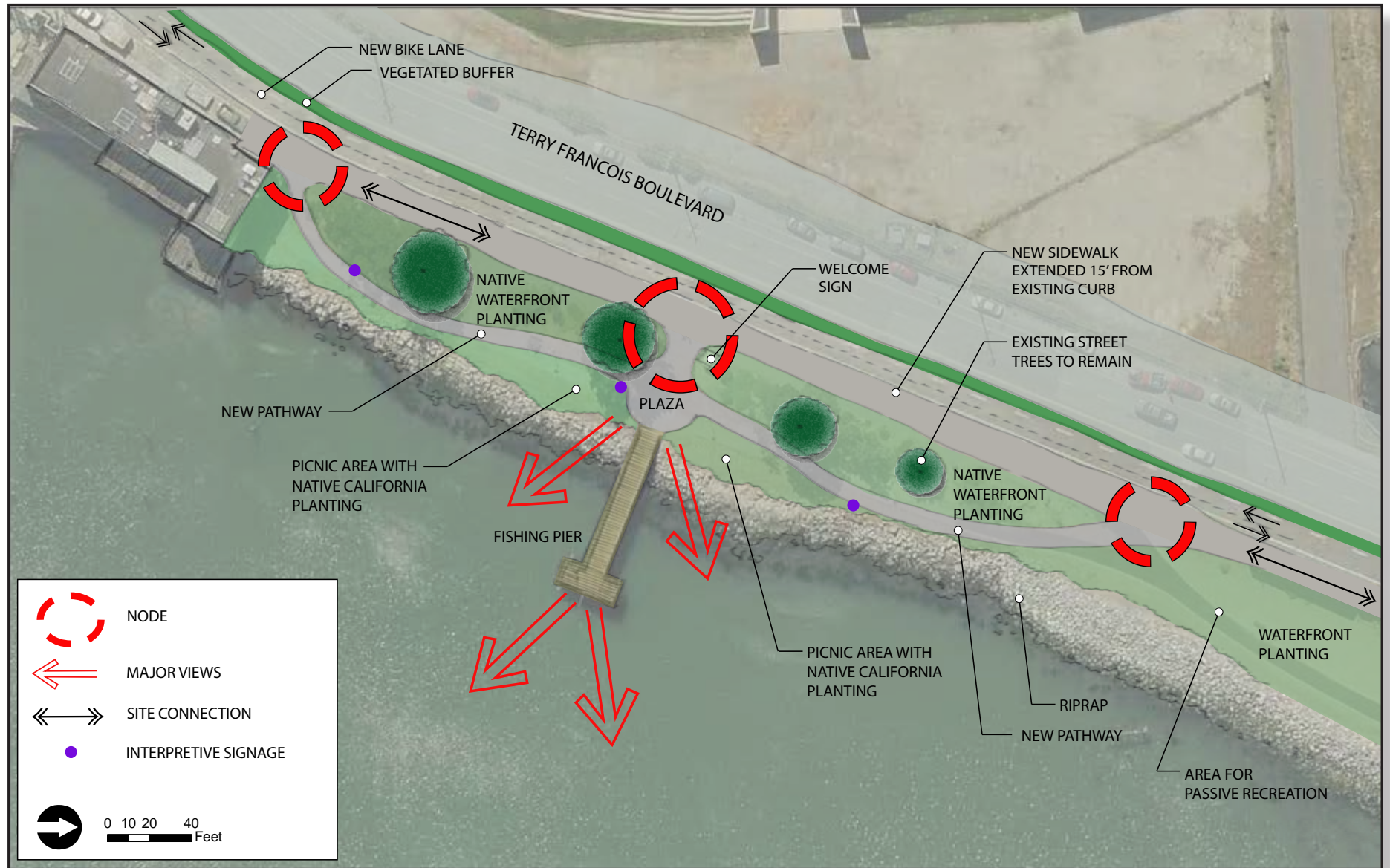
## Agua Vista Park - SITE 7

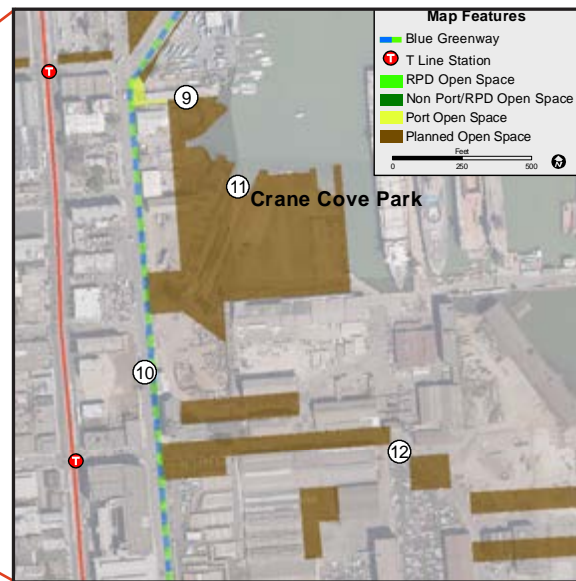
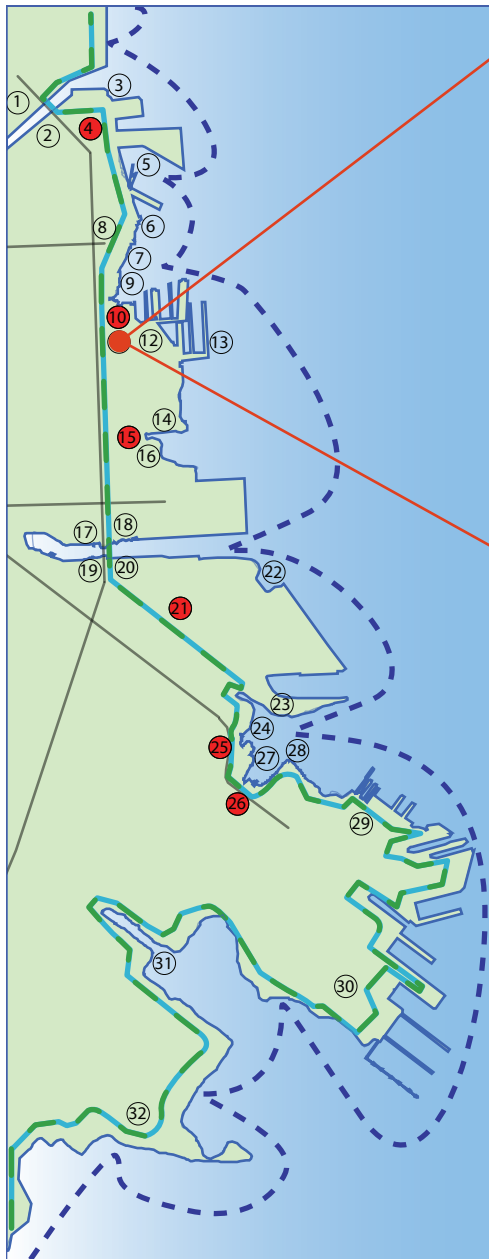
### Recommended Program Concepts

Agua Vista is currently an approximately 20,000 square foot park built in the mid 1970's. Existing amenities are minimal but include a 1,000 square foot fishing pier, concrete picnic tables, outdoor lighting, bike racks, a shoreline trail and fascinating views of adjacent ship repair operations. The program uses below were developed through the criteria and suitability analysis conducted and described previously in this section. The program concepts were developed to enhance the existing characteristics and amenities of the site and improve the connection between Bayfront Park and Mission Bay Open Spaces.

- Fishing Pier
  - Picnicking
  - Seating and Viewing
  - Passive Recreation
  - Historical Interpretive Elements \ Signage
- Improvements to this park will be coordinated with the adjacent Mission Bay Bayfront Park. In general this park needs updating, including new paths, signage and site furnishings. The future realignment of Terry Francois Boulevard will increase the width of this park, but the program will largely remain the same.

# Agua Vista Park - SITE 7





**Project Cost/Funding:** \$45 Million

Funding for the project will include 10.1 million from the 2008 Parks Bond, 10 million from the 2012 Parks Bond and \$3.4 million of Port Capital funding.

## Crane Cove Park - SITE 11

### Recommended Program Concepts

The following program uses were identified as appropriate and compatible for the Pier 70 Crane Cove Park. These concepts were developed through the criteria and suitability analysis conducted and described previously in this section and through previous planning processes, including the Port's Waterfront Land Use Plan, the Eastern Neighborhoods Central Waterfront Plan and the Pier 70 Preferred Master Plan. As the planning and design of this open space is refined, the program of uses will also be refined and updated. It is anticipated that not all of these uses will be accommodated in the final design.

- Small Craft Launch
- Boat Storage / Aquatic Center
- Urban Beach
- Viewing Area
- Playground
- Picnic Area
- Passive Recreation
- Public Art
- Open Air Pavilion
- Large Public Gathering Area
- Restaurant / Food Kiosk
- Restrooms
- Maintenance / Storage Facilities
- Off Street Parking
- Retain and Restore Slipway 4 Cranes and Slipway
- Potential Reuse of Building 109 East for Pavilion or Parking

## Crane Cove Park - SITE 11

### Planning and Design Considerations

The following criteria and design considerations will be the basis for the Crane Cove Park Master Planning and detail design for the Initial Phase.

- Site access (water and land, Blue Greenway)
- View to and from (water and land)
- Site environmental / contamination
- Historic Resources Rehabilitation and Interpretation Uses
- Adjacent parcels and boundary considerations
- Adjacent uses (ship repair, commercial uses within Pier 70, and neighborhoods / districts adjacent to Pier 70 area)
- Shoreline edge treatment options
- Shoreline sediment
- Sea level rise
- Solar and wind orientation
- Geotechnical factors
- Site utilities
- Sustainability
- Existing / future interim leases
- Relationship to adjacent projects and neighborhood
- Phasing of Improvements



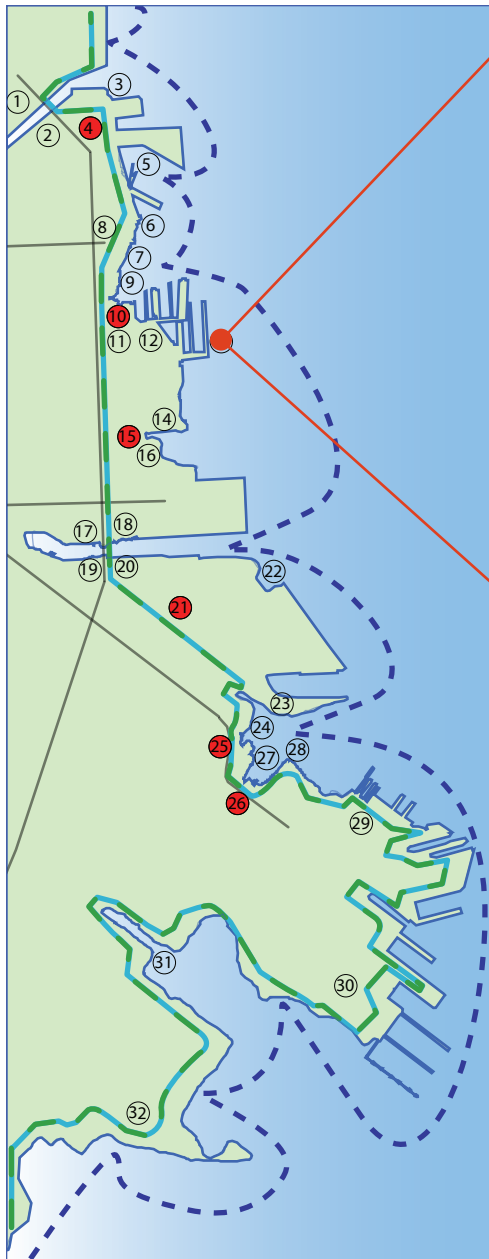
*Illustrative Concept*

### Overview/Context

The Pier 70 Preferred Master Plan envisions an open space, located at the northern edge of Pier 70, as a park that will serve existing nearby neighborhoods as well as the new activities introduced at Pier 70. The park area includes historic Slip 4 and its cranes, creating a strong relationship with the water and the active shipbuilding history of the site. It should provide expansive views of the Bay and a safe public viewing area of ship repair operations. See: [www.sfport.com/pier70](http://www.sfport.com/pier70)

In early 2011, the Port issued an RFP to select a consultant team to develop a Master Plan for the approximately 7 acre park site. Once completed, the Master Plan will include a phasing strategy on what portion of the park can be improved with the available funds. It is recognized that this park will be phased over many years as funds are secured.

It is anticipated that the development of a Master Plan and phasing strategy will take approximately 12 months. Afterwards the plans will then move into schematic, then detail design and construction of an Initial Phase.



**Project Cost/Funding:** \$15 Million

This site was not identified as a receiver for the 2008 or 2012 GO Bond funds. Funding for this park is part of the Port's Pier 70 Waterfront Site Development project.

**Pier 70 Slipways Park - SITE 13**

**Recommended Program Concepts**

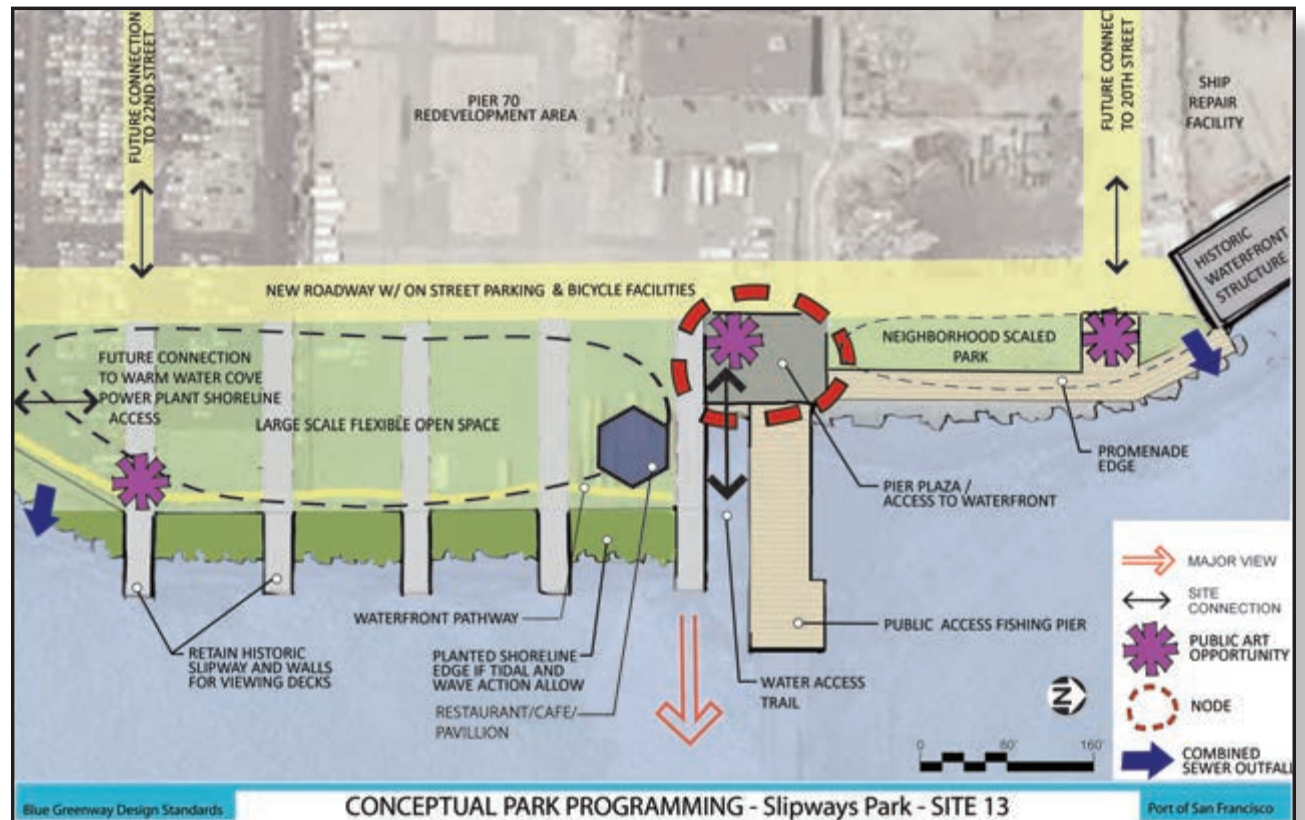
The following program uses were identified as appropriate and compatible for Pier 70 Slipways Park. These concepts were developed through the criteria and suitability analysis conducted and described previously in this section and through previous planning processes, including the Port's Pier 70 Preferred Master Plan. As the planning and design of this open space is refined, the program of uses will also be refined and updated.

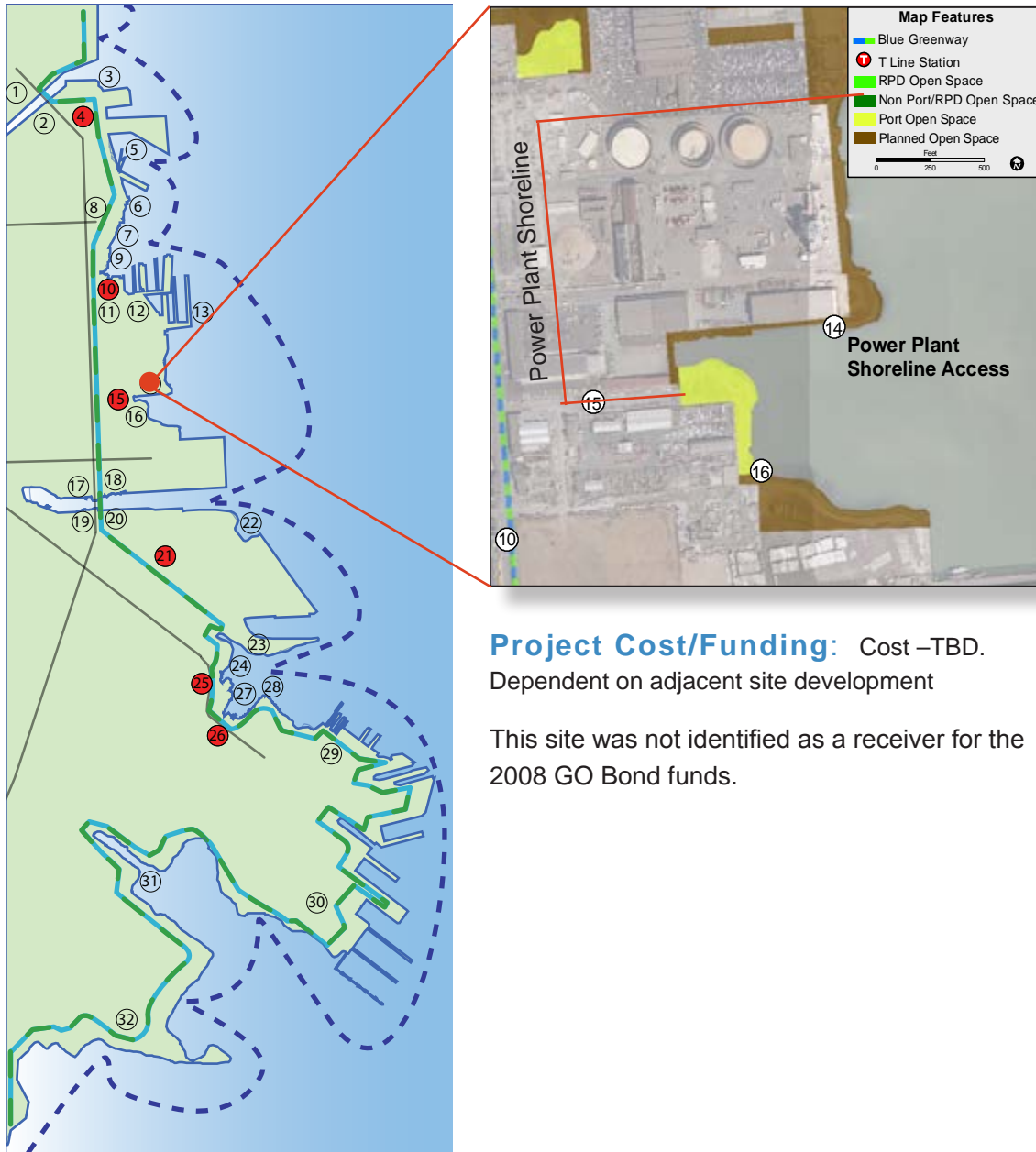
- Waterfront Promenade
- Fishing Pier (possible location of existing pier)
- Viewing Platform
- Picnic Areas
- Public Art
- Plaza
- Large Public Gathering Areas
- Playground
- Passive Recreation
- Restaurant / Concessions
- Future Connection to South (through former Potrero power plant site)

## Pier 70 Slipways Park - SITE 13

### Planning and Design Considerations

- The Pier 70 Plan identifies this as a significant shoreline open space project
- This open space plan must recognize its relationship to the WWII era Building 12 complex within Pier 70 and the future development parcel directly adjacent to the west
- This park is likely to be phased with the new development directly adjacent to the site
- As part of the Pier 70 open space network, the four sloped slipways along the eastern shoreline of the planned development area, which formerly facilitated the construction and launching of ships built at Pier 70, would be enhanced as part of a series of outlooks extending into the Bay
- Full development of the open space is contingent on identifying financial resources
- This park site will be developed as a part of the Port's overall Pier 70 revitalization efforts. The design, configuration and programming of this open space directly interfaces with the major new development site at Pier 70 (the Waterfront Site) and will evolve as that development project moves forward. The Port is planning on entering into exclusive negotiations with a development partner for the Waterfront Site in the summer of 2011. The design of Slipways Park will be a responsibility of that developer with community input as implementation plans for Pier 70 as a whole are prepared.





## Power Plant Shoreline - SITE 14

### Recommended Program Concepts

The Port of San Francisco owns the narrow waterfront edge on a portion of this site (generally between 22nd and 23rd street). The program of uses for this site will be determined through the planning of the reuse of the entire former power plant site. Size and configuration of the parcel will help further define the appropriate program use concepts.

**Project Cost/Funding:** Cost –TBD.  
Dependent on adjacent site development

This site was not identified as a receiver for the 2008 GO Bond funds.



## Power Plant Shoreline - SITE 14

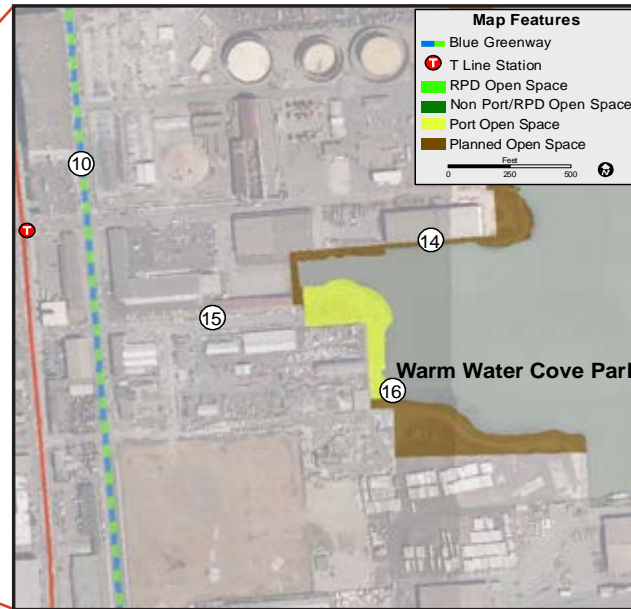
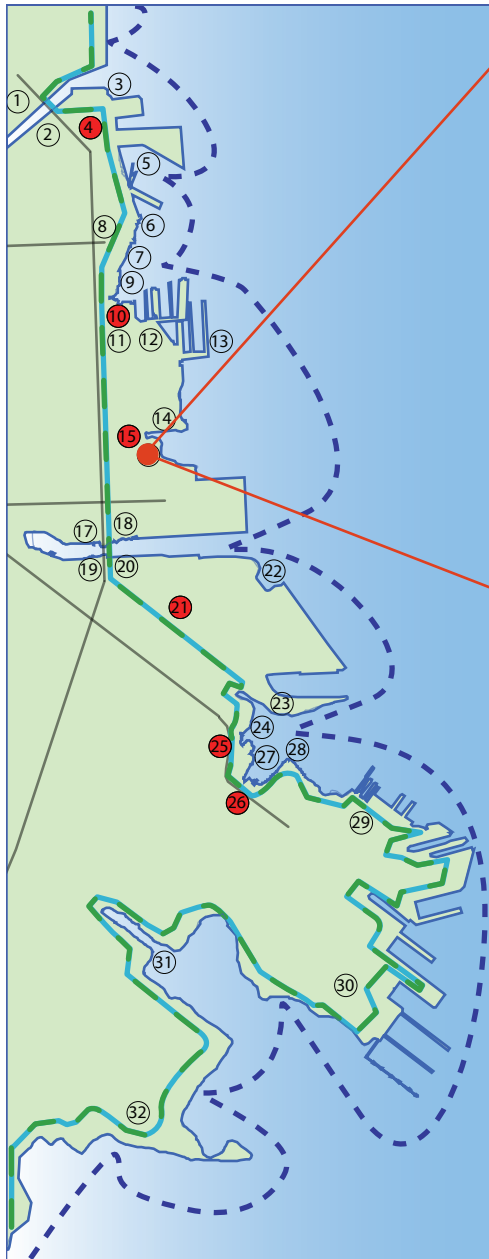
### Planning and Design Considerations

There are several constraints that must be overcome prior to this site being improved for public access including:

- The site must be remediated and the former power plant must be dismantled
- Public access and open space on the adjacent Pier 70 Slipways Park location should be completed;
- Adjacent privately held land must be made available to provide the area required to provide public access along the shoreline edge
- Public access between the existing Warm Water Cove Park and the warehouse currently occupied by DHL must be provided
- These privately held properties consist of two owners Genon and the Harrigan - Weidenmuller Company. The Port and City will work with these two property owners to coordinate the development of a continuous waterfront open space system along the Bay's edge and connecting them with the Port's existing shoreline open spaces.



*Aerial photo of power plant shoreline between sites 13 and 16.*



**Project Cost/Funding:** \$6 Million

An initial phase of this project was funded through the 2012 Parks GO Bond. \$1.5 million will allow park wide improvements and expansion to 26th Street.

## Warm Water Cove - SITE 16

### Recommended Program Concepts

The following program uses were identified as appropriate and compatible for Pier 70 Slipways Park. These concepts were developed through the criteria and suitability analysis conducted and described previously in this section. As the planning and design of this open space is refined, the program of uses will also be refined and updated.

