



IRON HORSE NATURE PARK & OPEN SPACE

LANDSCAPE MASTER PLAN

SWA Group **City of Dublin**
Landscape Architecture **Parks and Community Services**
San Francisco Dublin

OCTOBER 1, 2013

| SWA GROUP

| CITY OF DUBLIN

IRON HORSE NATURE PARK & OPEN SPACE LANDSCAPE MASTER PLAN



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**IRON HORSE
NATURE PARK
& OPEN SPACE**

**PROJECT
OVERVIEW**

EXECUTIVE SUMMARY

The Iron Horse Nature Park and Open Space Project is a vision for the current utility corridor, developed from community input, focused on habitat restoration, historic preservation, education, and neighborhood program. This plan integrates the Zone 7 creek restoration efforts with the development of the park, creating a larger, richer place with a diversity of habitats and community programs.

The former Southern Pacific Railroad corridor is a relatively narrow and long strip of land running north-south, located directly adjacent to the Iron Horse Regional Trail and the South San Ramon Creek, which lie to the west and are the property of the Zone 7 Flood Control District. The eastern property edge is defined by a narrow strip of Alameda County Property, a utility easement for the Kinder Morgan pipeline. The southern third of the site is

detached, separated by the Amador Valley Boulevard corridor. For the purposes of this report, the Study Area will include the three adjacent properties.

The study area is located within an established residential neighborhood, with extensive single and multi-family homes neighboring to the east and west. Directly adjacent to the west is Dublin High School and the study area is frequently utilized by students in the daily commute.

The Iron Horse Regional Trail is a popular and well-used regional trail system, maintained and operated by the East Bay Regional Park District. The proposed design solution considered in this report would enhance this important amenity.



EXISTING CONDITION





PROCESS

Creating a comprehensive master plan for the proposed Iron Horse Nature Park and Open Space required a task-oriented road map, highlighting important benchmarks along the way to completion. A key element for the successful implementation of the plan was community support, so the design team sought to develop a clear, robust vision for the transformation of the space that Dublin residents could get behind.

Initial steps included a thorough data collection and analysis period; first, the design team assembled hard, recorded facts and conducted mapping exercises to understand the physical nature of the site, its connection to the city and to the larger region. Next, the team reached out to Dublin community members and site users to ensure that their ideas and values were represented in the analysis.

Following the data collection and analysis, the design team generated three preliminary and divergent concepts that were scrutinized during an intensive community design workshop and subsequent online review.

Based upon the community feedback regarding the three schemes, the design team developed a final “preferred” concept that incorporated the popular elements of the previous schemes and also addressed the concerns raised by the community.

This concept is envisioned as a Mosaic Landscape and the master plan for the site.



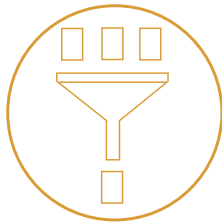
DATA COLLECTION

- Regional Inventory
- Site Inventory
- Cultural Inventory
 - Community Site Walk
 - Feedback Maps
 - Ideas Boards
 - Online Survey



THREE CONCEPTS

- Opportunities and Constraints Analysis
- Generate three concept plans
- Community Workshop



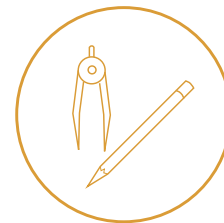
DISTILL TO ONE CONCEPT

- Collect community input on proposed concepts
- Coordinate with City and other public agencies
- Generate one concept plan reflecting all input and background information



PARKS COMMISSION PRESENTATION

- Presentation of concept master plan to Dublin Parks Commission



REFINE CONCEPT

- Collect Parks Commission feedback on proposed concept
- Analyze comments finalize design direction
- Refine final master plan



CITY COUNCIL PRESENTATION

- Presentation of final master plan to Dublin City Council
- Complete written report and submit to City of Dublin

LANDSCAPE MASTER PLAN





**IRON HORSE
NATURE PARK
& OPEN SPACE**

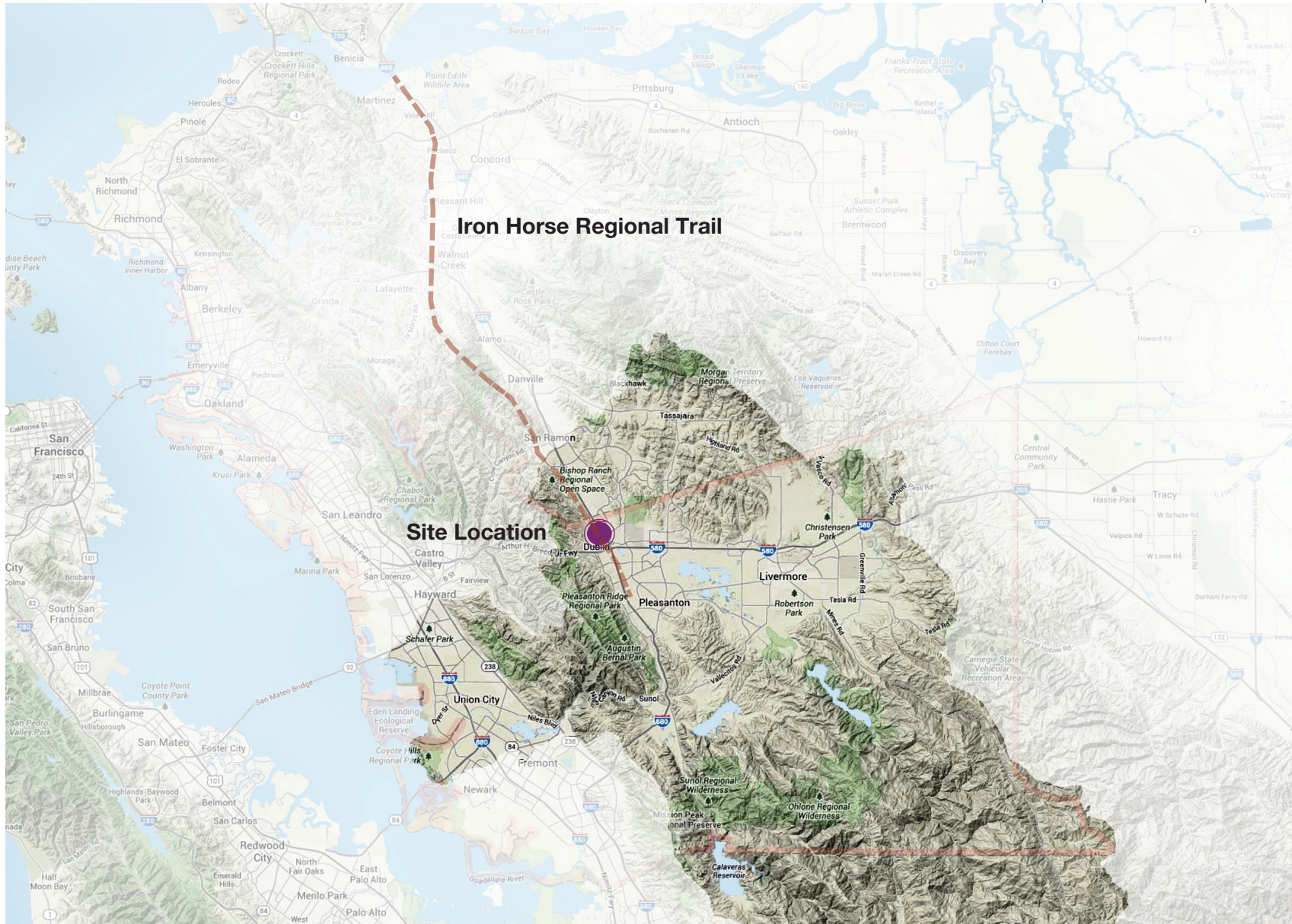
DATA COLLECTION



WATERSHED

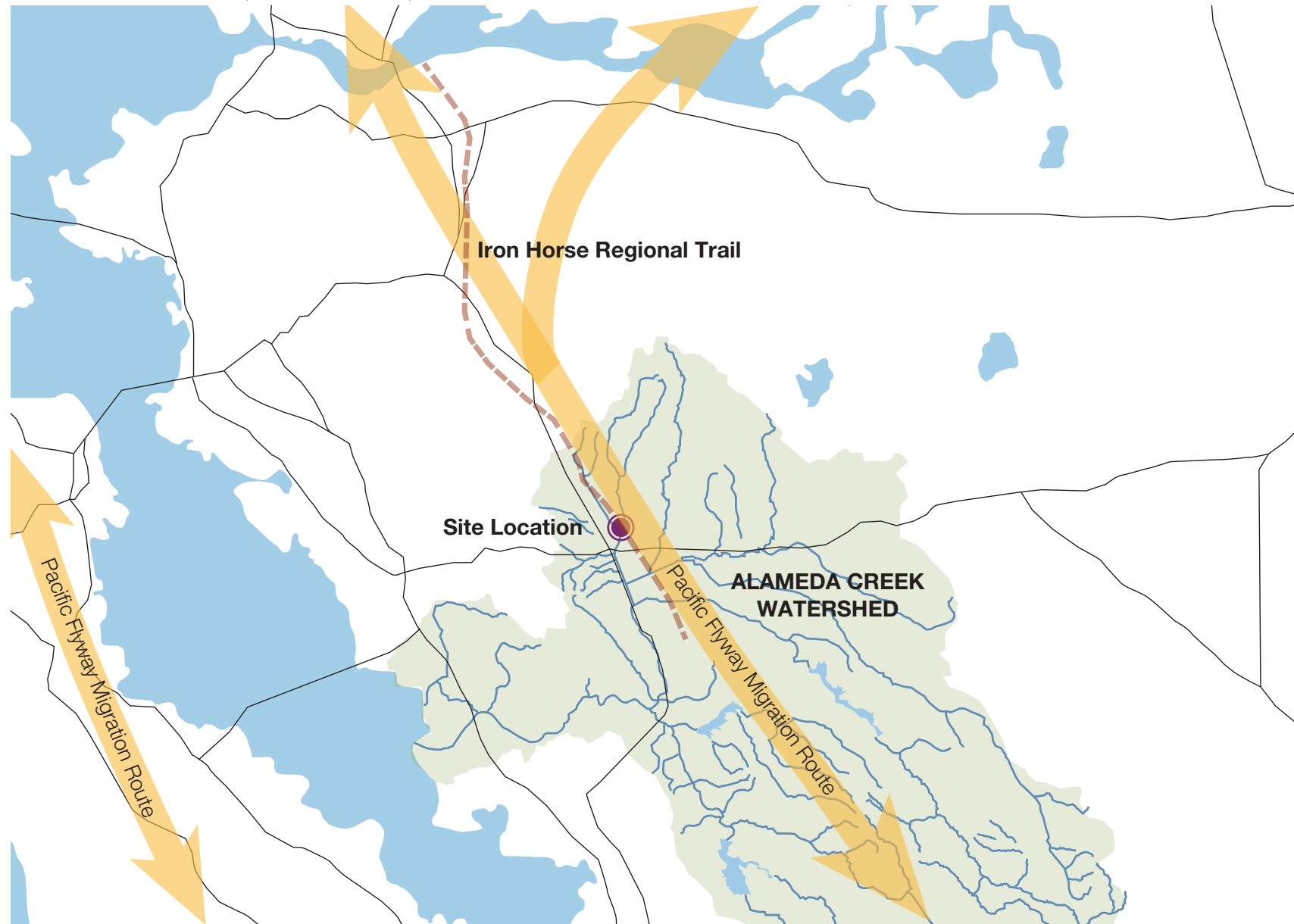
Alameda Creek Watershed, the largest in the Bay Area, drains 700 square miles into the San Francisco Bay via Alameda Creek.

South San Ramon Creek, the western edge of the study area, connects to Alameda Creek via the Arroyo de la Laguna tributary.



TOPOGRAPHY

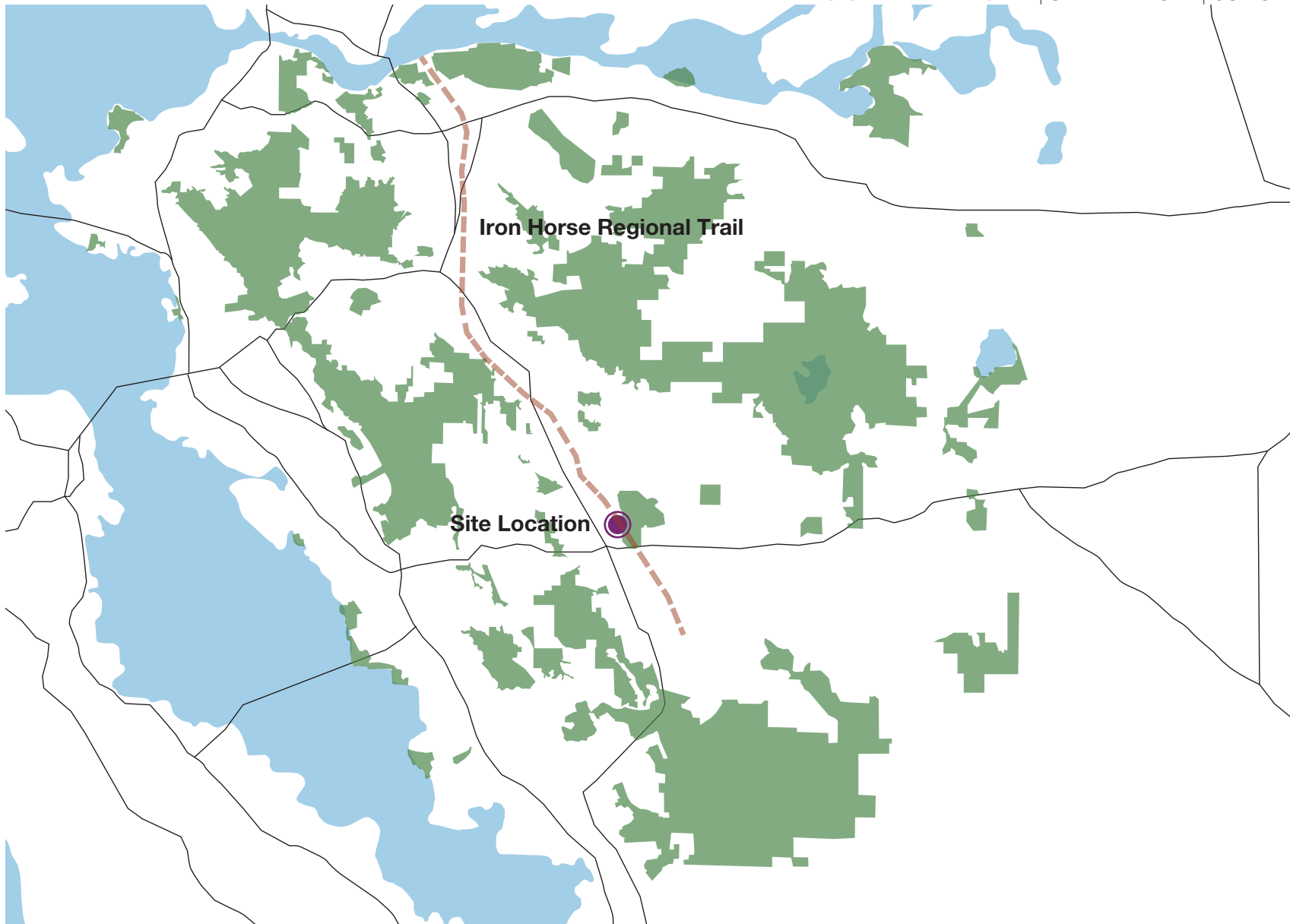
The East Bay landscape is dominated by at a low point within the San Ramon Valley. Mount Diablo (3,889 ft) and the rolling hills of the Diablo range. The study area resides



BIRD MIGRATORY ROUTE

The Pacific Flyway is a major north-south route of travel for migratory birds extending from Alaska to Patagonia. Protected

wetlands and open spaces around the San Francisco Bay are important rest stops along the route.

