

# Section 1 Recommended Alignments

## GOALS

To narrow the list of three alternative alignments to one recommended trail alignment.

## PROJECT PROCESS

Completion of field surveys and cataloguing and mapping:

### Biology:

- Least Bell's vireos,
- Burrowing owls,
- Endangered plants.

### Engineering:

- Soil stability,
- Topography,
- Hydrology.
- Investigation, mapping and cataloguing of utility conflicts.
- Hosting public workshops, presenting three alternatives and seeking input.
- Evaluating the viewshed surrounding alternative trail alignments.
- Selecting, mapping and cataloguing recommended trail alignments.



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## Introduction

The purpose of the current study is to develop a final recommended alignment for the Santa Ana River Trail (SART) within the designated project area. As such, it builds upon four prior studies:

- The Santa Ana River Corridor Trail System - 1990,
- The Santa Ana River National Recreational Trail Master Plan - 2004,
- The Wardlow Wash Feasibility Study - 2007, and
- The Reach 9 - Weir Canyon to Prado Basin Study circa 2006.

The SART covers a total of 110 miles, 75 of which are located in the coastal valleys and consist of both paved and soft surface trails. The remaining 35 miles are within the San Bernardino Mountains and consist of soft surface trails only. While most of the 75 mile SART has been completed, final planning and construction of the project area segment has been delayed. The project area segment has complications created by steep topography to the north and south of the river, flood control and habitat conflicts, the Green River Golf Course, and local development. (From just westerly of State Route 71 downstream through the Green River Golf Course, the trail alignment is the subject of a separate study. Decisions regarding this area have influenced the alignments recommended in this report.)

Building on the four prior studies, this project analyzed the project area in depth with evaluations of technical constraints, environmental impacts and costs. The choices were narrowed to alignments described in Section 8 found in Appendix A. As part of the planning process, the project area was divided into twelve reaches to provide a point of reference for communication, both verbal and written. These reach numbers have been used throughout this report to assist the reader in orienting themselves to map exhibits and for comparing other exhibits.

A number of factors were considered and included in the process of determining the recommended alignments. The following section describes the various investigations that were conducted along with the process used to evaluate and select the recommended alignments. These are followed by a description of the final alignment broken down into the twelve separate reaches and starting at the downstream end.

## Project Area

The project area extends from just westerly of State Route 71 (SR-71) in Corona to the existing SART in the Hidden Valley Wildlife Area at the western edge of Riverside. It encompasses the following:

- Prado Dam and Flood Control Basin,
- Orange County Water District (OCWD) conservation lands within and adjacent to Prado Basin, and
- The residential communities of Corona, Norco, and Eastvale, as well as unincorporated territory of Riverside County.

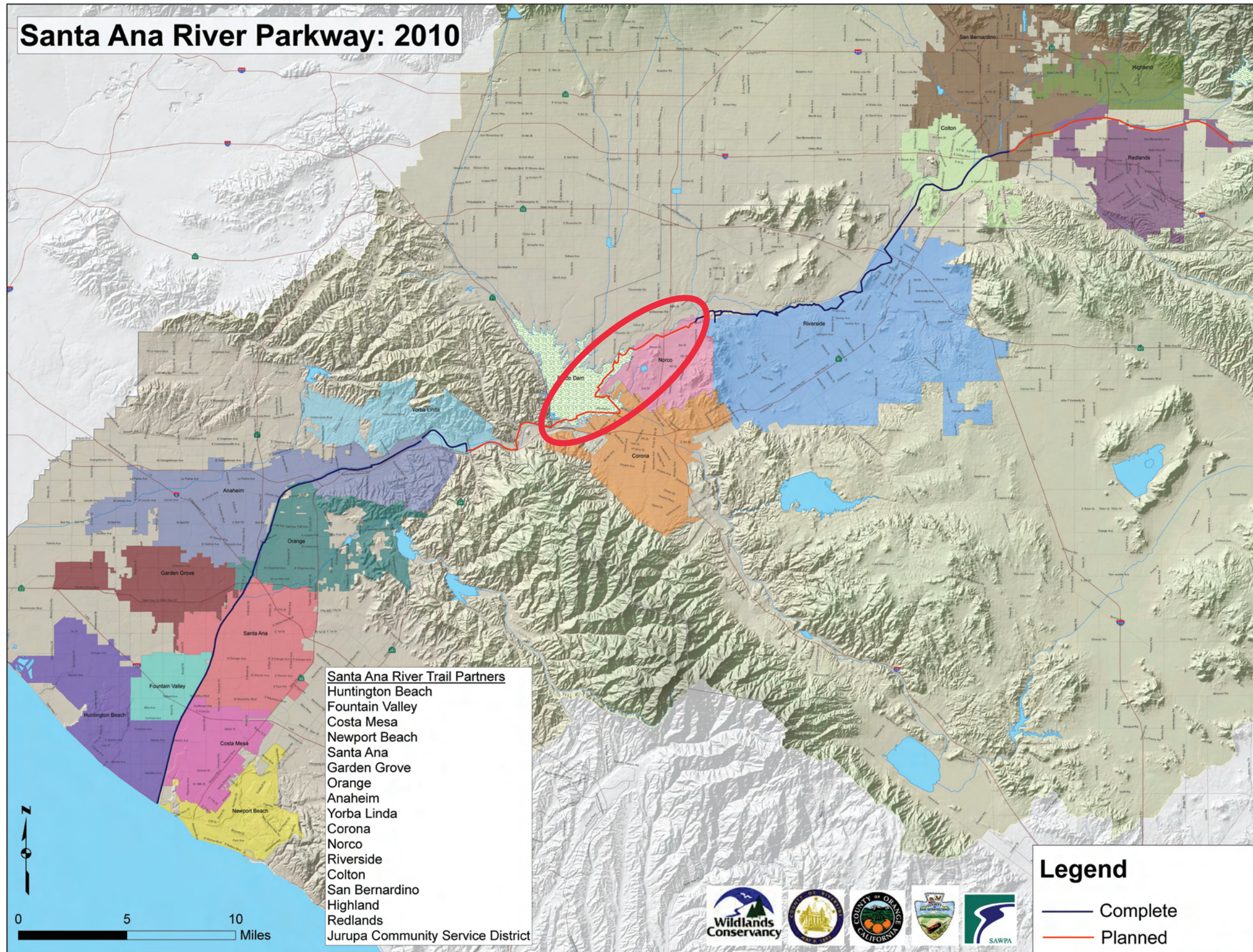
As can be seen on the map on the following page, it is one of the remaining unfinished segments of the trail.



*Downstream the segment of the Santa Ana River trail proposed in this report will connect to a segment of the Santa Ana River Trail (currently being planned) at the termination of the outflow channel maintenance roads downstream of SR-71.*



*Upstream the segment of the Santa Ana River Trail proposed in this report will connect to the existing Santa Ana River Trail in Hidden Valley Wildlife area.*



**Map 1: Orange County and Inland Empire**

 **Project Area**

## Planning Process

The planning process began with discussions with land owning and regulatory agencies so as to determine critical information affecting the project. Extensive field investigations were also conducted early, covering a variety of concerns. This collective information was utilized to develop criteria for choosing alignments.

Existing and proposed public works facilities near the river were prioritized for trail alignments because they provided cost savings, minimized or mitigated environmental impacts, as well as avoided geotechnical and flooding issues.

Once these were selected, the most desirable and feasible alignments which connected the public works facilities and best met the trail selection criteria were chosen. Public parks along the selected route were also evaluated for their suitability to serve as staging areas and provide public facilities at convenient locations along the trails.

Maps 1-1 and 1-2 within this section illustrate the recommended alignment descriptions while Tables 1-1 and 1-2 provide additional details.

## Public Ownership and Public Projects

After identifying property owners (see Section 6 in Appendix A), and noting that much of the property is publicly owned, meetings were held with the following public agencies to discuss potential alignments on their property:

- United States Army Corps of Engineers (USACE),
- Orange County Flood Control Division, (OCFCD),
- Orange County Water District (OCWD),
- City of Corona,
- City of Norco, and
- Jurupa Community Services District (JCSD).

## USACE

The USACE staff provided guidance regarding the trail alignment and agreed to a trail alignment on several of their flood control structures including:

- Both sides of the outflow channel maintenance roads,
- Bridge connection over the outflow channel connecting the two maintenance roads,
- Auxiliary dike,
- Wastewater treatment dike,
- Alcoa dike, and
- Norco bluff stabilization.

The use of the USACE facilities provided an opportunity to avoid or minimize habitat impacts and avoid flood prone areas. A schedule of their anticipated construction completion for these structures provided guidance in the development of the SART Phasing Plan (see Section 3).

## OCFCD

The OCFCD staff worked with the project team to determine where the connections between the Orange County and Riverside County trails would occur west of SR-71, and in particular, whether they would be on the north or south sides of the Santa Ana River. The recommended trail placement coordinates with their selection downstream, by placing the paved (bicycle) trail on the south side of the river, and the soft surface (equestrian) trail on the north side.

OCFCD staff agreed in concept to a staging area on their property at Auto Center Dr. A specific agreement was not developed as a part of this report.

## OCWD

OCWD staff expressed strong concerns about willow habitat and flooding impacts of a trail alignment in their river bed property between Stagecoach Dr. and River Rd. To avoid this OCWD property, an alignment on Bluff St. has been selected. A future paved route through this stretch is possible on a bench above the river bottom near the base of the bluff, if an agreement can be reached with adjacent land owners.

## City of Corona

The City of Corona elected to meet internally with the city's parks department and Corona Municipal Airport management, to discuss designation of Butterfield and Stagecoach Parks for trail staging, and alignment of the SART on airport property adjacent to Butterfield Dr., Smith Ave. and Rincon St. Both agencies provided recommendations and guidance for use of their facilities.

## City of Norco

City of Norco staff met with the project team on several occasions to discuss trail alignments on public streets in Norco. These alignments were necessary to maintain connectivity while avoiding segments where it is difficult to locate the trails adjacent to the Santa Ana River. These difficulties included private ownerships along the bluff, flood erosion issues, and habitat concerns. Consequently, staff recommended the use of public streets for the alignment. Various routes through Norco were discussed, and recommended alignments were selected including locations where proposed roadway work would increase roadway width sufficient to provide for bike lanes. The soft surface trail would be located on existing equestrian trails located adjacent to the roadway where possible. In particular, Norco staff encouraged a route that would take advantage of the following Norco roadway projects:

- Community Center Parking Lot Expansion (Hamner Ave.),
- Norco Dr. (Fifth St. to Cedar Ave.), and
- Hamner Ave. widening (Santa Ana River north to Citrus St.).

Norco staff supported the concept that the interim roadway alignments for both trails through Norco, from River Rd. to Hamner Ave., would become a loop trail after the proposed updated Hamner Ave. bridge and Eastvale trail segments are completed, and the officially designated trail is moved to the north side of the river.

## JCSD

JCSD conditioned developers to build parallel paved and soft surface trails adjacent to the Santa Ana River, between Grapewin St. and Sumner Ave. in Eastvale. The JCSD staff said that the District will also condition future developments for completion of the trails from Sumner Ave. to the proposed Eastvale Community Park. Current plans for the park include the trail located along the river. The District supports the connection of the Eastvale trails to the Santa Ana River Trail in Norco via trails along Hamner Ave. and a trail lane on the proposed Hamner Ave. bridge replacement. When the bridge is completed, it is proposed that the official SART will move to the north side of the river from Hamner Ave. to River Road.

## Field Surveys and Assessments - Biological

Following the initial field trips (see Section 8 Alternative Alignments in Appendix A), an in-depth process of evaluation was completed as follows:

- Initial habitat assessments were completed along the three alternate alignments (alternatives) and mapped.
- As the non-Federally owned portions of the project area are within the boundaries of the Riverside County Multi-Species Habitat Conservation Plan (MSHCP), the impacts of the alternatives were evaluated and an MSHCP Consistency Report was prepared.
- Focused species surveys were completed, including:
  - Burrowing Owl Surveys in support of MSHCP,
  - Sensitive Plant Surveys in support of MSHCP, and
  - Least Bell's Vireo Surveys following USFWS protocols.
- A Preliminary Jurisdictional Delineation and Assessment was completed.
- A Cultural Resources Records Search and survey of relevant locations for the entire project area was completed.

The biological assessment included the following processes, which, after a public review, are anticipated to be completed by Fall 2011:

- Initial Assessment
- CEQA
- NEPA

A description of this process can be found in Section 6 - Ownership Study.

## Field Surveys and Assessments - Engineering

A survey team visited the areas to assess the geology and soils. The scope of the study included the following tasks:

- Review of existing relevant and easily available geologic and hydrogeologic information near the Prado Basin,
- Review of existing soil laboratory test data and geotechnical documents,
- Site reconnaissance,
- Determination of soils removal and compaction needs, and
- Report preparation.

A geotechnical study was performed to evaluate the underlying soil conditions of the proposed trail paths for both paved and soft surface trails. This study resulted in recommendations of the depths for soils removal, fill, and re-compaction. The details are more fully explained in Appendix E - Santa Ana River Trail Preliminary Geotechnical Study. The study was performed based on the anticipated trail route shown on the preliminary plans and profiles prepared by WRC Consulting Services, Inc. along with a review of aerial photography, meetings with various governmental agencies, and review of readily accessible geologic maps, subsurface geotechnical investigations, and data. The soils removal and re-compaction depths are identified for each segment of the trail on the geotechnical maps (see sheets C-04 through C-07, sheets C-11 through C-17, and sheets C-20 through C-28 in Appendix E).

## Soil Field Studies

The geotechnical literature review and field studies found the soils to be adequately stable to support both paved and soft surface trails. Recommendations for the paved trail were:

- "After the paved trail alignment is clear of all vegetation and organics, loose or soft soils should be over-excavated and replaced with certified compacted fill to a depth of 1-3 feet (or 3-5 feet, depending on the conditions) with a fill cap extending a minimum 1 to 1 projection beyond the edge of the river trail for pavement support (the removals would extend out from 3 to 5 feet wider than the anticipated trail edges)."
- On bridges or narrow bluffs where space is sufficient, the multi-use trail will consist of two 5' wide bike lanes and a 6' shoulder of decomposed granite (DG) on one side, with no separation between the two surfaces.

