

3. Trail Design Guidelines



The Park to Playa Trail is a natural surface multi-use path for hiking and bicycling

The Park to Playa Trail (the Trail) is a regional trail that ties together trails and paths in several jurisdictions and park facilities. The design of the Trail will vary depending on site conditions and uses, and the policies and practices of the agency with jurisdiction over that portion of the route. In this context, the participating agencies agreed on basic shared design objectives and a minimum design standard for the Trail.

3.1 Design Guidelines

The following standards shall apply to the Park to Playa Trail except where this would conflict with the standards of the agency or owner with jurisdiction over the trail segment, or requirements for access for fire, utilities, or other purposes. The trail design within each parkland is subject to agency discretion.

Minimum Trail Design Guidelines

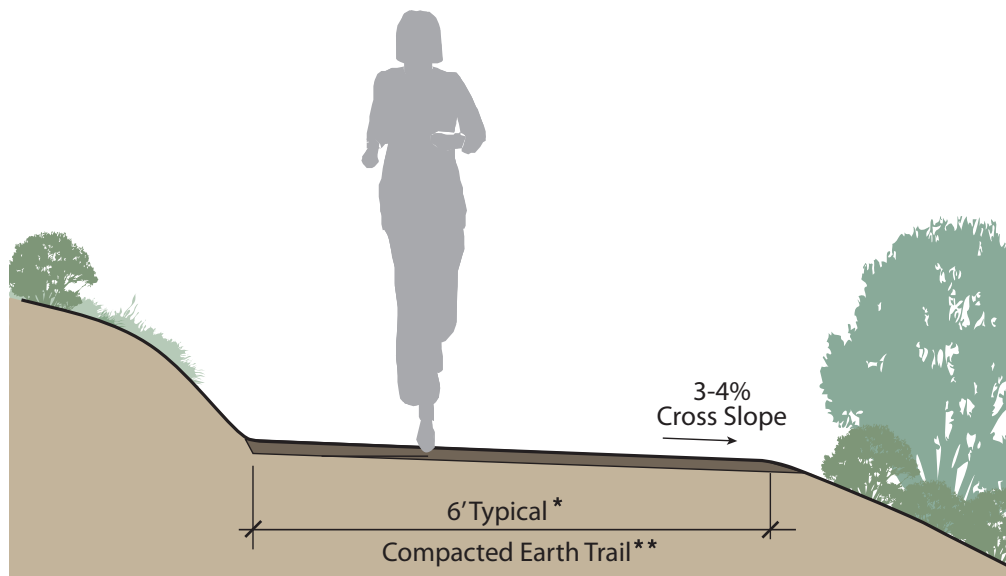
The Park to Playa Trail will, at minimum, meet the design standards contained in Table 3-1, which include basic criteria for compliance with disabled access standards for recreational trails.

The agencies that are parties to the Trail discussed and agreed on minimum design guidelines for the trail, summarized in the table. This can always be exceeded in terms of width, improved surface, and gentler gradient – as it typically is in the developed parks along the route. This minimum standard considers the portions of the trail that pass through natural terrain and open space areas, where a wider, more improved trail may be inappropriate to the natural setting, and/or infeasible to construct. The standard is consistent with ADA accessibility standards, as detailed below.

Table 3-1 Minimum Trail Standard	
Width	6' minimum, up to 12' wide (width may be reduced to as little as 4' in areas with steep side slopes)
Surface	Unpaved, firm and stable surface (may be native earth, decomposed granite, aggregate road base or other material as suitable to setting) Paved in areas of high use or adjacent to areas of high use (i.e. playgrounds)
Cross Slope	5% Maximum to 3% Minimum (3-4% cross slope to the outside/downhill edge for drainage)
Running Slope (Gradient)	0% - 5% (Max length: No restriction) 5.1% - 8.33% (Max length: 200' between resting intervals) 8.34% - 10% (Max length: 30' between resting intervals) 10.1% - 12.5% (Max length: 10' between resting intervals) Resting intervals must be at least 60" long, as wide as trail and max 1:20 (5%) gradient No more than 30% of the total trail length shall exceed 1:12

Note: ADA Guidelines provide exceptions to these criteria based on specific site conditions, including the maximum gradient, e.g. based on the steepness of slope the trail is crossing. See Appendix B for more information.

Figure 3.1 shows the minimum trail cross section, which may be unpaved except in high



* Width may be reduced on steep side slopes

** Base rock/fines overlay may be needed to provide firm, stable surface

Figure 3.1 - Minimum trail cross section

use areas, and is at least six feet wide.

