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D e s i g n G u i d e l i n e s

Design Guidelines

The following Design Guidelines have their basis in existing City of San Diego documents, including the San Diego Bicycle Master Plan, and the Mission Valley, Navajo, and Tierrasanta Community Plans. The ideas developed through the public process of the Conceptual Plan and of this Draft Master Plan have also been incorporated into the recommendations for the San Diego River Park. Each Guideline category is applicable to each reach of the San Diego River Park, but certain elements described within the Guidelines are modified to specifically respond to the character and issues in each reach.

Principles of sustainability are inherent in every aspect of the San Diego River Park. The planning principles and recommendations guide the evolution of the valley toward a regionally appropriate landscape that is sensitive to the cultural, physical and climatic conditions. Implementing the ideas of this plan will lead to increased bio-diversity in the valley, cleaner water in the river through increased filtration and decreased water use through the planting of appropriate native species. The use of local, reusable and recycled materials is encouraged. Each step toward implementation of the San Diego River Park should strive to be a model of a 'green' approach to development. The application of guidelines such as the U.S. Green Building Council's Leadership in Energy and Environmental Design are encouraged.

Ultimately, the San Diego River Park and Trail will provide connectivity between communities, between neighborhoods and transit stops and between residential areas and work places creating the opportunity for many San Diegans to consider alternative modes of transportation.

Corridors/Buffers

Three corridor types are recommended for the San Diego River Park: A Habitat and Open Space Corridor that serves to primarily protect and create wildlife habitat; a Path Corridor that is parallel to the open space corridor to provide buffer space for a multi-use path; and a Water Quality Buffer located within the open space corridor that filtrates surface runoff draining toward the river. A minimum Habitat and Open Space Corridor should be preserved for the river. This corridor is generally within the existing river floodway, and should provide adequate space for improving river hydrologic function by allowing the channel to be separated from ponds, to be widened to allow for recreating meanders in some locations, and to provide functioning habitat for a variety of species.

The Habitat and Open Space Corridor may not be centered on the river channel itself and should vary in width, reaching beyond the native riparian zone to provide a diversity of native vegetation and habitat to provide for a viable ecosystem. Between Mission Trails Regional Park and Friars Road, there is an opportunity to benefit a greater diversity of species including larger animals because of the connection to the significant reservoirs of contiguous native landscape in MTRP and Elanus Canyon. Downstream of Friars Road Bridge to Mission Valley Preserve, it may not be realistic to expect a broad range of larger species because of the impact of highways, bridges, traffic noise, isolation from canyons and the encroachment of development on the valley floor.

A paved multi-use trail should be located outside of the Habitat and Open Space Corridor. The alignment of the Habitat and Open Space Corridor should allow for the multi-use trail to occasionally cross over the river and run parallel to it for short distances of less than 1/8 mile. In such instances the minimum Habitat and Open Space Corridor width should be provided near the river but opposite the trail alignment. Soft paved pedestrian trails may be located within the Open Space Corridor.

Vegetation within the Habitat and Open Space Corridor should include a range of native plant communities, forming a continuum from riparian, freshwater marsh in the lowlands, to coast live oak woodland and chaparral in the uplands; reaching into side canyons that include coastal sage scrub. Vegetation should allow a variety of views and access to the river, particularly near trails, with areas of dense riparian and upland under story to provide wildlife habitat and buffer from adjacent uses:



Walkers along the San Diego River

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Habitat and Open Space Corridor, San Diego River, minimum total widths

- Estuary: Equal to present dimensions of dike, expand should opportunity arise to realign and terrace dike edges to incorporate additional estuarine and upland native vegetation.
- Lower Valley: Equal to 100 year floodway alignment. Expand where possible with redevelopment opportunities to incorporate additional riparian and upland native plant communities.
- Confluence: Equal to 100 year floodway alignment. Expand where possible by integrating with new development and redevelopment to incorporate additional riparian and upland native plant communities.
- Upper Valley: Follow 100 year floodway alignment. Expand where possible by integrating with new development and redevelopment to incorporate additional riparian and upland native plant communities.
- Gorge: As exists in Mission Trails Regional Park. Coordinate with private land owners to improve native vegetation.
- Plateau: Follow 100 year floodway alignment and integrate with Carlton Oaks Golf Course to encourage transition to native plant communities. Expand where possible by integrating with new development and redevelopment to incorporate additional riparian and upland native plant communities.