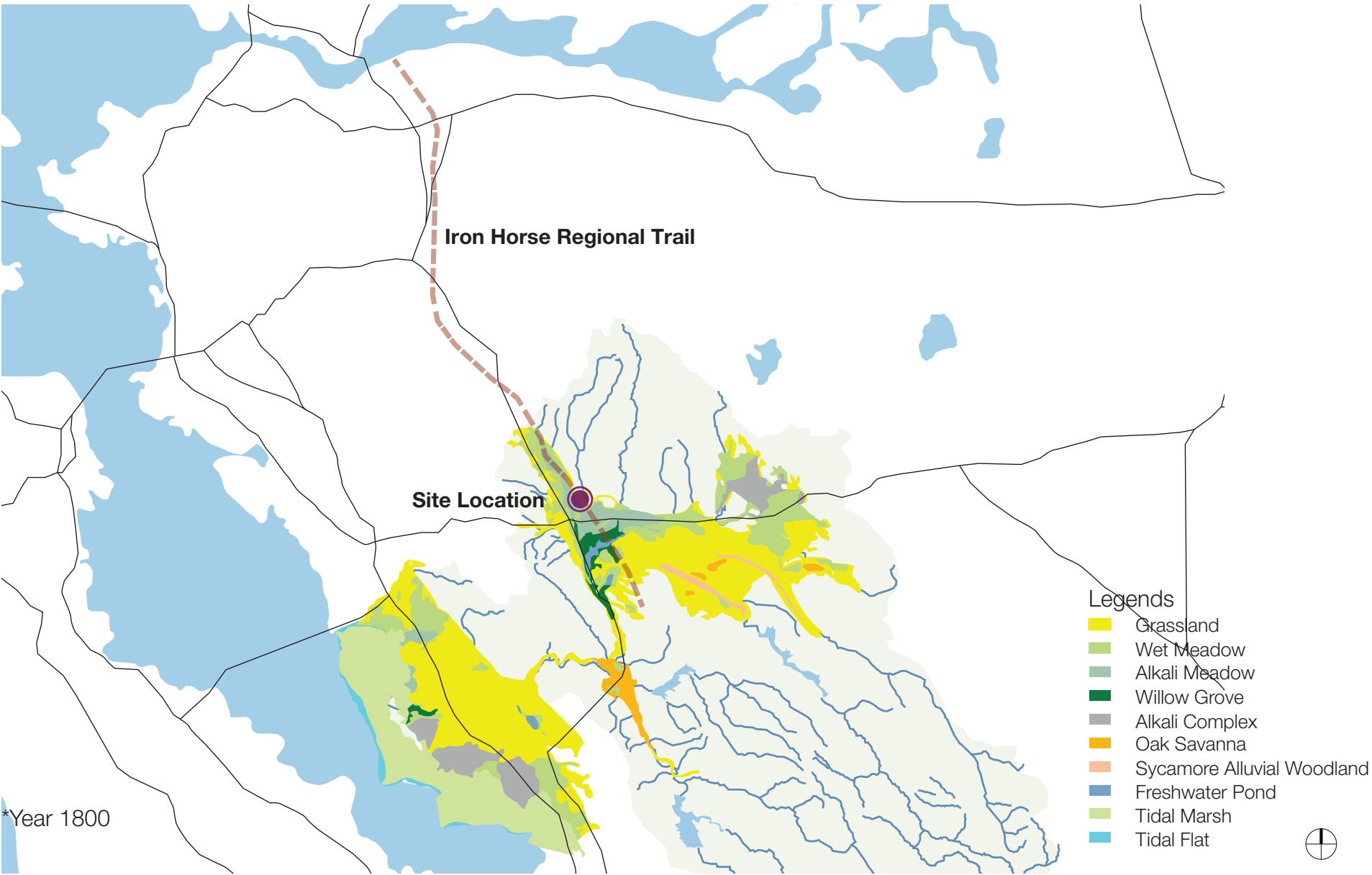


OPEN SPACE

The hills, water bodies and forests of the East Bay region abound with protected open space, forming a complex network of

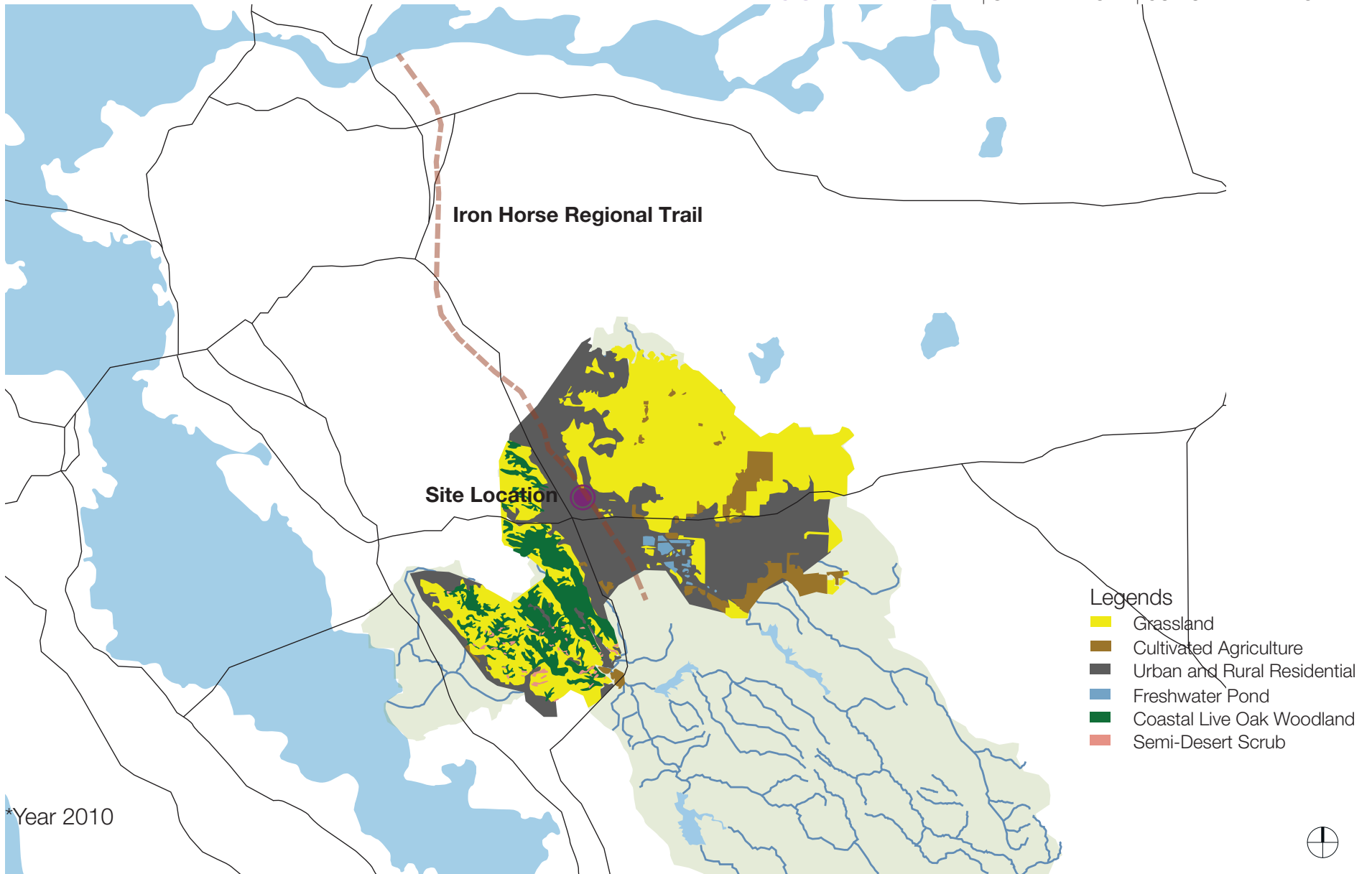
critical wildlife habitat and public recreation areas. Numerous connections exist between the study area and this network.





HISTORICAL ECOLOGY

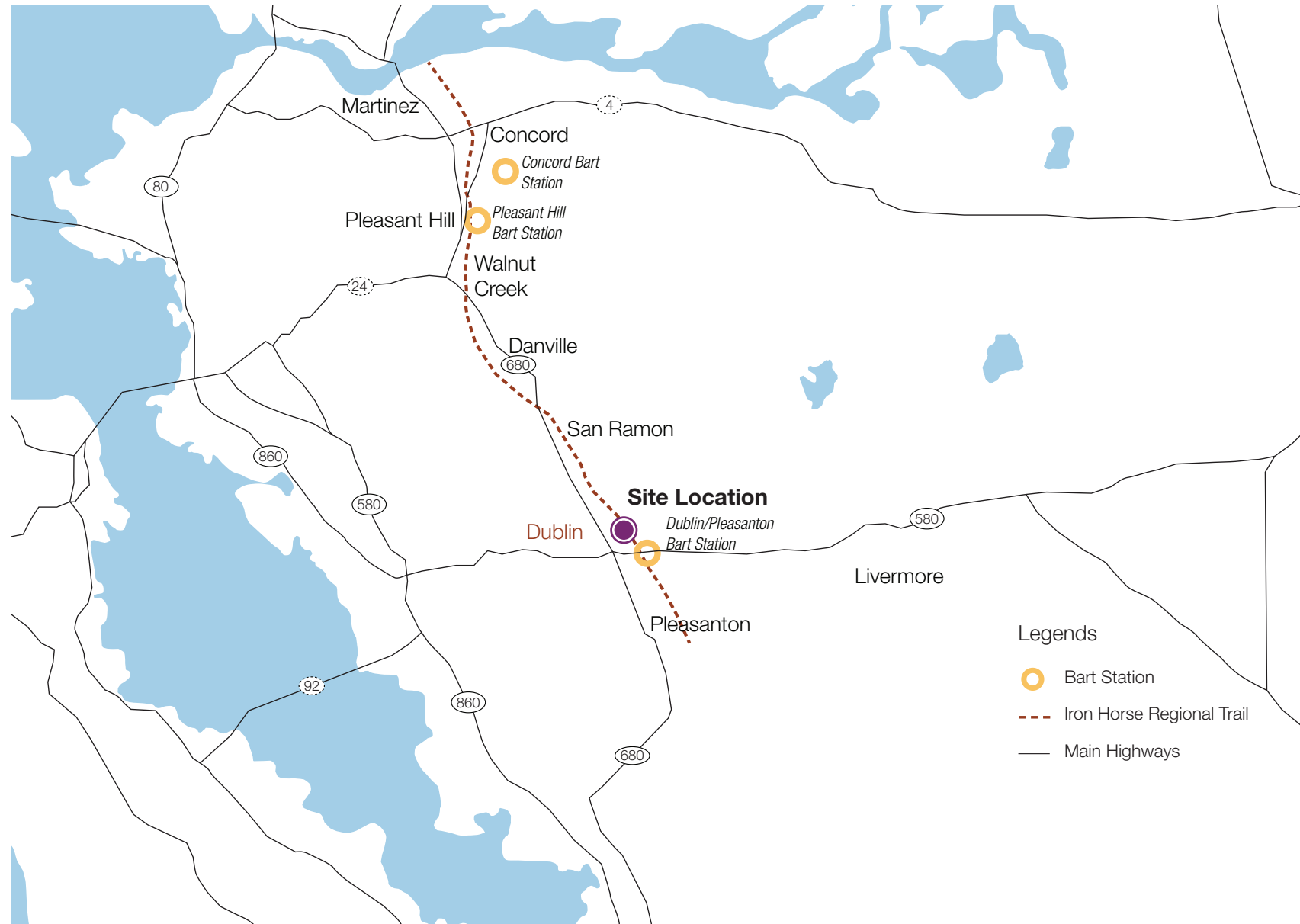
The regional landscape historically was comprised of a complex web of ecological types, supporting a wide variety of wildlife and fauna. The physical nature of the land greatly determined the type of biophyllia supported in any given location.



CURRENT ECOLOGY

Native ecologies were transformed after generations of intensive agricultural management. As urban development took

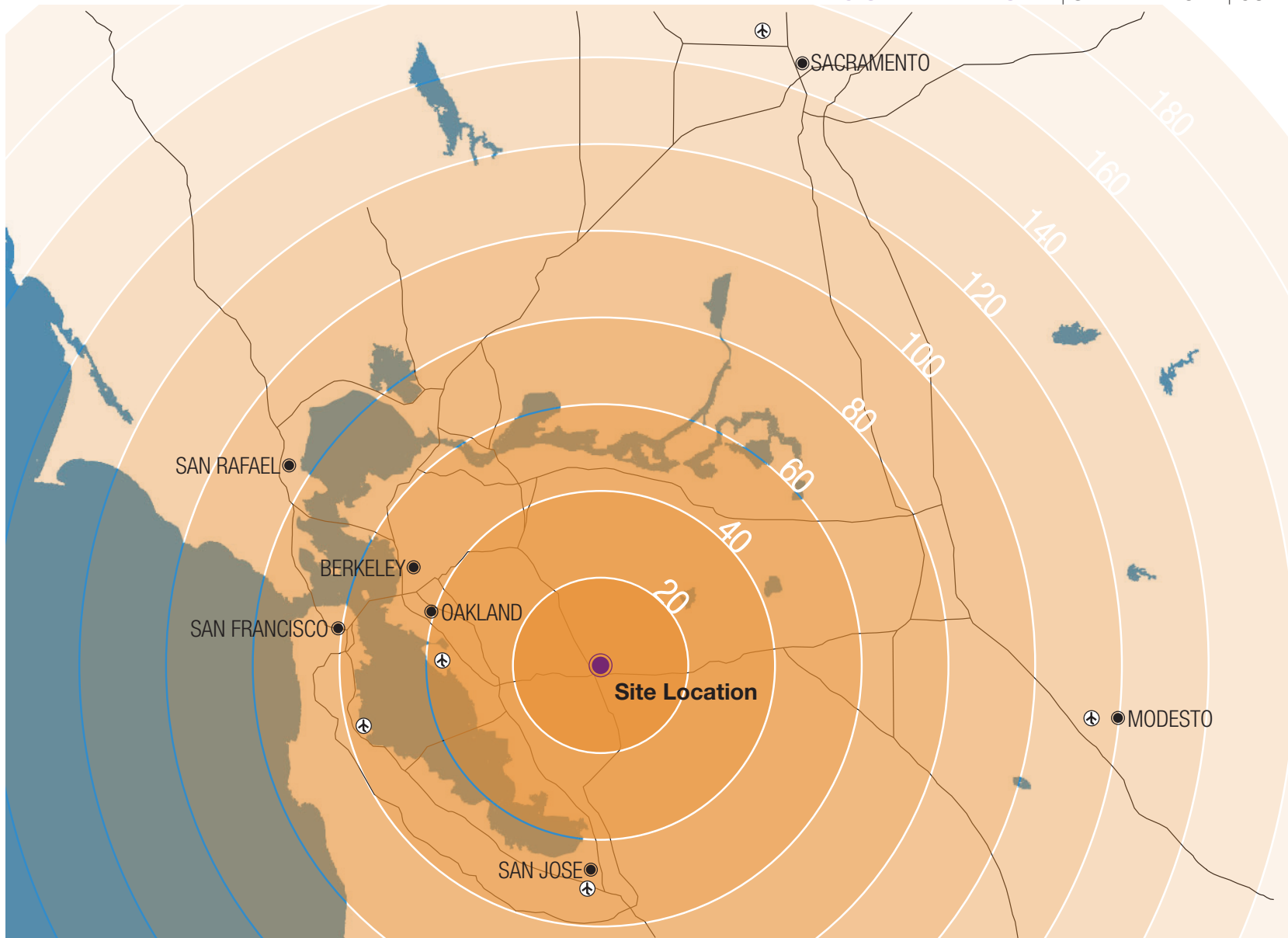
a foothold and expanded, native ecologies were significantly displaced and biological diversity irreparably damaged.



TRANSIT CONNECTIONS

Located at the confluence of several major interstate highways, the study area is widely accessible to large regional population

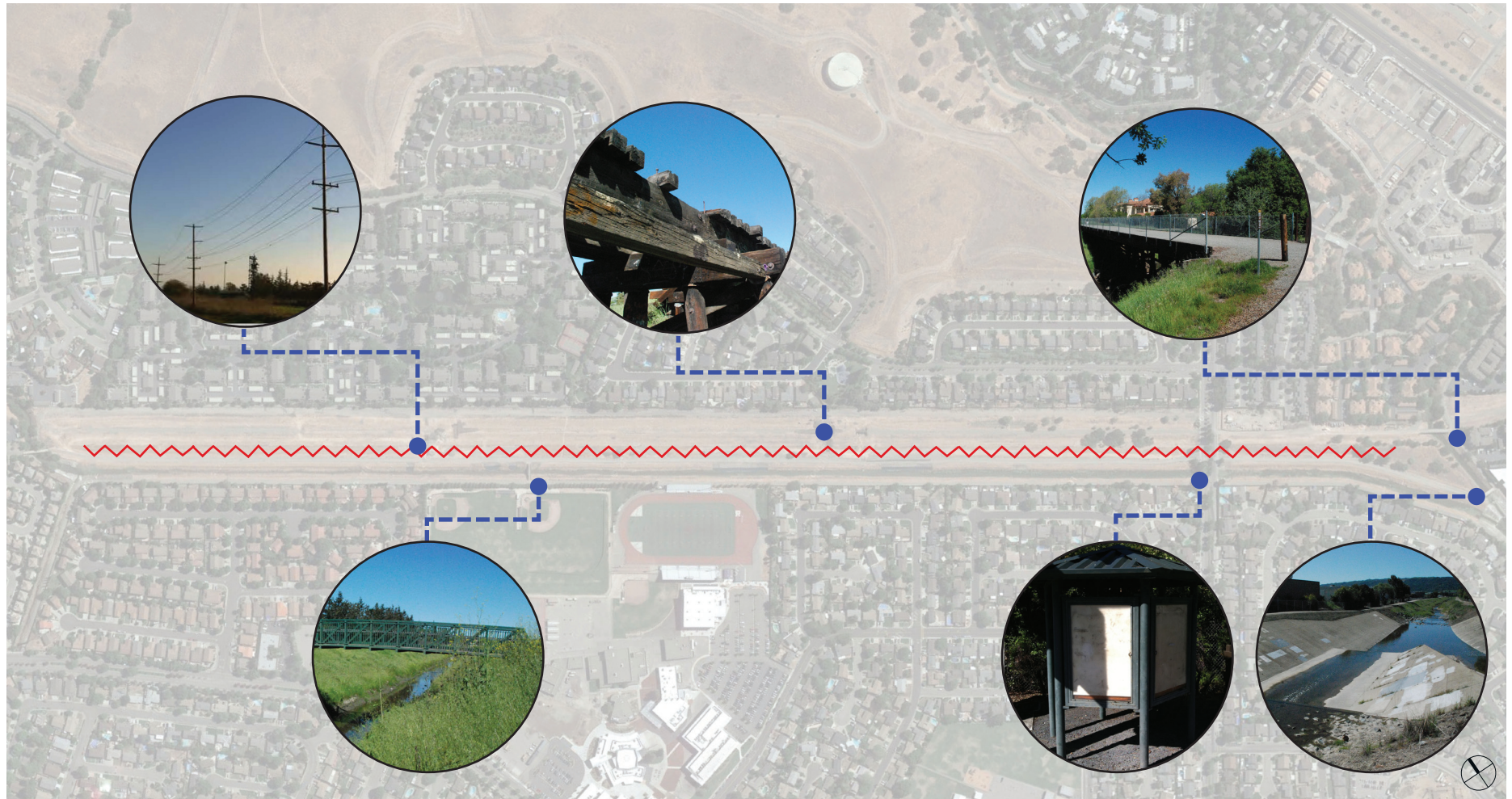
centers. Additionally, the 33-mile long Iron Horse bike trail connects 12 east bay cities and three BART stations.



REGIONAL CONNECTIONS

The study area is centrally located to several major population centers and airports. The Iron Horse Regional Bike Trail

is a popular recreation destination, this provides the potential for Dublin to become an important regional gateway.