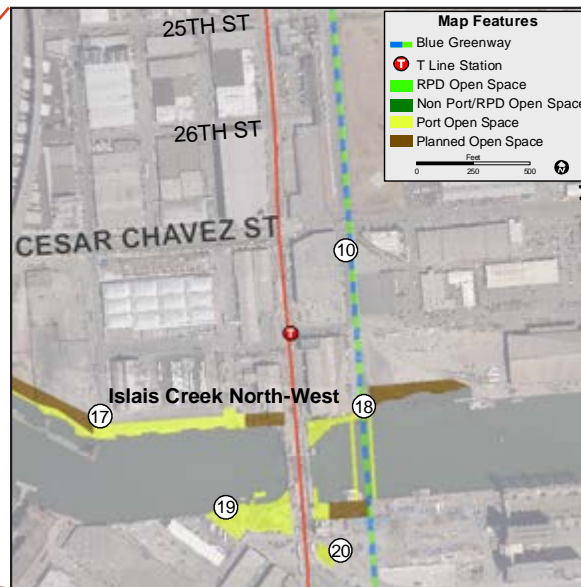
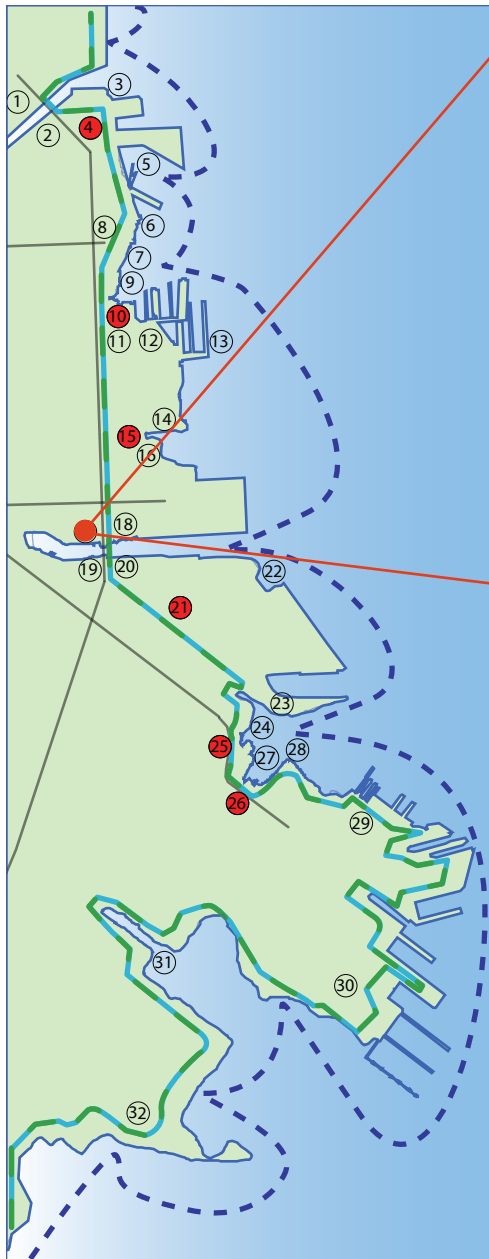
- Small Craft Launch
- Open Air Pavilion
- Mountain Bike/BMX Bicycle Training Area
- Skateboard Park
- Passive Recreation
- Upland Habitat Restoration
- Native Garden
- Stormwater Treatment for Adjacent Development

## Warm Water Cove - SITE 16

### Planning and Design Considerations

- An eventual expansion of the park by approximately 2.5 acres to the south will include new vegetation, lighting, site furnishings, public art and enhanced safety features
- Future open space programming may include shoreline habitat restoration, storm water management swales for future Pier 80 expansion, off road bicycling (BMX), lawn area for informal recreation
- In developing new concept uses here, it will be important to recognize the potential conflict between a BMX bicycle facility and the opportunity for habitat. The concept developed could also be configured to separate these facilities by switching the picnic area and BMX bicycle areas.
- The size and extent of the uplands habitat will be determined when the park is identified to receive funding for improvements. Additional investigation may also determine if it is appropriate to enhance the mud flats that exist at low tide.



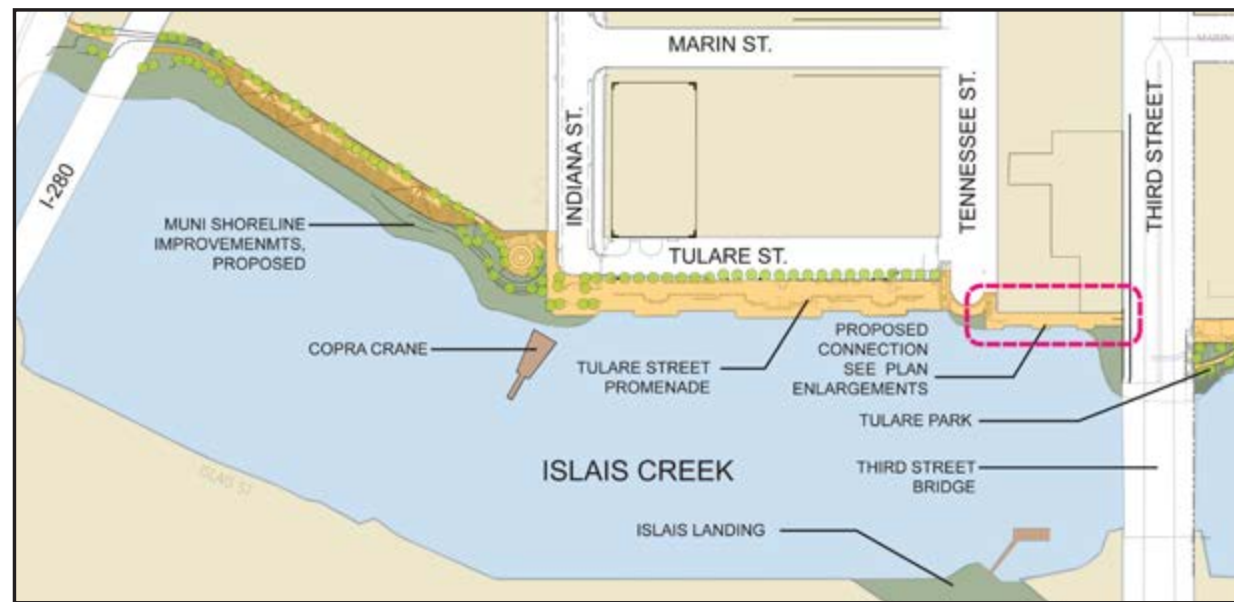


## Islais Creek Northwest - SITE 17

### Recommended Program Concepts

The program use of this site is very limited because the entire structure will be constructed over water. The primary purpose of this open space is to close a connection and to complete the Islais Creek northern shoreline public access system. This section would close a shoreline access gap that exist between Tennessee and Third Street.

- Pedestrian connection
- Interpretation
- Viewing



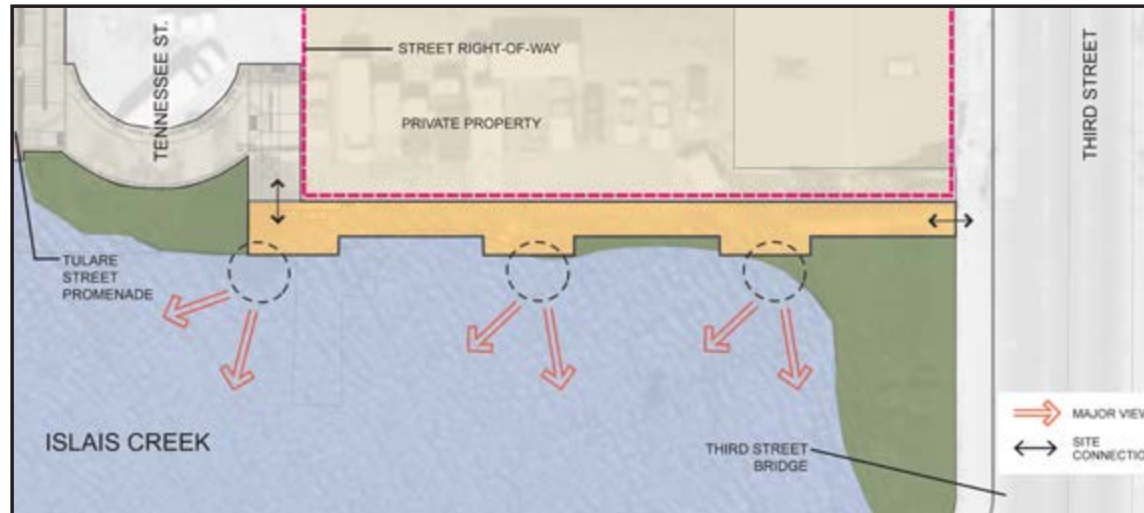
Shoreline Diagram - Combined Projects

## Islais Creek Northwest - SITE 17

**\$1,500,000**

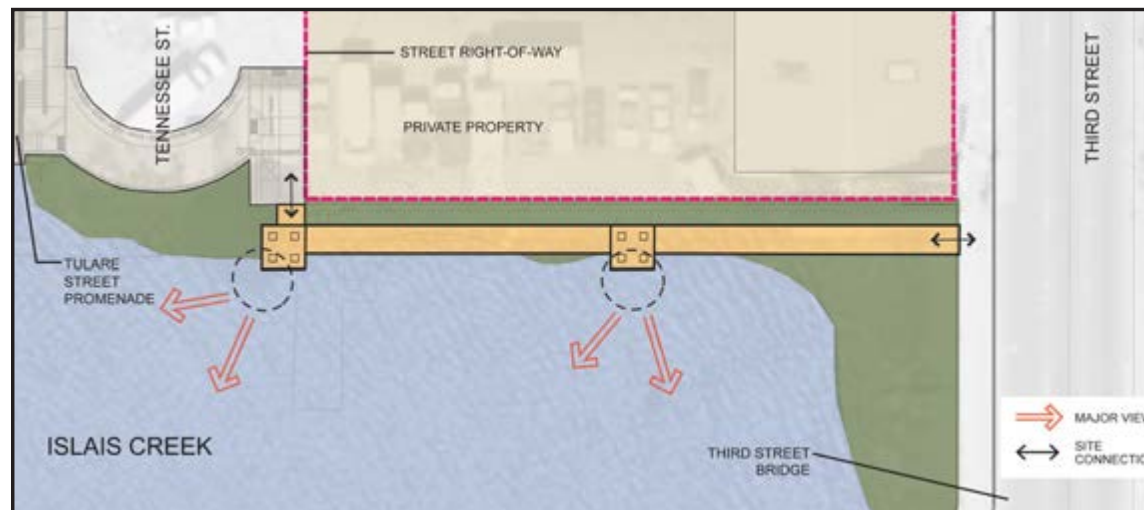
### Planning and Design Considerations

- The cost of the improvements is significant because of the over water location.
- Existing infrastructure adjacent to the site may increase cost
- Improvements likely to be phased after other northern shoreline improvements are completed.
- Improvements and timing should consider potential reuse of adjacent parcel to north.



*Alternative 1 - Boardwalk Promenade*

**Project Cost: \$ 1.4 Million**



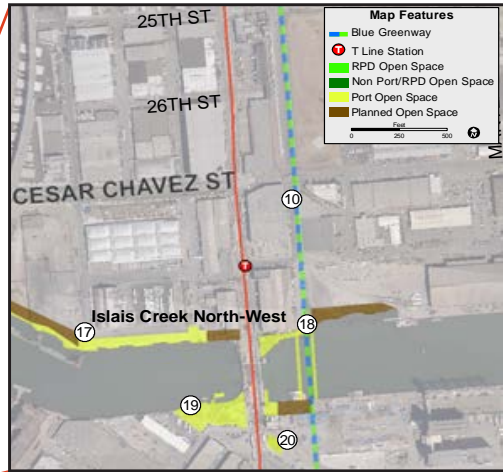
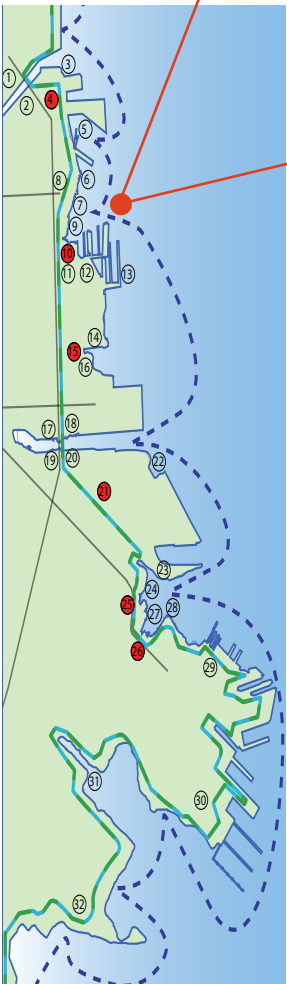
*Alternative 2 - Prefabricated Bridges*

**Project Cost: \$900,000**

### Project Cost / Funding

Project Cost: \$1,500,000

This site has been identified as a site receiving funding from the 2012 Parks GO Bond.



### Project Cost / Funding:

\$1.5 Million

(Tulare: \$860,000, Pier 80 Shoreline: \$640,000)

This site has been identified as one of the projects that can receive funds from the 2008 Proposition A, Clean and Safe General Obligation Bond funds. In addition the Port has secured a grant for improvements to this project through the California Resource Agency Environmental Enhancement Mitigation funds.

## Tulare Park / Islais Creek North-East - SITE 18

### Recommended Program Concepts

The following program uses were identified as appropriate and compatible for Tulare Park and the Pier 80 shoreline area. These concepts were developed through the criteria and suitability analysis conducted and described previously in this section. The open spaces include both Tulare Park and the Pier 80 shoreline area. Tulare Park is a public access open space constructed in the 1970's. Tulare Park needs to be improved to include ADA upgrades, new site furnishings and plantings. Tulare Park has been prioritized because of the ability to leverage available grant funds and the need to bring it up to current ADA standards.

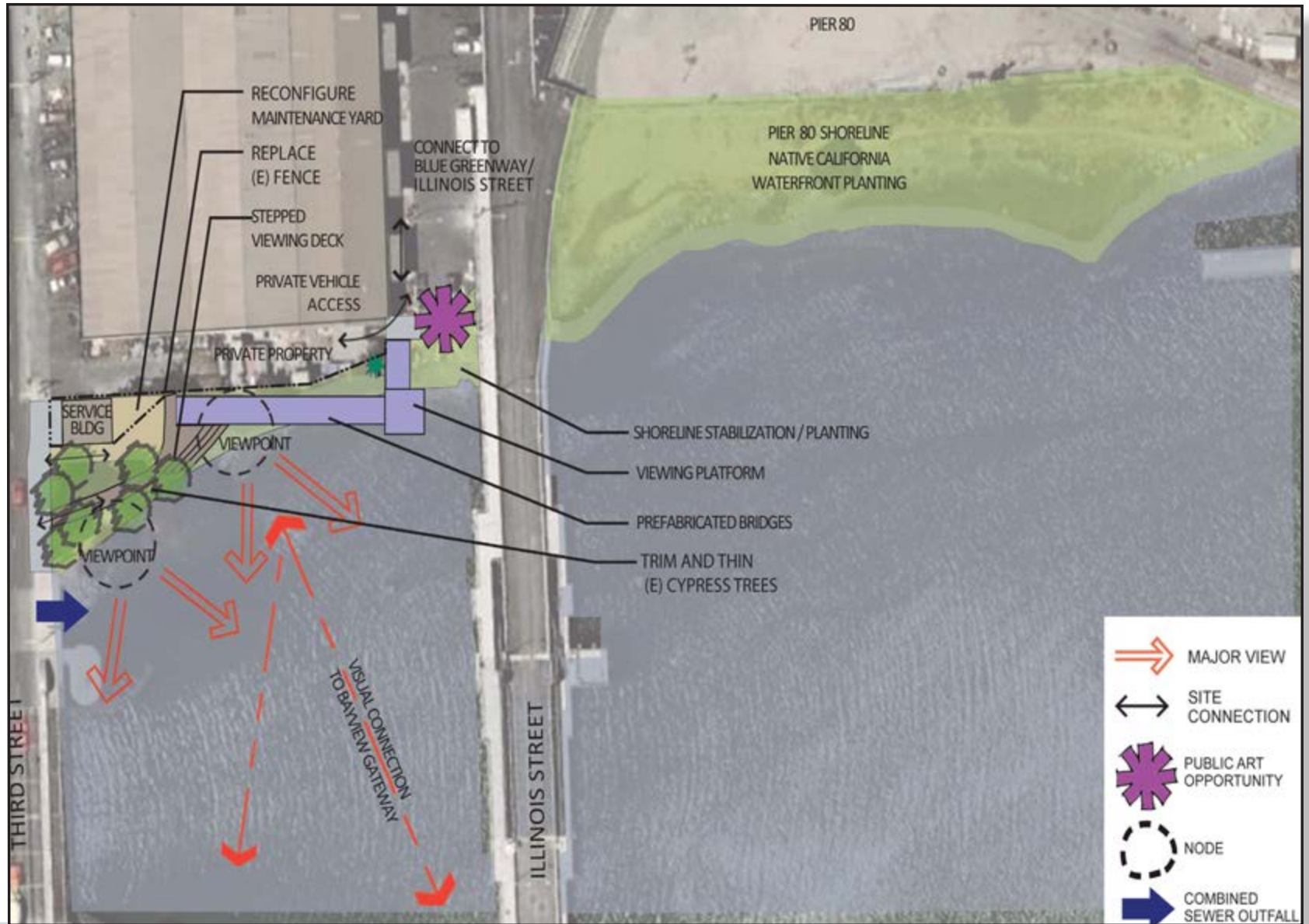
The Pier 80 shoreline area is a currently unimproved area. Public Access is not planned, but opportunity exist to restore/replant and grade the shoreline with native plants material and provide habitat if appropriate.

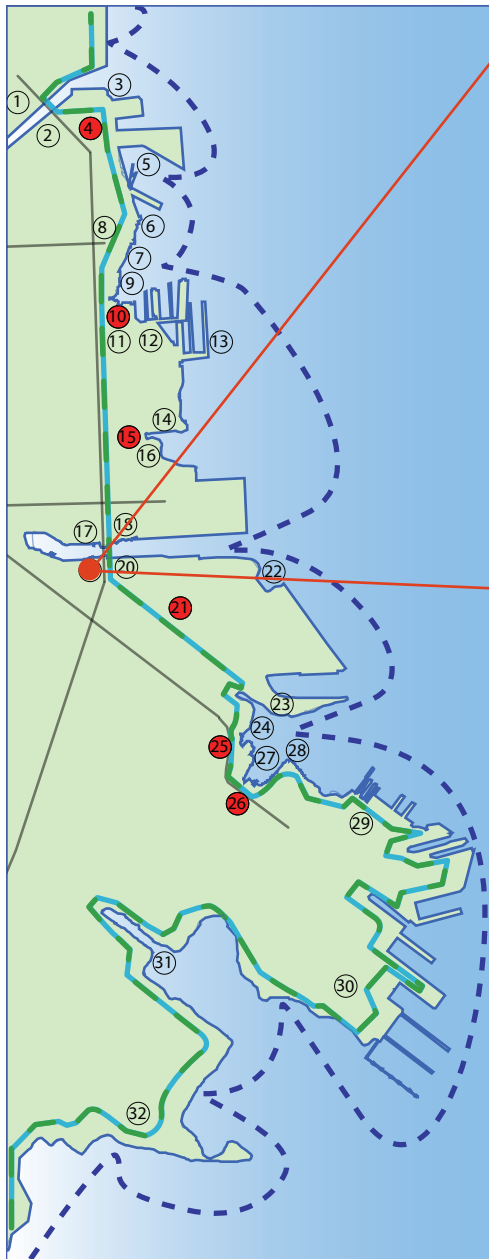
- Connect Third Street and Illinois Avenue
- Native Garden (Tulare)
- Retain Specimen Cypress Trees (Tulare)
- Improve Visibility (Tulare)
- Seating and Picnic Area (Tulare)
- Passive Recreation (Tulare)
- Public Art (Tulare)
- Habitat Restoration (Pier 80 Shoreline)
- Upland Restoration (Pier 80 Shoreline)

### Planning and Design Considerations

- Restoration efforts east of the Illinois Street Bridge would add habitat & visual interest
- Landscape material and park redesign will open visibility to and through the site for security purposes and to make the area more inviting for active uses

## Tulare Park / Islais Creek North-East - SITE 18





**Project Cost:** \$0 (see below)

A new restroom and cross walk to the Bayview Gateway site and other minor improvements to this site are included in Bayview Gateway project costs. This site has been identified as one of the parcels that can receive funds from the 2008 Proposition A Clean and Safe General Obligation Bond funds.

## Islais Landing / Islais Creek South- SITE 19

### Recommended Program Concepts

The Islais Landing site is a current Port open space and does not require significant improvements. The Program uses were developed in the original park planning and design. Installation of a restroom is completing the project as originally designed.

- Native Coastal California Plant Material
- Human-powered Boat Landing / Access
- Small Watercraft Storage
- Interpretation
- Picnic Viewing
- Restroom to Support Water Related Activity
- Improved Crosswalk at Third Street to Connect with Third and Cargo Gateway
- Neighborhood Gateway Art / Signage as a Component of Improved Crosswalk
- Public Art



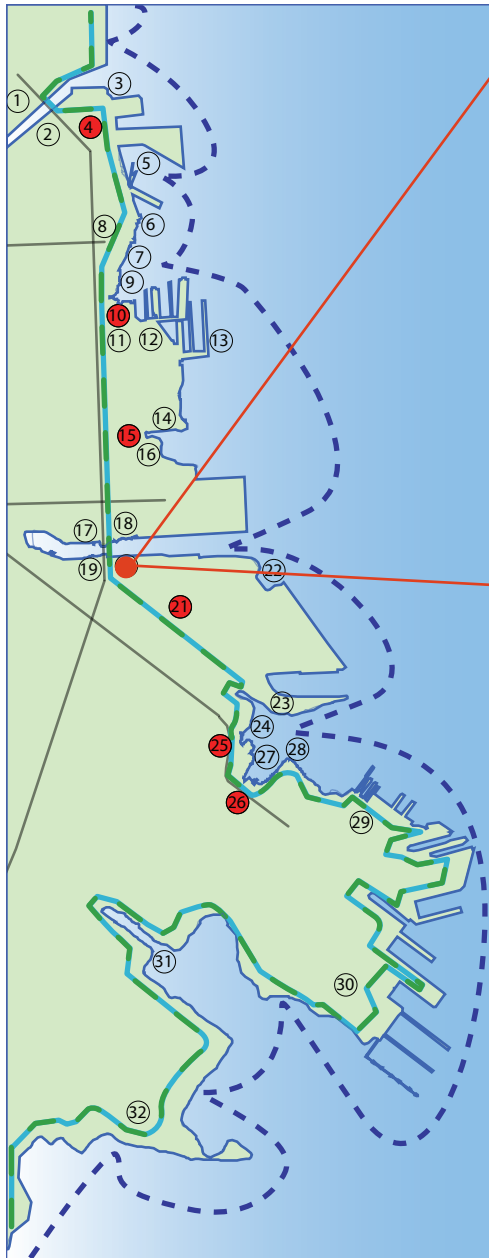
## Islais Landing / Islais Creek South- SITE 19



*Aerial image of Islais Landing*



*Third street crosswalk to gateway site*



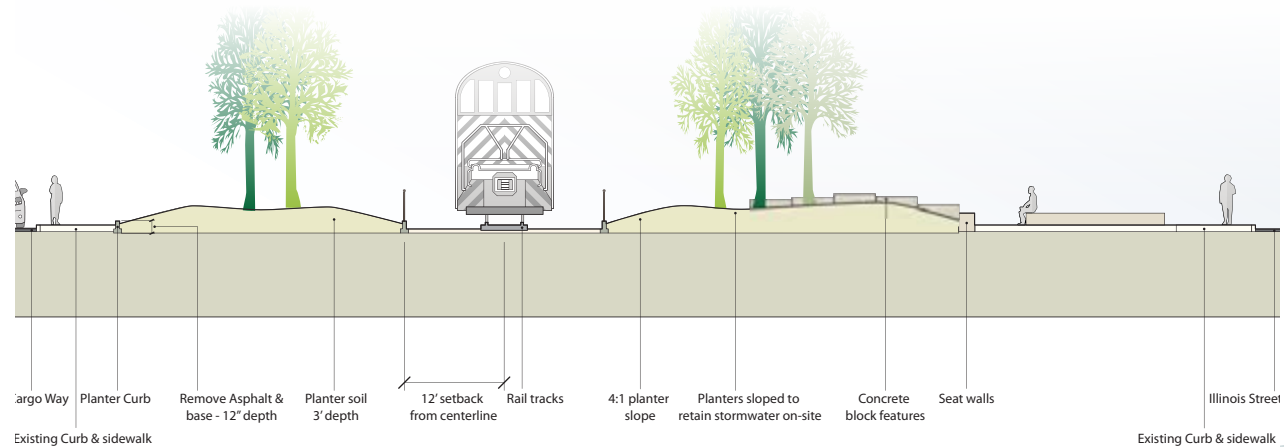
**Project Cost:** \$3.6 Million

This site has been identified as one of the parcels that can receive funds from the 2008 Proposition A Clean and Safe General Obligation Bond funds.