Open Space Corridor, Canyon Tributaries

The canyons provide important refuge to wildlife species that may access the river. The extent to which the canyons can remain undisturbed native vegetation with connection to the river's riparian corridor will be of benefit to the success of the River Park in providing for wildlife habitat and encouraging wildlife movement. Establish a continuous open space and viable habitat corridor in the canyons that achieves wildlife movement and habitat objectives. The appropriate design and layout of the corridor should be determined during site specific planning processes that consider habitat, water quality, hydraulic, recreation, and access and development opportunities.

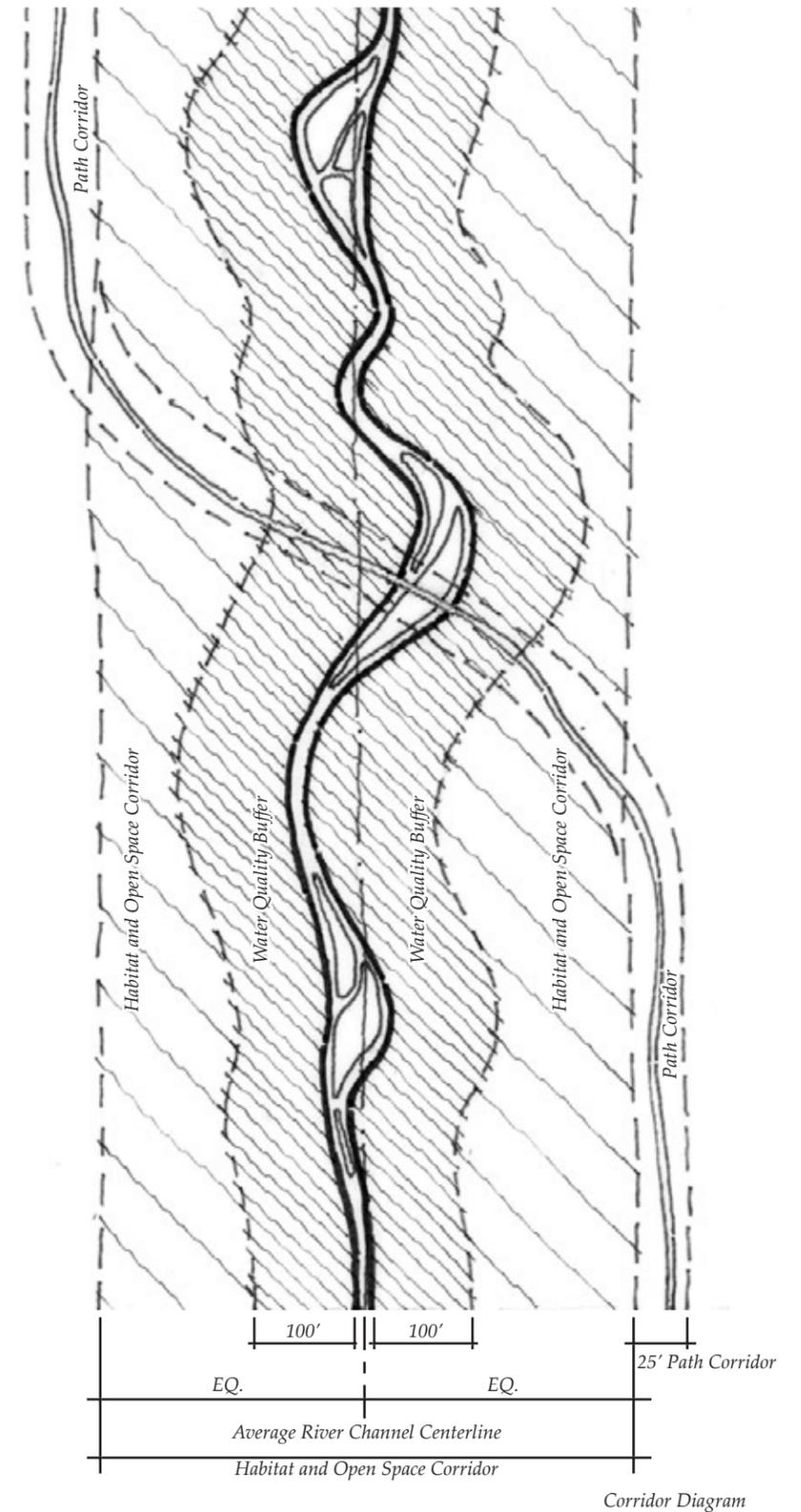
Path Corridor, minimum width (in addition to open space corridor)

