7. Appendices

Appendix A: Land Use Maps

Appendix B: Existing Utility Maps

Appendix C: Biological Resources Memorandum

Appendix D: Public Workshop and Open House Summaries

Appendix E: RTC Similar Projects Memo

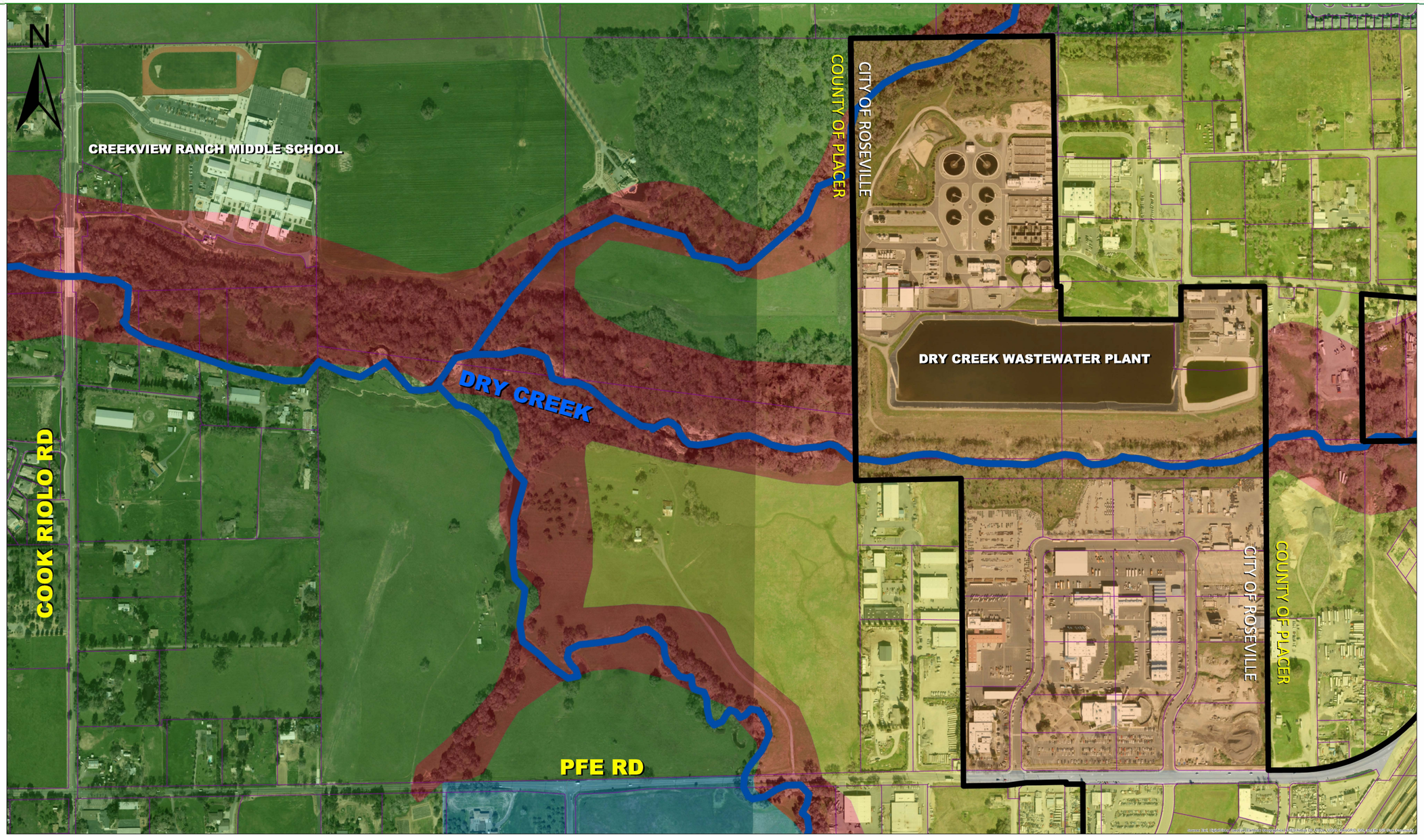
Appendix F: Project Cost Estimates

Appendix G: Alignment Evaluation Tables

Appendix H: Funding

Appendix A: Land Use Maps

PROJECT AREA LAND USES

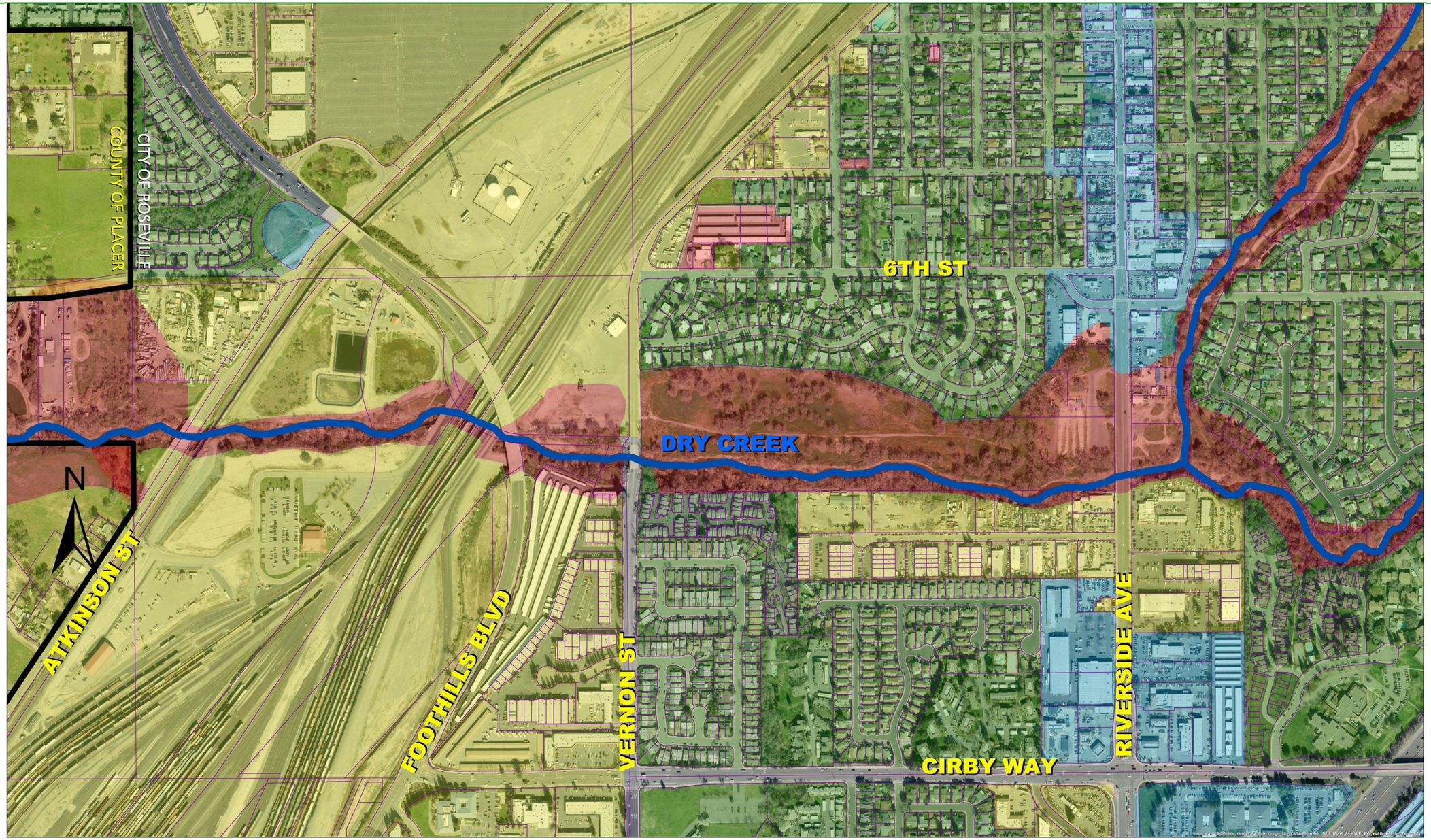


LEGEND

- Residential
- Commercial
- Industrial
- Civic and Resource Protection
- Open Space
- City Boundary Line
- Parcel Lines

DRY CREEK GREENWAY WEST MULTI-USE TRAIL PLANNING & FEASIBILITY STUDY

PROJECT AREA LAND USES



0 375 750 1,500 2,250 3,000 Feet

LEGEND

- Residential
- Commercial
- Industrial
- Civic and Resource Protection
- Open Space
- City Boundary Line
- Parcel Lines

DRY CREEK GREENWAY WEST MULTI-USE TRAIL PLANNING & FEASIBILITY STUDY

Appendix B: Existing Utility Maps

EXISTING UTILITIES MAP 1

LEGEND

- PROJECT AREA
- PARCELS
- CITY COUNTY LINE
- ELECTRIC
- WATER
- SEWER
- RAW WATER
- RECYCLED WATER

DRY CREEK GREENWAY WEST MULTI-USE TRAIL PLANNING & FEASIBILITY STUDY

EXISTING UTILITIES MAP 2

LEGEND

- PROJECT AREA
- PARCELS
- CITY COUNTY LINE
- ELECTRIC
- WATER
- SEWER
- RAW WATER
- FIBER OPTIC

DRY CREEK GREENWAY WEST MULTI-USE TRAIL PLANNING & FEASIBILITY STUDY

Appendix C: Biological Resources Memorandum

Draft Biological Resources Memorandum for the Dry Creek Greenway West Multi-use Trail Planning and Feasibility Study

Prepared for:
City of Roseville
Public Works Department—Alternative Transportation
316 Vernon St, Suite #150,
Roseville, CA 95678

Prepared by:
Dokken Engineering
110 Blue Ravine Road,
Folsom, CA 95630

September 2018

INTRODUCTION

The Dry Creek Greenway West Multi-Use Trail is a portion of the Dry Creek Greenway and will be a Class 1, paved, multi-use path between Cook Riolo Road in Placer County and Riverside Avenue in the City of Roseville, spanning approximately three miles (see Figure 1: Project Vicinity and Figure 2: Project Location). It will be a shared use path connecting neighborhoods, parks, schools, businesses, and the on-street bikeway system for cyclists, walkers, joggers, and disabled users. A wide variety of constraints exist within the study area including private property, environmental concerns, and the railroad and as a result, the proposed project requires extensive coordination with the appropriate stakeholders.

This Biological Resources Memorandum describes the methods used to identify potential biological resource issues, presents the results of findings, and includes a list of recommendations to provide general guidance for developing trail alternatives. These recommendations are intended to minimize effects to biological resources that occur within the project's vicinity. The recommendations also intend to minimize the necessary mitigation associated with construction of the multi-use path.

The purpose of this report is to assist the City in developing design alternatives for the Dry Creek Greenway West Multi-Use Trail that avoid and minimize effects on biological resources. The information presented in this report should be considered preliminary and used for planning purposes only. Additional comprehensive biological surveys will be required to support future environmental documentation consistent with the state California Environmental Quality Act (CEQA) and the federal National Environmental Policy Act (NEPA).

METHODOLOGY

Literature research and a desktop survey was conducted to review existing information and to prepare lists of special-status plant and wildlife species known to occur or with potential to occur in the project region. Literature research was conducted through the United States Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants to identify habitats and special-status species having the potential to occur within the project vicinity. A desktop survey was conducted through review of aerial imagery to document existing biological resources, detect potential jurisdictional waters of the U.S. and CDFW and search for suitable habitat of sensitive protected species. Potential effects to resources were analyzed based on the proposed alignments and ecological resources identified. Limited preliminary field reconnaissance surveys were conducted where access was available to verify results of the desktop survey.

RESULTS

The study area is located in western Placer County, a semi-urbanized region that has retained large, contiguous areas of undeveloped corridors along Dry Creek. These undeveloped corridors support terrestrial and aquatic species and sensitive natural communities. Within the feasibility study corridor, habitat quality ranges from disturbed, low quality to high quality habitat. Although the habitat value of the urban creek corridor that occurs in the study area may be diminished because of adjacent and surrounding development, the Dry Creek corridor provides migratory

habitat of wildlife species including migratory fish, which are federally protected, as well as riparian habitat for the federally protected valley elderberry longhorn beetle.

The feasibility study corridor supports both important and common biological communities. Important biological communities are habitats considered sensitive because of high species diversity, high productivity, unusual characteristics, limited distribution, declining status, or a combination of these attributes. Local, state, and federal agencies consider such habitats important. The USFWS considers certain habitats, such as wetlands and riparian communities, important to wildlife. The USACE and the Environmental Protection Agency (EPA) consider wetland habitats important for water quality and wildlife. The biological communities in the study area that meet the criteria for important natural communities are Oak Woodland and Waters of the U.S. and State (Riparian). The riparian corridors provide habitat for the federally protected valley elderberry longhorn beetle, while Dry Creek provides habitat for federally protected anadromous fish.

Common biological communities are habitats that have low species diversity, are widespread, reestablish naturally following disturbance, or support primarily nonnative species. These communities are generally not protected by environmental regulation unless the specific site is habitat for or supports sensitive species (e.g., raptor foraging or nesting habitat, upland habitat in a wetland watershed). The only common biological community in the study area is annual grassland. The disturbed vegetation classifications are either developed parcels, or parcels so degraded they do not currently support habitat or vegetation.

The general location and extent of these biological communities is shown in the following Figure 3: Feasibility Study – Environmental Considerations.

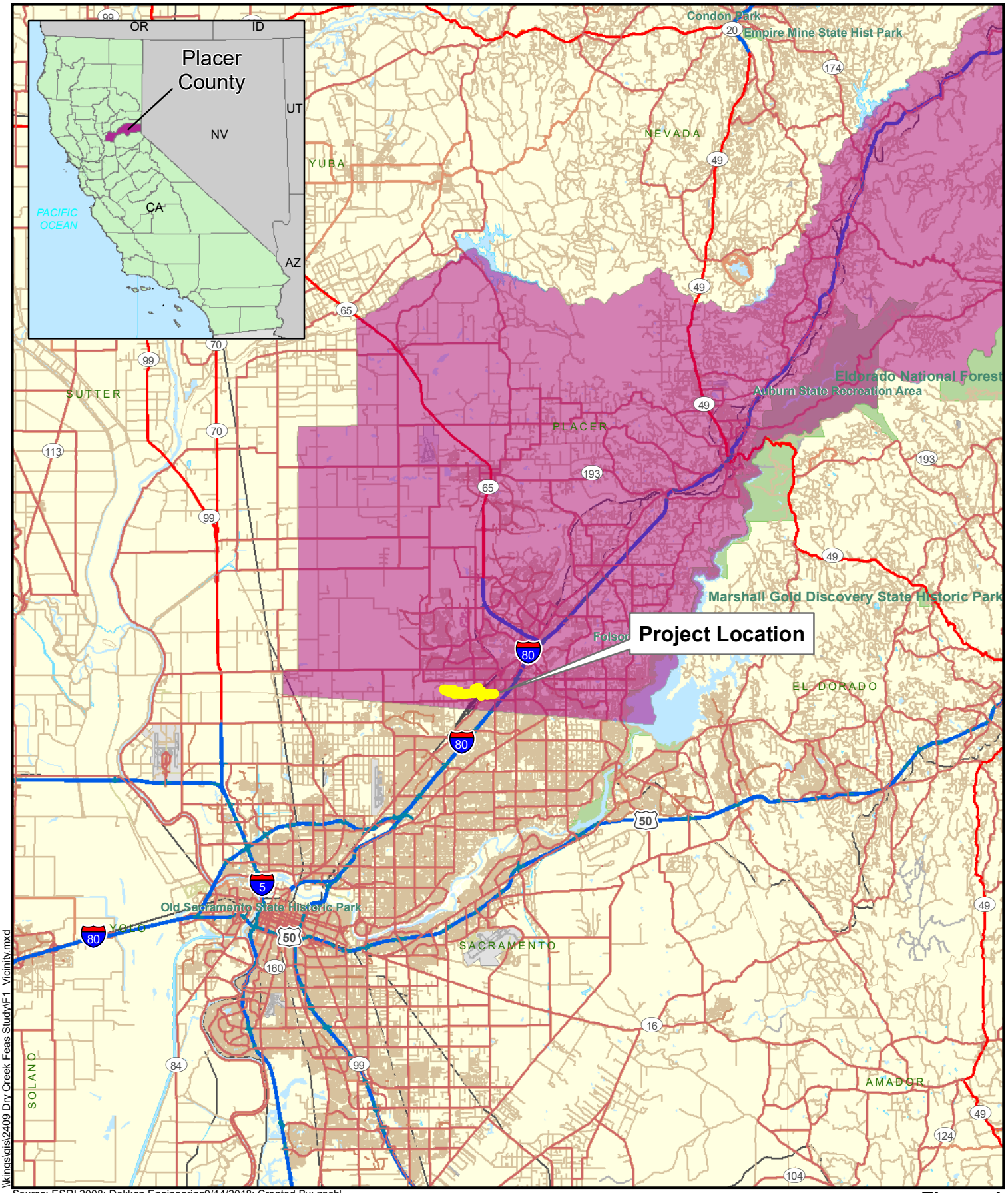
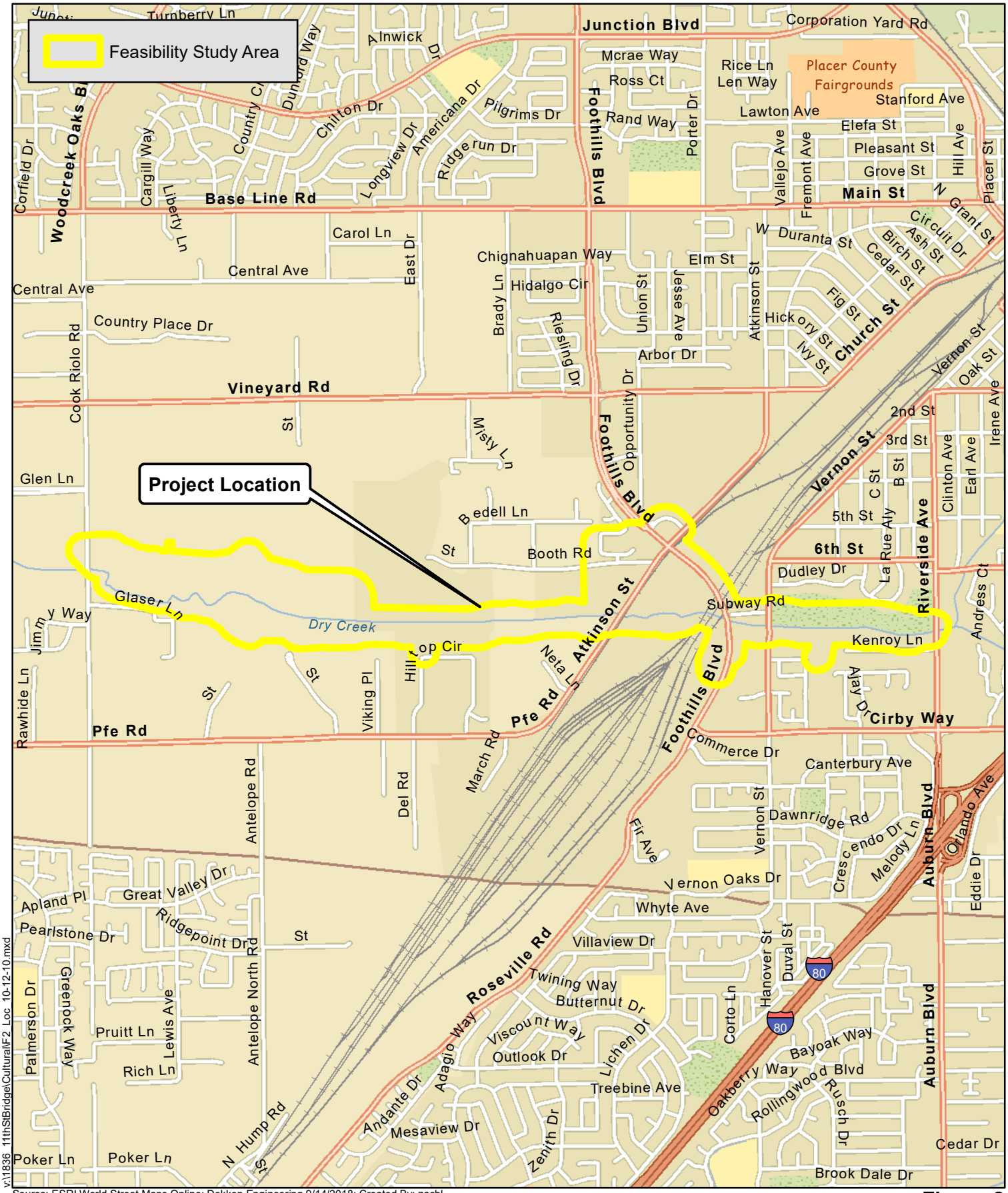


Figure 1
Project Vicinity
Dry Creek Greenway West Multiuse Trail Project Feasibility Study
City of Roseville, Placer County, California



Source: ESRI World Street Maps Online; Dokken Engineering 9/14/2018; Created By: zachl

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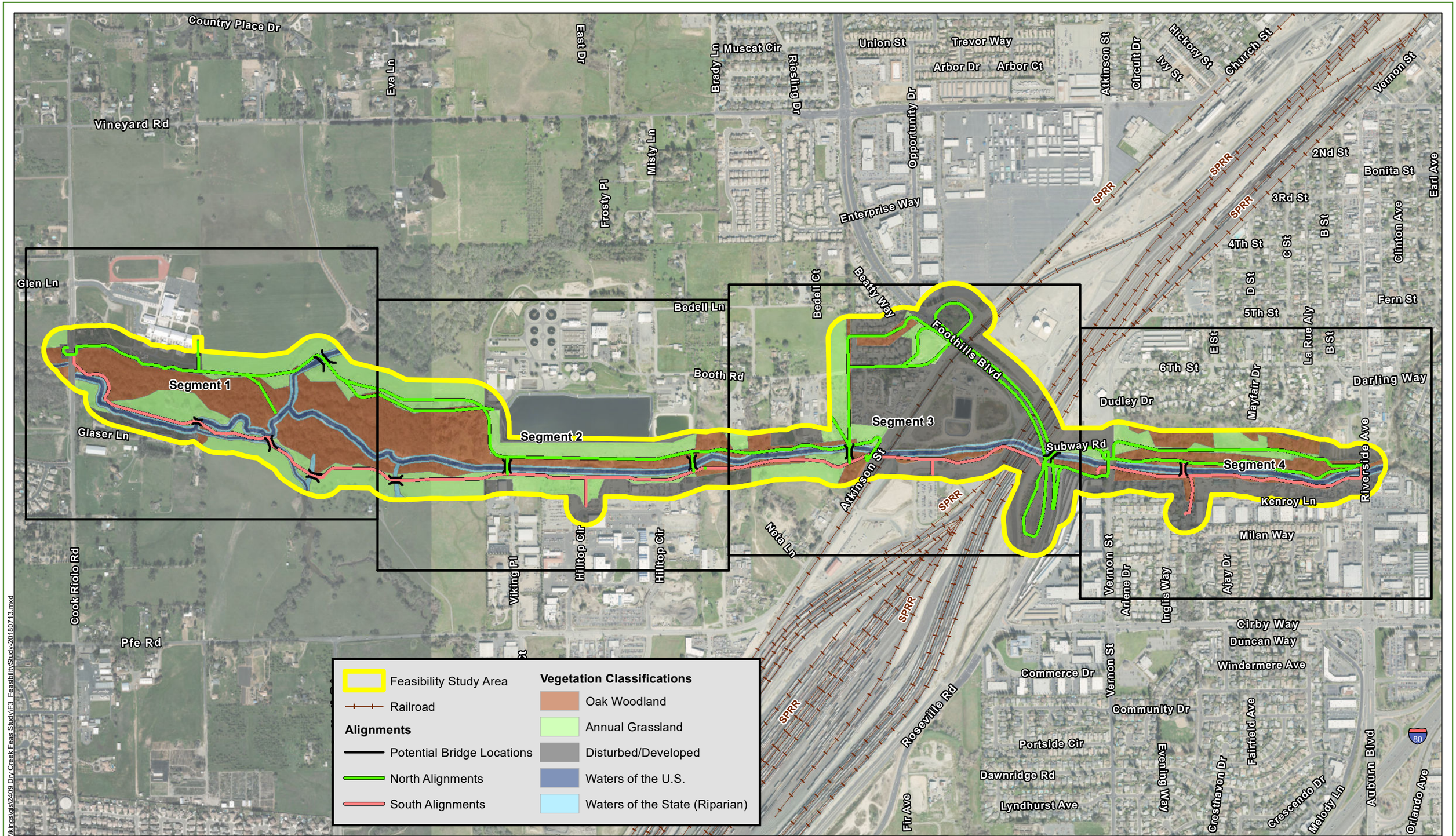
Figure 2
Project Location
Dry Creek Greenway West Multiuse Trail Project Feasibility Study
City of Roseville, Placer County, California

0 0.25 0.5 0.75 1 Miles



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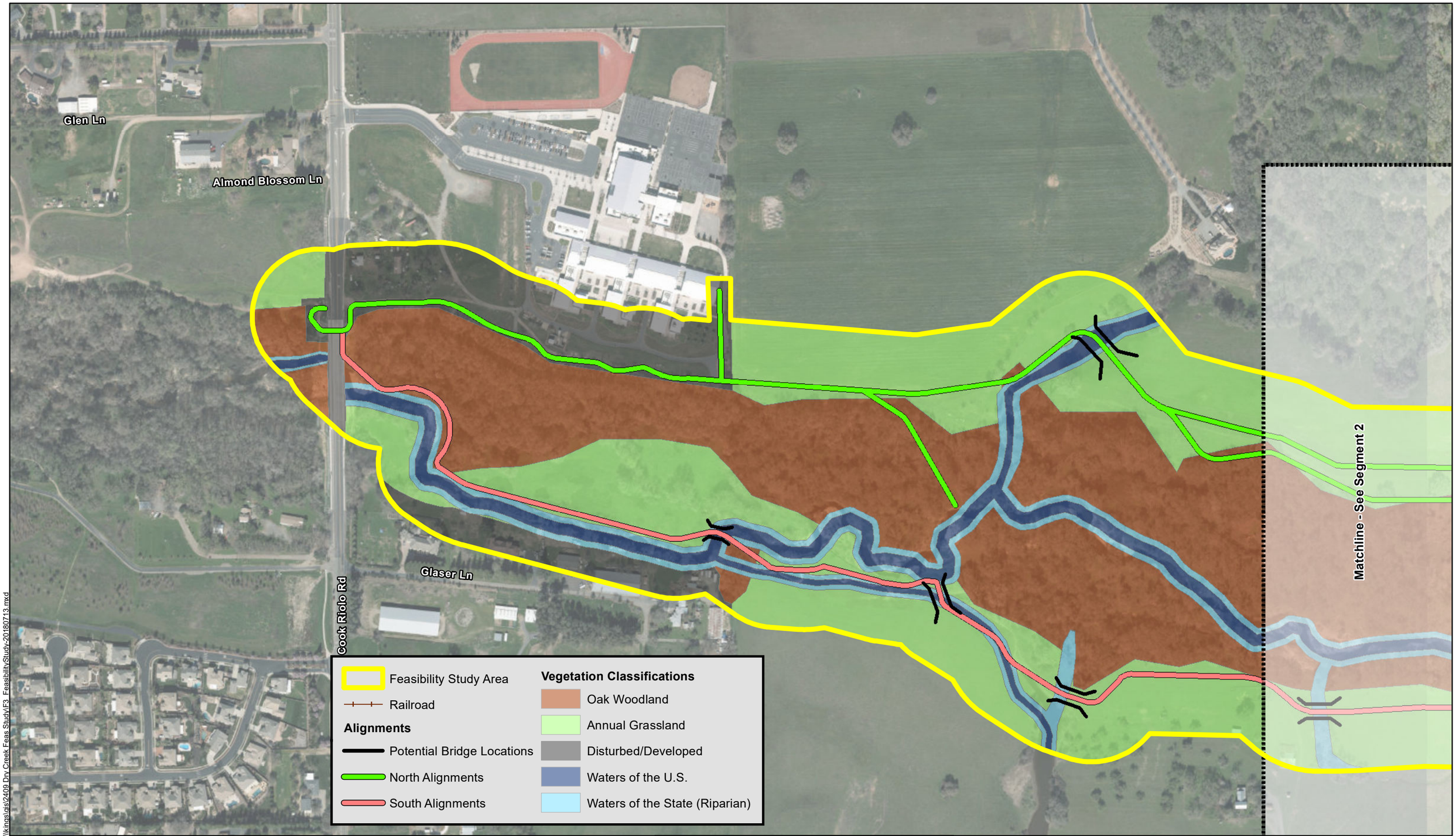
Source: ESRI Maps Online; Dokken Engineering 9/14/2018; Created By: zachl

0 600 1,200 1,800 2,400 3,000 Feet

Figure 3
Feasibility Study - Environmental Considerations
Index Page

Dry Creek Greenway West Multiuse Trail Project Feasibility Study
City of Roseville, Placer County, California



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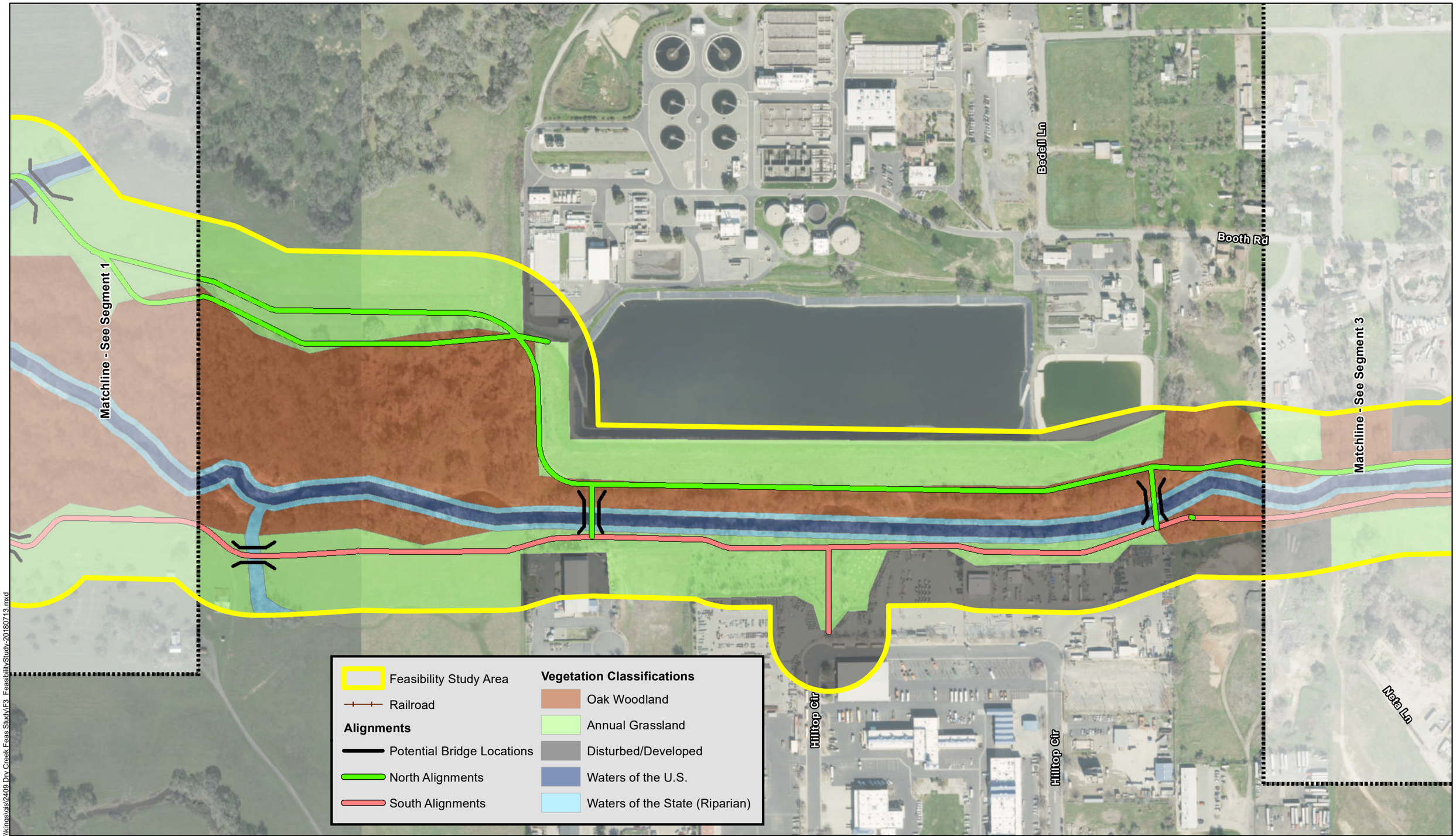
Source: ESRI Maps Online; Dokken Engineering 9/14/2018; Created By: zachl

0 200 400 600 800 1,000 Feet

Figure 3
Feasibility Study - Environmental Considerations
Segment 1
Dry Creek Greenway West Multiuse Trail Project Feasibility Study
City of Roseville, Placer County, California



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Source: ESRI Maps Online; Dokken Engineering 9/14/2018; Created By: zachl

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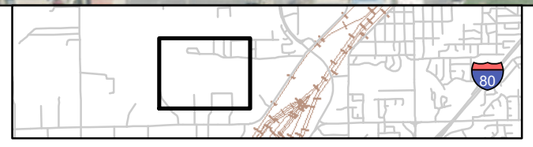
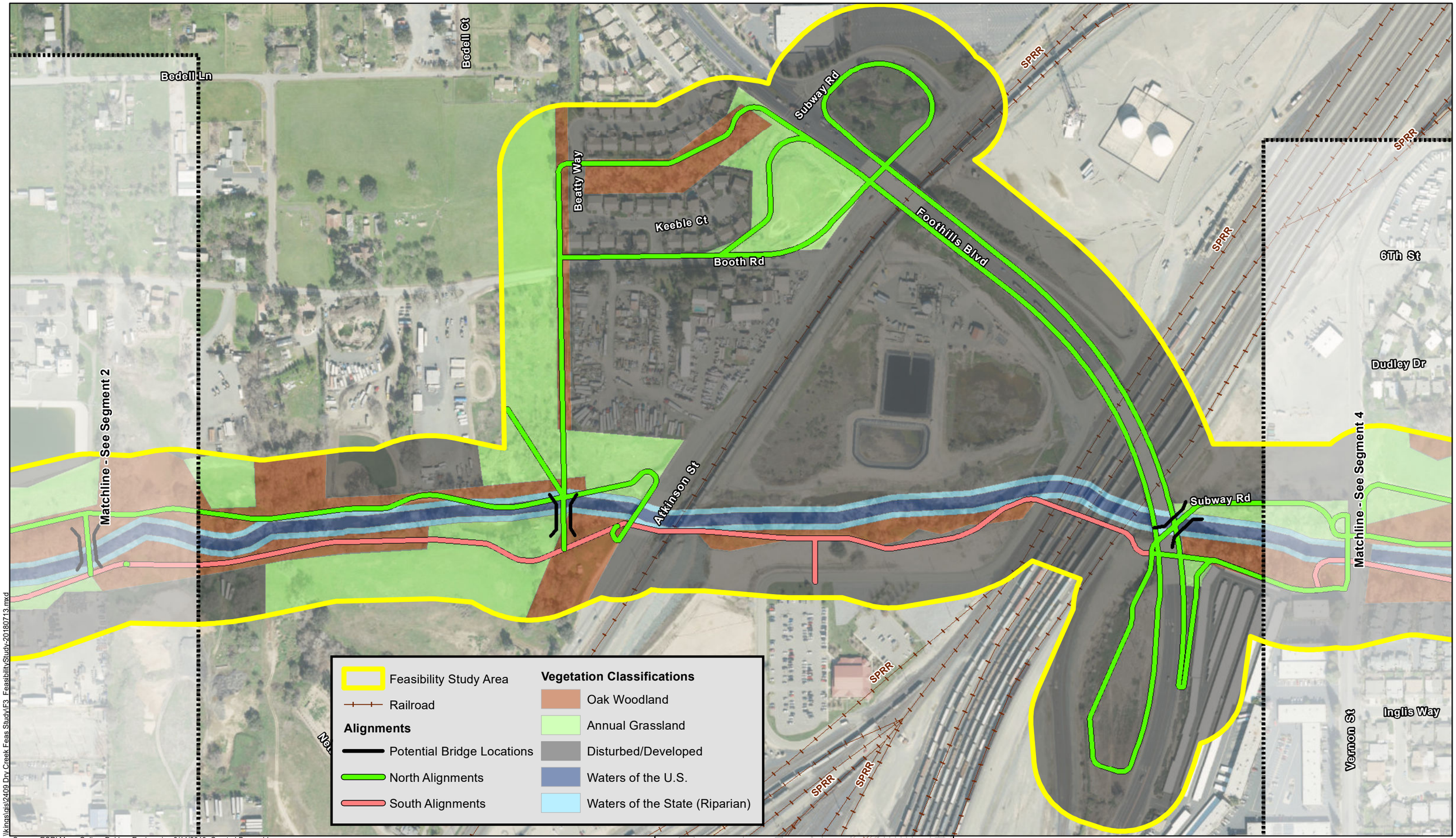


Figure 3
Feasibility Study - Environmental Considerations
Segment 2
Dry Creek Greenway West Multiuse Trail Project Feasibility Study
City of Roseville, Placer County, California



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Source: ESRI Maps Online; Dokken Engineering 9/14/2018; Created By: zachl

0 200 400 600 800 1,000 Feet

Figure 3
Feasibility Study - Environmental Considerations
Segment 3
Dry Creek Greenway West Multiuse Trail Project Feasibility Study
City of Roseville, Placer County, California

SPRR
SPRR
E St
La Rue Aly
B St
Vine Way
6Th St
La Rosa Ct
Hampton Dr
Windsor Dr
Darling Way
Clinton Ave
Darling Way
Dudley Dr
Mayfair Dr
Hernandez Ln
Andress Ct
Lucy Ln
Machado Ln
Matchline - See Segment 3
Subway Rd
Kenroy Ln
Inglis Way
Milan Ct
Milan Way
Cameron Way
Vernon St
Foothills Blvd
Giuseppe Ct
Hyacir
Cappas Ct
Riverside Ave
Valley Oak Dr
Live Oak Cir
Girby Hills Dr

Feasibility Study Area
Railroad

Alignments
Potential Bridge Locations
North Alignments
South Alignments

Vegetation Classifications
Oak Woodland
Annual Grassland
Disturbed/Developed
Waters of the U.S.
Waters of the State (Riparian)

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Source: ESRI Maps Online; Dokken Engineering 9/14/2018; Created By: zachl

0 200 400 600 800 1,000 Feet

80

Figure 3
Feasibility Study - Environmental Considerations
Segment 4
Dry Creek Greenway West Multiuse Trail Project Feasibility Study
City of Roseville, Placer County, California

RESULTS (continued)

Each segment's north and south alignments were analyzed to determine the potential for environmental effects to sensitive resources. Environmental effects were rated either Not Applicable, Minimal, Moderate, and Heavy for effects to woodland, grassland, and riparian. The number of water crossings were also evaluated, with one water crossing rated as minimal effects, two water crossing rated as moderate effects, and three water crossing rated as heavy effects. These effects are then totaled and averaged for each alignment to estimate overall environmental effects (Minimal, Minimal/Moderate, Moderate, Moderate/Heavy, and Heavy) for each alignment.

Segment 1

Segment 1's north alignment starts at Cook Riolo Road and follows an existing maintenance road through disturbed/developed lands south of Creekview Ranch Elementary School and then transitions to follow an existing utility easement through annual grasslands. There is one bridge crossing over a ravine and pond for this alignment. Segment 1's north alignment will have minimal effects to oak woodlands, annual grasslands, riparian habitat, and one water crossing of a tributary to Dry Creek, a waters of the U.S. and State. Overall, Segment 1's north alignment will have minimal biological effects and one water crossing/bridge (see Table 1 below).