Trail Accessibility

The trail shall conform to standards for recreational trail accessibility, as defined in the following documents, and summarized in Table 3-1:

Proposed Architectural Barriers Act Accessibility Guidelines for Outdoor Developed Areas, U.S. Department of Justice, June 20, 2007 <http://www.access-board.gov/outdoor/nprm/>

California State Parks Accessibility Guidelines, California Department of Parks and Recreation, 2005 (consistent with the federal Guidelines)

Table 3-1 reflects the standards in the above documents, which were created to implement the federal Americans with Disabilities Act of 1990 (ADA). They include specific standards for recreational trails. The width in the Park to Playa Trail guidelines exceeds the required minimum width of 36", and the passing space width of 60". The other design aspects, such as surface, openings, and obstructions, are detailed further in the Guidelines.

See Appendix B for more information on the Accessibility Guidelines, along with an overview of standards for other types of bike and pedestrian routes and facilities.

3.2 Trail Alignment

Most of the new connections to complete the Park to Playa Trail are in open space areas with steep slopes and at least partially native vegetation, with habitat restoration efforts often underway. Much of the work required to complete and improve the Trail

is realignment, widening or completion of 6 foot wide natural surfaced trails that will be sustainable and compliant with ADA standards for recreational trails. The Trail Plan generally identifies the work required in each segment. Many of the existing trails are too steep or narrow to meet the standards, and/or are exhibiting significant erosion as a result of inappropriate layout and design. Some segments, such as in the Stocker Corridor, were already slated for realignment prior to the preparation of this Plan.

Los Angeles County Department of Parks and Recreation has recently published a Trail Manual . The Manual is very comprehensive in its coverage of trail-related information. Section 4.0 on Trail Design is particularly pertinent to the Park to Playa Trail. It contains principles and details for layout and design of trails in hilly terrain that are appropriate for the realignment and extension of the key links needed to complete the Trail.

Trail Alignment

The Trail shall be aligned or realigned based on the above minimum standards and the standards contained in the Los Angeles County Department of Parks and Recreation Draft Trail Manual, Section 4.0, Trail Design, or the final version as adopted. Specific improvement elements include:

- Align or realign to provide slopes consistent with Minimum Standards, avoiding “fall line” routes that follow direction of drainage
- Reconstruct switchbacks to rolling crown type per Trail Manual (generally avoid switchbacks in trail layout)
- Widen trail to 6’ minimum
- Provide cross-slope per standards
- Narrow the trail by restoring unnecessary width or adjacent disturbed areas (see Trail Restoration below).

The Trail Plan maps reflect preliminary study to identify an appropriate alignment. This will need to be confirmed and adjusted through more specific field studies and layout by persons experienced in trail layout and construction. The Trail shall be laid out, designed and constructed in accordance with the steps and standards in the L.A. County Trail Manual, Section 4.5; Constructability.

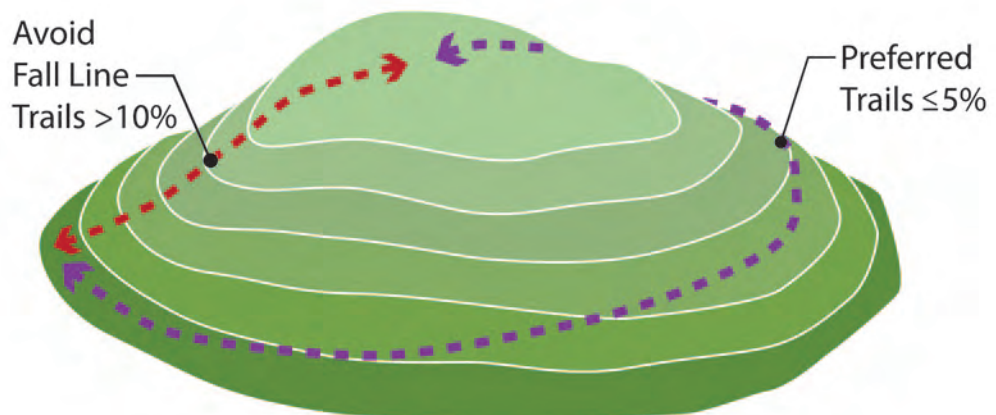


Figure 3.2 - Sustainable trail alignment

3.3 Trail Restoration

An important part of the Park to Playa Trail experience, and of the experience of users of the parks the trail passes through, will be restoration of the native landscape, especially in conjunction with realignment of inappropriately sited trails along the route or connecting to it. Restoration is an art in its own right, and will need to be carefully designed for each specific site and coordinated with other habitat restoration efforts in the parks or the region.