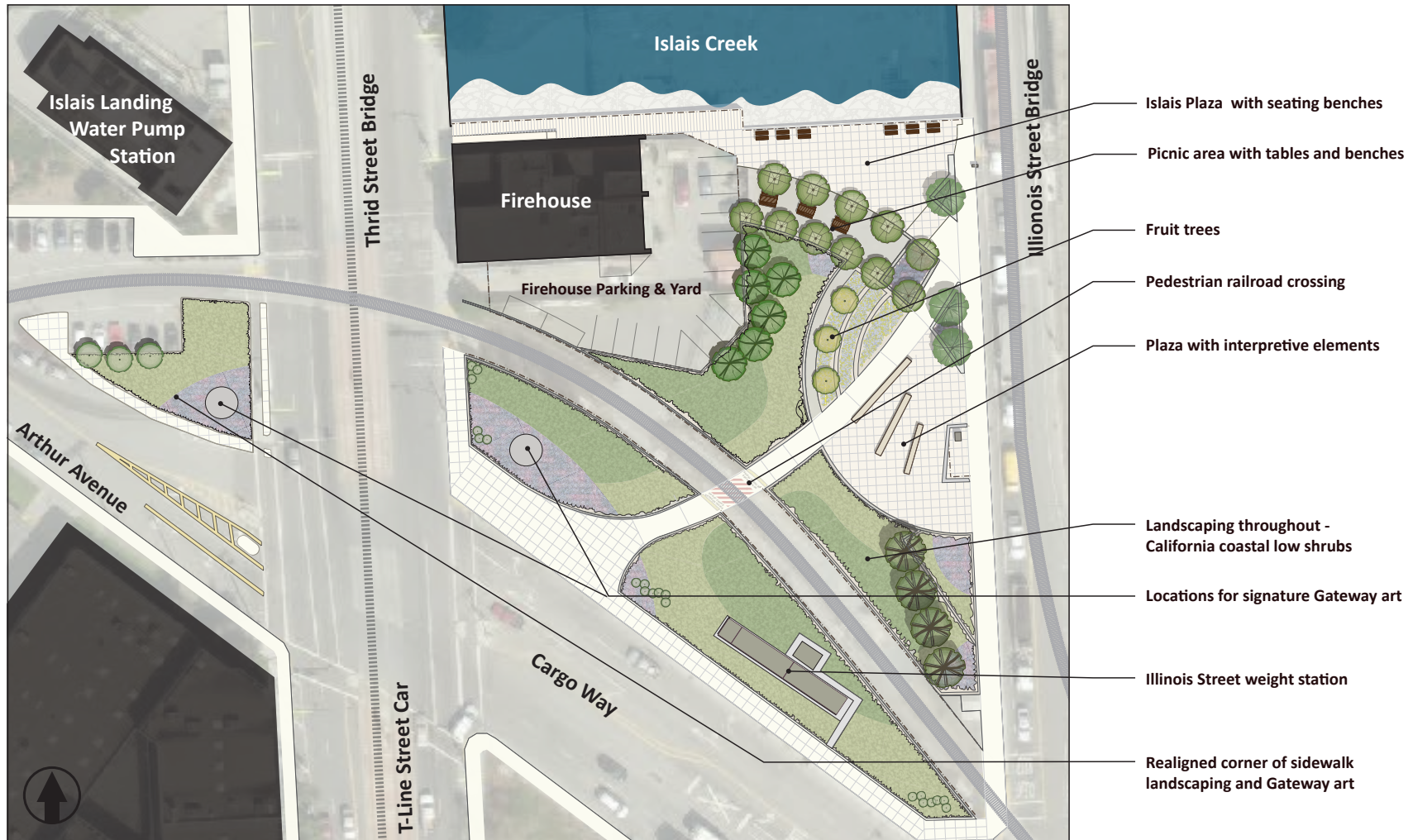
## Bayview Gateway - SITE 20 Recommended Program Concepts

The Bayview Gateway site has long been identified as a “gateway” site to the Bayview Community. The program and use concepts were developed through the criteria and suitability analysis conducted and described previously in this section. In addition, this site has benefited from a number of previous planning efforts including through the Port’s Pier 90 - 94 Backlands and Gateway planning and more recently through the 2010 SPUR Piero Patri fellowship.

- Boardwalk / Promenade
- Community Garden
- Plaza
- Public Art
- Picnic / Viewing Area
- Connect / Transition Illinois Street to Cargo Way
- Improved Connection and Crosswalk to Islais Landing

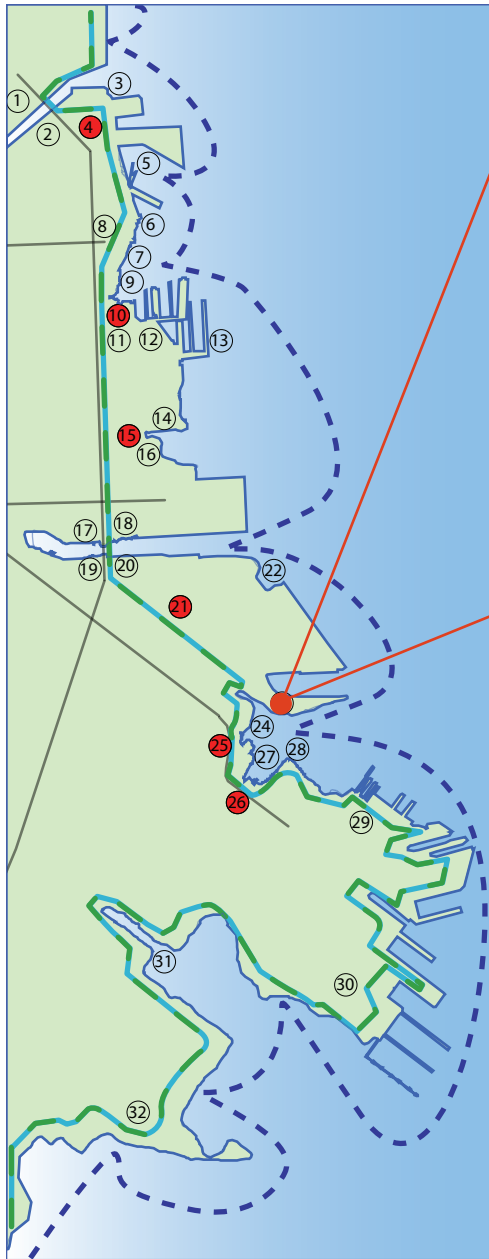


## Bayview Gateway - SITE 20



### Planning and Design Considerations

- This park site is located between the Central Waterfront and Bayview neighborhoods and is a transition point between the two.
- Concept includes removal of deteriorated wharf structure and reconfiguration of Fire Department leasehold.
- Public art both temporary and permanent
- Improvements to Islais Landing previously described under site 18, would be included in this project.



## Heron's Head Park- SITE 23

**Project Cost/Funding:** \$ 2 Million

This site has been identified as one of the projects that can receive funds from the 2008 Proposition A Clean and Safe General Obligation funds. This project was identified as an early implementation project utilizing the 2008 GO Bonds. The design illustrated went through a community review process and will be constructed in the summer and fall of 2011.



Photo of Heron's Head Park

## Heron's Head Park- SITE 23

### Existing and Planned

### Program Concepts

- Wetlands restoration
- Habitat
- Interpretation
- Viewing
- Picnic
- Natural Area Education through Partnership with Literacy for Environmental Justice (LEJ)
- Restroom
- Off Leash Dog Walk
- Recreation Meadow
- Public Art
- Improved Signage



Conceptual Site Plan



*Heron's Head Park*

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## 7. PROJECT COST & IMPLEMENTATION

The City's 2008 and 2012 Parks GO Bonds passed by San Francisco voters will provide \$39.5 million of funding towards Blue Greenway projects. Funding from the GO Bond has allowed the Port working with its partner agencies to conduct a community planning process to define the Blue Greenway, including how to phase and expend available resources. The GO Bond funding is a great initial investment into completing improvements to help establish an open space system and identity for the Blue Greenway. Other funding sources are available to make additional improvements but all partner agencies will need to continue to work together to secure significant funds to complete the system.

The GO Bond funds identified for the Blue Greenway are restricted to expend on Port open space improvements. Identified below and presented in Chapter 6 are the projects being implemented with current funding:

- Undertaking a community planning process to develop the Blue Greenway Planning and Design Guidelines;
- Construct shoreline improvements in Mission Bay adjacent to the future Bayfront Park;
- Improve Agua Vista Park
- Construct improvements to the proposed Pier 70 Crane Cove Park;
- Construct Improvements to Warm Water Cove Park;
- Construct improvements to Islais Creek shoreline open spaces;
- Construct improvements to Heron's Head Park; and
- Install Blue Greenway signage and public art along the Port's portion of the Blue Greenway;

It is recognized that not all of the projects can be implemented with the available funding, therefore the planning process has identified project prioritization based upon available funds and has identified potential future funding sources for non-funded projects.

In addition to the GO Bond funds, the Port has identified other sources of funds that can be utilized for Blue Greenway projects. Other funding sources include:

- The Port of San Francisco's Transbay Cable Public Trust Public Benefit Package (these funds must be used for public access, open space and to promote or enhance energy efficiency), the Port receives \$550,000 annually for 10 years
- The Port of San Francisco's Southern Waterfront Beautification funds (these funds must be used for Port properties south of Mariposa street, including for: open space, historic rehabilitation, environmental clean-up and economic development); this funding source accumulates approximately \$150,000 a year.
- San Francisco Bay Conservation Development Commission (BCDC) Islais Creek mitigation funds. These funds were a mitigation paid by the San Francisco Public Utilities Commission (PUC) and are to be utilized along Islais Creek area. The California Coastal Conservancy administers the funds on behalf of BCDC, the Port and the PUC. Approximately \$740,000 exist in this funding source.
- Miscellaneous Grants, the Port has applied for and received a grant for \$185,000 from the Metropolitan Transpiration Commission for improvements to Cargo Way for bicycle facilities.

While the Port has jurisdiction over much of the Blue Greenway, there are several other City and State agencies that have jurisdiction over portions of the Blue Greenway. Ultimately each agency is responsible for securing funds to improve and manage its open spaces and other Blue Greenway elements. The various City agencies will work together to leverage the maximum amount of funds to support the improvements required to implement the Blue Greenway.

## Project Cost and Funding

Project cost estimates were developed by DPW for the concepts presented in Section Six and are presented in *Table 7.1, Port Blue Greenway Project Cost*. The cost estimates include all soft and hard cost and are preliminary based upon the nature of the concept level of detail. Cost estimates will be refined as projects are selected for implementation and as they are further defined. In addition to the cost estimates for each of the open spaces, the Port has identified costs for additional Blue Greenway improvements within its jurisdiction. The additional improvements include: 1) Blue Greenway signage to assist in bringing recognition and an identity to the system; 2) installation of Public Art to also strengthen the system identity and provide visual interest; 3) standard site furnishings to be installed at key locations along the Linking Streets; and 4) pile and debris removal from Islais Creek.

## Prioritization

Several projects were identified for early implementation to meet bond spending requirements, these projects include: Mission Bay, Bayfront Park Shoreline; Tulare Park, Heron's Head Park and initial planning and design for Crane Cove Park. *Table 7.2, Draft Port Blue Greenway Project Prioritization* also identifies the various funding sources.

Recognizing the project cost estimates prepared and the available funding sources and funding restrictions, the Port prepared criteria as a basis for prioritizing projects. The following criteria were used:

- Does the project meet the established criteria for the specific funding source
- Is the project identified in an existing Port or City Plan
- Does the project strengthen the Blue Greenway identity
- Does the project create waterfront access where it does not exist today
- Is the project identified as a priority by the adjacent community
- Does the project serve an adjacent or nearby community
- Does the project protect or enhance a natural or cultural resource
- Will the project leverage other funding (now or in the future)
- Can the project be easily phased or completed with the available funding

Based upon the project cost and the prioritization criteria, *Table 7.2* identifies the projects that have been prioritized for implementation. The draft prioritization attempts to maximize and leverage existing resources. While not all projects are funded for immediate implementation, each of the projects that meets more than 5 criteria established are prioritized and will significantly improve the Blue Greenway. With the exception of the Pier 70 Crane Cove Park project and Site 18, all of the projects can be completed with the available funding. Crane Cove Park has been identified as priority project, but the anticipated budget (\$30 million) exceeds the total available funds. However projects such as Crane Cove Park are often phased to accommodate incremental funding.

Section Two of this document defines Blue Greenway Linking Streets, which are an integral part of the Blue Greenway. The Port, working with MTA, OCII and DPW has identified both short and long term solutions to improve the Linking Streets. Some of the projects, such as Terry Francois Boulevard can be implemented in the near future, while other projects such as the long term plan for Cargo Way will require significant investment and



will likely require federal funding. The projects that can be implemented in the near term will be funded with existing grants or funds currently budgeted, including grants the MTA and Port have secured or SFRA project funds for Mission Bay. Because funding for long term street projects would likely come through transportation funding sources, they were not included in Table 7.1. The Port will continue to work with the partner agencies to seek and secure additional funds to help improve the Blue Greenway Linking Streets since they likely will not be funded through typical open space funding sources.



*Mid block curb bulb-out, site for signage, wayfinding and pedestrian amenities*

## Future Funding

The City and Port have been successful pursuing a variety of funding sources for open space projects. The Port will continue to collaborate with other city agencies and pursue funds for the Blue Greenway, specific funding sources that should and will be pursued, include.

- California Proposition 84 State Park Grants for new open spaces
- Coastal Conservancy and Bay Trail Grants for design and open space improvements
- California Resource Agency Grants
- Future Streets GO Bonds
- Tax Increment Financing from adjacent Port Development Projects

In addition to these sources of funds, the Port will work with the Recreation and Parks Department and City Capital Planning Committee to secure future General Obligation Bond funds bringing Port waterfront open space projects to the ballot for voter approval.

Lastly, the Port has been successful in improving open spaces connected to major development projects. This approach is being proposed for the future expansion of China Basin Shoreline Park and the Pier 70 Slipways Park. This and other new development in San Francisco can contribute to parks and open space needs either by direct provision (building open space as part of the project) or by paying impact fees. The funding of which is structured into the public/private development transactions. Other Blue Greenway open spaces that are appropriate may be improved through this approach.

Table 7.1: Port Blue Greenway Project Costs

PROJECT / COST ESTIMATE		SOURCE					TOTAL
		GO Bond	Southern Waterwront Beautification	Transbay Cable Public Trust	BCDC/PUC Islais Creek Mitig.	CA Resource Agency Grant	
Blue Greenway Planning and Design Guidelines	\$836,000	\$836,000					\$836,000
China Basin Park (SITE 3)	\$15,000,000						
Pier 52 Boat Launch (SITE 5)	\$600,000						
Bayfront Park Shoreline (SITE 6)	\$2,950,000	\$2,950,000					\$2,950,000
Agua Vista Partk	\$2,500,000	\$2,000,000					\$2,000,000
Pier 70 Crane Cove Park (SITE 11)	\$45,000,000	\$20,663,250		\$3,300,000			\$23,963,250
Pier 70 Slipways Park (SITE 13)	\$15,000,000						
Power Plant Shoreline (SITE 14)	\$TBD						
Warm Water Cove Park (SITE 16)	\$5,000,000	\$2,000,000					\$2,000,000
Islais Creek Northwest (SITE 17)*	\$1,500,000	\$1,500,000					\$1,500,000
Tulare Park/ Islais Creek North-East (SITE 18)	\$860,000	\$585,000				\$275,000	\$860,000
Islais Landing/ Islais Creek South (SITE 19)	\$0						
Bayview Gateway (SITE 20)	\$3,600,000	\$3,594,125					\$3,594,125
Heron's Head Park Improvements (SITE 23)	\$1,975,000	\$1,975,000					\$1,975,000
Blue Greenway Signage, Identity & Furnishings	\$1,260,000	\$1,258,000					\$1,258,000
Public Art	\$885,000	\$684,000	\$350,000				\$1,034,000
Cargo Way Bicycle Lanes	\$437,000		\$125,000			\$312,000	\$437,000
Islais Creek Pile and Debris Removal& Copra Crane	\$750,000				\$606,000		\$606,000
<b>TOTAL</b>	<b>\$98,153,000</b>	<b>\$38,045,375</b>	<b>\$350,000</b>	<b>\$3,300,000</b>	<b>\$606,000</b>	<b>\$275,000</b>	<b>\$42,576,375</b>

\*Cost estimate does not include Pier 80 shoreline improvements

Table 7.2: Draft Port Blue Greenway Project Prioritization

PROJECT	CRITERIA	Does the project meet the established criteria for the specific funding source or City Plan	Is the project identified in an existing Port Blue Greenway identity	Does the project strengthen the access where it does not exist today	Is the project create waterfront by the adjacent community	Does the project identified as a priority or nearby community	Will the project serve an adjacent (now or in the future)	Can the project leverage other funding completed with the available funding	Does the project be easily phased or natural/cultural resources	PRIORITIZED
Blue Greenway Planning and Design Guidelines	X	X	X	X	X	X	X	X	X	X
China Basin Park (SITE 3)		X	X			X				
Pier 52 Boat Launch (SITE 5)						X				
Agua Vista Park (site 7)	X	X	X		X	X	X	X		X
Bayfront Park Shoreline (SITE 6)	X	X	X	X		X	X	X	X	X
Pier 70 Crane Cove Park (SITE 11)	X	X	X	X	X	X	X	X	X	X
Pier 70 Slipways Park (SITE 13)		X		X					X	
Power Plant Shoreline (SITE 14)				X						
Warm Water Cove Park (SITE 16)	X	X		X	X	X		X	X	X
Islais Creek Northwest (SITE 17)	X	X	X	X	X					X
Copra Crane Restoration	X	X	X		X		X	X	X	X
Tulare Park/ Islais Creek North-East (SITE 18)	X	X					X	X	X	X
Islais Landing/ Islais Creek South (SITE 19)	X									
Bayview Gateway (SITE 20)	X	X	X	X	X	X		X	X	X
Heron's Head Park Improvements (SITE 23)	X	X	X		X	X		X		X
Blue Greenway Signage, Identity & Furnishings	X	X	X		X	X	X	X	X	X
Public Art	X	X	X		X	X	X	X		X
Islais Creek Pile and Debris Removal	X			X		X		X	X	X
Cargo Way	X	X			X	X	X	X		X



# APPENDIX I

The Port working with its partner agencies and stakeholders established a five phase planning process, which includes:

- Phase 1- Project Initiation (completed)
- Phase 2- Preparation of Existing Conditions, Opportunities and Constraints and Best Practices Document (“Existing Conditions Document”) (complete)
- Phase 3- Development of Alternative Use Programs and Design Guidelines (complete)
- Phase 4 – Revised Concepts, Cost Estimates, Project Prioritization and Funding (underway); and
- Phase 5 – Finalize Planning and Design Guidelines and Implement Projects

This appendix provides a summary of the Blue Greenway community planning process and an overview of the organization of the Blue Greenway and its individual elements that together are the Blue Greenway. In addition, it reviews how the document has been revised to address comments received to date.

This document represents the culmination of phases 3 and 4, further details of the work program for each of the phases is reviewed in the Existing Conditions Report.

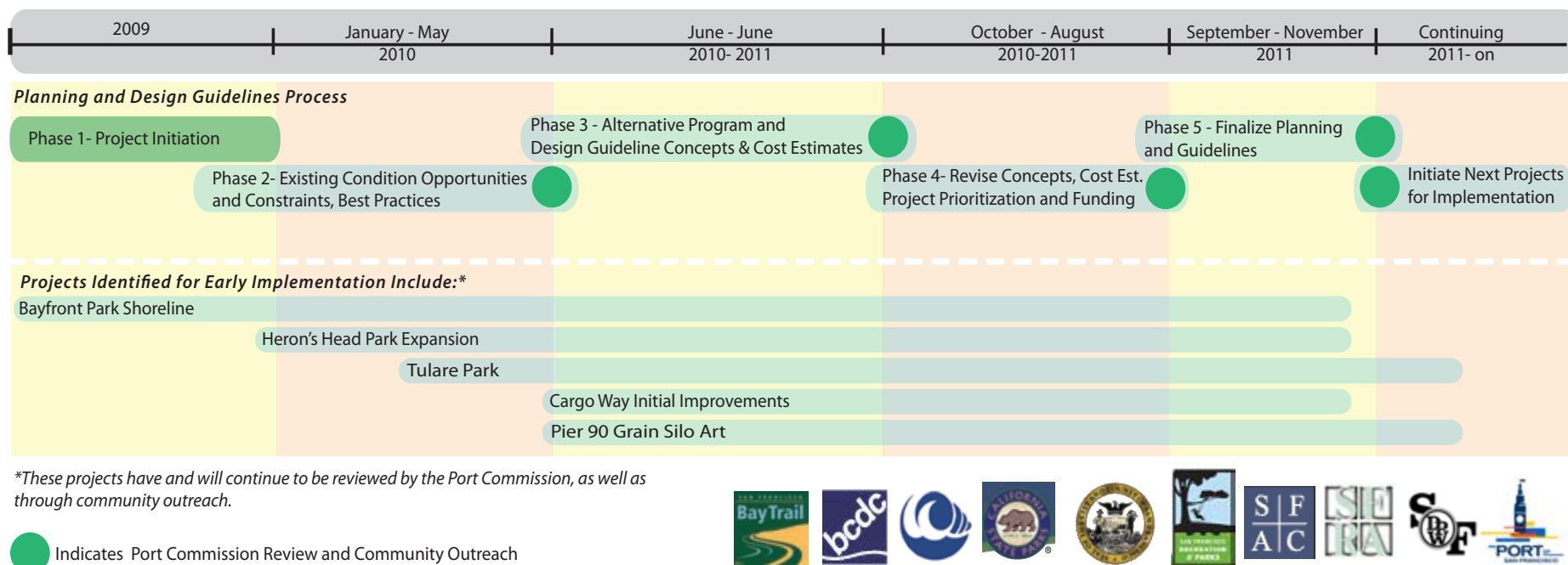


Figure A.1: Planning Process and Schedule

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## Phase 1- Project Initiation

In 2009, the Port initiated the community planning process by developing the scope of work for the Blue Greenway Planning and Design Guidelines. In addition to the scope of work, the Port formed an Interagency Working Group (IWG) to help facilitate the planning process and to get technical support in the planning process. The Port also established a stakeholder steering group that represented the broad interest of the Blue Greenway, this stakeholder group has attended multiple community meetings and has committed to tracking and participating in the planning process. Representatives of each of these groups and a more detailed outline of the scope of work is provided in the Existing Conditions Document.

## Phase 2- Existing Conditions

In May 2010, the Port of San Francisco and San Francisco Department of Public Works (DPW) released the Blue Greenway Existing Conditions Report (Existing Conditions Report) for public review. The Existing Conditions Report, was the City's initial phase of analysis to support the public planning process to for the Blue Greenway. It cataloged all of the Blue Greenway open spaces and elements, reviewed applicable existing plans, identified opportunities and constraints and analyzed Best Practices from plans for similar waterfront open space systems in North America.

On May 26, 2010, the Port and partnering agencies hosted a community workshop to review and take comment on the Existing Conditions Report. The community workshop was well attended by diverse stakeholders, who provided many helpful public comments, which will be incorporated into the document. Comments received were summarized in the September document referenced below. The

existing conditions document will continue to function as a catalog of all of the Blue Greenway open spaces, including data on the status of the open space and the jurisdiction within which they are located or managed.

## Phase 3 - Open Space Use Concepts and Site Furnishings

In September 2010 the Port and San Francisco Department of Public Works released the Blue Greenway Planning and Design Guidelines Open Space Program and Uses and Site Furnishings Concepts document. The document presented concepts for the program and uses of Port open spaces and concepts for site furnishings standards to be utilized in the development of all Port Blue Greenway open spaces. The document was presented at two community workshops, reviewed with the Port Commission and at several subsequent community and stakeholder meetings. The community meetings were well attended and public comment on the document and material presented was comprehensive and informative. The comments received are reflected in this updated document and can be summarized into the following categories:

### Organization:

- The document should better describe the organization of it and how it fits in the context of the final Planning and Design Guidelines
- The document should articulate what is and is not being covered and why certain projects are within, or not within the document (Port vs. non Port projects)
- The document should articulate the various elements of the Blue Greenway.

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## Open Space Program and Uses:

- The Site Suitability and Use Suitability analysis and Open Space Programming matrix were strong and an excellent tool for determining the appropriate uses and mix of programs;
- The document should articulate why the suitability criteria was only applied to Port open spaces;
- Specific comments regarding programs and uses for individual sites were received and those comments are reflected in the updated concepts;

## Site Furnishings:

- The suggested palettes are too specific, the selection of furnishings should be criteria based;
- The use of site settings as a basis of establishing furnishings is too specific;
- Site furnishings for individual open spaces should be based upon a criteria that allows designers to choose furnishing based on the context of the site;
- The site furnishings standards are best applied to the linking streets as an element to tie the Blue Greenway open spaces together and should relate to signage and way-finding;
- When using land use types as a criteria for site furnishing selections, it appears to raise the issue of equity of material types by neighborhood; and
- There should be some type of site furnishing that helps establish an identity to the Blue Greenway, ideally utilizing a material or vernacular that exists or can be locally produced with materials that currently exist or are produced within the area of the Blue Greenway (concrete, steel) reflective of the architectural, industrial or maritime remnants or forms.

Table A.1: Port Blue Greenway Open Space Programming Matrix

OPEN SPACES	Ped. & Bike Access		Water Access and Views						Active Recreation <sup>1</sup>				Passive Recreation				Habitat			Community Facilities and Support									
	Bay Trail - Pedestrian Access	Bay Trail Multi-Modal	Pedestrian Water Access/Views of Water	View of Water	Small Craft Launch	Fishing Pier	Boat Storage	Trailered Boat Launch (Water Access Support)	Boat Trailer/ Camper Parking	Sports Fields	Sport Courts	Playground	Skatepark	Picnic Areas	Passive Recreation	Community Gardens	Dog Run	Public Art	Outdoor Entertainment	Wetland Restoration	Upland Restoration	Native Garden	Native Plant Nursery	Cafe or Food Kiosk	Restrooms	Recreation Center/Clubhouse	Maintenance/ Storage	Nature Education Facility	Dedicated Automobile Parking
3 China Basin Park	x	x	x	x	x						x			x	x			x	x					x	x		x		
5 Pier 52 Boat Launch	x	x	x	x	x			x	x					x				x				x							
11 Pier 70 Crane Cove Park	x	x	x	x	x		x				x			x	x			x	x					x	x	x	x		x
13 Pier 70 Slipway Park	x	x	x	x		x					x			x	x			x	x					x					
16 Warm Water Cove Park	x	x	x	x	x							x		x	x			x		x	x								
18 Islais Creek North (including Tulare Park)	x	x	x	x										x	x			x			x	x							
20 Bayview Gateway	x	x	x	x										x	x	x			x					x	x		x		

<sup>1</sup> The suitability analysis reviewed opportunities and the need for active recreation uses to determine the level of need or appropriateness. However, use restrictions on Port lands preclude most active recreation types of uses, unless they are water oriented. The Port has been provided some flexibility on some lands from the State Lands Commission, which will allow flexibility, including active recreation uses (Sea Wall Lot 337). In addition, the Port is working with the State Lands Commission on other options that may allow a limited amount of active recreation on other Port lands within the Blue Greenway.



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## APPENDIX II

The May 2010 Existing Conditions Document reviewed and cataloged all of the Blue Greenway open spaces, the catalog information included:

1. Existing uses and programs for each of the existing and future sites;
2. Vision, Opportunities and Constraints for each of those sites based upon previous planning efforts; and
3. Evaluation of Best Practices for open space improvements

Utilizing this information and addressing public comments received to date, the Port and the Interagency Working Group analyzed the deficiencies and suitability of each of the Port Blue Greenway sites for open space improvements, resulting in the analysis and concept plans presented in this report. As indicated in Section Two of this document, open space program and use concepts are only developed for Port open spaces.

The analysis conducted to establish appropriate uses, included, the preparation of a list of possible program uses using a survey of existing and planned amenities, and organized into six general program categories: 1) Water Access, 2) Circulation and Views, 3) Active Recreation, 4) Passive Recreation, 5) Habitat Creation, and 6) Community Facilities and Support. Design criteria were then developed for each category. Each open space site was then evaluated based on a range of possible constraints; from size and layout requirements to site location limitations and service area recommendations. Criteria were determined through National Recreation and Park Association standards and research of comparable facilities at existing San Francisco parks.