Segment 1's south alignment starts at Cook Riolo Road and follows along the creek through oak woodland and waters of the State (riparian) vegetation before crossing over Dry Creek. From this crossing, the proposed south alignment meanders through annual grasslands and requires up to two other bridge crossings of ravines and tributaries. Segment 1's south alignment will have moderate effects to oak woodlands, annual grasslands, riparian habitat, and moderate/heavy effects due to one bridge crossing Dry Creek, which has the potential to impact federally protected fish species, and two other crossings of tributaries to Dry Creek, both waters of the U.S. and/or State (see Table 1 below).

Table 1: Segment 1 Alignment Effects

Effects	North Alignment	South Alignment
Woodland Effects	Minimal	Moderate
Grassland Effects	Minimal	Moderate
Riparian Effects	Minimal	Moderate
Waters Effects	One water crossing	Three water crossings
TOTAL	**Minimal Effects**	**Moderate/Heavy Effects**

Overall, Segment 1's north alignment will have minimal biological effects and one water crossing/bridge. Segment 1's south alignment will have moderate/heavy biological effects and three water crossings/bridges.

Segment 2

Segment 2's north alignment continues along the existing utility easement through annual grasslands and then utilizes a maintenance road along the top of a second levee adjacent to the levee protecting the Dry Creek Wastewater Treatment Plant from flooding. There are zero bridge crossings for Segment 2 north alignment. Segment 2's north alignment will have minimal effects on annual grasslands; however, due to the proximity of Segment 2's north alignment riparian

habitat and the presence of a number of trees on top of the levee, riparian and to oak woodlands effects are rated as moderate (see Table 2 below).

Segment 2's south alignment continues to meander through annual grasslands and follows along the top embankment of Dry Creek just north of the industrial park. There are a number of small trees recently planted here as mitigation for development of the Dry Creek Wastewater Treatment Plant, which will be avoided to the greatest extent feasible to ensure the treatment plant remains in compliance with their mitigation commitments. One bridge crossing is required at the start of Segment 2's south alignment to cross a tributary to Dry Creek, a waters of the State. Segment 2's south alignment will have minimal effects to oak woodlands, and moderate effects to annual grasslands and riparian habitat. Segment 2's south alignment has one water crossing, a waters of the State; however, it does not cross over Dry Creek, and does not have the potential to impact federally protected fish species (see Table 2 below).

Table 2: Segment 2 Alignment Effects

Effects	North Alignment	South Alignment
Woodland Effects	Moderate	Minimal
Grassland Effects	Minimal	Moderate
Riparian Effects	Moderate	Moderate
Waters Effects	Zero water crossings	One water crossing
TOTAL	**Moderate Effects**	**Moderate Effects**

Overall, Segment 2's north alignment will have moderate biological effects and zero water crossings/bridges. Segment 2's south alignment will have moderate biological effects and one water crossing/bridge.

Segment 3

Segment 3's north alignment continues along the top of the embankment through an oak woodland corridor and then veers northward through annual grasslands to connect to Foothills Boulevard. The trail then follows Foothills Boulevard southbound until it reconnects to the north side of Dry Creek in an area with dispersed oak woodland, grassland, and developed/disturbed environment. There is one potential bridge crossing to connect the trail from Foothills Boulevard to the north side of Dry Creek over a waters of the U.S. and State. Segment 3's north alignment will have minimal effects to annual grasslands and moderate effects to oak woodlands and riparian vegetation due to the amount of tree and vegetation removal along the top of the creek's bank (see Table 3 below).

Segment 3's south alignment continues along the top embankment which is classified as a mixture of oak woodland and annual grasslands and is bounded to the south by industrial development and disturbed habitat. The trail then goes under the railroad bridges and follows along the edge of the creek, passing through riparian and oak woodland. Segment 3's south alignment will have minimal effects to annual grasslands and to oak woodlands, and moderate effects to riparian due to the close proximity of the alignment to the edge of Dry Creek. Segment 3's south alignment does not have any water crossings (see Table 3 below).

Table 3: Segment 3 Alignment Effects

Effects	North Alignment	South Alignment
Woodland Effects	Moderate	Minimal
Grassland Effects	Minimal	Minimal
Riparian Effects	Moderate	Moderate
Waters Effects	Potential water crossing	Zero water crossing
TOTAL	**Moderate Effects**	**Minimal/Moderate Effects**

Overall, Segment 3's north alignment will have moderate biological effects and one potential water crossing/bridge. Segment 3's south alignment will have minimal/moderate biological effects and zero water crossings.

Segment 4

Segment 4's north alignment continues either along the existing maintenance road within annual grasslands, or weaves through the oak woodland atop the banks of Dry Creek and terminates at Riverside Avenue. There is one potential water crossing needed for Segment 4's north alignment depending on which alignment is selected in Segment 3, which will cross over a waters of the U.S. and State. Segment 4's north alignment will have minimal effects to annual grasslands and moderate effects to oak woodlands and riparian vegetation (see Table 4 below).

Segment 4's south alignment continues to weave through the oak woodland atop the banks of Dry Creek and terminates at Riverside Avenue. Segment 4's north alignment utilizes the existing bridge at Riverside Avenue to cross over to the eastern terminus of the multi-use trail. Segment 4's south alignment will have minimal effects to annual grasslands and moderate effects to oak woodlands and riparian vegetation (see Table 4 below).

Table 4: Segment 4 Alignment Effects

Effects	North Alignment	South Alignment
Woodland Effects	Moderate	Moderate
Grassland Effects	Minimal	Minimal
Riparian Effects	Moderate	Moderate
Waters Effects	Potential water crossing	Zero water crossing
TOTAL	**Moderate Effects**	**Moderate Effects**

Overall, Segment 4's north alignment will have moderate biological effects and one potential water crossing/bridge. Segment 4's south alignment will have moderate biological effects and zero water crossings.

Additional considerations should be made for each creek crossing to minimize potential effects to Dry Creek, which is spawning and migratory habitat for federally protected anadromous fish. The number of crossings should be minimized to limit disturbance of this sensitive environment. Bridge crossing points should maximize the potential for community access to the trail system while attempting to minimize the number and size of crossings in order to limit effects to the biological environment.

CONCLUSION

Based on the results of the analysis, the northerly alignments appear to have fewer biological effects because they often follow existing utility easement corridors and access roads; thereby, minimizing the effects to sensitive natural communities including oak woodlands and riparian vegetation. If creekside vegetation removal is required, the north bank is preferred because the south bank vegetation provides greater shaded riverine aquatic habitat benefits due to the summer sun angle. Additionally, the northerly alignments have fewer water crossings, which would minimize the potential effects to sensitive aquatic habitats including the habitat of federally protected anadromous fish species.

As shown, the North Alignment is generally the least environmentally damaging alignment for the analyzed segments; however, the South Alignment is the least environmentally damaging alignment for Segment 3. Additional considerations will be made when determining the most feasible alternative such as community effects and maximizing community access to the trail during the detailed environmental analysis phase of the project.

Implementation of the following guidelines can be used to further avoid and minimize environmental effects during planning of the Dry Creek Greenway West Multi-Use Trail:

- The multi-use trail should follow existing utility corridors including easements and access roads where possible to avoid effects to sensitive communities including oak woodlands, riparian vegetation, and annual grasslands.
- The number of water crossings including bridges over tributaries and Dry Creek should be minimized to protect existing riparian vegetation as much as feasible.
- The trail should meander through oak woodlands to avoid removal of any large and established native tree species. Avoidance of removal of trees will reduce the amount of mitigation necessary to offset project effects.
- Where creekside vegetation removal is required, avoiding the South bank preserves shaded riverine aquatic habitat.

Appendix D: Public Workshop and Open House Summaries

Dry Creek Greenway West Planning and Feasibility Study

A MULTI-USE PAVED TRAIL ALONG DRY CREEK, FROM COOK RIOLO ROAD TO RIVERSIDE AVENUE

Community Open House #1

SUMMARY 4.20.2018

Open House Summary

Introduction

On Monday, April 9, 2018, in coordination with Placer County, Placer County Transportation Planning Agency (PCTPA), and the Rails-to-Trails Conservancy, the City of Roseville held a community open house for the Dry Creek Greenway West Planning and Feasibility Study. The open house was held from 6:00 – 8:00 p.m. at Cirby Elementary School in the multi-purpose room, located at 814 Darling Way, Roseville CA, 95678.

Project Overview

The Dry Creek Greenway West Planning and Feasibility Study will evaluate the possibility of developing a 3-mile multi-use trail between Cook Riolo Road and Riverside Avenue, which would ultimately connect with the existing Dry Creek Greenway in unincorporated Placer County, west of Cook Riolo Road and the proposed Dry Creek Greenway East (Riverside Avenue to Old Auburn Road).

Open House Purpose and Format

The community open house provided a project introduction to the Dry Creek Greenway West Planning and Feasibility Study. The meeting provided community members with an opportunity to learn about the study and share input on the trail concept and potential challenges and opportunities.

The meeting was held in an "open house" format, with five information stations set up around the room for attendees to review and provide input, with project team members stationed around the room to answer questions.

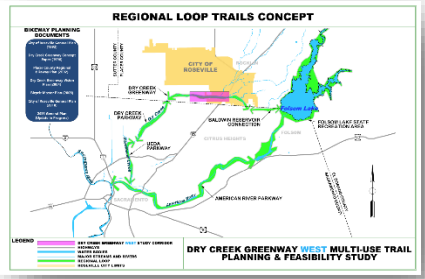
The open house objectives included the following:

- Provide an overview of the Dry Creek Greenway West Feasibility Study goals, objectives, and potential schedule
- Gather input on the trail concept and existing trail challenges and opportunities
- Gather community questions and concerns

Stations

The open house consisted of the following staffed information stations:

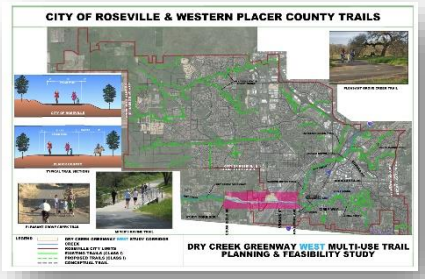
Station 1: Regional Loop Trails Concept



The objective of this station was to gather information about community members' current use of trails and inform the community about the comprehensive community benefits of paved trails. The station featured an overview of the City and County's vision for paved trails in the region.

Displays Included:

- Regional Loop Trails Concept
  - Map displaying the connections to the American River Parkway
- City of Roseville and Western Placer County Trails
  - Map showing trails in Roseville and Placer County, along with illustrative photos of community use of existing paved trails in Roseville and Placer County. The board also included the City and County trail cross section standards.

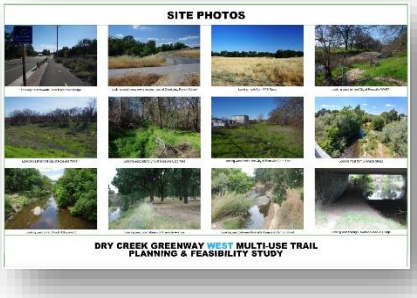


Station 2: Dry Creek Greenway West Overview

The objective of this station was to inform the community about the Dry Creek Greenway West Planning and Feasibility Study. This station provided an overview of the Dry Creek Greenway West study corridor.

Displays included:

- Large study corridor map
- Photo board of illustrative photos

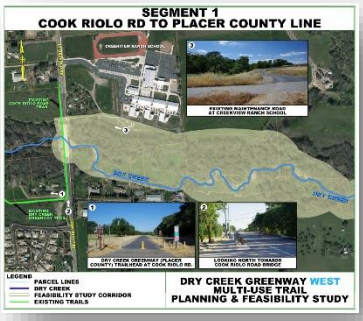


Station 3: Trail Corridor Segments

The objective of this station was to familiarize community members with the connections of the different study corridor segments and identify the opportunities and constraints of each segment.

Displays included:

- Aerial Map of Trail Corridor Segment 1: Cook Riolo Road – Placer County Line
- Aerial Map of Trail Corridor Segment 2: Placer County Line – City of Roseville
- Aerial Map of Trail Corridor Segment 3: Placer County Line – Vernon Street
- Aerial Map of Trail Corridor Segment 4: Vernon Street – Riverside Avenue



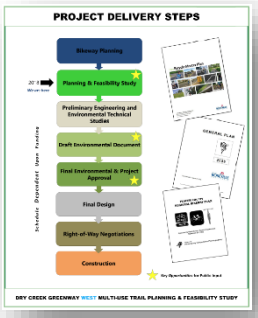
Station 4: Public Safety

The objective of this station was to inform community members about the public safety benefits of a formal trail along with safety options to consider with the trail. Roseville Police Department and Fire Department representatives were present at this station to discuss community concerns.

Display included:

- A board including illustrative photos depicting potential safety measures for the trail including privacy measures and trail crossings

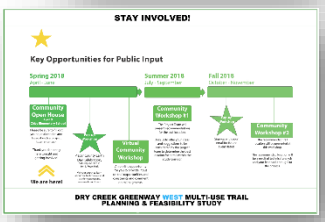
<u>Station 5:</u> Stay Involved

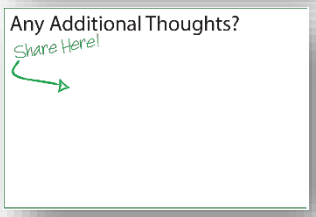


The objective of this station was to inform community members about the project delivery steps to construction, outreach opportunities during the study and direct them to an online questionnaire. Along with displays, the station included printed questionnaires for community members to complete and return to the project team.

<u>Displays included</u>:

- Project Delivery Steps
- Public Outreach Timeline
    - Take-home fliers with questionnaire website address for community members to take home.
- "Additional Thoughts" Board
    - Blank board with a question prompting attendees to leave additional thoughts with post-its.





Community Input

Below are the comments submitted by community members through the "Additional Thoughts" board and submitted questionnaires.

- We would move if the trail was built, our property is on Cook Riolo Road. We have five children and homeschool them. I am not always there to protect them. We cannot build a fence because Dry Creek floods every winter. How do we keep them and us safe? How do we stop people from scoping out our house to rob later? How will we be protected from increased fire danger? Please don't put this trail in our backyard!
- As home owners next to this proposed trail, we are concerned about additional homeless traffic and crime. We already see trespassers on our property on a regular basis and have noticed the trail between Walerga and Cook Riolo has increased people "exploring". We call the fire department when we see bonfires. In those areas, we find drug needles, alcohol containers, and crack pipes. We have called the police more times than I can remember. Our concern is also related to our small children and their safety.

- You should consider placing lighting at trail/road intersections and trail access points. Provide bike parking at all trail heads and access points and especially where motor vehicle parking is provided.
- I would love to be able to access bike/walking trails near my home rather than ride or drive to reach a trail. I would use it 3-4 times per week to walk my dogs or would even consider buying a bike again, so I could safely ride it.
- Some properties along the potential trail do not have gates, please include them so property owners can access the trail.
- Create grade separated street crossings wherever possible. Don't use bollards at access points. Strive to mimic the American River Parkway trail in width and having decomposed granite shoulders. Provide as much shade as possible and as many views of the creek as possible. Continue to promote regional loops.
- Command a reversing trail circulation policy to have all users on the right side of the trail, including walkers – no opposing circulation. Opening new trails will increase safety and reduce potential security and crime issues. There are many regional trail successes where local residents have increased property values.
- Linking together un-connected sections should be priority #1. As a trail runner and mountain biker, I also would love parallel single-track options, like the ones that exist along the current Dry Creek Trail.
- The existing trail from Cook Riolo to Walerga has a paved trail and a parallel dirt trail. I suggest the continuation of that concept, with a separate but parallel dirt trail in the corridor as far west as possible. This will provide a convenient way to train for high school mountain bike teams without having to take the kids and bikes up the hills and will provide a local outlet for all mountain bikers, so they don't have to drive to Tahoe.
- The box culvert under Riverside Avenue could also provide flood overflow capacity under Riverside Avenue. Old Subway Road gets a path under the railyards. Pay attention to sight distance along the path to ease conflicts between trail users.
- I use the American River Parkway and Folsom Trails twice a week. It will be nice once the Roseville trails are more connected. It will also be great when the SACOG planned loop is complete.
- Segment 3 is a challenge with the Railyards – do you have an alternate segment plan?
- Looking forward to being able to ride a majority of the Roseville-Sacramento-Folsom loop on bike trails.
- Don't let the "old people" derail the trail.

- By having a bike trail running between Riverside and lower Vernon, the City of Roseville would be able to: encourage outdoor recreation, monitor the homeless camping in the area, and protect the wildlife and nature by keeping the land a greenbelt.
- This is a very necessary transit option for Roseville, Placer, and the whole region. Getting people out of cars and in a [bike] saddle can make a huge difference in health and well-being, not only for those using the trail, but those that live along the roads and travel by car.
- No complaints about the existing trails. To gain connectivity will be wonderful. I've been frustrated that I couldn't safely take my daughter to preschool on the other side of I-80 without crossing at Cirby. I would also like connectivity with Folsom Lake. Safe bike routes under or over I-80 would be great!
- Consider an adopted mile stewardship program.

Notification

A total of 50 community members signed-in to the community open house and 25 community members submitted written questionnaire responses. To promote the community open house, a direct mail piece was sent to over 2,000 residents near the study corridor. Email notifications were sent to the City of Roseville, Placer County, Placer County Transportation Planning Agency, and Rails-to-Trails distribution lists. Local news stations in the City of Roseville were also notified. The project team reached out to community-based organizations and local businesses to share the event through their social media, newsletters, and fliers.

The open house was promoted on the City of Roseville's website and social media (Facebook, NextDoor, Twitter, and Instagram). The following organizations shared the event through social media and/or newsletter:

- City of Roseville
- Placer County
- PCTPA
- Dry Creek School District
- Ladies of Roseville Walking and Running Club
- Lifetime Cycle
- Performance Bicycle
- Roseville Chamber of Commerce
- Roseville Trail-Bike Group
- SABA
- Roseville Hub Bike Shop

Dry Creek Greenway West Planning and Feasibility Study

A MULTI-USE PAVED TRAIL ALONG DRY CREEK, FROM COOK RIOLO ROAD TO RIVERSIDE AVENUE

Online Questionnaire 4.9.2018 - 4.24.2018

SUMMARY

Online Questionnaire Summary

Introduction

The Dry Creek Greenway West Planning and Feasibility Study will evaluate the possibility of developing a 3-mile multi-use trail between Cook Riolo Road and Riverside Avenue. The trail would ultimately connect with the existing Dry Creek Greenway in unincorporated Placer County, west of Cook Riolo Road and the proposed Dry Creek Greenway East (Riverside Avenue to Old Auburn Road).

Community Outreach Approach

The project team engaged with the City of Roseville community members to gather concerns and input on the current opportunities and constraints of the study corridor as well as input about regional and county trails.

As part of the engagement process, the project team hosted a community open house on Monday, April 9. This open house gave community members the opportunity to learn about the potential trail, its context within the overall regional trail network, and to provide input on existing conditions along the study corridor. Along with the community open house, the project team launched a brief online questionnaire. This was available in a hard copy at the open house, as well as on the City of Roseville's website for two weeks, from Monday April 9 through Tuesday at midnight, April 24. The project team also collected responses at the April 21 Placer County Earth Day Celebration though printed questionnaires.

Methodology

This brief online questionnaire served as a forum for the community to contribute input on the current and potential trail usage study corridor and help the project team gather information about what the potential trail would be most used for and what would make the community use the trail.
The eight questions that appear in this summary focus on:

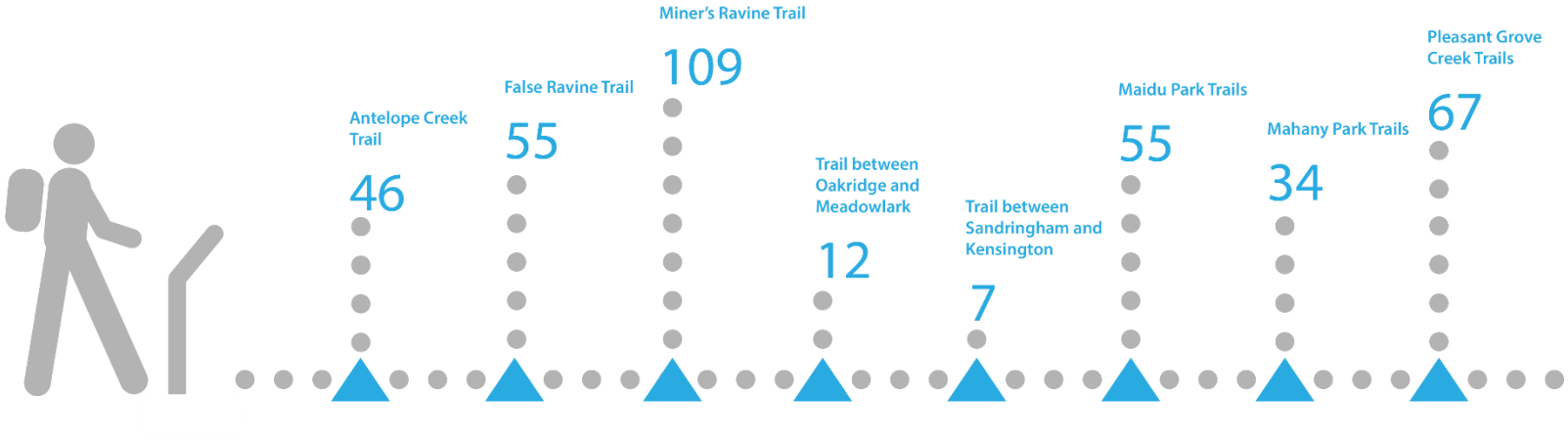
- Regional trail usage
- County trail usage
- Access to the potential Dry Creek West
- Trail amenities

Examples and maps were shown to help provide clarity on regional and county trail usage. Respondents were given multiple choice questions as well as open-ended questions. From the April 9 Community Open House, April 21 Earth Day pop-up event, and throughout the 2-week duration of the questionnaire being available online, the project team received 156 responses from community members.

Summary of Feedback

Below is a summary of feedback the project team received from all submitted questionnaires, organized by question.

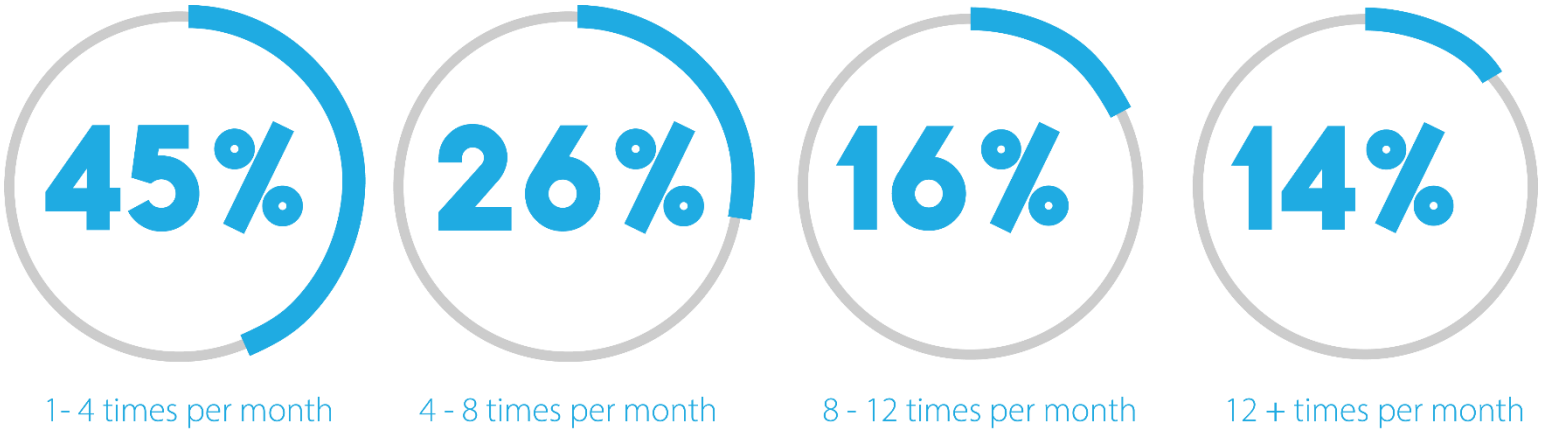
Question 1: *Which paved trails do you use in Roseville? Choose all that apply.*



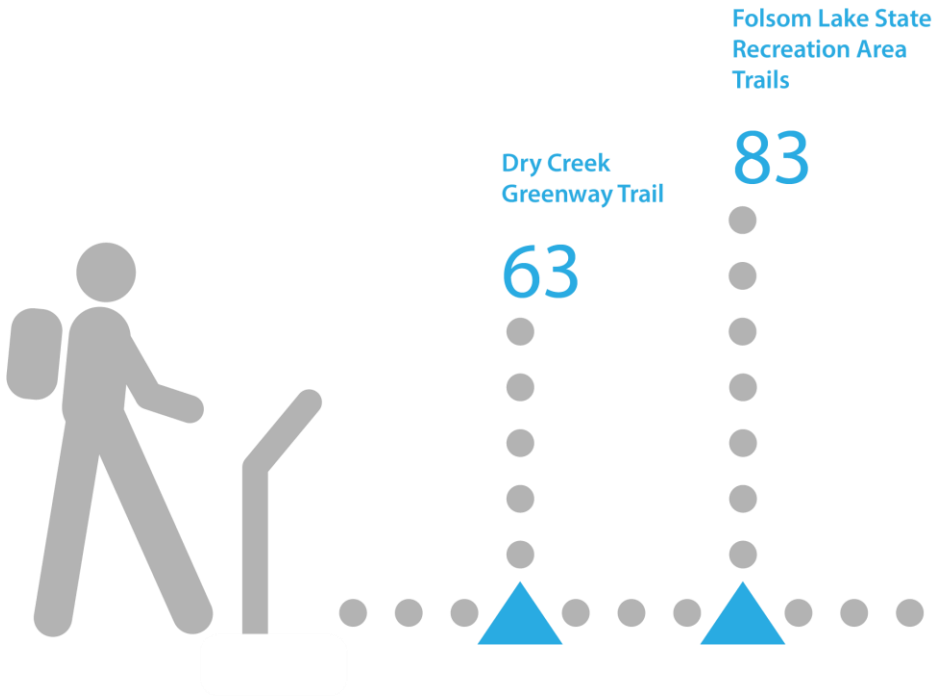
Other regional paved trails:

- American River Parkway
- Harding-Royer Trail
- West Park Trails
- Washington to Pleasant Grove – parallel to Roseville Parkway
- Saugstad Park Trails

Question 2: *How often do you use these paved trails?*



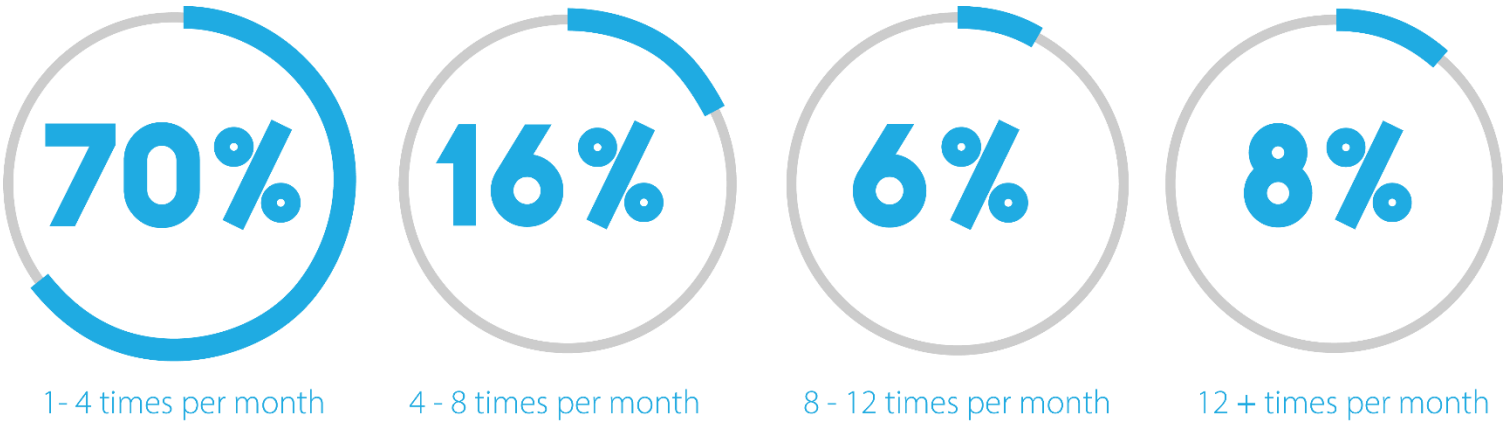
Question 3: *Which regional paved trails in Placer County do you use?*



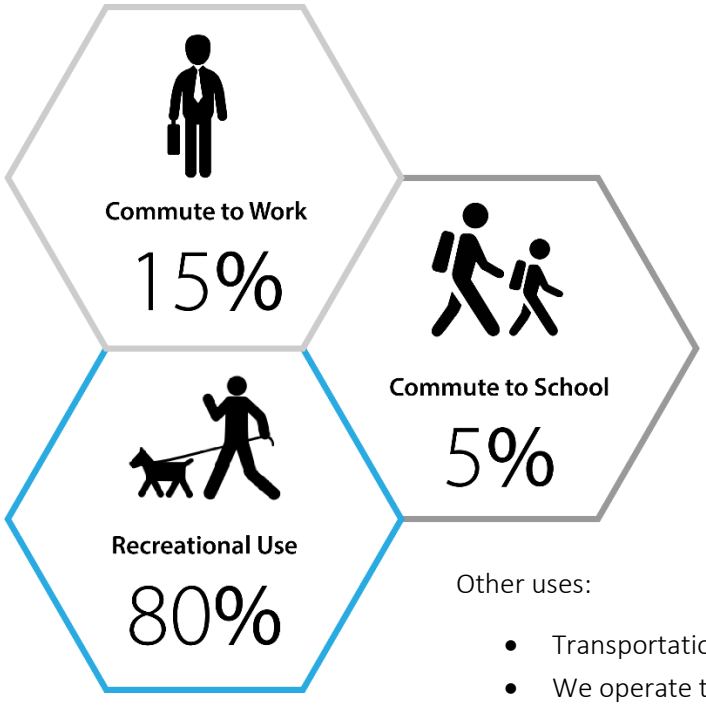
Other county paved trails:

- Olympus Pointe Sculpture Park
- American River Parkway

Question 4: *How often do you use these paved trails?*



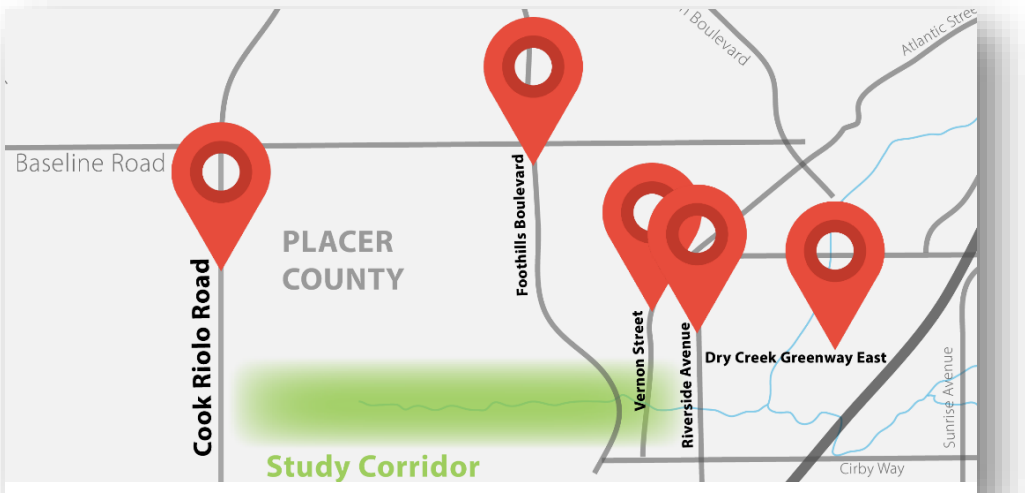
Question 5: *What do you use paved trails for?*



Other uses:

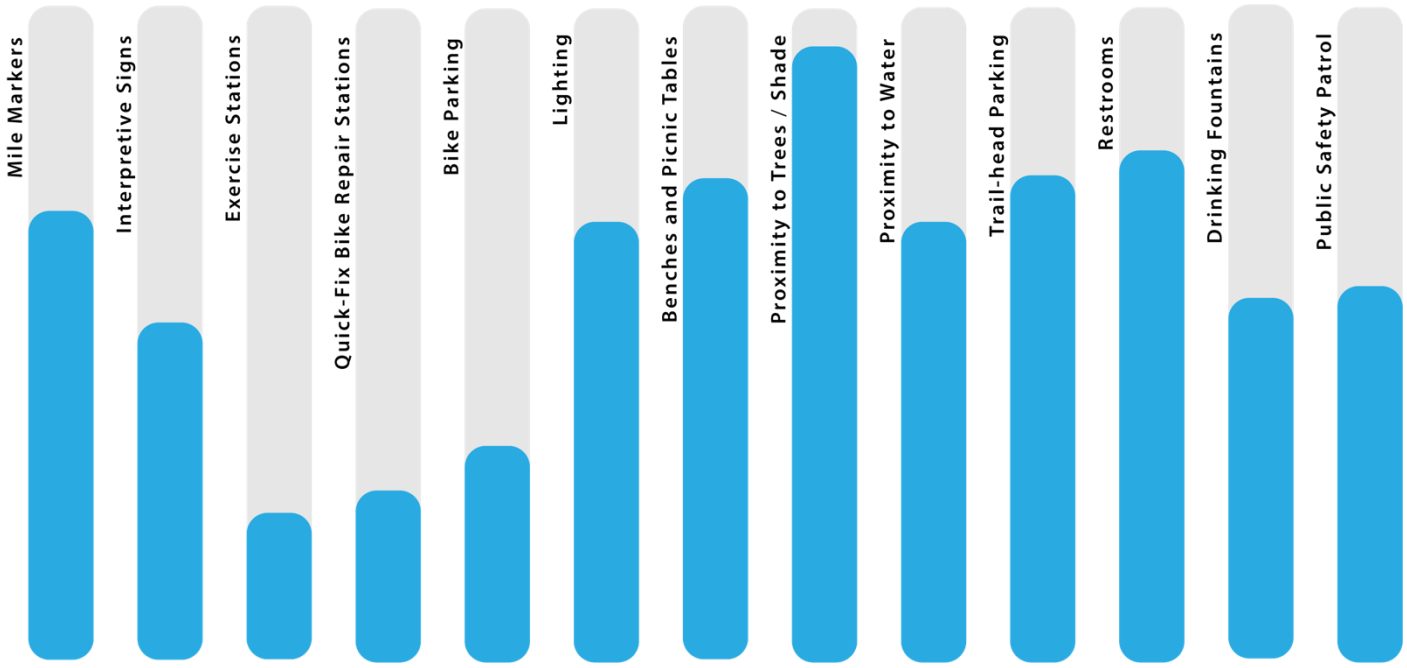
- Transportation to the dentist and Galleria
- We operate the BMX track on Riverside
- If the trails linked up to shopping areas, I would use them to run my errands

Question 6: *If the Dry Creek Greenway West Trail was built, where would you most often access the trail?*



1 *The map above represents the streets where people would like to access the potential Dry Creek West Trail*

Question 7: *What amenities would encourage you to use the paved trail?*



Other Amenities:

- Dog watering stations
- Dog waste bags & containers would be useful and help keep trail cleaner
- Trash cans, several along the trail
- Natural (dirt) trail along side of the pavement
- Signs with rules to enforce the flow of traffic
- Proximity to coffee shops or cafes
- Bathrooms near major trail starting areas – this adds to cost to have further safety measures/homeless patrol. Potentially design the trail with bathroom access at the parks.

Question 8: *Additional Comments.*

Amenities

- Provide dog-friendly trails.
- My husband and I love the trails and use them regularly to walk our dogs and ride our bikes. I especially have a difficult time continuing a ride or walk if I can't find a restroom, there are no construction outhouses to depend upon!
- I used to be in an organization that used the American River Parkway, which has water and restroom amenities.

- I probably would not use this trail, but I still think it should be built. Roseville needs more off-road trails that cyclists can use that are separated from roadways and cars.
- These trails are like the Cain's of the city, leading to the heart of downtown. Cyclists are good downtown Roseville shoppers. Could we get more places to lock up our bikes? How about discount to anyone who shops by bike with the downtown merchants?
- I like the mile markers on Miner's Ravine, if not actually on the trail, it could be nice to be able to look it up on the web site where we have the online trail map.
- We love Dry Creek trail between Walerga and Cook Riolo and would love to see it extended. We walk every day! More garbage cans are needed to help keep it clean
- No restrooms on the trail. They only draw the homeless to the area.

Access

- I love riding my bike on the trails rather than the busy streets like East Parkway, Douglas, and Harding.
- Bike access is needed under the tracks on Washington near Oak.
- Please build the Dry Creek connector to Riverside!
- Build more trails that are connected, and people will start biking more. Eventually we will run out of road space for automobiles, so we need to improve and build protected bike lanes and class 1 trails for commuting and exercise away from the bad/crazy/inattentive/aggressive Roseville drivers.
- I look forward to more cycling/walking trails in the area. Connecting trails are the best.
- I've been approached by many millennials on the Dry Creek trail asking about other trails. This would provide access to work, school and eateries in the downtown area which are presently a challenge to get to on a bike. The age and growth of the population in this area certainly needs a completed trail.
- Looking forward to the day when Pleasant Grove Creek Trail extends south from Woodcreek Oaks to connect with other Roseville trails.
- This would be a great extension of the trail I most often use, which starts at Walerga and ends at Cook Riolo!
- What's most needed is connectivity to all cycling trails in Roseville and Greater Sacramento so cyclists can safely bike throughout the region. Thank you!
- County, please complete the patchy trail system along Walerga Road to connect West Roseville to Dry Creek Greenway Trail. City, please extend Pleasant Grove Creek Trail to Corin Drive and Royal Gorge Loop in the west and to Rocklin's Lonetree Boulevard in the east.

Safety

- There are safety problems with the Oak trees being undermined by the water west of Riverside.
- Roseville has spent money on bike lanes, but drivers do not respect cyclist rights to the road. More trails are needed to ensure the safety of cyclists.
- Getting off the roads and away from traffic has always been my big concern with commuting by bike to work.
- I truly enjoy the trails in Roseville. My concern lies in the abuse of the trails from a camping perspective. It is not the camping that is annoying, but rather the mess that is created. I am disgusted by how much litter is left around.

- I enjoy running the Dry Creek trail and we also use it to walk/bike with our kids to get to the school and nearby park. It feels fairly safe now. If expanded I would want more safety incorporated. There are sometimes are a lot of transients along the river.
- Putting in restrooms? That encourages people to hang about and discourages wildlife. It leads to the destruction of plants, garbage, homelessness, etc. Its a big fools idea.