SITE FEATURES

The key features of the existing site are the Iron Horse Regional Trail, the creek, the historic railroad bed and trestle. Other

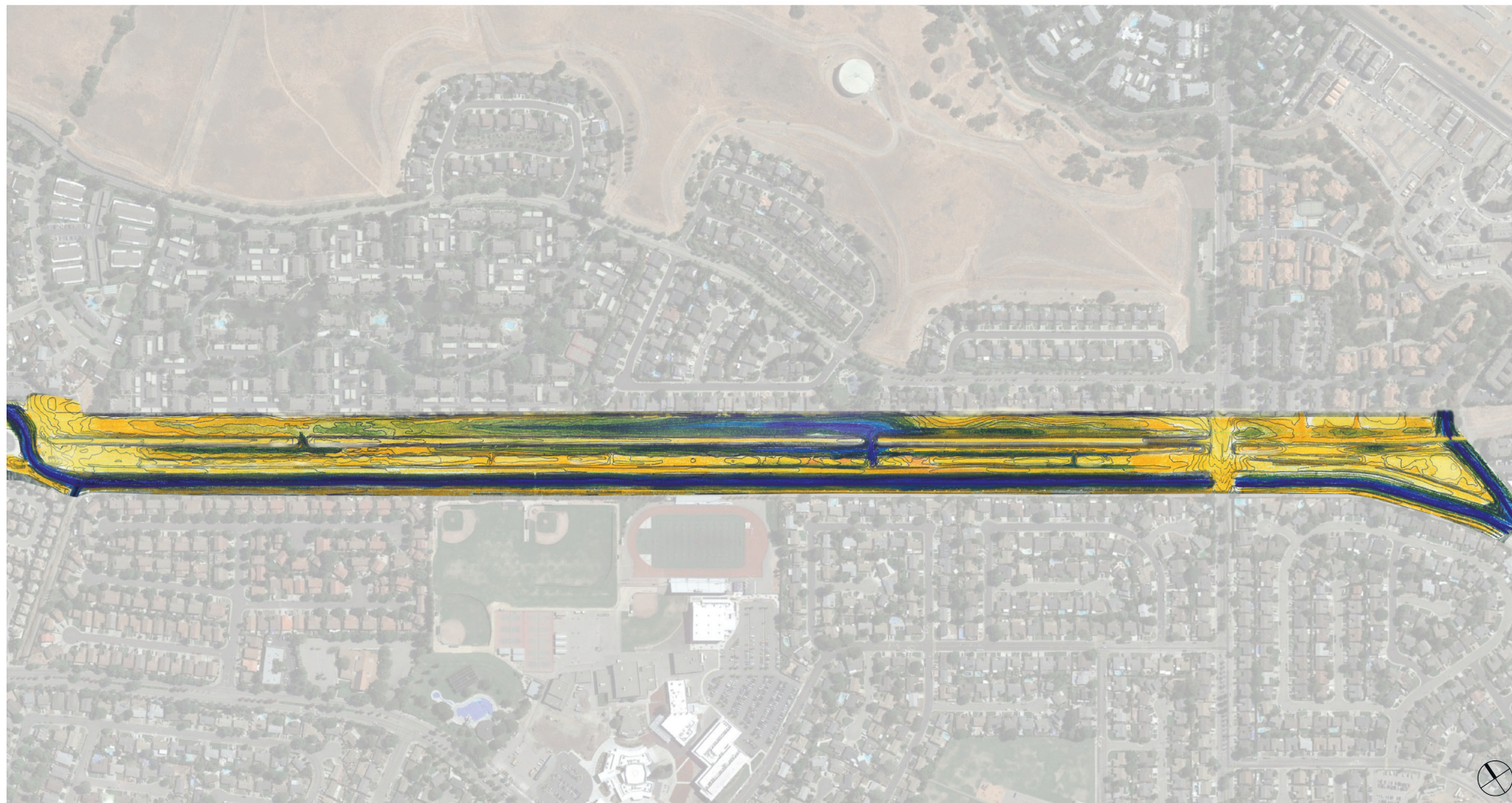
significant considerations are the powerlines and other utilities, the creek confluence, and the crossing at Amador Blvd.



VIEW SHED

This site has excellent panoramic views of the surrounding hills and open spaces, especially looking to the west. At multiple

points in the site, visitors have views to the Dougherty Hills Open Space to the east.



LEGEND

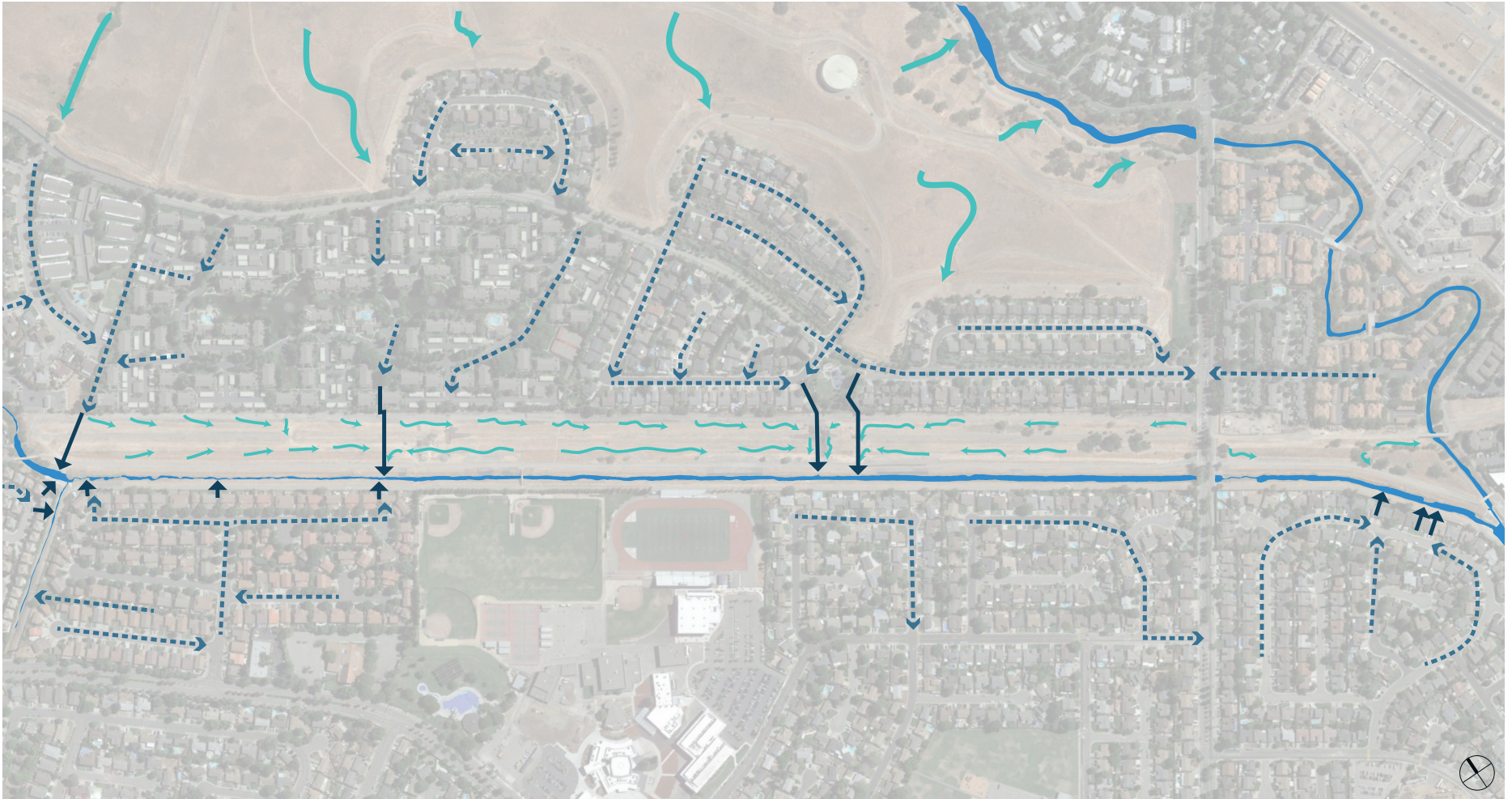


Highest > > > Lowest

TOPOGRAPHY

The current site is a highly disturbed utility corridor with multiple deep trenches and berms. At a few locations the berms are

cut through to allow for drainage. The site slopes gently from the north to the south.



LEGEND

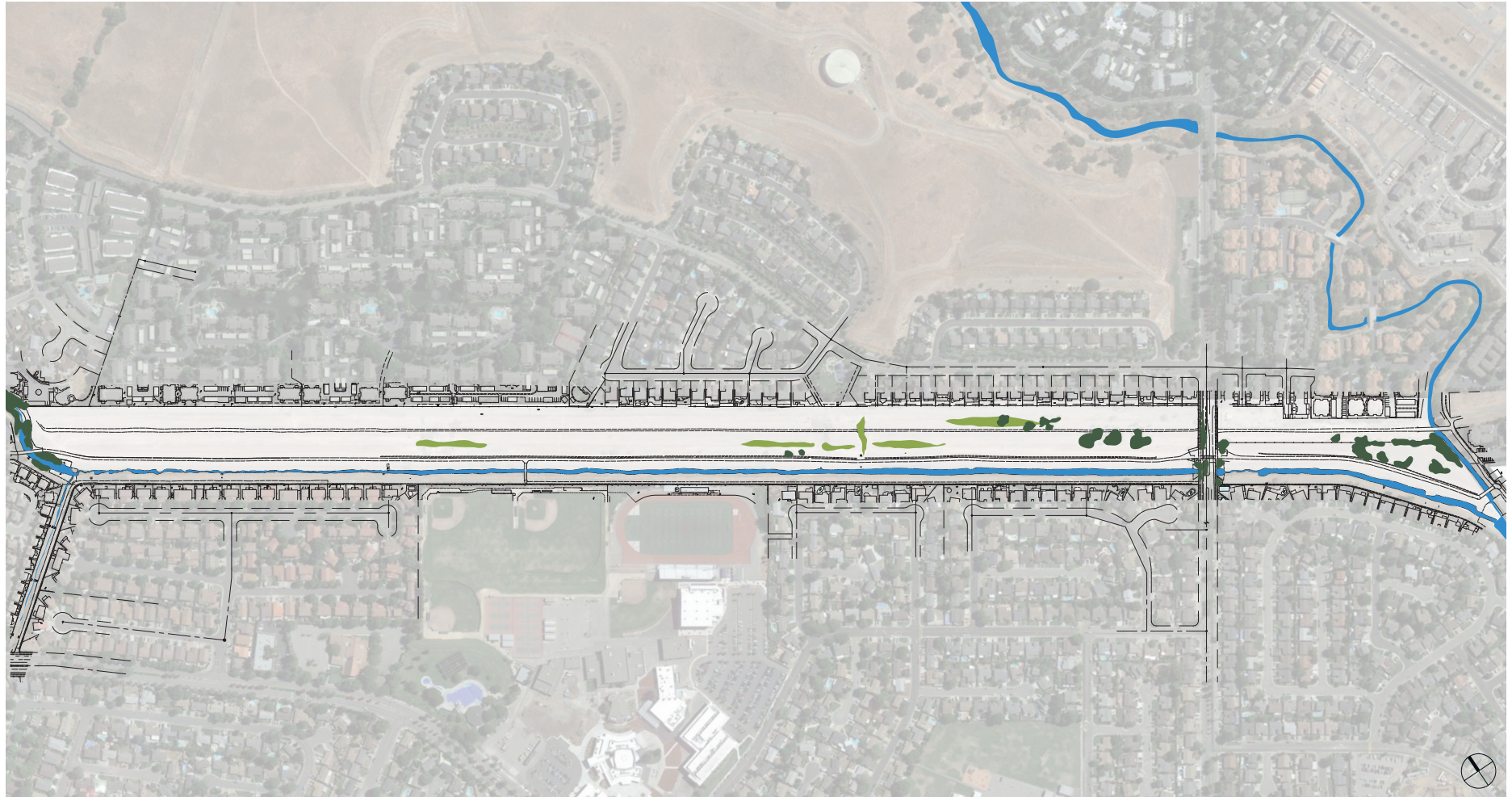
-  Creek
-  Over pervious landscape waterflow
-  Stormwater outlet into creek

 Over impervious landscape/stormdrain waterflow

HYDROLOGY

The current drainage regime channels most of the runoff into stormwater pipes that drain into the creek. On the site itself

low spots in the trenches create seasonal wetland habitat.



LEGEND

-  Significant trees
-  Existing wetlands
-  Herbaceous mix - exotic non-native dominated grassland

VEGETATION

The current site is mostly invasive annual grasses and herbaceous weeds. A few trees are scattered toward the southern

end of the site. Small seasonal wetlands are the most significant habitat on site.

EXISTING CONDITIONS

Dominant Vegetation Upland

Wild oat – **Avena fatua**
 Rye grass – **Festuca perennis**
 Ripgut brome – **Bromus diandrus**
 Bristly ox-tongue – **Helminthotheca echioides**
 Prickly lettuce – **Lactuca serriola**
 Common mustard – **Brassica nigra**
 Wild radish – **Raphanus sativa**
 Italian thistle – **Carduus pycnocephalus**
 Fennel – **Foeniculum vulgare**

Invasive [moderate] - not native
 Invasive [moderate] - not native
 Invasive [moderate] - not native
 Invasive [limited] - not native
 not native
 Invasive [moderate] - not native
 Invasive [limited] - not native
 Invasive [moderate] - not native
 Invasive [[high]] - not native

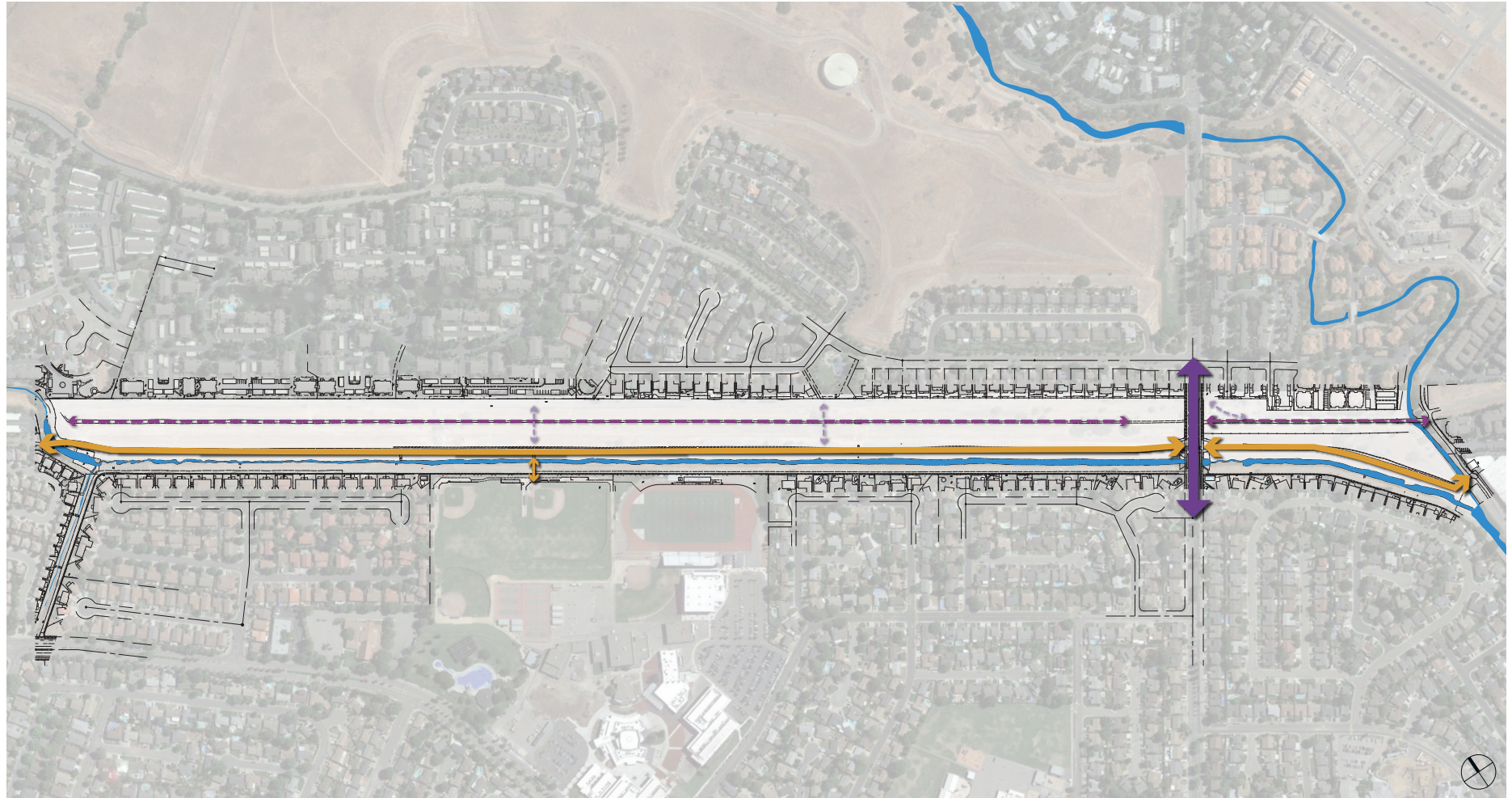
Dominant Vegetation Seasonal Wetland

Nutsedge – **Cyperus eragrostis**
 Swamp prickly grass – **Crypsis shoenoides**
 Rough cocklebur – **Xanthium strumarium**
 Salt grass – **Distichlis spicata**
 Curly dock – **Rumex crispus**
 Fat hen – **Atriplex prostrata**
 Rabbitsfoot grass – **Polypogon monspeliensis**

native
 not native
 native
 native
 Invasive [limited]] - not native
 native
 Invasive [limited]] - not native

source: Ironhorse Wetland Delineation Report

source: Calflora



LEGEND

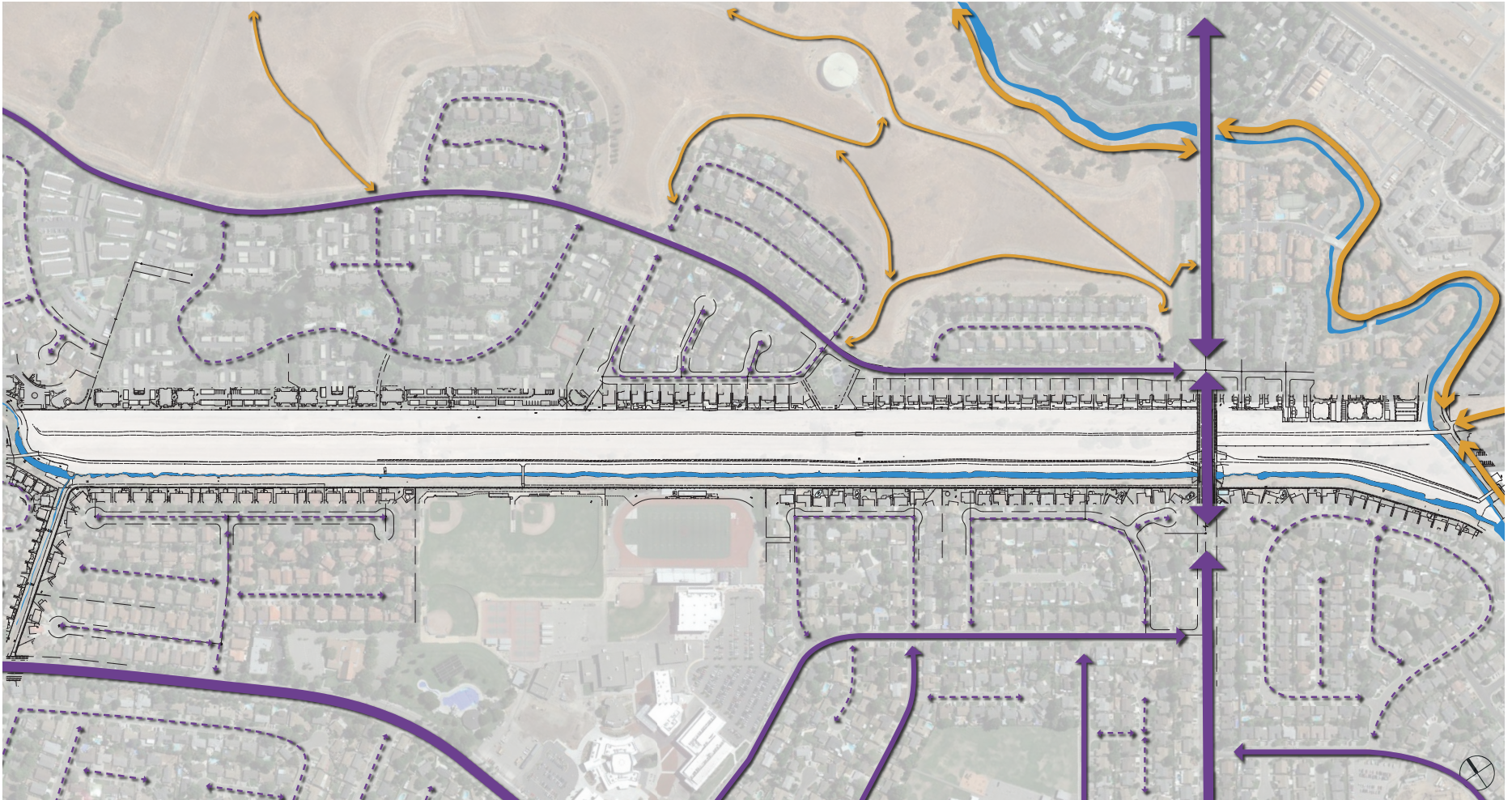
-  Insignificant informal pedestrian pathways
-  Significant informal pedestrian pathways
-  Secondary pedestrian pathways

-  Primary vehicular road
-  Primary pedestrian / bicycle pathways

ON-SITE CIRCULATION

The current site circulation is defined by the Iron Horse Regional trail for both formal pedestrian and bicycle use. Some informal

paths are also used, notably the former railroad bed. Access is possible from either end of the site and at the High School.