In locations where soil is deemed suitable by soil studies, the planned soft surface trail is separated from the paved trail and the recommendation is for a decomposed granite (DG) trail.

The soils and geotechnical information provided in Appendix E should not be considered all inclusive. Supportive investigations will be required for each segment of the trail for the final engineering planning.

## Flooding Evaluations

The completion of the Prado Dam reconfiguration and dike construction will provide the capacity for storage of water within the Prado Basin up to the 566' contour level. Flooding is also a factor below the spillway when the basin reaches capacity. As a result, flooding of segments of the trail from below the spillway to Hamner Ave. will periodically occur as follows:

- Where the trails traverse the spillway channel, flood waters released from the spillway may wash out the trails, requiring replacement.
- Between the outflow channel and Pomona Rincon Rd., the trails will be located on the bluff along the southern perimeter of the basin or on USACE flood control structures where they will be safe from flooding. Areas subject to inundation are the reaches from Pomona Rincon Rd., around the periphery of the basin to the knoll of the bluff. (The "knoll of the bluff" is used as a reference point for an area at the westerly end of the bluff overlooking the Prado Basin.) With the exception of the area adjacent to Temescal Creek along Rincon St., the water will be pooling and will not exert adequate force to wash out the trails. It will likely deposit mud and debris on the trail surfaces. The contours in this area vary by about 15 feet, with the lowest areas along Butterfield Dr. Flooding will affect the paved and soft surface trails differently as follows:
  - The paved trail can be cleared of debris, swept, and washed, as needed, and
  - The soft surface trail can be cleared of debris, but depending on the amount of mud deposited, may require resurfacing with a coat of fresh DG.

Three public workshops were held during 2010 to obtain public inputs concerning the trail.

Written and oral comments were provided by attendees and catalogued by the project team. In general the attendees were positive about the recommended alignment. Topics of concern included:

- Signage,
- Staging/Rest areas,
- Class II bike lanes, and
- Safety.

A more complete description of the public inputs are found in Section 9.

## Recommended Alignments

### Trail types

The following five trail types are recommended in the Master Plan:

- Soft-surface trail - The soft surface trail will consist of compacted subgrade or compacted dirt overtopped with decomposed granite and a stabilizing agent for a firm unyielding surface. The soft surface trail is intended to be used by hikers, joggers, equestrians, and pedestrians. It is usually safer to keep bicyclists on a separate trail due to their faster speed and the different surface material that is suited to their needs.
- Class I Paved bike path - Class I bike paths provide a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized. The Class I bikeways will meet Caltrans Standards.
- Class II - The Class II bikeway will consist of two, one-way bike lanes on the roadway on each side of the street, separated from vehicular traffic by striping and proceeding in the same direction as traffic. This street route will be identified by signage and meet Caltrans Standards.
- Class Ib - The Class Ib bikeway is a modified Class I. Like the Class I bikeway, it will be a two-way trail, striped down the middle. However, instead of four feet or more separation from the roadway, it will be on the roadway separated from vehicular traffic by a low barrier in the pavement.
- Multi-use trail - The multi-use trail will be constructed to Caltrans Class I standards, with soft surface shoulders of varying widths depending on existing conditions. It will be utilized when space is limited, and shared by all users.

- From the knoll around the base of the bluff to River Rd., alternatives in the river bed would be subject to both flooding and washout because of their proximity to the river channel. However, the proposed future alignment provides a bench 15'-20' up the slope of the bluff, lessening the potential for flooding and washout.
- The trail lane on the newly constructed River Rd. bridge is designed to be above the 100 year flood line.
- At a higher elevation, the trail on the bluff adjacent to Kendra Lane in Eastvale is less subject to flooding and washout. In extreme storm events, however, it may be affected.
- The proposed design for the USACE bluff stabilization downstream of Hamner Ave. shows the bench at the top to be at the 100 year flood level, so a trail on the future bench would only be subject to flooding infrequently.
- A trail lane on the anticipated Hamner Ave. bridge would also be above the 100 year flood level.
- A trail on the bench on the existing USACE bluff stabilization upstream of Hamner Ave. would also be above the anticipated 100 year flood level.

More complete hydrology information can be found in the Preliminary Drainage Study, Santa Ana River Trail, Appendix D.



*The recommended soft surface trail in Norco will be located on the USACE bench out of the flood plain.*

## Reaches

The following is a description of the recommended alignments, broken down into individual reaches, starting from downstream (southwest) and extending upstream (northeast). Maps showing the location and limits of reaches are found on the pages facing these descriptions. In addition, tables are provided that give more detailed data and comments. Relevant trail criteria are in the boxes to the left.

### Reach I

#### Trail Criteria Met

- Minimizes environmental impacts
- Located in scenic areas
- Safe for users
- Cost effective
- Technically feasible
- Meets ADA standards
- Provides a direct route
- Provides facilities for all users
- Connects to other trails

#### Habitat

- Slender-horned spineflower and Brand's phacelia

#### Adjacent Trail Separation Type

- Trails not adjacent

#### Staging

- None

### Reach II

#### Trail Criteria Met

- Minimizes environmental impacts
- Safe for users
- Cost effective
- Technically feasible
- Provides a direct route
- Provides facilities for all users

#### Habitat

- Burrowing owl
- Least Bell's vireo

#### Adjacent Trail Separation Type

- Native landscaping

#### Staging

- None

### Reach I:

Extents: From about 600 feet downstream of SR-71 to the upstream end of the newly built USACE outflow channel maintenance roads, one trail of each type (paved and soft surface) located on each side of the Santa Ana River, and connected by a maintenance bridge. The area is constrained by Prado Dam on the north and SR-91 on the south. To minimize environmental impacts the trails will be located on the existing USACE outflow maintenance roads.

- To connect to the proposed paved SART segment downstream, the recommended paved trail will be on the left (facing downstream) maintenance road. This alignment will also make possible a connection to the proposed Wardlow Wash Trail at the existing SR-91 drainage undercrossing just downstream.
- The recommended soft surface alignment on the right maintenance road will connect to the proposed soft surface SART downstream, and the Aliso Canyon entry to Chino Hills State Park. At the upstream end of the maintenance road, the soft surface alignment will utilize the existing USACE maintenance bridge to cross the river.

Safety fencing along the channel, and regulatory signage will be added for both trails. An existing interpretive kiosk is located adjacent to the bridge.

### Reach II:

Extents: From the upstream end of the USACE outflow channel maintenance roads to the downstream edge of the proposed auxiliary dike. Still on USACE property, both trails will traverse the spillway plain to reach the base of the bluff. Both trails will be subject to washout in this location during rare heavy flood events that cause water to overflow the spillway.

After traversing the spillway plain, both trails will climb to the top of the bluff. These trails will exceed 8% grades and some disabled users may need to bypass the SART from Green River Golf Course, using Green River Rd., Palisades Dr. and Serfas Club Dr., to Auto Center Dr. as outlined in the 2004 plan. From the top of the bluff, the trails will run parallel along the top of the bluff to the proposed auxiliary dike.

### Reach III

#### Trail Criteria Met

- Located in scenic area
- Safe for users
- Cost effective
- Technically feasible
- Meets ADA standards
- Provides a direct route
- Provides facilities for all users

#### Habitat

- Burrowing owl
- Least Bell's vireo

#### Adjacent Trail Separation Type

- Trails not adjacent

#### Staging

- None

### Reach IV

#### Trail Criteria Met

- Minimizes environmental impacts
- Located in scenic area
- Safe for users
- Cost effective (on dike)
- Technically feasible
- Meets ADA standards
- Provides a direct route
- Provides facilities for all users

#### Habitat

- Burrowing owl
- Least Bell's vireo
- Riparian woodland

#### Adjacent Trail Separation Type

- Typical trail fencing (Pomona Rincon Rd.)
- Trails not adjacent (remainder)

#### Staging

- New at Auto Center Dr. - autos/equestrian trailer

### Reach III:

Extents: From the downstream to the upstream edge of the proposed auxiliary dike.

- The recommended paved trail alignment will be on the top of the proposed USACE auxiliary dike, where there is adequate room for one trail. Safety fencing will be on the reservoir side of the trail where the slope will be armored with large rip rap. The landward side will be vegetated. A viewing area is recommended.
- The soft surface trail will be located at the base of the auxiliary dike on the reservoir side (see Exhibits 1-1 and 1-1a at the end of this section). After construction of the soft surface trail, all disturbed areas will be re-hydroseeded.

### Reach IV:

Extents: From the upstream end of the auxiliary dike to the upstream end of the wastewater treatment dike.

- The recommended alignment for both trails is parallel to, or on, the USACE Pomona Rincon Rd. maintenance road. At the existing USACE Prado Basin headquarters complex, the soft surface trail will move onto the pavement in front of the complex and then move back away from the roadway on the other side. Both trails will continue as a multi-use trail (with a wide shoulder) along Butterfield Dr. (an unpaved USACE maintenance road) adjacent to the tree line to Yorba St. (see Exhibit 1-2 at the end of this section).
- The paved trail alignment will use Yorba St. (an unpaved existing USACE maintenance road) to access the wastewater treatment dike where it will be located at the base of the dike on the existing paved trail.
- The soft surface trail alignment will continue east using the existing USACE Butterfield Dr. maintenance road.





**Map 1-1: Santa Ana River Trail - Recommended Trail Alignments, Reaches I-VIII**

**Legend**

Reach Extent Lines

City Boundary

Recommended, Class I Bikeway

Recommended, Soft Surface Trail

Recommended, Class Ib - On-Road

Recommended, Class II Bike Lanes

Recommended, Multi-use Trail

Recommended, Class I - Spur

Recommended, Class Ib - On-Road - Spur

Recommended, Soft Surface - Spur

Recommended, Multi-use - Spur

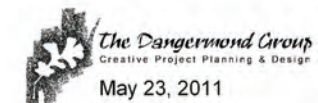
Existing, Class I

Existing, Soft Surface Trail

Future, Class I Bikeway

Future, Soft Surface Trail

Future, Multi-use Trail





**Reach V**

**Trail Criteria Met**

- Located in scenic area
- Safe for users
- Technically feasible
- Meets ADA standards
- Provides a direct route
- Connects to adjacent neighborhoods

**Habitat**

- Least Bell's vireo
- Riparian woodland
- Smooth tarplant

**Adjacent Trail Separation Type**

- Not adjacent

**Staging**

- Butterfield Stage Park - auto

**Reach V:**

Extents: Paved trail from upstream end of wastewater treatment dike to the western boundary of the Butterfield Park facilities. Soft surface trail from Yorba St. via Butterfield Dr. to the western boundary of the Butterfield Park facilities.

- After leaving the wastewater treatment dike the paved trail will utilize the existing USACE Clearwater Dr. maintenance road which has room for only one trail. Impacts to the surrounding willow habitat will be mostly limited to the adjacency of trail users, and minimal trimming required to maintain the trail. At the end of Clearwater Dr. the trail will join the soft surface trail on Butterfield Dr.
- The soft surface trail will use the existing Butterfield Dr. maintenance road to the paved portion of the road (see Exhibit 1-3).

**Reach VI**

**Trail Criteria Met**

- Minimizes environmental impacts
- Located in scenic area
- Safe for users
- Cost effective (Next to dike)
- Technically feasible
- Meets ADA standards
- Provides facilities for all users

**Habitat**

- Least Bell's vireo
- Riparian woodland

**Adjacent Trail Separation Type**

- Native landscaping

**Staging**

- None

**Reach VI:**

Extents: From western boundary of the Butterfield Park facilities to the Temescal Creek vehicular crossing (bridge).

- Both trails will enter the Corona Municipal Airport, on property leased from the USACE, through an opening in the fence, and proceed along the northern side of paved portion of Butterfield Dr. to the proposed USACE alcoa dike (see Exhibit 1-4). An additional chain link fence will be installed on the airport side of the trails. These trails will be used for emergency evacuation of airplanes during large storm events.
- Both trails will run parallel at the base of the proposed alcoa dike. The soft surface trail will be on the airport side, the paved trail will be on a raised bench at the base of the dike (see Exhibit 1-5).
- After leaving the alcoa dike, both trails will utilize the existing water pond berms to Temescal Creek located on USACE property.

**Reach VII**

**Trail Criteria Met**

- Located in scenic area
- Safe for users
- Technically feasible
- Close to river
- Meets ADA standards
- Provides facilities for all users

**Habitat**

- Least Bell's vireo
- Riparian woodland

**Adjacent Trail Separation Type**

- Adjacent

**Staging**

- Stagecoach Park - auto

**Reach VII:**

Extents: From Temescal Creek to the base of the knoll of the bluff (in Corona).

- The recommended alignment for both trails will utilize a new trail bridge, located downstream of the existing vehicular bridge, to cross Temescal Creek. To reduce the footprint and cost of the bridge, the bridge will be a two lane multi-use bridge.
- Both trail alignments will parallel Rincon St., offset from the roadway by varying amounts of willow habitat, on property owned by USACE. The paved trail will be closest to the roadway. Habitat in this area is degraded, so mitigation may include removing exotic plants and enhancing the habitat (see Exhibit 1-6).
- Both trail alignments will proceed through about 800 feet of existing willow habitat to the base of the knoll of the bluff.

**Reach VIII**

**Trail Criteria Met**

- Minimizes environmental impacts (street route)
- Located in scenic areas (knoll)
- Safe for users
- Cost effective (street)
- Technically feasible
- Meets ADA standards
- Provides a direct route
- Provides facilities for all users
- Connects to other trails (street)

**Habitat**

- Least Bell's vireo
- Riparian woodland
- Brand's phacelia

**Adjacent Trail Separation Type**

- Multi-use trail has no separation (knoll of bluff)
- Typical trail fencing (short-term equestrian Bluff St.)
- Not adjacent (long-term bench on base of bluff)

**Staging**

- None

**Reach VIII:**

Extents: From the base of the knoll of the bluff to River Rd.

- Both trails will share a multi-use trail on the existing maintenance road at the base of the knoll of the bluff. One privately owned parcel will need to be purchased. The remainder of the property is owned by the USACE.
- After rounding the knoll of the bluff, both trails will climb the bluff and traverse the OCWD property to reach the intersection of Stagecoach Dr. and Bluff St. The precise location on the OCWD property needs to be negotiated with the District.
- For the paved trail there are two recommended alignments for the reach upstream of Stagecoach Dr.:
  - The short term alignment will be Class II bike lanes on Bluff St.
  - The long term alignment is contingent on obtaining use agreements for properties along the north west side of Bluff St. If use agreements are obtained, the paved trail will be located on a bench built at the base of the bluff (see Exhibit 1-7).
- The soft surface trail alignment will be the existing equestrian trail on the southeast side of Bluff St.