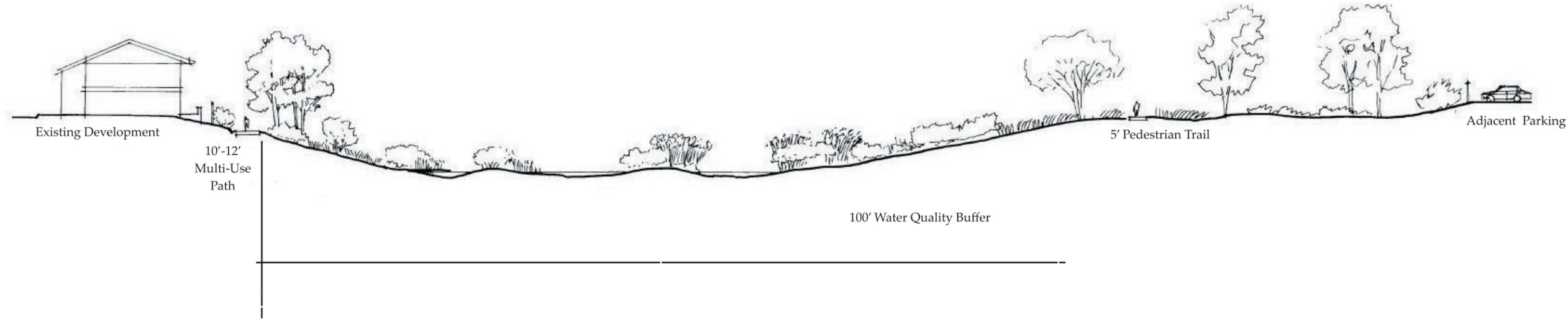
All Reaches: 25'

Water Quality Buffer, minimum width (within open space corridor)

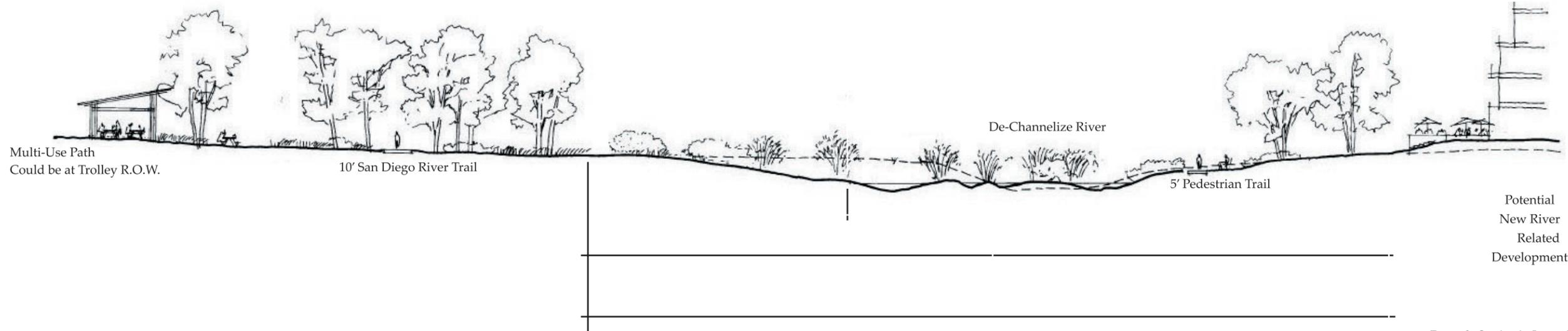
All Reaches: Preferred 100' (from edge of low flow channel)