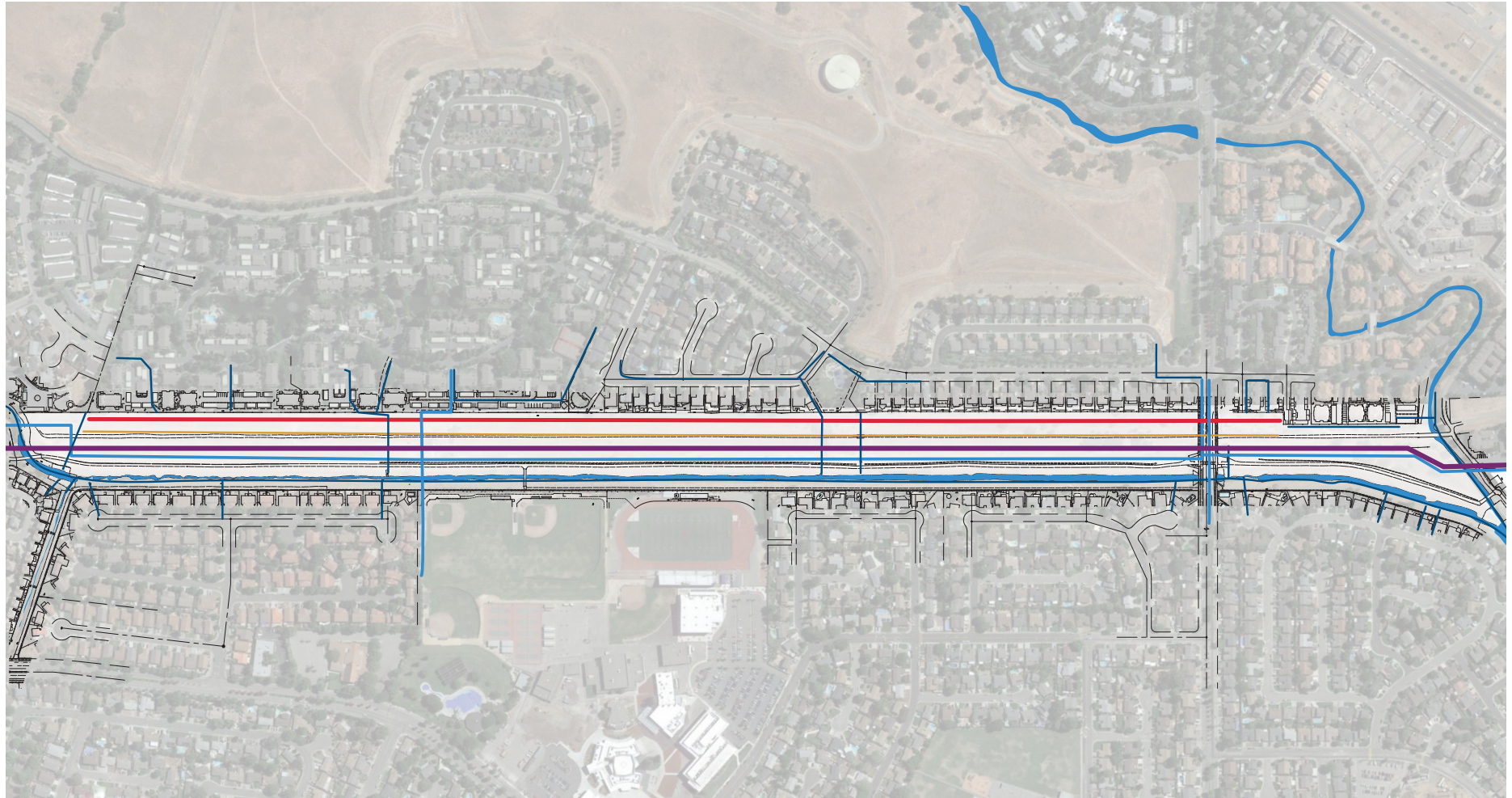
LEGEND

- - - - - Minor vehicular road
- <— Secondary vehicular road
- <—> Primary vehicular road
- <— Secondary pedestrian pathways
- <—> Primary pedestrian / bicycle pathways

OFF-SITE CIRCULATION

Amador Boulevard is the primary circulation corridor and is the primary access point to the site. There is no other crossing through

the site that connects the eastern and western neighborhoods.



LEGEND

- | | | | |
|---|---------------------------------|--|--|
|  | Overhead power lines |  | Gas Pipeline |
|  | Buried fiber optic cable |  | Water Service - potable north of Amador
reclaimed south of Amador |
|  | Stormwater | | |

UTILITIES

The site has a series of utilities that divide the space. The overhead power lines are cost prohibitive to bury, and the gas

pipeline cannot be covered by anything but the most temporary landscaping.

**LEGEND**

-  Human noise
-  Vehicular or Industrial noise

ADJACENT USE DISTURBANCE

To create the best habitat for wildlife, noise mitigation and activity placement are key considerations. Amador Boulevard is the

primary source of noise disturbance on the site, with the high school as a secondary source for consideration.

METHODOLOGY

This public process collected feedback from the community in multiple formats in order to parse out the communities values and hopes for the Iron Horse Nature Park and Open Space improvements. These methods focused on soliciting the opinions of the public, documenting both how they felt about the existing space, and concerns and hopes for the future. Methods included:

- Community walk and discussion
- Map and survey responses
- Idea board exercise
- Online survey

ave a water ~~re~~ Fountain!
 Get more benches too!
 keep it clean and try to
 the Dog park Trail to the
 iron horse trail make a park



Iron Horse Park and Open Space

Q1 How often do you use the Iron Horse Trail?

Answered: 74 Skipped: 0

COMMUNITY SITE WALK AND LISTENING SESSION

On April 27, 2013, the design team and representatives from the City of Dublin gathered with interested community members to walk the site and discuss potential ideas and issues. The purpose of the gathering was to introduce people to the project and make sure they understand scope of project and project site for this new park. In addition, team members solicited information from participants, including ideas and feedback on what was or was not desired for the new park.

As we walked the site and talked with participants, we asked a variety of questions, including: Do you live right in the neighborhood? Are you a resident of Dublin? What would you like to see on this site? How could it be better? What do you want to preserve? Do you have any special memories related to this site?

In addition to informal conversations at several locations, the design team stopped and presented in general terms the master planning process, some details about the site's conditions, and some general options for how it could be improved.

This exercise was primarily a listening exercise, and the most consistent feedback we heard was that the participants wanted the site to feel 'natural', they were not interested in sports fields, rather 'wilderness.' As conversations progressed it became evident the word 'Park' was synonymous in the community with athletic fields and playgrounds, and a discussion ensued considering the possibilities of a restoration or ecological park.



Protect the wildlife!

We need a place for
contemplation and
peace.

Shade along the trail would
be great!

Man it's hot out
here.

No development.

A tour of the history
or ecology would be
excellent

FEEDBACK MAPS

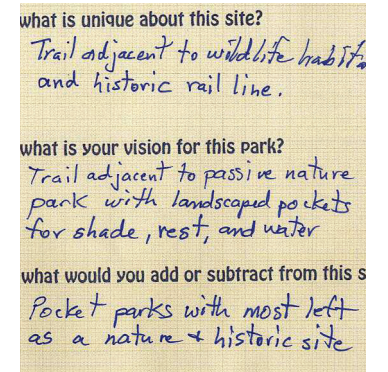
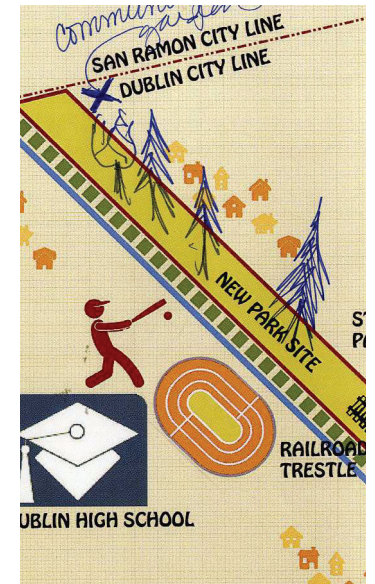
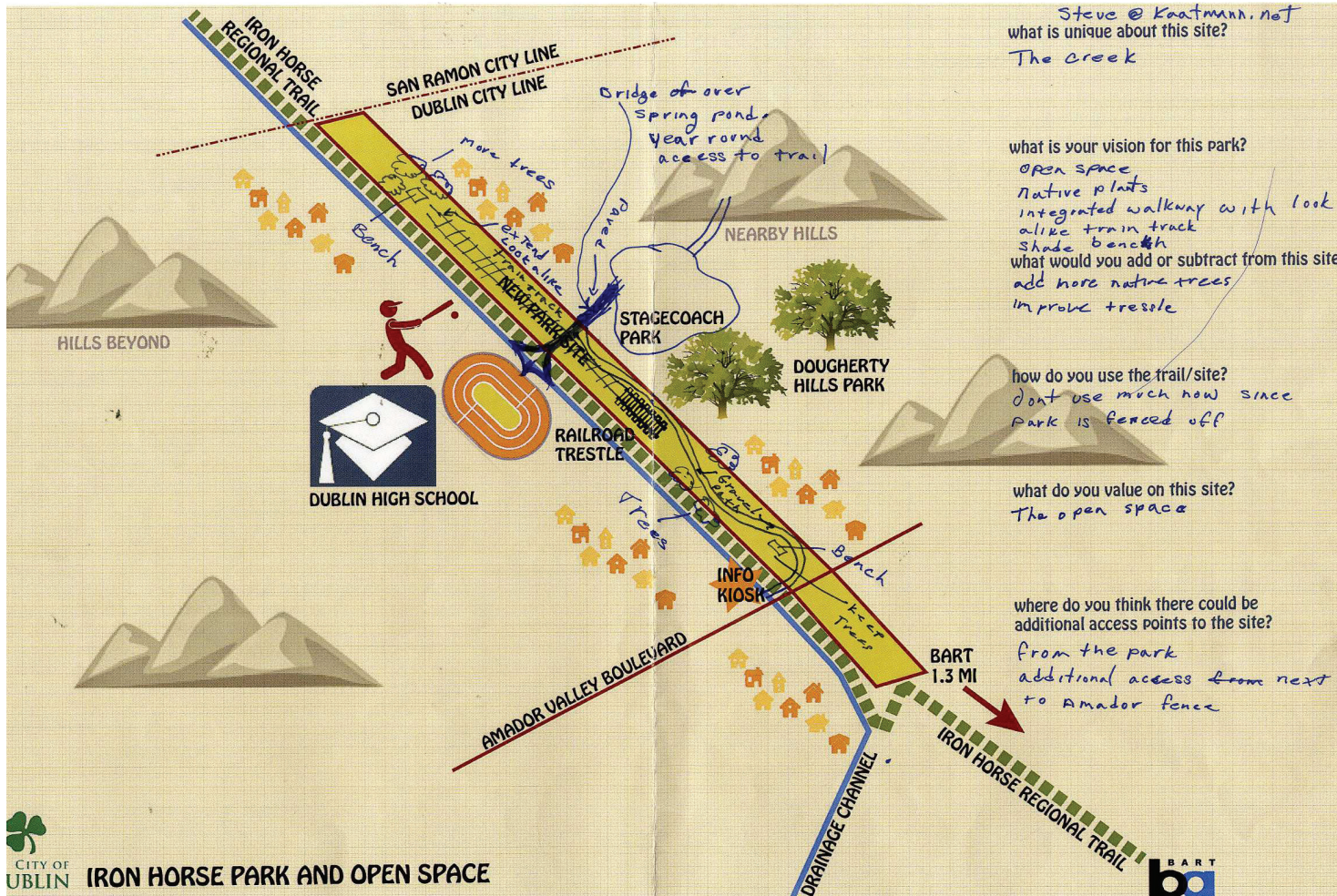
Community walk handouts were provided to each participant. This map allowed everyone to share their thoughts both written and drawn regarding the site. Part of this exercise was to make sure that less vocal participants were heard, as well as collecting a written record of ideas and feedback.

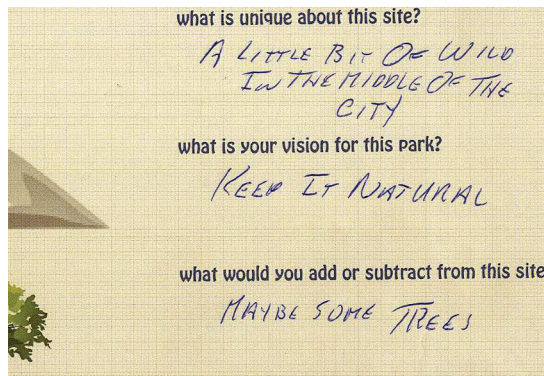
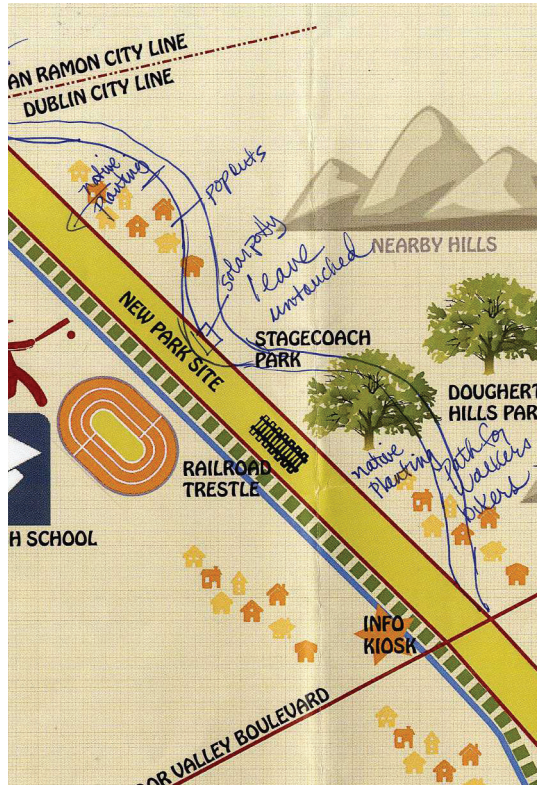
What is unique about this site?

- Wildlife is varied- deer, coyotes, turkeys, muskrat, etc. The only wild area along the Iron Horse Trail.
- 100 feet Union Pacific, 50 feet Alameda County, high pressure gas line.
- Natural wildlife
- How much wildlife belongs/lives here.
- Wildlife, historic features
- That it has been left alone.
- Trail adjacent to wildlife habitat and historic rail line.
- A little bit of wild in the middle of the city.
- Access is open

What is your vision for this park?

- Too much traffic on Amador Valley Blvd. Leave it as wild as possible.
- Water, duck feeding, wild life observation areas
- Telephone lines underground, natural walking trails (not cement!)
- Leave natural, green it up, some shade
- Keep wildlife preserved.
- Maintain vegetation and wildlife
- To remain as open space and part of the existing iron horse trail.
- Trail adjacent to passive nature park with landscaped pockets for shade, rest and water.





- Keep it natural.
- Visual/soften harsh climate, Have a path for walkers not bikers
- No grass, many native trees *walking areas without cement*. This should ALL be native vegetation.
- Open space, native plants, integrated walkway with look-alike train track, shaded benches

What would you add or subtract from this site?

- Subtract power/utility lines to beautiful area and leave the rest as is! Maybe add a few benches to rest along the trail- that's it!
- More trees
- California native trees, trees for shade like in Danville downtown area. Keep it natural!
- Enhance wildlife, add benches, food, signage
- Improve paved trail, remove weeds and

more vegetation + water stations

- No parking- this area should be for walking-to and appreciating by people in this area.
- Pocket parks with most left as a nature and historic site.
- Maybe some trees
- Solar bathroom, trees, trees and more trees.
- Clean up creek, very minimal signage, add benches and bathroom with water available. Keep the tressle!
- Add more native trees, improve tressle

How do you use the trail/site?

- Walking/walking dogs, running, rollerblading, cycling, photographing
- Bike riding, training
- Walking, riding bikes. Will avoid this part of Ironhorse in the heat- it's too hot!
- Walk, walk dogs, hike around
- To observe wild life in its natural beauty.

- Walk, bike
- Bike riding. I wake up every morning and look at it.
- Walk and view nature- birds and animals.
- Bike rides
- Walk/bike/run
- Bike/walk
- Don't use much now since park is fenced off

What do you value on this site?