**Map 1-1: Santa Ana River Trail - Recommended Trail Alignments, Reaches I-VIII**

**Legend**

- Reach Extent Lines
- City Boundary
- Recommended, Class I Bikeway
- Recommended, Soft Surface Trail

- Recommended, Class Ib - On-Road
- Recommended, Class II Bike Lanes
- Recommended, Multi-use Trail
- Recommended, Class I - Spur
- Recommended, Class Ib - On-Road - Spur
- Recommended, Soft Surface - Spur

- Recommended, Multi-use - Spur
- Existing, Class I
- Existing, Soft Surface Trail
- Future, Class I Bikeway
- Future, Soft Surface Trail
- Future, Multi-use Trail



**Reach IX-X - Interim**

**Trail Criteria Met**

- Minimizes environmental impacts (street route)
- Safe for users
- Cost effective
- Technically feasible
- Meets ADA standards
- Provides a direct route
- Provides facilities for all users
- Connects to other trails

**Habitat**

- None

**Adjacent Trail Separation**

- Typical trail fencing

**Staging**

- Corydon Staging Area & George Ingalls Equestrian Event Center - auto/equestrian trailer
- Norco Community Center Park - auto

**Reaches IX-X Interim Alternative:**

Extents: From River Rd. to the intersection of Old Hamner Rd. and Detroit Ave.

- River Rd.
- Corydon Ave.
- Norco Dr.
- Cedar Ave.
- Alhambra St.
- Acacia Ave.
- Taft St.
- Old Hamner Rd.
- The soft surface trail will be adjacent to the roadway on the same streets as the paved trail with one exception (see Exhibit 1-9). Instead of following Cedar Ave. to Alhambra St., the soft surface trail will proceed only to the south boundary of the Norco Community Park, at which time it will proceed along the boundary of the park to Acacia Ave.
- The soft surface trail will largely be on existing Norco equestrian trails.

**Reach IX - Spur**

**Trail Criteria Met**

- Minimizes environmental impacts
- Located in a scenic area
- Safe for users
- Cost effective
- Technically feasible
- Close to the river
- Meets ADA standards
- Provides a direct route
- Provides facilities for all users
- Connects to other trails

**Habitat**

- Least Bell's vireo
- Riparian woodlands
- Brand's phacelia

**Adjacent Trail Separation**

- No separation - Multi-use

**Staging**

- Riverwalk Park - auto

**Reach IX - Spur/Long-Term Recommended Alternative:**

Extents: From River Rd. to western border of proposed Eastvale Community Park.

- Both trails will use the existing multi-use trail on the east side of River Rd. from Bluff St. to the River Rd. bridge.
- Both trails will use the River Rd. bridge trail lane to cross the Santa Ana River.
- The trails will be on property on the north side of the River owned by USACE and Riverside County Regional Parks and Open Space District. They will share a multi-use trail along the top of the bluff from River Road to Prado Basin Road on an existing maintenance road. The proposed trail will continue as a multi-use trail along the bluff from Prado Basin Road to the existing trail at Dearborn Street. This will necessitate easements from the current property owners or be a condition of approval for development of this area.
- From Dearborn St. to Sumner Ave. both trails will utilize the existing JCSD trails which run adjacent along the river.
- New paved and soft surface trails along the river, from Sumner Ave. to the western perimeter of the proposed Eastvale Community Park, are proposed as a condition of approval for future development.

**Reach X - Spur**

**Trail Criteria Met**

- Minimizes environmental impacts
- Located in a scenic area
- Safe for users
- Cost effective
- Technically feasible
- Close to the river
- Meets ADA standards
- Provides a direct route
- Provides facilities for all users
- Connects to other trails

**Habitat**

- Least Bell's vireo
- Riparian woodlands
- Brand's phacelia

**Adjacent Trail Separation**

- Native landscaping (in park)
- Fence (both on Hamner Ave.)
- Low street barrier (paved/vehicles along Hamner Ave.)
- Fence on maintenance road

**Staging**

- Eastvale Comm. Park - auto
- Silverlakes Equestrian & Sports Park - auto/eques. trailers

**Reaches XI-XII**

**Trail Criteria Met**

- Minimizes environmental impacts
- Located in scenic area (bench)
- Safe for users
- Cost effective
- Technically feasible
- Close to the river (bench)
- Meets ADA standards
- Provides a direct route
- Provides facilities for all users
- Connects to other trails

**Habitat**

- Minimal mulefat scrub along Arlington Ave.

**Adjacent Trail Separation**

- Native landscaping along Arlington Ave.

**Staging**

- George Ingalls Equest. Event Center - auto/equestrian trailers (connects to SART via Norco equest. trail system)

**Reach X - Spur/Long-Term Recommended and Future Alternatives:**

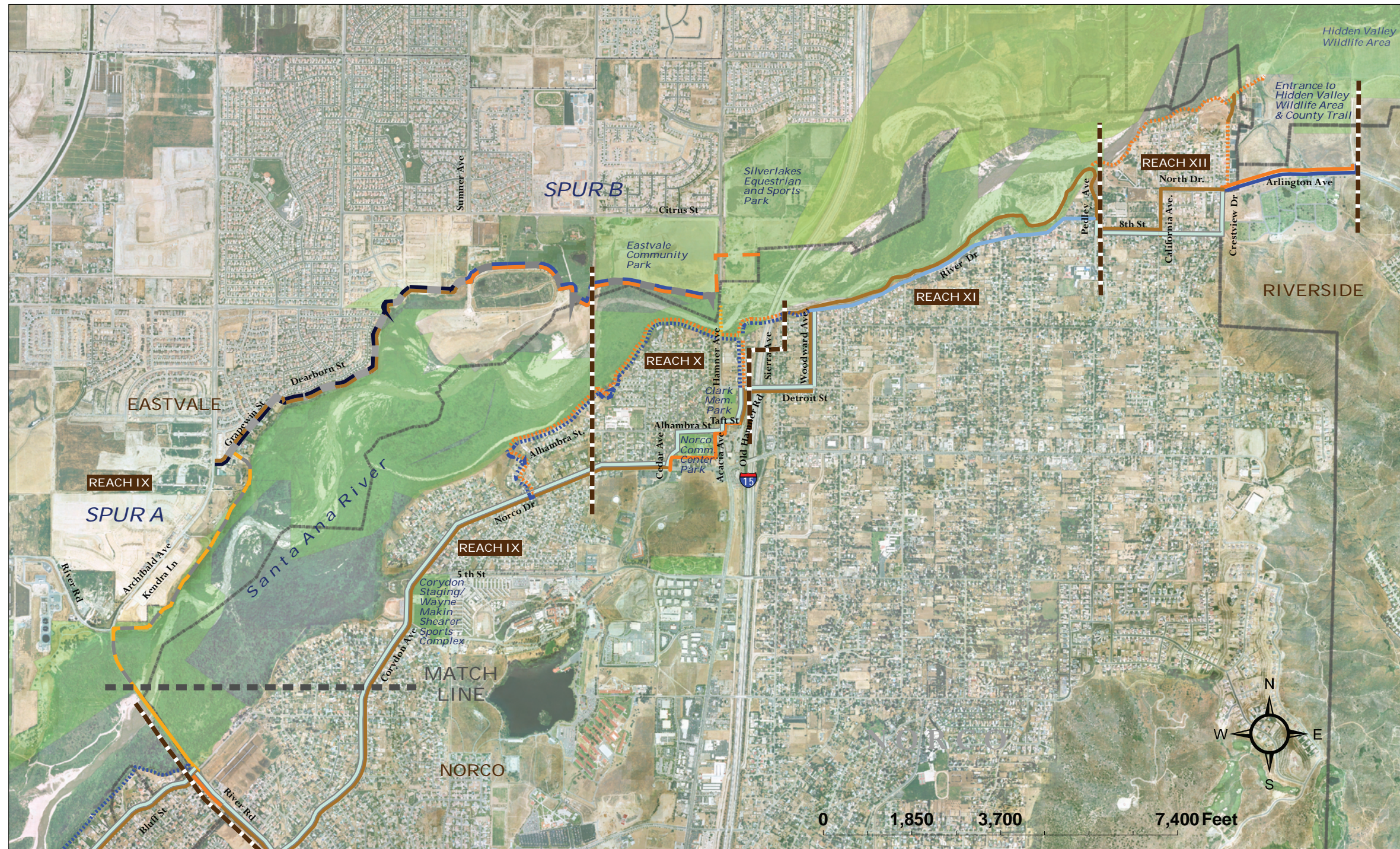
Extents: From the western border of Eastvale Community Park to River Dr. and USACE bluff stabilization bench.

- Both trails will be incorporated in the proposed Eastvale Community Park, running west to east.
- At the eastern perimeter of the Eastvale Community Park:
  - The paved trail will be a specialized Class I which will be a two way bike facility located on the roadway adjacent to the southbound lane of traffic on Hamner Ave. It will be separated by a low barrier in the pavement and classified as a Class Ib trail and will connect to the proposed future Hamner Ave. bridge trail lane (see Exhibit 1-11).
  - The soft surface trail will be along the edge of Hamner Ave., running parallel to the paved Class Ib trail, and will connect to the proposed future Hamner Ave. bridge trail lane (see Exhibit 1-11).
  - A soft surface spur to the proposed Silverlakes Equestrian and Sports Park will utilize the proposed causeway beneath Hamner Ave.
- Both trails will utilize the proposed trail lane adjacent to the southbound vehicular lane on the proposed Hamner Ave. bridge replacement.
- At the south end of the bridge, the paved trail will utilize the existing USACE maintenance road to access River Dr.
- The soft surface trail will use the existing USACE maintenance road to access the existing USACE bluff stabilization bench at the base of the bluff. (The exact location and method whereby the two trails will leave the bridge trail lane is not yet known because the bridge has not been designed.)

**Reaches XI-XII:**

Extents: From the intersection of Old Hamner Rd. and Detroit Ave. to Hidden Valley Wildlife Area.

- Continue from Old Hamner Rd. to Detroit St. and then on Woodward Ave. to its northern terminus at River Dr.
- On River Dr. the paved trail will be a Class Ib Bikeway directly adjacent to the westbound lane of traffic from Woodward Ave. to Pedley Ave. and then south to Eighth St.
- Parallel to River Dr., the soft surface trail will be on the USACE bluff stabilization bench at the base of the bluff. The soft surface trail will use the bench with access using existing trails at Woodward Ave. and at Pedley Ave. (see Exhibit 1-10).
- The paved trail will continue as a Class II bikeway on Eighth St., joined by the soft surface trail which will be located on the existing equestrian trail.
- Both trails will continue as a Class II bikeway and a soft surface trail (on the existing equestrian trail) to California Ave.
- The paved trail will continue on Eighth St. to Crestview Dr., and then to Arlington Ave.
- The soft surface trail will turn north on existing trails along California Ave. and then east on existing trails on North Dr. to Arlington Ave.
- On Arlington Ave. the paved trail will run parallel to a new soft surface trail, both of which will be offset from the westbound lane of traffic (see Exhibit 1-12).