A vegetative buffer adjacent to the river is important to provide filtration of runoff from adjacent development. The preferred width for such a buffer is 100' from the edge of the river as measured at low flow condition (the edge of water flowing at capacity but below flood stage). This buffer is included within the Open Space and Habitat Corridor, and therefore within the boundaries of the floodway. In some locations, the edge of the floodway is less than 100' from the edge of the river. As development and redevelopment occur in such locations, it is encouraged that appropriate measures be included in the site specific planning process to consider management of runoff to protect and improve the water quality of the river.





Example of Section in Confluence
View to East



Example Section in Lower Valley
View to East

Path and Trail Design

The path and trail system consists of three primary components: the San Diego River Park Trail, Connecting Paths, and Secondary Pedestrian Trails. In addition, unpaved hike/bike connecting trails are proposed in and adjacent to the Mission Trails Regional Park trail system.

The San Diego River Park Trail is an east-west, primarily hard-paved surface trail that will link the ocean trail system through Mission Valley to the City of Santee trail system in Mast Park. This trail builds upon existing Class 1 Bicycle Path and Multi-Use Paths within Mission Bay Park, FSDRIP, Mission Valley and MTRP. The San Diego River Park Trail proposes linking these segments and creating grade separated crossings at difficult intersections. Except as noted, the San Diego River Trail is consistent with the San Diego Bicycle Master Plan. Design standards for multi-use paths are consistent with the Caltrans Highway Design Manual and the City of San Diego Street Design Manual. Trail connections should also be coordinated with the San Diego County Bicycle Transportation Plan and the City of Santee Trail System

Trails within the City of San Diego should be managed in accordance with city standards.

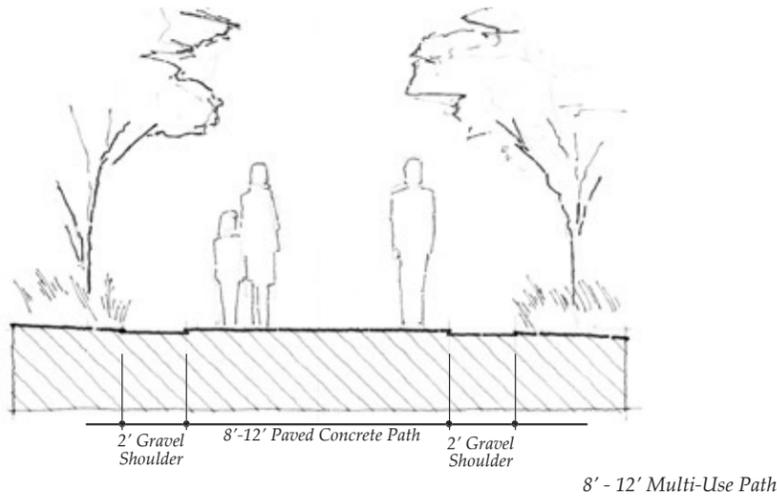
Connecting trails will link to the San Diego River Park Trail with trails and recreation facilities in communities beyond the river valley. These should follow the multi-use trail standard with a minimum width of 8'.

Secondary Pedestrian Trails are proposed within the river valley Open Space Corridor, to encourage a pedestrian experience that allows close engagement with the river and the experience of the valley native landscape. This class of trail permits only pedestrian travel.

