



Access to the water's edge at high tide is possible with floating boardwalks.



Not all trails can be fully accessible, but improvements will increase safety and access, while protecting resources.

#### DESIGN PROCESS

The core planning team consisted of NPS and Trust staff and consultants with experience in park planning, natural and cultural resources, facilities manage-

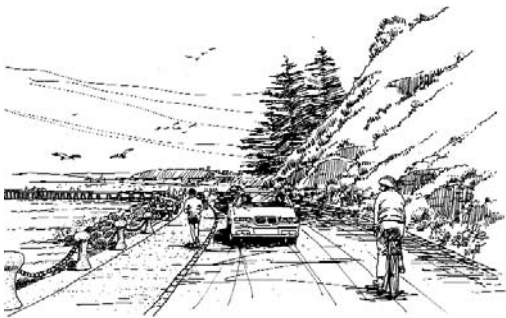
ment, interpretation, visitor protection and transportation.

The team engaged the public in identifying needs and issues, proposing alternative solutions, and reviewing the Plan.

Since the Trails and Bikeways Master Plan included an Environmental Assessment, the public involvement was formalized to meet requirements of the National Environmental Policy Act

Boardwalks protect resources and provide access to sandy beaches.



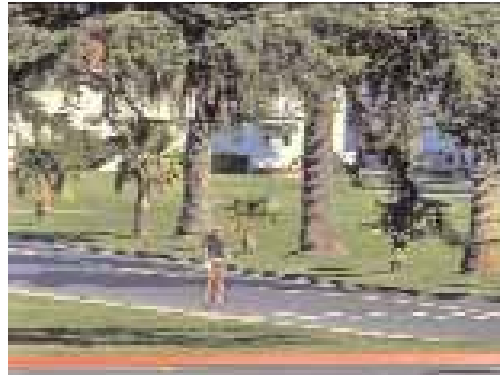


Multi-use trails such as the Golden Gate Promenade accommodate cars and bicycles, and often have a soft-surface pedestrian trail alongside.



Raised pavement markings or raised traffic separators can pose hazards to cyclists of all abilities. Except in special circumstances, bike lanes should be separated from motor vehicle traffic by painted lane markings.

Wide multi-use trails can accommodate many different types of users.



On-street bicycle routes link major park sites. This cyclist is using a low-volume road with no bike lane.

(NEPA). The first phase of public involvement included a public meeting, a series of focus group meetings, a design concept workshop, a survey of park users, communications with other agencies, and various opportunities for written comment. As the process continued, other public involvement activities included newsletter articles, public presentations, on-site walks and rides, wide distribution of planning documents, open-house style displays in the park, and website publication of the Plan.

## Inclusive Design Features and Settings

In special areas such as the Presidio, where the mandate for resource protection is equal to the mandate for visitor experience, providing trails designed to serve all visitors is extremely challenging. It is especially difficult to provide access to extraordinary visitor experiences that are by their nature not accessible. The desire for restricted access often competes equally with the desire to increase accessibility for all visitors.

The trail system was developed with the following universal design principles in mind:

- Consistency and continuity of trail design benefits all users.
- Trail gradients of 1:20 or less benefit recreational cyclists as well as wheelchair users.
- Safety considerations—such as median islands where trails cross roadways—aid families with small children and other users, as well as people with disabilities.



This overlook also functions as a trailhead, providing wayfinding signage.



Trail alignments take advantage of unique viewpoints.

- Trail signage can clarify a trail user's expectation of a trail's challenge, allowing design for varying levels of accessibility.
- Not all portions of all trails can or should be fully accessible to all users, due to constraints of slope, natural resources, or the desire for a variety of experiences.
- A wide variety of trail types increases accessibility for all users, and provides the opportunity for equivalent experiences.
- Pedestrian trails that are designed to be accessible require park policies that manage bicycle use to ensure safety.

#### TRAILS

Trails in the Presidio traverse a wide range of settings, from beaches to forests, from historic places to high-density urban development, and from spaces that are dark and enclosing to expansive vista points. Terrain varies from flat to very steep and trails vary

from narrow footpaths to wide, multi-use paved promenades.

Although trails and bikeways are designed for consistency and continuity, the design guidelines allow flexibility to respond to each unique setting to enhance the visitor's experience of that setting. Trails providing access to these varied settings are classified in three basic categories: pedestrian trails, multi-use trails and bikeways.