Map 1-2: Santa Ana River Trail - Recommended Trail Alignments, Reaches IX-XII

**Legend**

Reach Extent Lines

City Boundary

Recommended, Class I Bikeway

Recommended, Soft Surface Trail

Recommended, Class Ib - On-Road

Existing, Soft Surface Trail

Recommended, Class II Bike Lanes

Recommended, Multi-use Trail

Recommended, Class I Bikeway - Spur

Recommended, Class Ib - On-Road - Spur

Recommended, Soft Surface Trail - Spur

Recommended, Multi-use - Spur

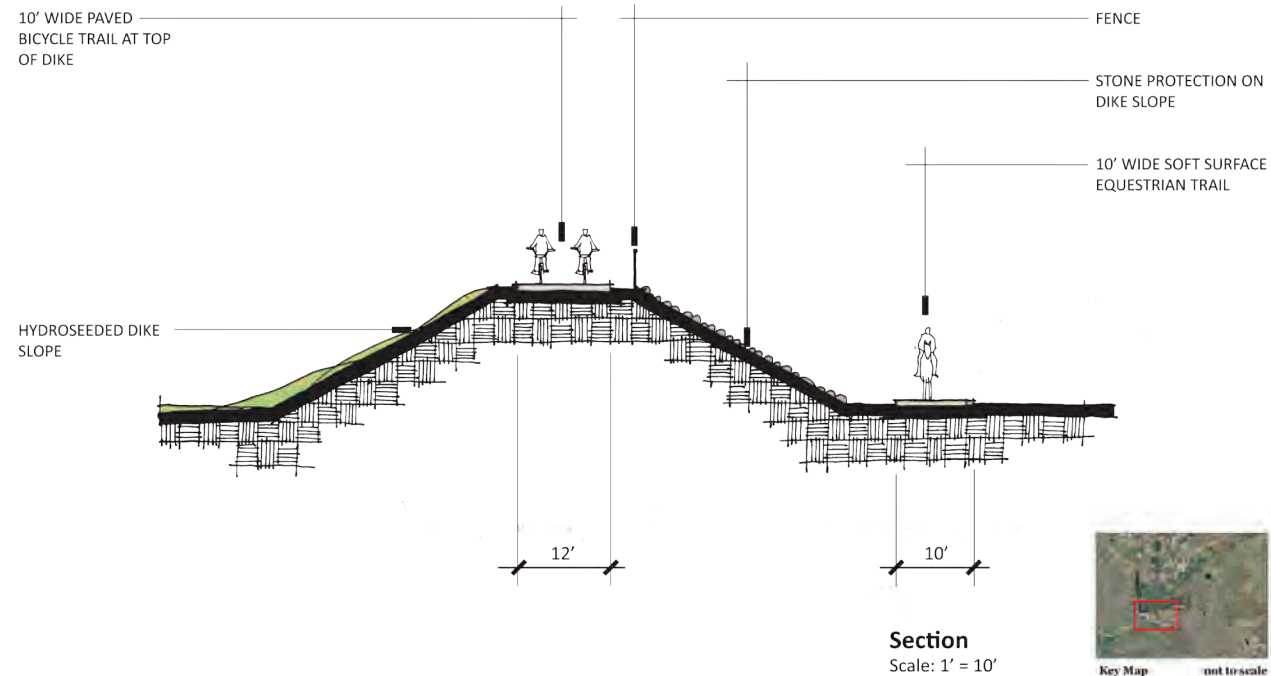
Existing, Class I - Spur

Existing, Soft Surface Trail - Spur

Future, Class I Bikeway

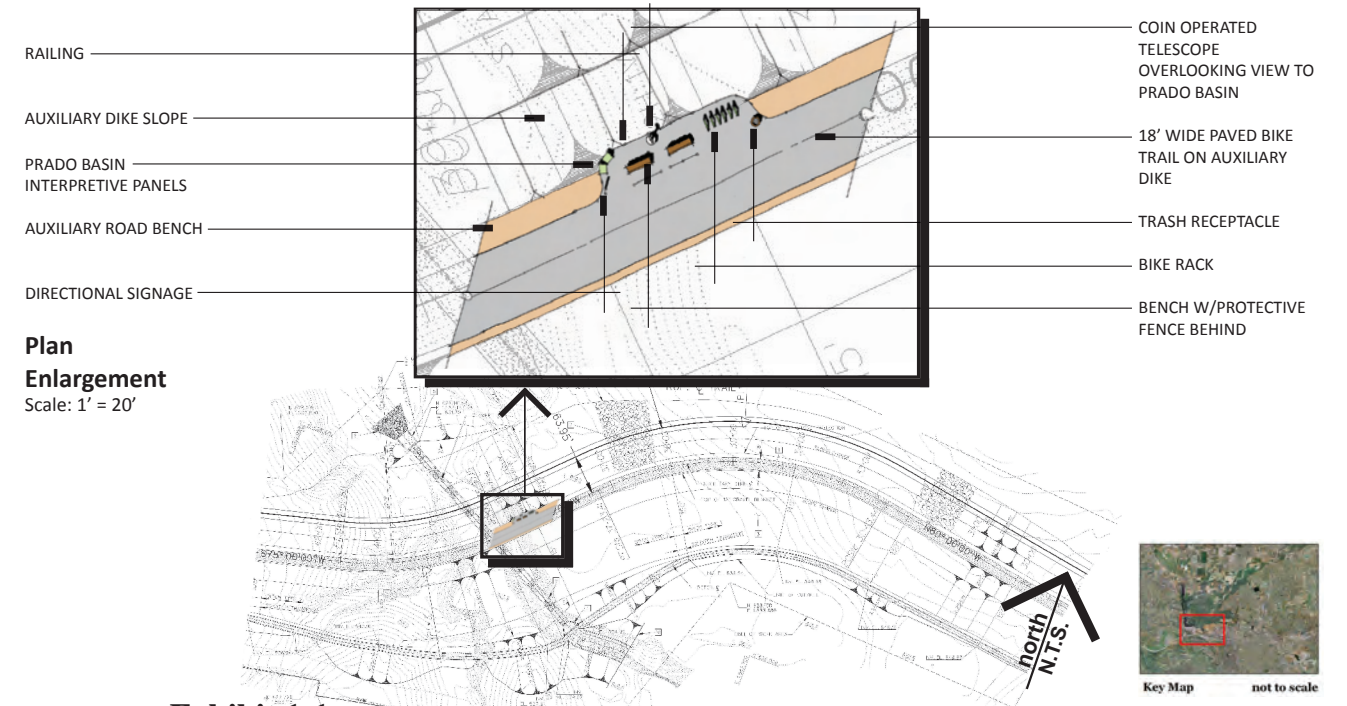
Future, Soft Surface Trail

Future, Multi-use Trail



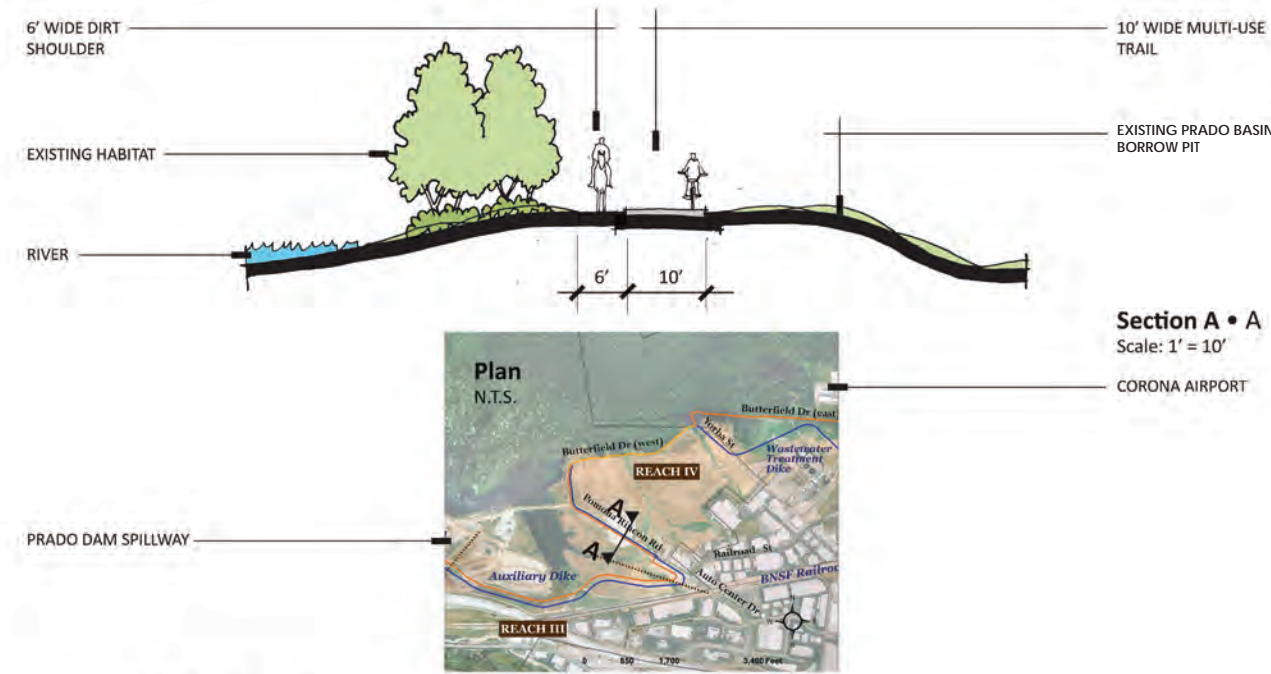
**Exhibit 1 - 1**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**Reach III - Alt. - 1, Auxiliary Dike Trails, Prado Basin**

December 17, 2010  
The Design Group



**Exhibit 1-1a**  
**Santa Ana River Trail - Potential Trail Alignments**  
**REACH III, Bike Trail Rest Area on Auxiliary Dike**

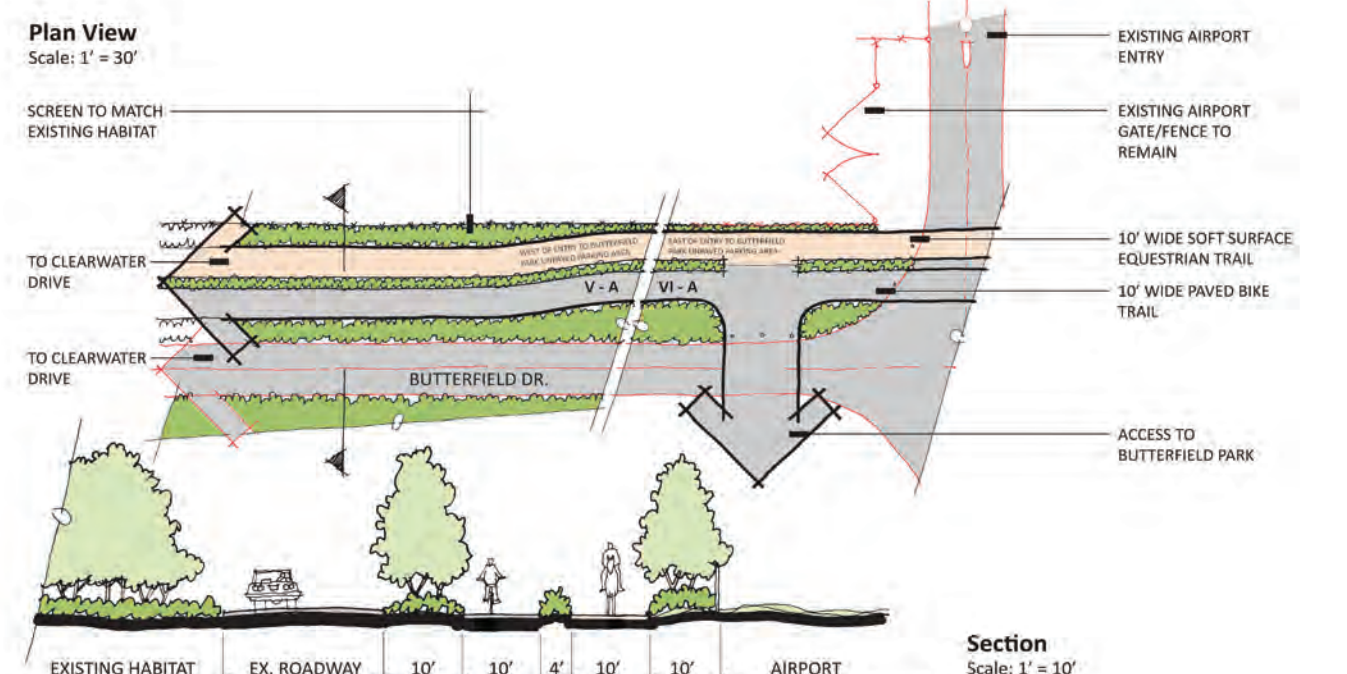
May 24, 2010  
The Design Group



**Exhibit 1-2**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH IV - Butterfield Dr. (West)**



The Design Group



**Exhibit 1-3**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH V - Butterfield Dr., (East) Corona, CA**

The Design Group

**Plan View**

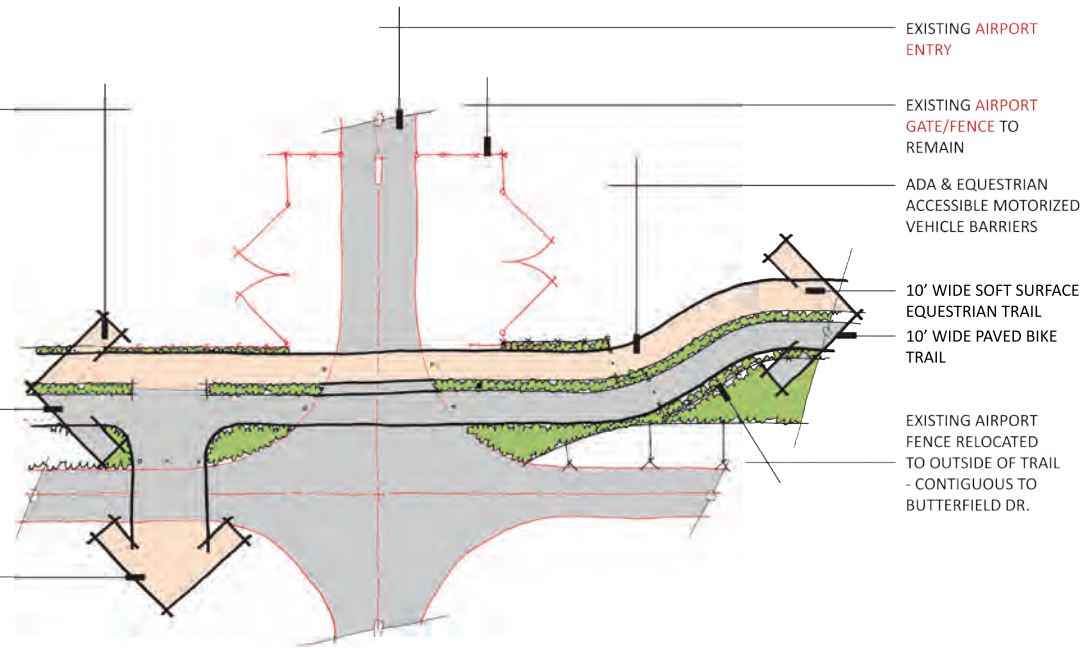
Scale: 1" = 30'

MEET EXISTING AIRPORT FENCE WITH RELOCATED EXISTING AIRPORT FENCE

NOTE: RED LINES INDICATE EXISTING CONDITIONS

TO CLEARWATER DR.