Multi-Use Path:

- 8-12 feet wide paved concrete path with 2 foot wide crusher fines shoulders on each side
- Minimum radii and grade per standards
- Sawcut controls joints @ 10' intervals recommended
- San Diego River Park Trail: 10' wide

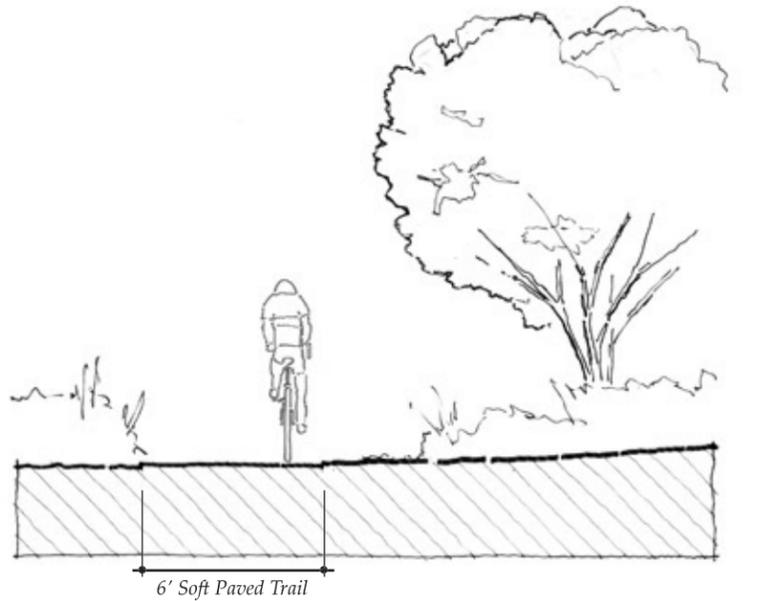
Connecting Multi-Use Path: 8' min. to 12' wide



Hike/Bike Trail:

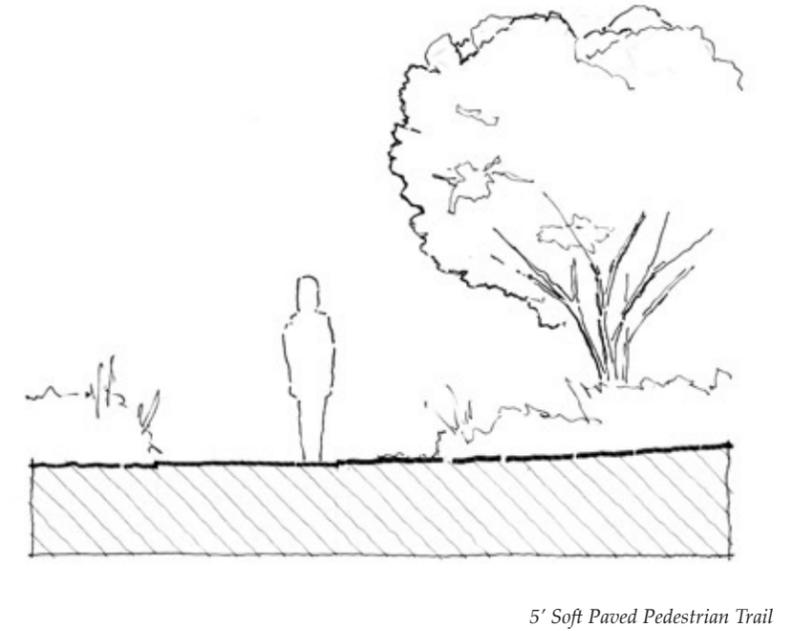
Soft paved trail (gravel fines)
No minimum radii, alignment responds to natural conditions with no disturbance to existing vegetation and minimal grading.

San Diego River Park Trail in MTRP:
In accordance with MTRP standards



Secondary Pedestrian Trail:

5' wide soft surface trail (gravel fines)
No minimum radii, alignment responds to natural conditions with no disturbance to existing vegetation and minimal grading.



Trail Furnishings and Lighting

Furnishings

The San Diego River Park Trail should provide seating, trash receptacles and bicycle racks at all trail heads, corridor access points, waystations and rest areas.