Other

- Keep up the good work - this is what makes Roseville awesome!
- Roseville has great walking and biking trails! Many do not end or go by commercial / business areas.
- Looking forward to the new trail!
- This is a great chance to use trails as a family.
- Great new location!
- Would love to see an expansion of the Roseville trail system!
- Keep up the good work. Roseville trails paved and unpaved are a great asset to the community.
- Great trail system. I wish more were available in Placer County.
- We are very fortunate to have such beautiful landscapes around us. My family and many friends peruse the trails whenever we can and are thankful to have them. We have taken to not venture on them alone, though.
- Love these trails!
- Having the paved trails is the main thing I love about Roseville.
- How long will this process take?
- Very pleased with Placer counties effort to provide walking trails in natural environments.
- We enjoy many bike trails in this area. We avoid riding on city streets as much as possible!
- Big fan of this idea – please build!
- I want to thank all involved - this is very exciting! I think it will help sell Roseville as a great place to live for those considering it, and as such will be money well spent.
- I think this is a great project.
- We need more paved trails in Placer County for the safety of walkers and riders. This will help with tourism!
- I am not interested in the trail. Would not use it and wouldn't want to pay for it either.
- Please build the new proposed trails! I would use them a lot.
- I'm a city employee and would like to access the bike path for commuting. I would like to see the path on the same side of the creek where Hilltop Circle is located with a back gate for entering the Corporation Yard. It would be good for employees to use to enter the building.
- The Roseville trails are appreciated. I am happy to see that the City of Roseville is starting to expand their bike/multi-use trails, as the City of Folsom has done over the past few years.
- We like the rural feeling, let's not do too much to "city-fi" the area.
- I use the American River Parkway twice a week for running and /or bicycling. Would be nice to have the Roseville trail system connected and extended.
- I hope I live long enough to ride on a trail from Doyle Ranch park to Folsom Lake. Keep up the good work!!
- Pedals are becoming more popular and being used more and more as a transit alternative to cars. Hoping Roseville stays ahead of this shift.

Notification

Community members were notified through email, social media, and at the open house and pop-up workshop. Below is a graphic depicting how community members heard about the questionnaire.

Email	Earth Day Event	Facebook	Twitter	Family / Friend
43%	30%	10%	10%	7%

CITY OF ROSEVILLE CALIFORNIA

Memorandum

Public Works – Alternative Transportation

To: Dry Creek Greenway West Project Development Team

From: Alison Winter, Alternative Transportation

Date: July 12, 2018

Subject: Summary of Dry Creek Greenway West Outreach at Operation Swim

The purpose for participating in this outreach effort was to bring awareness to about active transportation and the Dry Creek Greenway West project to the disadvantaged community in the project area. Roseville Alternative Transportation staff, Jeannie Gandler and Alison Winter, attended Family Swim Nights as part of Operation Swim at the Johnson Pool on June 20, 2018 and June 27, 2018. During Family Swim Nights, the City offers free admission to the pool between 7:00 PM and 8:30 PM. Through Operation Swim, children have the opportunity to receive a new swimsuit and towel. These events were heavily attended by the community and the facility reached capacity. Johnson Pool is located at 100 D Street in the Theiles Manor Neighborhood and is within walking distance of the Roseville Heights Neighborhood.

Alternative Transportation staff set up a table providing information about the Dry Creek Greenway West project, alternative transportation in Roseville, and a contest to win bike. The contest is called the "Active Transportation Summer Challenge" that includes biking and walking challenges along with safety reminders and facts. The contest is open to participants under the age of 18 and entries must be returned by August 1st to the Johnson Pool to be eligible for the drawing. Contest entry forms were provided in both English and Spanish. One winner will receive a new bike, a helmet, and a bike lock. Between the two nights, approximately 100 people took a contest entry form. The second night was more successful because staff positioned themselves just outside the facility and had mini beach balls to hand out to the kids as they exited the pool. The mini beach balls were provided as a courtesy from Pool Safely, a national public education campaign that promotes pool safety.

Dry Creek Greenway West Planning and Feasibility Study

A MULTI-USE PAVED TRAIL ALONG DRY CREEK, FROM COOK RIOLO ROAD TO RIVERSIDE AVENUE

Community Open House #2 and Virtual Community Workshop

SUMMARY

Open House and Virtual Community Workshop Summary

Introduction

On Monday, October 1, 2018, in coordination with Placer County, Placer County Transportation Planning Agency (PCTPA), and the Rails-to-Trails Conservancy, the City of Roseville held the second community open house for the Dry Creek Greenway West Planning and Feasibility Study. The open house was held from 6:00 – 8:00 p.m. at Cirby Elementary School in the multi-purpose room, located at 814 Darling Way. The project team presented trail alignment options and community members were able to share their thoughts on which alignment options they prefer and why or why not they prefer them.

At the same time, on October 1, the project team hosted a virtual community workshop on the City of Roseville's website. The virtual workshop was open from October 1, 2018 – October 19, 2018 and received over 200 responses from community members. The purpose of this online workshop was to reach community members who were not able to attend the Monday night community open house, and to reach a larger range of trail-users throughout Placer County, Roseville, and the Sacramento areas.

Project Overview

The Dry Creek Greenway West Planning and Feasibility Study will evaluate the possibility of developing a 3-mile multi-use trail between Cook Riolo Road and Riverside Avenue. The trail would ultimately connect with the existing Dry Creek Greenway in unincorporated Placer County, west of Cook Riolo Road and the proposed Dry Creek Greenway East (Riverside Avenue to Old Auburn Road).

Virtual Community Workshop Format

The virtual community workshop provided a project overview of the Dry Creek Greenway West Feasibility Study and presented the trail alignment options within the six areas of the entire potential trail. The online workshop provided community members a convenient opportunity to learn about the different alignment options and share their thoughts on which options they prefer and why. The online workshop consisted of area maps along with illustrative images and descriptions of each alignment option. Each area provided community members with trail alignment options where the user was to provide a "thumbs up" or a "thumbs down" as to whether they preferred the trail alignment or not, and provide any comments relating to the particular alignment option.

Open House Purpose and Format

The second community open house provided a project overview of the Dry Creek Greenway West Feasibility Study and presented the trail alignment options within the six areas of the entire potential trail. This meeting provided community members with an opportunity to learn about the different alignment options and share their thoughts on which options they prefer and why.

The meeting was held in an "open house" format, with four information stations set up around the room for attendees to review and provide input.

The four information stations included:

- Regional Trail Boards
  - Regional Trails
  - Roseville / West Placer County Trails
- Dry Creek Greenway West Trail Area Map and Area Maps
- Evaluation Criteria
  - How an Alignment is Chosen
- Boards from the First Community Open House
  - Project Delivery Steps
  - Site Photos
  - Public Safety
  - Stay Involved
  - Additional Thoughts Board

Community Open House #2 Stations

The open house consisted of the following staffed information stations:

Station 1: Regional Trails

The objective of this station was to provide an overview of the regional trails that surround and would potentially connect to the Dry Creek Greenway West.

Displays included:

- Regional Loop Trails Concept
  - Map displaying the connections to the American River Parkway, proposed 72-mile Dry Creek Greenway Regional Trail
- City of Roseville and Western Placer County Trails
  - Map showing trails in Roseville and Placer, along with illustrative photos of community use of paved trails currently in Roseville and Placer County, City and County trail cross section standards, and a flow chart of the bikeway's development background.

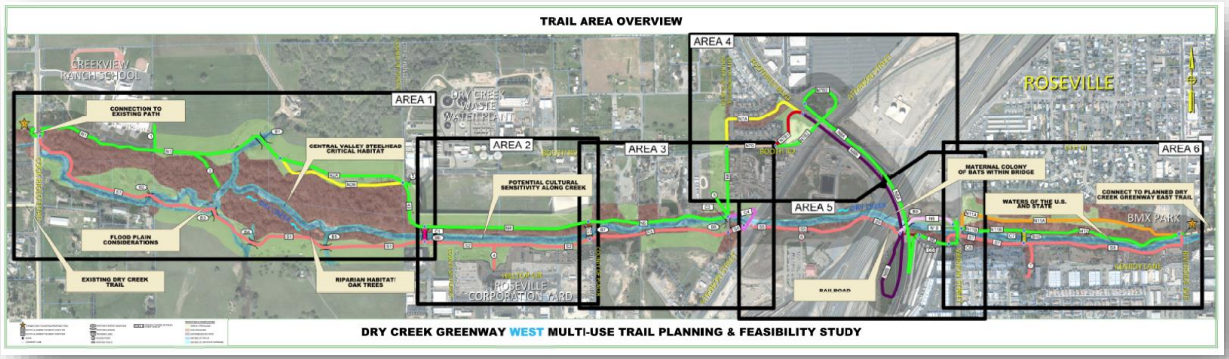
Station 2: Dry Creek Greenway West Trail Map and Area Maps

The objective of this station was to present the different trail alignment options for each of the six areas of the proposed trail and gather community input on which alignment options are preferred and why.

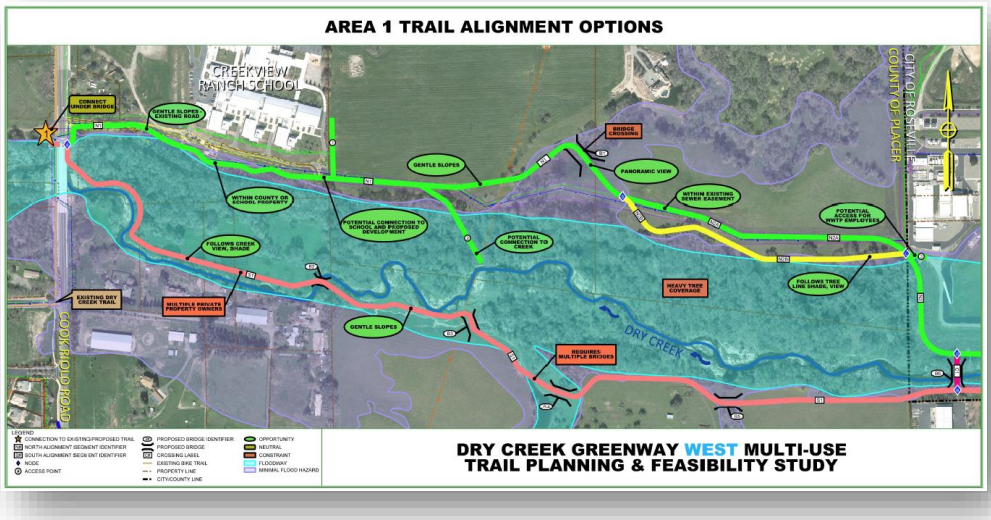
This station presented the opportunities and constraints for the various alignment alternatives, giving community members an idea of terrain, property ownership, floodplain impacts, tree coverage, and the user experience for each alignment.

Displays included:

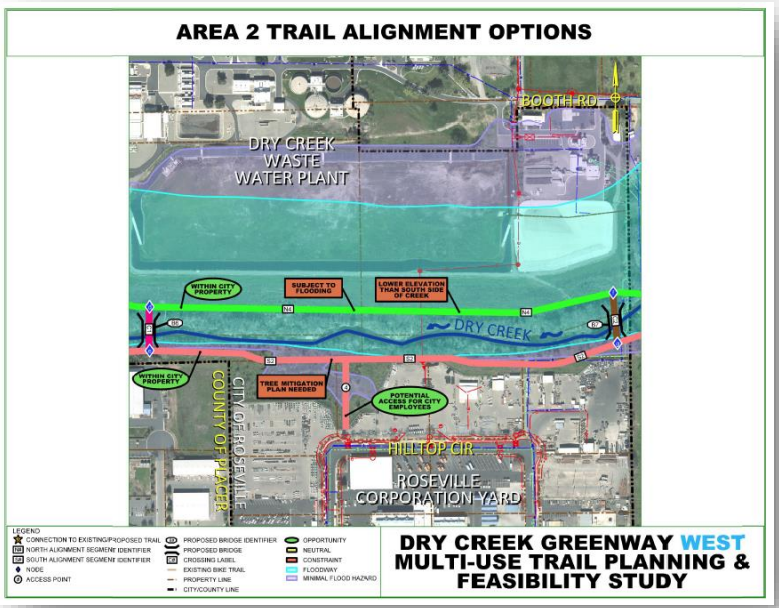
- Large study corridor map



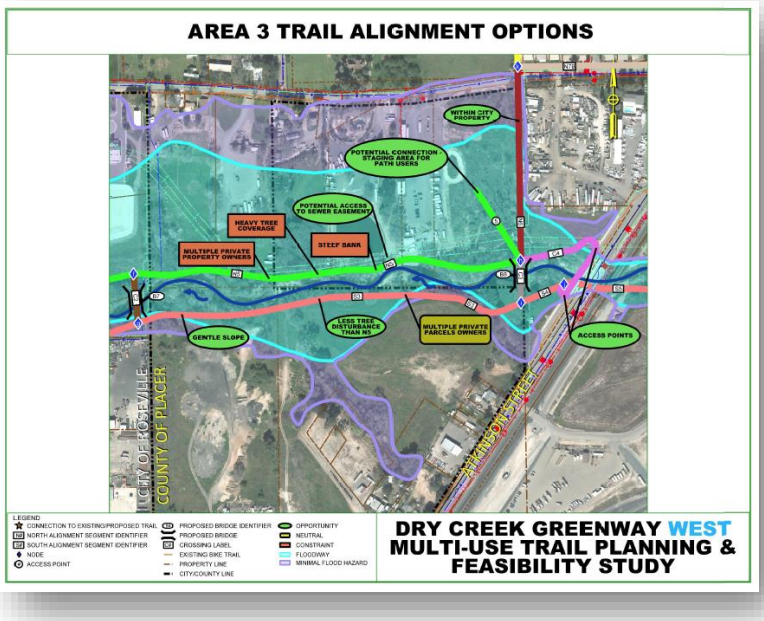
- Area 1 Map



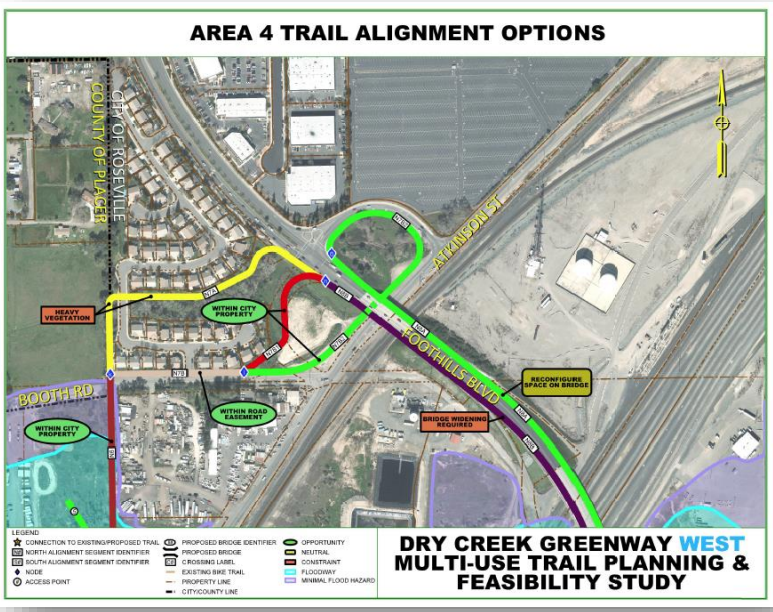
- Area 2 Map



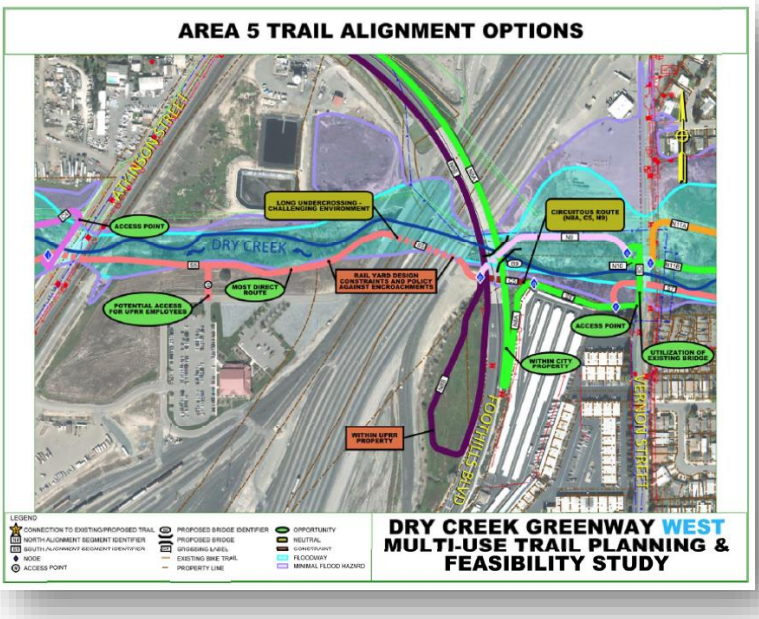
- Area 3 Map



- Area 4 Map

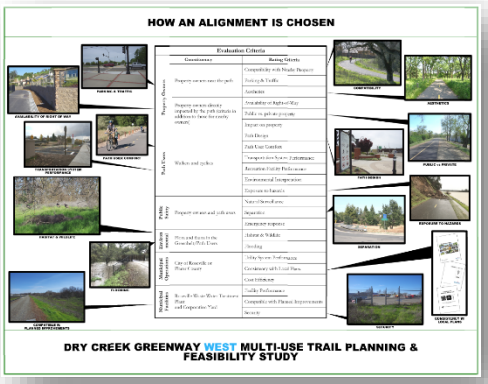


- Area 5 Map



- Area 6 Map

Station 3: Evaluation Criteria



The objective of this station was to inform the community about the path alternative rating system that was developed to compare alignment alternatives as they relate to property owners, path users, public safety, environmental, municipal operations and municipal facilities. The evaluation criteria, along with public input, will help to identify the preferred alternative.

This station provided community members with a display showing criteria that will be used to rate the alignments and provide an opportunity for public input.

Station 4: Boards from the First Community Open House

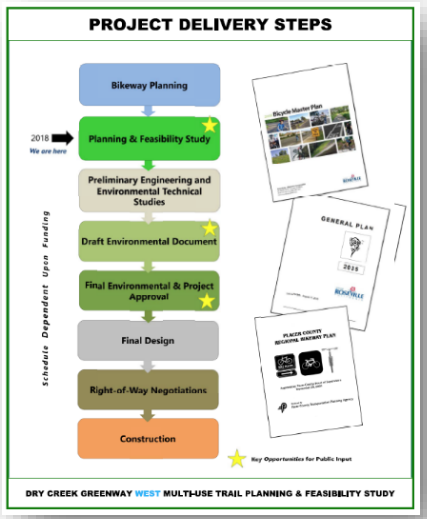
The objective of this station was to inform community members about the project, opportunities to participate in the process, and direct them to the virtual community workshop.

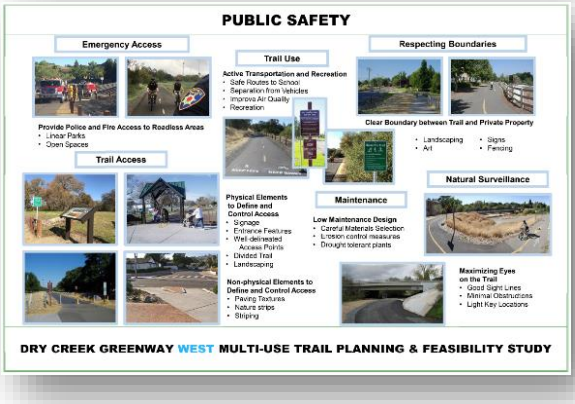
This station featured a board showing the steps involved in planning a multi-use trail including community outreach events planned to gather public input.

This station also provided a computer for community members to participate in the virtual community workshop.

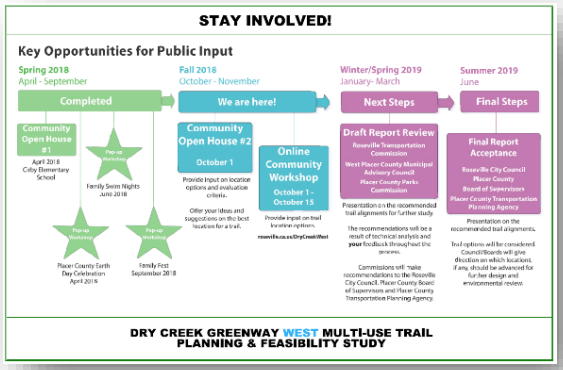
Displays included:

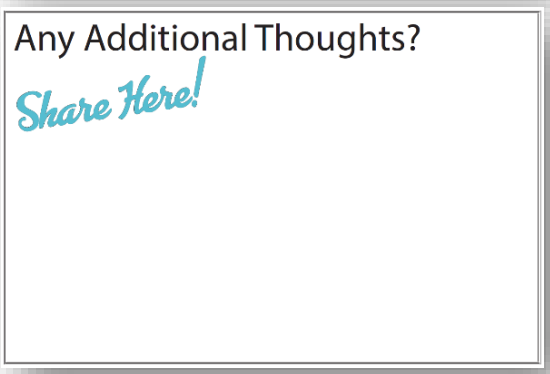
- Project Delivery Steps
- Site Photos
- Public Safety





- "Stay Involved"
- "Additional Thoughts" Board
    - Blank board with a question prompting attendees to leave additional thoughts with post-its.



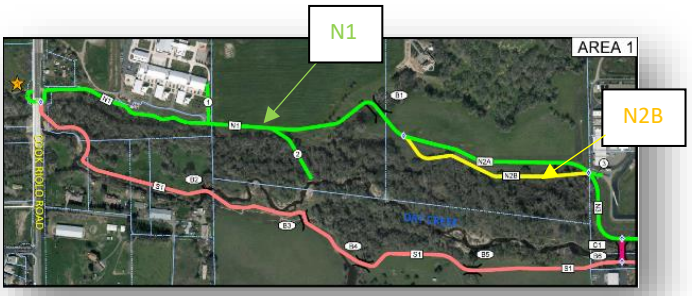


Open House #2 Community Input

Below are the comments submitted by community members through the feedback forms provided based on each trail area.

Area 1

- Though constraints occur, Pathway "N1" could be closer to the creek yet remain north of the Creek. Doing so there appears to be less of a barrier than pathway "S1"
- I prefer N1 (Green) then N2B (Yellow)

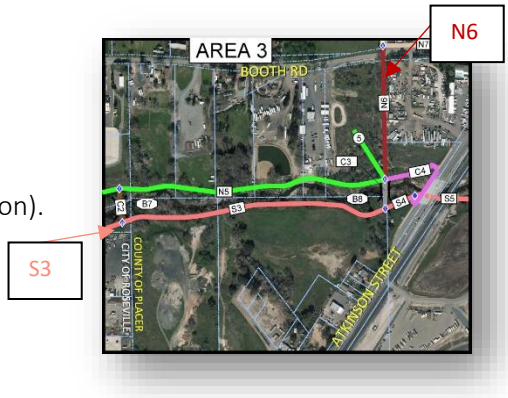


Area 2

- I prefer N4 because there will be better views.

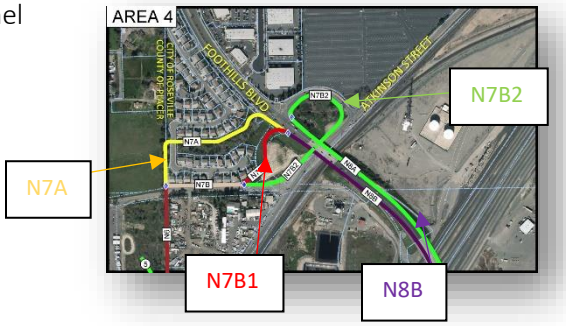
Area 3

- I live on Booth Road and I am in favor of N5 to N6. The S3 option seems less safe due to transient activity in the under populated area.
- S3 (Salmon) will have better views to C3 (Grey) to N6 (Maroon).



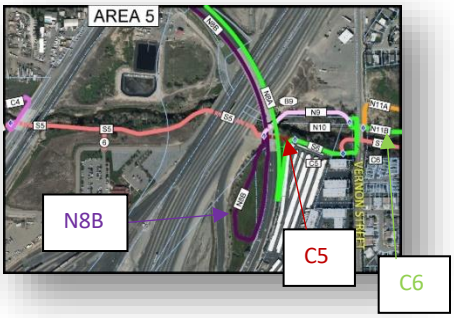
Area 4

- Strongly support continued efforts with railroad to use tunnel under the yard. Offer tax incentives?
- N7A or N7B1 would be favorable. N7B2 is not a terribly safe route for walkers. There is a lot of transient activity along Atkinson Road and along the Rail Tracks.
- I prefer N6 to N7A (Yellow) to N8B (Purple).



Area 5

- I prefer N8B, (Purple) to C5 to S6 (Green) to C6 (Green) to N11B (Green).



Area 6

- I Recommend pathway "N12" as it meets all goals.
- I prefer N12 (Green)

Additional Thoughts and Comments

- Generally, having trails closer to creeks and within shaded landscapes is preferred because aesthetics is prettier and offer a greater sense of seclusion. Also, shade is greatly sought after in our summer heat. This should be a primary goal. A secondary goal is to separate hiking, biking, and pedestrian traffic from motorized traffic. A third goal is to minimize over-development of the pathway. I fully support this project.
- I am a property owner along the proposed pathway and I am excited at the idea of extending. Can't wait for it to happen!

Notification for the Community Open House

A total of 18 community members signed-in to the community open house and four community members submitted written feedback forms. To promote the second community open house, a direct mail piece was sent to over 2,000 residents near the study corridor. Email notifications were sent to the City of Roseville, Placer County, Placer County Transportation Planning Agency, and Rails-to-Trails distribution lists. Local news stations in the City of Roseville were also notified. The project team reached out to community-based organizations and local businesses to share the event through their social media, newsletters, and fliers.

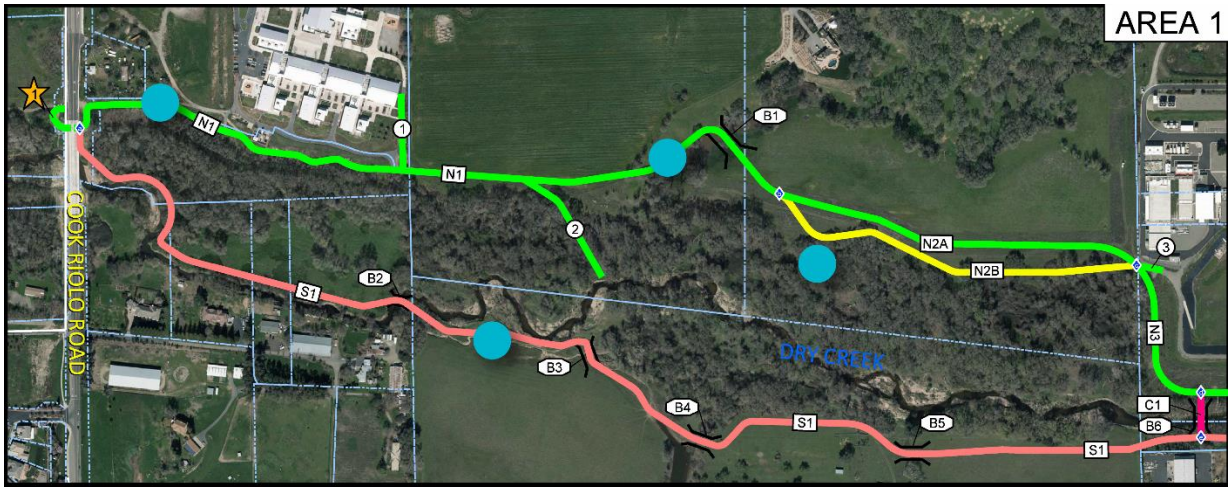
The open house was promoted on the City of Roseville's website and social media (Facebook, NextDoor, Twitter, and Instagram). The following organizations shared the event through social media, email, newsletter, and/or flyer:

- City of Roseville
- Placer County
- PCTPA
- Ladies of Roseville Walking and Running Club
- Placer Land Trust
- Roseville Chamber of Commerce
- SABA
- Dry Creek Unified School District
- Roseville City Elementary School District
- St. Rose School
- Sun City Cycling
- Biking Roseville
- Fleet Feet Sports – Roseville
- American River Parkway Foundation
- Dry Creek Parkways Advisory Committee

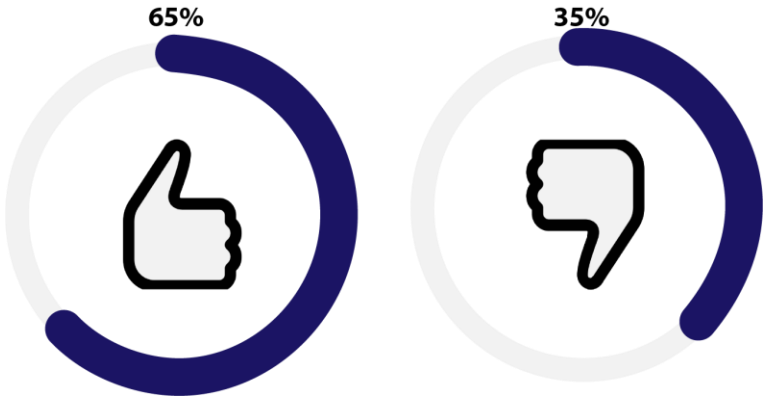
Virtual Community Workshop Input

Below is the community input received through the virtual community workshop, organized by trail area.

Area 1



Option1: Green (N1, new bridge B1) to Green (N2A) to Green (N3)



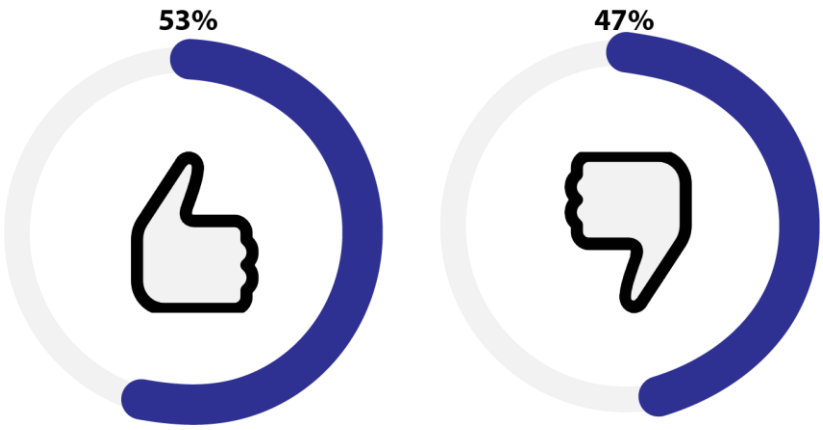
Comments

- Acceptable route.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Any of these options would be fine – I would suggest following whichever option can be completed soonest with the least amount of resistance regarding private property.
- From the map, this option does not look as scenic as other options. I'm not "opposed" to this option, but like others better.
- I am not in favor of the N1 piece as I believe it can allow dangerous elements that has the potential to affect the children going to school.

- I believe tree coverage provides shade and creates a cooler environment. With there being over 300 days per year of sunshine it's important to have access to shade. This side of the bike path appears to have the best potential for shade. I also like how there is potential access to play at the school's field and park. If the trail is shut down during school hours for child safety, I would vote against having trail access on this route as I believe the bike trail should be open during commute hours for adults. This only requires one new bridge to be built which would be cheaper and doesn't seem to cross over any critical habitat areas you've outlined.
- I frequently ride my bike on the trails in Roseville. The more trails and the more they interconnect, the better for walkers and cyclists. The roads are not the safest for cyclists with speeders and distracted drivers.
- I like that fewer trees would be removed than on S1.
- I like the idea of connecting/extending the existing trail to the school for an alternate student entrance away from drop-off/pick-up traffic. My biggest concern about the trail is safety as it gets into more rural areas.
- I love the idea of making Roseville a more bike friendly town. I have ridden my bike in Folsom. They have fantastic bike/running/hiking trails that go on for miles. It would be great if Roseville could do the same.
- Please install at least two public bathrooms along the Dry Creek Greenway West trail.
- Might be least expensive.
- Minimal amount of bridges to lower the cost. Preferred elevation is above the flood zone.
- My only reservation is if the kids will be able to ride their bikes down the trail will there be many people watching over the kids! Super excited though to see another trail in the neighborhood!
- Nice plan, simple.
- Not near the creek, out in a pasture.
- Option 1 seems a long way from the riparian corridor of Dry Creek, which is the best aesthetic amenity. It also seems that connections to the school and the WWTP are not real important; if those connections are more important that they first appear, then this may be a good option. This option would be the least costly to construct and maintain.
- Seems like this route will be easier to maintain.
- The existing paved trail west of Cook Riolo Road has a parallel dirt trail, which should be continued in this section. The paved trail should follow the green route. Starting at Cook Riolo, the dirt trail should follow the salmon route as far as B2, but instead of crossing the creek should angle left up to B1, or have its own bridge downstream, then continue on in the trees, either on the yellow route or closer to the creek. The dirt trail can be an important element of the Dry Creek corridor, used by hikers, trail runners, equestrians, and mountain bikers, including the local high school mountain bike teams, providing a place for them to train without having to drive a long distance.
- This section will be less interesting and hot.

- There is mention of a possibility of the public having access to the creek and a picnic area near the creek. Our (Schellhous) family owns the property on the south side of the creek near the area labeled #2 in green and I see a potential problem with people wading across the creek onto our property. Then we might be responsible for injuries, etc.
- "This looks to have the least number of turns. This is good for commuting.
- This is a more general comment, but it would be cool to see a natural surface (mountain bike trail) in addition to the paved trail.
- This option seems OK, but I like Option 4 a bit better since the terrain is more interesting and there is some shade for the trail.
- This option seems very reasonable, but I would opt for the very similar route that includes N2B and some shade along this segment.
- This shows a trail (labelled 2) that goes to the creek. Our family (Schellhous) owns property on the other side of the creek (and possibly a portion of this as well, not sure) and we would rather not have public access to the creek. We have a home on the other side and are worried about people coming across the creek and accessing the property. It would be much better to have the trail away from the creek.
- This trail should never be built. Ever since opening Dry Creek Park, the amount of traffic, trash, graffiti and vandalism near Morgan Creek has been ridiculous. Opening the other side of the trail will be a threat to those homeowners and Creekview Ranch school.
- Too close to the school.
- Tree removal: Please indicate whether the trees are native or exotic. Are there other native vegetation being disturbed i.e. pipe vine. School access is important as it would permit children to have access to environmental science projects.
- Until you finish current regional parks I think any additional projects should not even be worked. Spend the resources on what you have been lying about for 15 years. Build Central Park.
- Water is the staff of life! You will have a hard time walking and bicycling if you have no water to drink. Maybe Placer county should put supplying water to the state by building more dams and put recreational plans second.
- We need a rest stop and eating area near the Cook Riolo Road.
- We need a rest stop and tables, benches close to Cook Riolo Road.
- Why are we stopping only on the north side of the creek?

Option 2: Green (N1, new bridge B1) to Green (N2A) to Green (N3) to Pink (C1, new bridge B6)

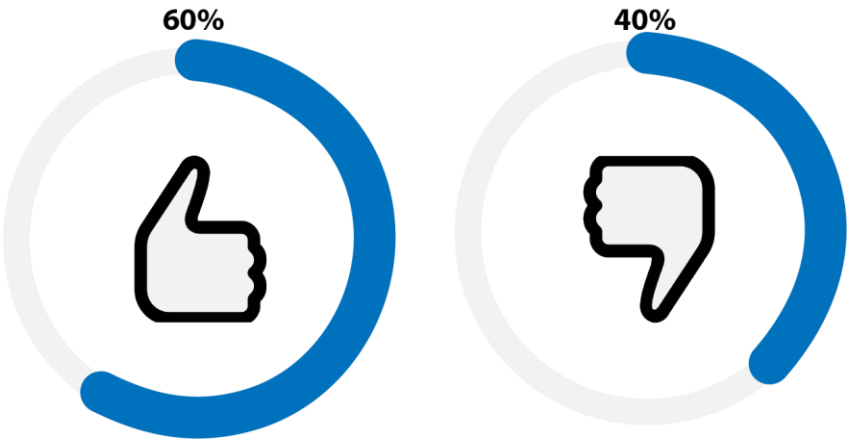


Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Appears to avoid cultural sensitivity area on N3 continuation however requires an additional bridge expense. Would depend on how sensitive the area is culturally. Can the path on N3 go around the cultural sensitivity area?
- C1 is nice to get to the other side so kids can run some loops around the creek – future cross county trail!
- Depends on what the "cultural sensitivity" is.
- From map this option does not look as scenic as other options.
- I am not in favor of the N1 piece as I believe it can allow dangerous elements that has the potential to affect the children going to school.
- I believe there are too many political, budgetary, and environmental barriers that would allow C1 new bridge to be constructed fast and cheap enough to allow access to the corporation yard within my time frame. However, it would be really cool to have a bridge that crosses to view during high flood events, view the fish population, and over all enjoyment of a bridge in the middle of this awesome habitat. I would hope the bridge would be high enough to cross during high rain events too.
- I like the B6 connecting bridge
- I like the idea of creek access and a picnic area option.
- It would be a good idea to make the bike trails connect to one another with the least amount of traffic.
- Option 2 also seems to waste the opportunity to run the trail along the creek. Bridge C1 would have to be very high, providing a poor vertical alignment for the trail.
- Shade would help on hot days. Construction would have to give wide berth for oak tree root disruption.

- This option is the best of all, although option 4 would also be good. The varied terrain and views make this slightly preferable to option 1
- Until you finish current regional parks I think any additional projects should not even be worked on. Spend the resources on what you have been lying about for 15 years. Build Central Park.

Option 3: Green (N1, new bridge B1) to Yellow (N2B) to Green (N3)

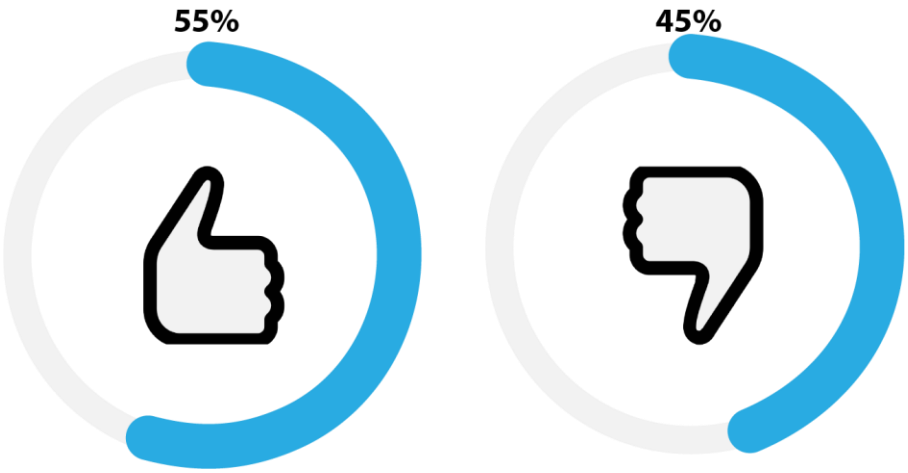


Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Avoid disruption to native vegetation allowing for adopt a stream replanting.
- See Dry Creek Conservancy's contract with City of Roseville for Adopt a Stream.
- Reforestation of open space would be excellent project. How will you provide for keeping wild weeds under control?
- From just a glance at the map this appears to be the most sensible route, takes the users into the trees a little, yet appears to be the safest from a washout from flooding and washouts.
- From map this option does not look as scenic as other options. I'm not "opposed" to this option, but like others better.
- I am not in favor of the N1 piece as I believe it can allow dangerous elements that has the potential to affect the children going to school.
- I like how yellow seems more scenic.
- I like the 'varied terrain' and 'more shade' for this route.
- I like this option best… Seems to be a little bit longer. The coverage of the trees at the edge is a huge advantage for people who like to stay shielded as much as possible from the sun.
- I prefer this option for several reasons; it would provide better access to the multi-use trail for the school children & staff, local business and public facilities employees, use some existing parcels owned by the county, and be less subject to flooding.
- I would be good with any of these options for area 1.
- It's nice to have a little shade.