ACCESS TO BUTTERFIELD PARK



EXISTING AIRPORT ENTRY

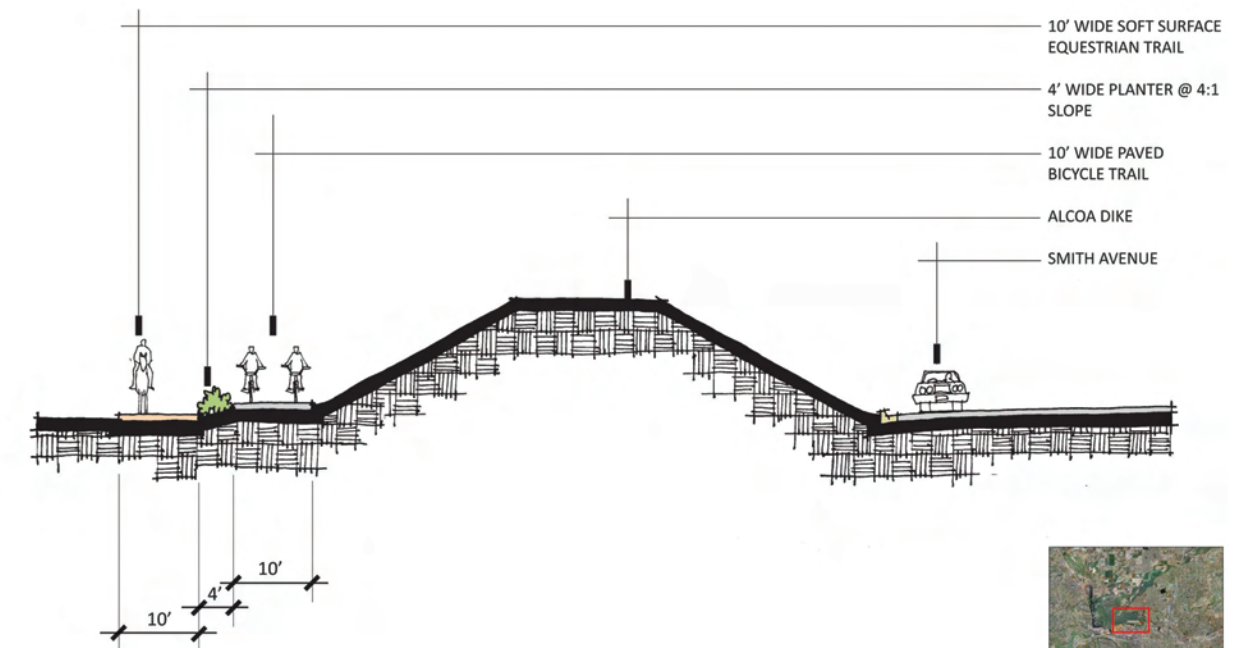
EXISTING AIRPORT GATE/FENCE TO REMAIN

ADA & EQUESTRIAN ACCESSIBLE MOTORIZED VEHICLE BARRIERS

10' WIDE SOFT SURFACE EQUESTRIAN TRAIL  
10' WIDE PAVED BIKE TRAIL

EXISTING AIRPORT FENCE RELOCATED TO OUTSIDE OF TRAIL - CONTIGUOUS TO BUTTERFIELD DR.

**Exhibit 1-4**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH VI, Aviation Dr., Corona, CA**



Key Map not to scale

**Exhibit 1 - 5**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH VI, Alcoa Dike Trails, Corona, CA**



June 7, 2010

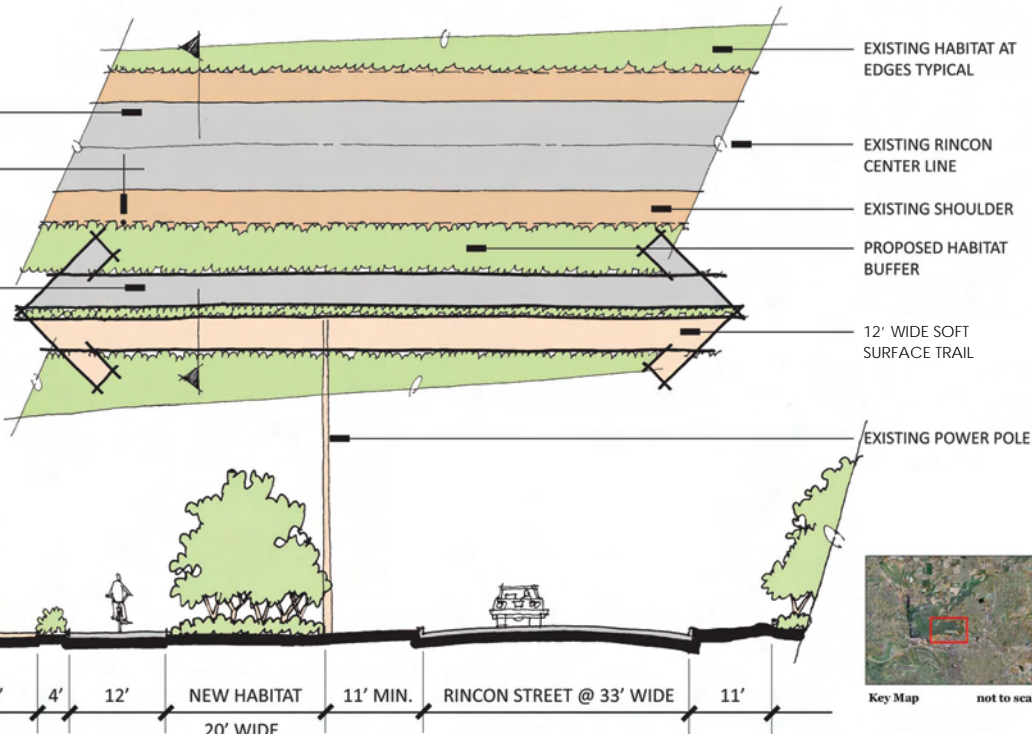
**Plan View**

Scale: 1" = 30'

RINCON STREET

EXISTING POWER POLE

12' WIDE PAVED TRAIL



EXISTING HABITAT AT EDGES TYPICAL

EXISTING RINCON CENTER LINE

EXISTING SHOULDER

PROPOSED HABITAT BUFFER

12' WIDE SOFT SURFACE TRAIL

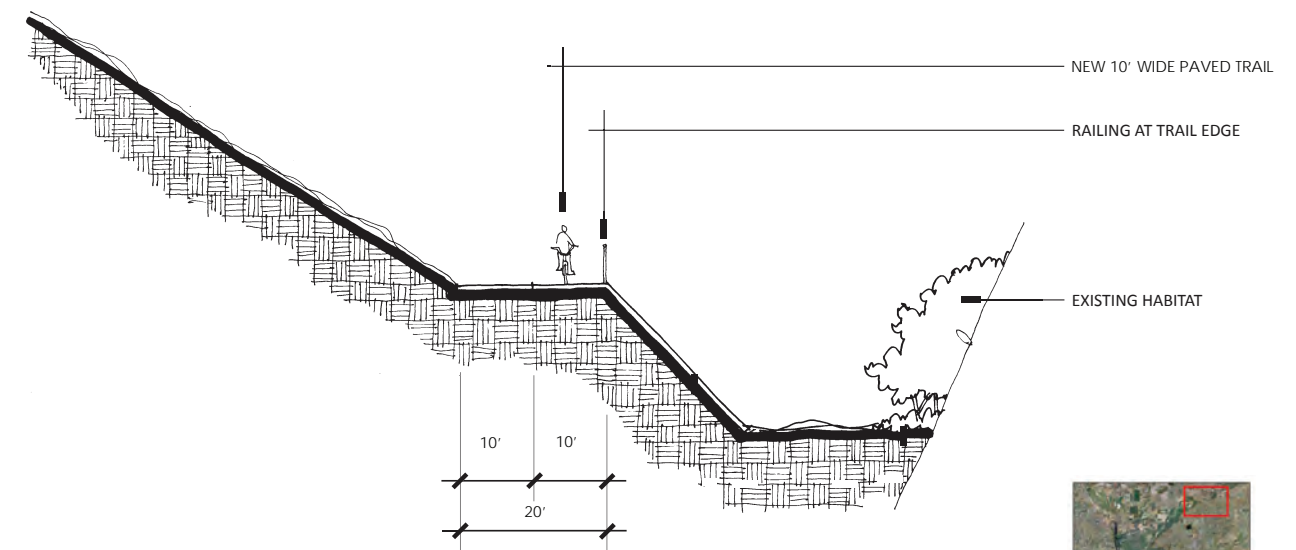
EXISTING POWER POLE



Key Map not to scale

**Exhibit 1-6**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH VII, Rincon St. Trails, Corona, CA**

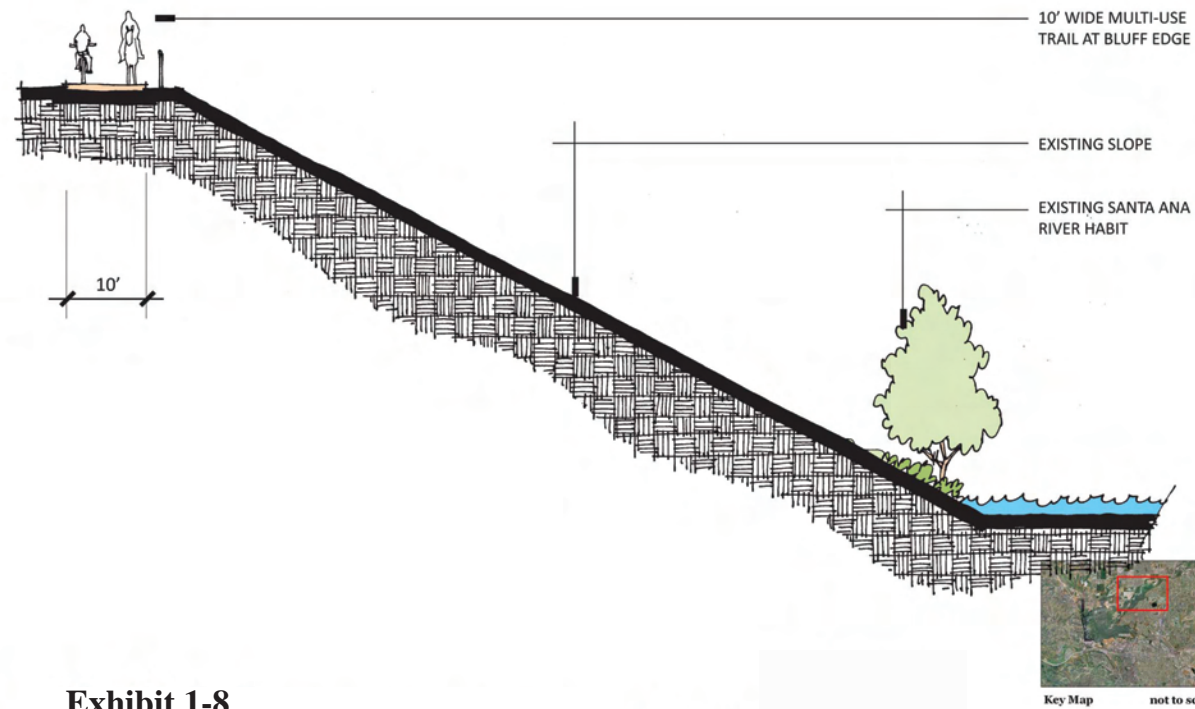
October 14, 2009



Key Map not to scale

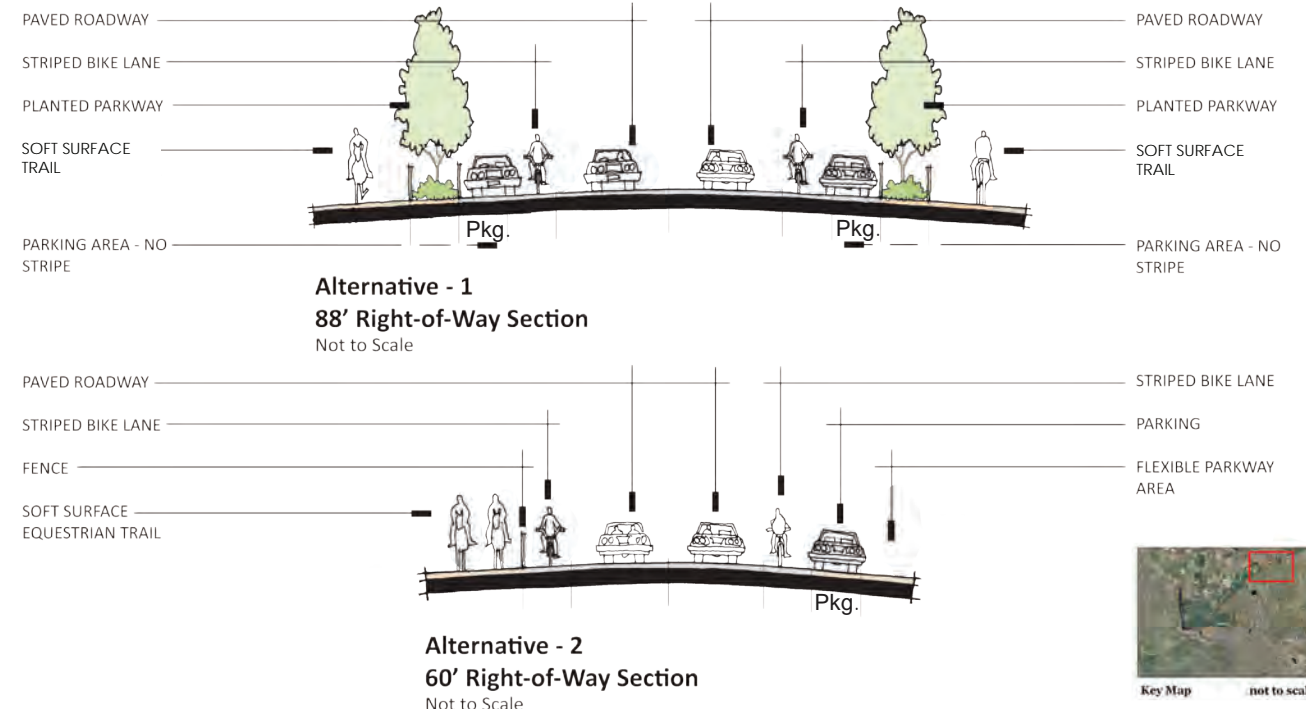
**Exhibit 1-7**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH VIII, Bluff between Stagecoach Dr. and River Rd.**