Trail Restoration:

Close and restore inappropriate trails and disturbed areas adjacent to the trail with native plants appropriate to the setting. Specific restoration elements include:

- Closing the facility – through signs, “brush packing” at the former entrances, posted information; encouragement through docent and user groups, and enforcement through ranger staff. Fencing is an option, but is obtrusive, expensive, and not necessarily effective enough to warrant its use.
- Restoring the ground surface – re-contouring, ripping compacted surfaces, replacing lost soil;
- Replanting – for habitat, aesthetics, erosion control, and potentially user control, through planting of prickly pear and other plants that deter access off the designated trail.

Depending on their condition, some trails may be restored to a natural landscape simply by closing them to use. Others may require extensive efforts to correct existing conditions and allow the land to recover.

The plant palette for restoration plantings and landscaping improvements should consist of native species associated with the coastal sage scrub and other regional native species of trees, shrubs, grasses, and forbs. A number of restoration efforts are underway within the Baldwin Hills Parklands. Improvements along the Park to Playa corridor should coordinate with existing restoration programs and native planting efforts. Tree and vine species may be necessary along areas of the trail adjacent to private homes. Drought tolerant species should be used as appropriate. The following list provides an example of potential native species appropriate to the Baldwin Hills.

Table 3-2 Native Plant Palette			
Common Name	Scientific Name	Common Name	Scientific Name
Shrubs and Scrub			
California Sagebrush	Artemisia californica	Purple Needle grass	Nassella Pulchra
Purple sage	Salvia Officinalis	Giant Wild Rye	Leymus condensatus
White sage	Salvia Apiana	Blue-Eyed Grass	Sisyrinchium Bellum
Toyon	Heteromeles arbutifolia	California Goldfield	Lasthenia californica
Mulefat	Baccharis salsifolia	California Aster	Lessingia Filaginifolia
Prickly Pear Cactus	Opuntia x occidentalis	California Poppy	Eschscholzia californica
Heart-leaved Penstemon	Keckiella cordifolia	Dune Primrose	Camissonia cheiranthifolia
Trees			
Coastal Live oak	Quercus agrifolia	Western Sycamore	Platanus racemosa



Fall Line trail in Kenneth Hahn State Recreation Area has resulted in a significant amount of trail erosion.

3.4 Trail Use Designations

Trail use is an important consideration for the design of the trail and to accommodate the broadest range of users. A basic agreement between the agencies participating in the Park to Playa Trail is that the allowed uses in any particular park or jurisdiction would not change just because it is part of the Park to Playa Trail. Any change in use would need to be made through the normal planning and management processes of the agency with jurisdiction. Table 3-3 summarizes the trail uses allowed on each portion of the study area – the eastern 5 miles of the Park to Play Trail

Trail Use Designation:

Uses on the Trail shall be designated by the agency with jurisdiction over the park or open space through which the Trail passes. Table 3-3 identifies current use policies for the parklands within the Park to Playa Corridor.

3.5 Alternative Trail Routes for Bikes

Many regional trail systems have multiple designated routes to accommodate different

Park	Walkers/ Joggers/ Hikers	Cyclists (Road or Mt. Bike)	Leashed Dog Walkers	Rollerbladders / Skateboarders	Equestrians
Stocker Corridor	Yes	Yes ¹	Yes	Yes ¹	No
Ruben Ingold Park	Yes	No	Yes	Yes ¹	No
Norman O. Houston Park	Yes	No	Yes	Yes ¹	No
Kenneth Hahn State Recreation Area	Yes	Yes ^{1,2}	Yes	Yes ¹	No
BHRCA Property	Yes	No	Yes	Yes ¹	No
Baldwin Hills Scenic Overlook	Yes	No	No	Yes ¹	No
Culver City Park	Yes	No	Yes ³	Yes ¹	No
Ballona Creek Path	Yes	Yes	Yes	Yes	No

¹ Some segments of the trail may not accommodate road bike tires, rollerblades, skateboards or strollers due to unpaved surface or steep slopes

² Some segments do not accommodate bikes due to stairs.

³ Leashed dogs are only allowed on identified “pooch path.”

users. Portions of the Park to Playa Trail will not be accessible to bicyclists, dog walkers, or other user groups due to policies and/or conditions. Because the minimum trail design standard is an unpaved trail, for example, portions will not be appropriate for narrow-tired road bicycles. Other portions will not meet accessibility standards due to terrain. The wayfinding plan describes signs to direct users to alternative trail routes when the main route cannot accommodate them.