- Walking only, peace/quiet, natural beauty, safety
- No cars
- Trail without traffic, wildlife
- Wildlife
- Wildlife, it's peaceful
- Nature and the lack of development
- Natural setting
- Peace and quiet- wildlife
- Off-road safety and wildlife, minimal

development and disturbance

- Wildlife and quiet
- The open space

Where do you think there could be additional access points to the site?

- Train trestle area to connect park and high school access
- Only one- at stagecoach park.
- Pick a designated location from the east and west sites- acquire easements.
- Stagecoach Park
- Stagecoach Park and Amador Lakes
- From the park, additional access next to Amador fence

Other Comments

- Ensure all ideas are developed by three or more groups independent of each other for us to vote on. (The three groups being us neighbors.)
- Extend train track remains, place a bridge over the spring pond to provide year-round access to trail (near playing field and Stagecoach Park), gravel path

IDEAS BOARDS

IRON HORSE PARK AND OPEN SPACE

The City of Dublin is considering the acquisition of a 25-acre parcel adjacent to the Iron Horse Trail for park and open space purposes. The property is located between the border of San Ramon and the conference of the Shasta and Siskiyou National Forests south of American Valley Blvd. As part of the process the City of Dublin has hired the landscape architectural firm SDA Group to lead a community visioning process for the proposed park. The process will include public meetings and public input gathered from the City website. This public input process will begin in mid-spring 2013 and conclude in summer 2013. Your input is valuable and we hope to hear from you!

If you have any questions call 925.556.4500

Ideas from around the world...



ECOLOGY ...



ORNAMENTAL GARDENS ...



COMMUNITY AGRICULTURE...



... share your vision with your neighbors!



"A native garden would be swell!"

ART ...



A wooden play structure with water fountains for children would be a good idea

[-yo mama]

But keep in mind that there is a play structure at Stagecoach Park that is under utilized.

ADD BENCHES ALONG IRON HORSE, ENHANCE NATURAL HABITAT ALONG RAILROADS.

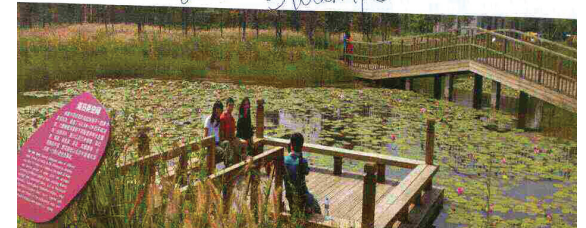
I Like the idea of pergolas + Natural shade.

permanent exercise station

Just replace weeds with drought-tolerant California native plants. A field of Calif poppies here and there.

nice

build up seasonal swamps



☆

SUPER QUOTES FROM IDEAS BOARDS AT THE KIOSK AND ONLINE:

“The Ecology and Agriculture pictures look desirable. The Ornamental Gardens and the Public Art pictures look too artificial. I would be in favor of commemorating the railroad history in a tasteful way (e.g. signs or plaques that give actual history, not sculpture).”

“Yes...like the gardens and natural play areas. I think the water area should be carefully considered.”

“A community vegetable garden that doesn’t disturb the wildlife would be nice at the ends nearer to Walmart and down the other side of Amador Valley by the apartments.”

“Wildlife”

“A ROAD/PATH THAT ALLOWS FOR PEDESTRIAN/BIKE TRAFFIC – SEPARATE LANES”

“Add benches/shade along iron horse trail. Enhance natural habitat along railroad”

“Low impact lighting for late evening walk”

“Keep nature intact, impact should be overtime so as to not overly disturb our wildlife”

“Shade - trees ”

“ENHANCEMENTS OF THE SWAMPS WITH ACCURATE AND APPROPRIATE VEGETATION WITHOUT DISRUPTING THE FROGS. SOME LARGE ROCKS, A BENCH OR TWO.”

‘Keep it simple!’

“Lawns? We don’t need more lawns”

“I would like to have a path that connects the StageCoach park to the Iron Horse Trail. We live on Topaz Circle and we have to walk about a 1/2 mile to get the Iron Horse Trail when we can see it from the Stagecoach Park. This would be the most important feature for us!”

“Drinking fountain!! ”

ONLINE SURVEY

To reach out to a wider audience, the design team hosted an online survey regarding the site. While the survey was open, it received responses from 74 participants across a range of ages.

The survey response was high enough to be considered a significant sample size for the City of Dublin, sampling bias and confidence interval accounted for.

The participants sampled were generally older than the city of Dublin's population, and this bias may account for a skewing of data based on differential responses per the 19-35 year olds and the older participants.

Of the online survey for data with close variations, such as a 50% response, the confidence interval is 11.38%. Of the online survey for data with wide variations, such

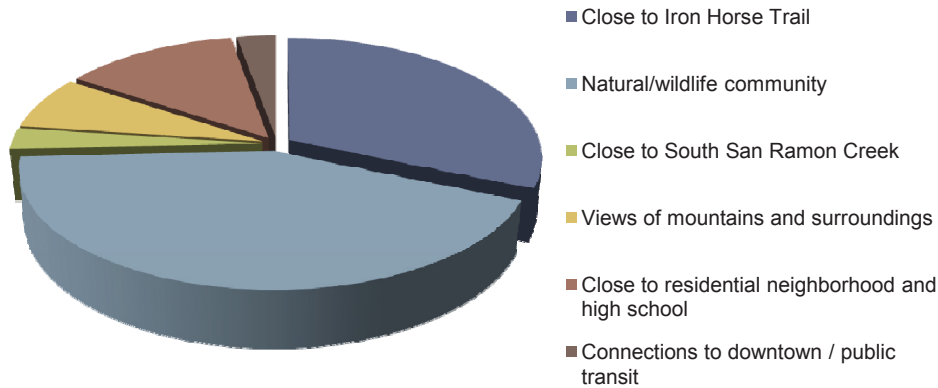
as a 95% response, the confidence interval is 4.96%.

A variety of conclusions could be drawn from this sampling, to add to the wider picture of feedback received from other methods.

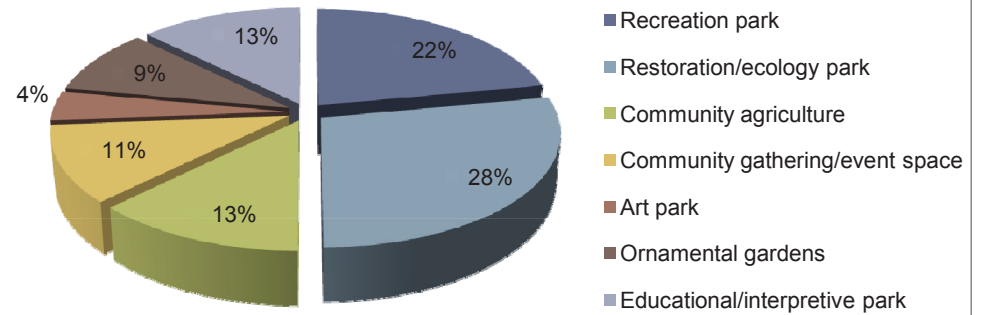
The most popular improvements and programs all focused on wildlife, restoration ecology, native habitat, and more trees. Other features were widely supported, such as benches, water fountains, picnic areas, outdoor educational spaces, and community gardens.

Other elements had mixed support and opposition, indicating that placement would be important to gain community support. These included playgrounds, the restroom, and the parking area.

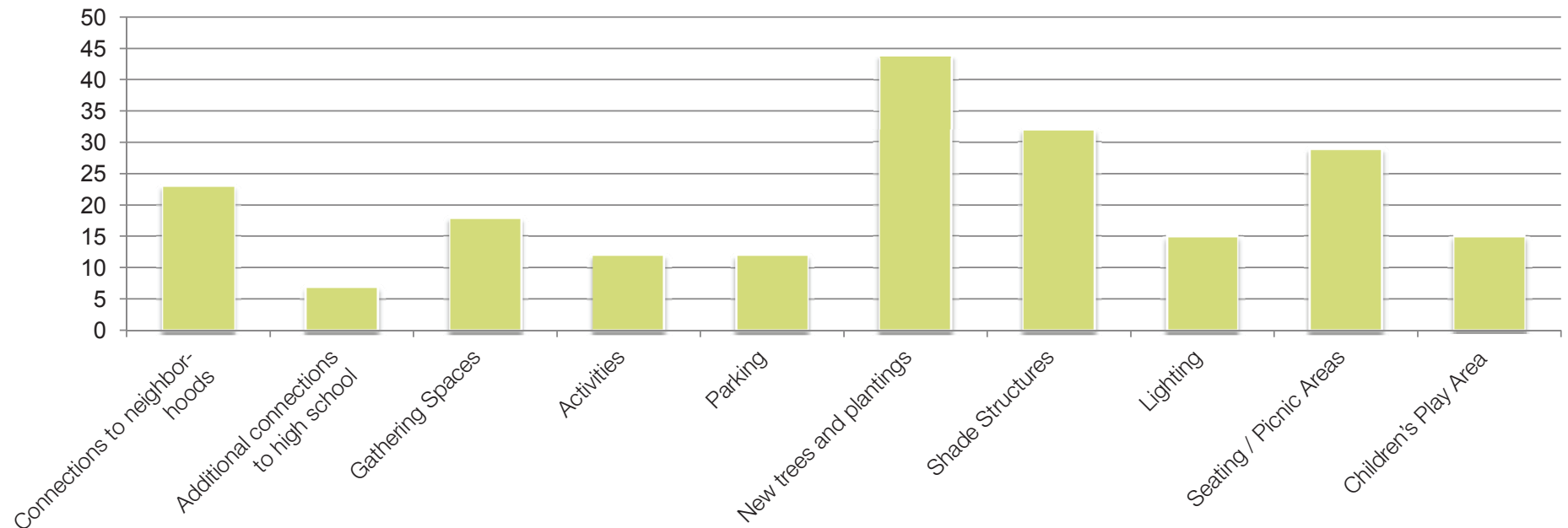
WHAT DO YOU VALUE ABOUT THE EXISTING SITE?

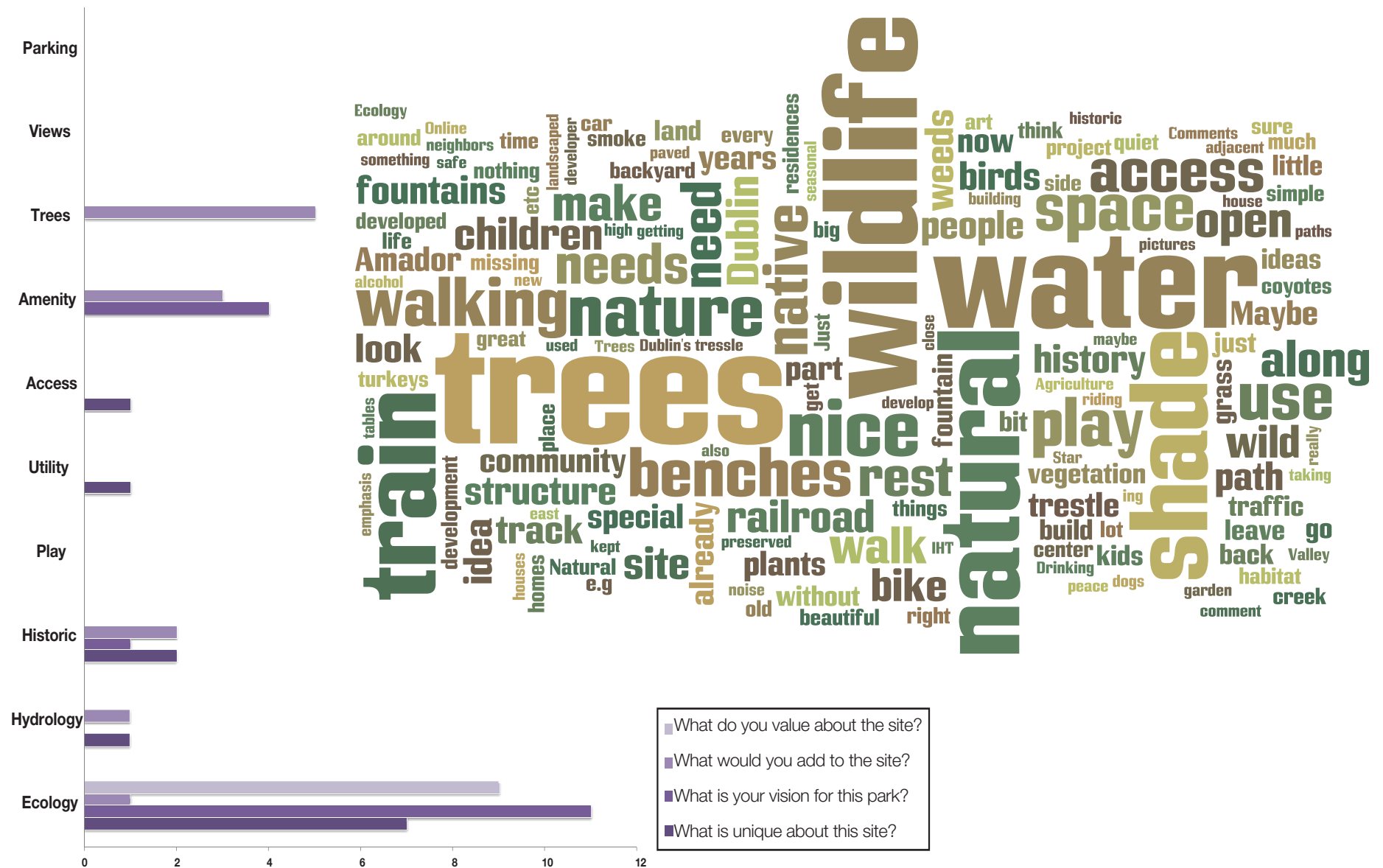


WHAT IS YOUR VISION FOR THIS PARK?



WHAT WOULD YOU ADD TO THE SITE?





COMMON THEMES

These graphics show the hierarchy of concepts mentioned in letters and comments from the community.



Bird and Wildlife Viewing



Fishing



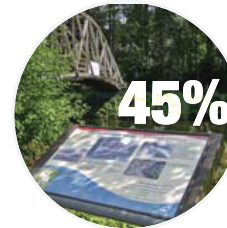
Community Garden



Event Space



Picnic Areas



Interpretive Signage



Kite Flying



Education and Natural Science



Public Art



Restrooms



Play Equipment



Parking



Climbing



Volunteer Restoration

SUPPORT FOR PROGRAMS



CONCLUSIONS

- Strong support for wildlife and California native habitat restoration
- Strong support for trail amenities, such as shade, benches and restrooms, but concerns about their potential location.
- Mixed support for some active programs, such as picnicking, natural play structures, and community gardens. Location may ameliorate concerns of increased site activity.



**IRON HORSE
NATURE PARK
& OPEN SPACE**

**THREE
CONCEPTS**

ECOLOGIC: DESIGN PROPOSAL



Eco-Logic focused on a comprehensive restoration ecology approach to the site with minimum new community facilities. In this plan, the full site was utilized in the creek restoration, creating a strongly meandering creek, acres of new and enhanced wetlands, and enabling a variety of other ecosystems across the site. These included riparian woodlands, oak savannas, and meadows. The community program focused on trails and access to these enhanced habitats, outdoor classrooms, and interpretive signage. A small kiosk and parking lot were located at the trailhead. The site circulation is altered to create a

broadly sweeping layout to the Iron Horse Trail with a variety of side paths for walkers. Eco-logic maximizes the habitat and local environmental education possibilities on the site for the local neighborhood.



CONCEPT SKETCH





AGRI \ CULTURE: DESIGN PROPOSAL



Agri\Culture reconnects the site to the agricultural history of Amador Valley. A series of community gardens, apiaries, and urban orchards are located along the Iron Horse Trail. This plan emphasizes the historic railroad not only through refurbishing the trestle, which is a common requirement for all concepts, but also through using reclaimed rail materials in the programmed areas of the site, and extensive historic signage. In addition to pure agriculture, this plan also takes elements from Eco-Logic, such as a creek channel restoration and wetland construction, but in a more restrained manner. The Iron Horse Trail is

gently modified to allow for a few deeper meanders in the creek, and a secondary pedestrian circulation is added along the former railroad bed. Picnic spaces and a small playground round out this concept, creating a place where the community can gather, grow food, harvest, play, and enjoy nature.



CONCEPT SKETCH





ACTIVATE: DESIGN PROPOSAL



Activate maximizes the potential for use of the site by the community. The first priority in Activate is creating space for community gathering and activity. The main hub of the park will be at Amador Boulevard, where the kiosk is expanded into a visitor center, with facilities to host a popup café and mobile bike repair station. Adjacent is a large natural play area, that uses vernacular plan equipment hosted in a natural setting. At the confluence a small amphitheater is proposed, taking advantage of the view and proximity to downtown. Outdoor class rooms, community gardens, event spaces and an art park anchor the northern part of

the site. The circulation of Active is very simple, the Iron Horse Trail is not modified, and a secondary pedestrian circulation is added along the former railroad bed. The ecological story in Activate focuses on a limited creek restoration combined with a large wetland creation – including boardwalks and birding observation decks. Active seeks to transform this site into a lively public space, used and loved by the wider Dublin community.