- I like the yellow route – closer to trees
- N2B is most desirable because of the shade and terrain changes it provides.
- Shade is always welcome on a trail.
- This is like Option 1, but with a bit more shade.
- Simple, access to school campus for students, some trail variation, nice option for Waste Water employees to have trail access.
- The more shade the better.
- This option only involves one new bridge; the trail would be farther from the creek than S1 so hopefully wildlife would be less disturbed. N2B sounds like more interesting terrain than N2A and there is also apparently some shade there.
- This seems like a good compromise between adding new and appreciated facilities, along with less impact to the riparian area, and likely more cost effective as opposed to more bridges for S1 route.
- This seems to be the best and most cost-effective option.
- While S1 looks to be preferable in the summer, I think N1 is the best option for year around use, as well as school and City yard access. Plus, the alignment is likely to be less expensive since it is mostly on government or easement land. To add the shade factor, I would like to see N2B selected. I also would like to see the spur 2 added for creek access.

Option 4: Green (N1, new bridge B1) to Yellow (N2B) to Green (N3) to Pink (C1, new bridge B6)

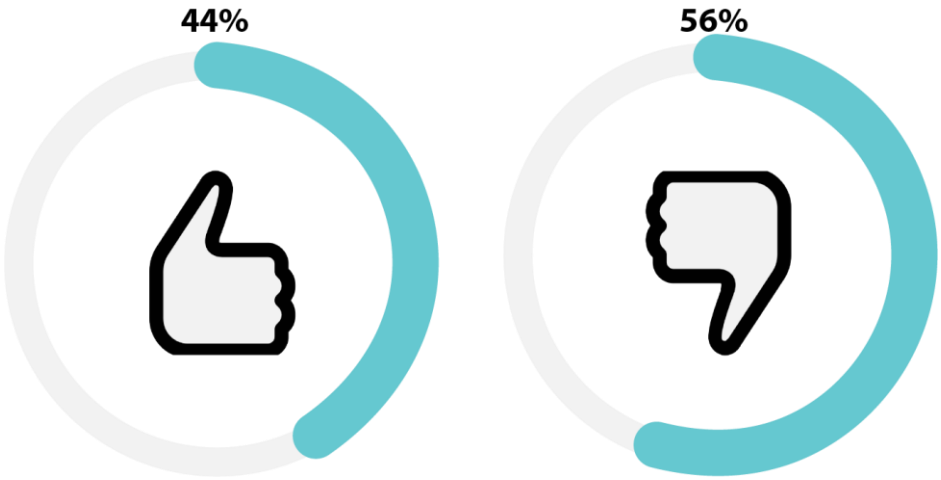


Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Based on the photos provided, this seems like the prettiest, most scenic trail.
- Better to be on the edge of the two ecosystems Grass and Oaks, also better for summer shade.
- The pink connector to salmon is key. I like the northern route held close to the trees and water

- I am not in favor of the N1 piece as I believe it can allow dangerous elements that has the potential to affect the children going to school.
- I like N2B – gives me some shade and a new bridge C1 and this would be the best option then.
- I would be good with any of these options for area 1.
- N2B again is most desirable because of the shade and terrain changes it provides, however, I'm worried about the cost of building a bridge over the creek to cross sides then a bridge on the same side.
- Option 4 also seems to waste the opportunity to run the trail along the creek. Bridge C1 would have to be very high, providing a poor vertical alignment for the trail.
- I prefer to stay on south side of Dry Creek.
- Simple, access to school campus for students, some trail variation, nice option for Waste Water employees to have trail access
- The new bridge at B6 is unclear what that would look like.
- The yellow section of the trail looks like it cuts through part of our property. This could cause issues in the future for us as well as problems if there are cattle on the property. Any fencing would cut through our property and if there is no fencing, it would allow access to the creek and possible access to our property on the other side of the creek. We want to avoid this.
- This one would be a great option due to the terrain, and shade that would be provided during the summer months. Additionally, the access for WWTP employees makes this option beneficial. Hopefully, the access to the picnic area would be included. The bridge enabling access to the pink trail is ideal. If the pink trail is flooded this trail could still be used.
- This seems like a good compromise between adding new and appreciated facilities, along with less impact to the riparian area, and likely more cost effective as opposed to more bridges for S1 route.
- Shady in many places.
- This looks like a desirable option since it apparently provides some shade for the trail yet is still far enough away from the creek such that the wildlife may be less disturbed.

Option 5: Salmon (S1, new bridges B2, B3, B4, B5)

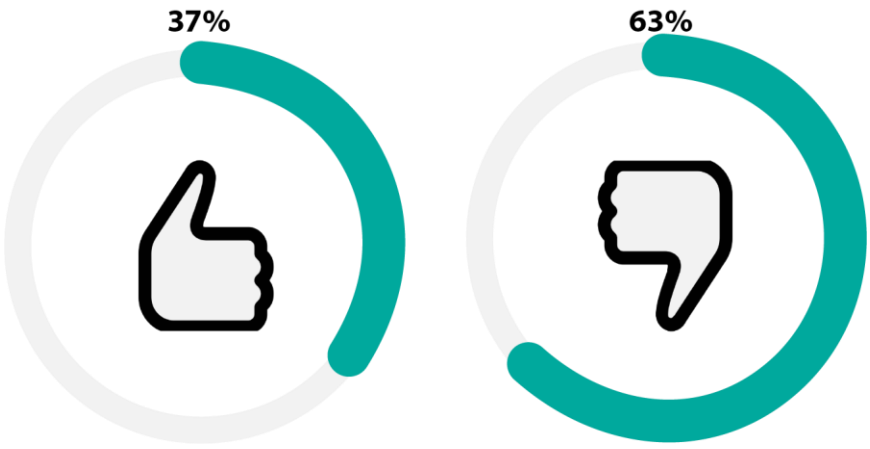


Comments

- This option is nice but has a lot of bridges.
- Appears to be most scenic option. I like riding on the existing bike path along Dry Creek on west side of Cook-Riolo Road, and this option seems the best to continue the nice characteristics of that existing bike path.
- Both this option and option 6 are less desirable: too many crossings of public parcels and too many bridges required to be built. These problems (plus potential flooding in winter) outweigh the benefits of being under the trees and closer to the creek.
- Extra cost for bridges, doesn't help school access for students.
- I am not in favor of the S1 piece as it goes through private property for my neighbors and I.
- I bike to Roseville Electric for work several times a week and would love to take this instead of going down PFE Road.
- I prefer the trail that provides direct access for students to the school away from traffic. Also, concerned about the number of bridges that would need to be constructed and the safety with so much of the trail being near the creek. There are sometimes transients that reside close to the creek currently.
- I'd like to see as many bike trials as possible in Roseville. I've been to the town of Folsom and they have an extended miles of bike trails that are fantastic to ride on.
- Would love to see Roseville become a bike/walking/running friendly town.
- I'm not necessarily opposed to this option, but it seems like it may have more of an impact on the riparian area, both by removing trees and building more bridge, but also by allowing more direct human access that may wonder off-trail.
- It seems that with the 4 extra bridges needed, and the impact on some private land, this would be a costlier proposition, unless the shorter distance of the trail made up for the difference in cost.

- Neat route, but lots of expensive bridges, plus likely more maintenance and possibly less use in winter.
- Our family owns most of the land (Schellhous property) along both sides of this option and we think that it would lower the value of our land. It divides our property and might complicate and make more expensive any future development. We also do not want public access to our land and buildings, and don't want the expense of putting up fences. Also, we sometimes lease out the land as pasture for cattle and would need fencing.
- Our Schellhous family owns most of the land on both sides of this option. We feel that this path would lower the value of our property. It would divide our property and could create extra expenses and difficulty in any future development. We do not want public access so close to the house and farm sheds. We might be liable for any injuries on our land. We also sometimes lease out the pasture for cattle grazing and would need fences.
- Subject to storm events would stop riders from accessing the path once the storm and ended but the water hasn't receded yet. However, I'm always for better and more interesting terrain for users. No one enjoys a boring trail or path in sun drenched asphalt.
- The cost and disruption of natural habitat for the several bridge crossings are not worth it. Also, there would not be an option for children to access the school if they took the path to/from campus.
- The options involving Salmon S1 are too close to the creek and have a higher potential for disturbing the wildlife therein. Also, several bridges would be required and that is costly
- This creates the best visual, but it seems it would be at greater expense.
- This is my preferred option, but I understand that the issues with potential flooding and increased cost of construction due to grading and tree removal. If these factors are cost-prohibitive, then other options which would encompass the route most closely following Dry Creek would be my preference.
- This is my preferred route as I like its proximity to the creek
- This seems to offer the best experience for trail users, and coordinates with the southerly alignment in Segment 2 while avoiding bridge C1.
- This trail is less desirable than the north side trails because it is closer to the creek and would disturb the riparian wildlife more; it also sounds like there are more construction issues such as extra bridges to build and a higher potential for flooding
- This whole section of the Salmon trail crosses back and forth across and through the creek and we would strongly oppose this as it allows people to access the creek and our property. It seems also that it would be very expensive to build the bridges and would also interfere with the natural flow of the creek.
- Too much sun.
- Why build bridges if we don't need them on N1?

Option 6: Salmon (S1, new bridges B2, B3, B4, B5) to Pink (C1, new bridge B6)



Comments

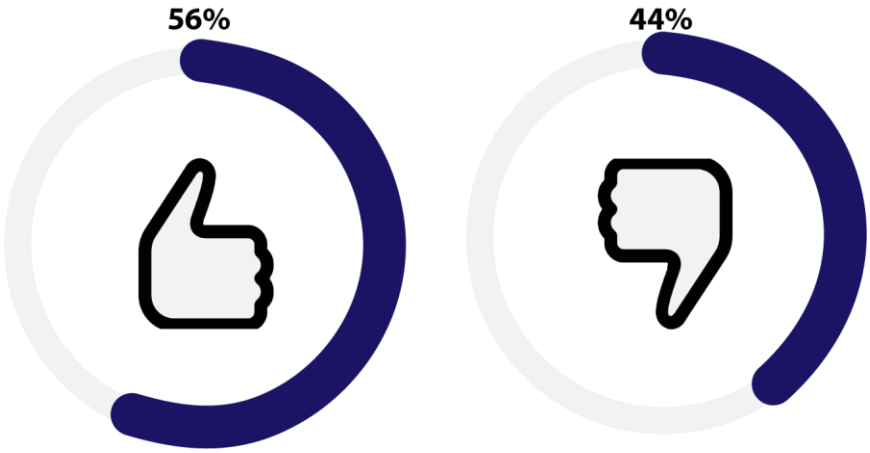
- I prefer the trail that provides direct access for students to the school away from traffic. Also, concerned about the number of bridges that would need to be constructed and the safety with so much of the trail being near the creek. There are sometimes transients that reside close to the creek currently.
- A neat route, but lots of expensive (I'm thinking) bridges, plus likely more maintenance and possibly less use in winter.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- As an avid trail user this trail by far makes the most sense; I would want to be out there as close to the creek as possible. Also, there should be an effort to emphasize the creek's salmon run; the fact that salmon still manage to find their way upstream and spawn in Dry Creek (despite all the development and relative inattention to their existence) over the last several decades is pretty much a miracle. Let's celebrate this wonderful resource and educate folks on just how valuable this watershed really is.
- Better to avoid bridge C1 and stay on the south side of the creek.
- For the same reasons as Option 5, we would strongly oppose this option and it doesn't seem to make much sense. Again, it would be much better to have any trail be away from the creek.
- I am for all New routes in Placer County.
- I am not in favor of the S1 piece as it goes through private property for me and my neighbors.
- I like any path that allows me access to the corporation yard.
- I'm not necessarily opposed to this option, but it seems like it may have more of an impact on the riparian area, both by removing trees and building more bridge, but also by allowing more direct human access that may wonder off-trail.
- The northern route will prettier.
- Our family owns most of the (Schellhous) land on both sides of this option and we think it would lower the land value. It would divide our property and might complicate and make more

expensive any future development. We do not want public access to our land and buildings. We sometimes lease out the land as pasture for cattle and would need fencing.

- Our Schellhous family owns both sides of the creek for most of this option. It would divide our property and could create future problems in developing the property. Thus, lowering the value of our property. We have a house and farm sheds nearby and don't want public access to them. We sometimes lease out the land for cattle grazing and would need fencing.
- Prefer to stay on south side of Dry Creek.
- The cost and disruption of natural habitat for the several bridge crossings are not worth it. Also, there would not be an option for children to access the school if they took the path to/from campus.
- This option along with Option 4 would work great. The bridge (B6) would enable users to connect to both trails. If S1 is flooded, users could just not use it. However, if the proposal is for only one trail then Option 4 would be my selection.
- This route sounds too complicated.
- What work has been done about chasing off the homeless from using this as a highway to bother residents? Until that is figured out no point in building as it is a project endangering resident.

Area 2

Option 1: Green (N4)

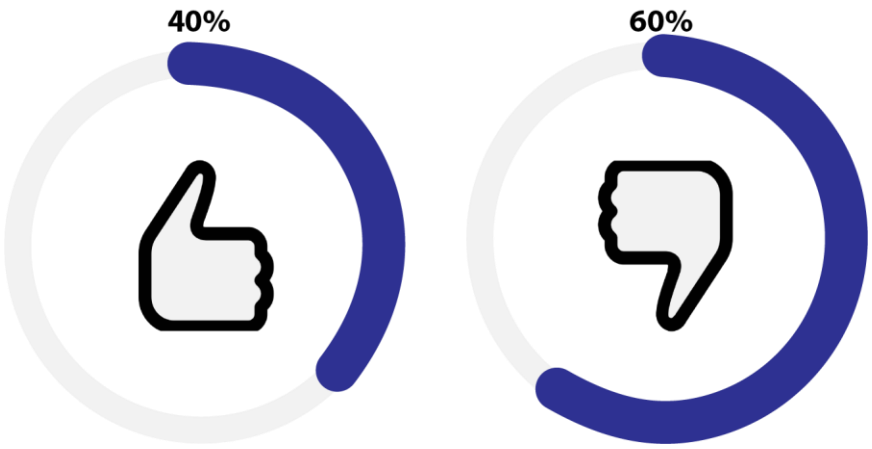


Comments

- It's recommended that that a dirt trail parallel the paved on whichever side of the creek has the most space, which is hard to determine without actually walking the route.
- Any area more prone to flooding and thus closure and repair seems like a less desirable alternative.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Best out of the options but not happy with any of suggestions.
- Boring, unappealing scenery (WWTP), and no connection to the Corp Yard.
- Please install at least two public bathrooms along the Dry Creek Greenway West trail.

- It makes sense to keep the trail on just one side of the creek; building bridges disturbs the creek and its wildlife and is costly.
- Keeping the trail higher up will allow it to stay open more often during rain events.
- Less likely to expose users to undesirable elements.
- Please make it crystal clear that these are meant to be multi-use. That means cyclists, respecting others, and slowing down. I run into nothing but problems with cyclists and mountain bikers taking over trails, and roads. They are the most self-entitled group of people ever. There are so many people that want to & would like to utilize trails, but are intimidated, frightened of being hit, know that there experience of walking on a trail comfortably, is long gone with the on slot of cyclists. I have ridden a bike many times and I know how to be respectful, considerate of everyone else. Please make that clear on the trail. I am quite confident, many that are reading this are cyclists.
- Next to the treatment plant is not ideal.
- No obstacles.
- No, because of possible flooding.
- I don't think fencing is needed. We've ridden on the levees by Elkhorn/Elverta to Discovery Park and there is no fencing on those levees.
- Prefer keeping a natural screen from the ugly corporation yard.
- S2 would probably be the preferred route – looks more interesting.
- This option seems less costly.
- The WWTP is ugly and smelly and doesn't provide access to the Corporation Yard.
- This looks like the simplest and most direct route for the trail.
- This route keeps it on the same side of the creek, eliminates a bridge, to keep costs down and prevent a washout that could require repairs and shut down the path.
- This seems the most reasonable considering cost for new bridge construction and minimizing impact to the riparian zone. Neither option really provides more connected routes, so with this respect they seem equivalent.
- This option is very exposed with little shade.

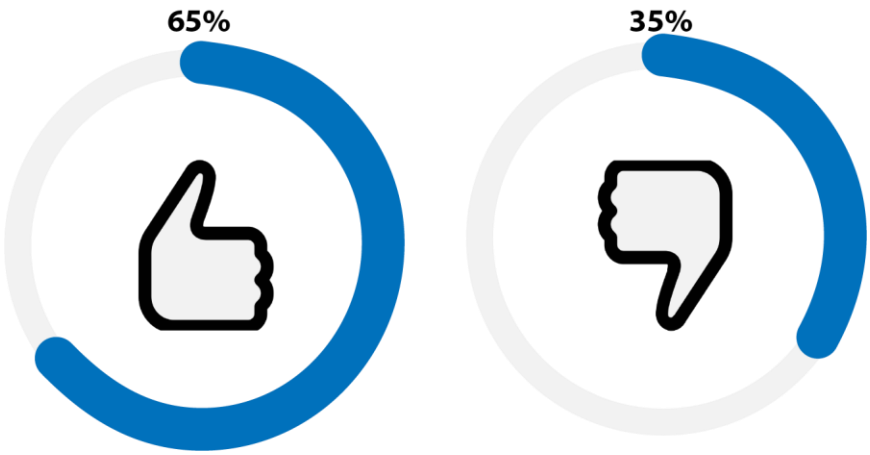
Option 2: Green (N4) to Brown (C2, new bridge B7)



Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Boring, unappealing scenery (WWTP), and no connection to Corp Yard. Bridge B7 would add cost for both construction and maintenance and may force a poor alignment (both horizontal & vertical).
- I like the idea of access to the corporation yard. It might become a possible bike commute route. Again, trees on a trail always makes a trail more inviting.
- Not sure about this since I don't prefer N4 but may need the bridge B7 for access to Corporation Yard people.
- The south side is better, more interesting.
- This one seems to avoid going right next to the parking lot which is nice.
- Very exposed with little shade.
- Yes, I'd like to support any bridge access to the side of the Corporation Yard. I feel this is valuable for many reasons which would include staff access to trails during lunch breaks to take walks. Access for employees to bike and walk to work at the corporation yard. Currently during lunch breaks, staff at the corporation yard walk the enclosed hilltop circle access road which provides no side walk safety or interesting terrain. Walking during lunch breaks can provide physical health and mental benefits for staff who work at a desk 9 hours a day.
- You are going to build bridges for peoples' pleasure. If you don't have dams to supply water, you won't be able to bike and walk! Have you considered that no water means no life?

Option 3: Salmon (S2)

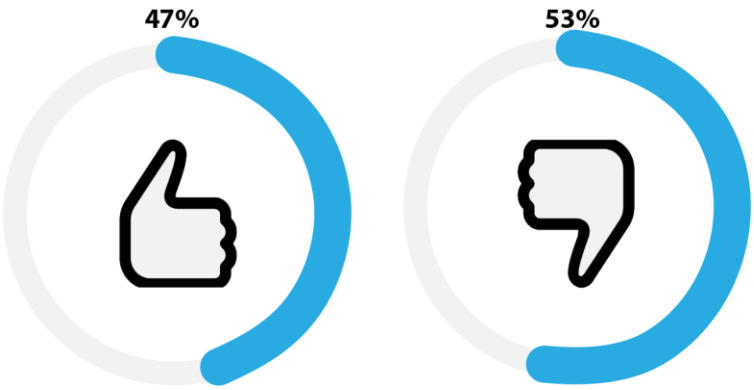


Comments

- Again, more shade for summer riding and less flooding.
- Although perhaps less scenic because of the corporation yard's proximity, the availability of shade is a huge plus, and more protection from flooding is also desirable.
- Avoids flooding. Keeps the trail open in rainy seasons which promotes people using it to commute as well as for recreation
- Because I'd like to commute by bike and access the path for lunch break walks id like trail access to be on the most shaded, most terrain interesting side, closest side to the Corporation Yard, and least likely to flood during a storm event. Because this option doesn't require any bridge work I believe it will be faster to build, approve, and stay on budget.
- Corporation Yard access turns this into a viable commute option for some.
- I bike to Roseville Electric for work several times a week and would love to take this instead of going down PFE Road.
- I prefer this option as it utilizes a city parcel or city-owned land and provides access to staff who work at the city's Corporate Yard.
- Near existing connections, so it would be helpful to see what land use is planned in the area.
- Nice access to employment while being beautiful.
- This seems to be the best use and certainly a better visual.
- The shade and connectivity to the Corporation Yard are positives that would make both this and option 4 preferable.
- Think it would be much better to stay away from the creek as much as possible.
- This seems the best option for Area 2, since it's less subject to flooding (which will reduce maintenance cost) is more scenic, and provides for a connection to the Corp Yard, which is accessed by both the public and employees. It also avoids extra bridges across the creek, which

would add cost for both construction and maintenance, and may force a poor horizontal and vertical alignment.
- Varied terrain, nice for access for Corporation Yard employees, less of a chance of flooding.
- Yes, because there is no flooding, lots of trees, a City parcel and nice access for the Corporation Yard, if they want it.

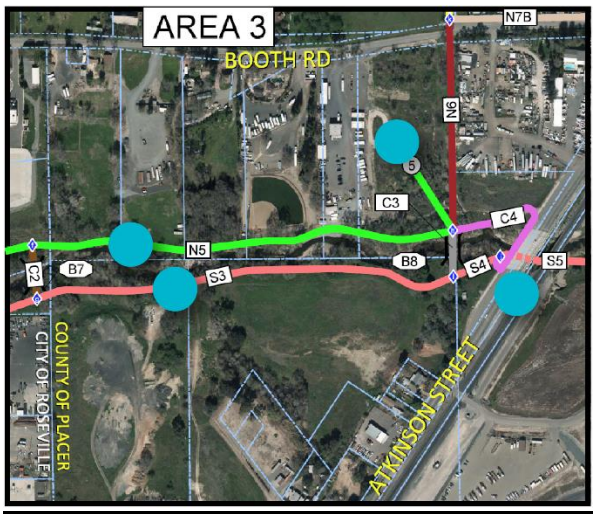
Option 4: Salmon (S2) to Brown (C2, new bridge B7)



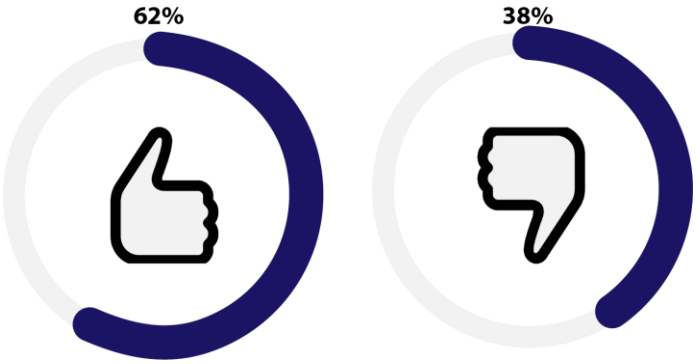
Comments

- You would only need B7 if there is a trail over there.
- All these seem great ideas. I would love to see the bike trails in Greenbelt areas and away from car traffic as much as possible.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- I also support this option, any option that will allow trail access to the creek from the Corporation Yard with the highest possible full-time around use which would include increase shade coverage and increase height to avoid flooding.
- I bike to Roseville Electric for work several times a week and would love to take this instead of going down PFE Road.
- Less flooding is better from a riding perspective since there are no detours available in case of flood.
- More bridges lead to more loops which is more fun!
- Save money with no bridge.

Area 3



Option 1: Green (N5) to Maroon (N6)

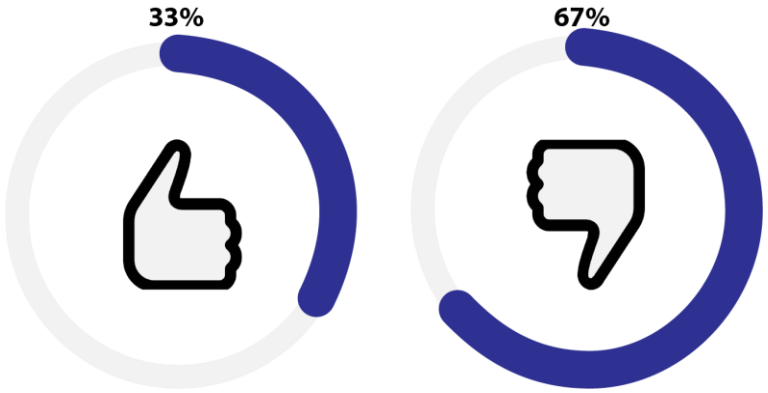


Comments

- I suggest picking the route that can be completed the soonest, with the fewest number of obstacles, such as private property.
- This looks like a nice direct route.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- I support this option because I don't want to go under the bridge where a maternal colony of bats live, and so I'm assuming this option will take me around the bat bridge. I don't understand bats, so I think they'd attack me. If you did any sort of explaining or education about the maternal bat colony I might change my mind.
- I'm not in favor of the trail at all. But if it must be done, keep it as far away from vagrant elements as possible. With that in mind I think this option might be best. Though since I don't want it to go through, perhaps looking for the priciest bridge option might be the best option.
- Not crazy about this side.

- This affects a lot of private parcels.
- The upside is the option for parking for a trailhead and for access to trail for employees from businesses on Booth Road.
- This route puts users behind industrial parks that seem unsafe and intimidating to females using the path alone or with small children.

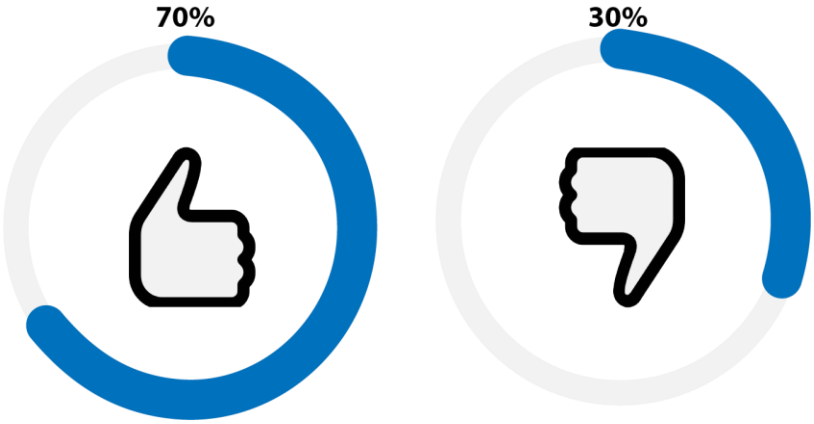
Option 2: Green (N5) to Magenta (C4, on existing Atkinson Street Bridge) to Salmon (S5)



Comments

- I voted this option down because I don't like the idea of crossing Atkinson Road and going under a bridge with bats. However, if there was safety in crossing Atkinson and I have more education about bats and if they would attack me, I might not have voted this option down.
- The upside is the option for parking for a trailhead and for access to trail for employees from businesses on Booth Road.
- This seems like the prettiest route.
- This is too complex, keep it simple.
- Would prefer not to ride on a busy street.

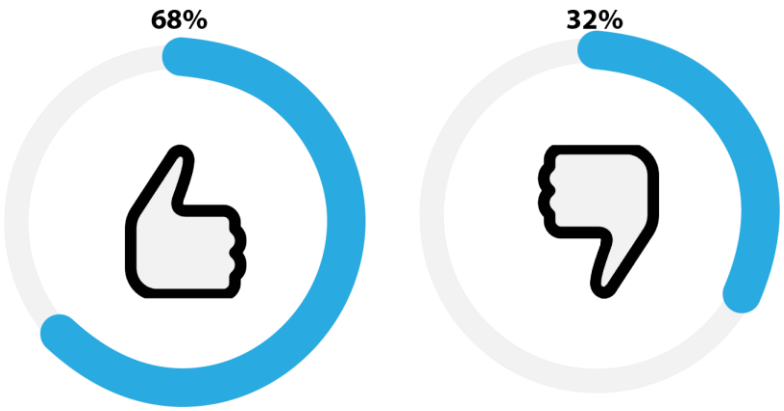
Option 3: Green (N5) to Grey (C3, new bridge B8) to Salmon (S4, S5) under existing bridge at Atkinson



Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- I like this option. It allows for good connections north of Dry Creek and provides an off-street crossing and access to/from eastern Dry Creek. The bridge crossing here would provide direct access to N6 and neighborhoods to the north.
- If N5 is picked, then this is the best way to get to S5.
- Seems the easiest.
- This affects a lot of private parcels.
- The upside is the option for parking for a trailhead and for access to trail for employees from businesses on Booth Road.
- This is a better option than Option 2 because the bridge is allowing me to avoid traveling on Atkinson Road, but then continues under the bridge where bats will. Please provide education on bats and what they do to humans. I can only imagine what I know from the movies like Bruce Wayne in Batman being attacked by bats.
- Underneath the bridge seems very unsafe for female runners/walkers when crossing through an area frequented by homeless people and those who ride the trains through the rail yard.

Option 4: Salmon (S3, S4, S5) under existing bridge at Atkinson

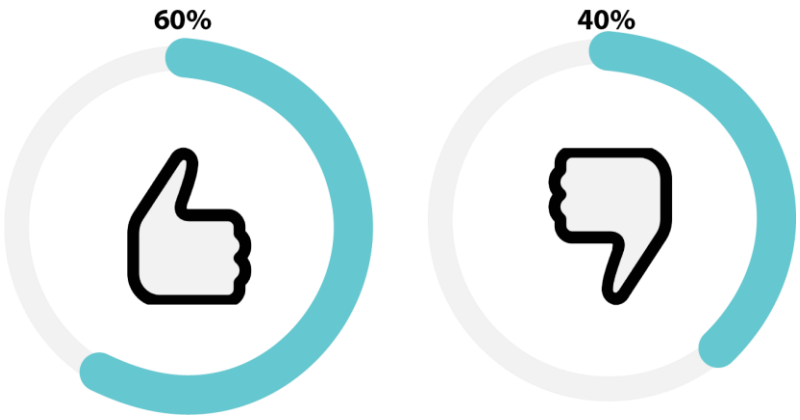


Comments

- Again, dirt trail should parallel paved trail, but closer to creek. Seems to be the most space on the south side.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Bike trail floods during heavy rains. I'd try and keep away from stream. This will also keep pollution out of Dry Creek.
- I am loving the Salmon option, all the way through!
- I bike to Roseville Electric for work several times a week and would love to take this instead of going down PFE Road.

- I highly recommend this route for its beauty, terrain, and ease of construction.
- I like any option that is on the south side of the creek and would require less maintenance.
- Least invasive.
- Less cost for new bridges, simpler.
- looks like the most straightforward.
- Nice variety of terrain and less impact on private parcels.
- Option 4 seems the most straightforward and practical, avoiding odd turns that may tend to confuse trail users.
- Simple, direct and beautiful.
- Straight Shot! Best option! Plus, the sound of the creek is so pleasant.
- This part looks nice and seems a 'cleaner ' route.

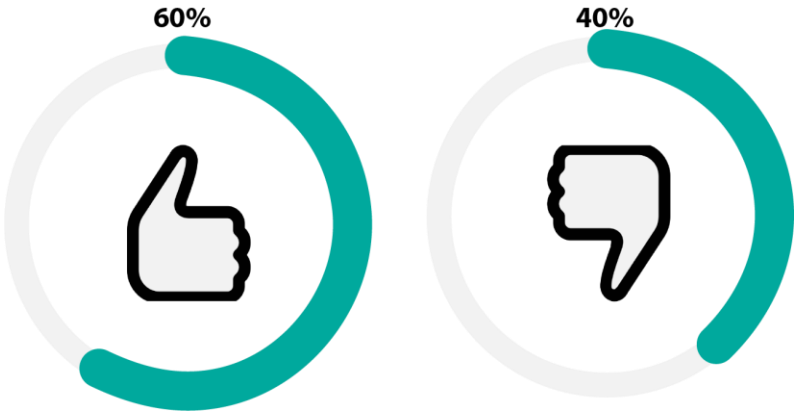
Option 5: Salmon (S3) to Grey (C3, new bridge B8) to Maroon (N6)



Comments

- I bike to Roseville Electric for work several times a week and would love to take this instead of going down PFE Road.
- I like this option because it avoids the bats and Atkinson road.
- I think that bridge B8 is not necessary...keep the trail uncomplicated.
- Nice variety of terrain and less impact on private parcels.
- Not acceptable. Route should be planned to hook into S5.

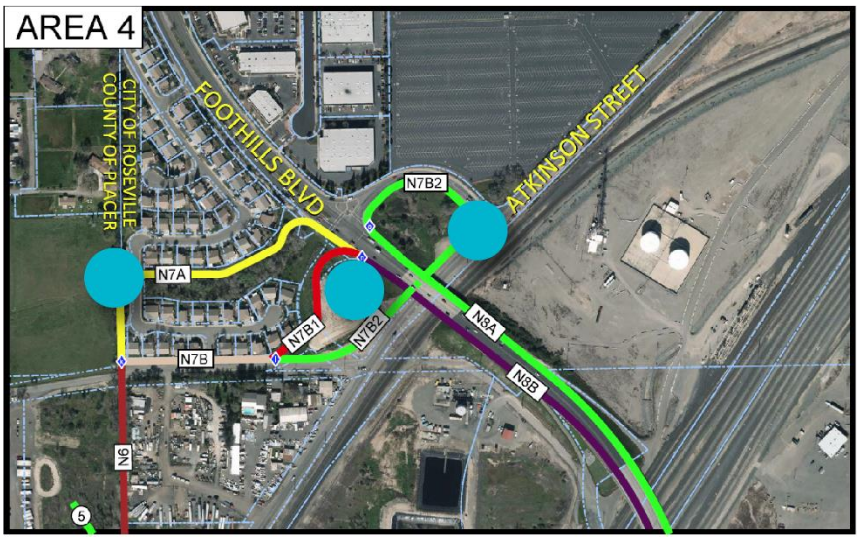
Option 6: Salmon (S3, S4) to Magenta (C4, on Atkinson Street Bridge) to Maroon (N6)



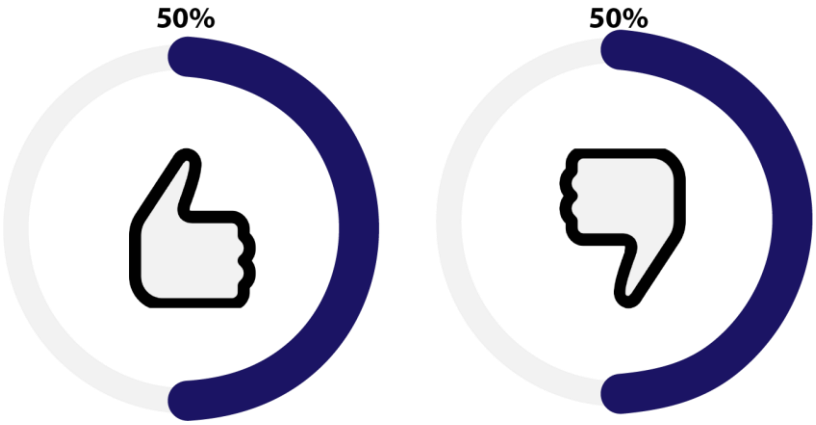
Comments

- Heading north to cross the freeway seems less desirable to me.
- I bike to Roseville Electric for work several times a week and would love to take this instead of going down PFE Road.
- Nice variety of terrain and less impact on private parcels
- Better to continue under the bridge.
- Not acceptable, this route should be planned to hook into S5.

Area 4



Option 1: Maroon (N6) to Yellow (N7A) to Purple (N8B, along Foothills Boulevard over Atkinson Street)

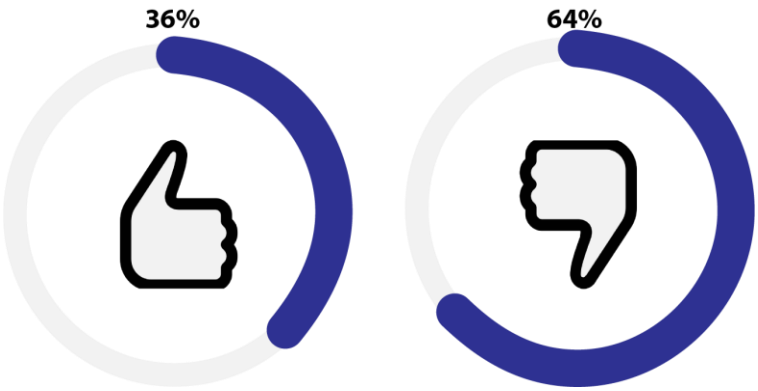


Comments

- Again, I would support whatever trail configuration provides the most separation of bicycles and vehicles, and whatever is the most practical in terms of getting the trail built
- All the northern alignments in Area 4 include out-of-direction turns away from the creek corridor, which will tend to confuse trail users. However, N6 and one of the N7 options may be a nice addition to provide access to the main trail.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Any bike trail that is planned to use the bike lane on Foothills Boulevard and Riverside Boulevard is a horrible idea. Even to a seasoned cyclist accustomed to riding on busy roads, I actively avoid these roads. For less serious cyclists, these will be a serious impediment to using this entire trail.

- Any route that puts bicycle traffic on Foothills overpass should be avoided if you want families to use it.
- I like the idea of hooking into this neighborhood, but I don't like the Foothills Boulevard sections.
- I like this option because it goes through dense trees behind the homes.
- Make it the longest journey for vagrant population to travel to keep them from reaching Dry Creek.
- N6 to N7A to N8B is a good option.
- None of the suggested routes in area 4 are preferred, due to the complicated construction requirements, unsightly views, and noise from nearby traffic.
- Seems the simplest.
- Since I am not a fan of the north route, go forth with the most cost-efficient trail option.
- The busyness of Foothills in this makes any of these option undesirables to me.
- This is less direct than Option 2.
- This N7a route to N8B maybe the better route.
- This is way too complex and indirect, these will cut use by 50%.

Option 2: Maroon (N6) to Beige (N7B) to Red (N7B1) to Purple (N8B, along Foothills Boulevard over Atkinson Street)



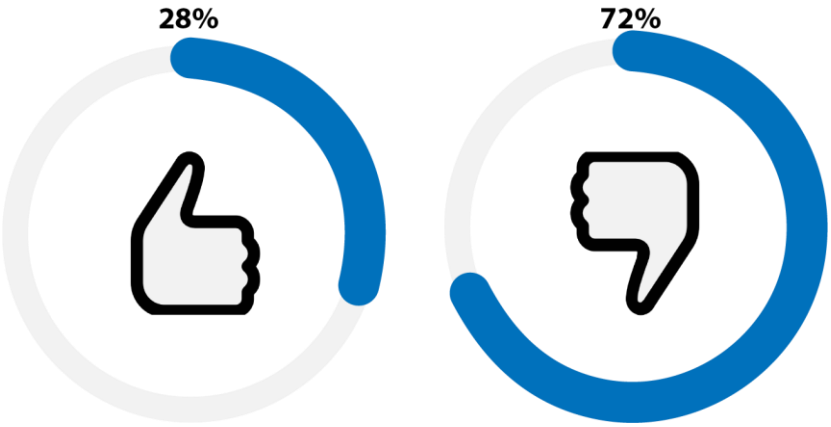
Comments

- All the northern alignments in Area 4 include out-of-direction turns away from the creek corridor, which will tend to confuse trail users. However, N6 and one of the N7 options may be a nice addition to provide access to the main trail.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Any Route that puts bicycle traffic on Foothills overpass should be avoided if you want families to use it.
- Choose a route with minimal stops and traffic controls.
- I don't really understand the proposed routes or what they are trying to solve in the way they are presented, but Option 2 seems the less problematic. It's not clear to me why there wouldn't be

on-street bike lanes on Booth, Atkinson, and Denio Loop in both traffic directions to allow access on and off Foothills Boulevard. Having a bike path on only one side of the road (How would you turn right to head west on Foothills Boulevard?) this greatly limits cyclists' ability turn left or right and choose a desired direction of travel. Aside from the Beatty Way neighborhood providing access to Foothills Boulevard eastbound, the N7B1 option trail would provide simplified access to Foothills Boulevard. I think regular bike lanes on Booth, Atkinson, and Denio Loop would be best, and maybe standard, buffered bikes lanes on Foothills Boulevard over the railway would be an improvement as opposed to separate "trail" or "cycle path."