Along with relevant area plans previously reviewed, these criteria allowed for a park-by-park suitability analysis for each category of

use. Proposed facilities were given a 0 to 4 suitability rating given a park's existing conditions and planned development. A park's physical area and layout, its proximity to both the waterfront and a critical mass of possible users, probable contamination, and any planned future uses were considered in the analysis. Higher ratings indicate greater suitability. More specifically, a rating of 0 deems a facility physically impossible for a particular site, 1 indicates that it is physically possible with major alterations or pushes the limits of the site, 2 indicates that a facility may be physically possible at a site but not suitable for the area, 3 deems a facility both physically possible and suitable for an area, while a rating of 4 marks high suitability based on the existing conditions of the site and any proposed development. This detailed assessment is presented in *Table A.3: Use Suitability Analysis* and *Table A.2: Site Suitability Criteria*.

*Table B.1: Port Blue Greenway Open Space Programming Matrix* presents the summary conclusions of that suitability analysis. This table illustrates how each use may be distributed across each of the open spaces. The table and concepts are an example of how each of the spaces could be programmed, considering them in the larger context of the entire Blue Greenway system and within the adjacent community setting.

While the suitability analysis reviewed opportunities and need for active recreation uses, use restrictions on Port lands restrict or preclude most active recreation types, unless they are water oriented. *Table A.1* indicates the results of the suitability analysis for active recreation. The Port is working on possible strategies to enable some inclusion of this type of open space on Port lands, which will be subject to review and discussion with the California State Lands Commission, to arrive at programs that are acceptable under the public trust.

Table A.2: Site Suitability Criteria

	Min. Dimensions / Area <sup>a</sup>	Spatial Flexibility		Min. Construction Cost 1-4, 1=low 4=high	No. of Units Per Population	Service Radius	Site Location Limitations	Required Amenities/ Infrastructure	Supervision/Staff Needed 1-4, 1=low 4=high	Maintenance Cost 1-4, 1=low 4=high	
		Size 1-4, 1=smaller area required 4=larger area required	Layout Flexibility 1-4, 1=flexible layout 4=fixed layout								
Water Access and Views	SMALL CRAFT LAUNCH	20' long and 12 ft wide, 30' turning radius	2	3	3	*	*	need shoreline with maximum slope of 10-15 percent, street and water access protected from rough waters; minimum 4 ft water depth at slope end; requires appropriate fishing line disposal facility	parking or boat storage	1	3
	FISHING PIER	70'+ long, 15' wide	2	3	4	*	*	need spot with a bay floor with features that attract fish, signage must be posted that fishing is for sport, not consumption	seating, lighting	2	3
	BOAT STORAGE	varies, depends on space available	2	2	3	*	*	near water, parking, and other boat related amenities	fencing or storage structure	2	2
	URBAN BEACH	Beach area should have 50 sq. ft. of land and 50 sq. ft. of water per user. Turnover rate is 3. There should be 3 - 4 A supporting land per A of beach.	2	2	3, but varies greatly depending on site condition and size of sites	*	*	needs protected waterfront area, away from rough waters and large ships. If swimming desired, should have sand bottom with slope maximum of 5% (flat preferable), boating areas completely segregated from swimming areas, and no sediment contamination.	sand infill, restrooms, picnic areas and shade structures	2	3
Circulation and Views	VIEWING PLATFORM	150 ft <sup>2</sup>	2	1	2	*	*	near water, along pedestrian path	seating, lighting	1	2
	WATERFRONT PROMENADE	15 -16 ft wide, length varies	2	2	2, but varies greatly depending on site condition and size of sites	*	*	along water, protected from active recreation and near high pedestrian traffic	landscaping, lighting, seating, pedestrian access points, guardrail, wayfinding signage	1	2
	BIKE PATH	10 ft wide, length varies	1	1	1, but varies greatly depending on site condition and size of sites	*	*	street access and possible connections to existing transportation networks	lighting, separation from roadway with pavement markings or physical barrier, wayfinding signage	1	1
Active Recreation	SPORTS FIELDS										
	BASEBALL/SOFTBALL										
	1. Official	Baselines – 90' Pitching distance 60' ½' foul lines – min. 320' Center field – 400'+	4	4	3	1 per 5,000 <sup>b</sup>	1/4 - 1/2 miles <sup>b</sup>	level site, large open space, proximity to residential areas	irrigation, drainage, equipment storage, fencing, seating, restrooms and drinking fountain recommended	1	3
	2. Little League	Baselines - 60' Pitching distance - 46' Foul lines - 200' Center field - 200' - 250'									
	SOCCER/FOOTBALL	195' to 225'x330' to 360' with a minimum 10' clearance all sides.	4	4	2	1 per 4,000 <sup>c</sup>	1/4 - 1/2 miles <sup>a</sup>	level site, large open space, proximity to residential areas	irrigation, water drainage, equipment storage, fencing, seating, restrooms and drinking fountain	1	3
	SPORTS COURTS										
	BASKETBALL (High School)	50' x 84', with 5' unobstructed space on all sides	3	4	2	1 per 5,000 <sup>b</sup>	1/4 - 1/2 mile <sup>b</sup>	level site, proximity to residential areas	lighting, equipment storage, seating, fencing, restrooms and drinking fountain recommended	1	1
TENNIS	36'x78', 12' clearance on both sides; 21' clearance on both ends	3	4	2	1 per 2,000 <sup>b</sup>	1/4 - 1/2 mile <sup>b</sup>	level site, proximity to residential areas	lighting, seating, equipment storage, fencing, restrooms and drinking fountain recommended	1	1	
PLAYGROUND <sup>d</sup>	1000 ft <sup>2</sup>	2	3	2	1 per 1,000 <sup>d</sup>	1/4 mile <sup>a</sup>	away from traffic, somewhat protected area, proximity to residential area	safety surface, fencing, seating, restrooms and drinking fountain	2	2	
SKATE PARK/BMX BICYCLE AREA	10,000 ft <sup>2</sup>	3	3	3	1 per 20,000 <sup>d</sup>	2 - 5 mile <sup>a</sup>	large open area	lighting, fencing, seating, restrooms and drinking fountain recommended	2	2	

\* Data not found

a. Minimum dimensions determined through National Park Association (NRP) standards and, where standards were not available, through an assessment of existing San Francisco park facilities as documented in the Condition Management Estimation Technology (COMET) database.

b. Lancaster, R.A. (Ed.). (1990). Recreation, Park, and Open Space Standards and Guidelines. Ashburn, VA: National Recreation and Park Association.

c. Varying recommended service level standards exist for soccer, ranging from 1 per 10,000 to 1 per 4,000. The more generous standard has been selected for this chart based on current demand and popularity of the sport in the San Francisco area. The recommended service level of 1 field per 4,000 persons is taken from section 8.1 "Facility Standards" of the "Parks, Open Space, Trails and Recreation Master Plan" from the City of Durango, Colorado adopted on April 20, 2010. This document can be found at <http://www.durangogov.org/parks/postreports.cfm>.

Table A.2: Site Suitability Criteria (continued)

	Min. Dimensions / Area <sup>a</sup>	Spatial Flexibility		Min. Construction Cost 1-4, 1=low 4=high	No. of Units Per Population	Service Radius	Site Location Limitations	Required Amenities/ Infrastructure	Supervision/Staff Needed 1-4, 1=low 4=high	Maintenance Cost 1-4, 1=low 4=high		
		Size 1-4, 1=smaller area required 4=larger area required	Layout Flexibility 1-4, 1=flexible layout 4=fixed layout									
Passive Recreation	PICNIC AREAS	300 ft <sup>2</sup>	1	1	1	1 per 1,000 <sup>d</sup>	1/4 - 1/2 mile <sup>e</sup>	near other activities	tables, seating, shade, trash receptacles, restrooms and drinking fountain recommended	1	1	
	PASSIVE RECREATION LAWN	1000 ft <sup>2</sup>	2	2	2	*	*	open area, proximity to other activities	seating, landscaping	1	2	
	COMMUNITY GARDENS	1000 ft <sup>2</sup>	2	2	2	*	*	level site, 8 hours of sun per day, away from active recreation areas, proximity to residential areas	fencing, irrigation water	2	2	
	DOG RUN	8,000 ft <sup>2</sup>	3	3	3	1 per 20,000 <sup>d</sup>	2 -5 miles <sup>a</sup>		fencing, trash cans, drinking fountain recommended	1	3	
	PUBLIC ART	varies	1	1	2	*	*	may require slightly protected area	signage	1	3	
	OUTDOOR ENTERTAINMENT											
	SMALL PLAZA/AMPHITHEATER	600 ft <sup>2</sup>	2	2	3	*	*	near high pedestrian traffic	seating, lighting, plantings, restrooms and drinking fountain recommended	1	1	
	OPEN AIR PAVILION	600 ft <sup>2</sup>	2	2	3	*	*	near other passive recreation activities	seating	1	1	
	LARGE PERFORMANCE SPACE <sup>g</sup>	50,000 ft <sup>2</sup>	4	4	4	*	*	large open space, can be a destination site	stage, seating, lighting, sound system, parking, restrooms and drinking fountain	4	1	
Habitat Creation	WETLAND	min. 4,000 ft <sup>2</sup> , includes open water areas, non-vegetated areas, vegetated marsh plain, and submerged vegetation <sup>h</sup>	3	3	3, but varies greatly depending on site condition and size of site	*	*	inundated area, appropriate natural conditions (e.g. water quality, soil quality, etc), protection from incompatible human uses or urban pest/rodents, site soil, sediment or water contamination may limit viability	protective buffer, habitat structures	2	2	
	UPLAND	min. 4000 ft <sup>2</sup>	3	3	2, but varies greatly depending on site condition and size of site	*	*	higher elevations and not inundated, appropriate natural conditions (e.g. soil quality, etc), protection from incompatible human uses or urban pest/rodents, site soil, sediment or water contamination may limit viability	protective buffer, habitat structures	2	3	
	NATIVE GARDEN	varies	2	2	2	*	*	minimal water access and sun exposure, protection from incompatible human uses, urban pest/rodents, site soil, sediment or water contamination may limit viability	may need fencing, paths	2	3	
Community Facilities and Support	CAFÉ OR FOOD KIOSK	250 ft <sup>2</sup>	1	2	2	*	*	near activities and pedestrian traffic	some plumbing, electrical, storage	4	3	
	RESTROOMS	400 ft <sup>2</sup>	1	4	4	*	*	near activities and pedestrian traffic, visible area, safety concern	some plumbing, electrical, storage	2	4	
	CLUBHOUSE/RECREATION CENTER	1,200 ft <sup>2</sup> - 12,600 ft <sup>2</sup>	2	3	4	2 ft <sup>2</sup> per person <sup>d</sup>	depends on size of center	near active recreation	electrical, plumbing, usually has restroom inside	4	4	
	MAINTENANCE/STORAGE	300 ft <sup>2</sup>	1	3	3	*	*	near active recreation	plumbing and electrical	2	1	
	NATURE EDUCATION FACILITY	1,500 ft <sup>2</sup>	2	3	4	*	*	usually near a habitat	plumbing, electrical, restroom facility, parking, usually a destination site	4	4	
	BICYCLE PARKING	40 ft <sup>2</sup>	1	1	1	*	*	close to street traffic or bicycle/pedestrian path	paved area, lighting	1	1	
	DEDICATED AUTOMOBILE PARKING	350 ft <sup>2</sup>	4	3	2	*	*	close to street traffic		1	1	

d. Data taken from section 8.1 "Facility Standards" and section 8.2 "Equity Mapping/Service Area Analysis" of the "Parks, Open Space, Trails and Recreation Master Plan" from the City of Durango, Colorado adopted on April 20, 2010. These standards were determined through "National Recreation and Park Association (NRPA) guidelines, recreation activity participation rates reported by American Sports Data as it applies to activities that occur in the United States and the Durango area, community and stakeholder input, findings from the prioritized needs assessment report and general observations" (p. 157). This document can be found at <http://www.durangogov.org/parks/postreports.cfm>.

e. Data extrapolated through comparison of established National Park Association (NRPA) service radii for other facilities and walking distance data from the San Francisco Planning Department's "Recreation and Open Space Element" from May 2009.

f. Playground is defined as a play area for both younger and older age groups, which is reflected in the 1000 ft<sup>2</sup> minimum area requirement. A younger play area alone, however, can be as small as 600 ft<sup>2</sup>.

g. Large performance space assumes a venue with minimum capacity of 2,000 people.

h. Wetland data gathered through assessment of existing California wetland database at <http://www.californiawetlands.net/tracker/>.

Table A.3: Use Suitability Analysis

		3. China Basin Park (including Proposed expansion)	5. Pier 52 Boat Launch	9. Pier 64 Shoreline Access	11. Pier 70 Crane Cove Park	13. Pier 70 Slipways Park	14. Power Plant Shoreline Access	16. Warm Water Cove Park	18. Tulare Park/Isais Creek North-East	20. Third and Cargo Gateway	
Water Access	SMALL CRAFT LAUNCH	4	4	3	4	2	2	3	3	N/A	
	FISHING PIER	3	4	2	2	2	2	2	2	N/A	
	BOAT STORAGE	3	4	1	3	2	0	2	3	N/A	
	URBAN BEACH	4	2	2	3	2	2	2	2	N/A	
Circulation and Views	VIEWING PLATFORM	4	4	4	4	4	4	4	4	4	
	WATERFRONT PROMENADE	4	4	4	4	4	4	4	4	N/A	
	BIKE PATH	4	4	4	4	3	3	3	4	4	
Active Recreation	SPORTS FIELDS										
	BASEBALL/SOFTBALL	3	0	0	1	0	0	0	0	0	
	SOCCER/FOOTBALL	3	0	0	1	1	0	0	0	0	
	SPORTS COURTS										
	BASKETBALL (High School)	3	1	0	2	2	0	2	2	0	
	TENNIS	3	2	1	2	2	0	2	2	0	
	PLAYGROUND	4	2	2	3	3	2	2	2	2	
	SKATE PARK	3	2	2	2	3	3	4	1	2	
MOUNTAIN/BMX BICYCLE AREA	3	2	2	2	3	3	4	1	2		
Passive Recreation	PICNIC AREAS										
	PASSIVE RECREATION MEADOW	4	4	4	4	4	4	4	4	4	
	COMMUNITY GARDENS	3	2	4	2	3	3	3	3	4	
	DOG RUN	3	2	1	2	3	3	3	3	2	
	PUBLIC ART	4	3	4	4	4	4	4	4	4	
	OUTDOOR ENTERTAINMENT										
	SMALL PLAZA	4	3	3	4	3	3	4	3	4	
	OPEN AIR PAVILION	4	2	2	4	3	2	3	2	4	
	LARGE PERFORMANCE SPACE <sup>2</sup>	4	0	0	3	3	0	0	0	0	
Habitat Creation	WETLAND	1	0	1	2	2	2	1	3	0	
	UPLAND	4	0	3	2	2	2	4	3	0	
	NATIVE GARDEN	4	2	4	3	3	2	3	3	4	
Community Facilities and Support	CAFÉ OR FOOD KIOSK	4	3	2	4	3	2	2	2	4	
	RESTROOMS	4	3	2	4	4	2	3	2	3	
	CLUBHOUSE/RECREATION CENTER	3	0	2	3	2	0	2	2	2	
	MAINTENANCE/STORAGE	3	0	2	3	3	2	3	2	3	
	NATURE EDUCATION FACILITY	3	0	2	2	2	0	2	2	2	
	BICYCLE PARKING	4	3	3	4	4	4	4	3	4	
	DEDICATED AUTOMOBILE PARKING	3	3	0	3	3	1	3	2	3	


0 - not physically possible

1 - physically possible w/ major alterations or pushes limits of site

2 - physically possible but not suitable use for this area

3 - suitable and possible use for the area

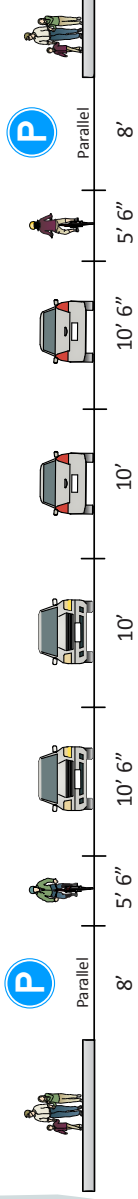
4 - highly suitable based on existing conditions and uses and/or planned future development on port open spaces

 Suitability meets demonstrated need in area (Need determined through gap analysis on page 2.4 of the "Blue Greenway - Existing Conditions document"). Suitability for Active Recreation was analyzed to determine the need, but Public Trust use restrictions prohibit many active recreation uses from occurring on Port lands and unless noted, were not considered as a use, (See page 3.1)

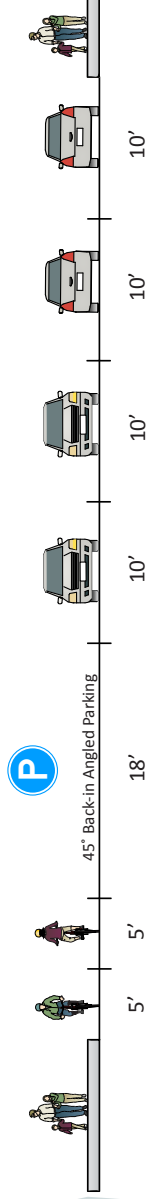
# APPENDIX III

## Terry Francois Cross Sections Mission Rock to Mariposa Looking South

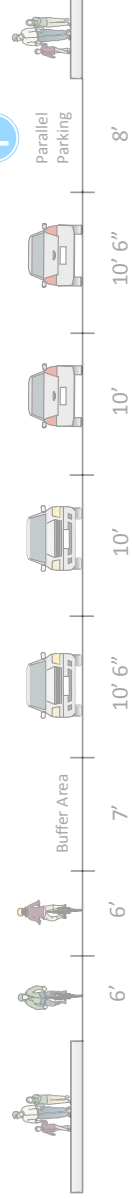
### Existing



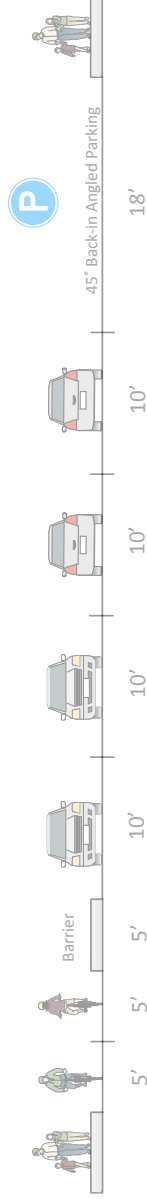
### Alternative 1 Two-Way Cycletrack, Existing Curb-to-Curb, Angled Parking East Side



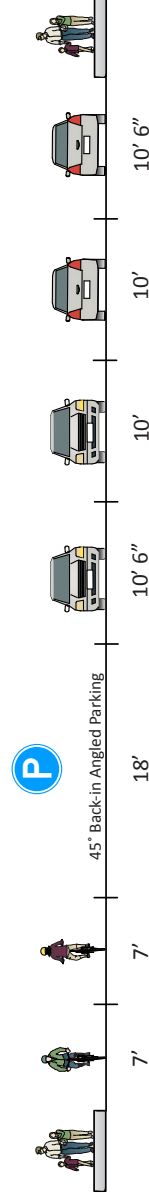
### Alternative 2 Two-Way Cycletrack, Existing Curb-to-Curb, Parallel Parking West Side



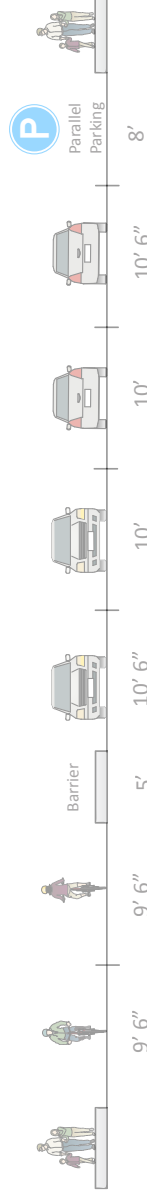
### Alternative 3 Two-Way Cycletrack, +5' Encroachment Into East Sidewalk, Angled Parking West Side



### Alternative 4 Two-Way Cycletrack, +5' Encroachment Into East Sidewalk, Angled Parking East Side



### Alternative 5 Two-Way Cycletrack, +5' Encroachment Into East Sidewalk, Parallel Parking West Side



San Francisco Bay Conservation and Development Commission

# Shoreline Plants

A LANDSCAPE GUIDE  
FOR THE SAN FRANCISCO BAY



**\* Plant community names abbreviated as follows:**

salt marsh = coastal salt marsh  
 grassland = coastal grassland  
 scrub = coastal scrub  
 beach/dune = coastal beach and dune

oak woodland = coast live oak woodland  
 brackish marsh = brackish marsh  
 riparian = riparian woodland  
 mixed evergreen forest = mixed evergreen forest

**\*\* Indicates whether native around the Bay, native to California or not native:**

BAY = native around the Bay  
 CA = native to California  
 NO = not native

<b>Botanical and Common Names</b>	<b>Plant Community*</b>	<b>Plant Type</b>	<b>Native:**</b>	<b>Description: preferences, tolerances, attributes</b>
<i>Abronia latifolia</i> yellow san verbenia	beach/dune	groundcover	CA	evergreen groundcover forms 1-3' wide leafy mats; broad, thick leaves and small yellow flowers; prefers sun and sandy soil; use as dune cover in sandy soils
<i>Acer macrophyllum</i> bigleaf maple	riparian	tree	BAY	fast-growing deciduous tree 20-100' tall; sun to part shade and occasional water; excellent shade tree; good wildlife shelter
<i>Acer negundo</i> ssp. <i>californicum</i> California box elder	riparian	tree	CA	deciduous tree 20-40' tall; pale green leaves turn yellow in fall; fast-growing; great in tough soil
<i>Achillea millefolium</i> white yarrow	grassland, scrub, beach/dune	perennial	BAY	herbaceous, evergreen perennial up to 2' tall; fern-like, aromatic leaves; prefers full sun; drought tolerant; attracts butterflies and bees; may use as lawn substitute; OK from seed, great planted
<i>Aesculus californica</i> buckeye	oak woodland	tree	BAY	deciduous tree 15-30' tall; fragrant, white blooms May-June; sometimes drops leaves in July; white bark color; tolerates seacoast; attracts butterflies; does well in a variety of conditions
<i>Agrostis hallii</i> Hall's bent grass	grassland	grass	BAY	1-2' tall finely textured grass; spreads by rhizomes, may be used as lawn substitute; sun to part shade; tolerates poor soils
<i>Agrostis pallens</i> Diego bent grass	grassland	grass	BAY	1-2' tall grass similar to <i>A. hallii</i> although more compact; works well as lawn substitute - requires occasional water to stay green through summer; tolerates poor soils
<i>Alnus rubra</i> red alder	riparian	tree	BAY	deciduous tree 40-50' tall by 20-30' wide; dark green leaves with rust-colored under side; light gray bark; good along coast - tolerates brackish marsh; fast grower in poor mineral soils

Botanical and Common Names	Plant Community*	Plant Type	Native:**	Description: preferences, tolerances, attributes
<i>Ambrosia chamissonis</i> beach-bur	beach/dune	perennial	CA	perennial with gray-green leaves forms loose mats on sand; stems with flower spikes; high ornamental value
<i>Arbutus unedo</i> strawberry tree		shrub/tree	NO	evergreen multi-stemmed shrub/tree 15-30' tall and wide; dark green leaves, reddish bark, pink flowers turn to red fruit; full sun to part shade; tolerates wind and seacoast conditions
<i>Arctostaphylos edmundsii</i> Little Sur manzanita	scrub	groundcover	CA	evergreen ground cover 6-12" high by 4-6' wide; red bark and pink-white flowers March-April; prefers part shade and occasional water; attracts butterflies; needs well-drained soil
<i>Arctostaphylos hookeri</i> Hooker's manzanita	scrub	shrub	CA	evergreen shrub 18"-4' high by 4-6' wide: forms dense mounds; red bark and pink-white flowers March-April; full sun to part shade; tolerant of drought and sandy soils; attracts butterflies
<i>Arctostaphylos densiflora</i> 'Howard McMinn' Howard McMinn manzanita	scrub	shrub	CA	evergreen shrub forms 5-6' tall mound by 7' wide; pretty red bark; pink-white flowers March-April; prefers full sun and well-drained soil; drought tolerant; attracts butterflies
<i>Arctostaphylos nummularia</i> glossyleaf manzanita	scrub	shrub	CA	evergreen shrub 2-3' tall; small bright green leaves and white flowers; prefers some shade and good drainage; drought tolerant; attracts butterflies
<i>Arctostaphylos pumila</i> sandmat manzanita	beach/dune	groundcover	CA	low, spreading groundcover 1-2' tall; dull green leaves, white-pink flowers; native to Monterey Bay dunes; good cover in sandy soil near coast
<i>Arctostaphylos uva-ursi</i> 'Pt. Reyes' manzanita	beach/dune	groundcover	CA	evergreen groundcover 1-2' tall by 10' wide; forms dense mats with glossy green leaves; prefers full sun and good drainage; attracts butterflies; good for erosion control
<i>Armeria maritima</i> ssp. <i>californica</i> sea-thrift	grassland	perennial	CA	herbaceous, evergreen perennial 6" tall by 6-12" wide; pink flowers in spring; prefers full sun and good drainage; nice as border accent; may use as lawn substitute
<i>Artemisia californica</i> California sagebrush	scrub	shrub	BAY	evergreen shrub 2-5' tall by 4-5' wide; fragrant, silvery gray foliage; full sun; tolerates drought and wind; prefers well-drained, coarse or rocky soils; good as filler

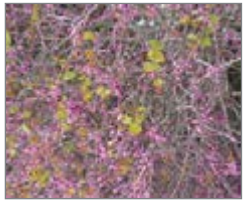


*Coyote bush in background with blackberry brambles in front.  
Eastshore State Park*