CONCEPT SKETCH

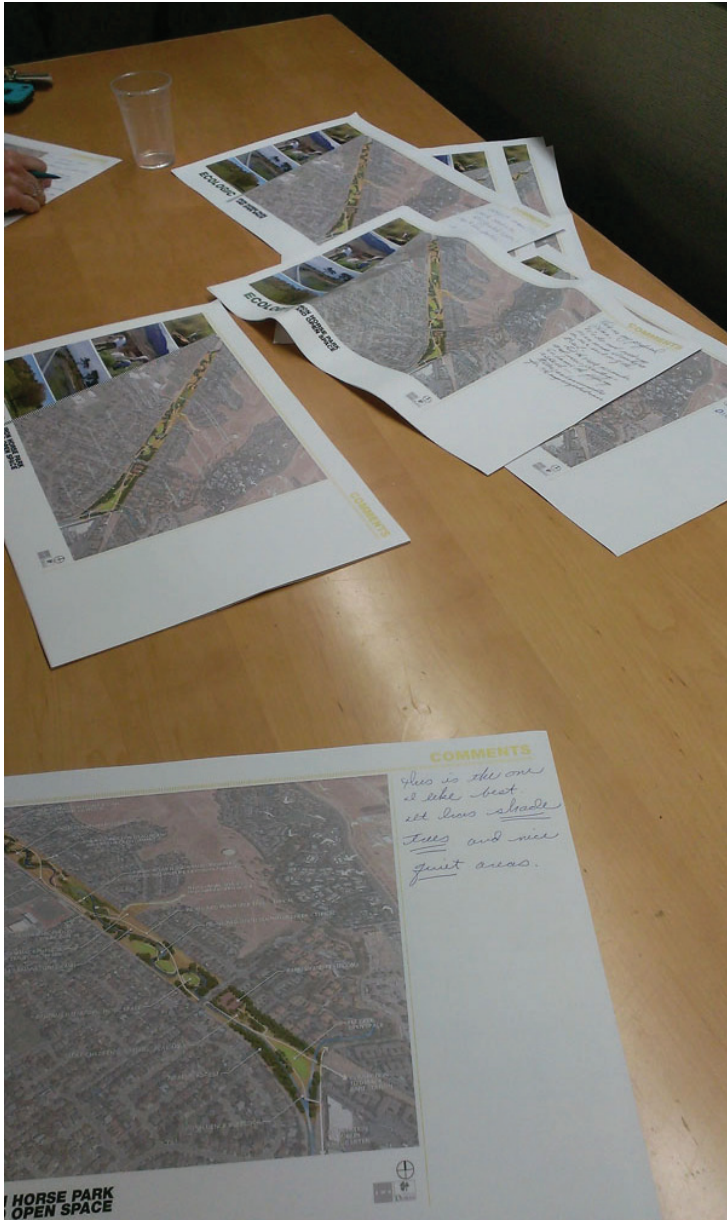


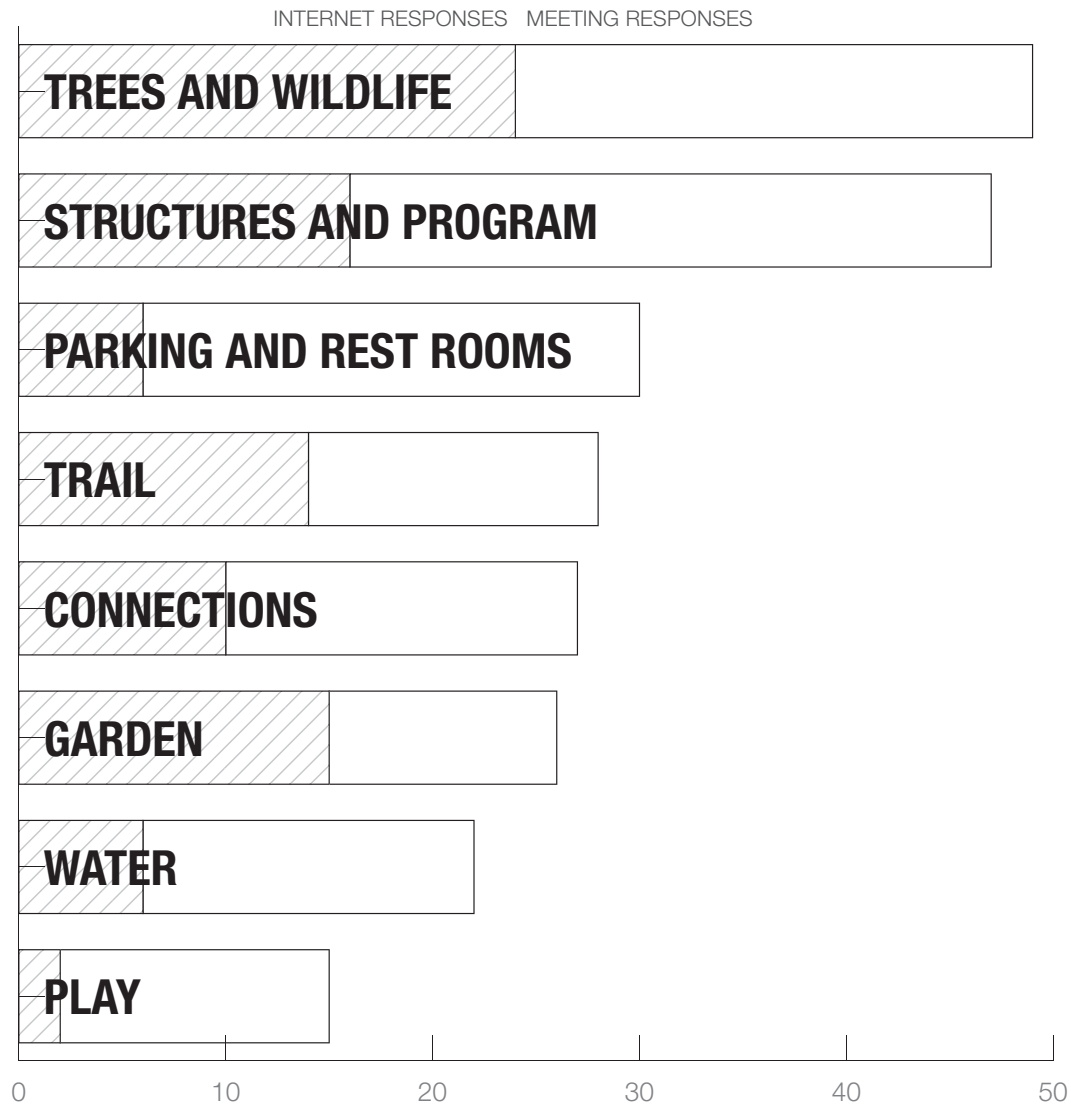
CONCEPT PLAN



COMMUNITY WORKSHOP

After the presentation of the three conceptual plans, the design team discussed the plans in small groups. Participants had plans they could draw and comment on, and designers were available to clarify the design intent and listen to ideas and critique from community members. Through a lively discussion, the over-all concept of a park based around ecology was the most supported, with many specific discussions of appropriate program and program location discussed in detail. These results enable the design team to move into a single concept with a clear understanding of what was and was not supported by the community.

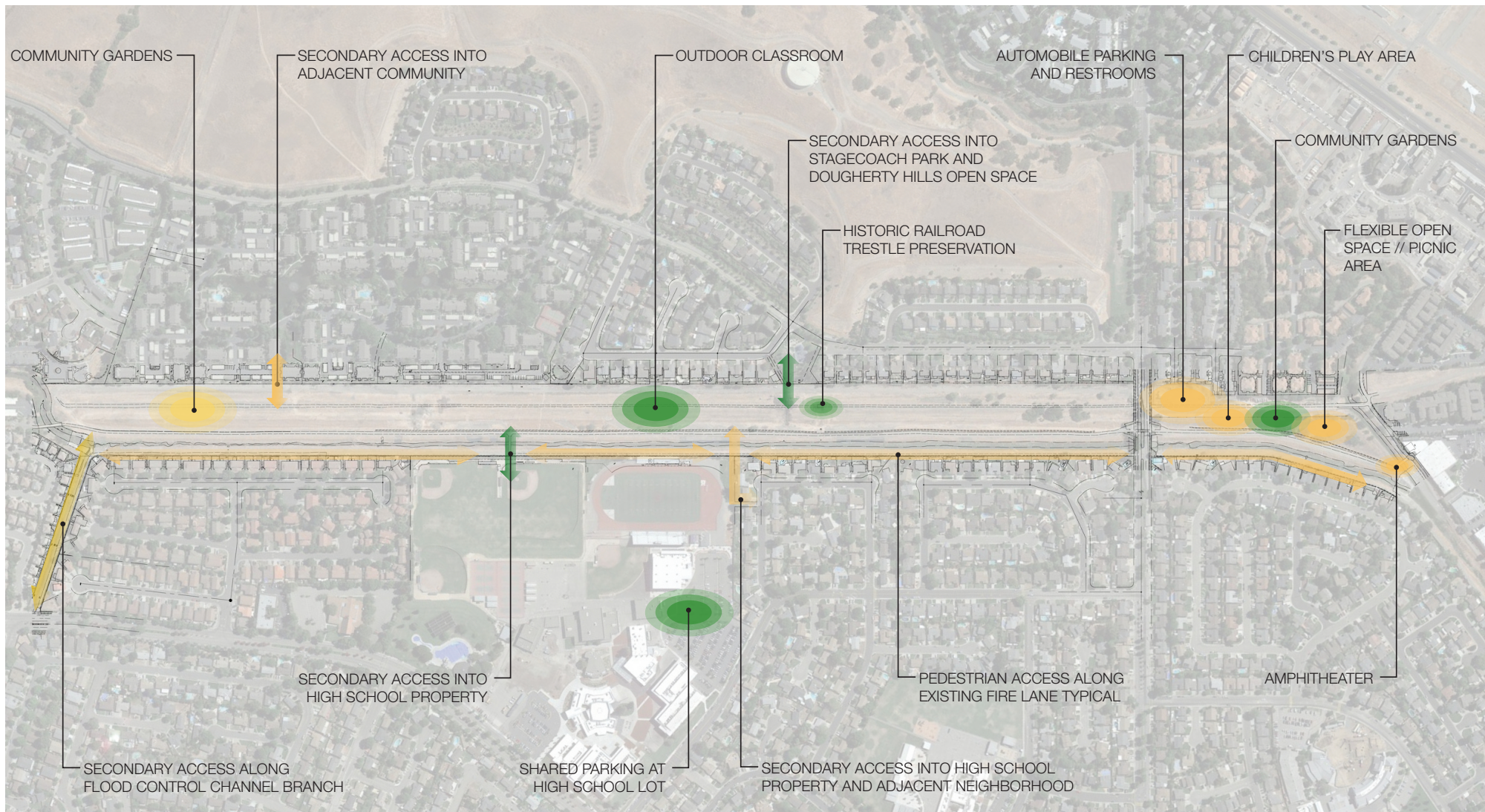




ONLINE FEEDBACK

In addition to the discussion, the plans were posted online for further comment and feedback. The overall feedback

was consistent with the results from the participants in the meeting, with a focus on ecology and only minor public program.



ANALYSIS

This map identifies the program location feedback received in the community meeting. The orange locations received

net critical comments, the green locations received net positive comments.



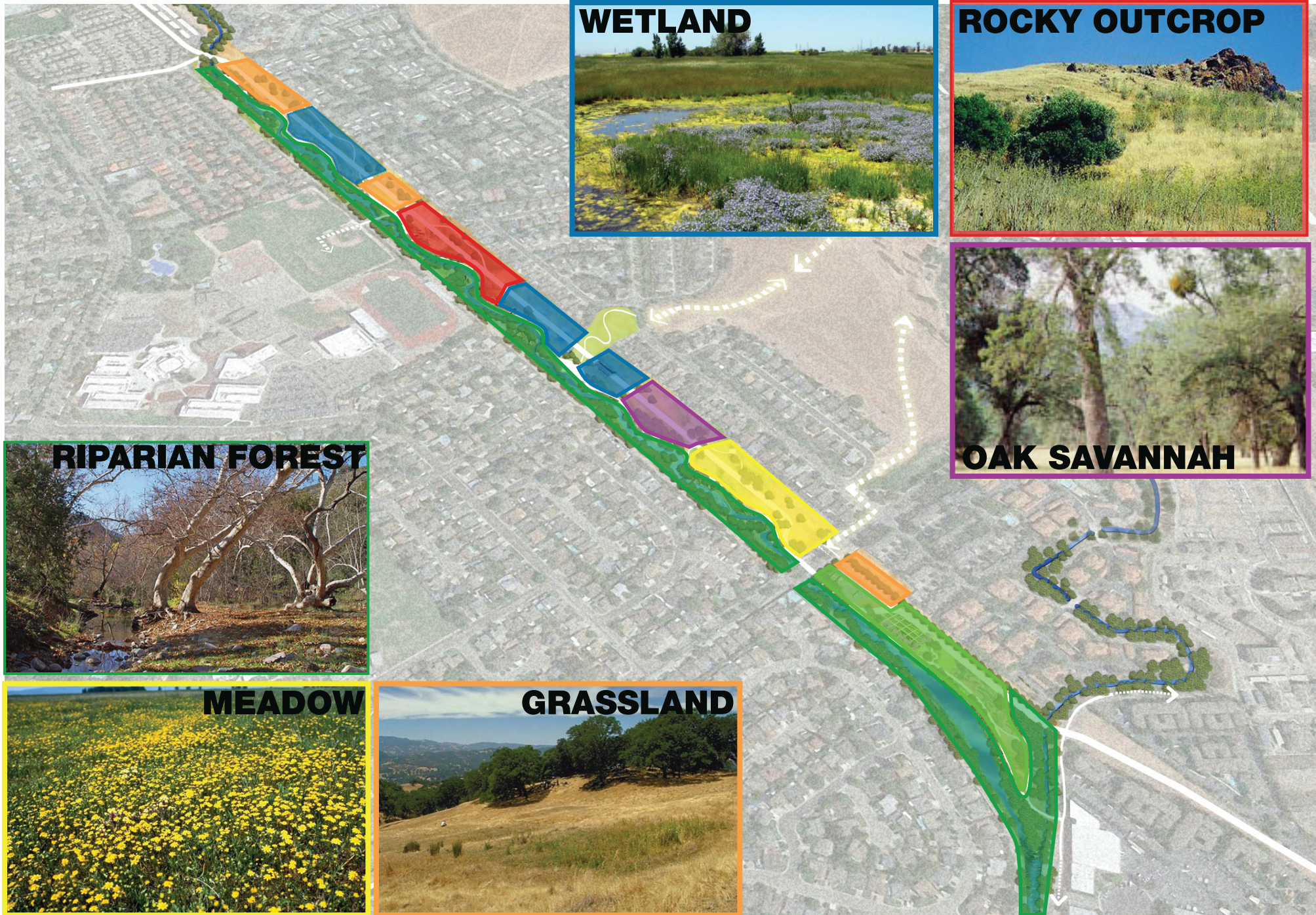
**IRON HORSE
NATURE PARK
& OPEN SPACE**

**LANDSCAPE
MASTER PLAN**

MOSAIC: ECOLOGY

Mosaic Ecology is derived from the pre-development heterogeneous ecology of Amador Valley, where a wide diversity of ecosystems and ecotones were in close proximity due to the hydrology, soils, and aspect of the land. In Mosaic Ecology, a series of representative ecosystem restoration areas are laid out in sequence along the Iron Horse Trail. Each of these areas serve as outdoor rooms, whether riparian woodland, oak savanna, meadow, or wetland. This plan focuses on ecological and creek restoration, but also includes a few choice community programs that were popular. These programs include a

discreet trail head, educational signage, outdoor classrooms, a children's play garden, and a small optional community garden. In addition, this concept includes the trestle restoration and railroad historic interpretation signage. The new circulation emphasizes the historic railroad by relocating the Iron Horse Trail onto the historic rail bed, and using a secondary pedestrian path along the creek for more intimate access to nature. Mosaic Ecology focuses on celebrating the ecology and heritage of Amador Valley in an accessible community park.



WETLAND



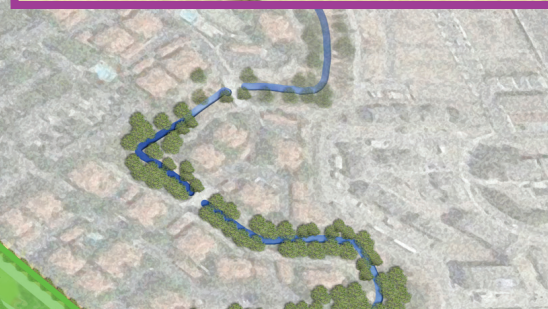
ROCKY OUTCROP



RIPARIAN FOREST



OAK SAVANNAH



MEADOW



GRASSLAND



RIPARIAN FOREST

big-leaf maple

California bay laurel

Red alder *Alnus oregona*

black cottonwood *Populus trichocarpa*

bracken fern *Pteridium aquilinum*

tall, graceful lady fern *Athyrium filix-femina*

sandbar willow *Salix hindsiana*

California blackberry *Rubus vitifolius*

twinberry *Lonicera involucrata*

Riparian woodlands occur in ribbon-like bands along stream beds where rich soils and high humidity produce a natural greenhouse effect. Although this unique community accounts for less than one percent of California's total forest acreage, it supports one of the most diverse ecological communities of plants and animals. Tall deciduous trees such as big-leaf maple, *Acer macrophyllum*, and the evergreen California bay laurel tower above a lush understory of ferns and delicate wildflowers. Unfortunately, many riparian woodlands have been destroyed over the last century because the fertile soils along rivers are among the most sought after for agricultural lands, and because numerous rivers have been channelized for flood control projects.

Common to practically all riparian communities are big-leaf maple and California bay laurel. Red alder, *Alnus oregona*, and black cottonwood, *Populus trichocarpa*, are typical of northern and central coast regions, whereas Fremont cottonwood, *Populus fremontii*, and western sycamore, *Platanus racemosa*, are common riparian trees in central and southern coastal regions.

Below the canopy of trees, rich riparian soils support many species of ferns and willows such as the coarse and wiry bracken fern, *Pteridium aquilinum*; tall, graceful lady fern, *Athyrium filix-femina*; and sandbar willow, *Salix hindsiana*. Velvety-leaved canyon gooseberry, *Ribes menziesii*;

California blackberry, *Rubus vitifolius*; and twinberry, *Lonicera involucrata*, are frequently encountered shrubs in riparian communities.

source: <http://ceres.ca.gov/ceres/calweb/coastal/trees/riparian.html>

OAK SAVANNAH

Valley oaks – **Quercus lobata**

Oak savannas contain a low density of oaks spread over open, low herbaceous cover. The oaks are irregularly spaced, forming occasional clusters and treeless areas.