- Looks like a direct route, however, thought must be given to what the trail will look like on Foothills Boulevard. Motorists drive way too quickly on this route, making it dangerous for cyclists. If a secure dedicated bike trail can't be assured on this side of Foothills, then Option 3 would be safer; there is currently a sidewalk on that side of Foothills and it could be used as the trail, providing some degree of safety for cyclists and pedestrians.
- The busyness of Foothills in this makes all of this option undesirable to me.
- This looks like the best route since it involves less distance than N7A or N7B2. However, Foothills Boulevard is a dangerous road with motorists driving way too fast, so if a nice safe dedicated bike path can't be assured then I would vote for Option 3 since N8A is on the side of Foothills Boulevard which has a sidewalk which bicyclists could use and be somewhat protected from traffic.

Option 3: Maroon (N6) to Beige (N7B, along north side of Booth Road) to Green (N7B2, along Atkinson Street under Foothills Boulevard) to Green (N8A, along Foothills Boulevard over Atkinson Street)

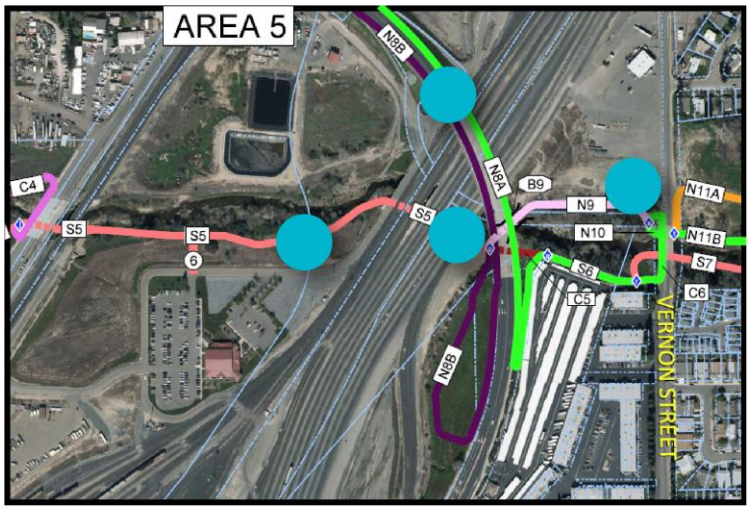


Comments

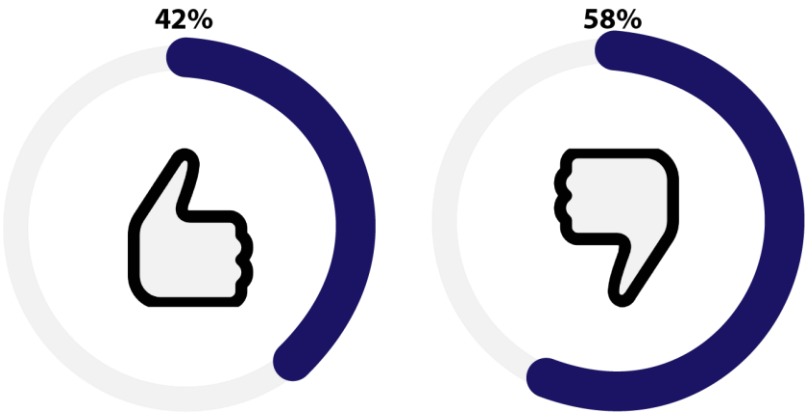
- A lot of homeless people congregate under this area.
- A more direct route, but I am not sure of the loop.
- If the trail is on Foothills, then both N8A or N8B will require some kind of bike barrier on Foothills, because both require a rider to be on the wrong side of the road.

- All the northern alignments in Area 4 include out-of-direction turns away from the creek corridor, which will tend to confuse trail users. However, N6 and one of the N7 options may be a nice addition to provide access to the main trail.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Any route that puts bicycle traffic on Foothills overpass should be avoided.
- I don’t like it because this area is busy with traffic noise.
- The busyness of Foothills in this makes any of these option undesirables to me.
- This would be my first choice if Option 2 could not provide a safe bike path on N8B.
- This would be my preference if Option 2 couldn't provide a safe bike path on this side of Foothills Boulevard, N8A is on the side of Foothills Boulevard that has a sidewalk which could be used by bicycles and protect them from speeding vehicles driven by inattentive motorists.
- This is an ugly option.

Area 5



Option 1: Green (N8A, along Foothills Boulevard over Union Pacific Railroad) to Green (S6) to Salmon (S7, under the Vernon Street bridge)



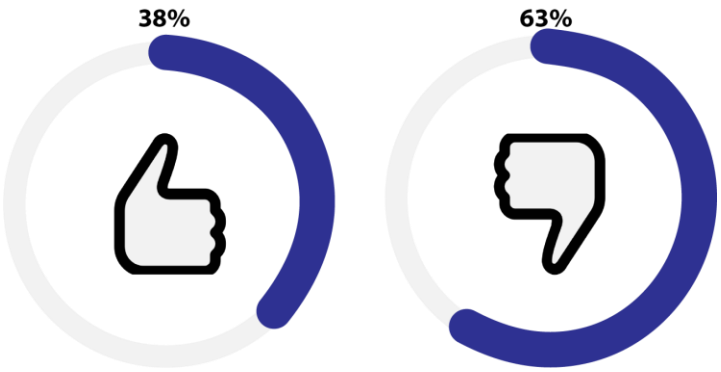
Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Avoid heavily traveled roads.
- Good use of preexisting paths/sidewalks.
- I don't understand the cycle path idea over Foothills Boulevard. This would greatly limit the options to cyclists to continue on further, northwest along Foothills Boulevard, it would limit or remove access to cyclists traveling from Cirby or Roseville Road over the rail yard on Foothills Boulevard. Reducing the already present cycling facilities on Foothills Boulevard to accommodate a trail along Dry Creek seems like it's diminishing travel route for cyclists elsewhere in the area. If the bridge of Foothills Boulevard is necessary to accommodate a cycle trail along Dry Creek, it seems like it would be better to integrate the present travel options into the current plan as

opposed to reduce the travel options. If safety appears to be an issue, the either painted buffered bike lanes in each direction or barrier protected bike lanes in each direction would be much better option for all cyclists of all skills and abilities.

- Please install at least two public bathrooms along the Dry Creek Greenway West trail.
- If Union Pacific is unwilling to work with planners, there is no option – you will have to go with what works!
- It's not clear to me what changes if any will be made to Foothills Boulevard bridge on N8A. What is considered a barrier protected trail? Is a sidewalk, bike lane, and chain link fence, as seen as existing in the photo already considered a barrier protected trail? If so, I don't like it and it would deter me from riding. Road noise and safety is my main concern here.
- Lots of odd, out-of-direction turns, which would be confusing to trail users. Sending trail users along Foothills Boulevard would be a terrible experience.
- N8 to S6 seems confusing to navigate for new trail users.
- No, avoid the Foothills overpass unless you are going to widen it with a protected bicycle lane
- Pick a route with minimal traffic stops and elevation changes.
- This option looks like the best coming from the Bob Kolak property east of Vernon.
- This would be a good route if N8A is the designated path.
- Whichever pass gives one a view of the historic transcontinental rail line.
- This would be a perfect spot for historic signage Kids would love to see the switching yard in action.

Option 2: Green (N8A, along Foothills Boulevard over Union Pacific Railroad) to Green (S6) to Green (C6, on the Vernon Street bridge) to Green loop (N10, under the Vernon Street bridge) to Orange (N11A) or Green (N11B)

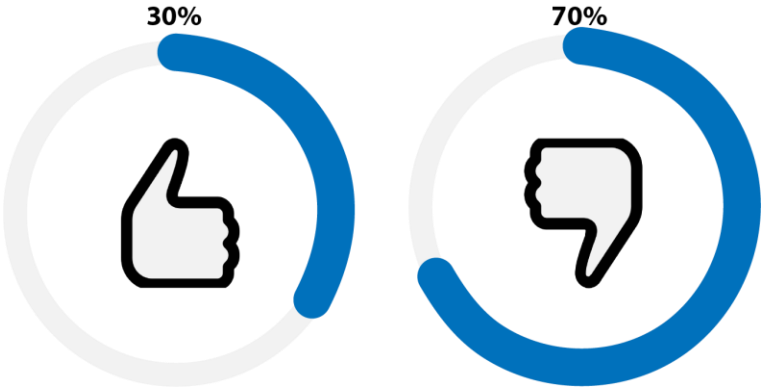


Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Avoid heavily traveled roads.
- If N8A becomes the chosen option for the trail, then this is a good option for this area.

- Lots of odd, out-of-direction turns, which would be confusing to trail users. Sending trail users along Foothills Blvd would be a terrible experience.
- No, avoid Foothills overpass unless you are going to build a new, separate bicycle portion.
- Think history / children watching trains!
- This would be a good route if N8A becomes the chosen route for the trail.

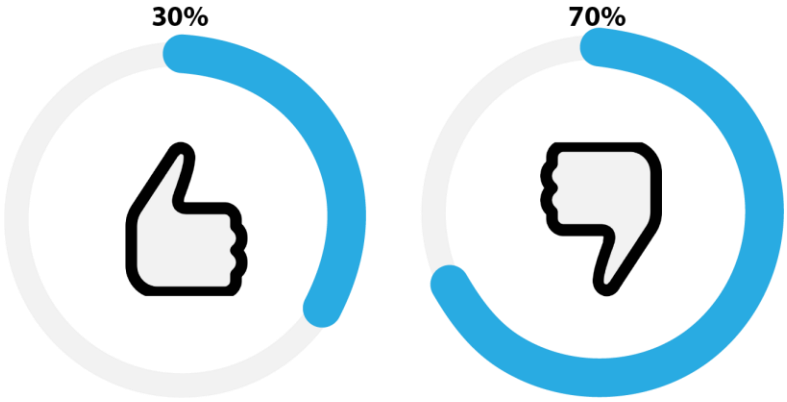
Option 3: Green (N8A, along Foothills Boulevard over Union Pacific Railroad) to Maroon (C5, under the Foothills Boulevard bridge) to Pink (N9, new bridge B9) to Green loop (N10, under the Vernon Street bridge) to Orange (N11A) or Green (N11B)



Comments

- Lots of odd, out-of-direction turns, which would be confusing to trail users. Sending trail users along Foothills Blvd would be a terrible experience.
- No advantage to this route and a new bridge will be costly.
- No, avoid Foothills overpass unless you are going to build a new, separate bicycle bridge.
- This is less desirable than Option 2 since it would require a new bridge.

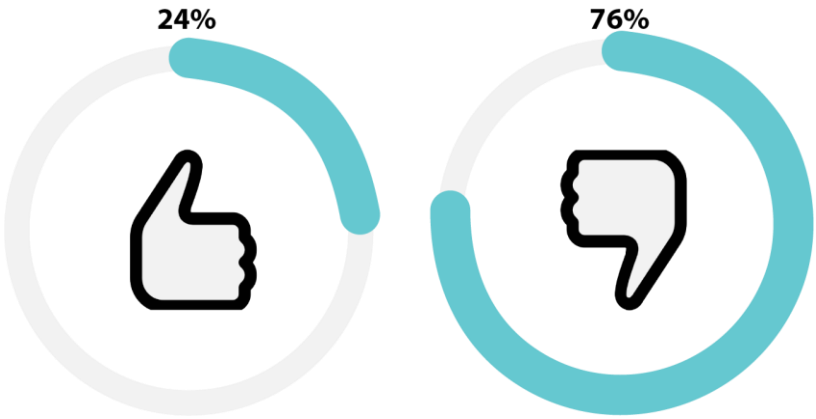
Option 4: Purple (N8B, along Foothills Boulevard over Union Pacific Railroad) to Pink (N9, new bridge B9) to Green loop (N10, under the Vernon Street bridge) to Orange (N11A) or Green (N11B)



Comments

- What is the cost of widening the bridge and effect on traffic?
- If N8B becomes the chosen trail route, then this option is a good one for this section of trail.
- If this works, it would have to have a very good barrier to protect bicycle riders from traffic – drivers think this is an extension of I-80!
- Longest, most difficult path for vagrant population to get to Dry Creek.
- Lots of odd, out-of-direction turns, which would be confusing to trail users. Sending trail users along Foothills Boulevard would be a terrible experience.
- No, avoid Foothills overpass unless you are going to build a separate, protected bicycle bridge.
- This would be a good path if N8B is the ultimate route chosen for the trail.

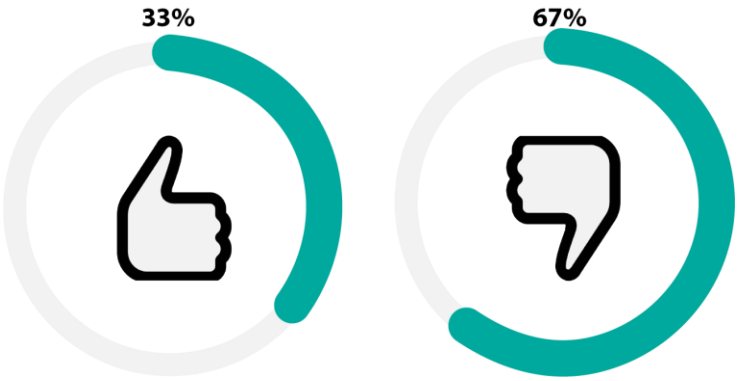
Option 5: Purple (N8B, along Foothills Boulevard over Union Pacific Railroad) to Maroon (C5, under the Foothills Boulevard bridge) to Green (S6) to Salmon (S7, under Vernon Street bridge)



Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Avoid heavily travelled roads.
- Look at the cost of widening the bridge and effect on traffic
- Lots of odd, out-of-direction turns, which would be confusing to trail users. Sending trail users along Foothills Boulevard would be a terrible experience.

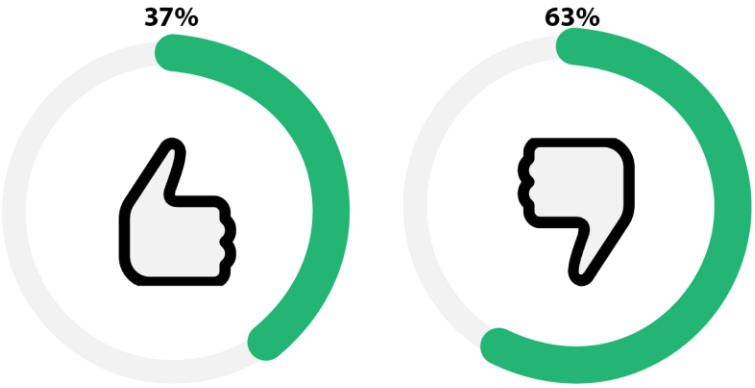
Option 6: Purple (N8B, along Foothills Boulevard over Union Pacific Railroad) to Maroon (C5, under the Foothills Boulevard bridge) to Green (S6) to Green (C6, on the Vernon Street bridge) to Green loop (N10, under Vernon Street bridge) to Orange (N11A) or Green (N11B)



Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Avoid heavily travelled roads.
- Look at the cost of widening the bridge and effect on traffic
- Lots of odd, out-of-direction turns, which would be confusing to trail users. Sending trail users along Foothills Boulevard would be a terrible experience.

Option 7: Salmon (S5, under the railroad bridges) to Pink (N9, new bridge B9) to Green loop (N10, under the Vernon Street bridge) to Orange (N11A) or Green (N11B)

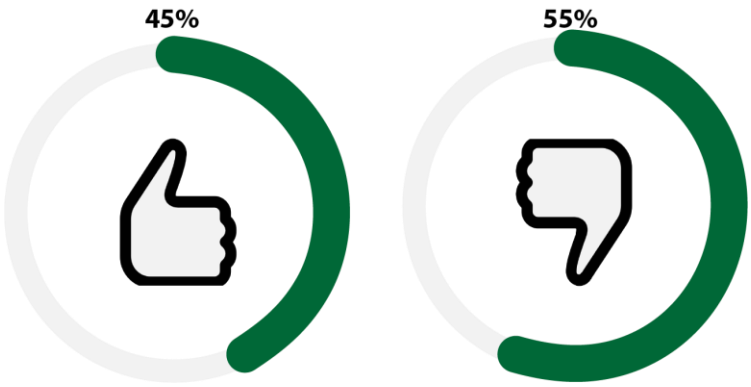


Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Dirt trail parallel to paved trail, but closer to creek.
- I like S5.
- It's best to steer clear of the rail yard.
- This option is nice and direct.

- Option 7 seems the most straightforward and practical alignment in Area 5. It keeps the tail along the creek and avoids confusing out-of-direction turns.
- Poor safety; too much resistance from UPRR

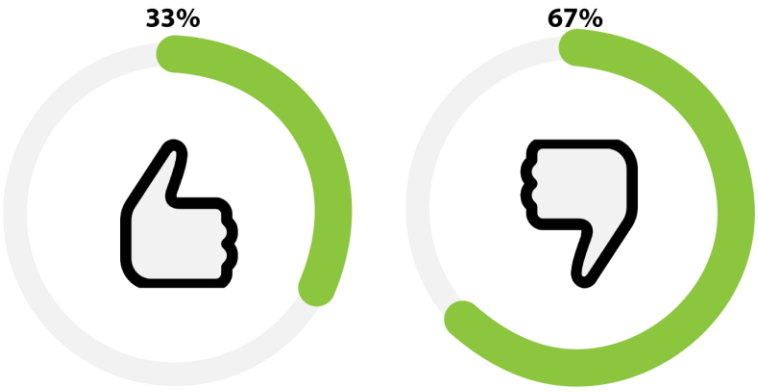
Option 8: Salmon (S5, under the railroad bridges) to Maroon (C5, under the Foothills Boulevard bridge) to Green (S6) to Salmon (S7, under Vernon Street bridge)



Comments

- It's a little hard to tell, but it looks like all of these options follow the creek and it would seem much better to stay away from the creek. Also, if there is an issue with a bat colony, it seems like it wouldn't be a good idea.
- Not too bad.
- Poor safety; too much resistance from UPRR.
- S5 straight to S7 – need to get through this industrial area fast – shortest route please.
- This by far would be the route I prefer, except I believe that a separate multi-use trail should be built over the railroad tracks. UPRR's statement that they would not allow the trial to cross over their tracks should be challenge. After all, Foothills Boulevard currently crosses over the tracks. A modification to the above Option 8 plan would be to consider the construction of a new connecting trail (not shown) that would run north along the west side of the tracks from S5 up to N8B, then to C5, S6, and S7.
- This seems like the sanest option.
- This seems most direct route. I have gotten stuck on the wrong side of the railroad and used the bridge under the tracks which was not great.

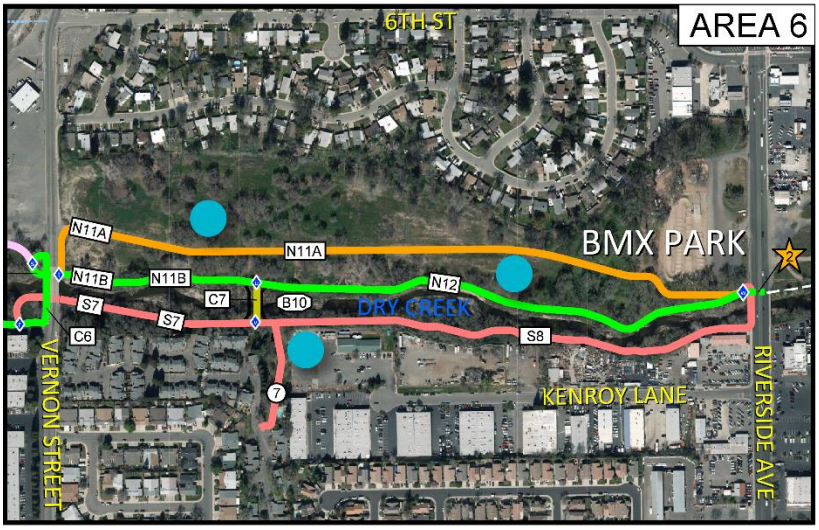
Option 9: Salmon (S5, under the railroad bridges) to Maroon (C5, under the Foothills Boulevard Bridge) to Green (S6) to Green (C6, on Vernon Street Bridge) to Green loop (N10, under the Vernon Street bridge) to Orange (N11A) or Green (N11B)



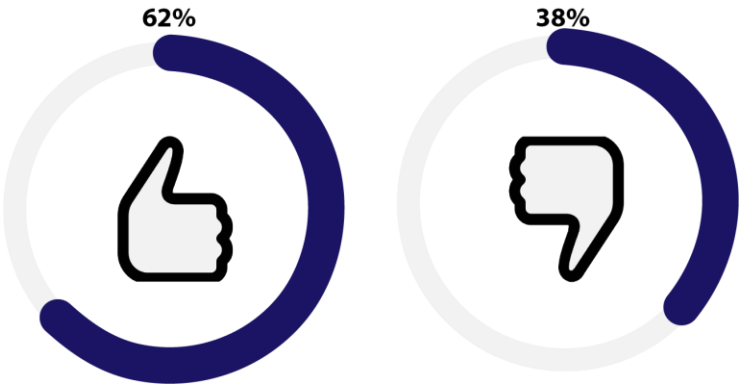
Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- N10 is a terrible alignment, from a sight distance point of view. That would tend to cause conflicts between trail users.
- Poor safety; too much resistance from UPRR.
- Until you finish current regional parks I think any additional projects should not be considered. Spend the resources on what you have on building Central Park.

Area 6



Option 1: Orange (N11A) to Riverside Avenue

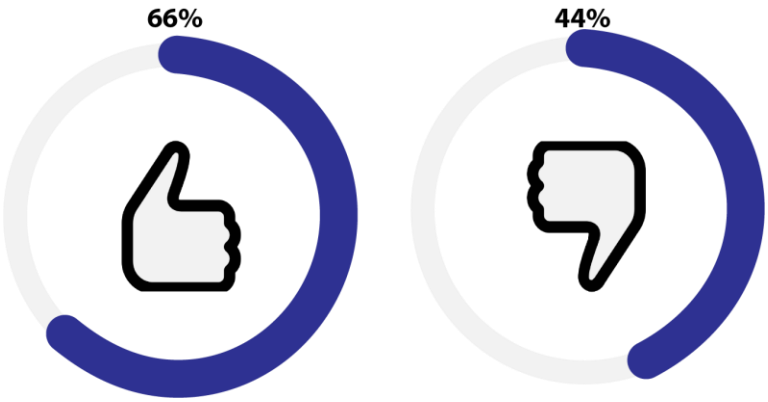


Comments

- Easy, offers some shade and grading would be less work.
- For recreational cyclists, and cycle commuters, a flat, direct, route with minimal stops or traffic controls is desirable.
- Least impact on existing home population.
- N11A Orange trail, less urban noise.
- Nice and simple.
- Option 1 is a reasonable alignment, but not as appealing to trail users as Option 2.
- Paved trail on orange route. Dirt trail on green route.
- Seems the most direct.
- Still have the homeless population to contend with especially with the Roseville Police Department feeling powerless to move the bums out.

- The most feasible route that includes the most trees and creek views is best
- The orange option will cause us lots of grief. But you could buy us out. Parks and recreation could run the track. Currently there is a homeless problem along both sides of the creek. Lots of garbage clean-up and wierdo's too close to the kids who race.
- Allowing just anyone to ride through our events would cost us a lot of business.
- This option makes the most sense. A road already exists, least disruptive to wildlife and does not encroach on homes along the trail.
- This route makes sense because it follows an existing easement
- Too far from creek, less enjoyable, and doesn't include B10. Bad all around.
- Must have bridge (B10) since Vernon and Riverside are too far apart and too fast/busy. It's also dangerous to get to these from southern neighborhoods because Cirby is also extremely busy. The best bike crossing from the south is the Northridge/Lindsay light, but there needs to be a connection from that road to Milan Court (best), Promenade Park Apartments (second best), or Inglis Way (ok).

Option 2: Green (N11B) to Green (N12) to Riverside Avenue

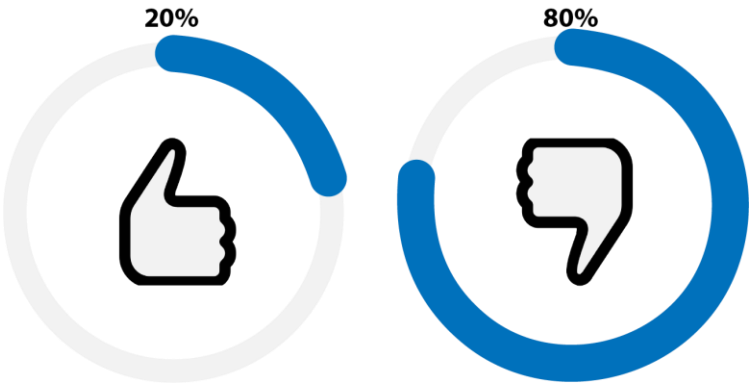


Comments

- Again, just picking the one farthest away from the creek as this would seem to be better.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- Good proximity to creek. Need B10 and 7 added for connectivity to Lindsay/Northridge light.
- Must have bridge (B10) since Vernon and Riverside are too far apart and too fast/busy. It's also dangerous to get to these from southern neighborhoods because Cirby is also extremely busy. The best bike crossing from the south is the Northridge/Lindsay light, but there needs to be a connection from that road to Milan Ct. (best), Promenade Park Apartments (second best), or Inglis Way (ok).
- I like creek view.
- Nice terrain.

- Option 2 seems the best and most practical alignment for Area 6, but should also include and underpass under Riverside Avenue, since a grade-level crossing of Riverside would be dangerous. The alignment along the creek would be visually appealing and interesting.
- Paved trail on orange route. Dirt trail on green route. There is already a dirt trail there. You wouldn't close it, would you?
- Same as above. Any activity among our families in their pit areas would cause our patrons to go elsewhere. Putting our events success in danger. How can you even consider taking our property on the north side of the creek?
- Shady and close to creek.
- Should include connection (C7) and bridge (B10) to connect to Cirby Woods Apartments area.
- Simple direct and beautiful, however this option misses access to neighborhoods.
- This looks to have the best aesthetics while still high enough to stay out of the flood plain. It would be cool to add some dirt trails in here also.
- This sounds prettier and nicer that N11A.

Option 3: Green (N11B) to Yellow (C7, new bridge B10) to Salmon (S8) to Riverside Avenue, on the Riverside Avenue bridge to the north side of creek

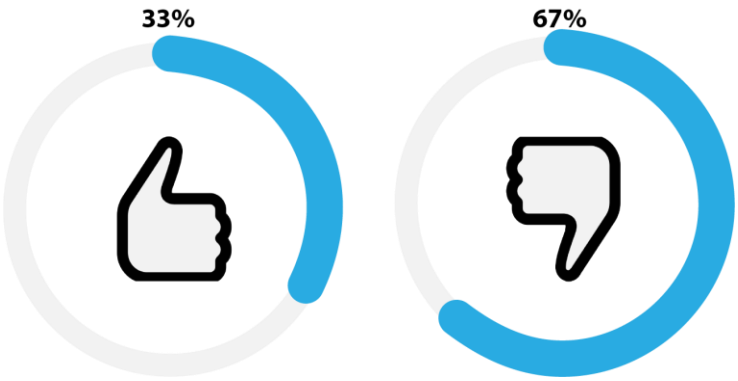


Comments

- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- As a resident of the Cirby Woods Townhomes that borders S7, I oppose this option. It will increase the number of people walking into the Cirby Woods community.
- Extra bridge on the eroded side of the reek is needed.
- This is not feasible so should not be an option.
- S8 doesn't seem like a good route.
- S8 is too narrow for construction, why even include this?
- Section S8 seems likely to be problematic to maintain.

- When we have State and National events, this would create problems as we use the west entrance. Any influx on the north side of the creek will put our normal events in danger. A bridge on private property for what? How much would that cost?

Option 4: Salmon (S7) to Salmon (S8) to Riverside Avenue, on the Riverside Avenue bridge to the north side of creek

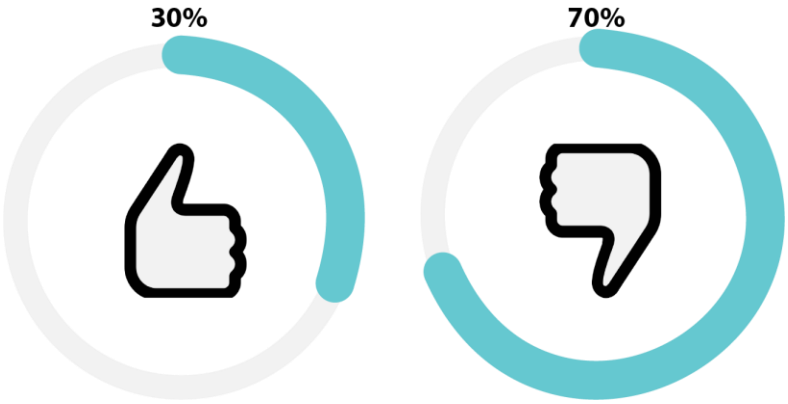


Comments

- No to S8.
- All are fine. I like the neighborhood access.
- Any bike trail in this area will only aid in spreading homeless camps throughout the region.
- From the Riverside bridge going west on the south side (S8) of Dry Creek would be the best for the land owner. Talking with the owner of this property, he also feels that the green (N12) would be fine to go from Riverside bridge west. Within 200 yards, build a bridge going to the south side of Dry Creek west to Vernon. The City of Roseville also could purchase this property for a beautiful park or as one of the only RV Parks in the city or surrounding areas. We are agreeable to the bike trail going through our property in some fashion, agreeable to both parties for certain consideration.
- We would also like to thank all the hard-working staff for their input and for their visit to the property site. It was very enjoyable to be able to walk the property and see the views from the professionals. Thank you.
- It still puts a lot of strangers on our property right through our events for no reason.
- No, no, no! Strongly oppose this option. This trail would land just a few feet from my deck that currently looks out over the creek. I also strongly oppose trail 7 that runs right through the Cirby Woods property! We already struggle with homeless here! Please do not place the trail here.
- This one is not as pretty but has good access.
- This is not feasible, so it should not be an option.
- S8 is too narrow for construction, why even include this?
- Straight shot S7 to S8.

- Though the alignment may not be the best, this option provides more neighborhood access to the proposed trail. Neither Vernon Street nor Riverside Avenue have cycle-friendly bike lanes, and so the neighborhoods south of Dry Creek, which are relatively close, would not be able to easily and safely access the trail. More on street bike lanes and road diets could be an alternative.
- Yes, I love the Salmon route! And it would be good to get a connection into the neighborhoods – the apartments, condos, homes.

Option 5: Salmon (S7) to Yellow (C7, new bridge B10) to Green (N12) to Riverside Avenue, under the Riverside Avenue to proposed Dry Creek Greenway East



Comments

- I prefer this option as it is very feasible for construction, provides great scenery, could provide access to the residential area on both the north and south sides of the creek.
- Just no. Please eliminate the Salmon option altogether.
- Nice option to give apartments access to trail.
- Not too bad, but extra bridge would introduce poor horizontal and vertical alignments.
- We don't want anyone north of the creek! Why does this need to be an option?
- This would work fine.
- This would work, I like the idea of going under Riverside. All these options should include the underpass at Riverside.

- Must have bridge (B10) since Vernon and Riverside are too far apart and too fast/busy. It's also dangerous to get to these from southern neighborhoods because Cirby is also extremely busy. The best bike crossing from the south is the Northridge/Lindsay light, but there needs to be a connection from that road to Milan Court (best), Promenade Park Apartments (second best), or Inglis Way (ok).

Notification for the Virtual Community Workshop

Over 200 community members provided input in the virtual community workshop. The online workshop was promoted through the Community Open House on October 1st, as well as through traditional and electronic means. The City of Roseville and Placer County Transportation Planning Agency sent emails to interested community members who either signed up their mail to receive information at one of the community open houses, or who had signed up through the project website.

The virtual community workshop was also shared through social media by community-based organizations or groups, as well as individuals, and through various organizations' e-blasts, or e-newsletters:

- City of Roseville
- Placer County
- PCTPA
- AIM Consulting
- Creekview Ranch School PTA
- Get Outdoors and Play
- Moms Run this Town Running group
- Rails-to-Trails Conservancy
- Sacramento Area Bicycle Advocates (SABA)
- Total Body Fitness Roseville
- Running Friends with Yard Sale Benefits group

Appendix E: RTC Similar Projects Memo

TO: Jeannie Gandler, City of Roseville and Dokken Engineering

FROM: Rails-to-Trails Conservancy

DATE: July 2018

SUBJECT: Dry Creek West Feasibility Study, Research and Documentation of Similar Projects

JULY 13, 2018 DRAFT FOR TEAM REVIEW

The development of the Dry Creek Greenway West offers opportunities to expand the City of Roseville's active transportation system, linking existing multiuse trails and promoting a safe and connected city. Within the study area, Dry Creek passes under multiple tracks owned by Union Pacific Railroad. The Dry Creek Greenway West necessarily must traverse the same Union Pacific Railroad tracks in some fashion to link the western and eastern ends of Roseville via an uninterrupted trail route.

The most direct alignment of the Dry Creek Greenway West under the active Union Pacific Railroad tracks would parallel Dry Creek. However, the existing width is not great enough to accommodate both the creek and the trail on available land. Three different potential solutions to this challenge are available, with the first two examined in this memo:

1. **Elevated Trail:** The routing of the trail over a portion of the creek via a boardwalk or other elevated structure;
2. **Underpass:** The construction of a new underpass that serves as a dedicated right-of-way for the trail; and
3. **Re-routing on Local Roads:** The routing of the trail around the existing creek passage, likely via nearby roads. This alternative is outside the scope of this memo.

Multiuse trails that pass under railroad trestles may also provide useful lessons, as many of the characteristics, negotiating tactics, and design and construction guidelines will be the same. One such example – Sand Creek Regional Greenway - is presented in this memo.

It must be noted that the use of an existing structure that conveys water under an active Union Pacific Railroad line for trail use is explicitly banned in the railroad's *Guidelines for Railroad Grade Separation Projects*. The same document emphasizes the railroad's policy of discouraging the construction of new trail underpasses. Overcoming the barriers set by the guidelines may require political pressure or the implementation of improvements to Union Pacific property near the underpass or in another part of the city. Even if ultimately approved, the underpass project will likely be subject to detailed design requirements and strict scrutiny from the railroad.

While precedents comparable to the proposed underpass along Dry Creek Greenway West in terms of design and process can be found, the specific parameters of this project (particularly the

need to pass under multiple railroad tracks) made it a challenge to identify direct comparisons. Despite ample research, identical projects—multiuse trails constructed parallel to waterways that pass under multiple train tracks where the trail is constructed either over the waterway or adjacent to it via a new underpass—simply may not exist. However, we are confident that the case studies of projects comparable in terms of design and process highlighted below, as well as general design guidelines discussed later, can nevertheless be helpful in informing the route selection and potential design of this portion of the Dry Creek Greenway West.

Elevated Trail Constructed Over Waterway

Where conditions warrant it, short sections of multiuse trails have been constructed over waterways as raised walkways. These boardwalk sections allow for the free flow of water while maintaining a trail on its preferred course. However, such a solution may not be feasible due to clearance requirements for both trail users and the water below. The width of the waterway also may not be adequate to accommodate the displacement of water caused by caissons. Where possible, construction of a raised walkway is likely to add considerable expense to a trail project and be subject to additional environmental regulations and permitting requirements. Once open, flooding and slick surfaces may also be a concern.

Case Study

In Washington, D.C., the Anacostia Riverwalk Trail courses 28 miles on both sides of the Anacostia River. The newest section of trail, opened in 2016, connects the trail directly to nearly 50 miles of multiuse trail in Maryland. Long a gap in the trail due to the presence of Kenilworth Park & Aquatic Gardens, a site administered by the National Park Service and home to natural wetlands, the trail was routed over a series of boardwalks and bridges to address environmental and security concerns. Further, Amtrak's active Northeast Corridor line and a U.S. Highway just north of Kenilworth Park & Aquatic Gardens necessitated a routing of the trail over the edge of the Anacostia River to avoid dangerous at-grade crossings and railroad and road abutments (see Figure 1).

The 1,250-foot raised walkway was constructed with concrete piers, metal fencing, and a concrete surface to better resist damage from flooding. The substantial marine work led to higher bids than originally budgeted for, and work below Amtrak's right-of-way required significant coordination with the railroad and thus a longer lead time than expected. Where the trail passes under the Amtrak line, chain-link fencing that extends to the underside of the railroad bridge and forms a roof over the trail protects trail users from falling debris (see Figure 2). Project leaders from the District Department of Transportation identified "time, money, and friends in high places" as crucial requirements when working with the railroad.

Figure 1: Design of the Kenilworth Aquatic Gardens Segment of the Anacostia Riverwalk in Washington, D.C.; photo courtesy Anacostia Waterfront Initiative

Figure 2: Raised walkway undercrossing of Amtrak's Northeast Corridor line over the Anacostia River along the Anacostia Riverwalk in Washington, D.C.; photo courtesy Greater Greater Washington

Other Examples

Numerous other examples of trails constructed over waterways at constrained points can be found. In Dexter, Michigan, the Border-to-Border Trail was constructed as a wooden boardwalk over Mill Creek where it passes under an active rail line. Despite the railroad bridge's stone construction, a roof was installed over the trail to protect trail users from falling debris (see Figure 3). The Walnut Creek Trail in Raleigh, North Carolina, features a similar design where it passes under a railroad trestle that spans Walnut Creek, as does the Ann and Roy Butler Hike and Bike Trail where it jogs out over the Colorado River under the Ann Richards Congress Avenue Bridge in Austin, Texas.

In Chicago, Illinois, the Chicago Riverwalk runs along the Chicago River in the Loop—the city's commercial core. The path once effectively ended at each road crossing over the river, requiring trail users to ascend to road level, cross a busy road, and descend on the other side. In 2016, a reconstruction of the Riverwalk opened, extending the path over the Chicago River where it now passes under these road bridges (see Figure 4). The award-winning project required Congressional approval to redefine the width of the navigational channel to allow for a 20-foot buildout under each bridge. Unlike the previous raised walkway examples, caissons were drilled directly into the riverbed alongside steel sheeting, allowing project managers to create new land where once was water.

Figure 3: Boardwalk undercrossing of Amtrak line over Mill Creek along the Border-to-Border Trail in Dexter, Michigan; photo courtesy Rails-to-Trails Conservancy

Figure 4: Undercrossing of road bridge along the Chicago Riverwalk in Chicago, Illinois, on new land taken for the project from the Chicago River; photo courtesy Rails-to-Trails Conservancy

New Underpass to Accommodate Trail

Another solution to crossing an active rail line below grade is to construct an entirely new underpass for the trail, such as a box culvert. Like the raised walkway solution, this option allows a trail to preserve its course without significant grade changes, at-grade crossings, or lengthy detours. However, due to its expense and a variety of other challenges, including gaining the consent of the railroad, meeting loadbearing and permitting requirements, and difficult construction conditions, this alternative is rarely implemented. Further, it is an option easiest to accomplish for shorter spans, such as below only one or two train tracks.

Case Study

The Truckee Mousehole shares similarities with the Dry Creek Greenway West pedestrian underpass, including the railroad operating above. The Town of Truckee, California, found that pedestrians were walking along State Route 89, a narrow but high-traffic and high-speed road, to cross under tracks owned by Union Pacific Railroad. As part of the State Route 89 Mousehole Improvement Project that largely took place in 2015, the Town installed a bicycle and pedestrian underpass referred to as the "Mousehole" that opened in 2016 (see Figure 5). The project, which cost approximately $13 million, was completed in partnership with Caltrans, the Nevada County Transportation Commission, Federal Highway Administration, Placer County, and Union Pacific

Railroad. The Truckee Mousehole received funding from a variety of sources due to its unique location along a state highway, beneath a transcontinental railroad, and bordering two counties.