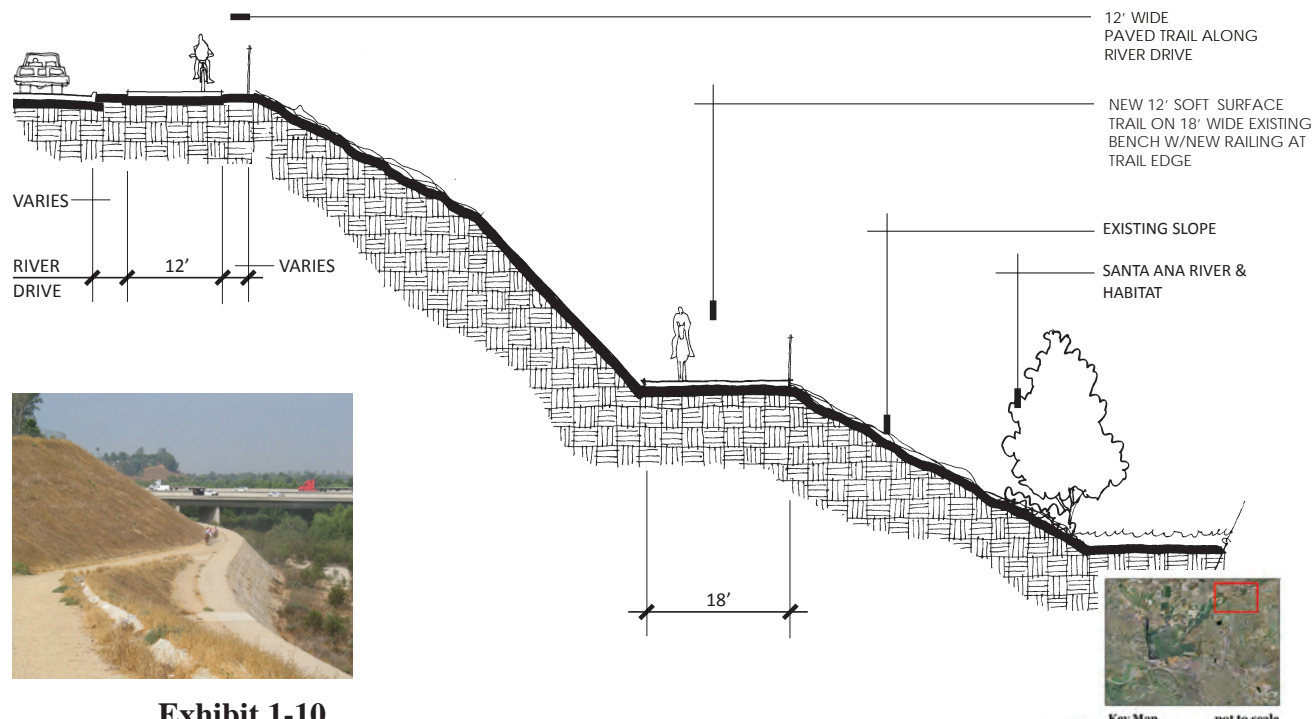
**Exhibit 1-8**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH IX, Archibald Bluff, Eastvale, CA**

June 7, 2011  
 The Design Group  
 Prepared by: [illegible]  
 Copyright 2011



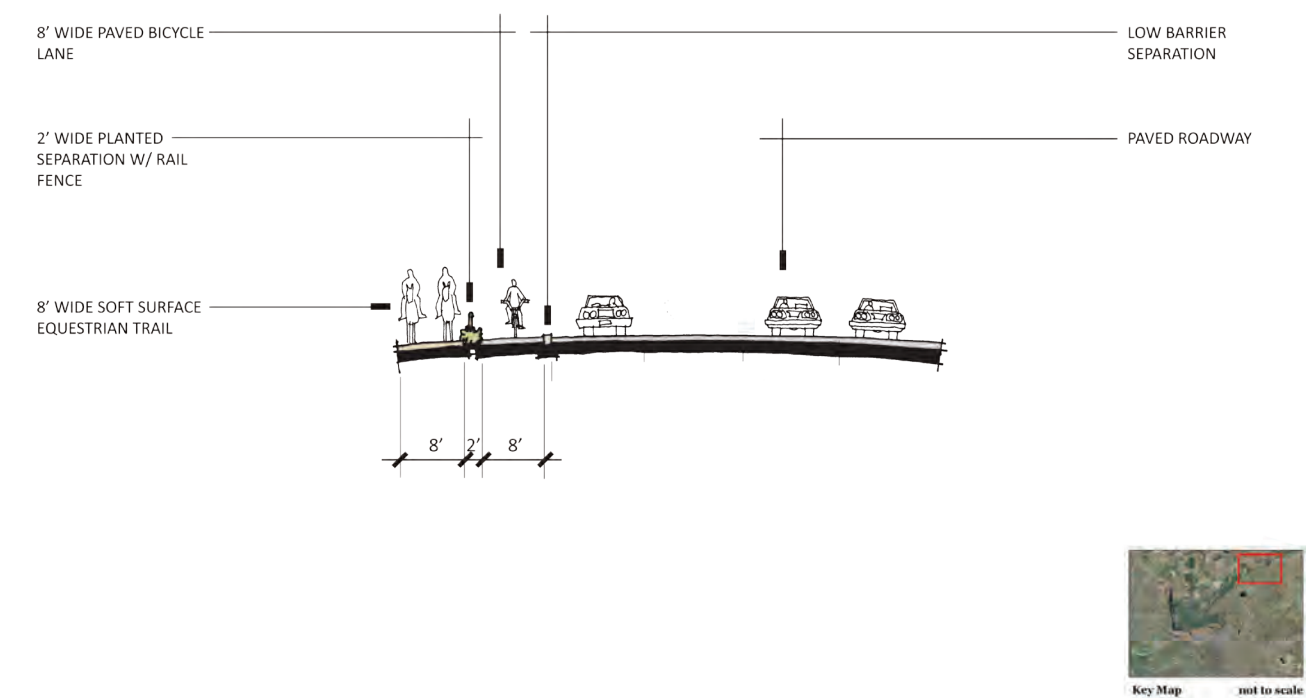
**Exhibit 1-9**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH IX, X, XI, XII, Typical Norco Roadway Sections**

June 7, 2010  
 The Design Group  
 Prepared by: [illegible]  
 Copyright 2010



**Exhibit 1-10**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH XI, I-15 to Pedley Ave.**

June 3, 2010  
 The Design Group  
 Prepared by: [illegible]  
 Copyright 2010



**Exhibit 1-11**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**REACH X, Hamner Ave. Connector to Eastvale Community Park**

December 17, 2010  
 The Design Group  
 Prepared by: [illegible]  
 Copyright 2010





**Exhibit 1-12**  
**Santa Ana River Trail - Recommended Trail Alignment**  
**Reach XII, Arlington Avenue, Riverside, California**

Section  
 Scale: 1" = 10'



December 17, 2010



**Table 1-1: Santa Ana River Recommended Paved Trail Alignment**
**Definitions:**

Class I - Two-way bike path separated from street  
 Class Ib- Two-way bike path, on the street, separated by barrier  
 Class II - Two one-way bike lanes, on opposite sides of the street  
 Multi-use - Two-way multi-use lane for all non-motorized users

<sup>1</sup> Mitigation

1. Slender-Horned Spineflower & Brand's Phacelia
2. Burrowing Owl
3. Least Bell's Vireo
4. Smooth Tarplant
5. General Upland

Type	Street/Location	Side of Street	Amenities	Status	Land Owner/ Jurisdiction	APN	Preferred	Trail Width in Feet	Habitat Mitigation Type	Paved/Soft Trails Adjacency	Safety Fencing/Barrier Locations	Trail Segment Length - Linear Feet (lf)	Comment
<b>Recommended Alignment</b>													
<b>Reach I</b>													
Class I	<b>Left outflow channel maint. road (facing downstream)</b> From downstream terminus of left outflow channel maint. road to spillway plain	n/a	signage, fence	new	USACE/Corona	101140006	1	12	none	N	New chain link on channel side of trail	3597	30% drawings will be completed to the project limit which is 20' upstream of the terminus of the left outflow channel maintenance road. Safety fencing will be added along the channel.
<b>Reach II</b>													
Class I	<b>Spillway plain</b> From left outflow channel maint. road (facing downstream) to spillway bluff	n/a	signage	new	USACE/Corona	101170001	1	12	1	N	n/a	1215	Grades are less than 8% on the spillway plain but exceed 8% on the transition to the spillway bluff. Trail users who are unable to negotiate this grade will need to bypass this segment of the trail by using the street route outlined in the 1994 Master Plan. Please see map of street route in the appendix.
Class I	<b>Spillway bluff</b> From spillway plain to auxiliary dike	n/a	signage	new	USACE/Corona	101170001	1	12	none	Y	n/a	1377	Grades are less than 8% on the spillway bluff, which is suitable for all users.
<b>Reach III</b>													
Class I	<b>Auxiliary dike</b> From spillway bluff to Pomona Rincon Rd.	Adjacent to southbound traffic on unpaved road	signage, fence	new	USACE/Corona	101170001	1	12	none	N	New chain link on basin side of trail	5677	Paved trail will be on top of auxiliary dike and will use standard USACE fencing. Includes a rest area/viewpoint. Safety fencing will be located on the reservoir side of the trail at the edge of the bench.
<b>Reach IV</b>													
Class I	<b>Pomona Rincon Rd.</b> From auxiliary dike to Butterfield Dr. (west)	n/a	signage	new	OCFCD USACE/Corona	102010005 101170001	1	10	2,3	Y	n/a	3200	The paved trail will use the existing maintenance road alignment adjacent to a 6' wide shoulder
Multi-use	<b>Butterfield Dr. (west) and Yorba St.</b> From Pomona Rincon Rd. to wastewater treatment dike.	n/a	signage	new	USACE/Corona	101170001 101160003 101090003	1	10	2,3	N	n/a	4500	The paved trail will utilize the existing paved trail on the wastewater treatment dike.
Class I	<b>Wastewater txmt. dike</b> From Yorba St. to Clearwater Dr.	n/a	signage	new	Corona/Corona USACE/Corona	102020031 101110002	1	12	none	N	Existing chain link on basin side of trail.	2326	The paved trail will utilize the Clearwater Rd. alignment.
Class I	<b>Clearwater Dr.</b> From wastewater txmt. dike to Butterfield Dr. (east)	north	signage	new	USACE/Corona	101110002	1	10	3	N	n/a	1581	The paved trail will use the existing maintenance road alignment.
Class I	<b>Butterfield Dr. - inside airport fence</b> From Clearwater Dr. to base of Alcoa dike - airport side	west	signage, fence	new	USACE/Corona/Airport	101110002	1	10	3,4	Y	Existing chain link on basin side of trail.	3000	The trail alignment will enter the airport just east of Clearwater Dr. It will be separated from the airport by a security fence.
<b>Reach V-VI</b>													
Class I	<b>Alcoa dike - on bench at base of dike - airport side</b> From Butterfield Dr. to Rincon St.	south	signage, fence	new	USACE/Corona/Airport	119200009	1	10	3	Y	Existing chain link on basin side of trail.	3141	The trail will be offset from Rincon St. by a 20 ft. habitat buffer.
<b>Reach VII</b>													
Class I	<b>Rincon St.</b> From alcoa dike to knoll of bluff	n/a	signage	new	USACE/ Weyerhaeuser Mortgage Co.	121130002 121120023	1	10	3	Y	n/a	3900	The paved trail will be offset from Rincon St. by a habitat buffer. As part of mitigation for this project the existing degraded habitat will be upgraded.
<b>Reach VIII</b>													
Multi-use	<b>Knoll of bluff</b> From Rincon St. to Stagecoach Dr. at Bluff St.	n/a	signage	new	USACE/OCWD	121120024 101110002	1	10	3	Multi-use	n/a	5900	The trail in this location will be a multi-use trail with a rubberized asphalt base. This alignment: 1. Will require habitat clearance. 2. Will be a raised trail where there is standing water. 3. Crosses one private parcel belonging to Weyerhaeuser Mortgage Co.
Class I	<b>OCWD bluff property</b> From OCWD southwestern property boundary to Stagecoach Dr.	n/a	signage	new	Orange County Water District (OCWD)	1	1	3	10	Y	n/a	750	To be design in conjunction with OCWD staff,
Class II	<b>Bluff St.</b> From Stagecoach Dr. to River Rd.	both	barrier, signage	new	Corona/County		1	10	none	Y	n/a	4948	New Class II bike lanes will be constructed within the road right of way.



**Table 1-1: Santa Ana River Recommended Paved Trail Alignment**

**Definitions:**

- Class I - Two-way bike path separated from street
- Class Ib - Two-way bike path, on the street, separated by barrier
- Class II - Two one-way bike lanes, on opposite sides of the street
- Multi-use - Two-way multi-use lane for all non-motorized users

<sup>1</sup> Mitigation

1. Slender-Horned Spineflower & Brand's Phacelia
2. Burrowing Owl
3. Least Bell's Vireo
4. Smooth Tarplant
5. General Upland

Type	Street/Location	Side of Street	Amenities	Status	Land Owner/ Jurisdiction	APN	Preferred	Trail Width in Feet	<sup>1</sup> Habitat Mitigation Type	Paved/Soft Trails Adjacency	Safety Fencing/Barrier Locations	Trail Segment Length - Linear Feet (lf)	Comment
<b>Recommended Loop Trail Alignment</b>													
<b>Reach IX</b>													
Class II	<b>River Rd.</b> From Bluff St. to Corydon Ave.	both	striping, signage	new	County		1	10	none	Y	n/a	2450	New Class II bike lanes will be constructed within the road right of way.
Class II	<b>Corydon Ave.</b> From River Rd. to Fifth Ave.	both	barrier, signage	new	Norco		2	10	none	Y	n/a	6999	New Class II bike lanes will be constructed within the road right of way.
Class II	<b>Norco Dr.</b> From Fifth Ave. to Cedar Ave.	both	barrier, signage	new	Norco		2	10	none	Y	n/a	5893	New Class II bike lanes will be constructed within the road right of way.
<b>Reach X</b>													
Class II	<b>Cedar Ave.</b> From Norco Dr. to Alhambra St.	both	striping, signage	new	Norco		2	10	none	Y	n/a	848	Per Norco City Plan.
Class II	<b>Alhambra St.</b> From Cedar Ave. to Acacia Ave.	both	striping, signage	new	Norco	n/a	2	10	none	Y	n/a	757	Per Norco City Plan.
Class II	<b>Acacia Ave.</b> From Alhambra St. to Taft St.	both	barrier, signage	new	Norco	n/a	2	10	none	Y	n/a	282	Per Norco City Plan.
Class II	<b>Taft St.</b> From Acacia Ave. to Old Hamner Rd.	both	striping, signage	new	Norco	n/a	2	10	none	Y	n/a	450	Per Norco City Plan.
Class I	<b>Hamner Ave.</b> From Alhambra Ave. to Taft St.	east	striping, signage	new	Norco		2	10	none	Y	n/a	1128	n/a
Class II	<b>Old Hamner Rd.</b> From Taft St. to Detroit St. bridge	both	striping, signage	new	Norco	n/a	2	10	none	Y	n/a	763	Per Norco City Plan.
Class II	<b>Detroit St. bridge</b> From Old Hamner Rd. to Detroit St.	both	striping, signage	new	Norco	n/a	2	10	none	Y	n/a	452	The Class II bike lane will share the bridge with vehicular, equestrian and pedestrian users.
<b>Reach XI</b>													
Class II	<b>Detroit St.</b> From east end of Detroit St. bridge to Woodward Ave.	both	striping, signage	new	Norco	n/a	2	10	none	Y	n/a	1586	New Class II bike lanes will be constructed within the road right of way.
Class II	<b>Woodward Ave.</b> From Detroit St. to River Dr.	both	striping, signage	new	Norco	n/a	2	10	none	Y	n/a	1698	New Class II bike lanes will be constructed within the road right of way.
<b>Recommended Alignment</b>													
<b>Reach XI and XII</b>													
Class Ib	<b>River Dr.</b> From Woodward Ave. (or River Dr. connector from Hamner Ave. bridge) to Eighth St.	north	barrier, signage	new	Norco	n/a	1	10	none	N	Low barrier in road, type to be determined in future design	5310	Constructing the trail adjacent to the westbound lane on River Dr. will require restriping the traffic lanes in locations where there is inadequate room for the trail on the bluff.
Class II	<b>Eighth St.</b> From River Dr., along Pedley, to Crestview Dr.	both	striping, signage	new	Norco	n/a	1	10	none	Y	n/a	4120	New Class II bike lanes will be constructed within the road right of way.
Class II	<b>Crestview Dr.</b> From Eighth St. to Arlington Ave.	both	striping, signage	new	Norco	n/a	1	10	none	Y	n/a	882	New Class II bike lanes will be constructed within the road right of way.
Class I	<b>Arlington Ave.</b> From Crestview Dr. to Hidden Valley Wildlife Area entry	north	signage	new	RCRPOSD Riverside County Transportation Dept. ROW	153240031	1	10	none	Y	n/a	2942	The paved trail will be separated from the westbound lane of vehicular traffic on Arlington Ave. by a vegetated strip.