Seating:

- Seating should be durable, comfortable, attractive and securely anchored
- Seating surfaces should generally be 16-18 inches high with a minimum depth of 16 inches
- Seating should generally be offset a minimum of 3 feet from the edge of trails wherever possible; the offset area may vary in surface materials, but should reflect the materials used around it
- Seats with backs should be a dark painted steel, and consistent through out the corridor
- Seats without backs should be dark painted steel with wood or recycled, simulated wood seating surface and consistent throughout the corridor
- Where appropriate, low walls of material appropriate to each reach should be provided at seat height in lieu of, or in addition to benches

Trash Receptacles:

- Locate to allow convenient access for maintenance
- Locate conveniently near (but not next to) seating, trail intersections and at all access points
- Trash receptacles should relate in appearance and color to other furnishings
- Attach firmly to pavement or a footing to minimize vandalism

Bicycle Racks:

- Locate bicycle racks near access points, rest areas and pedestrian trail intersections
- Bicycle racks should be of “inverted U” type
- Bicycle racks should relate in color to other furnishings

Water Features:

- Integrate at entrances and urban edges
- Coordinate with public art elements
- Important opportunity to interpret and express the river and the value and precious nature of water in the arid west.



Bike Rack by SiteScapes, Inc.

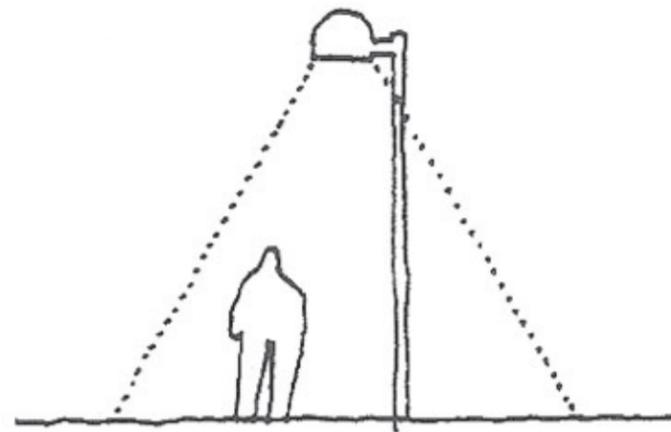
Lighting

The San Diego River Park Trail will generally not be lighted, except where it engages urban edges. Developed parks that are located within the river corridor should be lighted in a manner that meets or exceeds typical Park and Recreation standards. Where lighting is appropriate and provided, it should be treated consistently throughout the City of San Diego segment of the river corridor, in light source, fixture type, and fixture finish and color. The overall conceptual approach to illuminating the trail should balance safety and security with nighttime visibility and function through light color selection and reduction of glare. The approach should minimize light pollution (“sky-glow”) and light trespass, particularly into adjacent habitat and residential areas. Lighting design should identify aspects of the goals of the International Dark Sky Association (IDSA) and Illuminating Engineering Society of North America (IESNA) that are appropriate to the San Diego River Park.

The overall lighting approach, including light source type (color) and fixture types, will be solidified as San Diego River Park planning advances to a more detailed level of design. Lighting design should emphasize uniform, unobtrusive illumination with a subtle emphasis on trail intersections and access points.

Determine light source color

Metal halide (MH) is recommended for its true color rendering; this type of light source does not cast a ‘color’ over the objects it lights. Reaction time and color recognition are considerably higher under white light sources such as metal halide. In addition, metal halide lighting generally requires lower light levels than other non-white light sources, because of the true color it offers. Transitioning between white and non-white light sources presents concerns regarding safety, function and aesthetics, and should be considered if more than one light source is considered.



Pole Lights should be full cut-off

Select standard high-performance light fixtures

A fixture palette that allows lighting to respond to adjacent conditions (urban, naturalized) should be selected for each application: pedestrian pole lighting, pedestrian walk lights, step and wall lights, etc. These fixtures may be standard or custom-designed, but should coordinate with each other. Fixtures should create an unobtrusive appearance that allows the focus to remain on the Park, rather than the furnishings in it. Round fixtures and round metal poles are recommended for their relative unobtrusiveness in daylight. Bollard-type light fixtures can present significant problems of glare and cut-off, and for this reason are strongly discouraged.