Botanical and Common Names	Plant Community*	Plant Type	Native:**	Description: preferences, tolerances, attributes
<i>Artemisia douglasiana</i> mugwort	riparian	perennial	BAY	herbaceous perennial low growing to 3'; leaves dark green on top, silvery beneath; spreads by underground runners; prefers shade, moist banks
<i>Aster chilensis</i> California aster	salt marsh	groundcover	BAY	evergreen groundcover 4-6" tall; pale violet flowers summer-late fall; vigorous grower, spreads rapidly - plant with care; now uncommon around the Bay although found along Suisun marsh edges
<i>Atriplex californica</i> California saltbush	beach/dune	shrub	CA	evergreen shrub; tolerates drought, heat, wind, alkaline/saline/clay soils; regionally extinct
<i>Atriplex lentiformis</i> quail bush	salt marsh	shrub	CA	evergreen shrub 4-10' tall; blue-gray leaves and small white flowers; tolerates drought, heat, wind, alkaline/saline/clay soils; good habitat plant
<i>Atriplex leucophylla</i> beach saltbush	beach/dune	groundcover	CA	perennial groundcover; tolerates drought, heat, wind; needs sandy soils
<i>Atriplex spatula</i> var. <i>spatula</i> spear oracle	salt marsh	annual	CA	evergreen shrub; tolerates drought, heat, wind, alkaline/saline/clay soils
<i>Atriplex triangularis</i> spearscale	salt marsh	annual	CA	1-3' tall annual; broad triangular green leaves and small greenish flowers June-Nov; grows in upper zone of salt marsh
<i>Baccharis douglasii</i> marsh baccharis	salt marsh, riparian	shrub	BAY	evergreen shrub; tolerates drought, salt spray, alkaline soils; grows in high zone of salt marsh; thrives easily; provides wildlife shelter
<i>Baccharis pilularis</i> var. <i>consanguinea</i> coyote bush	scrub	shrub	BAY	large evergreen shrub to 6' tall; tolerates drought, salt spray, alkaline soils and poor soils; thrives easily; provides wildlife shelter
<i>Baccharis pilularis</i> ssp. <i>pilularis</i> dwarf coyote bush	scrub	groundcover	CA	evergreen groundcover; tolerates drought, salt spray, alkaline and poor soils; thrives easily; provides wildlife shelter
<i>Bolboschoenus maritimus</i> alkali bulrush	salt marsh, brackish marsh	perennial	BAY	perennial sedge 1-5' tall with triangular stems; extremely salt tolerant; grows in salt or brackish marshes

Botanical and Common Names	Plant Community*	Plant Type	Native?***	Description: preferences, tolerances, attributes
<i>Brodiaea californica</i> brodiaea	grassland, oak woodland	perennial	CA	grasslike leaves, cluster of funnel-shaped purple flowers on 8-30" stalks; plant dormant after bloom; some species also known under the genus <i>Dichelostemma</i> or <i>Triteleia</i> ; attracts butterflies
<i>Brodiaea elegans</i> harvest brodiaea	grassland	perennial	CA	grasslike leaves, flower stems 12-18" tall with purple flowers in summer; easy to grow - multiplies freely
<i>Bromus carinatus</i> California brome	grassland	grass	BAY	6-12" tall perennial grass; provides good forage; difficult to get certified native seed although does well from seed
<i>Camissonia cheiranthifolia</i> ssp. <i>cheiranthifolia</i> beach evening primrose	beach/dune	perennial	BAY	perennial with prostrate stems that form large mats at maturity; bright yellow blooms; needs sandy soils
<i>Carex praegracilis</i> meadow sedge	grassland	grass	BAY	deciduous to evergreen perennial sedge to 12" tall; dark green leaves; tolerates foot traffic - can serve as unmowed turf; likes moisture
<i>Carex tumulicola</i> dwarf sedge	grassland	grass	BAY	1-2' tall by 1-2' wide clumping grass; prefers part shade and upland location; self sows easily; may use as lawn substitute
<i>Carpenteria californica</i> bush anemone		shrub	CA	evergreen shrub 6' tall by 4' wide; dark green leathery leaves, white flowers with yellow centers in spring; prefers full sun, some water with good drainage; can be espaliered
<i>Castilleja ambigua</i> salt marsh owl's clover	scrub, salt marsh	annual	BAY	herbaceous annual; yellow flowers with purple markings; locally extinct or rare; can be hard to grow
<i>Castilleja foliosa</i> indian paintbrush	scrub	perennial	BAY	somewhat woody perennial 1-2' tall with narrow gray-green leaves; orange-red flowers; can be hard to grow
<i>Ceanothus gloriosus</i> ceanothus	beach/dune	groundcover	CA	12-18" tall by 12-16' wide; dark green leaves with light blue flowers; attracts butterflies, hummingbirds and bees; tolerates coastal wind; needs well-drained soil
<i>Ceanothus griseus</i> var. <i>horizontalis</i> Carmel creeper 'Yankee Point'	scrub	groundcover	CA	evergreen groundcover 3' tall by 10' wide; glossy dark green leaves and medium blue flower clusters; fast-growing; attracts butterflies, hummingbirds and bees; tolerates coastal wind; needs well-drained soil



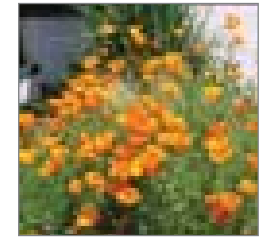
*Cercis occidentalis*  
Western redbud

Botanical and Common Names	Plant Community*	Plant Type	Native?***	Description: preferences, tolerances, attributes
<i>Ceanothus maritimus</i> maritime ceanothus	scrub	shrub	CA	1-3' tall by 3-8' wide; blue-green leaves, white to pale lavender flowers; attracts butterflies, hummingbirds and bees; needs well-drained soil
<i>Ceanothus thyrsiflorus</i> blue blossom	scrub	shrub	BAY	6-10' tall by 8-20' wide; glossy green leaves, light to dark blue flower spikes; very hardy; attracts butterflies, hummingbirds and bees; needs well-drained soil
<i>Ceanothus thyrsiflorus</i> var. <i>repens</i> creeping blue blossom	scrub	groundcover	BAY	8" tall by 12' wide; shiny bright green leaves; white flowers in spring; attracts butterflies, hummingbirds and bees; needs well-drained soil
<i>Cercis occidentalis</i> western redbud	oak woodland	shrub/tree	CA	deciduous shrub/tree 10-20' tall and wide; open branching form; magenta flowers early spring before bright green heart-shaped leaves; dark purple seed pods; prefers full sun to part shade, good drainage, little water; can grow as espalier
<i>Chlorogalum pomeridianum</i> soaproot	scrub	perennial	BAY	herbaceous perennial with long, wavy blade-like leaves 12" tall with 2-4' white flowers stalks; prefers sun; Native Americans ate bulbs and also used as a soap
<i>Clarkia rubicunda</i> farewell-to-spring	grassland	annual	BAY	to 5" tall; pink to lavender flowers spring- early summer; prefers sandy soil
<i>Cordylanthus maritimus</i> salt marsh bird's beak	salt marsh	annual	CA	branched annual with fairly prostrate stems; narrow hairy leaves; purple and white tubular flowers; endangered; very difficult to grow
<i>Corylus cornuta</i> var. <i>californica</i> western hazelnut	mixed evergreen forest	tree	BAY	deciduous tree; open, multi-stemmed form 5-12' tall; bright yellow fall color; needs shade; beautiful small tree
<i>Cotinus coggygia</i> smoke tree		shrub/tree	NO	deciduous shrub/tree 10-15' tall and wide; striking purple leaves; prefers sun to part shade, good drainage, little water; hardy in poor soils
<i>Danthonia californica</i> var. <i>californica</i> California oatgrass	grassland	grass	BAY	2-6" high clumps with 1' tall flower spikes; sun to part shade; tolerates moderate foot traffic; can be hard to grow
<i>Deschampsia cespitosa</i> ssp. <i>holciformis</i> Pacific hairgrass	grassland	grass	BAY	dark green bunchgrass to 1' tall; tolerates light foot traffic and salinity; provides good forage

<b>Botanical and Common Names</b>	<b>Plant Community*</b>	<b>Plant Type</b>	<b>Native:**</b>	<b>Description: preferences, tolerances, attributes</b>
<i>Deschampsia elongata</i> slender hairgrass	grassland	grass	BAY	4" tall tufts of yellow-green leaves with 1-4' tall flower stalks; provides good forage
<i>Dichelostemma capitatum</i> blue dicks	grassland, scrub, oak woodland	perennial	BAY	herbaceous perennial; 2' tall stems with blue-violet flowers; prefers excellent drainage, full sun and no water; tolerant of many soils and exposures; naturalizes over time
<i>Dichelostemma congestum</i> Ookow	grassland, oak woodland	perennial	BAY	herbaceous perennial; 2' tall stems with lavender blue flowers; prefers excellent drainage, full sun and no water; attracts butterflies; effective in drifts
<i>Dichelostemma ida-maia</i> firecracker flower	grassland	perennial	CA	grasslike leaves to 20" high; buds open to 2" long scarlet-red tubular flowers; effective in meadowlike plantings
<i>Distichlis spicata</i> salt grass	salt marsh	perennial	BAY	herbaceous perennial grass 8-12" tall; forms dense mats in brackish marshes and high zone of salt marshes; may use as lawn substitute in appropriate conditions
<i>Dodonaea viscosa</i> var. <i>purpurea</i> purple hopseed bush		shrub	NO	evergreen shrub fast-growing to 10-15'; prefers sun to part shade, little water; tolerates wind, heat and poor soil; good hedge or screen
<i>Dudleya farinosa</i> bluff lettuce	scrub	perennial	BAY	evergreen perennial with fleshy succulent-like, gray-green leaves up to 1' tall; prefers full sun on coast; use as accent; leaves often red-tipped; needs very well-drained soil
<i>Elymus glaucus</i> blue wild rye	grassland	grass	BAY	tufted perennial bunchgrass to 1' tall, flower stalks 2-3' tall; prefers part shade and little water; self sows easily, can be invasive; good for slope stabilization
<i>Elymus trachycaulus</i> slender wheatgrass	grassland	grass	BAY	perennial bunchgrass grow 3' high; good for erosion control
<i>Epilobium californicum</i> California fuchsia	beach/dune	perennial	BAY	18-24" tall shrub with gray-green foliage and tubular scarlet flowers summer-fall; prefers full sun to part shade, little to no water; attractive to hummingbirds, butterflies and bees
<i>Erigeron glaucus</i> seaside daisy	scrub, beach/dune	perennial	CA	12" tall by 18" wide herbaceous, evergreen perennial with blue-green leaves and lavender flowers; prefers full sun, good drainage, little water; attractive to butterflies

Botanical and Common Names	Plant Community*	Plant Type	Native?***	Description: preferences, tolerances, attributes
<i>Eriogonum arborescens</i> Santa Cruz Island buckwheat	scrub	shrub	CA	1-6' tall depending on conditions, 3-5' wide; prefers full sun, good drainage, little water; tolerates heat, wind, drought, salt spray; attracts butterflies and bees; use in masses for erosion control
<i>Eriogonum fasciculatum</i> California buckwheat	scrub	shrub	CA	evergreen shrub to 4' tall with gray-green leaves; creamy white flowers bloom spring-summer; prefers full sun, good drainage, little water; good for erosion control
<i>Eriogonum giganteum</i> Saint Catherine's lace	scrub	shrub	CA	4-8' tall by 6-10' wide; masses of lacy flowers in summer; prefers full sun, good drainage, little water; tolerates heat, wind, drought, salt spray; attracts butterflies and bees; effective as informal screen
<i>Eriogonum grande</i> var. <i>rubescens</i> red-flowered buckwheat	scrub	shrub	CA	evergreen shrub 1-3' tall and wide; gray-green leaves and rosy-red flowers spring-summer; prefers full sun, good drainage, little water; use as filler and plant in drifts
<i>Eriogonum latifolium</i> coastal buckwheat	scrub	shrub	BAY	forms low mounds 1-2' tall; prefers full sun, good drainage, little water; tolerates heat, wind, drought, salt spray; attracts butterflies and bees
<i>Eriogonum nudum</i> naked eriogonum	scrub	perennial	BAY	evergreen perennial 1-3' tall and wide; gray-green leaves; white, pink, yellow flower heads July-August; use in mixed border for airy effect; most common Buckwheat around Bay
<i>Eriophyllum lanatum</i> var. <i>achillaeoides</i> common wooly sunflower	scrub	perennial	CA	shrubby perennial 1-3' tall by 1-3' wide silvery gray leaves and golden yellow flowers; prefers full sun, good drainage, little or no water
<i>Eriophyllum nevinii</i> Catalina silver lace	scrub	perennial	CA	shrubby perennial 3-5' tall with gray-green leaves; prefers full sun, good drainage, little or no water; use as border plant
<i>Eriophyllum staechadifolium</i> seaside wooly sunflower	scrub	perennial	CA	shrubby perennial with gray-green leaves; prefers full sun, good drainage, little or no water
<i>Escallonia rubra</i> escallonia		shrub	NO	evergreen shrub 6-15' tall and wide; glossy dark-green leaves and red flowers; attracts bees; tolerates wind, drought and seacoast conditions

Botanical and Common Names	Plant Community*	Plant Type	Native:**	Description: preferences, tolerances, attributes
<i>Eschscholzia californica</i> California poppy	grassland, beach/dune	annual	BAY	6-12" tall herbaceous perennial; bright orange bloom over long blooming season; minimal care needed; will spread easily; prefers full sun, good drainage, no water; tolerates poor soil; does well from seed
<i>Festuca californica</i> California fescue	grassland	grass	BAY	perennial bunchgrass; leaves 1-3', flowering stems 3-4' tall; full sun OK, best in part shade; good for erosion control; tolerates poor soils
<i>Festuca idahoensis</i> fescue bunchgrass	grassland	grass	BAY	12-18" tall clumping perennial grass; blue-green leaves; prefers full sun to part shade and good drainage
<i>Festuca rubra</i> red fescue	grassland	grass	BAY	3-12" tall tufted drifts; full sun or light shade; spreads by rhizomes; can serve as a native alternative to lawn; be careful to use only native strains such as molate
<i>Fragaria chiloensis</i> sand strawberry	beach/dune	groundcover	BAY	herbaceous, prostrate perennial; spreads by runners; shiny green leaves and white flowers; use as dune cover; may use as lawn substitute in sandy soils
<i>Frankenia salina</i> alkali-heath	salt marsh	perennial	BAY	low, bushy perennial 6-12" tall; forms a dense mat; grows in middle zone of salt marsh; versatile groundcover that spreads by rhizomes; grows in clay or saline soils with or without irrigation
<i>Fremontodendron californicum</i> flannel bush		shrub	CA	fast-growing shrub to 20' tall by 10-15' wide; large bright yellow flowers in spring; needs full sun and good drainage; hairy leaves can irritate skin
<i>Garrya elliptica</i> coast silktassel	scrub	shrub/tree	BAY	dense evergreen shrub/tree; 10-20' tall and wide; long, white flowers; full sun or part shade and little or no water; good for screening
<i>Gaultheria shallon</i> salal	scrub	shrub	CA	evergreen shrub 4-10' tall and slightly wider; glossy bright green leaves and purple-black berries; slow-growing and difficult to establish; tolerates salt spray; prefers shade
<i>Glaux maritima</i> sea-milkwort	salt marsh	perennial	CA	low-growing perennial with fleshy leaves; grows in middle zone of salt marsh



*Eschscholzia californica*  
California poppy

Botanical and Common Names	Plant Community*	Plant Type	Native?***	Description: preferences, tolerances, attributes
<i>Grevillea lavandulacea</i> grevillea		shrub	NO	evergreen shrub 3-6' tall by 4-6' wide; gray-green needle like leaves and red flowers; full sun to part shade, good drainage, little or no water; tolerates drought, heat, poor soil; attractive to hummingbirds
<i>Grindelia hirsutula</i> var. <i>hirsutula</i> gumplant	scrub	perennial	BAY	herbaceous perennial 1-3' tall; 2" wide bright yellow blooms spring-summer
<i>Grindelia stricta</i> var. <i>angustifolia</i> Pacific gumplant	salt marsh, scrub	perennial	BAY	1-5' tall shrubby perennial; showy yellow flowers; grows along upper edges of salt marsh
<i>Hakea suaveolens</i> sweet hakea		shrub	NO	evergreen shrub 10-20' tall; dark green 4" leaves; tolerates wind, poor soils; useful, fast-growing barrier plant or screen
<i>Hardenbergia violacea</i> lilac vine		vine	NO	evergreen vine 10-12'; winter-early spring white or purple blooms; full sun or part shade; moderate water
<i>Helictotrichon sempervirens</i> blue oat grass		grass	NO	clumping perennial grass 2-3' tall and wide; bright blue-gray leaves and straw-colored flower clusters in spring; prefers full and well-drained soil
<i>Heteromeles arbutifolia</i> toyon	scrub, oak woodland	shrub/tree	BAY	evergreen shrub 10-20' tall by 10-15' wide; dark green, leathery leaves; white flowers June-July; red berries Dec; full sun to part shade, good drainage, little or no water; good for erosion control; tolerates poor soil; attracts butterflies and hummingbirds; can grow as espalier
<i>Holodiscus discolor</i> cream bush	mixed evergreen forest	shrub	BAY	deciduous shrub 3' tall in shade, 20' tall in sun; long creamy white flowers spring-summer and red fall color; full sun to part shade; good habitat plant - attracts butterfly larvae, birds and bees; can grow as espalier
<i>Hordeum brachyantherum</i> meadow barley	grassland	grass	BAY	perennial grass to 6" high; grows in clumping form; topped with purple seed heads in spring; does well from seed
<i>Iris douglasiana</i> Douglas iris	grassland	perennial	BAY	herbaceous perennial 12-24" tall; early spring purple flowers Feb-May; spreads easily from rhizomes
<i>Jaumea carnosa</i> fleshy jaumea	salt marsh	perennial	CA	prostrate, herbaceous perennial 4-12" tall; narrow fleshy leaves; common in middle zone of salt marsh

Botanical and Common Names	Plant Community*	Plant Type	Native?*	Description: preferences, tolerances, attributes
<i>Juncus patens</i> wire grass	grassland, riparian	perennial	BAY	2' tall rush with stiff, upright gray-green stems; prefers moist soil
<i>Koeleria macrantha</i> junegrass	grassland	grass	BAY	perennial grass with 6-12" high leaves and 1-2' high spike-like flower stalks; prefers sun and good drainage; tolerates poor soils
<i>Laurus nobilis</i> sweet bay		shrub/tree	NO	evergreen shrub/tree 10-40' tall by 12-40' wide; dark green aromatic leaves; full sun to part shade, good drainage, moderate water; tolerates wind; good as informal screen
<i>Lavatera assurgentiflora</i> tree mallow		shrub	CA	evergreen shrub 6-12' tall and wide; gray-green leaves with pink-purple flowers spring-summer; full sun, good drainage, moderate water; tolerates heat, wind, drought, salt spray; attracts butterfly larvae
<i>Leptospermum laevigatum</i> tea tree		shrub/tree	NO	evergreen shrub/tree 10-30' tall and wide; gray-green fine narrow leaves; white spring blooms; full sun, good drainage, little water; hardy plant - tolerates wind
<i>Leymus condensatus</i> giant wild rye	scrub	grass	CA	perennial bunchgrass 4' tall by 3' wide; blue-green leaves; prefers sun and little water; spreads aggressively by underground runners - good for erosion control
<i>Leymus mollis</i> Pacific dune grass	beach/dune	grass	BAY	perennial bunchgrass; blue-green leaves; spreads by underground runners - good for erosion control; prefers sun and little water; historic Bay beach/dune dominant plant, now limited to San Leandro in the Bay; needs light, sandy soil
<i>Leymus triticoides</i> creeping wild rye	grassland	grass	BAY	grass stems 2-4' tall; good for erosion control; very tolerant; competitive with non-native grasses in seasonally moist clay soils - spreads rapidly; does not do well from seed
<i>Limonium californicum</i> sea-lavender	salt marsh	perennial	BAY	1-2' tall; broad flat leaves and pale violet flowers July-Dec.; grows in upper zone of salt marsh above tide lines
<i>Lithocarpus densiflorus</i> tanoak	mixed evergreen forest	tree	CA	evergreen tree to 60' tall; gray-green foliage, creamy white flowers mid summer; bronze new foliage in spring; needs some shade



Botanical and Common Names	Plant Community*	Plant Type	Native?***	Description: preferences, tolerances, attributes
<i>Lupinus albifrons</i> silver bush lupine	scrub	shrub	BAY	evergreen shrub 5' tall and wide; blue to violet, fragrant blooms April - July; full sun, good drainage, little water; attracts butterflies and bees
<i>Lupinus formosus</i> summer lupine	grassland	perennial	BAY	full sun, good drainage, little water; attracts butterflies and bees
<i>Lupinus variicolor</i> varied lupine	grassland	perennial	BAY	nice as edging; full sun, good drainage, little water; attracts butterflies and bees
<i>Mabonia pinnata</i> California holly grape		shrub	BAY	evergreen shrub 5' tall and wide; glossy green holly-like leaves, yellow spring flowers turn to blue berries; full sun to part shade, moderate water; tolerates drought; attracts birds
<i>Melaleuca quinquenervia</i> cajeput tree		tree	NO	evergreen tree 20-30' tall by 15-20' wide with white peeling bark; likes sun; little water; fast growing; tolerates wind
<i>Melica californica</i> California melic	grassland	grass	BAY	semi-evergreen perennial grass up to 4' tall; semi-erect; provides good forage; tolerates poor soils and shade
<i>Mimulus aurantiacus</i> sticky monkey flower	scrub	perennial	BAY	woody perennial up to 4' tall; orange or yellow tubular flowers spring-summer; full sun to part shade, good drainage, little water; attracts butterfly larvae and hummingbirds
<i>Muhlenbergia rigens</i> deer grass	grassland	grass	CA	perennial bunchgrass 3' tall and wide; bright green leaves, upright flowers stalks; full sun to part shade, good drainage, little water
<i>Myrica californica</i> Pacific wax myrtle		shrub	BAY	evergreen shrub 10-30' tall and wide; shiny dark green leaves; sun or part shade, most soils OK, moderate water; good informal hedge; tolerates wind and salt spray; good habitat plant; bay-like odor; can grow as espalier
<i>Myrtus communis</i> myrtle		shrub	NO	evergreen shrub to 5-6'; small bright green leaves; full sun, good drainage, moderate water; tolerates any soil; good as hedge or screen
<i>Nassella lepida</i> foothill needle grass	grassland	grass	BAY	perennial grass 1' tall and wide; summer dormant; spreads by self-sowing; full sun, good drainage, no water; good for erosion control; tolerates poor soils

Botanical and Common Names	Plant Community*	Plant Type	Native?*	Description: preferences, tolerances, attributes
<i>Nassella pulchra</i> purple needle grass	grassland, scrub	grass	BAY	perennial grass; leaves 1-2' tall, flower stalks 2-3' tall; prefers full sun; tolerates poor soils
<i>Penstemon spectabilis</i> royal penstemon	scrub	perennial	CA	herbaceous perennial 3-6' tall; prefers full sun, good drainage and occasional water; blue, pink, purple or white flowers; attracts butterfly larvae and hummingbirds
<i>Phlomis fruticosa</i> Jerusalem sage		shrub	NO	evergreen shrub 4' tall by 6' wide; woolly gray-green leaves, yellow flowers spring-summer; full sun, good drainage, some water; good along seacoast
<i>Physocarpus capitatus</i> ninebark		shrub	BAY	deciduous shrub 8' tall and wide; medium green leaves, dense clusters of white flowers; needs some shade
<i>Pinus contorta</i> ssp. <i>contorta</i> shore pine	beach/dune	tree	CA	fast growth to 20-35' tall and wide; dark green 1-2" needles; dwarfed and contorted by ocean winds; tolerates salt spray
<i>Pinus muricata</i> Bishop pine		tree	CA	fast growth to 40-80' tall by 20-40' wide; pyramidal when young, rounded with age; tolerates seacoast
<i>Pinus torreyana</i> Torrey pine	scrub	tree	CA	fast growth to 40-60' tall by 30-50' wide; open, irregular form when exposed to ocean winds; useful in open spaces and parks; native to Southern California coast
<i>Pittosporum tobira</i> tobira		shrub/tree	NO	evergreen shrub/tree 6-15' tall and wide; full sun to part shade, moderate water; good as hedge or windbreak; tolerates seacoast conditions
<i>Platanus x acerifolia</i> London plane		tree	NO	deciduous tree 40-80' tall by 30-40' wide; sun to part shade; moderate water; fast growing; tolerates many soils, smog, reflected heat; performs well as street or lawn tree
<i>Poa douglasii</i> sand-dune bluegrass	beach/dune	grass	CA	native, annual bunchgrass; grows along shifting sand dunes; threatened by alien species
<i>Polystichum munitum</i> swordfern	scrub, mixed evergreen forest	fern	BAY	evergreen fern to 4' tall; little water needed; prefers shade; spread quickly by underground runners
<i>Populus fremontii</i> Fremont cottonwood	riparian	tree	BAY	fast-growing deciduous tree 40-60' tall by 25-30' wide; glossy yellow-green triangular leaves with pale gold fall color; use in background for screening; use male trees



*Quercus agrifolia*  
coast live oak

Botanical and Common Names	Plant Community*	Plant Type	Native:**	Description: preferences, tolerances, attributes
<i>Prunus ilicifolia</i> ssp. <i>ilicifolia</i> hollyleaf cherry		shrub	BAY	evergreen shrub 10-25' tall and wide; part shade, good drainage, moderate water; good as hedge, windbreak, screen or espalier
<i>Pteridium aquilinum</i> western bracken fern	grassland, scrub	fern	BAY	fronds 2-7' tall; prefers full sun to part shade and little water; can be invasive; poisonous if fronds ingested
<i>Quercus agrifolia</i> coast live oak	oak woodland	tree	BAY	evergreen tree 30-75' tall by 60-100' wide; full sun or part shade, good drainage; do not water regularly within root zone; tolerates drought, heat, wind; plant in groves preferably; acorns used for propagation should be from salt adapted parents
<i>Ranunculus californicus</i> California buttercup	grassland	perennial	BAY	1-2' tall herbaceous perennial; finely divided leaves, early spring yellow blooms; full sun, good drainage, no summer water
<i>Rhamnus californica</i> coffeeberry	scrub, oak woodland	shrub	BAY	evergreen shrub 3-18' tall; shiny dark green leaves, red berries; hardy grower; prefers sun to part shade with good drainage, little water; tolerates poor soils; attracts butterflies; good habitat plant
<i>Rhus integrifolia</i> lemonade berry	scrub	shrub	CA	evergreen shrub 3-10' tall and wide; leathery dark-green leaves; full sun to part shade, good drainage, little water; good windbreak, screen, habitat plant; can grow as espalier
<i>Rhus ovata</i> sugar bush		shrub	CA	evergreen shrub 8-12' tall by 8-12' wide with round form; dark green leaves, small white flowers; full sun to part shade, good drainage, little water; good windbreak, screen, habitat plant
<i>Rosa californica</i> California rose	riparian	shrub	BAY	3-8' tall; pale pink flowers; prefers moist shade but will grow in sun with water; good shelter and food for wildlife; excellent for bank stabilization
<i>Rubus pentalobus</i> bramble		groundcover	NO	evergreen groundcover 6-12" tall by 6' wide; forms dense, vigorous mat; keeps weeds out; part shade preferred; occasional water, good drainage
<i>Rubus ursinus</i> California blackberry	scrub, riparian, oak woodland	shrub	BAY	trails, climbs and forms mounds; prickles on stems; white flowers produce edible black berries late summer; best in shade