**Table 1-1: Santa Ana River Recommended Paved Trail Alignment**
**Definitions:**

Class I - Two-way bike path separated from street  
 Class Ib - Two-way bike path, on the street, separated by barrier  
 Class II - Two one-way bike lanes, on opposite sides of the street  
 Multi-use - Two-way multi-use lane for all non-motorized users

<sup>1</sup> Mitigation

1. Slender-Horned Spineflower & Brand's Phacelia
2. Burrowing Owl
3. Least Bell's Vireo
4. Smooth Tarplant
5. General Upland

Type	Street/Location	Side of Street	Amenities	Status	Land Owner/ Jurisdiction	APN	Preferred	Trail Width in Feet	Habitat Mitigation Type	Paved/Soft Trails Adjacency	Safety Fencing/Barrier Locations	Trail Segment Length - Linear Feet (If)	Comment
<b>Long Term Recommended Alignment Spur Trail A</b>													
<b>Reach IX</b>													
Multi-use	<b>River Rd. bridge</b> From Bluff St. to Archibald Ave. on separated multi-use lane adjacent to north bound traffic lane	n/a	signage	under construction	County		1	8	none	Multi-use	Existing concrete barrier on vehicular side and lodgepole fence on river side	3430	A separated trail lane has been built for all non-motorized users.
Multi-use	<b>Eastvale bluff trail</b> From River Rd. bridge to bend in Prado Basin Park Rd.	n/a	striping, signage	new	USACE/JCSD	130080010	1	8	1,3	Y	Proposed chain link on bluff side of trail.	5015	The trail alignment will follow the top of the bluff, and utilize the existing maintenance road where it exists.
Multi-use	<b>Eastvale bluff trail - future</b> From bend in Prado Basin Park Rd. to existing trail	south	barrier, signage	new	RCRPOSD Private	130080006 130060006	1	8	1,3	Y	Proposed chain link on bluff side of trail.	2108	This alignment will be primarily on parks property but where it is on private property the alignment will be determined later and depend on cooperation of the current private land owner.
<b>Long Term Recommended Alignment Spur Trail B</b>													
Class I	<b>Existing JCSD Trail</b> From Dearborn St. to Sumner Ave.	n/a	signage	existing	JCSD	n/a	1	8	none	Y	n/a	5300	The existing JCSD Trail is acceptable for the SART.
<b>Reach IX and X</b>													
Class I	<b>Future JCSD Trail</b> From Sumner Ave. to west border of proposed Eastvale Community Park	n/a	signage	new	JCSD	134250018 134250019 134250017	1	8	1,3	Y	n/a	4733	The future JCSD Trail will be built to the same standards as the existing JCSD Trail which is acceptable for the SART.
Class I	<b>Proposed Eastvale Community Park</b> (adj. to Citrus St.) From west border of Eastvale Community Park to Hamner Ave. (east border of Eastvale Community Park)	n/a	signage	new	JCSD	134250018 134250019 134250017 134250016	1	8	none	N	n/a	1382	The trail alignment will be accommodated into the plans for the Eastvale Community Park.
<b>Future Long Term Recommended Alignment</b>													
<b>Reach X and XI</b>													
Class Ib	<b>Hamner Ave.</b> From northeast corner of proposed Eastvale Community Park to Hamner Ave. bridge	west	barrier, signage	new	JCSD/Norco	n/a	1	8	none	Y	n/a	1800	The paved trail will be a two-way facility on the roadway, adjacent to the southbound vehicular lane, and separated by a low barrier in the pavement.
Multi-use	<b>Proposed Hamner Ave. bridge widening</b> From right bank of Santa Ana River (facing downstream) to left bank of Santa Ana River	west	signage	future	Norco	n/a	1	8	none	Multi-use	Recommend concrete barrier on vehicular side and lodgepole fence on river side	629	The paved trail needs to be incorporated into the plans for the future Hamner Ave. bridge replacement, similar to the facilities on the River Road bridge.
Class I	<b>River Dr. connector</b> From Hamner Ave. bridge to River Dr.	n/a	signage	new	Norco	n/a	1	8	1,3	Y	n/a	1642	The paved trail will use the existing maintenance road to connect from the Hamner Ave. bridge to River Dr.
<b>Future Alignment</b>													
<b>Reach VIII</b>													
Class I	<b>Base of bluff - Riverside County</b> From Stagecoach Rd. to River Rd. at Bluff St.	n/a	signage	new	USACE Private Owners	121050005 121030006 121030011	1	8	1,3	N	Existing chain link on basin side of trail.	6450	Placing the paved trail on a bench near the base of the bluff would separate the trail from the flood plain, but would require easements from property owners.
<b>Reach IX-X</b>													
Class I	<b>Proposed USACE Norco bluff stabilization bench</b> From the wash behind Alhambra St. (south end) to 200 feet downstream of Hamner Ave. bridge	n/a	signage, fence	new	Altfillisch Construction Co./ USACE/Norco	130100001	3	10	none	Y	Existing chain link on basin side of trail.	16029	The bench would need to be wide enough to accommodate both trails.
Class I	<b>Hamner bridge connector</b> From 200 Ft. downstream of Hamner Ave. bridge to Hamner Ave. bridge	n/a	signage, fence	new	Norco/USACE	152070003	3	10	1,3	Y	Low barrier in road,	200	The bluff would need to be stabilized and a bench built to accommodate the trail alignment.
											<b>Total Project in Linear Feet</b>	<b>130,390</b>	
											<b>Total Project in Miles</b>	<b>24.7</b>	



**Table 1-2: Santa Ana River Recommended Soft Surface Trail Alignment**

**Definitions:**

Soft Surface - Compacted dirt with decomposed granite (where suitable) - suitable for equestrian use  
 Multi-use - Two-way multi-use lane for all non-motorized users

1. Mitigation  
 Slender-Horned Spineflower & Brand's Phacelia  
 Burrowing Owl  
 Least Bell's Vireo  
 Smooth Tarplant  
 General Upland

Type	Street/Location	Side of Street	Amenities	Status	Land Owner/ Jurisdiction	Preferred	Preferred	Habitat Mitigation Type	Trail Width in Feet	Separation from paved trail in feet, where adjacent	Paved/Soft Trails Adjacency	Recommended Surface	Trail Separation Type where adjacent: Fencing/ Landscaping	Safety Fencing Location	Trail Segment Length - Linear Feet (ft)	Comment
<b>Recommended Alignment</b>																
<b>Reach I</b>																
Soft Surface	<b>Right outflow channel maint. road (facing downstream)</b> From downstream terminus of right outflow channel maint. road to outflow channel bridge	n/a	signage, fence	new	USACE/Corona	1	1	none	10	n/a	N	Existing asphalt	n/a	New chain link on channel side	3597	30% drawings will be completed to the project limit which is 20' upstream of the terminus of the left outflow channel maintenance road. Safety fencing will be added along the channel.
Soft Surface	<b>Outflow channel bridge</b> From upstream terminus of right outflow channel maint. road (facing downstream) to spillway plain	n/a	signage	new	USACE/Corona	1	1	none	10	n/a	N	Existing asphalt	n/a	Existing chain link on both sides	100	There is adequate room on the existing outflow channel bridge for the soft surface trail. Existing chain link fencing will provide adequate protection.
<b>Reach II</b>																
Soft Surface	<b>Spillway plain</b> From outflow channel bridge to spillway bluff	n/a	signage	new	USACE/Corona	1	1	1	10	4'-5'	N	Decomposed granite (DG)	n/a	n/a	1215	Grades are less than 8% on the spillway plain but exceed 8% on the transition to the spillway bluff. Trail users who are unable to negotiate this grade will need to bypass this segment of the trail by using the street route outlined in the 1994 Master Plan. Please see map of street route in the appendix.
Soft Surface	<b>Spillway bluff</b> From spillway plain to auxiliary dike	n/a	signage	new	USACE/Corona	1	1	none	10	4'-5'	Y	DG	Native landscaping	n/a	1377	Grades on the ramp up to the bluff are anticipated to be as much as 10% when the USACE has completed their construction. While most horses should be able to negotiate this grade, the final design should evaluate meandering the trail, and adding rest areas and drainage dips.
<b>Reach III</b>																
Soft Surface	<b>Auxiliary dike</b> From spillway bluff to Pomona Rincon Rd.	n/a	signage	new	USACE/Corona	1	1	5	10	n/a	N	DG	n/a	n/a	5537	The soft surface trail will be at the bottom of the auxiliary dike on the basin side.
<b>Reach IV</b>																
Multi-use	<b>Pomona Rincon Rd.</b> From auxiliary dike to Butterfield Dr.	Adjacent to southbound traffic on unpaved road	signage, bench	new	USACE/Corona	1	1	2,3	10	<or = 3'	Y (except at existing USACE bldg. complex)	DG	Post & rail fence	n/a	5917	Location of future staging area. Multi-use trail will consist of a 10' wide asphalt trail with an adjacent 6' DG trail separated by a post and rail fence.
Soft Surface	<b>Butterfield Dr.</b> From Pomona Rincon Rd. to Clearwater Dr.	n/a	signage	new	USACE/Corona	1	1	2,3	10	n/a	N	DG	n/a	Existing chain link on airport side	4558	The soft surface trail will be on the existing maintenance road on Butterfield Dr. The SARI line follows the maintenance road and the trail will need to avoid the manhole covers.
<b>Reach V-VI</b>																
Soft Surface	<b>Butterfield Dr.</b> From Clearwater Dr. to base of alcoa dike - airport side	n/a	signage, fence	new	USACE/Corona/Airport	1	1	3,4	10	4'-5'	Y	DG	Native landscaping	New chain link on airport side	2164	The trail alignment will enter the airport just east of Clearwater Dr. It will be separated from the airport by a fence.
Soft Surface	<b>Alcoa dike - base of dike, airport side</b> From Butterfield Dr. to Rincon St.	n/a	signage, fence	new	USACE/Corona/Airport	1	1	3	10	4'-5'	Y	DG	Native landscaping	New chain link on airport side	5764	The soft surface trail will be located on the airport side at the base of the alcoa dike. At the northern end of the dike it will climb over the proposed USACE drainage structure.
<b>Reach VII</b>																
Soft Surface	<b>Rincon St.</b> From alcoa dike to knoll of bluff	Offset from southeast bound traffic lane	signage, bench	new	USACE	1	1	3	10	4'-5'	Y	DG	Native landscaping	n/a	3900	The soft surface trail will be on the basin side of the paved trail which will be offset from Rincon St. It will be separated from the street by a habitat buffer. As part of mitigation for this project the existing degraded habitat will be upgraded.
<b>Reach VIII</b>																
Multi-use	<b>Knoll of bluff</b> From Rincon St. to OCWD bluff property	n/a	signage	new	USACE	1	1	3	10	n/a	Multi-use	Rubberized asphalt	n/a	n/a	6589	The trail in this location will be a multi-use trail with a rubberized asphalt base. This alignment: 1. Will require habitat clearance. 2. Will be a raised trail where there is standing water. 3. Crosses one private parcel belonging to Weyerhaeuser Mortgage Co.
Soft Surface	<b>OCWD bluff property</b> From OCWD southwestern property boundary to Stagecoach Dr.	n/a	signage	new	Orange County Water District (OCWD)	1	1	3	10	n/a	Soft Surface	DG	n/a	To be determined in conjunction with OCWD	1065	This alignment will cross Orange County Water District Property. OCWD may or may not develop this property, and this trail alignment will need to be designed in conjunction with OCWD staff. There is an existing maintenance road that connects directly to the intersection of Bluff St. and Stagecoach Dr.
Soft Surface	<b>Bluff St.</b> From Stagecoach Dr. to River Rd.	southeast	signage	existing	Corona/County	1	1	none	8	n/a	Y	n/a	Existing post & rail fence	4948	The soft surface trail will use the existing trail on Bluff St.	