Oak savanna tree density is variously defined in the literature, ranging from less than 10% to as much as 25% tree cover (see Sawyer and Keeler-Wolf 1995, FGDC 1997, Allen-Diaz et al. 1999, Davis et al. 2000, ICF International 2010a). Oak savanna in this study area occurred at very low density, with valley oaks (*Quercus lobata*) as the dominant tree.

source: Alameda Creek Historical Ecology Study

WETLAND

Wetlands are transitional lands between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is often covered by shallow water during some parts of the year.

source: <http://ceres.ca.gov/ceres/calweb/wetlands.html>

VERNAL POOL

Inundation Period Nov–Apr | 0–6 mos

Plants downingia, navarretia, popcorn flower, coyote thistle, pricklegrass,

Water Birds dabbling ducks, shorebirds, coots, geese

Animal Foods for Birds tadpole and fairyshrimp, cladocera, copepods, beetles

Birds Use feeding, roosting

Vernal pools are seasonally flooded depressional wetlands underlain by a hardpan or claypan with hummocky microtopography (Keeler-Wolf et al. 1998, Holland 2009, SFEI 2011). These wetlands are associated with a specialized set of plants, including Navarretia spp., popcornflower (Plagiobothrys spp.), downingia (Downingia spp.), and goldfields (Lasthenia spp.) (Goals Project 1999). Vernal pool complex includes the pools themselves and the surrounding matrix of grassland or seasonal wetland.

source: Alameda Creek Historical Ecology Study

SEASONAL MARSH

Inundation Period Aug/Nov–Mar/Apr | 4–8 mos

Plants pricklegrass, smartweed, tules

Water Birds shorebirds, geese, dabbling ducks, diving ducks, coots, herons,

Animal Foods for Birds minnows, snails, crayfish, insects, cladocera

Birds Use feeding, roosting

WATERGRASS

Inundation Period Aug–May, 8 mos | Jun/Jul, 1–2wks

Plants watergrass, smartweed

Water Birds mallards, curlews, ibis, rails, herons, egrets

Animal Foods for Birds minnows, snails, crayfish, insects, chironomids

Birds Use feeding, roosting

RIPARIAN SCRUB

Inundation Period Jan–Dec | 3–12 mos

Plants willows, cottonwoods, tules

Water Birds mallard, wood duck, herons, egrets

Animal Foods for Birds carp, minnows, snails, crayfish, insects

Birds Use feeding, roosting, nesting



MEADOW

Salt grass – ***Distichlis spicata***

Wild barley – ***Hordeum spp.***

Orachs – ***Atriplex spp.***

Tidy tips – ***Layia spp.***

Goldfields – ***Lasthenia spp.***

Alkali heath – ***Frankenia salina***

Tarplants – ***Centromadia spp.***

Alkali weed – ***Cressa truxillensis***

Inundation Period Nov–Apr | 0–2 wks

Plants saltgrass, chenopods, goldfields, grasses, gumweed

Water Birds cackling geese, coots, curlews, plovers, wigeon

Animal Foods for Birds beetles, spiders, bees

Birds Use feeding

Alkali meadows are temporarily or seasonally flooded herbaceous communities characterized by poorly drained, clay-rich soils that have a high residual salt content (over 0.2% in the first six feet; Westover and Van Duyne 1911). They support a distinctive, salt-tolerant plant community, including some species characteristic of salt marshes and/or vernal pools (Baye et al. 2000, Holstein 2000). These habitats are typically subject to seasonal soil saturation and temporary to seasonal flooding, with subsequent drying through the summer (Holland 1986, Elmore et al. 2006). Dominant plant species can include salt grass (*Distichlis spicata*), wild barley (*Hordeum spp.*), orachs (*Atriplex spp.*), tidy tips (*Layia spp.*), goldfields (*Lasthenia spp.*), alkali heath (*Frankenia salina*), tarplants (*Centromadia spp.*), and alkali weed (*Cressa truxillensis*).

source: Alameda Creek Historical Ecology Study



Wetlands: habitat intermittently flooded, saturated. Water chemistry: saline. Valley bottoms, lower portions of alluvial slopes. Cowardin class: Palustrine emergent saline wetland. The national list of wetland plants (Reed 1988) lists alkali sacaton as a FAC+.

source: A manual of California Vegetation

SALT GRASS

This rigid, erect, warm-season grass forms dense colonies of dark-green, leafy stems, up to 3 ft. high. The seed head is short and made up of large, smooth spikelets. Coastal salt grass is a perennial.

Bloom Information

Bloom Color Yellow

Bloom Time Apr , May , Jun , Jul , Aug , Sep , Oct

Growing Conditions

Water Use Medium

Light Requirement Sun

Soil Moisture Wet

CaCO₃ Tolerance High

Soil Description Wet, saline or alkaline soils.

Conditions Comments This species is useful for revegetating unusually saline, interior areas. Its extensive, creeping rhizomes enable it to colonize an area quickly. The grass adapts to drier soils including silts, clays, and even sands.

Benefit

Use Food Native Americans obtained salt by eating globules adhering to saltgrass stems.

Attracts Birds , Butterflies

Larval Host Sandhill Skipper (*Polites sabuleti*)



WILD BARLEY

Small and shiny. When in flower, the nodding clusters are purple to pale green, with many long, straight bristles; after flowering, the bristles frizz up, and the flower heads dry to a bleached tan and disintegrate easily.

Plant Characteristics

Duration Perennial

Habit Grass/Grass-like

Root Type Fibrous

Size Class 1-3 ft.

Bloom Information

Bloom Color White , Green , Purple

Bloom Time May , Jun , Jul

Bloom Notes The inflorescence appears whitish-green to light purple.



GOLDFIELDS

A low, slightly pubescent, slender, unbranched annual, 2-6 in. tall, with threadlike leaves and small, yellow, radiate flowers. A small, slender annual with reddish stems, very narrow opposite leaves, and a small golden-yellow flower head at the end of each branch. In better soils, the plant is stouter and reaches 10 in. in height.

Plant Characteristics

Duration Annual

Habit Herb

Size Class 0-1 ft.

Bloom Information

Bloom Color Yellow

Bloom Time Mar , Apr , May

GRASSLAND

Grasslands were once the dominant vegetation cover across the Alameda Creek Watershed. The grasslands contained wildflowers (forblands) and a mix of herbaceous species. Sparse oaks were found, particularly in northern Sunol Valley and at very low density in Livermore-Amador Valley.

source: Alameda Creek Historical Ecology Study

Grassland is a mix of low herbaceous cover, including grasses and forbs, with occasional oaks (Holstein 2000, Minnich 2008). Oak savanna and grassland are distinguished by oak density: the oaks in grassland occur at densities lower than in savanna. Grassland was the default habitat type for this study, which may have resulted in overmapping of grassland area.

source: Alameda Creek Historical Ecology Study

PURPLE NEEDLEGRASS

In the mid-1860s, William Brewer, one of California's earlier botanical explorers, called the grasslands of the broad valleys of the Central Coast range the "pingrass prairie," distinguishing purple needlegrass as the most likely component of the foothill grassland. This long-lived, deep-rooted bunchgrass may very well have been the dominant grass of the sunny valleys and hills, growing in rich adobe soils. In many ways purple needlegrass typifies the classic bunchgrass of California's foothill grassland open space. Today it is the undisputed candidate for official state grass.

BLUE WILDRYE

The tall blue wildrye is undoubtedly the bunchgrass the first Spanish explorers saw growing as high as the flanks of horses; it was probably one of the primary native grasses used for pinole. Closely associated with woodland meadows and open stands of deciduous oaks, it grows in many forms, from tall specimens suited for shady woodlands, to leafy, sprawling forms in open meadows or on hilltops and north-facing slopes.

MALPAIS BLUEGRASS

One of the more widespread native bunchgrasses of the drier, less fertile interior grasslands is one-sided bluegrass or malpais bluegrass. It is a short perennial bunchgrass with a shallow, fibrous root system. It survives the long dry season by completely shutting down as soon as the ground begins to dry out. Malpais bluegrass is the earliest native perennial grass to green up in the winter and is very attractive to grazing animals, both small and large. Even as their basal leaves are eaten close to the crown or withered and brown from drought, their flowering stems stand green and erect with still-ripening seed.

CALIFORNIA MELICGRASS

Another important native grass from the drier foothill range is California melicgrass, which may well have been the most widespread native perennial grass of the interior plains and hills. With its graceful stems and silvery seed heads, California melicgrass is one of the most beautiful of our native grasses. Like the bluegrass, it turns completely dormant in the late spring. California melicgrass grows on the richer soils and is larger and more productive than the bluegrass. It is not a strict bunchgrass, but rather spreads underground, forming a swollen bulb at the base of the flowering stem, which gives rise to new buds after the plant has been grazed. It is a tasty and nutritious grass and likely provided substantial early spring forage for migrating tule elk.

<http://baynature.org/articles/grassland-heritage/>

ROCKY OUTCROP

Bush monkeyflower – **Mimulus auranticus**

Coyote brush – **Baccharis pilularis**

California matchweed – **Gutierrezia californica**

Poison-oak – **Toxicodendron diversilobum**

California broom – **Acmispon glaber var. glaber**

Bush lupine – **Lupinus albifrons**

source: Alameda Creek Historical Ecology Study

NORTHERN COASTAL SCRUB / DIABLAN SAGE SCRUB

It is most often found on south-facing slopes on rocky, well drained soils. Subject to periodic fires, it responds quickly to burning. Common species include bush monkeyflower

(*Mimulus auranticus*), coyote brush (*Baccharis pilularis*), California matchweed (*Gutierrezia californica*), poison-oak (*Toxicodendron diversilobum*), California broom (*Acmispon glaber var. glaber*), and bush lupine (*Lupinus albifrons*).

Coastal and sage scrub is most often used by gopher snakes, rattle snakes, coyote, and bobcat. Lesser goldfinch (*Carduelis psaltria*) and Alameda whipsnake (*Masticophis lateralis euryxanthus*) also occur in this habitat (ICF International 2010b).

source: Alameda Creek Historical Ecology Study



COYOTE BRUSH

A leafy, much-branched, erect or rounded shrub, 4-8 ft. high and wide. Leaves are oval to rounded and shiny, bright green. Axillary and terminal flower clusters are numerous, made up of small, whitish-yellow flowers. Coyotebrush is perhaps the most common and widespread shrub in coastal brush communities in northern and central California, becoming gradually less common southward. The genus name *Baccharis* refers to the Roman god Bacchus, a god of vegetation and of wine; *pilularis*, meaning "pill-shaped," refers to the round, flat flower heads.

source: Lady Bird Johnson Wildflower Center



MOSAIC: MOVE

The Mosaic concept alters the circulation on the site and connectivity. In addition to connecting the site to the east via Stagecoach Park, and to the west at the Village Parkway,, the Iron Horse Trail is realigned to follow the historic rail bed.

REGIONAL BIKE TRAIL

In the proposed design, the Iron Horse Regional trail enters the site at the existing bridge, then sweeps across to the rail bed. From there it continues straight to Amador Boulevard crossing over the restored trestle. At Amador, the trail turns to make the street crossing, requiring bicyclists to slow down before entering the intersection, Based on community feedback, the new bicycle trail could be striped to better resolve pedestrian bicyclist conflict.

PRIMARY HIKING TRAIL

A primary pedestrian trail runs the full length of the site, so that walkers can enjoy the site without conflict with runners and cyclists. This trail could be an alternate material, such as stabilized gravel, and will follow the restored creek channel through the variety of ecosystems.

SECONDARY HIKING TRAIL

Many short secondary trails will tie the site together, providing access to bird observation areas, connections to Stagecoach Park and the High school, and connectivity between the regional trail and the primary hiking trail.

BOARDWALKS

Boardwalks will be used in the wetland areas to let visitors make closer observations of the habitat and wildlife.



MOSAIC: EXPERIENCE

This plan envisions the Iron Horse Public space to be a culturally relevant, peaceful, natural oasis in the City of Dublin. Programs like community gardens will bring neighbors together, while habitat areas will support wildlife, enriching both the ecology and local identity.

REST

Shade, benches, and water fountains will provide moments of rest for visitors running or bicycling along the Iron Horse Trail. Quiet places, such as the bird observation boardwalk, will provide space for park users a moment of peace and quiet reflection, to appreciate nature in their community, to meditate and pray.

PLAY

A lively children's play garden will be the focal point of play, where play equipment made of natural materials over wood chips will be woven into a colorful garden with flowers and trees. The children's garden will include educational exercises, and signs, telling the story of the plants and animals and the landscape of Dublin.

DISCOVER

Through the outdoor classrooms, interpretive signage, historic preservation and restoration, and kiosks the site will provide a variety of avenues of inquiry for visitors to learn more about the local history, ecology and community.



REST



DISCOVER



PLAY



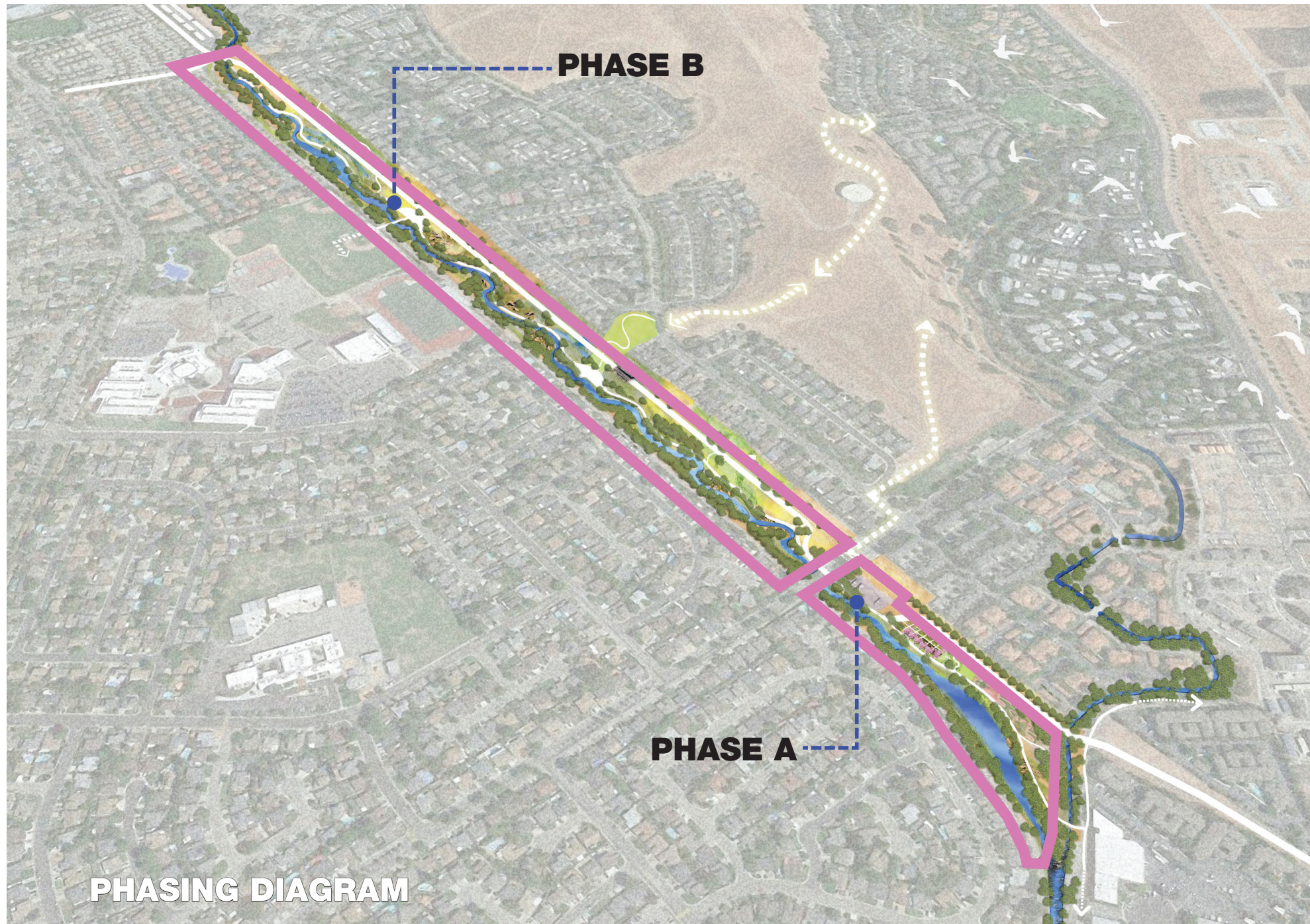












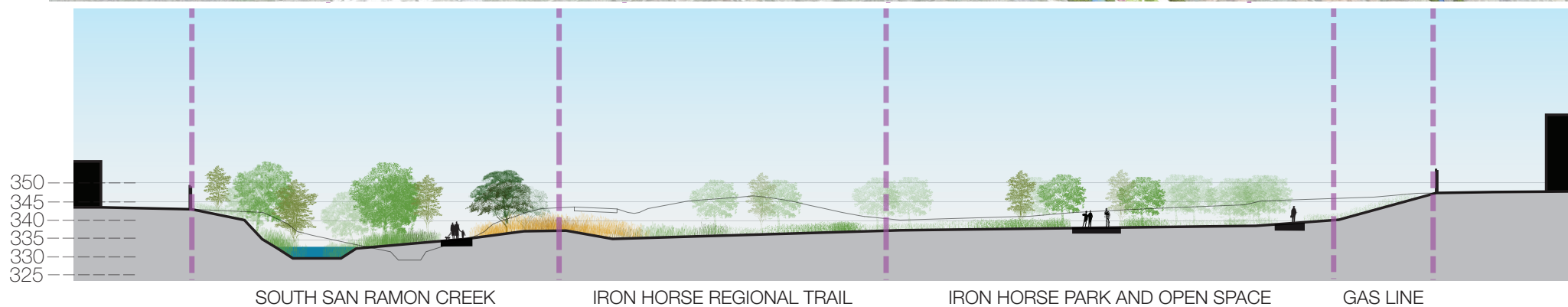
PHASING DIAGRAM

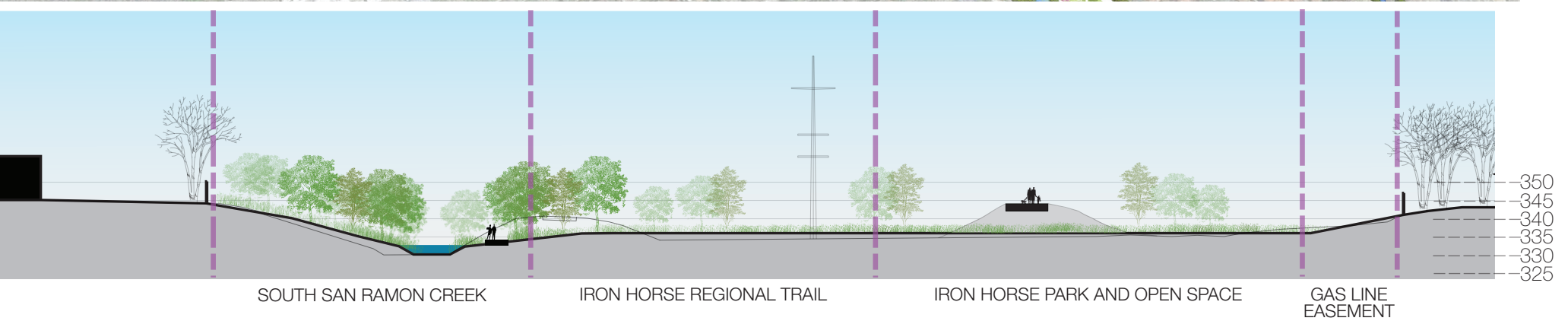


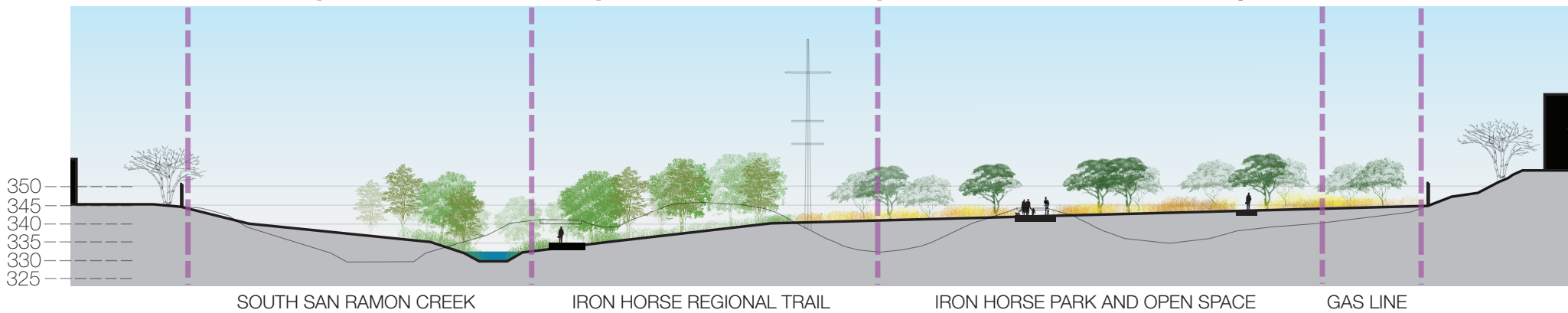
PRELIMINARY GRADING

Existing topography is relatively consistent over the one mile north to south, while there is significant elevation change in the

300 feet east to west. Proposed grading will reveal the creek to the rest of the site, fostering a more inclusive park experience.