In order to construct the new underpass, pipes were inserted into the ground immediately below the railroad tracks and a brine solution pumped through to freeze the ground, providing enough stability in the area above where the underpass was to be installed to support the rail line during construction activities below. The box was assembled immediately outside its planned resting place, and the ground below the freezing pipes was partially excavated. Once complete, the box was pushed through with hydraulic rams, with progress halted periodically for additional excavation. Full installation of the underpass in this fashion took six days and was a complete success: there was no impact to Union Pacific Railroad's operations or any recorded track movement.

Figure 5: The Mousehole Underpass in Truckee, California; photo courtesy Town of Truckee

Case Study

A similar trail underpass of an active rail line opened in November 2017 where the Mass Central Rail Trail, Norwottuck Rail-Trail, and Manham Rail Trail meet in Northampton, Massachusetts (see Figure 6). A critical active transportation junction for the region, the connection was formerly interrupted by the Connecticut River Line, an active track owned by the Massachusetts Department of Transportation and home to Pan Am Railways freight service and Amtrak's *Vermonter* passenger rail service. Before the bicycle and pedestrian underpass opened, trail users wishing to continue on their trek would often trespass across the active line via a hole in a fence, creating safety and liability headaches for Northampton, MassDOT, and the operating railroads.

In fact, the underpass was constructed as “an investment in safety,” according to Massachusetts Secretary of Transportation Stephanie Pollack.

The $4.4 million project was managed by the Massachusetts Bay Transportation Authority. The new underpass was just one component of a much larger $83 million project to make upgrades to the rail line required for a desired reroute of Amtrak’s service and eventual commencement of commuter rail service along the corridor. Federal American Recovery and Reinvestment Act funds supplied $73 million of the total project cost, with $10 million, including the $4.4 million underpass cost, provided by the state.

Because the Connecticut River Line at the location of the underpass has only one track in a fairly wide corridor, the construction contractor was able to reroute the active line via a new shoofly (temporary) track approximately 20 feet to the west while the eastern portion of the precast-concrete underpass was installed. When that half of the underpass was complete, the track was restored to its original location and the shoofly track removed, allowing for completion of the western portion of the underpass.

Figure 6: The Northampton Underpass in Northampton, Massachusetts; photo courtesy Trains in the Valley

Case Study

A longer undercrossing of active Union Pacific Railroad tracks was installed in San Jose, California, in 2017 (see Figure 7). The new 80-foot-long underpass tunnels under three tracks, allowing cyclists and pedestrians to access Santa Clara Station and its commuter rail services

from the north. The underpass was actually an extension to an existing underpass that tunneled under two railroad tracks to reach the commuter rail island platform from the south (see Figure 8). The $13.8 million project was led by the Santa Clara Valley Transportation Authority.

Unlike the previous two case studies, construction of the underpass extension was disruptive to railroad operations. Commuter rail service in both directions was relocated to a single track over the existing underpass and Union Pacific service was halted for four days as 24-hour construction occurred. The project contractor used cut-and-cover construction techniques to complete the new underpass, including the cutting of approximately 200 feet of railroad track, excavation, the installation of 14 precast-concrete boxes, and restoration of the three Union Pacific tracks. After opening, the underpass was named the 2018 Golden State Award Winner by the American Council of Engineering Companies.

Figure 7: The Santa Clara Pedestrian Underpass in Santa Clara, California; photo courtesy Engineering California

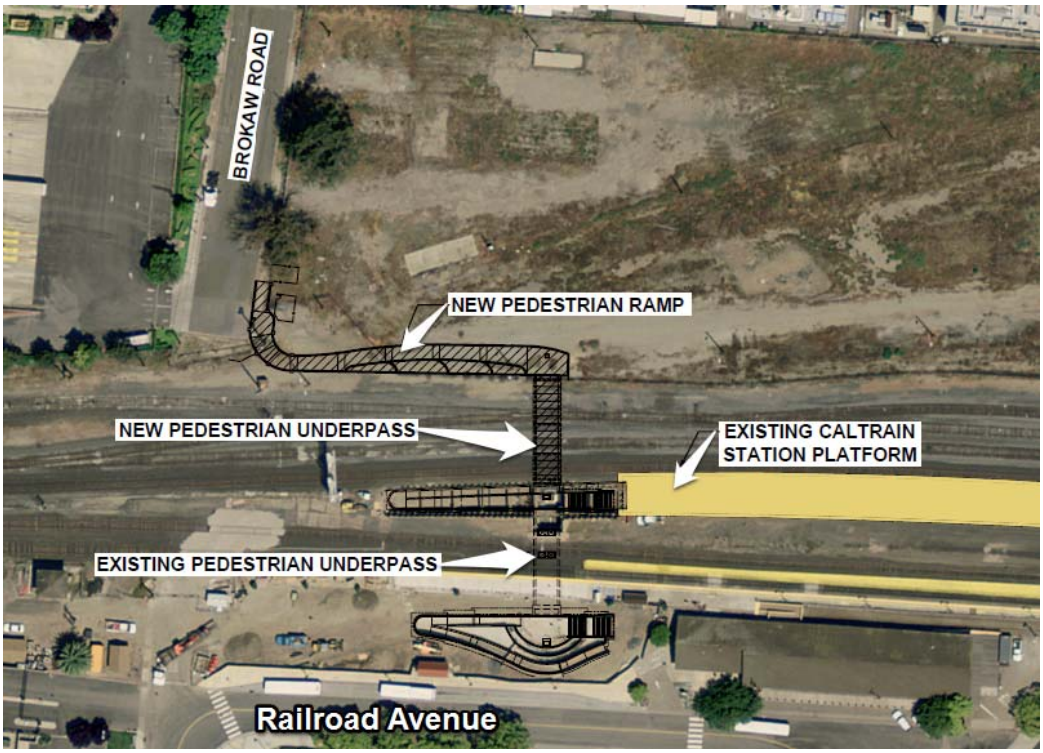


Figure 8: Design for the Santa Clara Pedestrian Undercrossing of three Union Pacific Railroad tracks in Santa Clara, California; photo courtesy Santa Clara Valley Transportation Authority

Trail Under Multiple Rail Lines

Cases like the above, where a multiuse trail passes under more than two consecutive railroad tracks, are exceptionally rare. Where these examples can be found, the trail generally passes under a series of railroad trestles—not a railyard or other single piece of railroad property. While construction techniques and costs in these cases likely differ greatly from the Dry Creek Greenway West underpass project, many of the principles involved are similar, such as interactions with the railroad, safety and liability concerns, and design features and requirements.

Case Study

The Sand Creek Regional Greenway in Commerce City, Colorado, passes under three consecutive railroad trestles that span Sand Creek (see Figures 9 and 10). One of the structures is owned by Union Pacific Railroad, while another is owned by BNSF Railway. All three trestles featured adequate space between the piers to accommodate the trail with no construction impact on railroad structures or operations. Fencing was installed on both sides of the trail and roofing was installed to protect trail users from falling debris.

Beth Nobles, Executive Director of the Sand Creek Regional Greenway, spoke to the efficacy of "political muscle" when working to develop trails adjacent to or under railways. This was especially necessary when facing negotiations with both Union Pacific and BNSF. The Sand

Creek Regional Greenway Board has an elected official from each community that the greenway runs through. Additionally, each community nominates another board member, oftentimes without political affiliations. The "political muscle" that results from having elected officials on the board has been helpful in working with both railroads.

Figure 9: Sand Creek Regional Greenway undercrossing of BNSF and UP trestles; photo courtesy TrailLink.com

Figure 10: Street view of the Sand Creek Regional Greenway undercrossing of BNSF and UP trestles; photo courtesy Google Maps

Design Best Practices

A variety of sources, including the *AASHTO Guide for the Development of Bicycle Facilities*, provide general design guidance for underpasses along multiuse trails. However, it is not uncommon for an affected railroad to set stricter design requirements than might otherwise be deemed necessary during negotiations. Further, where the trail must run directly over a waterway to pass under active tracks, such as via a boardwalk, additional environmental regulations will apply and planning and construction costs will be higher. Where a new underpass is constructed, engineers would need to determine whether a new trail tunnel could accommodate the heavy loads of trains above. Ultimately, successful design will delicately balance the operational, maintenance, and safety requirements of a railroad with the specific needs and characteristics of a variety of recreational and commuting trail user types.

Fencing/Roofing

Fencing is likely to be required adjacent to the trail where it approaches the underpass and on rail property above the underpass to prevent trespassing from trail users. Railroads often require that fencing adheres to specific height and material requirements. Railroads may also require the installation of protection over the trail, such as a roof, where it passes under exposed trackage or at the entrance and exit of an underpass. Overhead protection may be constructed of solid metal, chain-link, or wood (see Figures 3, 10, 11, and 12). Such overhead protection could prevent trail user injury from falling freight or debris and reduce the liability of both the railroad and trail manager.

Lighting

Dark, isolated underpasses that are hidden from public view can attract illegal activity, so they should be designed to be as short as possible to increase the amount of light available and thus decrease their attractiveness for crime. Adequate artificial lighting is also extremely important and may be mandated by the railroad. Lighting can be designed as public art to encourage desired trail use of the underpass while meeting safety needs (see Figure 13). Trail designers should consider lighting's impact on train operations and visibility. One possible solution is to have lighting activated by motion detectors, so that the trail is illuminated while people approach and a few minutes after they pass, but not for the entire night.

Drainage

Drainage is a concern in underpasses. According to AASHTO guidelines, a minimum recommended pavement cross slope of 1 percent should be adequate. The trail surface should be even to prevent water pooling. The decking for a raised walkway over water could be constructed with a material other than wood, such as concrete or composites, to increase its longevity.

When constructing a new underpass, its impact on the railroad's drainage system above will also need to be considered. Railroad corridors are constructed with both lateral and cross-roadbed

drainage to keep water off the tracks and ballast. Lateral drainage consists of the ditches parallel to most tracks, which help direct water into natural or built waterways. Cross-roadbed drainage pipes link lateral drainage ditches via a connection under the tracks. Maintaining the integrity of the railroad drainage system is of paramount importance for any project that impacts railroad right-of-way.

Dimensions

Trail planners must allow for adequate overhead clearance in an underpass, remembering that some trail users on bicycles will sit higher than the tallest pedestrian. Union Pacific Railroad guidelines set a minimum of 8 feet of vertical clearance, while the *AASHTO Guide for the Development of Bicycle Facilities* (2012) recommends a minimum of 10 feet. The resource also recommends the minimum width of a multiuse trail through an underpass be the same as the width of the approach path, with an additional 2-foot clear area on each side. Locations where such clearances cannot be secured are likely infeasible. Larger horizontal and vertical clearances may be needed for certain types of maintenance and emergency vehicles. Future needs for vehicular access should be taken into consideration when designing these structures.

Grade

Approach grades for underpasses along multiuse trails should follow AASHTO guidelines and typically also must meet ADA Accessibility guidelines. A grade greater than 5 percent is not recommended.

Figure 11: Trail along Red River in Fargo, North Dakota, crossing under BNSF Railway line with metal cover to protect trail users; photo courtesy Stuart Macdonald

Figure 12: Integrated chain-link cover and fencing protects trail users along East Grand Forks National Recreation Trail in Minnesota; photo courtesy Stuart Macdonald

Figure 13: LED lights illuminate the 18th Street Underpass in Birmingham, Alabama; photo courtesy REV Birmingham, Hal Yaeger and Bill FitzGibbons

Working with Railroads

Those involved in the development of any structure that impacts railroad property or operations must approach all negotiations with the knowledge that any railroad's overriding concern is safety, and must be prepared to be creative to meet the railroad's various needs. Design and construction strategies that reduce the liability of the railroad will be viewed favorably and likely make negotiations easier.

In some cases, addressing a railroad's area of concern elsewhere in the area, such as closing an at-grade crossing, adding new signals at a crossing, or authorizing higher speeds along the line, may increase their willingness to discuss the target bicycle and pedestrian project—sometimes even despite the presence of guidelines that reject the project in principle. In other cases, leveraging political influence may bring the railroad to the negotiating table. The Sand Creek Regional Greenway's strategy of building "political muscle" by including elected officials in the greenway's governing board is one such example of this method.

Another example is an upcoming extension of the Whittier Greenway, a rail-with-trail in Whittier, California. The trail will parallel Union Pacific Railroad tracks both within and immediately adjacent to their right-of-way despite the railroad's formal opposition to such projects. According to Nancy Mendez, Assistant City Manager for the City of Whittier, negotiations with Union Pacific broke down twice. In both instances, political pressure brought the railroad back to the negotiating table. "At the time of the negotiations, [U.S. Representative] Grace Napolitano represented part of Whittier, and she was a ranking member of the House Transportation Committee," Nancy Mendez recounted in an interview. "So when she told the railroad to go back and talk with our people, the railroad went back and talked to our people."

Conclusion

The development of the Dry Creek Greenway West underpass would establish the multiuse trail's extension along the most direct course, creating a range of benefits, including promoting active transportation and encouraging recreation for Roseville residents and visitors. While we have yet to identify a case study with exactly the same parameters as Dry Creek, the similar projects profiled above should demonstrate that the development of a trail undercrossing of Union Pacific Railroad tracks is feasible given sufficient funding and public and political support, and would eliminate a major barrier in the continuing development of Roseville's active transportation network.

Appendix F: Project Cost Estimates

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 1-1

Description: N1 (1)(2)[B1], N2A (3), N3

PROJECT ESTIMATE: November 2018

Length of Path: 6,100 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$645,000***
RIGHT OF WAY				
30' Easement	181,300	SF	$1.75	**$318,000**
			Subtotal	***$318,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	120	TON	$120	**$14,000**
** Portland Cement Concrete	1,310	CY	$300	**$390,000**
Aggregate Base	90	CY	$60	**$5,000**
Decomposed Granite	10	CY	$40	**$400**
Scarify and Recompact Native Material	10,000	SY	$15	**$150,000**
Structures - Bridge 'B1'	1,600	SF	$300	**$480,000**
Retaining Walls (< 10')	4,840	SF	$75	**$363,000**
Fencing	3,900	LF	$30	**$117,000**
Tree/Brush Removal	3,000	SF	$4	**$12,000**
Supplemental Earthwork (Import)	7,200	CY	$22	**$158,000**
Supplemental Earthwork (Excavation)	1,340	CY	$65	**$87,000**
Environmental Mitigation	1	LS	$38,000	**$38,000**
Roadway Supplemental Items	5%			**$91,000**
			subtotal	***$1,910,000***
Mobilization	10%			**$191,000**
Contingency	25%			**$478,000**
			Construction Items subtotal	***$2,580,000***
ADMINISTRATION				
Construction Administration	25%			**$645,000**
			Subtotal	***$645,000***
TOTAL PROJECT COST	**$4,190,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 1-2

Description: N1 (1)(2)[B1], N2A (3), N3, C1 [B6]

PROJECT ESTIMATE: November 2018

Length of Path: 6,300 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$923,000***
RIGHT OF WAY				
30' Easement	186,700	SF	$1.70	**$318,000**
			Subtotal	***$318,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	130	TON	$120	**$16,000**
** Portland Cement Concrete	1,310	CY	$300	**$390,000**
Aggregate Base	100	CY	$60	**$6,000**
Decomposed Granite	10	CY	$40	**$400**
Scarify and Recompact Native Material	10,000	SY	$15	**$150,000**
Structures - Bridge 'B1'	1,600	SF	$300	**$480,000**
Structures - Bridge 'B6'	2,400	SF	$300	**$720,000**
Retaining Walls (< 10')	4,840	SF	$75	**$363,000**
Fencing	3,900	LF	$30	**$117,000**
Tree/Brush Removal	3,500	SF	$4	**$14,000**
Supplemental Earthwork (Import)	7,400	CY	$22	**$163,000**
Supplemental Earthwork (Excavation)	1,840	CY	$65	**$120,000**
Environmental Mitigation	1	LS	$59,000	**$59,000**
Roadway Supplemental Items	5%			**$130,000**
			subtotal	***$2,730,000***
Mobilization	10%			**$273,000**
Contingency	25%			**$683,000**
			Construction Items subtotal	***$3,690,000***
ADMINISTRATION				
Construction Administration	25%			**$923,000**
			Subtotal	***$923,000***
TOTAL PROJECT COST	**$5,860,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 1-3

Description: N1 (1)(2)[B1], N2B (3), N3

PROJECT ESTIMATE: November 2018

Length of Path: 6,100 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$655,000***
RIGHT OF WAY				
30' Easement	183,100	SF	$1.75	**$321,000**
			Subtotal	***$321,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	120	TON	$120	**$14,000**
** Portland Cement Concrete	1,320	CY	$300	**$400,000**
Aggregate Base	90	CY	$60	**$5,000**
Decomposed Granite	10	CY	$40	**$400**
Scarify and Recompact Native Material	10,100	SY	$15	**$152,000**
Structures - Bridge 'B1'	1,600	SF	$300	**$480,000**
Retaining Walls (< 10')	4,840	SF	$75	**$363,000**
Fencing	3,900	LF	$30	**$117,000**
Tree/Brush Removal	4,800	SF	$4	**$19,000**
Supplemental Earthwork (Import)	7,200	CY	$22	**$158,000**
Supplemental Earthwork (Excavation)	1,360	CY	$65	**$88,000**
Environmental Mitigation	1	LS	$52,000	**$52,000**
Roadway Supplemental Items	5%			**$92,000**
			subtotal	***$1,940,000***
Mobilization	10%			**$194,000**
Contingency	25%			**$485,000**
			Construction Items subtotal	***$2,620,000***
ADMINISTRATION				
Construction Administration	25%			**$655,000**
			Subtotal	***$655,000***
TOTAL PROJECT COST	**$4,260,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 1-4

Description: N1 (1)(2)[B1], N2B (3), N3, C1 [B6]

PROJECT ESTIMATE: November 2018

Length of Path: 6,300 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$925,000***
RIGHT OF WAY				
30' Easement	188,500	SF	$1.70	**$321,000**
			Subtotal	***$321,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	130	TON	$120	**$16,000**
** Portland Cement Concrete	1,320	CY	$300	**$400,000**
Aggregate Base	100	CY	$60	**$6,000**
Decomposed Granite	10	CY	$40	**$400**
Scarify and Recompact Native Material	10,100	SY	$15	**$152,000**
Structures - Bridge 'B1'	1,600	SF	$300	**$480,000**
Structures - Bridge 'B6'	2,400	SF	$300	**$720,000**
Retaining Walls (< 10')	4,840	SF	$75	**$363,000**
Fencing	3,900	LF	$30	**$117,000**
Tree/Brush Removal	5,300	SF	$4	**$21,000**
Supplemental Earthwork (Import)	7,400	CY	$22	**$163,000**
Supplemental Earthwork (Excavation)	1,390	CY	$65	**$90,000**
Environmental Mitigation	1	LS	$73,000	**$73,000**
Roadway Supplemental Items	5%			**$130,000**
			subtotal	***$2,740,000***
Mobilization	10%			**$274,000**
Contingency	25%			**$685,000**
			Construction Items subtotal	***$3,700,000***
ADMINISTRATION				
Construction Administration	25%			**$925,000**
			Subtotal	***$925,000***
TOTAL PROJECT COST	**$5,880,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 1-5

Description: S1 [B2, B3, B4, B5]

PROJECT ESTIMATE: November 2018

Length of Path: 5,200 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$440,000***
RIGHT OF WAY				
30' Easement	154,700	SF	$2	**$310,000**
			Subtotal	***$310,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	0	TON	$120	**$0**
** Portland Cement Concrete	1,250	CY	$300	**$380,000**
Aggregate Base	0	CY	$60	**$0**
Decomposed Granite	0	CY	$40	**$0**
Scarify and Recompact Native Material	9,600	SY	$15	**$144,000**
Structures - Bridge 'B2'	1,280	SF	$300	**$384,000**
Structures - Bridge 'B3'	80	SF	$100	**$8,000**
Structures - Bridge 'B4'	32	SF	$75	**$3,000**
Structures - Bridge 'B5'	32	SF	$75	**$3,000**
Retaining Walls (< 10')	750	SF	$75	**$57,000**
Fencing	3,400	LF	$30	**$102,000**
Tree/Brush Removal	4,000	SF	$4	**$16,000**
Supplemental Earthwork (Import)	800	CY	$22	**$18,000**
Supplemental Earthwork (Excavation)	1,150	CY	$65	**$75,000**
Environmental Mitigation	1	LS	$50,000	**$50,000**
Roadway Supplemental Items	5%			**$62,000**
			subtotal	***$1,302,000***
Mobilization	10%			**$130,000**
Contingency	25%			**$326,000**
			Construction Items subtotal	***$1,760,000***
ADMINISTRATION				
Construction Administration	25%			**$440,000**
			Subtotal	***$440,000***
TOTAL PROJECT COST	**$2,950,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 1-6

Description: S1 [B2, B3, B4, B5], C1 [B6]

PROJECT ESTIMATE: November 2018

Length of Path: 5,400 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			*$708,000*
RIGHT OF WAY				
30' Easement	160,100	SF	$1.95	**$313,000**
			Subtotal	*$313,000*
CONSTRUCTION ITEMS				
* Asphalt Concrete	10	TON	$120	**$1,000**
** Portland Cement Concrete	1,250	CY	$300	**$380,000**
Aggregate Base	0	CY	$60	**$0**
Decomposed Granite	1	CY	$40	**$0**
Scarify and Recompact Native Material	9,600	SY	$15	**$144,000**
Structures - Bridge 'B2'	1,280	SF	$300	**$384,000**
Structures - Bridge 'B3'	80	SF	$100	**$8,000**
Structures - Bridge 'B4'	32	SF	$75	**$3,000**
Structures - Bridge 'B5'	32	SF	$75	**$3,000**
Structures - Bridge 'B6'	2,400	SF	$300	**$720,000**
Retaining Walls (< 10')	750	SF	$75	**$56,000**
Fencing	3,400	LF	$30	**$102,000**
Tree/Brush Removal	4,500	SF	$4	**$18,000**
Supplemental Earthwork (Import)	1,000	CY	$22	**$22,000**
Supplemental Earthwork (Excavation)	1,190	CY	$65	**$77,000**
Environmental Mitigation	1	LS	$64,000	**$64,000**
Roadway Supplemental Items	5%			**$99,000**
			subtotal	*$2,090,000*
Mobilization	10%			**$209,000**
Contingency	25%			**$523,000**
			Construction Items subtotal	*$2,830,000*
ADMINISTRATION				
Construction Administration	25%			**$708,000**
			Subtotal	*$708,000*
TOTAL PROJECT COST	**$4,560,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 2-1

Description: N4

PROJECT ESTIMATE: November 2018

Length of Path: 1,900 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$51,000***
RIGHT OF WAY				
30' Easement	56,500	SF	$0	**$0**
			Subtotal	***$0***
CONSTRUCTION ITEMS				
* Asphalt Concrete	350	TON	$120	**$42,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	280	CY	$60	**$17,000**
Decomposed Granite	30	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Retaining Walls	0	SF	$75	**$0**
Fencing	1,900	LF	$30	**$57,000**
Tree/Brush Removal	0	SF	$4	**$0**
Supplemental Earthwork (Import)	0	CY	$22	**$0**
Supplemental Earthwork (Excavation)	410	CY	$65	**$27,000**
Environmental Mitigation	0	LS	$0	**$0**
Roadway Supplemental Items	5%			**$7,000**
			subtotal	***$152,000***
Mobilization	10%			**$15,000**
Contingency	25%			**$38,000**
			Construction Items subtotal	***$205,000***
ADMINISTRATION				
Construction Administration	25%			**$51,000**
			Subtotal	***$51,000***
TOTAL PROJECT COST	**$310,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 2-2

Description: N4, C2 [B7]

PROJECT ESTIMATE: November 2018

Length of Path: 2,100 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$393,000***
RIGHT OF WAY				
30' Easement	62,700	SF	$0	**$0**
			Subtotal	***$0***
CONSTRUCTION ITEMS				
* Asphalt Concrete	360	TON	$120	**$43,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	280	CY	$60	**$17,000**
Decomposed Granite	40	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Structures - Bridge 'B7'	2,720	SF	$300	**$816,000**
Retaining Walls	0	SF	$75	**$0**
Fencing	1,900	LF	$30	**$57,000**
Tree/Brush Removal	0	SF	$4	**$0**
Supplemental Earthwork (Import)	5,400	CY	$22	**$119,000**
Supplemental Earthwork (Excavation)	460	CY	$65	**$30,000**
Environmental Mitigation	1	LS	$16,000	**$16,000**
Roadway Supplemental Items	5%			**$55,000**
			subtotal	***$1,160,000***
Mobilization	10%			**$116,000**
Contingency	25%			**$290,000**
			Construction Items subtotal	***$1,570,000***
ADMINISTRATION				
Construction Administration	25%			**$393,000**
			Subtotal	***$393,000***
TOTAL PROJECT COST	**$2,360,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 2-3

Description: S2 (4)

PROJECT ESTIMATE: November 2018

Length of Path: 2,300 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$236,000***
RIGHT OF WAY				
30' Easement	66,600	SF	$0	**$0**
			Subtotal	***$0***
CONSTRUCTION ITEMS				
* Asphalt Concrete	420	TON	$120	**$50,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	330	CY	$60	**$20,000**
Decomposed Granite	40	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Retaining Walls (< 10')	7,420	SF	$75	**$557,000**
Fencing	0	LF	$30	**$0**
Tree/Brush Removal	0	SF	$4	**$0**
Supplemental Earthwork (Import)	400	CY	$22	**$9,000**
Supplemental Earthwork (Excavation)	420	CY	$65	**$27,000**
Environmental Mitigation	0	LS	$0	**$0**
Roadway Supplemental Items	5%			**$33,000**
			subtotal	***$698,000***
Mobilization	10%			**$70,000**
Contingency	25%			**$175,000**
			Construction Items subtotal	***$943,000***
ADMINISTRATION				
Construction Administration	25%			**$236,000**
			Subtotal	***$236,000***
TOTAL PROJECT COST	**$1,420,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 2-4

Description: S2 (4), C2 [B7]

PROJECT ESTIMATE: November 2018

Length of Path: 2,500 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$575,000***
RIGHT OF WAY				
30' Easement	72,800	SF	$0	**$0**
			Subtotal	***$0***
CONSTRUCTION ITEMS				
* Asphalt Concrete	420	TON	$120	**$50,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	330	CY	$60	**$20,000**
Decomposed Granite	40	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Structures - Bridge 'B7'	2,720	SF	$300	**$816,000**
Retaining Walls (< 10')	7,420	SF	$75	**$557,000**
Fencing	0	LF	$30	**$0**
Tree/Brush Removal	0	SF	$4	**$0**
Supplemental Earthwork (Import)	5,770	CY	$22	**$127,000**
Supplemental Earthwork (Excavation)	470	CY	$65	**$31,000**
Environmental Mitigation	1	LS	$16,000	**$16,000**
Roadway Supplemental Items	5%			**$81,000**
			subtotal	***$1,700,000***
Mobilization	10%			**$170,000**
Contingency	25%			**$425,000**
			Construction Items subtotal	***$2,300,000***
ADMINISTRATION				
Construction Administration	25%			**$575,000**
			Subtotal	***$575,000***
TOTAL PROJECT COST	**$3,450,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 3-1

Description: N5 (5), N6

PROJECT ESTIMATE: November 2018

Length of Path: 2,900 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$111,000***
RIGHT OF WAY				
30' Easement	85,500	SF	$1.15	**$99,000**
			Subtotal	***$99,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	530	TON	$120	**$64,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	420	CY	$60	**$25,000**
Decomposed Granite	50	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Retaining Walls	0	SF	$75	**$0**
Fencing	2,400	LF	$30	**$72,000**
Tree/Brush Removal	11,300	SF	$4	**$45,000**
Supplemental Earthwork (Import)	0	CY	$22	**$0**
Supplemental Earthwork (Excavation)	610	CY	$65	**$40,000**
Environmental Mitigation	1	LS	$64,000	**$64,000**
Roadway Supplemental Items	5%			**$16,000**
			subtotal	***$328,000***
Mobilization	10%			**$33,000**
Contingency	25%			**$82,000**
			Construction Items subtotal	***$443,000***
ADMINISTRATION				
Construction Administration	25%			**$111,000**
			Subtotal	***$111,000***
TOTAL PROJECT COST	**$770,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 3-2

Description: N5 (5), C4

PROJECT ESTIMATE: November 2018

Length of Path: 2,700 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$206,000***
RIGHT OF WAY				
30' Easement	79,900	SF	$2.05	**$164,000**
			Subtotal	***$164,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	500	TON	$120	**$60,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	390	CY	$60	**$23,000**
Decomposed Granite	50	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Atkinson St. Space Reallocation	2,795	SF	$110	**$307,000**
Retaining Walls	0	SF	$75	**$0**
Fencing	2,000	LF	$30	**$60,000**
Tree/Brush Removal	8,400	SF	$4	**$34,000**
Supplemental Earthwork (Import)	50	CY	$22	**$1,000**
Supplemental Earthwork (Excavation)	580	CY	$65	**$38,000**
Environmental Mitigation	1	LS	$57,000	**$57,000**
Roadway Supplemental Items	5%			**$29,000**
			subtotal	***$611,000***
Mobilization	10%			**$61,000**
Contingency	25%			**$153,000**
			Construction Items subtotal	***$825,000***
ADMINISTRATION				
Construction Administration	25%			**$206,000**
			Subtotal	***$206,000***
TOTAL PROJECT COST	**$1,410,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 3-3

Description: N5 (5), C3 [B8], S4

PROJECT ESTIMATE: November 2018

Length of Path: 2,400 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$410,000***
RIGHT OF WAY				
30' Easement	71,500	SF	$1.70	**$122,000**
			Subtotal	***$122,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	420	TON	$120	**$50,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	330	CY	$60	**$20,000**
Decomposed Granite	40	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Structures - Bridge 'B8'	2,400	SF	$300	**$720,000**
Retaining Walls (< 10')	910	SF	$75	**$69,000**
Fencing	1,800	LF	$30	**$54,000**
Tree/Brush Removal	7,800	SF	$4	**$31,000**
Supplemental Earthwork (Import)	4,200	CY	$22	**$92,000**
Supplemental Earthwork (Excavation)	520	CY	$65	**$34,000**
Environmental Mitigation	1	LS	$78,000	**$78,000**
Roadway Supplemental Items	5%			**$58,000**
			subtotal	***$1,210,000***
Mobilization	10%			**$121,000**
Contingency	25%			**$303,000**
			Construction Items subtotal	***$1,640,000***
ADMINISTRATION				
Construction Administration	25%			**$410,000**
			Subtotal	***$410,000***
TOTAL PROJECT COST	**$2,590,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 3-4

Description: S3, S4

PROJECT ESTIMATE: November 2018

Length of Path: 1,900 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$131,000***
RIGHT OF WAY				
30' Easement	54,900	SF	$1.70	**$94,000**
			Subtotal	***$94,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	40	TON	$120	**$5,000**
** Portland Cement Concrete	400	CY	$300	**$120,000**
Aggregate Base	30	CY	$60	**$2,000**
Decomposed Granite	4	CY	$40	**$100**
Scarify and Recompact Native Material	2,200	SY	$15	**$33,000**
Retaining Walls (< 10')	910	SF	$75	**$69,000**
Fencing	1,800	LF	$30	**$54,000**
Tree/Brush Removal	4,100	SF	$4	**$16,000**
Supplemental Earthwork (Import)	60	CY	$22	**$1,000**
Supplemental Earthwork (Excavation)	400	CY	$65	**$26,000**
Environmental Mitigation	1	LS	$43,000	**$43,000**
Roadway Supplemental Items	5%			**$18,000**
			subtotal	***$387,000***
Mobilization	10%			**$39,000**
Contingency	25%			**$97,000**
			Construction Items subtotal	***$523,000***
ADMINISTRATION				
Construction Administration	25%			**$131,000**
			Subtotal	***$131,000***
TOTAL PROJECT COST	**$880,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 3-5

Description: S3, C3 [B8], N6

PROJECT ESTIMATE: November 2018

Length of Path: 2,700 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$428,000***
RIGHT OF WAY				
30' Easement	78,400	SF	$1.00	**$79,000**
			Subtotal	***$79,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	160	TON	$120	**$19,000**
** Portland Cement Concrete	400	CY	$300	**$120,000**
Aggregate Base	120	CY	$60	**$7,000**
Decomposed Granite	20	CY	$40	**$1,000**
Scarify and Recompact Native Material	2,200	SY	$15	**$33,000**
Structures - Bridge 'B8'	2,400	SF	$300	**$720,000**
Retaining Walls	0	SF	$75	**$0**
Fencing	2,400	LF	$30	**$72,000**
Tree/Brush Removal	8,600	SF	$4	**$34,000**
Supplemental Earthwork (Import)	4,150	CY	$22	**$91,000**
Supplemental Earthwork (Excavation)	570	CY	$65	**$37,000**
Environmental Mitigation	1	LS	$71,000	**$71,000**
Roadway Supplemental Items	5%			**$60,000**
			subtotal	***$1,265,000***
Mobilization	10%			**$127,000**
Contingency	25%			**$316,000**
			Construction Items subtotal	***$1,710,000***
ADMINISTRATION				
Construction Administration	25%			**$428,000**
			Subtotal	***$428,000***
TOTAL PROJECT COST	**$2,650,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 3-6

Description: S3, S4, C4 (5), N6

PROJECT ESTIMATE: November 2018

Length of Path: 3,700 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$288,000***
RIGHT OF WAY				
30' Easement	109,400	SF	$1.45	**$159,000**
			Subtotal	***$159,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	380	TON	$120	**$46,000**
** Portland Cement Concrete	400	CY	$300	**$120,000**
Aggregate Base	300	CY	$60	**$18,000**
Decomposed Granite	40	CY	$40	**$2,000**
Scarify and Recompact Native Material	2,200	SY	$15	**$33,000**
Atkinson St. Space Reallocation	2,795	SF	$110	**$307,000**
Retaining Walls (< 10')	910	SF	$75	**$68,000**
Fencing	1,800	LF	$30	**$54,000**
Tree/Brush Removal	11,100	SF	$4	**$44,000**
Supplemental Earthwork (Import)	60	CY	$22	**$1,000**
Supplemental Earthwork (Excavation)	790	CY	$65	**$51,000**
Environmental Mitigation	1	LS	$64,000	**$64,000**
Roadway Supplemental Items	5%			**$40,000**
			subtotal	***$848,000***
Mobilization	10%			**$85,000**
Contingency	25%			**$212,000**
			Construction Items subtotal	***$1,150,000***
ADMINISTRATION				
Construction Administration	25%			**$288,000**
			Subtotal	***$288,000***
TOTAL PROJECT COST	**$1,890,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 4-1

Description: N7A

PROJECT ESTIMATE: November 2018

Length of Path: 1,300 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$227,000***
RIGHT OF WAY				
30' Easement	38,900	SF	$0.33	**$13,000**
			Subtotal	***$13,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	240	TON	$120	**$29,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	190	CY	$60	**$11,000**
Decomposed Granite	20	CY	$40	**$1,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Retaining Walls (< 10')	6,800	SF	$75	**$510,000**
Fencing	280	LF	$30	**$8,000**
Tree/Brush Removal	4,000	SF	$4	**$16,000**
Supplemental Earthwork (Import)	125	CY	$22	**$3,000**
Supplemental Earthwork (Excavation)	280	CY	$65	**$18,000**
Environmental Mitigation	1	LS	$43,000	**$43,000**
Roadway Supplemental Items	5%			**$32,000**
			subtotal	***$671,000***
Mobilization	10%			**$67,000**
Contingency	25%			**$168,000**
			Construction Items subtotal	***$906,000***
ADMINISTRATION				
Construction Administration	25%			**$227,000**
			Subtotal	***$227,000***
TOTAL PROJECT COST	**$1,380,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 4-2

Description: N7B, N7B1

PROJECT ESTIMATE: November 2018

Length of Path: 1,200 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$20,000***
RIGHT OF WAY				
30' Easement	34,600	SF	$0	**$0**
			Subtotal	***$0***
CONSTRUCTION ITEMS				
* Asphalt Concrete	220	TON	$120	**$26,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	170	CY	$60	**$10,000**
Decomposed Granite	20	CY	$40	**$1,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Retaining Walls	0	SF	$75	**$0**
Fencing	0	LF	$30	**$0**
Tree/Brush Removal	0	SF	$4	**$0**
Supplemental Earthwork (Import)	160	CY	$22	**$4,000**
Supplemental Earthwork (Excavation)	250	CY	$65	**$16,000**
Environmental Mitigation	0	LS	$0	**$0**
Roadway Supplemental Items	5%			**$3,000**
			subtotal	***$60,000***
Mobilization	10%			**$6,000**
Contingency	25%			**$15,000**
			Construction Items subtotal	***$81,000***
ADMINISTRATION				
Construction Administration	25%			**$20,000**
			Subtotal	***$20,000***
TOTAL PROJECT COST	**$130,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 4-3

Description: N7B, N7B2

PROJECT ESTIMATE: November 2018

Length of Path: 2,100 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$36,000***
RIGHT OF WAY				
30' Easement	61,500	SF	$0	**$0**
			Subtotal	***$0***
CONSTRUCTION ITEMS				
* Asphalt Concrete	380	TON	$120	**$46,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	300	CY	$60	**$18,000**
Decomposed Granite	40	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Retaining Walls	0	SF	$75	**$0**
Fencing	0	LF	$30	**$0**
Tree/Brush Removal	200	SF	$4	**$1,000**
Supplemental Earthwork (Import)	160	CY	$22	**$4,000**
Supplemental Earthwork (Excavation)	450	CY	$65	**$29,000**
Environmental Mitigation	0	LS	$0	**$0**
Roadway Supplemental Items	5%			**$5,000**
			subtotal	***$105,000***
Mobilization	10%			**$11,000**
Contingency	25%			**$26,000**
			Construction Items subtotal	***$142,000***
ADMINISTRATION				
Construction Administration	25%			**$36,000**
			Subtotal	***$36,000***
TOTAL PROJECT COST	**$220,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-1

Description: N8A, S6

PROJECT ESTIMATE: November 2018

Length of Path: 3,300 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$778,000***
RIGHT OF WAY				
30' Easement	96,900.00	SF	$0.40	**$39,000**
			Subtotal	***$39,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	600	TON	$120	**$72,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	480	CY	$60	**$29,000**
Decomposed Granite	60	CY	$40	**$3,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Foothills Blvd. Bridge Space Reallocation	13,200	SF	$110	**$1,460,000**
Retaining Walls (< 10')	720	SF	$75	**$54,000**
Retaining Walls (> 10')	3,960	SF	$125	**$495,000**
Fencing	490	LF	$30	**$15,000**
Tree/Brush Removal	1,200	SF	$4	**$5,000**
Supplemental Earthwork (Import)	70	CY	$22	**$2,000**
Supplemental Earthwork (Excavation)	700	CY	$65	**$46,000**
Environmental Mitigation	1	LS	$8,000	**$8,000**
Roadway Supplemental Items	5%			**$109,000**
			subtotal	***$2,300,000***
Mobilization	10%			**$230,000**
Contingency	25%			**$575,000**
			Construction Items subtotal	***$3,110,000***
ADMINISTRATION				
Construction Administration	25%			**$778,000**
			Subtotal	***$778,000***
TOTAL PROJECT COST	**$4,710,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-2