**Table 1-2: Santa Ana River Recommended Soft Surface Trail Alignment**
**Definitions:**

 Soft Surface - Compacted dirt with decomposed granite (where suitable) - suitable for equestrian use  
 Multi-use - Two-way multi-use lane for all non-motorized users

 1. Mitigation  
 Slender-Horned Spineflower & Brand's Phacelia  
 Burrowing Owl  
 Least Bell's Vireo  
 Smooth Tarplant  
 General Upland

Type	Street/Location	Side of Street	Amenities	Status	Land Owner/ Jurisdiction	Preferred	Preferred	Habitat Mitigation Type	Trail Width in Feet	Separation from paved trail in feet, where adjacent	Paved/Soft Trails Adjacency	Recommended Surface	Trail Separation Type where adjacent: Fencing/ Landscaping	Safety Fencing Location	Trail Segment Length - Linear Feet (lf)	Comment
<b>Interim Recommended Alignment/Long-Term Loop Trail Alignment</b>																
<b>Reach IX</b>																
Soft Surface	<b>River Rd.</b> From Bluff St. to Trail St.	southwest	signage	new	County	2	2	none	n/a	n/a	Y	DG	Existing post & rail fence	n/a	891	A new soft surface trail alignment will be located on the east side of River Rd.
Soft Surface	<b>River Rd.</b> From Trail St. to Corydon Ave.	southwest	signage	existing	County	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	1559	A new soft surface trail alignment will be located on the east side of River Rd.
Soft Surface	<b>Corydon Ave.</b> From River Rd. to Fifth Ave.	southeast	signage	existing	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	6999	The existing equestrian trail is suitable.
Soft Surface	<b>Norco Dr.</b> From Fifth Ave. to Cedar Ave.	southeast	signage	existing	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	5893	The existing equestrian trail is suitable.
<b>Reach X</b>																
Soft Surface	<b>Cedar Ave.</b> From Norco Dr. to south perimeter of Norco Community Center Park	east	signage	new	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	848	The trail will be built per the Norco City Plan. It will be built under the supervision of the Santa Ana River Trail management team.
Soft Surface	<b>South Perimeter of Norco Community Center Park</b> From Cedar Ave. to Acacia Ave.	n/a	signage	new	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	757	The trail will be built per the Norco City Plan by the City of Norco.
Soft Surface	<b>Acacia Ave.</b> From south perimeter of Norco Community Center Park to Alhambra Ave.	east	signage	new	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	1586	The trail will be built per the Norco City Plan. It will be built under the supervision of the Santa Ana River Trail management team.
Soft Surface	<b>Hamner Ave.</b> From Alhambra Ave. to Taft St.	east	signage	new	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	1128	The trail will be adjacent to the north bound lane of Hamner Ave.
Soft Surface	<b>Taft St.</b> From Hamner Ave. to Old Hamner Rd.	north	signage	new	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	450	The trail will be built per the Norco City Plan by the City of Norco.
Soft Surface	<b>Old Hamner Rd.</b> From Taft St. to Detroit St. bridge	east	signage	existing	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	763	The existing equestrian trail is suitable. The City of Norco has plans to upgrade it at a future date.
Soft Surface	<b>Detroit St. bridge</b> From Old Hamner Rd. to Detroit St.	south	signage	new	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	452	Bicycles, motorized vehicles, pedestrians and equestrians will share the bridge.
<b>Reach XI</b>																
Soft Surface	<b>Detroit St.</b> From east end of Detroit St. bridge to Woodward Ave.	south	signage	existing	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	1110	The existing equestrian trail is suitable.
Soft Surface	<b>Woodward Ave.</b> From Detroit St. to USACE maintenance road	west	signage	existing	Norco	2	2	none	n/a	n/a	Y	n/a	Existing post & rail fence	n/a	1698	The existing equestrian trail is suitable.
Soft Surface	<b>USACE maintenance road</b> From Woodward Ave. to USACE bench	n/a	signage	existing	Norco	1	1	1,3	10	n/a	Y (until paved trail diverts to River Dr.)	existing surface	Native Landscaping	Chain link fence on river side.	1820	The trail will use the existing USACE maintenance road to access the existing USACE bench.
<b>Recommended Alignment</b>																
<b>Reach XI</b>																
Soft Surface	<b>USACE Bench</b> From Woodward Ave. or USACE maintenance road to Santa Ana River bed	n/a	signage	new	Norco	1	1	none	12	n/a	N	Existing surface	n/a	Post & rail fence on river side of trail	4338	The existing USACE bench will be upgraded with fencing and signage.
Soft Surface	<b>Santa Ana River bed</b> From USACE bench to Hidden Valley Wildlife Area	n/a	signage	new	Norco	1	1	n/a	n/a	n/a	N	Existing soil	n/a	n/a	7263	If the bluff is stabilized at a future date, the trail may be able to utilize a bench at the base of the bluff.
<b>Long-Term Recommended Alignment Spur Trail A</b>																
<b>Reach IX</b>																
Multi-use	<b>River Rd. bridge</b> From Bluff St. to Archibald Ave.	n/a	signage	under construction	County	1	1	none	8	n/a	Multi-use	n/a	n/a	Existing concrete barrier on vehicular side and lodgepole fence on river side	3430	A separated trail lane has been built for all non-motorized users.
Multi-use	<b>Eastvale bluff trail</b> From River Rd. bridge to bend in Prado Basin Park Rd.	n/a	signage	new	County Soon to become Eastvale	1	1	1,3	8	<or = 3'	Multi-use	DG	Post & Rail Fence	n/a	5493	The trail alignment will follow the top of the bluff, and utilize the existing maintenance road where it exists.



**Table 1-2: Santa Ana River Recommended Soft Surface Trail Alignment**

Definitions:  
 Soft Surface - Compacted dirt with decomposed granite (where suitable) - suitable for equestrian use  
 Multi-use - Two-way multi-use lane for all non-motorized users

1. Mitigation  
 Slender-Horned Spineflower & Brand's Phacelia  
 Burrowing Owl  
 Least Bell's Vireo  
 Smooth Tarplant  
 General Upland

Type	Street/Location	Side of Street	Amenities	Status	Land Owner/ Jurisdiction	Preferred	Preferred	Habitat Mitigation Type	Trail Width in Feet	Separation from paved trail in feet, where adjacent	Paved/Soft Trails Adjacency	Recommended Surface	Trail Separation Type where adjacent: Fencing/ Landscaping	Safety Fencing Location	Trail Segment Length - Linear Feet (lf)	Comment
<b>Long-Term Recommended Alignment Spur Trail B</b>																
Soft Surface	<b>Existing JCSD trail</b> From Dearborn St. to Sumner Ave.	n/a	signage	existing	JCSD	1	1	none	8	n/a	Y	n/a	Existing Landscaping	n/a	5300	The existing JCSD Trail is acceptable for the SART.
<b>Reach IX and X</b>																
Soft Surface	<b>Future JCSD trail</b> From Sumner Ave. to west border of the proposed Eastvale Community Park	n/a	signage	new	JCSD	1	1	1,3	8	4'-5'	Y	n/a	Same as Adjacent Existing Landscaping	n/a	4733	The future JCSD Trail will be built to the same standards as the existing JCSD Trail which is acceptable for the SART.
Soft Surface	<b>Proposed Eastvale Community Park (adj. to Citrus)</b> From west border of proposed Eastvale Community Park to Hamner Ave.	n/a	signage	new	JCSD	1	1	none	8	n/a	N	n/a	n/a	n/a	1382	The trail alignment is being designed into the plans for Eastvale Community Park.
<b>Future Long-Term Recommended Alignment</b>																
<b>Reach X and XI</b>																
Soft Surface	<b>Hamner Ave.</b> From northeast corner of proposed Eastvale Community Park to Hamner Ave. bridge	west	signage	new	JCSD/Norco	1	1	none	8	>5'	Y	DG	Post & Rail Fence	n/a	1312	The trail alignment will be between the park and the two way bikeway adjacent to the south bound vehicular lane. It will be separated from the paved trail by a safety fence.
Multi-use	<b>Proposed Hamner Ave. bridge widening</b> From right bank of Santa Ana River (facing downstream) to left bank of Santa Ana River	west	signage	future	Norco	1	1	none	8	n/a	Multi-use	n/a	n/a	Recommend concrete barrier on vehicular side and lodgepole fence on river side	629	The paved trail needs to be incorporated into the plans for the future Hamner Ave. bridge replacement, similar to the facilities of the River Rd. bridge.
Soft Surface	<b>USACE maintenance road</b> From Hamner Ave. bridge to USACE bench	n/a	signage	new	Norco	1	1	1,3	8	<or = 3'	N	Existing surface	Post & Rail Fence	n/a	1642	The trail will use the existing USACE maintenance road.
<b>Pedley Ave. Alternative</b>																
<b>Reach XII</b>																
Soft Surface	<b>Pedley Ave./ Eighth St.</b> From Santa Ana River, to Eighth St., to California Ave.	east	signage	existing	Norco	1	1	none	existing	n/a	N	n/a	n/a	n/a	1269	The existing equestrian trail is suitable.
Soft Surface	<b>California Ave.</b> From Eighth St. to North Dr.	north	signage	existing	Norco	1	1	none	existing	n/a	Y	n/a	Post & Rail Fence	n/a	2060	The existing equestrian trail is suitable.
Soft Surface	<b>North Dr.</b> From California Ave. to Crestview Dr.	north	signage	new	Norco	1	1	none	existing	n/a	Y	n/a	Post & Rail Fence	n/a	2060	The existing equestrian trail is suitable.
Soft Surface	<b>Arlington Ave.</b> From Crestview Dr. to Hidden Valley Wildlife Area entry	north	signage	new	Norco	1	1	none	8	4'-5'	Y	DG	Native Landscaping	n/a	2942	The existing equestrian trail is suitable.
<b>Future Parallel Trail Alignment</b>																
<b>Reach IX-X</b>																
Soft Surface	<b>Proposed USACE Norco bluff stabilization bench</b> From wash behind Alhambra St. (south end) to 200 ft. downstream of Hamner Ave. bridge	n/a	signage, fence	new	USACE/Norco	3	3	none	8	<or = 3'	Y	USACE surface	Post & Rail Fence	Post & rail fence on river side of trail	16029	The proposed bench on the USACE Norco bluff stabilization would need to be wide enough to accommodate both trails.
Soft Surface	<b>Hamner bridge connector</b> From 200 Ft. downstream of Hamner Ave. bridge to Hamner Ave. bridge	n/a	signage, fence	new	USACE/Norco	3	3	1,3	8	<or = 3'	Y	DG	Post & Rail Fence	n/a	200	The bluff would need to be stabilized and a bench built to accommodate the trail alignment.
															<b>136,052</b>	
															<b>25.8</b>	

## Construction Notes

### Spillway Hill

The segment of trail from the spillway plain to the Auxiliary Dike exceeds recommended grades. (An alternate route utilizing a number of miles of roadway from Green River Golf Course to Auto Center Dr. is possible for those whom this would be a problem.) The proposed 30% engineering drawings included in this report for the paved trail cover this steep segment. For the soft surface trail, it may be possible to create either adjacent switchbacks or pause areas to make this area more acceptable. This possibility will not be known until after the USACE completes its work in the area.

### Soft Surface Trail – Pomona Rincon Rd.

The trail will utilize the existing maintenance road which utilizes the historic Pomona Rincon Rd., with the paved trail on the north easterly side and the soft surface trail on the south westerly side. Part way down this roadway, the USACE has located a construction/maintenance complex on the same side of the road as the soft surface trail. The security fence and some of the buildings for the complex are located very close to the roadway. Originally it was thought that the trail could skirt around behind the complex, but it was found that a cultural site existed in that location. Therefore, it is recommended that the soft surface trail merge onto the roadway, for a short distance, in front of this complex. Final design will require USACE consultation and approval.

### Soft Surface Trail - Butterfield Dr.

The change to convert the Reach IV segment of the trail on Butterfield Dr. to a multi-use trail was made near the end of this phase of work. Because the USACE has not completed its final construction and design for the borrow pit, inadequate information is available to permit preparation of grading and construction details for this reach, and they will need to be done during the final engineering stage.

### Knoll of Bluff in Corona

The lower elevation portion of the trail below the knoll of the bluff in Corona is recommended as a multi-use trail. This segment calls for a 4" rubberized asphalt surface. The final decision regarding whether to utilize this material will be made during the final engineering stage.

### Orange County Water District Property

At the time of this phase report, final negotiations with the Orange County Water District had not occurred for the trail alignment from the intersection of Bluff St./ Stagecoach Drive down to the basin area below the knoll. Therefore, the precise engineering of this segment is not available and will need to be included in the next phase engineering effort.

### Soft Surface Trail – SR-71 to Intersection of Bluff St. and Stagecoach Dr.

The sample cross sections showing the relationship between the paved and soft surface trail are to be taken as diagrammatic, and final determinations need to be made during the final engineering and construction stage. The intent is that the soft surface trail be located as shown on the maps and cross sections found in Appendix B, but also that it rise and fall and meander slightly in order to fit existing contour deviations.

### Norco River Bottom

From the eastern end of the USACE bench below River Rd. to Pedley Ave., the trail descends into the Santa Ana River Bottom and follows existing trails within the park. It is recognized that detours around this small piece may be necessary during floods.

### Eastvale Bluff - Archibald Avenue

There have been a number of modifications over the life of the project in this stretch of the trail. The special circumstance is that there is insufficient right-of-way on either side of Archibald Avenue, as well as along the back of the bluff overlooking the river.

The recommended alignment is along the back of the bluff and for the development to be accomplished at some unknown time in the future. There are no 30% drawings for this area. The overall construction budget includes a "place holder" cost for this stretch based upon the trail being located within an expanded right-of-way on the south easterly side of Archibald. Construction could be accomplished by either negotiating a right-of-way purchase or dedication with the owner(s) or by requiring it as a condition of approval for a possible future development. The location could in turn be either along the edge of the bluff (the recommended alignment) or within an expanded right-of-way along Archibald Ave.

### Hamner Avenue Bridge

The existing bridge at Hamner Ave. is too narrow to allow trail usage. The Master Plan of Highways indicates that the bridge will eventually be widened. When this occurs, it is recommended that the project include a multi-use trail connecting the two sides of the river. Companion with this completion, the route through Eastvale is recommended to become the official Santa Ana River Trail, and the Norco side will become a designated spur trail.

### Arlington Avenue

Necessary contour, utility, and right-of-way information was not collected regarding the section of the trail along Arlington Avenue from the entry to Hidden Valley Wildlife Area to Crestview Drive. This information and subsequent planning will need to be included in the next phase engineering effort. A cross section sketch is provided to illustrate the desired final product.

### Undeveloped Norco Soft Surface Trails

The alignment of the soft surface trail in Norco is almost entirely on existing equestrian trails. There are, however, two short segments recommended that do not presently exist. These segments will require precise design in order to deal with existing trees, utility poles, etc. Although adequate right-of-way exists, precise locations and engineering for these segments will need to be included in the next engineering effort.