Botanical and Common Names	Plant Community*	Plant Type	Native?***	Description: preferences, tolerances, attributes
<i>Rumex maritimus</i> golden dock	salt marsh	annual	BAY	native to salt marshes around Bay; 6-8" tall leaves
<i>Salix laevigata</i> red willow	riparian, brackish marsh	tree	CA	deciduous tree less than 40' tall; grows along edges of marshes or streams; red or yellow colored twigs in winter
<i>Salix lasiolepis</i> arroyo willow	riparian, brackish marsh	shrub/tree	CA	deciduous shrub or small tree less than 30' tall; grows along edges of marshes or streams; yellow or brown colored twigs in winter; useful as informal screen
<i>Salvia leucophylla</i> purple sage	scrub	shrub	CA	evergreen shrub 3-5' tall and wide with sprawling form; pink-purple flowers in spring; prefers full sun, good drainage, little water; attracts hummingbirds, butterflies, bees
<i>Salvia mellifera</i> black sage	scrub	shrub	CA	3-6' tall; grows quickly; pale purple flowers; prefers full sun, good drainage, little water; attracts hummingbirds, butterflies, bees
<i>Sambucus mexicana</i> blue elderberry		shrub/tree	BAY	deciduous; 10-30' tall by 10-12' wide; full sun to part shade, little water; attracts butterflies and hummingbirds - good habitat plant; good screen, windbreak, edge; some plant parts are poisonous
<i>Sambucus racemosa</i> red elderberry		shrub	CA	deciduous shrub 8-10' tall and wide; 9" long leaves divided into leaflets; small, white flowers late spring turn into non-edible red berries; likes moist soil; attracts butterflies and hummingbirds; some plant parts are poisonous
<i>Sarcocornia pacifica</i> pickleweed	salt marsh	perennial	BAY	1-2' tall low-growing succulent which is very salt tolerant; grows in middle zone of salt marsh; spreads by underground stems; previously know as <i>Salicornia virginica</i>
<i>Satureja douglasii</i> Yerba Buena	scrub	perennial	BAY	low growing mint with trailing habit; shade tolerant but blooms with some sun; called "good herb" by Spanish settlers; may use as lawn substitute
<i>Schoenoplectus californicus</i> California bulrush	brackish marsh	perennial	BAY	perennial sedge to 13' tall with triangular stems; common in brackish marshes
<i>Scrophularia californica</i> bee plant	beach/dune, scrub	perennial	BAY	herbaceous perennial 3-5' tall with triangular leaves; small reddish-brown flowers February to July



*Salix lasiolepis*  
arroyo willow



*Sarcocornia pacifica*  
pickleweed

Peter Baye

Botanical and Common Names	Plant Community*	Plant Type	Native:**	Description: preferences, tolerances, attributes
<i>Sidalcea malviflora</i> checkerbloom		perennial	BAY	perennial 2' tall by 1-2' wide; pink-purple flowers early spring; sun to part shade, good drainage; no summer flower - summer dormant
<i>Sisyrinchium bellum</i> blue-eyed grass	grassland, scrub	perennial	BAY	grass-like leaves 4-24" tall; purple flowers late spring; thrives with full sun, occasional water; self-sows; tolerates poor soils
<i>Solidago californica</i> California goldenrod	grassland	perennial	BAY	herbaceous perennial up to 3' tall; blooms late summer; grow in a massing
<i>Spartina foliosa</i> California cord grass	salt marsh	grass	BAY	perennial grass 1-4' tall with 1/2" wide leaves; common in low zone of salt marsh; this is the only cordgrass native to the Bay; before planting genetic testing should be performed to ensure native species used; native species should not be planted near any of non-native species as they will hybridize
<i>Suaeda californica</i> California sea-blithe	salt marsh	perennial	BAY	1-3' tall perennial; narrow linear leaves and greenish flowers July-Oct; grows in upper zone of salt marsh in sandy soils; federally endangered, now regionally extinct except for reintroduction; no ornamental value
<i>Symphoricarpis mollis</i> creeping snowberry	oak woodland	vine	CA	deciduous vine 1-2' high; forms thicket over time; prefers some shade; drought tolerant; easy to grow; good choice for dry shade under oaks
<i>Toxicodendron diversilobum</i> poison oak	scrub, oak woodland	shrub	BAY	deciduous shrub; red new growth; oil from leaves causes itchy skin rash; easily distinguished by leaves with 3-lobed pattern
<i>Triglochin maritima</i> seaside arrow-grass	salt marsh	perennial	BAY	herbaceous perennial 1-2' tall with fleshy stem-like leaves; grows in dense clumps
<i>Umbellularia californica</i> California bay	riparian, mixed evergreen forest	tree	BAY	evergreen tree 30-100' tall; shiny aromatic leaves dried and used for seasoning; can be hard to grow and susceptible to fungus
<i>Vaccinium ovatum</i> California huckleberry		shrub	BAY	compact evergreen shrub 2-8' tall; glossy leaves; best in part shade

# VII ADDITIONAL INFORMATION AND RESOURCES

*Some further guidance,  
discussion of specific  
issues and list of resources*

## *Do Not Plant List*

Just as important, if not more important, as knowing the appropriate plants to use, is knowing what plants not to use. There are a number of non-native invasive plant species that have been extremely destructive to native habitat around the Bay. One well-known example is the introduction of Smooth Cord Grass (*Spartina alterniflora x foliosa*) in the 1970's as an experiment for stabilizing levees. Currently, massive efforts to eradicate the Smooth Cord Grass are underway (see [www.spartina.org](http://www.spartina.org)). Another common exotic plant that has been widely used around the Bay is iceplant. Various non-native species of iceplant have been used for erosion and weed control purposes, at the expense of destroying or preventing native plant communities from flourishing.

Since this list is continually being updated, it is also important to check resources that may be more current than this guide. Two particularly useful websites include:

[www.cal-ipc.org](http://www.cal-ipc.org) California Invasive Plant Council look for the "California Invasive Plant Inventory" and "The Weed Worker's Handbook: A Guide to Techniques for Removing Bay Area Invasive Plants"

[www.sfei.org](http://www.sfei.org) San Francisco Estuary Institute look for "Practical Guidebook to the Control of Invasive Aquatic and Wetland Plants of the San Francisco Bay-Delta Region"

### DO NOT PLANT LIST (Short list of very invasive non-native plants)

Botanical Name	Common Name
<i>Arundo donax</i>	giant reed
<i>Carpobrotus</i> spp.	iceplant
<i>Cortaderia jubata</i> , <i>C. selloana</i>	pampas grass
<i>Cytisus scoparius</i>	scotch broom
<i>Delairea odorata</i>	Cape ivy
<i>Drosanthemum</i> spp.	iceplant
<i>Echium candicans</i>	pride of Madeira
<i>Foeniculum vulgare</i>	sweet fennel
<i>Genista monspessulana</i>	french broom
<i>Hypericum calycinum</i>	creeping St. Johnswort
<i>Lampranthus</i> spp.	iceplant
<i>Lepidium latifolium</i>	perennial pepperweed
<i>Lythrum salicaria</i>	purple loosestrife
<i>Maytenus boaria</i>	mayten
<i>Rubus discolor</i>	himalayan blackberry
<i>Spartina alterniflora x foliosa</i>	smooth cord grass
<i>Spartina anglica</i>	common cord grass
<i>Spartina densiflora</i>	dense-flowered cord grass
<i>Spartina patens</i>	salt meadow cord grass
<i>Spartium junceum</i>	spanish broom
<i>Tamarix</i> spp.	salt cedar
<i>Vinca major</i>	periwinkle
<i>Vinca minor</i>	vinca

## *Plant Sources*

The number of native plant nurseries has grown over the last two decades in response to the increased demand for native plants. Be aware that the status of the nurseries on this list may have changed. The California Native Plant Link Exchange ([www.cnplx.info](http://www.cnplx.info)) is also a helpful resource for locating native plant material.

### **Nursery List**

Albright Seed Company	Carpinteria 805-684-0436 <a href="http://www.albrightseed.com">www.albrightseed.com</a>	Magic Gardens	Berkeley 510-644-2351
Bay Natives	San Francisco 415-722-6037 <a href="http://www.baynatives.com">www.baynatives.com</a>	Mostly Natives Nursery	Tomales 707-878-2009 <a href="http://www.mostlynatives.com">www.mostlynatives.com</a>
Berkeley Horticultural Nursery	Berkeley 510-526-4704 <a href="http://www.berkeleyhort.com">www.berkeleyhort.com</a>	Native Here Nursery	Berkeley 510-549-0211 <a href="http://www.ebcnps.org/nativeherehome.htm">www.ebcnps.org/nativeherehome.htm</a>
California Flora Nursery	Fulton 707-528-8813 <a href="http://www.calfloranursery.com">www.calfloranursery.com</a>	Native Revival Nursery	Aptos 831-684-1811 <a href="http://www.nativerivival.com">www.nativerivival.com</a>
Central Coast Wilds	Santa Cruz 831-459-0655 <a href="http://www.centralcoastwilds.com">www.centralcoastwilds.com</a>	Native Sons Wholesale Nursery	Arroyo Grande 805-481-5996 <a href="http://www.nativeson.com">www.nativeson.com</a>
Cornflower Farms	Elk Grove 916-689-1015 <a href="http://www.cornflowerfarms.com">www.cornflowerfarms.com</a>	North Coast Native Nursery	Petaluma 707-769-1213 <a href="http://www.northcoastnativenursery.com">www.northcoastnativenursery.com</a>
Elkhorn Native Plant Nursery	Moss Landing 831-763-1207 <a href="http://www.elkhornnursery.com">www.elkhornnursery.com</a>	Oaktown Native Plant Nursery	Oakland 510-387-9744 <a href="http://www.oaktownnativenursery.info">www.oaktownnativenursery.info</a>
Joaquin Miller Park Nursery	Oakland 510-501-3672	Pacific Coast Seed	Livermore 925-373-4417
Larner Seeds	Bolinas 415-868-9407 <a href="http://www.larnerseeds.com">www.larnerseeds.com</a>	Seedhunt	Freedom 650-763-1523 <a href="http://www.seedhunt.com">www.seedhunt.com</a>
		Suncrest Wholesale Nurseries	<a href="http://www.suncrestnurseries.com">www.suncrestnurseries.com</a>
		The Watershed Nursery	Berkeley 510-548-4714 <a href="http://www.thewatershednursery.com">www.thewatershednursery.com</a>
		Yerba Buena Native Plant Nursery	Woodside 650-851-1668 <a href="http://www.yerbabuena-nursery.com">www.yerbabuena-nursery.com</a>

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## APPENDIX V

*Low impact design (LID) offers an important opportunity to integrate San Francisco’s native landscape into ongoing urban development, creating ecologically significant patches of habitat that also function as stormwater management facilities.*

### Introduction

Using native plant species in stormwater swales, vegetated roofs, constructed wetlands, and other stormwater best management practices (BMPs) not only creates local habitat and ecosystem value but also offers the potential to save money, energy, and often time for developers and homeowners. Because native species are uniquely adapted to San Francisco’s Mediterranean climate, they generally require less water and maintenance—fertilizer and pest control—than other, more traditional plant species used in landscaping. In addition, native landscapes require fewer if any pesticides, can reduce fire hazard, support native wildlife, and create a distinctive sense of place unique to the San Francisco Bay Area.

The following vegetation palette complements the “LID Native Plant List for San Francisco,” published by the California Native Plant Society (CNPS) and accessible at <http://stormwater.sfwater.org>; the “Shoreline Plants: A Guide for the San Francisco Bay,” published by the San Francisco Bay Conservation and Development Commission; and existing Bay Area native landscaping guidebooks by providing detailed descriptions of plant species appropriate for the San Francisco Bay Area. The list may include several native plant species that are currently extirpated (X), endangered (E), threatened (T), and rare (R). A species is considered native when it has existed in an area prior to the influx of Europeans. According to the California Endangered Species Act (CESA), a species listed as endangered must be a California native that is: “in serious danger of becoming extinct throughout all,





*Sunset Circle parking lot at Lake Merced.*

or a significant portion of its range.” Threatened species are vulnerable to extinction in the near future. According to CEQA Guidelines, a species is considered rare when either it exists in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment is altered or the species is likely to become endangered within the foreseeable future. CNPS manages a Rare Plant Program, in which over 1,400 plant species in California, nearly 25% of the state’s native flora, are designated as at-risk or a potential conservation concern by a network of over 500 botanists. Species included in the CNPS Rare Plant Program are identified in the palette as species of local concern (SLC).

The vegetation palette can be used in conjunction with other regional landscaping reference books, such as: *Plants and Landscapes for Summer-Dry Climates*, published by the East Bay Municipal Utility District, and the *Sunset Western Garden Book*, published by Sunset Magazine. These are excellent resources for researching and selecting more commonly used California native and drought-tolerant plants.

It is important to group plants based on their cultural preferences: the amount of sun and water they need, as well as their soil and maintenance requirements. Additionally, creating a sustainable landscape requires the selection of plants compatible to the site’s existing topographic and soil conditions.

### ***Topography and Soil***

Site conditions influence the layout of a native garden. It is important to consider the degree and direction of any slopes present at the project site. As slopes become steeper, soil drainage improves. Therefore, species that require well-drained soils may be planted on a slope that has “heavy,” clay soils. However, plants that require regular water may not be well-suited to slopes due to an increase in water runoff. Slopes also affect sun exposure, as south-facing slopes receive more solar energy than north-facing slopes. Soil texture influences both watering and fertilizing practices and determines which species of plants will thrive at a particular site. The use of plants that are adapted to the native soils present at the site reduces the need for soil amendments, fertilizers, under-drains, and/or excess water application.

### *Mulch*

Mulching is the application of organic or inorganic materials to the surface of the soil around plants. Mulching maintains soil moisture levels between watering, prevents the growth of weeds, and reduces the risk of soil compaction from foot traffic or heavy rains. Organic mulch, such as wood chips and chopped green waste, contributes nutrients to the soil as it breaks down. Generally, two to four inches of mulch applied around the root zone of each plant is sufficient. It is important to not mulch near the plant crown to prevent fungus and disease, as many native species are extremely sensitive to crown burial. Inorganic mulch, such as gravel, pebbles, and decomposed granite, are well-suited for chaparral, wildflower, and desert plantings that suffer in moist conditions.

### *Water*

California native plants are adapted to San Francisco’s Mediterranean climate and can often tolerate long periods of drought. Enduring the summer, dry months requires a well-established, deep root system. Less frequent, generous applications of water allow oxygen to re-enter the root zone and promotes the growth of a substantial root system. Most native plant species thrive with a low-frequency, long duration watering schedule. Irrigating plants as they establish prevents stress, helping plants to deal with pests and disease. It is important to group plants with similar water needs to ensure plant health and reduce excess runoff.

Natives are best planted in the fall, winter or early spring. Winter planting mimics natural plant establishment cycles, thereby minimizing plant stress. In the summer, dry months, many native plants go dormant—maintaining their size and shape and ceasing to produce new growth. Cut back on watering for well-established plants in the summer months. Generally, a plant is established after two to three years or when the plant has doubled or tripled its size from the time of its planting.

Efficient irrigation practices rely on determining both when to apply water and the proper quantity of water required to ensure plant health. To assist landscape managers in efficient irrigation practice, the University of California Cooperative



*Mulch and plantings at Mint Plaza.*



*Rosa californica* (California Wild Rose).  
Photo: Barbara Eisenstein

Extension and the California Department of Water Resources published *A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California*. The guide includes calculation methods to estimate landscape irrigation demand based on local climate, site conditions, and plant species. The benefits of estimating the proper irrigation water demand of the landscape include: saving water and energy; reducing labor, pesticide, and fertilizer costs; improving landscape health; preventing groundwater contamination; and reducing runoff and drainage loads.

### ***Recycled Water and Salinity***

Recycled water is treated wastewater. Recycled water can be used for landscape irrigation. However, treated wastewater often contains more salts and nutrients than are found in potable water. Plants sensitive to salts may not be well-suited to the application of recycled wastewater. A series of studies by both the University of California at Davis and several Northern California water utility companies found that plants that were sensitive to recycled water applied overhead responded well to recycled water applied through a drip irrigation system. In addition, sprinkler-applied recycled water often had no negative effects if the water was applied infrequently and deeply, allowing for both salts to leach below the root zone and time for the leaves to dry out.

### ***Pest Management***

The use of chemical pesticides and fertilizers in the garden increases the risk of pollution to the Ocean, Bay and other receiving water bodies. Both stormwater and runoff water from irrigating lawns and planting areas can carry chemical pesticides and fertilizers into storm drains. During intense storm events, untreated stormwater and sewage can enter the Bay, threatening the health of Bay habitat and ultimately the entire Bay Area ecosystem. A benefit of planting native California and Mediterranean plants is the reduced need for both chemical pesticides and fertilizers. Native plants attract beneficial insects and wildlife that reduce the need for chemical pest management. In addition, native plants are adapted to the soil and climate of the Bay Area and require less fertilizer than non-native plants. Both proper plant care—watering, pruning, and mulching—and plant siting can support the health of the landscape and strengthen the plant's natural defenses against disease.

## *Wildlife*

Native gardens have the potential to attract birds, butterflies, and beneficial insects. Native plants provide food and shelter for wildlife, and wildlife is critical for propagating plant species through pollination. It is important to avoid using pesticides in order to not harm wildlife.

Native plants have a critical role in the support of local wildlife. In a study on the effects of landscaping with native plants versus non-native plants in a suburban context, researchers of the Department of Entomology and Wildlife Ecology, University of Delaware, found that native landscapes supported significantly greater butterfly and bird populations. Evidence cited in the study showed that 90% of insect herbivores, an important food source of terrestrial birds, required native plant species to reproduce. The results of this study empower property developers and owners to make landscape choices that can promote habitat biodiversity, support local wildlife, and enhance environmental quality while partially mitigating for the loss of habitat associated with development.

## *Additional Landscaping Resources*

Several resources for landscaping best management practices include the *Bay-Friendly Landscape Guidelines* and the *Sustainable Sites Initiative*.

The *Bay-Friendly Landscape Guidelines*, published by StopWaste.Org (a joint project of Alameda County Waste Management Authority and Alameda County Source Reduction and Recycling Board), describes practices for sustainable landscaping that are inspired by natural systems where nothing goes to waste: inputs are limited to available site resources, and species diversity supports landscape stability. The Guidelines offers methods for reducing and reusing waste at the site, maintaining soil health, supporting native flora and fauna diversity, and minimizing environmental impacts in the construction and maintenance of Bay Area landscapes. A scorecard to rate projects, as well as additional resources and references for best management practices are included in the Guidelines.



*Acer macrophyllum (Big Leaf Maple).*

*Photo: Barbara Eisenstein*



*Symphoricarpos albus* (Common Snowberry).  
Photo: Barbara Eisenstein

The Guidelines makes the direct connection between landscaping practices and the hydrologic cycle. Landscaping practices that maintain soil quality through mulching, composting, and reducing or eliminating the use of chemical fertilizers and pesticides can increase the capacity of the soil to infiltrate stormwater runoff, store water and nutrients to support plants, facilitate groundwater recharge, and filter pollutants.

Several requirements to qualify as a “Bay-Friendly Landscape” follow: applying recycled mulch to a minimum depth of three inches for all soil; diverting 50-percent of landscape construction and demolition waste; eliminating species that require shearing; eliminating all invasive species listed by Cal-IPC; specifying that 75-percent of plants shall be California natives, Mediterranean, and/or climate adapted plants requiring little to no summer water; reducing turf area to a size that requires no more than 25-percent of the total site irrigation demand; installing weather-based irrigation controllers; and eliminating sprinklers or spray heads from areas less than eight feet in width.

The *Sustainable Sites Initiative* (SSI), a collaborative project of the American Society of Landscape Architects, Lady Bird Johnson Wildflower Center, and the United States Botanic Garden, provides draft guidelines and performance benchmarks for site planning, design, and operation and maintenance to achieve environmental, social, and economic balance in the integration of natural and built systems. SSI aims to complement LEED by extending project guidelines to the landscape with performance benchmarks that address site ecology and regional conditions, providing a rating of ecosystem benefits.

The draft performance benchmarks and rating system focus on the following five factors: hydrology, soils, vegetation, materials, human health, and well-being. Points will be allocated for increasing pervious surface area, incorporating draught-tolerant, regionally appropriate plant species, and sourcing plant materials from approved nurseries and growers that use sustainable practices. SSI asserts that maintaining and improving soil conditions affect BMP performance. Points are

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*Eschscholzia californica* (California Poppy).  
Photo: Barbara Eisenstein

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Other systems approaches to be incorporated into the rating system are reusing existing materials in the site design and construction, recycling yard waste, and managing micro-climate with vegetation and facilities siting. These approaches aim to reduce energy consumption associated with both disposing of materials to landfills and building heating and cooling costs. SSI encourages the use of the draft “Guidelines and Performance Measures” to pursue LEED innovation credit. The draft can be found at [www.sustainablesites.org](http://www.sustainablesites.org).

### *Vegetation Palette*

The following vegetation palette combines data from several plant databases and major reference books to create a diverse palette specific to the San Francisco Bay Area. The plants can be combined with Mediterranean and non-native plants not listed, depending on their growing conditions and cultural requirements. The criteria for including plants in the Guidelines include the following characteristics:

- Well-suited to specific BMPs
- Attractive to wildlife and beneficial insects
- Locally appropriate

Plants are listed by both scientific and common names and plant type. The palette includes information on cultural preferences: soil, water, sun; native status; bloom time and color; and habitat value. Several lists of plants that follow the table of plants highlight the following: species adapted to LID, species of concern, species adapted to clay soils, species that flower, and species with habitat value.



*Ceanothus spp. (Wild Lilac), Cercis occidentalis (Western Redbud), and Eschscholzia californica (California Poppy).*

*Photo: Barbara Eisenstein*

Legend: \* - native to California; \*\* - included on the CNPS list, native to San Francisco; † - included on the San Francisco Bay Conservation and Development Commission; X - extirpated; E - endangered; T - threatened; R - rare; SLC - species of local concern

Scientific Name	Common Name	Plant Type	BMP							Soil			Water			Sun			Status	Bloom time; Color	Habitat Value					Notes	
			Swale	Buffer Strip	Wetland	Rock filter	Rain garden	Flow-through plants	Above ground plant	Clay	Loam	Sand	Regular	Moderate	Low	Drought tolerant	Full sun	Partial shade			Shade	Habitat value	Insects	Bees	Butterfly		Hummingbird
<i>Abronia umbellata</i> †	Pink Sand Verbena	perennial									•								SLC	white / pink						does well in poor soils	
<i>Acer macrophyllum</i> †	Big Leaf Maple	tree	•		•	•				•	•	•	•	•			•	•	•	Spring; yellow	•				•	no salinity tolerance	
<i>Acer negundo</i> †	Box Elder	tree	•	•	•	•	•	•	•	•										Summer - Fall; yellow-green	•				•	does well in poor soils	
<i>Acer rubrum</i>	Red Maple	tree	•	•	•	•	•	•	•	•	•	•	•				•	•		Spring; light brown / reddish	•				•	limited success in San Francisco	
<i>Acer saccharinum</i>	Silver Maple	tree	•	•	•	•	•	•	•	•	•	•					•	•		Spring; green / yellow	•				•	aggressive roots are hard on sidewalks and sewers	
<i>Achillea millefolium</i> **†	Yarrow	shrub					•				•	•		•			•			Summer - Fall; multi-colored	•	•	•	•		ground cover	
<i>Acorus gramineus</i>	Sweet Flag	grass				•	•					•					•	•	•							rich soil	
<i>Adiantum jordanii</i> *	California Maidenhair Fern	fern	•		•				•	•		•					•	•									
<i>Aesculus californica</i> *†	California Buckeye; California Chestnut	tree		•					•	•	•		•		•	•	•			Summer; white	•				•	•	prefers well-drained soil
<i>Agrostis exarata</i> *	Bentgrass	grass			•	•			•	•	•		•				•				•						
<i>Agrostis hallii</i> †	Hall's Bentgrass	grass											•				•										
<i>Agrostis pallens</i> **†	Bentgrass	grass			•	•	•										•	•								lawn substitute, good in turf-block pavers, requires water to stay green through summer; tolerates poor soils	
<i>Alnus spp.</i> **†	Alder	tree	•	•	•	•	•	•		•	•	•					•	•	•						•		
<i>Amsinckia lunaris</i>	Bentflower Fiddleneck	annual																•		Spring; yellow							
<i>Aquilegia formosa</i> **	Western Columbine	perennial			•	•				•	•	•	•				•	•				•		•	•	•	
<i>Arabis blepharophylla</i> *	Coast Rockcress; Rose Rockcress	perennial															•			rose	•				•	requires good drainage	



Legend: \* - native to California; \*\* - included on the CNPS list, native to San Francisco; † - included on the San Francisco Bay Conservation and Development Commission; X - extirpated; E - endangered; T - threatened; R - rare; SLC - species of local concern

Scientific Name	Common Name	Plant Type	BMP							Soil			Water			Sun			Status	Bloom time; Color	Habitat Value					Notes			
			Swale	Buffer Strip	Wetland	Rock filter	Rain garden	Flow-through plant	Above ground plant	Clay	Loam	Sand	Regular	Moderate	Low	Drought tolerant	Full sun	Partial shade			Shade	Habitat value	Insects	Bees	Butterfly		Hummingbird	Birds	
Arctostaphylos densiflora†	Howard McMinn Manzanita; McMinn's Vine Hill Manzanita	shrub		•			•	•	•						•		•	•			Spring; whitish-pink	•			•	•	•	good screen; prefers acid to neutral soils	
Arctostaphylos hookeri ssp. franciscana†	Franciscan Manzanita	shrub												•	•		•	•		X	Spring	•			•	•	•	prefers acid to neutral soils	
Arctostaphylos hookeri ssp. ravenii†	Presidio Manzanita	shrub		•			•	•	•					•	•		•	•		E		•			•	•	•	prefers acid to neutral soils	
Arctostaphylos tomentosa crustacea*	Lake Merced Brittleleaf Manzanita	shrub												•	•		•	•		SLC		•			•	•	•	prefers acid to neutral soils	
Aristolochia californica**	Pipevine	vine						•	•	•	•						•				Winter - Spring; cream	•				•			
Armeria maritima†	Sea Thrift	perennial		•	•	•				•	•			•			•				Spring - Summer; purple / white	•		•				ground cover	
Artemisia californica**†	Coastal Sagebrush	shrub								•				•	•	•													
Artemisia douglasiana†	Mugwort	perennial		•	•									•		•	•											provide good drainage	
Artemisia pycnocephala*	Beach Wormwood; Coastal Sagewort; Sandhill Sage	shrub								•				•	•	•													
Asarum caudatum	Wild Ginger	perennial				•				•				•		•	•											ground cover	
Asclepias fascicularis	Narrow-leaved Milkweed; Mexican Whorled Milkweed	perennial						•								•					Summer; white	•		•	•	•		most favored monarch butterfly host in California	
Aster radulinus*	Rough Leaved Aster	perennial						•	•	•	•					•				SLC	Summer - Fall; lavender								
Astragalus gambellianus*	Milk Vetch; Dwarf Loco Weed	perennial																		SLC		•			•				
Astragalus nuttallii**	Nuttall's Milk-Vetch; Loco Weed	perennial																		SLC		•			•				
Atriplex californica†	California Saltbush	perennial		•	•									•	•	•				SLC		•				•			
Baccharis pilularis**†	Coyote Bush; Coyote Brush	shrub						•	•	•				•		•					Summer; white	•	•			•		intolerant to shade	