Description: N8A, S6, C6, N10

PROJECT ESTIMATE: November 2018

Length of Path: 3,400 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$873,000***
RIGHT OF WAY				
30' Easement	103,000	SF	$0.50	**$52,000**
			Subtotal	***$52,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	700	TON	$120	**$84,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	560	CY	$60	**$34,000**
Decomposed Granite	70	CY	$40	**$3,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Foothills Blvd. Bridge Space Reallocation	13,200	SF	$110	**$1,460,000**
Vernon St. Space Reallocation	1,900	SF	$110	**$209,000**
Vernon St. Undercrossing	1	LS	$30,000	**$30,000**
Retaining Walls (< 10')	720	SF	$75	**$54,000**
Retaining Walls (> 10')	3,960	SF	$125	**$495,000**
Fencing	490	LF	$30	**$15,000**
Tree/Brush Removal	1,400	SF	$4	**$6,000**
Supplemental Earthwork (Import)	70	CY	$22	**$2,000**
Supplemental Earthwork (Excavation)	820	CY	$65	**$53,000**
Environmental Mitigation	1	LS	$10,000	**$10,000**
Roadway Supplemental Items	5%			**$123,000**
			subtotal	***$2,580,000***
Mobilization	10%			**$258,000**
Contingency	25%			**$645,000**
			Construction Items subtotal	***$3,490,000***
ADMINISTRATION				
Construction Administration	25%			**$873,000**
			Subtotal	***$873,000***
TOTAL PROJECT COST	**$5,290,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-3

Description: N8A, C5, N9 [B9], N10

PROJECT ESTIMATE: November 2018

Length of Path: 4,000 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$915,000***
RIGHT OF WAY				
30' Easement	118,400	SF	$0.55	**$66,000**
			Subtotal	***$66,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	710	TON	$120	**$85,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	560	CY	$60	**$34,000**
Decomposed Granite	70	CY	$40	**$3,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Structures - Bridge 'B9'	2,400	SF	$300	**$720,000**
Foothills Blvd. Bridge Space Reallocation	13,200	SF	$110	**$1,460,000**
Foothills Blvd. South Abutment (Walls & Box Culvert)	160	SF	$200	**$32,000**
Vernon St. Undercrossing	1	LS	$30,000	**$30,000**
Retaining Walls	0	SF	$75	**$0**
Fencing	990	LF	$30	**$30,000**
Tree/Brush Removal	2,400	SF	$4	**$10,000**
Supplemental Earthwork (Import)	4,150	CY	$22	**$91,000**
Supplemental Earthwork (Excavation)	860	CY	$65	**$56,000**
Environmental Mitigation	1	LS	$29,000	**$29,000**
Roadway Supplemental Items	5%			**$129,000**
			subtotal	***$2,710,000***
Mobilization	10%			**$271,000**
Contingency	25%			**$678,000**
			Construction Items subtotal	***$3,660,000***
ADMINISTRATION				
Construction Administration	25%			**$915,000**
			Subtotal	***$915,000***
TOTAL PROJECT COST	**$5,560,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-4

Description: N8B, N9 [B9], N10

PROJECT ESTIMATE: November 2018

Length of Path: 4,400 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$2,700,000***
RIGHT OF WAY				
30' Easement	131,000	SF	$0.95	**$125,000**
			Subtotal	***$125,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	780	TON	$120	**$94,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	620	CY	$60	**$37,000**
Decomposed Granite	80	CY	$40	**$4,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Structures - Bridge 'B9'	2,400	SF	$300	**$720,000**
Foothills Blvd. Bridge Widening	7,110	SF	$800	**$5,690,000**
Vernon St. Undercrossing	1	LS	$30,000	**$30,000**
Retaining Walls (< 10')	10,500	SF	$75	**$788,000**
Fencing	1,400	LF	$30	**$42,000**
Tree/Brush Removal	3,000	SF	$4	**$12,000**
Supplemental Earthwork (Import)	4,150	CY	$22	**$91,000**
Supplemental Earthwork (Excavation)	940	CY	$65	**$61,000**
Environmental Mitigation	1	LS	$36,000	**$36,000**
Roadway Supplemental Items	5%			**$380,000**
			subtotal	***$7,990,000***
Mobilization	10%			**$799,000**
Contingency	25%			**$2,000,000**
			Construction Items subtotal	***$10,800,000***
ADMINISTRATION				
Construction Administration	25%			**$2,700,000**
			Subtotal	***$2,700,000***
TOTAL PROJECT COST	**$16,400,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-5

Description: N8B, C5, S6

PROJECT ESTIMATE: November 2018

Length of Path: 4,100 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			*$2,600,000*
RIGHT OF WAY				
30' Easement	122,300	SF	$1.00	**$123,000**
			Subtotal	*$123,000*
CONSTRUCTION ITEMS				
* Asphalt Concrete	760	TON	$120	**$91,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	600	CY	$60	**$36,000**
Decomposed Granite	80	CY	$40	**$4,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Foothills Blvd. Bridge Widening	7,105	SF	$800	**$5,690,000**
Foothills Blvd. South Abutment (Walls & Box Culvert)	160	SF	$200	**$32,000**
Retaining Walls (< 10')	11,220	SF	$75	**$842,000**
Retaining Walls (> 10')	3,960	SF	$125	**$495,000**
Fencing	900	LF	$30	**$27,000**
Tree/Brush Removal	1,800	SF	$4	**$7,000**
Supplemental Earthwork (Import)	80	CY	$22	**$2,000**
Supplemental Earthwork (Excavation)	880	CY	$65	**$57,000**
Environmental Mitigation	1	LS	$15,000	**$15,000**
Roadway Supplemental Items	5%			**$365,000**
			subtotal	*$7,670,000*
Mobilization	10%			**$767,000**
Contingency	25%			**$1,920,000**
			Construction Items subtotal	*$10,400,000*
ADMINISTRATION				
Construction Administration	25%			**$2,600,000**
			Subtotal	*$2,600,000*
TOTAL PROJECT COST	**$15,700,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-6

Description: N8B, C5, S6, C6, N10

PROJECT ESTIMATE: November 2018

Length of Path: 4,600 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$2,700,000***
RIGHT OF WAY				
30' Easement	138,200	SF	$1.25	**$173,000**
			Subtotal	***$173,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	860	TON	$120	**$103,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	680	CY	$60	**$41,000**
Decomposed Granite	90	CY	$40	**$4,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Foothills Blvd. Bridge Widening	7,105	SF	$800	**$5,690,000**
Foothills Blvd. South Abutment (Walls & Box Culvert)	160	SF	$200	**$32,000**
Vernon St. Space Reallocation	1,872	SF	$110	**$206,000**
Vernon St. Undercrossing	1	LS	$30,000	**$30,000**
Retaining Walls (< 10')	11,220	SF	$75	**$842,000**
Retaining Walls (> 10')	3,960	SF	$125	**$495,000**
Fencing	900	LF	$30	**$27,000**
Tree/Brush Removal	2,000	SF	$4	**$8,000**
Supplemental Earthwork (Import)	110	CY	$22	**$3,000**
Supplemental Earthwork (Excavation)	1,000	CY	$65	**$65,000**
Environmental Mitigation	1	LS	$15,000	
Roadway Supplemental Items	5%			**$377,000**
			subtotal	***$7,930,000***
Mobilization	10%			**$793,000**
Contingency	25%			**$1,990,000**
			Construction Items subtotal	***$10,800,000***
ADMINISTRATION				
Construction Administration	25%			**$2,700,000**
			Subtotal	***$2,700,000***
TOTAL PROJECT COST	**$16,400,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-7

Description: S5 (6), N9 [B9], N10

PROJECT ESTIMATE: November 2018

Length of Path: 2,400 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$1,080,000***
RIGHT OF WAY				
30' Easement	86,000	SF	$2.00	**$172,000**
			Subtotal	***$172,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	480	TON	$120	**$58,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	380	CY	$60	**$23,000**
Decomposed Granite	50	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Structures - Bridge 'B9'	2,400	SF	$300	**$720,000**
Atkinson Street Undercrossing	1	LS	$30,000	**$30,000**
Amtrak Undercrossing	1	LS	$30,000	**$30,000**
UPRR Undercrossing	7,000	SF	$100	**$700,000**
Vernon St. Undercrossing	1	LS	$30,000	**$30,000**
Retaining Walls (< 10')	13,460	SF	$75	**$1,010,000**
Retaining Walls (> 10')	1,500	SF	$125	**$188,000**
Fencing	2,000	LF	$30	**$60,000**
Tree/Brush Removal	3,900	SF	$4	**$16,000**
Supplemental Earthwork (Import)	4,650	CY	$22	**$102,000**
Supplemental Earthwork (Excavation)	570	CY	$65	**$37,000**
Environmental Mitigation	1	LS	$39,000	**$39,000**
Roadway Supplemental Items	5%			**$152,000**
			subtotal	***$3,200,000***
Mobilization	10%			**$320,000**
Contingency	25%			**$800,000**
			Construction Items subtotal	***$4,320,000***
ADMINISTRATION				
Construction Administration	25%			**$1,080,000**
			Subtotal	***$1,080,000***
TOTAL PROJECT COST	**$6,660,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-8

Description: S5 (6), C5, S6

PROJECT ESTIMATE: November 2018

Length of Path: 2,500 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$973,000***
RIGHT OF WAY				
30' Easement	72,000	SF	$2.15	**$155,000**
			Subtotal	***$155,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	460	TON	$120	**$55,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	370	CY	$60	**$22,000**
Decomposed Granite	50	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Atkinson Street Undercrossing	1	LS	$30,000	**$30,000**
Amtrak Undercrossing	1	LS	$30,000	**$30,000**
UPRR Undercrossing	7,000	SF	$100	**$700,000**
Foothills Blvd. South Abutment (Walls & Box Culvert)	160	SF	$200	**$32,000**
Retaining Walls (< 10')	14,180	SF	$75	**$1,070,000**
Retaining Walls (> 10')	5,460	SF	$125	**$683,000**
Fencing	1,400	LF	$30	**$42,000**
Tree/Brush Removal	2,700	SF	$4	**$11,000**
Supplemental Earthwork (Import)	500	CY	$22	**$11,000**
Supplemental Earthwork (Excavation)	510	CY	$65	**$33,000**
Environmental Mitigation	1	LS	$19,000	**$19,000**
Roadway Supplemental Items	5%			**$137,000**
			subtotal	***$2,880,000***
Mobilization	10%			**$288,000**
Contingency	25%			**$720,000**
			Construction Items subtotal	***$3,890,000***
ADMINISTRATION				
Construction Administration	25%			**$973,000**
			Subtotal	***$973,000***
TOTAL PROJECT COST	**$6,000,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 5-9

Description: S5 (6), C5, S6, C6, N10

PROJECT ESTIMATE: November 2018

Length of Path: 3,000 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$1,070,000***
RIGHT OF WAY				
30' Easement	89,000	SF	$2.35	**$210,000**
			Subtotal	***$210,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	560	TON	$120	**$67,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	440	CY	$60	**$26,000**
Decomposed Granite	60	CY	$40	**$3,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Atkinson Street Undercrossing	1	LS	$30,000	**$30,000**
Amtrak Undercrossing	1	LS	$30,000	**$30,000**
UPRR Undercrossing	7,000	SF	$100	**$700,000**
Vernon St. Space Reallocation	1,872	SF	$110	**$206,000**
Foothills Blvd. South Abutment (Walls & Box Culvert)	160	SF	$200	**$32,000**
Vernon St. Undercrossing	1	LS	$30,000	**$30,000**
Retaining Walls (< 10')	14,180	SF	$75	**$1,070,000**
Retaining Walls (> 10')	5,460	SF	$125	**$683,000**
Fencing	1,400	LF	$30	**$42,000**
Tree/Brush Removal	2,900	SF	$4	**$12,000**
Supplemental Earthwork (Import)	500	CY	$22	**$11,000**
Supplemental Earthwork (Excavation)	630	CY	$65	**$41,000**
Environmental Mitigation	1	LS	$20,000	**$20,000**
Roadway Supplemental Items	5%			**$150,000**
			subtotal	***$3,160,000***
Mobilization	10%			**$316,000**
Contingency	25%			**$790,000**
			Construction Items subtotal	***$4,270,000***
ADMINISTRATION				
Construction Administration	25%			**$1,070,000**
			Subtotal	***$1,070,000***
TOTAL PROJECT COST	**$6,620,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 6-1

Description: N11A

PROJECT ESTIMATE: November 2018

Length of Path: 2,700 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$53,000***
RIGHT OF WAY				
30' Easement	81,000	SF	$1.70	**$138,000**
			Subtotal	***$138,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	510	TON	$120	**$61,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	400	CY	$60	**$24,000**
Decomposed Granite	50	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Retaining Walls	0	SF	$75	**$0**
Fencing	0	LF	$30	**$0**
Tree/Brush Removal	1,300	SF	$4	**$5,000**
Supplemental Earthwork (Import)	520	CY	$22	**$11,000**
Supplemental Earthwork (Excavation)	590	CY	$65	**$38,000**
Environmental Mitigation	1	LS	$8,000	**$8,000**
Roadway Supplemental Items	5%			**$7,000**
			subtotal	***$156,000***
Mobilization	10%			**$16,000**
Contingency	25%			**$39,000**
			Construction Items subtotal	***$211,000***
ADMINISTRATION				
Construction Administration	25%			**$53,000**
			Subtotal	***$53,000***
TOTAL PROJECT COST	**$460,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 6-2

Description: N11B, N12

PROJECT ESTIMATE: November 2018

Length of Path: 2,600 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$85,000***
RIGHT OF WAY				
30' Easement	77,100	SF	$1.70	**$132,000**
			Subtotal	***$132,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	480	TON	$120	**$58,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	380	CY	$60	**$23,000**
Decomposed Granite	50	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Retaining Walls	0	SF	$75	**$0**
Fencing	2,600	LF	$30	**$78,000**
Tree/Brush Removal	2,800	SF	$4	**$11,000**
Supplemental Earthwork (Import)	600	CY	$22	**$13,000**
Supplemental Earthwork (Excavation)	560	CY	$65	**$36,000**
Environmental Mitigation	1	LS	$20,000	**$20,000**
Roadway Supplemental Items	5%			**$12,000**
			subtotal	***$253,000***
Mobilization	10%			**$25,000**
Contingency	25%			**$63,000**
			Construction Items subtotal	***$341,000***
ADMINISTRATION				
Construction Administration	25%			**$85,000**
			Subtotal	***$85,000***
TOTAL PROJECT COST	**$650,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 6-3

Description: N11B, C7 [B10], S8 (7)

PROJECT ESTIMATE: November 2018

Length of Path: 3,300 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$1,578,000***
RIGHT OF WAY				
30' Easement	98,800	SF	$4.65	**$460,000**
			Subtotal	***$460,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	584	TON	$120	**$70,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	461	CY	$60	**$28,000**
Decomposed Granite	58	CY	$40	**$3,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Structures - Bridge 'B10'	2,560	SF	$300	**$768,000**
Retaining Walls (< 10')	3,800	SF	$75	**$285,000**
Retaining Walls (> 10')	22,100	SF	$125	**$2,770,000**
Fencing	720	LF	$30	**$22,000**
Tree/Brush Removal	5,400	SF	$4	**$22,000**
Supplemental Earthwork (Import)	17,600	CY	$22	**$387,000**
Supplemental Earthwork (Excavation)	620	CY	$65	**$40,000**
Environmental Mitigation	1	LS	$44,000	**$44,000**
Roadway Supplemental Items	5%			**$222,000**
			subtotal	***$4,670,000***
Mobilization	10%			**$467,000**
Contingency	25%			**$1,170,000**
			Construction Items subtotal	***$6,310,000***
ADMINISTRATION				
Construction Administration	25%			**$1,580,000**
			Subtotal	***$1,580,000***
TOTAL PROJECT COST	**$9,930,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 6-4

Description: S7, S8 (7)

PROJECT ESTIMATE: November 2018

Length of Path: 3,400 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$1,310,000***
RIGHT OF WAY				
30' Easement	101,200	SF	$4.60	**$466,000**
			Subtotal	***$466,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	630	TON	$120	**$76,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	500	CY	$60	**$30,000**
Decomposed Granite	60	CY	$40	**$3,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Vernon St. Undercrossing	1	LS	$30,000	**$30,000**
Retaining Walls (< 10')	8,160	SF	$75	**$612,000**
Retaining Walls (> 10')	22,100	SF	$125	**$2,770,000**
Fencing	0	LF	$30	**$0**
Tree/Brush Removal	6,400	SF	$4	**$26,000**
Supplemental Earthwork (Import)	2,500	CY	$22	**$55,000**
Supplemental Earthwork (Excavation)	640	CY	$65	**$42,000**
Environmental Mitigation	1	LS	$30,000	**$30,000**
Roadway Supplemental Items	5%			**$184,000**
			subtotal	***$3,860,000***
Mobilization	10%			**$386,000**
Contingency	25%			**$965,000**
			Construction Items subtotal	***$5,220,000***
ADMINISTRATION				
Construction Administration	25%			**$1,310,000**
			Subtotal	***$1,310,000***
TOTAL PROJECT COST	**$8,310,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

DOKKEN ENGINEERING

Dry Creek Greenway West
Multi-Use Trail
Feasibility Study

Alignment 6-5

Description: S7, C7 [B10], N12

PROJECT ESTIMATE: November 2018

Length of Path: 3,000 ft.

ITEM	QUANTITY		UNIT COST	ITEM COST
PRELIMINARY ENGINEERING				
Environmental Document & PS&E	25% of Construction Items Subtotal			***$598,000***
RIGHT OF WAY				
30' Easement	89,300	SF	$1.70	**$152,000**
			Subtotal	***$152,000***
CONSTRUCTION ITEMS				
* Asphalt Concrete	530	TON	$120	**$64,000**
** Portland Cement Concrete	0	CY	$300	**$0**
Aggregate Base	420	CY	$60	**$25,000**
Decomposed Granite	50	CY	$40	**$2,000**
Scarify and Recompact Native Material	0	SY	$15	**$0**
Structures - Bridge 'B10'	2,560	SF	$300	**$768,000**
Retaining Walls (< 10')	4,360	SF	$75	**$327,000**
Fencing	1,800	LF	$30	**$54,000**
Tree/Brush Removal	4,800	SF	$4	**$19,000**
Supplemental Earthwork (Import)	15,300	CY	$22	**$337,000**
Supplemental Earthwork (Excavation)	650	CY	$65	**$42,000**
Environmental Mitigation	1	LS	$42,000	**$42,000**
Roadway Supplemental Items	5%			**$84,000**
			subtotal	***$1,770,000***
Mobilization	10%			**$177,000**
Contingency	25%			**$443,000**
			Construction Items subtotal	***$2,390,000***
ADMINISTRATION				
Construction Administration	25%			**$598,000**
			Subtotal	***$598,000***
TOTAL PROJECT COST	**$3,740,000**			

* ASSUMES CITY STANDARD PAVEMENT SECTION

** ASSUMES COUNTY STANDARD PAVEMENT SECTION

Appendix G: Alignment Evaluation Tables

Table 5A - Alignment Evaluation Criteria

Constituency		Rating Criteria	Does the Alignment…
Property Owners	Property owners near the path	Compatibility with Nearby Property	Provide a separation or buffer between sensitive uses and path or path access points?
		Parking & Traffic	Minimize neighborhood traffic and parking by providing access to off-street public parking?
		Aesthetics	Minimize potential for cuts, fills, walls or structures?
	Property owners directly impacted by the path (criteria in addition to those for nearby owners)	Availability of Right-of-Way	Require property from owners willing to sell or grant an easement?
		Public vs. private property	Maximize the use of public property?
		Impact on property	Minimize impacts to existing/planned uses of private property?
Path Users	Walkers and cyclists	Path Design	And path design (width/materials) accommodate anticipated users?
		Path User Comfort	Minimize user exposure to busy roadways and advance a lower stress level environment?
		Transportation System Performance	Provide direct connections between key destinations and other pathways and close gaps?
		Recreation Facility Performance	Result in a continuous off-street facility with well distributed access points?
		Environmental Interpretation	Afford opportunities for enjoyment of natural resources/interpretation?
		Exposure to hazards	Minimize exposure to noise and air pollution?
Public Safety	Property owners and path users	Natural Surveillance	Support visibility of path and minimizes exposure to dark or confined crossings?
		Separation	Provide spatial separation or barriers between adjacent properties and path users to discourage trespassing?
		Emergency response	Provide access points for emergency vehicles?
Environmental	Flora and fauna in the Greenbelt/Path Users	Habitat & Wildlife	Minimize the impact to sensitive environmental resources?
		Flooding	Minimize the potential for obstruction of creek flows or erosion?
Municipal Operations	City of Roseville or Placer County	Utility System Performance	Facilitate access to and minimize the potential for impacts to existing utilities?
		Consistency with Local Plans	Achieve consistency with adopted plans?
		Cost Efficiency	Efficiently use limited resources for construction and maintenance?
Municipal Facilities	Roseville Waste Water Treatment Plant and Corporation Yard	Facility Performance	Facilitate access to and minimize the potential for impacts to existing facilities?
		Compatible with Planned Improvements	Conform with planned facility improvements?
		Security	Maintain or enhance security of the facility?

Table 5B – Evaluation Matrix Summary			
	Alignment		
	Name	Segment Definition	Rating
Area 1	1-1	N1 (1)(2)[B1], N2A (3), N3	7
	1-2	N1 (1)(2)[B1], N2A (3), N3, C1 [B6]	5
	1-3	N1 (1)(2)[B1], N2B (3), N3	7
	1-4	N1 (1)(2)[B1], N2B (3), N3, C1 [B6]	5
	1-5	S1 [B2, B3, B4, B5]	-2
	1-6	S1 [B2, B3, B4, B5], C1 [B6]	-3
Area 2	2-1	N4	-6
	2-2	N4, C2 [B7]	0
	2-3	S2 (4)	4
	2-4	S2 (4), C2 [B7]	5
Area 3	3-1	N5 (5), N6	0
	3-2	N5 (5), C4	-5
	3-3	N5 (5), C3 [B8], S4	-7
	3-4	S3, S4	4
	3-5	S3, C3 [B8], N6	6
	3-6	S3, S4, C4 (5), N6	1
Area 4	4-1	N7A	-1
	4-2	N7B, N7B1	4
	4-3	N7B, N7B2	6
Area 5	5-1	N8A, S6	-2
	5-2	N8A, S6, C6, N10	-1
	5-3	N8A, C5, N9 [B9], N10	4
	5-4	N8B, N9 [B9], N10	0
	5-5	N8B, C5, S6	-5
	5-6	N8B, C5, S6, C6, N10	-4
	5-7	S5 (6), N9 [B9], N10	1
	5-8	S5 (6), C5, S6	-2
	5-9	S5 (6), C5, S6, C6, N10	-1
Area 6	6-1	N11A	10
	6-2	N11B, N12	11
	6-3	N11B, C7 [B10], S8 (7)	-8
	6-4	S7, S8 (7)	-10
	6-5	S7, C7 [B10], N12	5

Key: Recommended alignments are highlighted yellow.
Alternate recommended alignments are highlighted green.

N## = North segment
S## = South segment
(#) = Spur Trail #
[B#] = Bridge #

Table 5C – Estimate of Project Costs				
	Recommended Alignment			
	Name	**Description**	**Segment Definition**	**Cost**
Area 1	1-2	Cook Riolo Road Path to WWTP	N1 (1)(2)[B1], N2A (3), N3, C1 [B6]	**$5,860,000**
Area 2	2-3	Along WWTP/ Corp Yard ROW	S2 (4)	**$1,420,000**
Area 3	3-5	Corp Yard to Booth Road	S3, C3 [B8], N6	**$2,650,000**
Area 4	4-3	Booth – Atkinson – Denio's Ramp	N7B, N7B2	**$220,000**
Area 5	5-3	Rail Yard – Denio's to Vernon	N8A, C5, N9 [B9], N10	**$5,560,000**
Area 6	6-2	Vernon to Riverside	N11B, N12	**$650,000**
			TOTAL PROJECT COST	**$16,360,000**

Table 5D – Area 1 Evaluation Matrix									
			Alignments						
			1-1	1-2	1-3	1-4	1-5	1-6	
Property Owners	Property owners near the path	Compatibility w/ Nearby Property	o	o	o	o	-	-	N1/N2 passes by private property within utility easement, along school and onto large private parcel slated for development. S1 close to existing residences at west end
		Parking & Traffic	o	o	o	o	o	o	No residential areas near access point at Cook Riolo; all alignments may help reduce school traffic if large parcels developed
		Aesthetics	+	+	+	+	+	+	All alignments would mostly follow existing contours through cirrently undeveloped land.
	Property owners directly impacted by the path (criteria in addition to those for nearby owners)	Availability of Right-of-Way	+	+	+	+	-	-	North alignments use existing easements and public land plus one private parcel with planned development; south alignments cross multiple private parcels with apparently unwilling owners.
		Public vs. private property	o	o	o	o	-	-	Nearly 1/3 of north alignments use existing easements or public land. South alignments nealry all on multiple private parcels.
		Impact on property	+	+	+	+	-	-	N1/N2A mostly follow access road and sewer easement; N2B on edfe of developable provets parcel; N3 along access road. S1 close to residences.
Path Users	Walkers and cyclists	Path Design	+	o	+	o	o	-	North alignments following existing terrain mostly on high ground; C1 will require embankment between channels. S1 mostly very low with multiple stream crossings
		Path User Comfort	+	+	+	+	+	+	All alignments would be pleasant and gently rolling with no conflicts
		Trans System Performance	o	+	o	+	-	o	North alignments provide potential for direct access to school; C1 provides connection to Corp Yard.
		Recreation Facility Performance	o	+	o	+	+	+	North alignment has great views at E end of N1 and spur to creek; S1 more shaded and closer to creek.
		Environmental Interpretation	o	o	+	+	+	+	N2 follows edge of woods; S1 close to creek and crosses several times.
		Exposure to hazards	+	+	+	+	+	+	All alignments well-separated from hazards.
Public Safety	Property owners and path users	Natural Surveillance	o	o	o	o	-	-	North alignments close to school and in open areas. S1 more in wooded areas out of sight.
		Separation	o	o	o	o	o	o	North alignments close to one residence and school; West end of S1 close to residences, but separated by creek.
		Emergency response	o	+	o	+	-	o	North alignments provide access from school , potential development and WWTP; S1 more difficult to access except at Corp Yard.
Enviromental	Flora and fauna in the Greenbelt/Path Users	Habitat & Wildlife	+	o	+	o	-	-	North alignments mostly avoid riparian habitats; S1 much lower and closer to creek. Bridges add impacts.
		Flooding	o	-	o	-	-	-	N3 crosses overflow channel; C1 requires embankment in/near the overflow channel. S1 multiple creek crossings has more locations to impact flooding.
Municipal Operations	City of Roseville or Placer County	Utility System Performance	+	+	o	o	o	o	N1, N2A follow sewer easement. N2B close. S1 no impacts on utilities, but does not help access.
		Consistency with Local Plans	+	o	+	o	o	-	N3 impacts access road and bypass channel. C1 potentially impacts access to outflow from WWTP.
		Cost Efficiency	o	-	o	-	+	o	
Municipal Facilities	Roseville Waste Water Treatment Plant and Corporation Yard	Facility Performance	-	-	-	-	o	o	North alignments create access conflicts for WWTP and bypass channel.
		Compatible with Planned Improvements	o	o	o	o	o	o	No planned municipal facilities in Area 1.
		Security	-	-	-	-	+	+	North alignments create security concerns for WWTP.
		TOTAL	7	5	7	5	-2	-3	

Table 4A - Area 1 Alignment Definitions*	
1-1	N1 (1)(2)[B1], N2A (3), N3
1-2	N1 (1)(2)[B1], N2A (3), N3, C1 [B6]
1-3	N1 (1)(2)[B1], N2B (3), N3
1-4	N1 (1)(2)[B1], N2B (3), N3, C1 [B6]
1-5	S1 [B2, B3, B4, B5]
1-6	S1 [B2, B3, B4, B5], C1 [B6]
*Area 1 begins at node “a” and ends at node “d” or “e”	

Table 5E – Area 2 Evaluation Matrix									
			Alignments						
			2-1	2-2	2-3	2-4			
Property Owners	Property owners near the path	Compatibility w/ Nearby Property	o	o	o	o			No affected nrearby properties.
		Parking & Traffic	o	o	+	+			No access points that could affect traffic or local properties. S2 provides potential connection to Corp Yard for employees.
		Aesthetics	-	-	-	-			N4 along levvee; south along back fences of industrial uses.
	Property owners directly impacted by the path (criteria in addition to those for nearby owners)	Availability of Right-of-Way	+	+	+	+			All allignments on public property owned by City.
		Public vs. private property	+	+	+	+			All allignments on public property owned by City.
		Impact on property	-	-	o	o			N4 impact access and security at WWTP, and bypass channel; Corp Yard access impacts mitigation plantings.
Path Users	Walkers and cyclists	Path Design	-	-	o	o			N4 challenging to design along narrow old levee. Narrow and steep slopes near west end for S2, remainder fairly open.
		Path User Comfort	+	+	+	+			All allignments simple and gentle.
		Trans System Performance	o	+	+	+			S2 access to Corp yard; C2 creates opposite side access.
		Recreation Facility Performance	o	o	o	o			None of alignments will be particularly interesting or attractive to users.
		Environmental Interpretation	o	o	o	o			No tmuch of interest in this area due to industrial uses.
		Exposure to hazards	-	-	o	o			N4 susceptible to being isolated by flooding
Public Safety	Property owners and path users	Natural Surveillance	-	-	-	-			All alignments at back of large industrial properties with no other users nearby.
		Separation	-	-	o	o			N4 will require fencing to separate WWTP from path.
		Emergency response	+	+	+	+			Adjacent municpal properties facilitate emergency response.
Enviro mental	Flora and fauna in the Greenbelt/Path Users	Habitat & Wildlife	o	-	o	-			B7 embankment impacts riparian area.
		Flooding	-	-	o	-			N4 susceptible to being isolated by flooding; B7 embankments in flood plain.
Municipal Operations	City of Roseville or Placer County	Utility System Performance	-	+	o	+			N4 creates conflicts with outfall structure access. B7 consistent with potential sewer crossing of creek.
		Consistency with Local Plans	o	+	o	+			B7 consistent with potential sewer crossing of creek.
		Cost Efficiency	+	o	o	-			
Municipal Facilities	Roseville Waste Water Treatment Plant and Corporation Yard	Facility Performance	-	+	o	+			N4 impacts outfall access; B7 provides access across creek for sewer.
		Compatible with Planned Improvements	-	+	o	+			B7 consistent with potential sewer crossing of creek.
		Security	-	-	o	o			N4 requires additional security measures for WWTP.
		TOTAL	-6	0	4	5			

Table 4B - Area 2 Alignment Definitions*	
2-1	N4
2-2	N4, C2 [B7]
2-3	S2 (4)
2-4	S2 (4), C2 [B7]
*Area 2 begins at node “d” or “e” and ends at node “f” or “g”	

Table 5F – Area 3 Evaluation Matrix									
			Alignments						
			3-1	3-2	3-3	3-4	3-5	3-6	
Property Owners	Property owners near the path	Compatibility w/ Nearby Property	-	-	-	o	o	o	N5 along narrow corridor at back of residential/industrial properties, opposition from owners. S3 two properties.
		Parking & Traffic	+	+	+	o	+	o	City propoertry potential parking area.
		Aesthetics	-	-	-	o	o	o	S3 more attractive than N5; some walls required on N5.
	Property owners directly impacted by the path (criteria in addition to those for nearby owners)	Availability of Right-of-Way	o	-	-	-	+	o	N5, N6 use City property; N5 crosses muiltiple private parcels with opposition from some owners. S3 unknown private owner opninons.
		Public vs. private property	o	-	-	-	+	o	N5, N6 use City property; N5 crosses muiltiple private parcels with opposition from some owners. S3 unknown private owner opninons.
		Impact on property	o	o	o	o	+	-	3-6 has most impact on properties. N5 more impacts than S3.
Path Users	Walkers and cyclists	Path Design	-	-	-	o	+	-	N5 tight corridor, walls, close to ball field & fences. S3 follows undeveloped land along top of bank. C4 on bridge as sidepath and out-of-direction.
		Path User Comfort	o	o	o	+	+	-	N5 tight corridor, close to ball field & fences. S3 follows top of bank. C4 on bridge as sidepath and out-of-direction.
		Trans System Performance	o	+	+	+	o	+	Alignments that connect to Atkinson provide best connections.
		Recreation Facility Performance	o	-	o	+	+	-	S3 more attractive than N5. C4 out of direction and along road.
		Environmental Interpretation	o	o	o	o	o	o	All alignments traverse disturbed land.
		Exposure to hazards	o	-	o	o	o	-	C4 takes users onto Atkinson.
Public Safety	Property owners and path users	Natural Surveillance	o	o	o	o	o	o	All alignments at back of large properties with little opportunity for natural surveillance.
		Separation	-	-	-	o	o	o	N5 corridor very narrow and adjacent to existing uses.
		Emergency response	o	+	o	-	o	+	All provide good access for emergency response. Those with N6 or C4 are best.
Environmental	Flora and fauna in the Greenbelt/Path Users	Habitat & Wildlife	o	o	-	o	-	o	B8 has higher impacts.
		Flooding	+	+	o	+	o	+	B8 has higher potential flood impacts; others have little effect.
Municipal Operations	City of Roseville or Placer County	Utility System Performance	+	+	o	-	-	+	N5 potential access to sewer. C4 adds maintenance access from Atkinson.
		Consistency with Local Plans	o	-	-	+	o	+	N6 uses City property. Potential water line along S3, S4.
		Cost Efficiency	+	o	-	+	-	o	
Municipal Facilities	Roseville Waste Water Treatment Plant and Corporation Yard	Facility Performance	o	o	o	+	+	+	N5 potentially affects flood remediation (RSP) along north bank.
		Compatible with Planned Improvements	o	-	o	+	+	o	C4 may not be compatible with build out of Atkinson. S3 compatible with proposed sewer line.
		Security	o	o	o	o	o	o	No impact on security of municpal facilities.
		TOTAL	**0**	**-5**	**-7**	**4**	**6**	**1**	

Table 4C - Area 3 Alignment Definitions*	
3-1	N5 (5), N6
3-2	N5 (5), C4
3-3	N5 (5), C3 [B8], S4
3-4	S3, S4
3-5	S3, C3 [B8], N6
3-6	S3, S4, C4 (5), N6
*Area 3 begins at node “f” or “g” and ends at node “j” or “k”	

Table 5G – Area 4 Evaluation Matrix									
			Alignments						
			4-1	4-2	4-3				
Property Owners	Property owners near the path	Compatibility w/ Nearby Property	-	-	o				1- very close to small back yards with open fences
		Parking & Traffic	-	o	o				1- potentiail for trail parking on residential street
		Aesthetics	-	-	o				1, 2 - very close to open back yards; aesthetic impact on properties
	Property owners directly impacted by the path (criteria in addition to those for nearby owners)	Availability of Right-of-Way	o	+	+				1 -requires private ROW, 2, 3 do not
		Public vs. private property	o	+	+				1 -requires private ROW, 2, 3 do not
		Impact on property	o	+	+				1 - impact private property, 2, 3 do not
Path Users	Walkers and cyclists	Path Design	o	-	-				2, 3 - Sidepath along Booth
		Path User Comfort	+	o	-				2, 3 - along Booth road; 3 along Atkinson
		Trans System Performance	o	o	o				All provide access to trail at more than one location
		Recreation Facility Performance	o	-	-				2, 3 - side path along busy road
		Environmental Interpretation	o	-	-				1 - passes through/by heavily-treed detention basin
		Exposure to hazards	o	o	o				All require crossung at least one residential street, but avoid busy roadway crossings.
Public Safety	Property owners and path users	Natural Surveillance	o	+	+				2, 3 - alignment along roads easily viewed by motorists
		Separation	-	o	+				1-very close to backyards and on farm property, 2-also close to some backyards; 3-separated by sound wall from yards
		Emergency response	o	+	+				All easily accessible from roads, escept part of 1
Environmental	Flora and fauna in the Greenbelt/Path Users	Habitat & Wildlife	o	+	+				1 would require walls along detention basin
		Flooding	+	+	+				No impacts on creek
Municipal Operations	City of Roseville or Placer County	Utility System Performance	+	o	o				1 would be along existing sewer access and expand that access.
		Consistency with Local Plans	o	o	o				All three would be compatible with, but be impacted by proposed interchange improvements.
		Cost Efficiency	-	+	+				1 would require retaining walls; 2,3 along existing grades
Municipal Facilities	Roseville Waste Water Treatment Plant and Corporation Yard	Facility Performance	+	+	+				
		Compatible with Planned Improvements	o	o	o				All three would be compatible with, but be impacted by proposed interchange improvements.
		Security	o	o	o				
		TOTAL	-1	4	6	0	0	0	

Table 4D - Area 4 Alignment Definitions*	
4-1	N7A
4-2	N7B, N7B1
4-3	N7B, N7B2

*Area 4 begins at node “k” and ends at node “n” or “o”

Table 5H – Area 5 Evaluation Matrix												
			Alignments									
			5-1	5-2	5-3	5-4	5-5	5-6	5-7	5-8	5-9	
Property Owners	Property owners near the path	Compatibility w/ Nearby Property	o	o	o	o	o	o	o	o	o	All adjacent properties are industria.
		Parking & Traffic	o	+	+	+	o	+	+	o	+	Aliignments that go N of creek provide potential for parking area.
		Aesthetics	-	-	o	o	-	-	o	-	-	Retaining walls on S6
	Property owners directly impacted by the path (criteria in addition to those for nearby owners)	Availability of Right-of-Way	o	o	+	-	-	-	-	-	-	N8B and S5 require ROW from UPRR; S6 requires private property; N9 may be able to stay in City ROW, but may require UPRR ROW from parking lot
		Public vs. private property	o	o	+	-	-	-	-	-	-	N8B and S5 require ROW from UPRR; S6 requires private property; N9 may be able to stay in City ROW, but may require UPRR ROW from parking lot
		Impact on property	o	o	o	o	o	o	o	o	o	Impacts would be minior to any of the private parcels; all are on currently unused portions of parcels.
Path Users	Walkers and cyclists	Path Design	-	-	-	+	o	o	+	o	o	Geometrics of N8A are challenging-hairpin curve. C-5 design will be challenging due to drainage and grades.
		Path User Comfort	-	-	o	+	o	o	o	-	-	S5 long undercrossing; S6 tight up against undustrial properties
		Trans System Performance	o	o	o	o	o	o	+	+	+	S5 provides direct connection where none exists; all improve bike-ped access across tracks.
		Recreation Facility Performance	-	-	-	-	-	-	+	+	+	S5 traverses mostly undeveloped RR land and stays by creek;
		Environmental Interpretation	-	-	-	-	-	-	+	+	+	S5 traverses mostly undeveloped RR land and stays by creek;
		Exposure to hazards	o	o	o	o	o	o	o	o	o	Security along S5 will be critical; N8A/N8B along road barrier protected, but still close to high-speed traffic.
Public Safety	Property owners and path users	Natural Surveillance	o	o	+	+	o	o	-	-	-	S5 isolated and hidden; N8A/B clse teo traffic; N9 generally visible from Vernon
		Separation	o	o	o	o	o	o	+	+	+	S5 completely seprated; N8A/B separated but close.
		Emergency response	o	o	+	+	o	o	-	-	-	N8A/B and N9 segments prpovide best emergency access; S5 would provide access where it doesn't currently exist.
Enviro mental	Flora and fauna in the Greenbelt/Path Users	Habitat & Wildlife	+	+	+	+	+	+	o	o	o	S5 may have more impacts than N8A/B
		Flooding	+	+	o	o	+	+	-	o	o	S5 and B9 may result in flood concerns.
Municipal Operations	City of Roseville or Placer County	Utility System Performance	o	o	o	o	o	o	o	o	o	None affect utility performance
		Consistency with Local Plans	o	o	o	-	-	-	o	o	o	N8B potentially conflicts more with proposed interchange improvements;
		Cost Efficiency	+	+	+	-	-	-	o	o	o	N8B requires widening Foothills Bridges; S5 requires protective covers and construction low in flood plain; S6 requires large retaining walls.
Municipal Facilities	Roseville Waste Water Treatment Plant and Corporation Yard	Facility Performance	o	o	o	o	o	o	o	o	o	No impacts on WWTP or Corp Yard
		Compatible with Planned Improvements	o	o	o	o	o	o	o	o	o	No impacts on WWTP or Corp Yard
		Security	o	o	o	o	o	o	o	o	o	No impacts on WWTP or Corp Yard
		TOTAL	-2	-1	4	0	-5	-4	1	-2	-1	

Table 4E - Area 5 Alignment Definitions*	
5-1	N8A, S6
5-2	N8A, S6, C6, N10
5-3	N8A, C5, N9 [B9], N10
5-4	N8B, N9 [B9], N10
5-5	N8B, C5, S6
5-6	N8B, C5, S6, C6, N10
5-7	S5 (6), N9 [B9], N10
5-8	S5 (6), C5, S6
5-9	S5 (6), C5, S6, C6, N10
*Area 5 begins at node "j", "n" or "o" and ends at node "r" or "t"	

Table 5l – Area 6 Evaluation Matrix								
			Alignments					
			6-1	6-2	6-3	6-4	6-5	
Property Owners	Property owners near the path	Compatibility w/ Nearby Property	+	+	o	o	o	Some resistance from Apartment/Condo residents along S7
		Parking & Traffic	+	+	+	o	o	N11A/B provide opportunity for staging area north of creek at Vernon
		Aesthetics	o	+	-	-	+	N11A cuts through center of large parcel; Very large walls likely along S8;
	Property owners directly impacted by the path (criteria in addition to those for nearby owners)	Availability of Right-of-Way	o	o	o	o	+	Property owner north of creek may be ammenable to incorporating trail into deve;lopment plans; prefers 6-5.
		Public vs. private property	o	o	o	o	o	All private property
		Impact on property	-	o	o	o	o	N11A through center of large private parcel.
Path Users	Walkers and cyclists	Path Design	+	+	-	-	o	N11A flat and straight; S7 terrain challenging; S8 extremely steep;
		Path User Comfort	+	+	-	-	o	S8 will be narrow and isolated along industrial fences
		Trans System Performance	o	o	+	o	+	C7 provides creek crossing opportunity and potential access to south side residential
		Recreation Facility Performance	o	+	-	-	+	N11A less interesting following sewer access road; S8 along fences
		Environmental Interpretation	-	+	o	o	+	
		Exposure to hazards	+	+	-	-	o	S7, S8 isolated along industrial fences high above creek.
Public Safety	Property owners and path users	Natural Surveillance	+	o	-	-	o	S7, S8 isolated along industrial fences high above creek.
		Separation	+	+	-	-	o	N11A/B would be potentialily integrated into development
		Emergency response	+	o	-	-	o	N11A would be along a maintenance access road.
Environmental	Flora and fauna in the Greenbelt/Path Users	Habitat & Wildlife	+	o	-	-	o	
		Flooding	+	+	o	o	o	C7 and S8 have potential flood impacts
Municipal Operations	City of Roseville or Placer County	Utility System Performance	+	o	o	o	o	N11A follows utility access road.
		Consistency with Local Plans	o	o	o	o	o	No relevant plans
		Cost Efficiency	+	+	-	-	o	B10 and walls along S8 drive up cost
Municipal Facilities	Roseville Waste Water Treatment Plant and Corporation Yard	Facility Performance	o	o	o	o	o	No affects on WWTP or Corp Yard
		Compatible with Planned Improvements	o	o	o	o	o	
		Security	o	o	o	o	o	
		TOTAL	10	11	-8	-10	5	

Table 4F - Area 6 Alignment Definitions*	
6-1	N11A
6-2	N11B, N12
6-3	N11B, C7 [B10], S8 (7)
6-4	S7, S8 (7)
6-5	S7, C7 [B10], N12
*Area 6 begins at node “r” or “t” and ends at node “w”.	