In addition to a specific fixture, each application should also have a specified mounting height. To control glare, spill light, and ‘sky glow’, all fixtures should be rated full cut-off by the Illuminating Engineering Society of North America (IESNA).

In remote locations, solar powered lighting should be used. Consider use of solar generated power for lighting throughout the San Diego River Park.

Luminaire reflectors should be faceted rather than hydro-formed, to ensure high reflectivity and high performance control of light distribution patterns. High performance luminaires will require fewer fixtures and less overall energy use.

Material finish and color should be determined and used consistently throughout the City of San Diego section of the San Diego River Park. Finish and color should be subdued, consistent with other San Diego River Park metal work along the corridor, and consistent with City of San Diego Park and Recreation standards for developed parks.

Recommended standards:

- Pedestrian Pole Lights: 12’ mounting height
- Pedestrian Walk Wash Lights: “drive-over” style low surface mounted
- Special walk conditions: step and wall mounted



Drive over light example

Signage

The invisibility of the river is striking, and the Foundation's simple initiative to sign the road crossings of the river has greatly increased awareness of the river in the community. Other opportunities exist to support the increased awareness, perhaps the I-8 should be renamed the San Diego River Freeway. At the very least every crossing and every creek and canyon should be identified.

Three general types of signage are anticipated within the San Diego River Park and along the San Diego River Park Trail. These types include Identity & Interpretive Signage, Directional Signage, and Regulatory Signage.

Identification of the San Diego River at crossings should continue and be expanded to identify the river at both edges and both sides of each crossing, and where they are not yet been installed, in cooperation and assistance with local government and Caltrans. If funding is not available from these agencies, private funding should be raised. The signs should highlight the presence of the river and include the San Diego River Park logo consistent with the existing signs. This program should be expanded to identify each canyon and creek where they intersect with roads and where they flow into the San Diego River.

Identity & Interpretive Signage:

- Consistent graphics and symbols
- Expand as needed to provide additional depth of information
- Consistent mounting height and sign surface material
- Consistent mounting system, based upon standard kiosk
- Establish a poster program to provide public information about the San Diego River Park at all trolley stations near the San Diego River

The signage system should reflect a consistency that links individual signs into a larger system and creates an immediate recognition in the user. Consistent graphics, type styles and signage structure offer this consistency.

Directional Signage:

- Consistent graphics and symbols
- Consistent detail of information
- Consistent size, mounting height and sign surface material
- Variety of mounting systems, appropriate to location
- Mount on 2" dia. galvanized steel pipe

Regulatory Signage:

- Manual Uniform Traffic Control Device graphic symbology system for standard signs
- Consistent graphics and symbols for San Diego River Park specific signage
- Mounting heights per code where applicable, or consistent with directional signage
- Variety of mounting systems consistent with directional signage



San Diego River Signage



City of San Diego Kiosk

Kiosks, Waystations, and Site Furnishings

Kiosks should be installed at key entry points along the San Diego River Trail. They should be of a consistent design to identify the kiosk as part of the San Diego River Park and include a location map and appropriate information. To ensure that the kiosks will be maintained and updated, as necessary, signs should be sponsored by local community groups or the San Diego River Park Foundation. Initial efforts should concentrate placement on the multi-use path on the south side of the river from the Robb Field Skate Board Park to Pacific Highway. The San Diego River Park Foundation and the Friends of Mission Valley Preserve have received funding to install an additional kiosk (or possibly two) at Mission Valley Preserve.

The City of San Diego Park and Recreation standard kiosk is recommended for San Diego River Park use, offering immediate recognition and connection with the City's other parks.

Incorporate the following materials suggested in the conceptual plan as detail elements into the standard kiosk design to better integrate the standard kiosk into the distinct character of each reach.