Where feasible, the Trail Plan identifies an alternative route around portions that are not accessible to road bicycles or all bicycles. These routes are typically “on-street” routes on proposed bikeways identified in the 2010 Bicycle Plan Update, the 2011 County of

Los Angeles Draft Bicycle Master Plan, and the 2010 Culver City Bicycle and Pedestrian Master Plan. See Chapter 4 Figure 4-2 for a map of proposed alternative routes for bicycles.

3.6 Trail System Support Features

A complete trail system requires support facilities and amenities. Specific types, designs and locations of these features would be determined in conjunction with design of specific trail segments and will depend on the agency that owns and manages the segment in question. The following section provides some basic guidelines.

Trail Access

Clearly defined trail access points are crucial to making trails inviting and accessible. Trail access points should provide the appropriate facilities to accommodate the permitted user types, expected user volumes and site context. Two levels of development are recommended for the Park to Playa Trail, trailheads and trail gateways.

Trailheads:

Good access to the trail system is a key element to its future success. Trailheads and staging areas (trailheads with parking areas, restrooms and other facilities to support trail use) serve the local and regional population arriving to use the regional trail system by car. Trailheads provide essential access to the trail system and provide essential facilities and orientation and information signage to guide trail use. Trailheads are typically developed on public parklands and can utilize existing facilities if trail use does not conflict with park use. Often trailheads can be established by arrangement with other types of public or private facilities where trail use is off-peak from the main land use. Existing public parking/trailhead areas that can serve the Park to Playa Trail are identified on the Trail Plan maps. Potential elements to include at Park to Playa trailheads include:

- Park to Playa gateway sign
- Vehicle parking with accessible parking stalls. Proposed parking areas should be constructed with a permeable surface and provide a landscape buffer to mitigate stormwater runoff and buffer the parking area from the natural trail experience.



Trailheads are access points with vehicular parking and additional amenities.

Table 3-4 Proposed Park to Playa Trailheads

■ = Existing Element ● = Proposed Element

	Parking Lot	Bike Rack	Restroom	Map Kiosk	Trash Receptacles	Benches	Drinking Fountain
Stocker Corridor - Five Points	●	●		●	●	●	
Norman O. Houston Park	■	●	●	●	■	■	■
KHSRA - Janice's Green Valley	■	●	■	●	■	■	■
KHSRA - Japanese Garden	■	●	■	●	■	■	■
Blair Hills Corridor	●	●	●	●	●	●	●
BHSO - Upper Parking Lot	■	■	■	●	■	■	
BHSO - 1600 Jefferson	●	●	●	●	●	●	●
Culver City Park	■	●		●	■	■	



Trail gateway entrances are more informal access points to a trail.

- Secure bicycle parking
- Restrooms
- Entry feature with native landscaping
- Map kiosk
- Lighting
- Benches
- Trash and dog waste receptacles

Trail Gateway

A trail gateway would have a moderate level of development and would be fitting for neighborhood access points where vehicle parking is not available. The level of development in this treatment would reflect design elements including:

- Entry feature with native landscaping
- Secure bicycle parking
- Map kiosk
- Benches
- Trash and dog waste receptacles

Amenities

Amenities enhance the trail experience, encourage trail usage and make trails more comfortable for the user. Basic amenities include: drinking fountains, benches, shade structures, trash receptacles, bicycle parking, fencing and gates. Enhanced amenities include: Park to Playa wayfinding signs, art installations, interpretative elements, and creative applications to reinforce a trail brand or a “sense of place”.

Trail elements should be constructed of durable, low maintenance materials such as concrete, stone and metals. Design of amenities should reflect the context of the park system they are located within. Amenities in open space areas such as Stocker Corridor should have a rustic aesthetic while amenities in more urban park areas such as Norman O. Houston Park should have a more developed aesthetic. Amenities and trail support features should be placed a minimum of 2 feet from the edge of the trail.