ESTIMATE OF PROJECT COSTS

Single Phase Treatable Surface Area:

Full Scope:	1,865,600 SF	//	42.83 acres
Hardscape:	171,300 SF	//	3.93 acres
Softscape:	1,694,300 SF	//	38.90 acres

Phase A Treatable Surface Area:

Full Scope:	330,362 SF	//	7.58 acres
Hardscape:	45,496 SF	//	1.04 acres
Softscape:	284,766 SF	//	6.54 acres

Phase B Treatable Surface Area:

Full Scope:	1,535,238 SF	//	35.25 acres
Hardscape:	125,804 SF	//	2.89 acres
Softscape:	1,409,534 SF	//	32.36 acres

COST ESTIMATE: SINGLE PHASE

ITEM DESCRIPTION	QTY	UNIT	ZONE	UNIT COST	ITEM TOTAL	SUBTOTAL
MOBILIZATION/SITE PREPARATION						
Mobilization (Single Phase)	1	LS				
Softscape Demolition and Selective Pruning	814,818	SF	City Portion	\$100,000.00	\$100,000.00	
Softscape Demolition and Selective Pruning	1,000,782	SF	Zone 7	\$0.10	\$81,481.80	
Hardscape Demolition	50,000	SF	Zone 7	\$0.10	\$100,078.20	
				\$15.00	\$750,000.00	
SUBTOTAL						\$1,031,560.00
GRADING						
Cut & Stockpile Topsoil	814,818	SF	City Portion	\$0.50	\$407,409.00	
Cut & Stockpile Topsoil	1,050,782	SF	Zone 7	\$0.50	\$525,391.00	
Spread Stockpiled Topsoil after rough grading	814,818	SF	City Portion	\$0.30	\$244,445.40	
Spread Stockpiled Topsoil after rough grading	1,050,782	SF	Zone 7	\$0.30	\$315,234.60	
Grading (Cut / Fill)	814,818	SF	City Portion	\$1.28	\$1,042,967.04	
Grading (Cut / Fill)	1,050,782	SF	Zone 7	\$1.28	\$1,345,000.96	
SUBTOTAL						\$3,880,448.00
SOIL PREPARATION						
Soil Amendments - All planting and Sod areas	519,914	SF	City Portion	\$1.00	\$519,914.00	
Soil Amendments - All planting and Sod areas	1,000,050	SF	Zone 7	\$1.00	\$1,000,050.00	
SUBTOTAL						\$1,519,964.00
PLANTING						
Planting - all trees and groundcover	1	LS	City Portion	\$367,030.80	\$367,030.80	
Planting - all trees and groundcover	1	LS	Zone 7	\$327,975.60	\$327,975.60	
SUBTOTAL						\$695,006.40
HARDSCAPE						
Trailhead paving - stabilized DG	9,000	SF	City Portion	\$5.00	\$45,000.00	
Trailhead paving - stabilized DG	9,000	SF	Zone 7	\$5.00	\$45,000.00	
IHT paving - asphaltic concrete	70,978	SF	City Portion	\$3.50	\$248,423.00	
IHT paving - asphaltic concrete	2,972	SF	Zone 7	\$3.50	\$10,402.00	
Paving - secondary trails - compacted gravel and dg	30,600	SF	City Portion	\$2.50	\$76,500.00	
Paving - secondary trails - compacted gravel and dg	38,760	SF	Zone 7	\$2.50	\$96,900.00	
Rocky Outcrops	10,000	SF	Zone 7	\$20.00	\$200,000.00	
Boardwalks	5,000	SF	City Portion	\$30.00	\$150,000.00	
Boardwalks	5,000	SF	Zone 7	\$30.00	\$150,000.00	
Trailhead - log curbing	100	LF	City Portion	\$20.00	\$2,000.00	
Trailhead - log curbing	100	LF	Zone 7	\$20.00	\$2,000.00	
SUBTOTAL						\$1,026,225.00
FURNISHINGS						
Trailhead - Signage (Kiosk)	2	EA	City Portion	\$5,000.00	\$10,000.00	
Interpretive Signage	10	EA	City Portion	\$1,000.00	\$10,000.00	
Trail Signage	5	EA	City Portion	\$1,000.00	\$5,000.00	
Drinking fountains	3	EA	City Portion	\$3,500.00	\$10,500.00	
Monument Signage	1	Allowance	City Portion	\$20,000.00	\$20,000.00	
Pedestrian Lighting (at trailhead and rec area)	25	EA	City Portion	\$5,000.00	\$125,000.00	
Benches	15	EA	City Portion	\$3,000.00	\$45,000.00	
Benches	10	EA	Zone 7	\$3,000.00	\$30,000.00	
SUBTOTAL						\$255,500.00
ALLOWANCES						
Restroom (4 room, full service)	1	Allowance	City Portion	\$250,000.00	\$250,000.00	
Site Utilities (drainage, plumbing)	1	LS	City Portion	\$200,000.00	\$200,000.00	
Community Garden	16,000	SF	City Portion	\$2.50	\$40,000.00	
Play garden	21,000	SF	City Portion	\$15.00	\$315,000.00	
Trestle Restoration	1	Allowance	City Portion	\$100,000.00	\$100,000.00	
Tresite Bridge Improvement @ Alamo Creek	1	Allowance	City Portion	\$50,000.00	\$50,000.00	
New Bridge At Northern Connection	1	Allowance	Zone 7	\$250,000.00	\$250,000.00	
New Bridge At High School Connection	1	Allowance	Zone 7	\$250,000.00	\$250,000.00	
Outdoor Classroom Facilities	2	Allowance	City Portion	\$50,000.00	\$100,000.00	
Enhanced Pedestrian Crossing Amador	1	Allowance	City Portion	\$200,000.00	\$200,000.00	
SUBTOTAL						\$1,755,000.00
IRRIGATION						
Temporary Irrigation	694,250	SF	City Portion	\$1.10	\$763,675.00	
Temporary Irrigation	691,470	SF	Zone 7	\$1.10	\$760,617.00	
SUBTOTAL						\$1,524,292.00
LANDSCAPE ESTABLISHMENT						
360 Day Maintenance	42	ACRES		\$20,000.00	\$840,000.00	
SUBTOTAL						\$840,000.00
TOTAL						
SUBTOTAL:						\$12,527,995
Zone Key						
City Portion	Zone Cost Subtotal	Shared Costs	Zone Total			
Zone 7	\$5,429,346.04	\$470,000.00	\$5,899,346			
	\$6,158,649.36	\$470,000.00	\$6,628,649			
				20% Contingency	\$2,505,599	
				TOTAL	\$15,033,594	

COST ESTIMATE: MULTIPLE PHASE: A

ITEM DESCRIPTION	QTY	UNIT	ZONE	UNIT COST	ITEM TOTAL	SUBTOTAL
MOBILIZATION/SITE PREPARATION						
Mobilization Phase A						
Softscape Demolition and Selective Pruning	1	LS				
	140,960	SF	City Portion	\$60,000.00	\$60,000.00	
Softscape Demolition and Selective Pruning				\$0.10	\$0.10	\$14,096.00
Softscape Demolition and Selective Pruning	179,402	SF	Zone 7	\$0.10	\$17,940.20	
Hardscape Demolition	10,000	SF	Zone 7	\$15.00	\$150,000.00	
SUBTOTAL						\$242,036.20
GRADING						
Cut & Stockpile Topsoil	125,298	SF	City Portion	\$0.50	\$62,649.00	
Cut & Stockpile Topsoil	159,468	SF	Zone 7	\$0.50	\$79,734.00	
Spread Stockpiled Topsoil after rough grading	125,298	SF	City Portion	\$0.30	\$37,589.40	
Spread Stockpiled Topsoil after rough grading	159,468	SF	Zone 7	\$0.30	\$47,840.40	
Grading (Cut / Fill)	125,298	SF	City Portion	\$1.28	\$160,381.44	
Grading (Cut / Fill)	159,468	SF	Zone 7	\$1.28	\$204,119.04	
SUBTOTAL						\$592,313.28
SOIL PREPARATION						
Soil Amendments - All planting and Sod areas	96,343	SF	City Portion	\$1.00	\$96,343.00	
Soil Amendments - All planting and Sod areas	159,468	SF	Zone 7	\$1.00	\$159,468.00	
SUBTOTAL						\$255,811.00
PLANTING						
Planting - all trees and groundcover	1	LS	City Portion	\$60,627.00	\$60,627.00	
Planting - all trees and groundcover	1	LS	Zone 7	\$36,424.50	\$36,424.50	
SUBTOTAL						\$97,051.50
HARDSCAPE						
Trailhead paving - stabilized DG	9,000	SF	City Portion	\$5.00	\$45,000.00	
Trailhead paving - stabilized DG	9,000	SF	Zone 7	\$5.00	\$45,000.00	
IHT paving - asphaltic concrete	14,412	SF	City Portion	\$3.50	\$50,442.00	
IHT paving - asphaltic concrete	350	SF	Zone 7	\$3.50	\$1,225.00	
Paving - secondary trails - compacted gravel and dg	5,672	SF	City Portion	\$2.50	\$14,180.00	
Paving - secondary trails - compacted gravel and dg	7,162	SF	Zone 7	\$2.50	\$17,905.00	
Rocky Outcrops	2,000	SF	Zone 7	\$20.00	\$40,000.00	
Trailhead - log curbing	100	LF	City Portion	\$20.00	\$2,000.00	
Trailhead - log curbing	100	LF	Zone 7	\$20.00	\$2,000.00	
SUBTOTAL						\$217,752.00
FURNISHINGS						
Trailhead - Signage (Kiosk)	1	EA	City Portion	\$5,000.00	\$5,000.00	
Interpretive Signage	2	EA	City Portion	\$1,000.00	\$2,000.00	
Trail Signage	1	EA	City Portion	\$1,000.00	\$1,000.00	
Drinking Fountains	1	EA	City Portion	\$3,500.00	\$3,500.00	
Monument Signage	1	Allowance	City Portion	\$10,000.00	\$10,000.00	
Pedestrian Lighting (at trailhead and rec area)	20	EA	City Portion	\$5,000.00	\$100,000.00	
Benches	3	EA	City Portion	\$3,000.00	\$9,000.00	
Benches	2	EA	Zone 7	\$3,000.00	\$6,000.00	
SUBTOTAL						\$136,500.00
ALLOWANCES						
Restroom (4 room, full service)	1	Allowance	City Portion	\$250,000.00	\$250,000.00	
Site Utilities (drainage, plumbing)	1	LS	City Portion	\$200,000.00	\$200,000.00	
Community Garden	16,000	SF	City Portion	\$2.50	\$40,000.00	
Play garden	21,000	SF	City Portion	\$15.00	\$315,000.00	
Trestle Bridge improvement @ Alamo Creek	1	Allowance	City Portion	\$50,000.00	\$50,000.00	
Enhanced Pedestrian Crossing Amador	1	Allowance	City Portion	\$100,000.00	\$100,000.00	
SUBTOTAL						\$955,000.00
IRRIGATION						
Temporary Irrigation	125,298	SF	City Portion	\$1.10	\$137,827.80	
Temporary Irrigation	110,262	SF	Zone 7	\$1.10	\$121,288.20	
SUBTOTAL						\$259,116.00
LANDSCAPE ESTABLISHMENT						
360 Day Maintenance	6.54	ACRES		\$20,000.00	\$130,800.00	
SUBTOTAL						\$130,800.00
TOTAL						
SUBTOTAL:						\$2,886,380
Zone Key						
City Portion	Zone Cost Subtotal	Shared Costs	Zone Total	20% Contingency		
Zone 7	\$1,766,635.64	\$95,400.00	\$1,862,036	\$577,276		
	\$928,944.34	\$95,400.00	\$1,024,344	TOTAL		\$3,463,656

COST ESTIMATE: MULTIPLE PHASE: B

ITEM DESCRIPTION	QTY	UNIT	ZONE	UNIT COST	ITEM TOTAL	SUBTOTAL
MOBILIZATION/SITE PREPARATION						
Mobilization Phase B	1	LS				
Softscape Demolition and Selective Pruning	673,858	SF	City Portion	\$80,000.00		\$80,000.00
Softscape Demolition and Selective Pruning	821,380	SF	Zone 7	\$0.10		\$67,385.80
Hardscape Demolition	40,000	SF	Zone 7	\$15.00		\$82,138.00
						\$600,000.00
SUBTOTAL						\$829,523.80
GRADING						
Cut & Stockpile Topsoil	689,520	SF	City Portion	\$0.50		\$344,760.00
Cut & Stockpile Topsoil	891,314	SF	Zone 7	\$0.50		\$445,657.00
Spread Stockpiled Topsoil after rough grading	689,520	SF	City Portion	\$0.30		\$206,856.00
Spread Stockpiled Topsoil after rough grading	891,314	SF	Zone 7	\$0.30		\$267,394.20
Grading (Cut / Fill)	689,520	SF	City Portion	\$1.28		\$882,585.60
Grading (Cut / Fill)	891,314	SF	Zone 7	\$1.28		\$1,140,881.92
SUBTOTAL						\$3,288,134.72
SOIL PREPARATION						
Soil Amendments - All planting and Sod areas	523,739	SF	City Portion	\$1.00		\$523,739.00
Soil Amendments - All planting and Sod areas	891,314	SF	Zone 7	\$1.00		\$891,314.00
SUBTOTAL						\$1,415,053.00
PLANTING						
Planting - all trees and groundcover	1	LS	City Portion	\$306,403.20		\$306,403.20
Planting - all trees and groundcover	1	LS	Zone 7	\$291,551.00		\$291,551.00
SUBTOTAL						\$597,954.20
HARDSCAPE						
Trailhead paving - stabilized DG	9,000	SF	City Portion	\$5.00		\$45,000.00
Trailhead paving - stabilized DG	9,000	SF	Zone 7	\$5.00		\$45,000.00
IHT paving - asphaltic concrete	70,978	SF	City Portion	\$3.50		\$248,423.00
IHT paving - asphaltic concrete	2,972	SF	Zone 7	\$3.50		\$10,402.00
Paving - secondary trails - compacted gravel and dg	30,600	SF	City Portion	\$2.50		\$76,500.00
Paving - secondary trails - compacted gravel and dg	38,760	SF	Zone 7	\$2.50		\$96,900.00
Rocky Outcrops	10,000	SF	Zone 7	\$20.00		\$200,000.00
Boardwalks	5,000	SF	City Portion	\$30.00		\$150,000.00
Boardwalks	5,000	SF	Zone 7	\$30.00		\$150,000.00
Trailhead - log curbing	100	LF	City Portion	\$20.00		\$2,000.00
Trailhead - log curbing	100	LF	Zone 7	\$20.00		\$2,000.00
SUBTOTAL						\$1,026,225.00
FURNISHINGS						
Trailhead - Signage (Kiosk)	1	EA	City Portion	\$5,000.00		\$5,000.00
Interpretive Signage	8	EA	City Portion	\$1,000.00		\$8,000.00
Trail Signage	4	EA	City Portion	\$1,000.00		\$4,000.00
Drinking Fountains	2	EA	City Portion	\$3,500.00		\$7,000.00
Monument Signage	1	Allowance	City Portion	\$10,000.00		\$10,000.00
Pedestrian Lighting (at trailhead and rec area)	5	EA	City Portion	\$5,000.00		\$25,000.00
Benches	12	EA	City Portion	\$3,000.00		\$36,000.00
Benches	8	EA	Zone 7	\$3,000.00		\$24,000.00
SUBTOTAL						\$119,000.00
ALLOWANCES						
Trestle Restoration	1	Allowance	City Portion	\$100,000.00		\$100,000.00
New Bridge At Northern Connection	1	Allowance	Zone 7	\$250,000.00		\$250,000.00
New Bridge At High School Connection	1	Allowance	Zone 7	\$250,000.00		\$250,000.00
Outdoor Classroom Facilities	2	Allowance	City Portion	\$50,000.00		\$100,000.00
Enhanced Pedestrian Crossing Amador	1	Allowance	City Portion	\$100,000.00		\$100,000.00
SUBTOTAL						\$800,000.00
IRRIGATION						
Temporary Irrigation	689,520	SF	City Portion	\$1.10		\$758,472.00
Temporary Irrigation	581,208	SF	Zone 7	\$1.10		\$639,328.80
SUBTOTAL						\$1,397,800.80
LANDSCAPE ESTABLISHMENT						
360 Day Maintenance	35.25	ACRES		\$20,000.00		\$705,000.00
SUBTOTAL						\$705,000.00
TOTAL						
SUBTOTAL:						\$10,178,692
Zone Key						
Southern Pacific	Zone Cost Subtotal		Shared Costs		Zone Total	
Zone 7	\$4,007,124.60		\$392,500.00		\$4,399,625	
	\$5,386,566.92		\$392,500.00		\$5,779,067	
			20% Contingency		\$2,035,738	
			TOTAL		\$12,214,430	