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Baccharis salicifolia	Mule-fat	shrub			•	•				•	•	•			•		•						Spring; yellow	•			•			intolerant to shade
Betula spp.*	Birch	tree	•	•	•	•	•	•				•				•								•			•			not good for lawn or near parked cars
Bouteloua dactyloides	Buffalo Grass	grass	•	•				•	•	•					•	•							Summer; yellow							
Bromus carinatus*†	California Brome	annual	•	•	•		•	•		•	•		•		•									•			•			
Calamagrostis nulkaensis**	Pacific Reedgrass	grass			•				•	•	•	•	•			•	•	•			SLC									
Calystegia purpurata	Morning Glory	vine								•						•	•													requires well-drained soil
Carex comosa	Bristly Sedge; Longhair Sedge	grass	•	•	•	•	•	•															Summer; green	•			•			
Carex densa*	Dense Sedge	grass	•	•	•	•	•	•	•		•										SLC			•			•			
Carex praegracilis†	Clustered Field Sedge	grass	•	•			•	•	•	•	•	•	•	•			•	•					Spring; green	•			•			no salinity tolerance; can be used as lawn substitute
Carex tumulicola*†	Berkeley Sedge; Slender Sedge	grass	•	•			•	•	•								•							•			•			lawn substitute
Carpenteria californica†	Bush Anemone; Tree Anemone	shrub											•	•		•	•													
Carya illinoensis	Pecan	tree	•	•	•	•	•	•	•	•	•					•								•						no salinity tolerance
Carya ovata	Buttonbush; Shagbark Hickory	tree	•	•	•	•	•	•	•	•	•					•	•						Spring; yellow							no salinity tolerance
Casuarina spp.	She-oak	tree	•	•	•	•	•	•		•				•	•	•														good screen
Ceanothus 'Julia Phelps**	Julia Phelps Ceanothus	shrub		•			•	•	•	•				•		•							Spring; blue	•		•	•	•	•	prefers well-drained soils
Cerastium arvense*	Field Chickweed	perennial			•	•															SLC	white								
Cercis occidentalis†	Western Redbud	tree		•			•	•	•					•	•	•	•						Spring; magenta / white	•		•		•		excellent for seldom-watered banks
Chenopodium californicum*	California Goosefoot	perennial									•					•					SLC									

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			Swale	Buffer Strip	Wetland	Rock filter	Rain garden	Flow-through planter	Above ground plant	Clay	Loam	Sand	Regular	Moderate	Low	Drought tolerant	Full sun	Partial shade	Shade			Habitat value	Insects	Bees	Butterfly	Hummingbird		Birds					
<i>Cirsium andrewsii</i> *	Franciscan Thistle	perennial			•															SLC	Spring - Summer	•			•								
<i>Clarkia rubicunda</i> †	Farewell to Spring; Ruby Chalice Clarkia	annual							•			•					•				Summer; pink / purple												
<i>Claytonia perfoliata</i> **	Miner's Lettuce	annual			•	•					•	•					•	•	•		Spring; white												
<i>Clematis lasiantha</i>	Pipestems; Chapparal Clematis	vine															•				Spring												
<i>Clematis ligusticifolia</i>	Virgin's Bower; Western White Clematis	vine			•	•					•	•	•						•		Spring - Summer										erosion control, reclamation, along stream banks		
<i>Cornus stolonifera</i>	Redwig; Red-Osier Dogwood	tree		•					•		•	•	•					•			Summer; white	•							•		can be used for windbreaks; low salinity tolerance; no tolerance to shade		
<i>Corylus cornuta californica</i> **†	California Hazelnut; Western Hazelnut	shrub or tree							•	•	•	•						•	•		Winter; yellow										good for slopes; no salinity tolerance		
<i>Croton californicus</i> *	California Croton	shrub																			SLC												
<i>Cupressus macrocarpa</i> *	Monterey Cypress	tree															•	•		•													
<i>Danthonia californica</i> **†	California Oatgrass	grass			•	•					•	•							•	•													
<i>Delphinium californicum</i> *	California Larkspur	perennial			•	•													•			SLC	white	•					•				
<i>Deschampsia cespitosa</i> **†	Tufted Hairgrass	grass		•	•	•	•				•	•	•	•	•				•	•				•			•						
<i>Dicentra formosa</i>	Bleeding Hearts; Pacific Bleeding Heart	perennial			•	•	•				•	•	•	•					•	•		Spring; purple	•		•	•	•					ground cover	
<i>Diospyros virginiana</i> *	Persimmon	tree	•	•	•	•	•	•	•	•	•	•	•	•					•	•	•		Summer; yellow										fragrant
<i>Disporum hookeri</i> *	Fairy Bells; Hooker's Fairy Bell; Drops of Gold	perennial																				SLC										good for slopes	
<i>Distichlis spicata</i> **†	Salt Grass	grass	•	•	•	•					•	•						•	•			Summer; yellow	•									intolerant to shade	
<i>Dryopteris expansa</i>	Spreading Wood Fern	fern			•	•														•	•												

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<i>Eleocharis macrostachya</i> *	Creeping Spike Rush; Pale Spikerush; Wire Grass	grass			•	•	•	•												SLC								
<i>Elymus glaucus</i> **†	Blue Wild Rye	grass	•	•	•	•			•	•	•			•			•											
<i>Epilobium canum</i> spp. <i>canum</i> *	California Fuchsia; Hummingbird Trumpet	shrub	•	•			•	•						•	•	•	•				Spring; red	•					•	
<i>Equisetum hyemale</i> **	Scourgrush Horsetail; Scouring Rush	perennial	•	•			•	•	•	•	•				•						Spring; white							drought tolerant but thrives in moist soils
<i>Erigeron foliosus</i> var. <i>franciscensis</i> *	San Francisco Leafy Fleabane; Franciscan Erigeron	perennial																			SLC		•			•		
<i>Erigeron glaucus</i> †	Seaside Daisy; Seaside Fleabane	perennial			•	•					•			•	•	•	•						•	•		•		
<i>Eriogonum fasciculatum</i> †	California Buckwheat	shrub		•			•	•	•	•			•	•	•						Fall; pink/white	•	•		•		erosion control; intolerant to shade; prefers well-drained soils	
<i>Eriogonum giganteum</i> **†	St. Catherine's Lace	shrub											•	•	•	•					Summer; white / lavender	•			•	•	prefers well-drained soils	
<i>Eriogonum latifolium</i> **†	Coast Buckwheat	shrub								•				•		•							•	•		•		
<i>Eriogonum parvifolium</i> *	Dune Buckwheat	shrub												•		•							•	•		•		prefers well-drained soils
<i>Erysimum franciscanum</i> **	San Francisco Wallflower	perennial								•						•	•				SLC		•	•				requires good drainage
<i>Eschscholzia californica</i> †	California Poppy	perennial		•	•	•	•		•	•	•			•	•	•					Spring - Summer; yellow / orange	•	•				no salinity tolerance	
<i>Eucalyptus citriodora</i>	Lemon-scented Gum	tree	•	•	•	•	•	•					•	•	•		•				Year-round; white	•				•		
<i>Eucalyptus erythrocorys</i>	Red-cap Gum	tree	•	•	•	•	•	•					•	•	•		•				Year-round; yellow	•				•		

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<i>Euthamia occidentalis</i> *	Western Goldenrod; Western Goldentop; Western Flat Topped Goldenrod	perennial			•	•					•	•	•					•			SLC	Summer; yellow							intolerant to shade
<i>Festuca californica</i> *†	California Fescue	grass					•	•	•	•	•	•	•	•	•			•	•		SLC								
<i>Festuca idahoensis</i> †	Idaho Fescue; Blue Bunchgrass	grass	•	•	•	•	•	•	•	•	•	•	•	•				•	•			Summer; yellow	•			•			intolerant to shade; good slope stabilizer
<i>Festuca rubra</i> **†	Red Fescue; Idaho Fescue	grass	•	•	•	•	•	•	•		•	•						•	•							•			can be used as a lawn substitute; erosion control
<i>Fragaria chiloensis</i> *†	Coastal Strawberry; Beach Strawberry	perennial	•				•	•	•			•	•					•	•			Spring; white							ground cover
<i>Fragaria vesca</i> **	Mountain Strawberry; Woodland Strawberry	perennial	•				•	•				•	•					•	•			Spring; white							ground cover
<i>Frankenia salina</i> †	Yerba Reuma; Alkali Heath; Alkali Seaheath	shrub			•	•															SLC								
<i>Fraxinus latifolia</i> *	Oregon Ash	tree	•	•	•	•	•	•	•	•	•							•	•										
<i>Fremontodendron</i> 'California Glory'*†	Flannel Bush	shrub									•				•			•				Spring; yellow							requires good drainage; no water once established; no salinity tolerance
<i>Garrya elliptica</i> *†	Coast Silktassel; Wavyleaf Silktassel	shrub or tree		•				•						•			•	•	•		SLC	Winter; yellow-green	•		•	•	•		requires good drainage; good screen
<i>Gaultheria shallon</i> †	Salal	shrub	•				•	•	•	•	•							•	•	•		Spring; white	•		•	•			
<i>Gilia capitata</i> ssp. <i>chamissonis</i> *	Blue Coast Gilia; Dune Gilia; Chamisso's Gilia; Bluehead Gilia	annual	•					•						•	•			•			SLC				•	•	•		requires well-drained soils
<i>Gleditsia triacanthos</i>	Honey Locust	tree	•	•	•	•	•	•	•	•		•	•					•				Spring; yellow							intolerant to shade
<i>Gnaphalium californicum</i> *	California Everlasting	biennial																				white	•			•			
<i>Grevillea robusta</i>	Silk Oak	tree							•	•	•			•	•	•	•					Summer; yellow	•		•	•	•	•	intolerant to shade

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<i>Grindelia hirsutula</i> var. <i>maritima</i> †	San Francisco Gumplant; Coastal Gumweed	shrub								•	•	•				•	•	•							SLC									
<i>Helianthus annuus</i>	Common Sunflower	annual								•	•	•						•								Summer - Fall; yellow / red	•		•	•		Fragrant; medicinal; used for fuel		
<i>Heliotropium curassavicum</i> *	Seaside Heliotrope; Salt Heliotrope	annual			•	•				•	•							•	•							SLC	Spring; white	•		•			high salinity tolerance; intolerant to shade	
<i>Heteromeles arbutifolia</i> **†	Toyon	shrub		•				•			•	•						•	•								Summer; white	•		•	•	•	good screen	
<i>Heuchera micrantha</i> *	Crevice Alumroot	perennial							•			•	•							•							SLC	Spring - Summer; white	•			•		grow best in well-drained, humus-rich soil tolerates poor soils
<i>Hordeum brachyantherum</i> **†	Meadow Barley	grass	•	•	•	•				•	•	•				•									Spring; purple	•								
<i>Iris douglasiana</i> **†	Douglas Iris; Pacific Iris	perennial			•	•	•		•	•	•	•		•	•	•	•	•	•							•		•	•	•	requires well-drained soil			
<i>Iris longipetala</i> *	Coast Iris	perennial					•		•	•	•	•		•	•	•	•	•	•							•			•		no salinity tolerance			
<i>Juglans hindsii</i> *	Northern California Walnut	tree			•													•	•							•				•				
<i>Juncus</i> spp.†	Rushes (various)	grass	•		•	•	•		•	•	•	•						•	•															
<i>Juncus xiphiodes</i> *	Iriseaf Rush	grass	•	•	•	•	•	•	•	•	•	•						•	•							SLC								
<i>Koeleria macrantha</i> **†	Prairie Junegrass	grass	•	•	•		•	•	•		•	•						•									Spring - Summer; yellow							
<i>Lasthenia glabrata</i> *	Gold Fields; Yellowray Goldfields	annual			•	•																			Spring									
<i>Lavatera assurgentiflora</i> †	Tree Mallow	shrub						•		•	•	•						•							Spring - Summer; pink / purple	•		•			requires good drainage; intolerant to shade			
<i>Linaria canadensis</i> *	Blue Toadflax	annual								•	•							•	•							SLC	blue							
<i>Liquidambar styraciflua</i>	American Sweet Gum; Redgum	tree	•	•	•	•	•	•	•	•	•	•						•	•								Spring; green							

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Lithophragma heterophyllum*	Hill Star; Hillside Woodland; Woodland Star	perennial																•	•		SLC							good on steep slopes	
Lotus formosissimus*	Harlequin Lotus; Seaside Bird's-foot Trefoil	perennial			•	•																multi-colored	•		•				
Lotus scoparius**	Common Deerweed	shrub		•	•	•	•		•														•		•	•			
Lupinus albifrons†	Silver Bush Lupin	shrub	•	•	•	•	•			•			•					•				Spring; purple	•		•	•			prefers good drainage
Magnolia grandiflora	Southern Magnolia	tree					•		•	•	•		•						•		Spring; white								
Magnolia virginia	Sweet Bay	tree	•	•	•	•	•	•	•	•	•	•	•					•	•		Summer; white								
Melaleuca quinquenervia†	Cajeput Tree	tree	•	•	•	•	•	•	•				•	•	•			•											
Melica californica*†	California Melic	grass	•	•	•	•	•	•	•		•	•							•		Summer; yellow							tolerates poor soil	
Mimulus aurantiacus*†	Sticky Monkeyflower	perennial	•	•			•	•	•	•	•		•				•	•		Spring - Summer; orange	•			•	•				
Mimulus guttatus**	Creek Monkeyflower; Seep-spring Monkeyflower	perennial	•	•	•	•	•	•	•	•	•	•						•				•			•	•			
Miscanthus sinensis	Japanese Silver Grass	grass	•	•	•	•	•	•	•	•	•	•					•				Summer; yellow								
Monardella villosa Benth. ssp. franciscana (Elmer) Jokerst*	San Francisco Coyote Mint; Coyote Mint	shrub												•				•		Spring - Summer	•				•		requires well-drained soils		
Muhlenbergia rigens†	Deer Grass; Mule Grass	grass	•	•			•	•	•	•	•	•					•				Summer; yellow	•						requires good drainage; streambank stabilization	
Myrica californica*†	Pacific Wax Myrtle	tree		•			•	•	•	•	•		•				•	•		yellow	•						good informal hedge, wind break		
Nassella lepida†	Foothill Needlegrass	grass	•	•	•	•	•	•	•	•		•					•				Spring; yellow							tolerates poor soils	
Nassella pulchra*†	Purple Needlegrass	grass	•	•			•	•	•	•	•		•				•			R	Spring; yellow								

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<i>Nemophila menziesii</i> *	Baby Blue Eyes	annual					•						•					•	•													ground cover; bulb cover	
<i>Nyssa sylvatica</i>	Black Tupelo; Blackgum	tree	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•								•					
<i>Oxalis oregana</i>	Redwood Sorrel	perennial					•				•	•								•												ground cover	
<i>Oxydendrum arboreum</i>	Lily of the Valley Tree; Sourwood; Sorrel Tree	tree	•	•	•	•	•	•	•		•	•	•					•	•	•												not good in lawns	
<i>Pellaea andromedaefolia</i> *	Coffee Fern; Coffee Cliffbrake	fern									•			•			•						SLC									requires good drainage	
<i>Penstemon</i> spp. †	Penstemon; Beard Tongue	perennial									•	•		•	•			•	•								•	•	•	•		erosion control; requires good drainage	
<i>Phacelia californica</i> *	Scorpionflower; California Phacelia	perennial										•			•			•	•								•	•					
<i>Picea sitchensis</i>	Sitka Spruce	tree	•	•	•	•	•	•	•	•	•	•	•	•				•	•														
<i>Platanus occidentalis</i>	American Sycamore	tree	•	•	•	•	•	•	•	•	•	•	•	•	•			•									•		•				
<i>Platanus racemosa</i> *	California Sycamore	tree	•	•	•	•	•	•	•	•	•	•	•	•	•			•									•		•				
<i>Platanus x acerifolia</i> †	London Plane Tree	tree	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•													good street or lawn tree	
<i>Poa unilateralis</i> Vasey*	Ocean Bluff Blue Grass; San Francisco Bluegrass	grass			•	•																											
<i>Polypodium scolieri</i> *	Leather Leaf Fern; Leathery Polypody	fern																		•	•												
<i>Polystichum munitum</i> †	Western Sword Fern	fern	•				•				•	•		•					•	•												does best in rich, well-drained soils intolerant to shade	
<i>Populus trichocarpa</i> *	California Poplar; Black Cottonwood; Western Balsam Poplar	tree			•						•	•	•					•									•		•				
<i>Potentilla rivalis</i> *	Brook Cinquefoil	annual			•	•													•	•												SLC	
<i>Prunus emarginata</i> **	Bitter Cherry	shrub or tree										•		•				•									•	•	•				



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<i>Prunus ilicifolia</i> †	Hollyleaf Cherry; Islais Cherry	shrub or tree								•	•	•	•	•	•							•						good screen; requires good drainage; avoid planting near sidewalk; fruit stains									
<i>Prunus virginiana</i> var. <i>demissa</i> *	Western Chokeberry	shrub																										SLC	Spring; white	•		•	•				good screen; erosion control
<i>Quercus agrifolia</i> *†	Coast Live Oak	tree		•			•		•	•	•							•	•											•					•	erosion control; good screen	
<i>Quercus chrysolepis</i> **	Canyon Live Oak	tree							•	•	•							•	•	•								SLC		•					•	erosion control	
<i>Quercus macrocarpa</i>	Bur Oak	tree		•	•	•	•	•	•	•	•		•					•											Spring; yellow	•							
<i>Quercus palustris</i>	Pin Oak	tree	•	•	•	•	•	•	•	•								•											Spring; yellow							intolerant to shade	
<i>Rhamnus californica</i> *†	Coffeeberry; California Buckthorn	shrub	•				•	•	•		•	•			•			•	•											•		•		•	good screen		
<i>Rhamnus crocea</i> **	Redberry Buckthorn	shrub													•			•	•									SLC	Spring; white	•		•		•	requires good drainage		
<i>Ribes divaricatum</i> *	Spreading Gooseberry	shrub			•	•													•	•										•		•	•	•			
<i>Ribes menziessi</i> *	Canyon Gooseberry	shrub																	•	•										•		•	•	•			
<i>Ribes sanguineum</i> **	Red-Flowering Currant	shrub								•	•		•	•				•	•	•									Spring; red	•		•	•	•	•		
<i>Rosa californica</i> *†	California Wild Rose	shrub		•	•	•	•	•		•	•	•						•	•	•									Summer; pink	•		•			excellent for bank stabilization		
<i>Rosa gymnocarpa</i> **	Wood Rose	shrub								•		•						•										SLC	Spring; purple	•		•	•				
<i>Rubus ursinus</i> *†	California Blackberry	shrub		•	•	•	•	•	•	•	•																		Spring; white	•		•		•			
<i>Salicornia virginica</i> *	Pickleweed; Virginia Glasswort	perennial			•					•	•		•					•											Spring; green	•					high salinity tolerance; no shade tolerance		
<i>Salix lasiolepis</i> *†	Arroyo Willow	tree		•	•	•	•		•	•	•	•						•	•											•		•		•			
<i>Salvia clevelandii</i> *	Cleveland Sage; Fragrant Sage	shrub							•	•	•				•	•	•												Summer; purple	•		•	•	•			
<i>Salvia mellifera</i> †	Black Sage	shrub		•						•	•	•			•														Spring - Summer; lavender	•		•	•	•	prefers good drainage		
<i>Salvia spathacea</i> **	Hummingbird Sage; Pitcher Sage	perennial		•			•	•	•		•							•	•									SLC	Spring; rose / lilac	•		•	•	•			

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<i>Sambucus nigra cerulea</i> *	Blue Elderberry	shrub or tree	•				•	•	•	•				•		•	•				•			•	•	•			
<i>Satureja douglasii</i> †	Yerba Buena	perennial												•		•	•											prefers coastal influence; moist, rich soil intolerant to shade	
<i>Scirpus californicus</i> *	Bulrush	perennial			•	•				•	•	•				•					•								
<i>Scirpus maritimus</i> *		grass		•		•	•	•	•	•	•					•	•						SLC						
<i>Scrophularia californica</i> **†	Bee Plant; California Figwort	perennial	•		•	•										•	•												
<i>Sedum spathulifolium</i> *	Broadleaf Stonecrop	succulent perennial					•	•							•	•	•				•			•					
<i>Sequoia sempervirens</i> *	Coast Redwood	tree								•	•					•	•	•										good screen	
<i>Sidalcea malviflora</i> **†	Checkerbloom; Checker Mallow	perennial							•	•				•		•					•				•				
<i>Sisyrinchium bellum</i> **†	Blue-eyed Grass	perennial	•	•	•	•	•	•	•	•			•	•		•	•												
<i>Sisyrinchium californicum</i> **	Yellow-eyed Grass	perennial	•		•	•			•	•			•	•		•	•						SLC					prefers moist conditions	
<i>Solanum umbelliferum</i> *	Nightshade	shrub	•																		•		SLC						
<i>Solidago confinis</i> †		perennial		•			•	•	•	•			•	•	•	•	•						SLC		•	•		not-too-rich soil	
<i>Spartina foliosa</i> †	Pacific Cordgrass; California Cordgrass	grass	•		•	•							•	•		•							SLC						
<i>Suaeda californica</i> †	California Seablite	shrub			•	•																							
<i>Symphoricarpos albus</i> **	Common Snowberry	shrub		•	•	•	•	•	•	•	•		•	•			•								•	•	•	•	prefers heavy, clay soils
<i>Tanacetum camphoratum</i> *	Dune Tansy; Camphor Tansy	perennial	•										•	•		•							SLC					yellow	
<i>Taxodium distichum</i>	Bald Cypress	tree			•	•			•	•	•	•	•	•		•									•			Spring; purple	
<i>Thuja occidentalis</i>	Arborvitae	tree	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•							•			Spring	
<i>Tradescantia virginiana</i> *	Virginia Spiderwort	perennial	•	•			•	•	•	•						•	•											Spring; mult-color	

Legend: \* - native to California; \*\* - included on the CNPS list, native to San Francisco; † - included on the San Francisco Bay Conservation and Development Commission; X - extirpated; E - endangered; T - threatened; R - rare; SLC - species of local concern

Scientific Name	Common Name	Plant Type	BMP							Soil			Water				Sun	Status	Bloom time; Color	Habitat Value					Notes		
			Swale	Buffer Strip	Wetland	Rock filter	Rain garden	Flow-through planter	Above ground planter	Clay	Loam	Sand	Regular	Moderate	Low	Drought tolerant				Full sun	Partial shade	Shade	Habitat value	Insects		Bees	Butterfly
Typha latifolia*	Common Cattail	perennial	•	•	•	•	•	•	•	•	•						•		Spring; brown	•							
Umbellularia californica†	California Bay Laurel	tree	•		•	•			•	•	•	•	•		•	•	•	SLC	Spring; yellow								
Vaccinium ovatum†	California Huckleberry; Evergreen Huckleberry	shrub					•	•	•	•	•	•		•	•	•	•	SLC	Spring; whitish-pink	•		•	•		•		
Vitis californica 'Roger's Red'†	California Wild Grape	vine			•	•			•	•	•			•	•	•											
Vulpia myuros	Zorro Annual Fescue	grass						•	•	•				•	•				Winter; yellow	•							acid soil; no shade tolerance
Woodwardia fimbriata*	Giant Chain Fern	fern	•	•	•						•					•	•	SLC									



*Achillea millefolium* (Yarrow).  
Photo: Barbara Eisenstein

# Species Adapted to LID

## Trees

*Acer macrophyllum*, Big Leaf Maple  
*Acer negundo*, Box Elder  
*Acer rubrum*, Red Maple  
*Acer saccharinum*, Silver Maple  
*Aesculus californica*, California Buckeye  
*Alnus spp.*, Alder  
*Betula spp.*, Birch  
*Carya ovata*, Buttonbush  
*Carya illinoensis*, Pecan  
*Casuarina spp.*, She-oak  
*Cercis occidentalis*, Western Redbud  
*Cornus stolonifera*, Redwig  
*Diospyros virginiana*, Persimmon  
*Eucalyptus citriodora*, Lemon-scented Gum  
*Eucalyptus erythrocorys*, Red-cap Gum  
*Fraxinus latifolia*, Oregon Ash  
*Garrya elliptica*, Coast Silktassel  
*Gleditsia triacanthos*, Honey Locust  
*Juglans hindsii*, Northern California Walnut  
*Liquidambar styraciflua*, American Sweet Gum  
*Magnolia grandiflora*, Southern Magnolia  
*Magnolia virginiana*, Sweet Bay  
*Melaleuca quinquenervia*, Cajeput Tree  
*Myrica californica*, Pacific Wax Myrtle  
*Nyssa sylvatica*, Black Tupelo  
*Oxydendrum arboreum*, Lily of the Valley Tree  
*Picea sitchensis*, Sitka Spruce  
*Platanus occidentalis*, American Sycamore  
*Platanus racemosa*, California Sycamore  
*Platanus x acerifolia*, London Plane Tree  
*Populus trichocarpa*, Black Cottonwood  
*Quercus agrifolia*, Coast Live Oak  
*Quercus macrocarpa*, Bur Oak  
*Quercus palustris*, Pin Oak  
*Salix lasiolepis*, Arroyo Willow  
*Taxodium distichum*, Bald Cypress  
*Thuja occidentalis*, Arborvitae  
*Umbellularia californica*, California Bay Laurel