	Gateway Feature	Bike Rack	Map Kiosk	Wayfinding Sign	Trash Receptacles	Benches
				●		●
Stocker Corridor – Presidio Drive				●		●
Stocker Corridor – Valley Ridge Avenue	●	●	●	●	●	●
KHSRA – Five Points	●		●	●		
KHSRA – Valley Trail Picnic Area			●	●		
KHSRA – Valley Trail			●	●		
KHSRA – Olympic Forrest	●	●	●	●		
BHSD –Jefferson Boulevard		■ ●		●		
Ballona Creek Bike Path – Duquesne Avenue	■		■	●		

Water Sources

Water fountains provide water for people (and pets, in some cases). Public comments requested these, but they are most practical where there is an existing water supply and a presence for maintenance. Existing sources of water are located in Ruben Ingold Park, Norman O. Houston Park, restroom buildings in KHSRA, BHSO Visitor's Center and in Culver City Park. Proposed drinking fountains are to be located at the two new trailheads in Blair Hills and 1600 Jefferson. Map kiosks should identify locations of drinking fountains so users can know where to get a drink or fill up their water bottles.

Benches

Providing benches at key rest areas and viewpoints supports use of the trail by people of all ages, and provides an opportunity for memorial donations or service projects. Generally a rustic bench type is recommended. The specific appropriate type will depend on managing agency standards and preferences.



Slatted wood bench can be installed with an embedded mount with concrete footings. Concrete benches, which are very durable, require a reinforced concrete slab to keep the bench stable and prevent it from sinking into the ground.

Trash and Waste

Trash receptacles and dog waste clean-up bag dispensers help keep the trail clean, although the ability to follow up with removal is critical. Some agencies adopt a “leave only footprints” policy and do not provide waste receptacles or pick-up. Because most of the new portions of the Trail are in open space/natural habitat settings, additional trash receptacles are recommended only at staging areas and trailheads within existing parks, and conforming to the types already in use at those facilities.

Shade Structures

There are existing shade structures along the Western Ridge Line in KHSRA off of the recommended Park to Playa Trail route. The L.A. County Trail Manual recommends shade structures every 1 – 3 miles (section 4.3.12). Additional shade structures are proposed at locations with steep exposed slopes, typically in combination with benches. A wood shade structure would be in keeping with the rustic setting of the Trail, but metal structures are more practical for fire and vandalism resistance.



Wooden and metal style shade structures.



Inverted U-style bicycle rack

Bicycle Racks

Bike racks will allow recreational users to safely park their bikes at trailheads and gateway entrances and at trail segments that do not allow bikes. Bicycle racks should be a design that is intuitive and easy to use. Bicycle racks should be securely embedded into the ground or anchored to a concrete pad. A standard inverted-U style rack is a simple and functional design that takes up minimal space and is easily understood by users. Avoid use of multiple-capacity “wave” style racks. Users commonly misunderstand how to correctly park at wave racks, placing their bikes parallel to the rack and limiting capacity to one or two bikes. One Inverted-U rack can securely hold two bicycles.

Fencing

Fencing can serve multiple purposes along trail facilities, including access control, visual screening, channeling of trail users, and elimination of liability concerns. Several types of fencing and gates will be important along the Park to Playa Trail.

- **Delineation Fencing:** A split-rail fence used throughout the Park to Playa corridor will help to visually tie the corridor together. Delineation fences are used at gateway entrances and adjacent to the trail when a visual cue is needed to keep users on the trail. The split-rail fence should be constructed of wood or recycled plastic.
- **Security Fencing:** Black, powder-coated chain link fencing is effective in keeping path users within the trail right-of-way and is low cost and low maintenance solution. The powder coat finish helps the fence blend into the landscape and provides a more attractive appearance. An alternative to chain link fencing is double wire fencing, a rigid iron mesh fence. Security fencing can be used along private property. Vines can be planted to grow on fence to improve privacy.
- **Metal Picket Fencing:** Wrought iron or aluminum picket fence is often used as vandal-resistant fence because it is difficult to cut and scale. Picket fences allow good visual access to the trail and should be used in areas where it is important

to keep “eyes on the trail.” Picket fences should be black and could be used along roads or residential properties.

- **Decorative Fencing:** Decorative fencing can add visual interest to a trail and could be used at gateway entrances or adjacent to neighborhoods.
- **Vegetative Buffer:** Trees and shrubs adjacent to the trail can be used to screen homes and yards from the trail-user view and vice versa. Depending on the plant material these buffers can also function as barriers between the trail and private properties. Height and placement of vegetation for screening should be based on site conditions such as distance of property line from trail, side slope, and height of object to screen.



Split rail fence



Black powder-coated chain link fence



Double wire fence



Black metal picket fence



Decorative Fence

Gates

Gates provide controlled access to the trail and can also create a gateway entrance feature. Several types of types of gates are recommended for the Park to Playa Trail.