Estuary:

- Natural finished wood or recycled wood product, bleached
- Sand, ceramic tile, glass and small rock

Lower Valley:

- Painted or galvanized steel in urban locations.
- Natural finished wood or recycled wood product, similar to kiosks
- Sand, ceramic tile, glass and small rock

Confluence and Upper Valley:

- Natural finished wood or recycled wood product, similar to kiosks
- Painted or galvanized steel in urban locations
- Ceramic tile and glass

Gorge:

- Wood to match Mission Trails Regional Park system
- Native sandstone where applicable
- River Rock

Plateau:

- Natural finished wood, similar to kiosks
- Painted or galvanized steel in urban locations
- Sand and native boulders

Maintenance

Maintenance is essential to the long term success of the San Diego River Park. Visible, ongoing maintenance activities demonstrate a high degree of care and ownership, underlining a level of attention that discourages vandalism and increases security. Maintenance includes day-to-day activities such as trash pick-up, landscape care, habitat management, and repair of damaged furnishings such as trash containers, bicycle racks and benches, and event-responsive activities such as flood damage repair.

It is anticipated that public agencies will provide maintenance activities on portions of the river corridor that are within their ownership. Land in private ownership may require alternative approaches, such as donations from adjacent development, volunteer efforts, and/or maintenance assessment districts. One maintenance assessment district, the First San Diego River Improvement Project (FSDRIP) already exists in the river valley. FSDRIP funds maintenance through assessment of adjacent properties within the district boundaries. This mechanism may provide a model for other parts of the valley to fund ongoing maintenance of the river, trails, and San Diego River Park furnishings.

Volunteers are another key component of an overall maintenance strategy for the San Diego River Park. The San Diego River Park Foundation has spearheaded many volunteer efforts throughout the valley to restore, enhance and maintain the area. Such volunteers are a key component of an overall maintenance strategy for the San Diego River Park, and will require ongoing coordination by public agencies and volunteer organizations. Developing a comprehensive maintenance program, including potential funding mechanisms, should be a part of the development of each implementation project.

Sustainable Design

A sustainable design approach seeks to reduce the negative impacts of development on the environment while providing for the health and comfort of people. The basic objectives are to reduce consumption of non-renewable resources, minimize waste and create healthy environments. Strategies for sustainable design include a focus on site, energy, materials, waste management and building environments. Applying a sustainable approach means that decisions made at each step of the design process consider the overall impacts of the project on the environment over time. By taking an integrated approach, all phases of the life cycle of a project are considered, from design through construction, operation and maintenance.

Sustainability is vital to the future health of the San Diego River and is at the essence of creating the San Diego River Park. Incorporating sustainable design principles into all new public and private development along the river will go along way toward ensuring the future health and vitality of the river and the valley. Sustainable practices such as capturing and treating run-off on-site before releasing it into the river system, reducing surface parking and paved surface areas, green architecture, and energy saving elements such as wind and solar energy and shade devices.

The use of recycled and local materials in all construction, and limiting irrigation in landscaping and parks through the use of native and xeriscape planting schemes is also encouraged.



A community clean-up at Mission Valley Preserve

Plant Groups

The use of native plants should be encouraged. The color and texture of these materials are important to unify the valley as a place. In the Open Space Corridor, all non-native vegetation should be eliminated. Re-vegetation should use only native plant species.

Three types of planting groups are proposed to establish a hierarchy of vegetation from a pure native community to a hybrid community appropriate for developed areas. These three groups include a Native Habitat Species List, a Buffer Species List, and an Urban Species List. A complete listing of each group can be found in the Appendices.

The Native Habitat Species List is designed for the open space corridor, and includes mixed willow woodland and chaparral/coastal sage scrub species. The Buffer Species List is appropriate for the zone between the open space corridor and bordering development; this selection of plants may also be used in the trail corridor. The Buffer Species List includes riparian and chaparral transition species. The Urban Species List should be used in developed areas, including streetscapes. This group focuses on native species, but also incorporates appropriate non-invasive ornamentals for shade, diversity and interest.