### *Pedestrian Trails*

There are two types of pedestrian trails. Primary trails occur in the major trail and road corridors, and provide connecting routes to important Presidio destinations. Primary trails are generally wide and often hard-surfaced to accommodate a large number of trail users.

Secondary trails provide an opportunity to experience many of the Presidio's less visited environments and

the many cultural, historical, natural and scenic resources. Secondary trails are typically soft-surfaced, single-track footpaths.

Some trails have a special character, such as a boardwalk designed to protect resources or provide access to beaches or areas with sandy soils. Other trails are designed with grades ranging from flat to steep to provide trail users with a variety of challenges.

### *Multi-Use Trails*

Multi-use trails provide major connections between important Presidio destinations, entry gates and other local, regional and national trail systems. To reduce impact, they are located in previously developed areas or on former service roadways as much as possible.

Most multi-use trails have easy grades of less than 1:20 (5 percent) to provide greater accessibility for persons with disabilities and recreational bicyclists.



Trails wind through groves of eucalyptus trees.

The trails generally have hardened surfaces, often with adjacent soft-surface pedestrian shoulders that can be used as walking or running paths.

### *Bikeways*

A primary goal of the Trails and Bikeways Master Plan was to improve roadway safety for bicyclists and ensure that there are no gaps in the bicycle circulation network. Bikeways were therefore designed to work in conjunction with traffic calming measures. The Plan addresses on-street bike lanes and signed bike routes where bikes and cars share a traffic lane. Bicycle use occurs on multi-use trails and on nearly all roadways in the Presidio.

### TRAILHEADS

Trailheads typically serve as multi-modal transfer points, allowing users to change from public transit or automobile to bicycle or foot, or from bicycle to foot. Trailheads provide trail information and user amenities where appropriate.

Primary trailheads at major trail starting points include automobile parking,

wayfinding signage and amenities.

Secondary trailheads provide a limited set of standard components such as trail information and perhaps bicycle parking at a footpath, but no automobile parking.

### OVERLOOKS

Overlooks allow park visitors to pause and enjoy a spectacular natural feature, observe wildlife, or take in a unique view of a special structure. There will be primary overlooks along Presidio roadways and in some cases an overlook may also function as a trailhead.

Secondary overlooks occur on trails without auto access, and are designed to take advantage of unique viewpoints resulting from trail alignment and topography. These “off the beaten track” overlooks are intended as quiet places of solitude.

Boardwalks through sensitive areas are designed to meander around vegetation.





## Management and Operational Issues

Providing safe and enjoyable trails requires an understanding of user requirements at the design stage, and appropriate management of trail use after construction. Management and operational issues fall into three categories: trail use policies, natural resource management and trail construction and maintenance.

One measure of success will be a low level of user conflicts. Conflict between bikers and pedestrians is one of the most common trail issues. The Trails and Bikeways Master Plan reduces conflicts by providing adequate width of multi-use trails, a greater choice of a variety of pedestrian and multi-use trail routes, and by designing some trails for pedestrian use only.



Trail markers inform users which trails are appropriate for the experience they want...

Natural resource management policies greatly affected trail planning, requiring compromises to visitor access and experience of the Presidio, and in a few instances, extraordinary design



...through promenades...

measures to protect sensitive habitat. For example, on one heavily used major multi-use trail, width is reduced from a standard 14 feet to only 6 feet, to protect habitat. Some areas require



...to historic buildings and...

fences or other barriers adjacent to trails to keep users from straying into sensitive habitats.

To address on-going trail design, management, construction and maintenance



...to steep trails down to the Pacific Ocean.

issues, NPS and Presidio Trust trail managers will follow the Park Design Guidelines, which are also included in the Trails and Bikeways Master Plan.

## User Feedback

*Andrea Lucas  
Landscape Architect and  
Project Manager, National Park Service*

“Significant issues at the Presidio are balancing historical, cultural and visual impacts. From an accessibility point of view, there are issues of finding your way from one point to another, when historical issues are also important. For example, one of the things we wanted to do with the Presidio Promenade was to make it recognizable as a trail going through various sites. We talked about making it a consistent trail surface all the way through, but the Presidio Trust decided to make it an urban concrete walk through the main post area. Outside of the main post area it would then be a consistent look so it would be identifiable to all users as the trail. . . . We’re trying to make a sensible trail system because it’s so confusing