- Vehicular Entry Gates: pipe gates may be needed to exclude public vehicles while allowing maintenance vehicles to access the trail. Pipe gates are cost effective and low maintenance.
- Bollards: Bollards or posts at trail access points can be necessary to keep vehicles and (off-Highway Motor Vehicles (OHVs) from entering the Trail. Posts should be designed to be visible to pedestrians and bicyclists, with reflective materials and appropriate striping. At least the center post should be designed to be removable by emergency vehicles.
- Artistic/Decorative Gateway Entrance Features: Entry features help to establish the trail as a unique and memorable place. Sculptural, black wrought iron gateways have been installed along the Ballona Creek portions of the Park to Playa Trail at Duquesne Avenue, Sepulveda Boulevard, Overland Avenue, Inglewood Boulevard, and McConnell Avenue, as well as the entrance to Culver City Park



Pipe gate



Bollard with retroreflective tape



Artistic gate at Culver City Park/BHSO

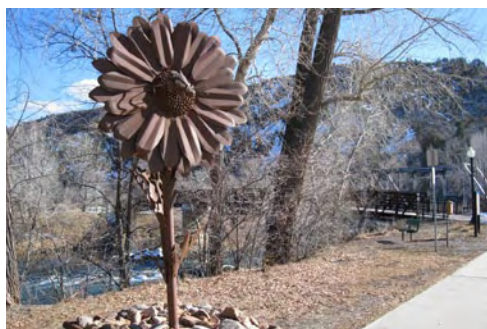


Artistic gate with stone pillars along Ballona Creek at McConnell Ave

from Baldwin Hills Scenic Overlook. To enhance the established theme, similar gateway entrance features are proposed for trail access points throughout the Baldwin Hills Parklands (see Table 3-5).

Art Installations

Local artists can be commissioned to provide art for the trail system, making it unique, entertaining and memorable. Themes should draw from the local natural and cultural environment. Many trail art installations function as or are incorporated into signs, benches, shelters, or even the pavement surface. Art pieces may be overt such as large scale sculpture or murals along the Ballona Creek Path.



3.7 Management and Maintenance

Determining requirements and arrangements for management, maintenance, and operation is a critical aspect of planning of specific trail segments and the overall system. A well-designed program of maintenance and operation will encourage the use of the facilities and deter problems such as vandalism, littering, trespass, and unauthorized types of trail use.

Such a program requires specific arrangements and a realistic level of funding for each part of the system. Maintenance and management arrangements typically involve a combination of agency staff, including partnerships between agencies, as well as support from organized, ongoing volunteer groups. Identifying and securing long-term funding is often difficult. Negotiations, discussions and partnerships need to occur in order to assure a successful Operations and Maintenance (O & M) program that is properly funded and withstands the test of time. All Park to Playa partner agencies are planning to work together to identify an O&M plan before any trail improvements begin.

Depending on the type of improvements, different levels of effort and funding are necessary to address items such as pavement or trail surface maintenance, drainage facility monitoring and maintenance, sign replacement, fencing, mowing, litter removal, and user education and enforcement. Basic management and maintenance-related design objectives for new trail facilities include:

- Provide a suitable design to support the intended uses and minimize conflicts and impacts, and maximize safety, while accommodating access for maintenance and emergency purposes;

- Provide durable vandal and weather resistant design and materials appropriate to the setting that minimize maintenance needs;
- Provide adequate fencing, gates, stiles, signage and other access control to the trail routes to clarify rules of use, minimize conflicts between users and impacts on adjacent land uses;
- Provide adequate informational, traffic control, regulatory, and wayfinding signage.

Maintenance and trail management for native surface trails is particularly important. Tread configuration will change over time and side slopes and outside berms will shift with use and water flow. Light maintenance should be anticipated in order to correct some compaction, displacement, and erosion issues and keep trails in usable states.

Meeting these objectives and providing a thorough ongoing maintenance program will benefit the basic physical, aesthetic, and environmental qualities of the route, and result in many other benefits in as listed below:

- A high standard of maintenance is an effective way of helping advertise and promote the facility as a local and regional transportation and recreational resource;
- The psychological effects of good maintenance can be a deterrent to vandalism, litter, and encroachments;
- Good maintenance is necessary to preserve positive public relations between the adjacent land owners and between public agencies;
- Good maintenance can help make enforcement of regulations on the route more efficient. Local clubs, interest groups, and neighbors will take pride in the facility and will be more apt to assist in its protection;
- A proactive maintenance policy will help improve safety;
- Regular, routine maintenance on a year-round basis will prolong the life of the facility.