## Shrubs

*Achillea millefolium*, Yarrow  
*Arctostaphylos densiflora*, Howard McMinn Manzanita  
*Arctostaphylos hookeri ssp. ravenii*, Presidio Manzanita  
*Baccharis salicifolia*, Mule-fat  
*Ceanothus 'Julia Phelps'*, Julia Phelps Ceanothus  
*Epilobium canum spp. canum*, California Fuchsia  
*Eriogonum fasciculatum*, California Buckwheat  
*Frankenia salina*, Alkali Heath  
*Gaultheria shallon*, Salal  
*Heteromeles arbutifolia*, Toyon  
*Lavatera assurgentiflora*, Tree Mallow  
*Lotus scoparius*, Common Deerweed  
*Lupinus albifrons*, Silver Bush Lupin  
*Rhamnus californica*, Coffeeberry  
*Ribes divaricatum*, Spreading Gooseberry  
*Rosa californica*, California Wild Rose  
*Rubus ursinus*, California Blackberry  
*Salvia mellifera*, Black Sage  
*Sambucus nigra cerulea*, Blue Elderberry  
*Suaeda californica*, California Seablite  
*Symphoricarpos albus*, Common Snowberry  
*Vaccinium ovatum*, California Huckleberry

## Perennials

*Aquilegia formosa*, Western Columbine  
*Armeria maritima*, Sea Thrift  
*Artemisia douglasiana*, Mugwort  
*Asarum caudatum*, Wild Ginger  
*Atriplex californica*, California Saltbush  
*Cerastium arvense*, Field Chickweed  
*Cirsium andrewsii*, Franciscan Thistle  
*Delphinium californicum*, California Larkspur  
*Dicentra formosa*, Bleeding Hearts  
*Equisetum hyemale*, Scourgrush Horsetail  
*Erigeron glaucus*, Seaside Daisy

### *Perennials (cont.)*

*Eschscholzia californica*, California Poppy  
*Euthamia occidentalis*, Western Goldenrod  
*Fragaria chiloensis*, Coastal Strawberry  
*Fragaria vesca*, Mountain Strawberry  
*Heuchera micrantha*, Crevice Alumroot  
*Iris douglasiana*, Douglas Iris  
*Iris longipetala*, Coast Iris  
*Lessingia filaginifolia*, Woolly Aster  
*Lotus formosissimus*, Harlequin Lotus  
*Mimulus aurantiacus*, Sticky Monkeyflower  
*Mimulus guttatus*, Creek Monkeyflower  
*Oxalis oregana*, Redwood Sorrel  
*Salicornia virginica*, Pickleweed  
*Salvia spathacea*, Hummingbird Sage  
*Scirpus californicus*, Bulrush  
*Scrophularia californica*, California Figwort  
*Sisyrinchium bellum*, Blue-eyed Grass  
*Sisyrinchium californicum*, Yellow-eyed Grass  
*Solidago confinis*  
*Tradescantia virginiana*, Virginia Spiderwort  
*Typha latifolia*, Common Cattail

### *Biennials, Annuals and Succulents*

*Bromus carinatus*, California Brome  
*Claytonia perfoliata*, Miner's Lettuce  
*Gilia capitata* ssp. *chamissonis*, Bluehead Gilia  
*Heliotropium curassavicum*, Seaside Heliotrope  
*Lasthenia glabrata*, Gold Fields  
*Nemophila menziesii*, Baby Blue Eyes  
*Potentilla rivalis*, Brook Cinquefoil  
*Sanicula maritima*, Adobe Sanicle  
*Sedum spathulifolium*, Broadleaf Stonecrop  
*Vulpia myuros*, Zorro Annual Fescue

### *Ferns*

*Adiantum jordanii*, California Maidenhair Fern  
*Dryopteris expansa*, Spreading Wood Fern  
*Polystichum munitum*, Western Sword Fern  
*Woodwardia fimbriata*, Giant Chain Fern

### *Grasses*

*Acorus gramineus*, Sweet Flag  
*Agrostis exarata*, Bentgrass  
*Agrostis pallens*, Bentgrass  
*Bouteloua dactyloides*, Buffalo Grass  
*Calamagrostis nutkaensis*, Pacific Reedgrass  
*Carex comosa*, Bristly Sedge  
*Carex densa*, Dense Sedge  
*Carex praegracilis*, Clustered Field Sedge  
*Carex tumulicola*, Berkeley Sedge  
*Danthonia californica*, California Oatgrass  
*Deschampsia cespitosa*, Tufted Hairgrass  
*Distichlis spicata*, Salt Grass  
*Eleocharis macrostachya*, Creeping Spike Rush  
*Elymus glaucus*, Blue Wild Rye  
*Festuca californica*, California Fescue  
*Festuca idahoensis*, Idaho Fescue  
*Festuca rubra*, Red Fescue  
*Hordeum brachyantherum*, Meadow Barley  
*Juncus* spp., Rushes (various)  
*Juncus xiphiodes*, Irisleaf Rush  
*Koeleria macrantha*, Prairie Junegrass  
*Melica californica*, California Melic  
*Miscanthus sinensis*, Japanese Silver Grass  
*Muhlenbergia rigens*, Deer Grass  
*Nassella lepida*, Neddlegrass  
*Nassella pulchra*, Purple Needlegrass  
*Poa unilateralis* Vasey, San Francisco Bluegrass  
*Scirpus maritimus*  
*Spartina foliosa*, California Cordgrass

*Vines*

*Clematis lasiantha*, Pipestems  
*Clematis ligusticifolia*, Virgin's Bower  
*Vitis californica* 'Roger's Red', California Wild  
Grape



*Fragaria chiloensis* (Coastal Strawberry).  
Photo: Barbara Eisenstein



Top: *Iris douglasiana* (Pacific Coast Iris) and *Sisyrinchium bellum* (Blue-eyed Grass), bottom: *Platanus racemosa* (California Sycamore). Photo: Barbara Eisenstein

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# Species of Concern

## Trees

*Acer macrophyllum*, Big Leaf Maple  
*Aesculus californica*, California Buckeye  
*Corylus cornuta californica*, California Hazelnut  
*Garrya elliptica*, Coast Silktassel  
*Prunus emarginata*, Bitter Cherry  
*Quercus chrysolepis*, Canyon Live Oak  
*Umbellularia californica*, California Bay Laurel

## Shrubs

*Arctostaphylos hookeri* ssp. *franciscana*, Franciscan Manzanita  
*Arctostaphylos hookeri* ssp. *ravenii*, Presidio Manzanita  
*Arctostaphylos tomentosa crustacea*, Lake Merced Brittleleaf Manzanita  
*Croton californicus*, California Croton  
*Frankenia salina*, Yerba Reuma  
*Grindelia hirsutula* var. *maritima*, San Francisco Gumplant  
*Prunus ilicifolia ilicifolia*, Islais Cherry  
*Prunus virginiana* var. *demissa*, Western Chokeberry  
*Rhamnus crocea*, Redberry Buckthorn  
*Ribes divaricatum*, Spreading Gooseberry  
*Ribes menziessi*, Canyon Gooseberry  
*Rosa gymnocarpa*, Wood Rose  
*Salvia mellifera*, Black Sage  
*Solanum umbelliferum*, Nightshade  
*Vaccinium ovatum*, California Huckleberry

## Perennials

*Abronia umbellata*, Pink Sand Verbena  
*Aquilegia formosa*, Western Columbine  
*Arabis blepharophylla*, Coast Rockcress

*Aster radulinus*, Rough Leaved Aster  
*Astragalus gambellianus*, Milk Vetch  
*Astragalus nuttallii*, Nuttall's Milk-Vetch  
*Atriplex californica*, California Saltbush  
*Cerastium arvense*, Field Chickweed  
*Chenopodium californicum*, California Goosefoot  
*Cirsium andrewsii*, Franciscan Thistle  
*Delphinium californicum*, California Larkspur  
*Disporum hookeri*, Fairy Bells  
*Erigeron foliosus* var. *franciscensis*, San Francisco Leafy Fleabane  
*Erysimum franciscanum*, San Francisco Wallflower  
*Euthamia occidentalis*, Western Goldenrod  
*Heuchera micrantha*, Crevice Alumroot  
*Lithophragma heterophyllum*, Woodland Star  
*Sisyrinchium californicum*, Yellow-eyed Grass  
*Solidago confinis*  
*Tanacetum camphoratum*, Dune Tansy

## Biennials and Annuals

*Amsinckia menziesii*, Menzies' Fiddleneck  
*Castilleja exserta* ssp. *latifolia*, Purple Owl's Clover  
*Clarkia davyi*, Davy's Clarkia  
*Gilia capitata* ssp. *chamissonis*, Blue Coast Gilia  
*Heliotropium curassavicum*, Seaside Heliotrope  
*Layia carnosa*, Beach Layia  
*Linanthus rosaceus*, Rose Linanthus  
*Linaria canadensis*, Blue Toadflax  
*Potentilla rivalis*, Brook Cinquefoil

## Ferns

*Adiantum jordanii*, California Maidenhair Fern  
*Pellaea andromedaefolia*, Coffee Fern



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*Ferns (cont.)*

*Woodwardia fimbriata*, Giant Chain Fern

*Grasses*

*Calamagrostis nutkaensis*, Pacific Reedgrass

*Carex densa*, Dense Sedge

*Eleocharis macrostachya*, Pale Spikerush

*Festuca californica*, California Fescue

*Juncus xiphioides*, Irisleaf Rush

*Nassella pulchra*, Purple Needle Grass

*Scirpus maritimus*

*Spartina foliosa*, California Cordgrass



*Garrya elliptica* (Coast Silktassel).

Photo: Barbara Eisenstein

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# Species Adapted to Clay Soils

## Trees

*Acer macrophyllum*, Big Leaf Maple  
*Acer negundo*, Box Elder  
*Acer rubrum*, Red Maple  
*Acer saccharinum*, Silver Maple  
*Aesculus californica*, California Buckeye  
*Cercis occidentalis*, Western Redbud  
*Corylus cornuta californica*, California Hazelnut  
*Cornus stolonifera*, Redwig  
*Diospyros virginiana*, Persimmon  
*Fraxinus latifolia*, Oregon Ash  
*Grevillea robusta*, Silk Oak  
*Liquidambar styraciflua*, American Sweet Gum  
*Magnolia grandiflora*, Southern Magnolia  
*Magnolia virginiana*, Sweet Bay  
*Myrica californica*, Pacific Wax Myrtle  
*Picea sitchensis*, Sitka Spruce  
*Platanus occidentalis*, American Sycamore  
*Platanus x acerifolia*, London Plane Tree  
*Populus trichocarpa*, Black Cottonwood  
*Quercus agrifolia*, Coast Live Oak  
*Quercus chrysolepis*, Canyon Live Oak  
*Quercus macrocarpa*, Bur Oak  
*Quercus palustris*, Pin Oak  
*Salix lasiolepis*, Arroyo Willow  
*Taxodium distichum*, Bald Cypress  
*Thuja occidentalis*, Arborvitae  
*Umbellularia californica*, California Bay Laurel

## Shrubs

*Baccharis pilularis*, Coyote Bush  
*Baccharis salicifolia*, Mule-fat  
*Ceanothus 'Julia Phelps'*, Julia Phelps Ceanothus  
*Eriogonum fasciculatum*, California Buckwheat  
*Gaultheria shallon*, Salal

*Grindelia hirsutula var. maritima*, San Francisco Gumplant  
*Prunus ilicifolia*, Islais Cherry  
*Rosa californica*, California Wild Rose  
*Rubus ursinus*, California Blackberry  
*Salvia clevelandii*, Cleveland Sage  
*Salvia mellifera*, Black Sage  
*Symphoricarpos albus*, Common Snowberry

## Perennials

*Asclepias fascicularis*, Narrow-leaved Milkweed  
*Aster radulinus*, Rough Leaved Aster  
*Dicentra formosa*, Pacific Bleeding Heart  
*Equisetum hyemale*, Scourgrush Horsetail  
*Eschscholzia californica*, California Poppy  
*Euthamia occidentalis*, Western Goldenrod  
*Heuchera micrantha*, Crevice Alumroot  
*Iris douglasiana*, Douglas Iris  
*Iris longipetala*, Coast Iris  
*Mimulus aurantiacus*, Sticky Monkeyflower  
*Mimulus guttatus*, Creek Monkeyflower  
*Salvia spathacea*, Hummingbird Sage  
*Scirpus californicus*, Bulrush  
*Sidalcea malviflora*, Checkerbloom  
*Sisyrinchium bellum*, Blue-eyed Grass  
*Sisyrinchium californicum*, Yellow-eyed Grass  
*Solidago confinis*  
*Tradescantia virginiana*, Virginia Spiderwort  
*Typha latifolia*, Common Cattail

## Annuals

*Bromus carinatus*, California Brome  
*Clarkia rubicunda*, Farewell to Spring

## *Annuals*

*Helianthus annuus*, Common Sunflower  
*Heliotropium curassavicum*, Seaside Heliotrope  
*Vulpia myuros*, Zorro Annual Fescue

## *Ferns*

*Adiantum jordanii*, California Maidenhair Fern  
*Polystichum munitum*, Western Sword Fern

## *Grasses*

*Agrostis exarata*, Bentgrass  
*Bouteloua dactyloides*, Buffalo Grass  
*Calamagrostis nutkaensis*, Pacific Reedgrass  
*Carex densa*, Dense Sedge  
*Carex praegracilis*, Clustered Field Sedge  
*Carex tumulicola*, Berkeley Sedge  
*Danthonia californica*, California Oatgrass  
*Deschampsia cespitosa*, Tufted Hairgrass  
*Distichlis spicata*, Salt Grass  
*Elymus glaucus*, Blue Wild Rye  
*Elymus trachycaulus*, Slender Wheatgrass  
*Festuca californica*, California Fescue  
*Festuca idahoensis*, Blue Bunchgrass  
*Hordeum brachyantherum*, Meadow Barley  
*Juncus spp.*, Rushes (various)  
*Juncus xiphioides*, Irisleaf Rush  
*Miscanthus sinensis*, Japanese Silver Grass  
*Muhlenbergia rigens*, Deer Grass  
*Nassella lepida*, Foothill Needlegrass  
*Nassella pulchra*, Purple Needlegrass  
*Scirpus maritimus*

## *Vines*

*Aristolochia californica*, Pipevine  
*Clematis ligusticifolia*, Virgin's Bower  
*Vitis californica* "Roger's Red", California Wild Grape



*Cercis occidentalis* (Western Redbud).  
Photo: Barbara Eisenstein

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# Species that Flower

## Trees

*Acer macrophyllum*, Big Leaf Maple  
*Acer negundo*, Box Elder  
*Acer rubrum*, Red Maple  
*Acer saccharinum*, Silver Maple  
*Aesculus californica*, California Buckeye  
*Carya ovata*, Buttonbush  
*Cercis occidentalis*, Western Redbud  
*Cornus stolonifera*, Redwig  
*Corylus cornuta californica*, California Hazelnut  
*Diospyros virginiana*, Persimmon  
*Eucalyptus citriodora*, Lemon-scented Gum  
*Eucalyptus erythrocorys*, Red-cap Gum  
*Garrya elliptica*, Coast Silktassel  
*Grevillea robusta*, Silk Oak  
*Liquidambar styraciflua*, American Sweet Gum  
*Magnolia grandiflora*, Southern Magnolia  
*Magnolia virginiana*, Sweet Bay  
*Myrica californica*, Pacific Wax Myrtle  
*Nyssa sylvatica*, Black Tupelo  
*Picea sitchensis*, Sitka Spruce  
*Platanus occidentalis*, American Sycamore  
*Platanus x acerifolia*, London Plane Tree  
*Populus trichocarpa*, California Poplar  
*Prunus emarginata*, Bitter Cherry  
*Quercus palustris*, Pin Oak  
*Sequoia sempervirens*, Coast Redwood  
*Taxodium distichum*, Bald Cypress  
*Thuja occidentalis*, Arborvitae  
*Umbellularia californica*, California Bay Laurel  
*Gleditsia triacanthos*, Honey Locust  
*Oxydendrum arboreum*, Lily of the Valley Tree  
*Quercus macrocarpa*, Bur Oak

## Shrubs

*Achillea millefolium*, Yarrow  
*Arctostaphylos densiflora*, Howard McMinn Manzanita  
*Arctostaphylos hookeri ssp. franciscana*, Franciscan Manzanita  
*Baccharis pilularis*, Coyote Bush  
*Baccharis salicifolia*, Mule-fat  
*Ceanothus 'Julia Phelps'*, Julia Phelps Ceanothus  
*Epilobium canum spp. canum*, California Fuchsia  
*Eriogonum fasciculatum*, California Buckwheat  
*Eriogonum giganteum*, St. Catherine's Lace  
*Fremontodendron 'California Glory'*, Flannel Bush  
*Gaultheria shallon*, Salal  
*Heteromeles arbutifolia*, Toyon  
*Lavatera assurgentiflora*, Tree Mallow  
*Lupinus albifrons*, Silver Bush Lupin  
*Monardella villosa Benth. ssp. franciscana (Elmer) Jokerst*, San Francisco Coyote Mint  
*Prunus virginiana var. demissa*, Western Chokeberry  
*Rhamnus crocea*, Redberry Buckthorn  
*Ribes sanguineum*, Red-Flowering Currant  
*Rosa californica*, California Wild Rose  
*Rosa gymnocarpa*, Wood Rose  
*Rubus ursinus*, California Blackberry  
*Salvia clevelandii*, Cleveland Sage  
*Salvia mellifera*, Black Sage  
*Solanum umbelliferum*, Nightshade  
*Symphoricarpos albus*, Common Snowberry  
*Vaccinium ovatum*, California Huckleberry

## *Perennials*

*Abronia umbellata*, Pink Sand Verbena  
*Arabis blepharophylla*, Coast Rockcress  
*Armeria maritima*, Sea Thrift  
*Asclepias fascicularis*, Narrow-leaved Milkweed  
*Aster radulinus*, Rough Leaved Aster  
*Astragalus gambellianus*, Milk Vetch  
*Astragalus nuttallii*, Nuttall's Milk-Vetch  
*Cerastium arvense*, Field Chickweed  
*Cirsium adnrewsii*, Franciscan Thistle  
*Delphinium californicum*, California Larkspur  
*Decentra formosa*, Pacific Bleeding Heart  
*Equisetum heymale*, Scouring Rush Horsetail  
*Eschscholzia californica*, California Poppy  
*Euthamia occidentalis*, Western Goldenrod  
*Fragaria chiloensis*, Coastal Strawberry  
*Fragaria vesca*, Mountain Strawberry  
*Heuchera micrantha*, Crevice Alumroot  
*Lorus formosissimus*, Seaside Bird's-foot Trefoil  
*Mimulus aurantiacus*, Sticky Monkeyflower  
*Oxalis oregana*, Redwood Sorrel  
*Penstemon spp.*, Penstemon  
*Phacelia californica*, California Phacelia  
*Salicornia virginica*, Pickleweed  
*Salvia spathacea*, Hummingbird Sage  
*Scirpus californicus*, Bulrush  
*Sidalcea malviflora*, Checkerbloom  
*Sisyrinchium bellum*, Blue-eyed Grass  
*Sisyrinchium californicum*, Yellow-eyed Grass  
*Solidago confinis*  
*Tanacetum camphoratum*, Dune Tansy  
*Tradescantia virginiana*, Virginia Spiderwort  
*Typha latifolia*, Common Cattail

## *Biennials, Annuals and Succulents*

*Amsinckia lunaris*, Bentflower Fiddleneck  
*Astragalus tener var. tener*, Alkali Milk-Vetch  
*Clarkia dabyi*, Davy's Clarkia  
*Clarkia rubicunda*, Farewell to Spring  
*Claytonia perfoliata*, Miner's Lettuce  
*Gnaphalium californicum*, California Everlasting  
*Helianthus annuus*, Common Sunflower  
*Heliotropium curassavicum*, Seaside Heliotrope  
*Lasthenia glabrata*, Gold Fields  
*Layia platyglossa*, Coastal Tidytips  
*Linaria canadensis*, Blue Toadflax  
*Nemophila menziesii*, Baby Blue Eyes  
*Sedum spathulifolium*, Broadleaf Stonecup  
*Vulpia myuros*, Zorro Annual Fescue

## *Grasses*

*Bouteloua dactyloides*, Buffalo Grass  
*Carex comosa*, Bristly Sedge  
*Carex praeegracilis*, Clustered Field Sedge  
*Distichlis spicata*, Salt Grass  
*Festuca idahoensis*, Blue Bunchgrass  
*Hordeum brachyantherum*, Meadow Barley  
*Koeleria macrantha*, Prairie Junegrass  
*Melica californica*, California Melic  
*Miscanthus sinensis*, Japanese Silver Grass  
*Muhlenbergia rigens*, Mule Grass  
*Nasella lepida*, Needlegrass  
*Nasella pulchra*, Purple Needlegrass

## *Vines*

*Aristoclochia californica*, Pipevine  
*Clematis lasiantha*, Pipestems  
*Clematis ligusticifolia*, Virgin's Bower

# Species with Habitat Value

## Trees

*Acer macrophyllum*, Big Leaf Maple  
*Acer negundo*, Box Elder  
*Acer rubrum*, Red Maple  
*Acer saccharinum*, Silver Maple  
*Aesculus californica*, California Buckeye  
*Alnus spp.*, Alder  
*Betula spp.*, Birch  
*Carya illinoensis*, Pecan  
*Cercis occidentalis*, Western Redbud  
*Cornus stolonifera*, Redwig  
*Diospyros virginiana*, Persimmon  
*Eucalyptus citriodora*, Lemon-scented Gum  
*Eucalyptus erythrocorys*, Red-cap Gum  
*Garrya elliptica*, Coast Silktassel  
*Grevillea robusta*, Silk Oak  
*Juglans hindsii*, Northern California Walnut  
*Myrica californica*, Pacific Wax Myrtle  
*Nyssa sylvatica*, Black Tupelo  
*Platanus occidentalis*, American Sycamore  
*Platanus racemosa*, California Sycamore  
*Populus trichocarpa*, California Poplar  
*Prunus emarginata*, Bitter Cherry  
*Quercus agrifolia*, Coast Live Oak  
*Quercus chrysolepis*, Canyon Live Oak  
*Quercus macrocarpa*, Bur Oak  
*Salix lasiolepis*, Arroyo Willow  
*Taxodium distichum*, Bald Cypress  
*Thuja occidentalis*, Arborvitae

## Shrubs

*Achillea millefolium*, Yarrow  
*Arctostaphylos densiflora*, Howard McMinn Manzanita  
*Arctostaphylos hookeri ssp. franciscana*, Franciscan Manzanita  
*Arctostaphylos hookeri ssp. ravenii*, Presidio Manzanita  
*Arctostaphylos tomentosa crustacea*, Lake Merced Brittleleaf Manzanita  
*Baccharis pilularis*, Coyote Bush  
*Baccharis salicifolia*, Mule-fat  
*Ceanothus 'Julia Phelps'*, Julia Phelps Ceanothus  
*Delphinium californicum*, California Larkspur  
*Epilobium canum ssp. canum*, California Fuchsia  
*Eriogonum fasciculatum*, California Buckwheat  
*Eriogonum giganteum*, St. Catherine's Lace  
*Eriogonum latifolium*, Coast Buckwheat  
*Eriogonum parvifolium*, Dune Buckwheat  
*Gaultheria shallon*, Salal  
*Heteromeles arbutifolia*, Toyon  
*Lavatera assurgentiflora*, Tree Mallow  
*Lotus scoparius*, Common Deerweed  
*Lupinus albifrons*, Silver Bush Lupin  
*Monardella villosa Benth. ssp. franciscana (Elmer) Jokerst*, San Francisco Coyote Mint  
*Prunus ilicifolia*, Islais Cherry  
*Prunus virginiana var. demissa*, Western Chokeberry  
*Rhamnus californica*, California Buckthorn  
*Rhamnus crocea*, Redberry Buckthorn  
*Ribes divaricatum*, Spreading Gooseberry  
*Ribes menziessi*, Canyon Gooseberry  
*Ribes sanguineum*, Red-Flowering Currant  
*Rosa californica*, California Wild Rose  
*Rosa gymnocarpa*, Wood Rose  
*Rubus ursinus*, California Blackberry  
*Salvia clevelandii*, Cleveland Sage  
*Salvia mellifera*, Black Sage  
*Sambucus nigra cerulea*, Blue Elderberry  
*Symphoricarpos albus*, Common Snowberry  
*Vaccinium ovatum*, California Huckleberry

## *Perennials*

*Aquilegia formosa*, Western Columbine  
*Arabis blepharophylla*, Coast Rockcress  
*Armeria maritima*, Sea Thrift  
*Asclepias fascicularis*, Narrow-leaved Milkweed  
*Astragalus gambellianus*, Milk-Vetch  
*Astragalus nuttallii*, Nuttall's Milk-Vetch  
*Atriplex californica*, California Saltbush  
*Cirsium andrewsii*, Franciscan Thistle  
*Delphinium californicum*, California Larkspur  
*Dicentra formosa*, Pacific Bleeding Heart  
*Erigeron foliosus var. franciscensis*, San Francisco Leafy Fleabane  
*Erigeron glaucus*, Seaside Daisy  
*Erysium franciscanum*, San Francisco Wallflower  
*Eschscholzia californica*, California Poppy  
*Heuchera micrantha*, Crevice Alumroot  
*Iris douglasiana*, Douglas Iris  
*Iris longipetala*, Coast Iris  
*Acer negundo*, Box Elder  
*Lotus formosissimus*, Harlequin Lotus  
*Lotus scoparius*, Common Deerweed  
*Mimulus aurantiacus*, Sticky Monkeyflower  
*Mimulus guttatus*, Creek Monkeyflower  
*Penstemon spp.*, Penstemon  
*Phacelia californica*, California Phacelia  
*Salvia spathacea*, Hummingbird Sage  
*Salicornia virginica*, Pickelweed  
*Scirpus californicus*, Bulrush  
*Sidalcea malviflora*, Checkerbloom  
*Solidago confinis*  
*Typha latifolia*, Common Cattail

## *Biennials, Annuals and Succulents*

*Bromus carinatus*, California Brome  
*Gilia capitata ssp. chamissonis*, Blue Coast Gilia  
*Gnaphalium californicum*, California Everlasting  
*Helianthus annuus*, Common Sunflower  
*Heliotropium curassavicum*, Seaside Heliotrope  
*Hesperolinon congestum*, Marin Dwarf-Flax  
*Nemophila menziesii*, Baby Blue Eyes  
*Sedum spathulifolium*, Broadleaf Stonecrop

## *Grasses*

*Agrostis exarata*, Bentgrass  
*Carex comosa*, Bristly Sedge  
*Carex densa*, Dense Sedge  
*Carex praegracilis*, Clustered Field Sedge  
*Carex tumulicola*, Berkeley Sedge  
*Deschampsia cespitosa*, Tufted Hairgrass  
*Distichlis spicata*, Salt Grass  
*Festuca idahoensis*, Blue Bunchgrass  
*Festuca rubra*, Red Fescue  
*Hordeum brachyantherum*, Meadow Barley  
*Muhlenbergia rigens*, Deer Grass  
*Vulpia myuros*, Zorro Annual Fescue

## *Vines*

*Aristolochia californica*, Pipevine

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