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FEDERAL AND STATE SOURCES

BUILD Transportation Discretionary Grants Program (formerly TIGER)

The U.S. Department of Transportation (DOT) allocated $1.5 billion in discretionary grant funding through the Better Utilizing Investments to Leverage Development (BUILD) Transportation Discretionary Grants program in 2018. BUILD Transportation grants replace the previous Transportation Investment Generating Economic Recovery (TIGER) grant program. The FY 2018 BUILD funds are to be awarded for projects that will have a significant local or regional impact. BUILD funding can support roads, bridges, transit, rail, ports or intermodal transportation.[1] Projects for BUILD will be evaluated based on merit criteria that include safety, economic competitiveness, quality of life, environmental protection, state of good repair, innovation, partnership, and additional non-Federal revenue for future transportation infrastructure investments. The maximum amount of funding awarded in each grant is capped at $25 million. Thirty percent of all funds will be reserved for rural projects.

- **Application Process:** The deadline for the 2018 grant cycle was July 19th, 2018. The timeline for the next round of BUILD grants has not yet been advertised, but grant funding is typically allocated on an annual basis. Grant applications can be found here: https://www.transportation.gov/BUILDgrants
- **Previously funded trail projects:**
  - Nelson Island Accessibility and Transportation Infrastructure Viability Enhancement (N.A.T.I.V.E.) Project, Nelson Island, AK
  - City of Burlington Downtown/Riverfront Revitalization Project, Burlington, Iowa
  - Bridging the Trail Gap: Enhancing, Regional Connections in PA, Philadelphia, PA

[1] Intermodal projects are defined as projects that connect various modes of transportation

    - Additional projects can be found here: https://www.transportation.gov/sites/dot.gov/files/docs/policy-initiatives/tiger/306331/t9-fact-sheets_0.pdf
- **Contact Information:** Office of Infrastructure Finance and Innovation, Office of the Secretary of Transportation, 1200 New Jersey Ave, SE, Washington, DC 20590, phone: 202-366-0301, email: BUILDgrants@dot.gov

Federal Land Access Program

The Federal Lands Access Program (FLAP) provides funds for transportation projects that are located on, adjacent to, or provide access to federal lands. Funds can be used for preventative maintenance, rehabilitation, restoration, and reconstruction of transportation facilities, which includes provisions for pedestrians and bicyclists. Funds are allocated to states using a formula that incorporates road mileage, number of bridges, land area, and visitation.

- **Previously Funded Projects:**
    - Dollar Creek Shared Use Path, Placer County, CA
    - Meeks Bay Bike Path, El Dorado County, CA
    - Rock Creek Road Improvement Project, Mono County, CA
    - A complete list of California projects funded in the last round of funding can be found here: https://flh.fhwa.dot.gov/programs/flap/ca/documents/ca-2017-final-prioritized-projects.pdf
- **Eligible Applicants**: State, county, town, township, tribe, municipal, or local governments.
- **Application Process:** The last call for applicants was in 2017. The program will re-open its call for projects in the winter of 2020. Application information can be found at https://flh.fhwa.dot.gov/programs/flap/.
- **Contact Info:** Frances Ramirez, Program Manager, Office of Federal Lands Highway, phone: (703) 404-6211, email: Frances.Ramirez@dot.gov

Active Transportation Program (ATP) and Transportation Alternatives Program (TAP)

The ATP was created in 2013 by legislation that merged most of the state's major bicycle, pedestrian and trail funding programs, including California's entire share of the federal Transportation Alternatives Program (previously known as Transportation Enhancements), Safe Routes to School, the Bicycle Transportation Account, and a portion of the Recreational Trails Program. ATP program goals include increasing biking and walking trips, improving safety and mobility of non-motorized users, reducing greenhouse gas emissions, and enhancing public health. There is a strong focus on projects that benefit disadvantaged communities. Most recently, the Road Repair and Accountability Act of 2017 Senate Bill 1 (SB1) added approximately $100 million per year in available funds for the ATP. This will nearly double the amount of available funds for the Active Transportation Program. The current funding level is approximately $440 million per year, allocated as follows:

  - Regional share: 40% to Metropolitan Planning Organizations (MPOs), distributed based on total county population;
  - Rural share: 10% to small urban and rural regions with populations of 200,000 or less; and
  - Statewide share: 50% for a statewide competition for projects anywhere in the state

- **Eligible Applicants:** Local, regional or state agencies; transit agencies; natural resource or public land agencies; tribal governments; school districts or schools. A private non-profit tax-exempt organization is eligible to apply independently for Recreational Trails Program funded projects (only about $2.8 million available per year within the ATP); otherwise, for trails or any other eligible projects, non-profits must partner with another eligible applicant.
- **Previously Funded Trail Projects:**
  - Midtown Fresno School Area Multimodal Interconnectivity Project, Fresno, CA
  - Juan Bautista De Anza Trail Gap Closure, Moreno Valley, CA

    - Dry Creek Greenway Multi-Use Trail Project, Roseville, CA
- **Application Process:** The California Transportation Commission (CTC) programs the statewide and rural shares, while the Metropolitan Transportation Commission (MTC) programs the regional share for the Bay Area. The 2018 call for projects deadline was July 31. The next call for projects will be in the spring of 2020. Check the website for more information: http://www.catc.ca.gov/programs/
- **Contact Information**: Laurie Waters, Associate Deputy Director, California Transportation Commission, phone: (916) 651-6145, email: Laurie.Waters@catc.ca.gov. A complete list of Caltrans ATP coordinators can be found here: http://www.dot.ca.gov/hq/LocalPrograms/atp/documents/ATP-District-Coordinators.pdf

Recreational Trails Program (RTP)

The Recreation Trails Program is a federal program that has been part of the federal transportation bill for many years, including the current Fixing America's Surface Transportation Act (FAST Act), signed into law in December 2015. It funds recreation trails and trails-related projects. California's current annual allotment is approximately $5 - 6 million, of which 40% is included in the Active Transportation Program (see above) and the balance (approximately $3 million) is administered by the California Department of Parks and Recreation. Half of this $3 million goes to non-motorized projects, programmed through the Department's Office of Grants and Local Services (OGALS), and half goes to motorized projects, programmed through the Department's Off-Highway Motor Vehicle Recreation Division. There are no set minimum or maximum grant amounts. The program funds up to 88% of the total project cost and requires that the applicant match at least 12% of the total project cost.

Eligible match sources include state, local, or private funds, donated materials and services, or other federal funds. Projects must comply with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act and be listed on the State Transportation Improvement Plan (STIP) or a local Transportation Improvement Plan (TIP).

- **Eligible Applicants:** Cities, counties, districts, state, and federal agencies and non-profit organizations with management responsibilities of public lands.
- **Previously Funded Trail Projects:**
  - San Francisco Bay Trail (Pinole Shores to Bay Front Park section), Pinole, CA
  - Eureka Waterfront Trail (Phase C), Eureka, CA
  - San Sevaine Trail (Segment 2), Fontana, CA
  - City Heights Canyon Loop, San Diego, CA
- **Application Process:** The next non-motorized RTP application cycle will commence in 2019/2020 at the earliest. Check the OGALS RTP webpage for further updates: https://www.parks.ca.gov/?page_id=24324. In the meantime, non-motorized RTP funding is also available through Caltrans' Active Transportation Program (ATP). The Caltrans California Transportation Commission (CTC) 2019 ATP (Cycle 4) had a due date of July 31, 2018. A portion of the funds are included in the ATP, so applicants must apply through that program (see above).
- **Contact Information:** To speak to an OGALS project officer, refer to this list: http://www.parks.ca.gov/pages/1008/files/po_contacts_city_county_2.9.2016.pdf

Affordable Housing and Sustainable Communities (AHSC) Grant Program

Administered by the Strategic Growth Council and implemented by the Department of Housing and Community Development, the AHSC Program funds land-use, housing, transportation, and land preservation projects to support infill and compact development that reduce greenhouse gas (GHG) emissions. Funding for the AHSC Program is provided from the Greenhouse Gas Reduction Fund (GGRF), an account established to receive cap-and-trade auction proceeds.

The AHSC Program will assist project areas by providing grants and/or loans that will achieve GHG emissions reductions and benefit disadvantaged communities through increasing access to affordable housing, employment centers, and key destinations via low-carbon transportation options that result in fewer vehicle miles traveled (VMT). The maximum AHSC Program loan or

grant award or combination thereof is $20 million with a minimum award of at least $1 million in TOD Project Areas and $500,000 in ICP and RIPA Project Areas.

Fifty percent of the available funds are set aside for affordable housing developments, and 50% of the available funds are set aside for projects benefitting disadvantaged communities.[2] This program is heavily focused on housing; only a small proportion of the projects funded to date contained biking or pedestrian elements.

- **Eligible Applicants:** A locality, public housing authority, redevelopment successor agency, transit agency or transit operator, regional transportation planning agency (RTPA), local transportation commission, congestion management agency, joint powers authority (JPA), school district, facilities district, university or community college district.
- **Eligible Activities:**
  - Affordable housing developments
  - Housing-related infrastructure
  - Sustainable transportation infrastructure (Includes active transportation and transportation infrastructure)
  - Transportation-related amenities
  - Program costs (including active transportation, transit ridership, or criteria air pollutant reduction programs)
- **Previously Funded Projects:** The NOFA page has a list of previously funded projects and how much they were awarded: http://www.hcd.ca.gov/grants-funding/nofas.shtml
- **Application Process:** The AHSC has a two-step process. Applications are invited through the issuance the Notices of Funding Availability (NOFA). Applicants must submit a concept proposal for review and evaluation. HCD will notify and invite select applicants to submit a full application based on the ranking of concept proposals and

[2] A single project can address both set-asides above and are not mutually exclusive.

available funds. The next AHSC application is due on February 11, 2019. For More Information, visit HCD's website here: http://www.hcd.ca.gov/grants-funding/active-funding/ahsc.shtml

- **Contact Information:** Phone: (916) 263-2771, email: ahsc@hcd.ca.gov

Urban Greening Grant Program

Administered by the Strategic Growth Council, the Urban Greening Grant Program funds projects that transform the built environment into places that are more sustainable, enjoyable, and effective in creating healthy and vibrant communities by establishing and enhancing parks and open space, using natural solutions to improving air and water quality and reducing energy consumption, and creating more walkable and bikeable communities. Grants are awarded on a competitive basis. The program emphasizes and gives priority to projects that are proposed by and benefit the State's disadvantaged communities. All projects are required to show a net GHG benefit and provide multiple other benefits. To quantify GHG emission reductions, projects must include at least one of the following project activities –

1. Sequester and store carbon by planting trees
2. Reduce building energy use from strategically planting trees to shade buildings
3. Reduce commute, non-recreational and recreational vehicle miles travelled by constructing bicycle paths, bicycle lanes, or pedestrian facilities

The Legislature recently approved $80 million for this program from the Greenhouse Gas Reduction Fund. In January 2018, $24.7 million dollars was allocated for the Round 2 Call for Projects. There is no minimum or maximum project size, and no match is required, although having a match makes an application more competitive. In previous rounds, typical project grants ranged from $75,000 to $1 million.

- **Eligible Applicants:** Public agencies, special districts, JPA's and nonprofit organizations. The grant awards must be used for the preparation, adoption and implementation of an urban greening project that provides multiple benefits.

- **Previously Funded Trail Projects:**
  - Refurbishing and creating four miles of trails that link schools, neighborhoods, and parks, San Diego, CA
  - Creating a ¾ mile bike and pedestrian path that connects low-income neighborhoods to a Metro Station, Burbank, CA
  - Preparing a plan that links greenway corridors, San Pedro, CA
- **Application Process:** The most recent deadline for the Round 2 Call for Projects was April 11, 2018. Guidelines and link to the application can be found here: http://resources.ca.gov/grants/wp-content/uploads/2018/01/Urban-Greening-Guidelines-Round-Two.pdf
- **Contact Information:** For general application process questions, contact the California Natural Resources Agency at (916) 653-2812 or urbangreening@resources.ca.gov

Environmental Enhancement and Mitigation Program (EEMP)

The Environmental Enhancement and Mitigation Program, managed by the Natural Resources Agency, funds projects that reduce environmental impacts of modified or new public transportation facilities such as streets, highways, park and ride facilities, or transit stations. The three categories of projects that are eligible for funding are urban forestry projects, resource lands, and mitigation projects beyond the scope of the lead agency. Although a separate trail category has been removed, trail improvement projects are still eligible for funding if they are combined with an urban forestry or resource lands project. All projects must be directly or indirectly related to offsetting environmental damage and should provide multiple benefits that reduce impacts of climate change. In 2013, the funding level was reduced from $10 million to $7 million annually. Forty percent of project funding is allocated projects in northern California, and 60 percent is allocated to projects in southern California. Individual project grants do not exceed $350,000.

- **Eligible Applicants:** Nonprofit organizations and local, state, and federal agencies. Joint projects between multiple agencies are accepted only if one agency leads.

- **Previously Funded Trail Projects:**
  - Homewood Bike Trail Project, Tahoe City, CA
  - Knickerbocker Channel Multiuse Trail, Big Bear Lake, CA
  - Lacks Creek Recreational Trail System, Humboldt County, CA
  - Additional examples of past awards can be found here: http://resources.ca.gov/grants/past-awards/
- **Application Process:** Applications must be submitted to the office of the California Natural Resources Agency. EEMP is an annual program with the next solicitation expected in April of 2019. For more information, including future grant cycles, check here: http://resources.ca.gov/grants/.
- **Contact Information:** Phone: (916) 653-2812, email: eemcoordinator@resources.ca.gov

Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program funds construction projects that reduce traffic fatalities and serious injuries on public roads or public bicycle and pedestrian paths or trails. Eligible projects must identify a specific safety problem that will be corrected. A minimum of 90% of the project cost must be safety-related construction items and a maximum of 10% of the project cost can be used for non-safety construction items, such as landscaping. The maximum for individual project grants is $1.5 million and the minimum is $100,000. Projects are evaluated based on the benefit/cost (B/C) ratio and the projects with the highest B/C ratio are selected for funding. Proposed projects first go through statewide project selection, which allocates 70%-80% of HSIP funds. Projects that are not selected then go through district project selection, which allocates the remaining 20%-30% of HSIP funds. High Risk Rural Road Projects have a lower statewide B/C ratio cutoff.

- **Eligible applicants:** City, county, or tribal government federally recognized with the State of California.
- **Previously Funded Trail Projects:**
  - Installed guardrail along various sections of Silverado Trail, Napa County, CA

    - Widened shoulder and upgraded drainage along Old Oregon Trail, Redding, CA
    - Installed a concrete abutment on a grade separated crossing on the Clovis Old Town Trail, Clovis, CA
- **Application Process:** Calls for projects are generally made every 1-2 years. Applications must be submitted to the respective Caltrans District Local Assistance Office and directed to the attention of the District Local Assistance Engineer. The most recent application submittal deadline was Friday, August 31, 2018. The HSIP Cycle 10 Call for Projects has not been announced yet. For more information, click here: http://www.dot.ca.gov/hq/LocalPrograms/HSIP/apply_now.htm
- **Contact Information:** a directory of Caltrans District Local Assistance Engineers (DLAE) can be found here: http://www.dot.ca.gov/hq/LocalPrograms/dlae.htm.

Congestion Mitigation and Air Quality (CMAQ) Program

The purpose of the CMAQ program is to fund transportation projects or programs that will contribute to the attainment or maintenance of the National Ambient Air Quality Standards for ozone, carbon monoxide, and particulate matter. The CMAQ program has been reauthorized several times under federal transportation acts - most recently in 2015 through the Fixing America's Surface Transportation Act (FAST Act).n The FAST Act provides approximately $455 million of CMAQ funds annually to California. These funds are distributed to metropolitan planning organizations and regional transportation planning agencies in federally designated air quality nonattainment and maintenance areas within the state.

The Sacramento Area Council of Governments (SACOG) conducts funding rounds to allocate funds to transportation projects based on available apportionments of regional Congestion Mitigation and Air Quality (CMAQ). The funds get distributed through individual funding programs that together make up a funding round. The 2018 Funding Round consists of the Regional Program, Community Design, Regional ATP, Next Generation Transportation Demand Management (TDM), and Green Region programs.

- **Previously Funded Programs:** No information available

- **Application Process:** Project applications are solicited from public agencies and their partners located in the SACOG region
- **Contact Information:** Additional information can be found here: https://www.sacog.org/regional-funding-programs

Regional Surface Transportation Program (RSTP)

California State Statute established the Regional Surface Transportation Program (RSTP) to leverage funds from the Surface Transportation Block Grant Program (STBGP), part of the federal Fixing America's Surface Transportation (FAST) Act. RSTP allows flexibility in state and local transportation decisions, providing flexible funding to address local transportation needs. In the most recent round of funding, California received $320 million in grant funding through this program. The Placer County Transportation Planning Agency (PCTPA) administers this funding source within Placer County.

- **Eligible Applicants:** Cities, counties, and transit agencies
- **Previously Funded Trail Projects:** Trail projects funded by RSTP in the SACOG region include:
  - Folsom/Placerville Rail Trail, Folsom, CA
  - Clarksburg Branch Line Trail Extension, West Sacramento, CA
  - Sprocket Bikeway Improvement, UC Davis, Davis, CA
- **Application Process:** Funds are distributed through individual funding programs (including RSTP) that together make up a funding round.
- **Contact Information:** For more information about the RSTP funding distribution, contact Lilibeth Green, in Caltrans' Office of Federal Transportation Management Program (OFTMP), phone: (916) 654-3521, email: lilibeth.green@dot.ca.gov.

State Transportation Improvement Program (STIP)

The STIP is a five-year capital improvement program for state highway, intercity rail, and regional highway and transit improvements. State law requires that it be updated biennially. The STIP is funded from the State Highway Account (SHA), the primary funds originating from the state gasoline tax and federal (primarily the Transportation Investment Fund) funds. The program provides funding for capital acquisition and construction of state highways and freeways, carpool lanes, local roads, public transit, pedestrian and bike facilities, grade separations, transportation demand management, sound walls, and safety projects.

- **Application Process:** To get a project included for funding in the RTIP, local agencies should work with their congestion management agency. For more information, visit the Caltrans website: http://www.dot.ca.gov/hq/LocalPrograms/STIP.htm or the CTC website: http://www.catc.ca.gov/programs/stip/.
- **Previous Funded Trail Projects:**
  - Humboldt Bay Trail (Eureka to Bracut Segment), Humboldt County, CA
  - Eureka Waterfront and Coastal Trail, Eureka, CA
  - Antelope Run Bike/Ped Path, Tehachapi, CA
  - Laguna Creek Trail - North Camden Spur, Elk Grove, CA
  - Additional examples of past awards can be found here: http://www.catc.ca.gov/programs/stip/2016-stip/2016-stip-staff-recommendations.pdf
- **Contact Information:** Teresa Favila, Associate Deputy Director, California Transportation Commission, phone: (916) 653-2064, email: teresa.favila@catc.ca.gov.

Land and Water Conservation Fund (LWCF)

The Land and Water Conservation Fund provides grants for acquiring and developing public outdoor recreation areas and facilities, with trails being one of the priority development projects. The National Parks Service allocates LWCF grants to state agencies and, in California, the Office of Grants and Local Services within the California Department of Parks and Recreation

allocates LWCF grants to local agencies. In 2018, the Outdoor Recreational Legacy Program (ORLP) allocated $13.3 million for the program. During each funding cycle, each state may nominate up to three projects requesting $250,000 to $750,000 per project application. Applicants must provide a grant request range for the highest desired and lowest acceptable amount of funding the project requires. Project planning costs incurred up to three years before the application is submitted are eligible for reimbursement. Land that is acquired or developed through LWCF is placed under federal protection to be preserved in perpetuity for public outdoor recreational use.

- **Eligible Applicants:** Cities, counties, and districts that are authorized to acquire, develop, operate, and maintain park and recreation facilities.
- **Previously Funded Trail Projects:**
  - Oasis Community Park, Oasis, CA (includes multiuse trail)
  - Civic Center Park, Elk Grove, CA (includes multiuse trail)
  - Previous projects include construction of multi-use bike trails in San Francisco and a walking trail loop in Farmersville. Additional project examples can be found here: https://www.parks.ca.gov/?page_id=21360.
- **Application Process:** The 2018 deadline for the ORLP was July 6, 2018. The next competitive cycle will occur in 2020 at the earliest. For updates, consult the OGALS website: http://www.parks.ca.gov/?page_id=1008.
- **Contact Information:** To contact your local county/city project officer, consult this page: https://www.parks.ca.gov/pages/1008/files/PO_Contacts_City_County_2.9.2016.pdf

Habitat Conservation Fund (HCF)

The Habitat Conservation Fund (HCF), authorized through the California Wildlife Protection Act in 1990, provides grants to programs that bring urban residents into parks, and to trail construction projects that protect wildlife corridors. Funds can be used either for site acquisition or enhancement, restoration, and development, not for both. The California Department of Parks and Recreation allocates $2 million annually through the Office of Grants and Local Services

(OGALS). There are no set minimum and maximum grant amounts, but there is a 50% required match which cannot come from other state funding sources.[3]

- **Eligible Applicants:** Cities, counties, and districts
- **Previously Funded Trail Projects:** Projects recommended for 2018 funding cycle include:
  - Lake Silveira Wildlife Trail, Morgan Hill, CA
  - Austin Waterfront Park Trail, Clearlake, CA
  - Harbor Point Park Trail Extension, Dana Point, CA
  - Additional project examples can be found here: https://www.parks.ca.gov/?page_id=21361.
- **Application Process:** The application deadline for 2018 was October 1, 2018. Grant cycles occur annually. Applications must be sent to the Office of Grants and Local Services.
- **Contact information:** Barbara Baker, phone: (916) 651-7743, email: Barbara.Baker@parks.ca.gov.

Wildlife Conservation Board Public Access Program

The Public Access Program, a Wildlife Conservation Board program established by the Wildlife Conservation Law of 1947, funds projects that improve public access to hunting, fishing or other wildlife-oriented recreation, including trails for hiking and bird watching. Applicants must demonstrate that projects address an existing wildlife-oriented public access need in the area and demonstrate an ability to manage and maintain improvements for 25 years. The Wildlife Conservation Board allocates approximately $1 million annually. Projects with 50% match are preferred.[4]

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[3] https://www.parks.ca.gov/?page_id=21361
[4] https://wcb.ca.gov/Programs/Public-Access

- **Eligible Applicants:** Federal, state agencies, Cities, counties, special districts, and nonprofit organizations and corporations that manage and operate wildlife oriented public access properties or programs.
- **Previously Funded Trail Projects:**
  - Public access to Cosumnes River Reserve, Sacramento County, CA
  - Public access to Rio de Los Angeles State Park, Los Angeles County, CA
  - Replacement of bridge at Battle Creek Wildlife Area, Shasta/Tehama County, CA
- **Application Process:** Application cycles occur annually. Prior to submitting an application, prospective applicants must discuss their projects with Wildlife Conservation Board staff, who will determine whether or not an application should be submitted and what project features need further development. Pre-applications are typically due in early summer, full applications are typically due in late summer.
- **Contact Information:** Sadie Smith, Public Access Program Manager, Wildlife Conservation Board, phone: 916-445-1113, email: sarah.smith@wildlife.ca.gov; Peter Perrine, Assistant Executive Director, Wildlife Conservation Board, phone: (916) 445-1099, email: peter.perrine@wildlife.ca.gov peter.perrine@wildlife.ca.gov

Caltrans Sustainable Planning Grants[5]

Senate Bill 1, The Road Repair and Accountability Act of 2017 (SB 1), provides $31 million for the Sustainable Communities and Climate Change Adaption Planning Grants. Funds can be used for a wide range of transportation planning purposes that address local and regional transportation needs, and implementation of these grants should ultimately lead to adoption of transportation improvements.

During the Fiscal Year (FY) 2018-19 Caltrans Transportation Planning Grant awards, a statewide total of 99 transportation planning projects were selected for grant awards, totaling

[5] For planning purposes only

approximately $29 million. In addition, metropolitan planning organizations will receive $12.5 million in Sustainable Communities Formula grants to further their Regional Transportation Plan/Sustainable Communities Strategy.

- **Previously Funded Trail Projects:**
  - Dracaea Avenue Neighborhood Greenway Corridor Study, Moreno Valley, CA
  - Planning for Future Coastal Rail Trail Segments in an Integrated Transportation Network, Encinitas, CA
  - Brea Creek Trail Gap Closure Feasibility Study, Buena Park, CA
  - A complete list can be found here: http://www.dot.ca.gov/hq/tpp/grant_files/FY_18-19/2.FY18-19_SC_AwardList.pdf
- **Application Process:** the application deadline for the 2019-2020 cycle is November 30th, 2018. The 2019-2020 application guide can be found here: http://www.dot.ca.gov/hq/tpp/grant_files/FY_19-20/03_Final_5OCT18_STPGrantGuideFY2019-20.pdf.
- **Contact Information:** Priscilla Martinez-Velez, Senior Transportation Planner, Grant Management Office of Regional Planning, (916) 651-8196, priscilla.martinez-velez@dot.ca.gov.

Office of Traffic Safety – Pedestrian and Bicycle Safety Program

The Office of Traffic Safety manages a program to increase awareness of traffic rules, rights and responsibilities among various age groups, and to ensure that drivers of motor vehicles understand their need to share the road with pedestrians and bicyclists. These programs are developed to be attractive and interactive in an effort to truly impact students. At the elementary school level, parents and teachers are drawn into the programs as active role models and mentors in traffic safety. Grantees conduct traffic safety rodeos and presentations in an effort to build students' skills and demonstrate proper practical application of those skills. To boost compliance with the law and decrease injuries, safety helmets are properly fitted and distributed to children in need for use with bicycles, scooters, skateboards, and skates. There is a special emphasis on programs designed exclusively for the hard-to-reach population at the middle and

high school levels. Additional outreach endeavors include programs targeting the senior population along with a multicultural approach to address safer driving and walking behaviors.

The goals of the Pedestrian and Bicycle Safety Program are:

  - To reduce the total number of pedestrians killed
  - To reduce the total number of pedestrians injured
  - To reduce the total number of bicyclists killed in traffic related collisions
  - To reduce the total number of bicyclists injured in traffic related collisions
  - To increase bicycle helmet compliance for children aged 5 to 18

- **Previously Funded Trail Projects:** Unknown
- **Eligible Applicants:** Unknown
- **Application Process**: The California Office of Traffic Safety will host several meetings to discuss the application process for the Federal Fiscal Year 2020. These meetings will be held statewide starting in December 2019. Please check the website for updates for time and location: https://www.ots.ca.gov/Grants/Pedestrian_and_Bicycle_Safety.asp.
- **Contact Information**: Phone: (916) 509-3030, email: ContactOTS@ots.ca.gov

REGIONAL AND LOCAL FUNDING SOURCES

Transportation Demand Management Mini-Grant Program

The Sacramento Area Council of Governments (SACOG) is soliciting applications for a pilot transportation demand management (TDM) mini-grant program. This request for grant applications (RGA) describes the eligibility requirements for the program, the project schedule, the grant application evaluation process, the minimum information that must be included in the application, and a sample grant agreement. A total of $60,000 in funding is available through the TDM mini-grant program in two phases ($30,000 for each phase) with applications considered on a rolling basis until all funds for that phase have been awarded. The first phase was open for applications until June 30, 2018. The second phase opened in July, with applications accepted

through December 31, 2018 if funds are still available. SACOG will award mini-grants of up to $3,000 per project in support of small events and non-infrastructure programs or projects to reduce single occupancy vehicle trips and miles by encouraging biking, walking, riding transit, carpooling, vanpooling and teleworking as options for reducing car trips. Projects that focus on testing a new strategy or tactic for changing travel behavior will be prioritized.

- **Previously Funded Trail Projects:** None
- **Eligible Applicants**: Applicants must be located in El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties. Local governments and special districts, nonprofit organizations (e.g. transportation management organizations, community-based organizations business improvement districts, main street associations, neighborhood associations, chambers of commerce, etc.), community colleges, colleges, and universities K-12 public education institutions.
- **Application Process**: Completed application must be submitted to SACOG by December 31, 2018 at 5 p.m. for the second phase. Applications can be found online at: https://www.sacog.org/post/tdm-mini-grant-program. Confirm available funding before completing an application. A full schedule of the Regional ATP milestones can be found here: https://www.sacog.org/pod/state-and-regional-atp-milestones. https://www.sacog.org/post/tdm-mini-grant-program. Confirm available funding before completing an application. A full schedule of the Regional ATP milestones can be found here: .
- **Contact Information**: All questions relating to this request for applications may be directed to Adrienne Moretz, Sacramento Area Council of Governments, phone: (916) 319-5189, email: amoretz@sacog.org.

TDM Traditional Grant

The purpose of SACOG's Transportation Demand Management (TDM) program is to encourage people to drive alone less often by developing and implementing TDM programs, policies, services and/or information that promote bicycling, walking, riding transit, carpooling, vanpooling, and/or teleworking. The Traditional Grants are intended to provide funding for

projects, programs, and events that have been tried, tested, and proven to be effective in changing travel behavior.

A total of $250,000 in funding is available beginning June 25, 2018 through the TDM Traditional Grant program. SACOG will award TDM Traditional Grants of no less than $20,000 per project and no more than $100,000 per project in support of small non-infrastructure projects, programs, or events to reduce single occupancy vehicle trips and miles by encouraging biking, walking, riding transit, carpooling, vanpooling and teleworking as options for reducing car trips. Projects that focus on testing a new strategy or tactic for changing travel behavior will receive a small number of additional points. However, the majority of the weighting is based on the potential of the project to reduce trips and/or miles and having a plan for measuring the behavior change resulting from the project.

- **Eligible Applicants:** Projects must take place in El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba counties. For-profit companies (e.g., contractors, suppliers, or consultants) may be partners in an application, but the lead applicant must be one of the eligible entities listed below. Partnerships are strongly encouraged. Awarded applicants will be responsible for subcontracts with project partners. Eligible applicants include:
    - Local governments and special districts
    - Nonprofit organizations (e.g., transportation management organizations, community-based organizations, business improvement districts, main street associations, neighborhood associations, chambers of commerce, etc.)
    - Community colleges, colleges, and universities K-12 public education institutions
- **Previously Funded Projects:** Unknown
- **Application Process:** The application is available online and the 2018 competition had a deadline of July 25, 2018 at 5 p.m. The Project Review Panel will assist with evaluating, scoring, and recommending projects for award. The list of recommended projects will be taken to SACOG staff, for a recommendation to the SACOG Board of Directors; the Board will have final approval of the awards. The 2018 TDM Grant

Guidelines (including evaluation rubric) are found here: https://sacog.forms.fm/tdm-traditional-grants/forms/5126.

- **Contact Information:** Adrienne Moretz, Sacramento Area Council of Governments, 1415 L Street, Suite 300, Sacramento, CA, 95814, amoretz@sacog.org, (916) 319-5189

Regional Active Transportation Program (ATP)

The ATP, described in the "Federal and State sources" section earlier in this document, is a funding program that encourages increased use of active modes of transportation. Part of the funding source is distributed through a competitive statewide program, and part is distributed competitively by large metropolitan planning organizations (MPOs), including SACOG. The California Transportation Commission (CTC) program funds across four years. The CTC approved a fund estimate on May 16, 2018, which confirmed the following funding levels for Cycle 4: $440 million for the State ATP and $11.6 million for SACOG's Six-County Regional ATP.

- **Eligible Applicants:** These are the same as in the statewide share: Applicants and/or implementing agencies must be able to comply with all the federal and state laws, regulations, policies and procedures. The following entities in California are eligible to apply for Active Transportation Program funds: local, regional or state agencies, Caltrans, transit agencies, natural resources of public land agencies, public schools or school districts, tribal governments, private non-profit tax-exempt organizations, and any other entity with responsibility for oversight of transportation or recreational trails that the Commission determines to be eligible.
- **Previously Funded Trail Projects:**
    - Broadway Complete Streets Project, Sacramento, CA
    - Northwood School and Transit Access Improvements, Sacramento, CA
    - Electric Greenway, Citrus Heights, CA
    - Mariposa Safe Routes to School Project, Phase IV, Citrus Heights, CA

- **Application Process:** 2018 applications for both the statewide and regional ATP were due on July 31, 2018. Projects that are not funded in the statewide share then compete in the regional share. Visit this site for more details**:** https://www.sacog.org/sites/main/files/file-attachments/2019_atp_faqs_4.pdfemily.abrahams@dot.ca.gov.
- **Contact Information:** Emily Abrahams heads the Active Transportation Resource Center, which can provide technical assistance during the application process (phone: 916-653-6920, email: emily.abrahams@dot.ca.gov). Additional points of contact include: Jerry Barton, Senior Transportation Planner, EDCTC, phone: 530.642.5267, email: jbarton@edctc.org; Aaron Hoyt, Senior Planner, PCTPA, phone: 530.823.4032, email: ahoyt@pctpa.net; Victoria Cacciatore, Associate Analyst, SACOG, phone: 916.340.6214, email: vcacciatore@sacog.org.

Transportation Development Act Article 3 (TDA)

TDA 3 allows counties to implement a quarter-cent sales tax to finance a wide variety of transportation projects, including transit operation, bus and rail projects, special transit services for disabled riders, pedestrian and bicycle facilities, and transportation planning. TDA 3 provides funding annually for bicycle and pedestrian projects. This funding source provides Placer County with approximately $450,000 annually.

- **Eligible Applicants:** Under the system currently used by The Placer County Transportation Planning Agency (PCTPA), all cities and the County are allocated Local Transportation Fund (LTF) money based on population. In addition, PCTPA and CTSA are apportioned funds. The City of Roseville is an eligible city.
- **Previously Funded Trail Projects:** Unknown
- **Application Process:** Eligible parties must submit a claim to receive funds. The key parts of the claim are the amount of funding requested and the purpose for which the funds will be used. PCTPA requires this information to ensure that jurisdictions are in compliance with the requirements of the Act. Appendix A of the Guidelines linked below

shows the forms that must be completed and submitted to obtain TDA funds: http://pctpa.net/library/tda/tda_guidelines_Oct2016_Final.pdf

- **Contact Info:** Questions should be directed to Placer County Transportation Planning Agency, phone: 530-823-4030, email: pctpa@pctpa.net

Safe Routes to School National Partnership Launch Program Technical Assistance[6]

The Safe Routes to School National Partnership helps ensures that Safe Routes to School funds succeed in California; they also work to leverage additional resources, and address and improve regional transportation policies. Similar to the Rails-to-Trails Conservancy, they provide technical assistance in the form of consulting, coaching, workshops, webinars, toolkits and trainings to communities planning Safe Routes to School projects and programs.[7]

- **Eligible Applicants:** Selected California communities. In general, they program will provide TA to communities who need help. However, in the previous ATP Cycle 4, program staff could only provide TA to disadvantaged communities as defined by the grant outlines.
- **Previous Funded Projects:** Safe Routes to School Action Plans have been developed for a variety of communities throughout California. Details can be found here: https://www.saferoutespartnership.org/safe-routes-school/local-work/safe-routes-launch/communities
- **Application Process**: Communities interested in applying for the technical assistance for Safe Routes to School Launch Program can complete the interest form online here: https://www.saferoutespartnership.org/sites/default/files/sr_launch_intake_form_2018.pdf.

[6] Technical assistance only
[7] https://www.saferoutespartnership.org/expert-help/safe-routes-launch

- **Contact Information:** Michelle Lieberman, Senior Technical Assistance Manager, phone: 415-637-6488, email: michelle@saferoutespartnership.org,

PRIVATE AND NON-TRADITIONAL FUNDING SOURCES

California Conservation Corps (CCC)

The CCC is not a funding source per se but is included here because they can provide trail construction services. In addition, the Active Transportation Program (described above), provides bonus points in their application process for projects that offer to use the CCC or a California Association of Local Conservation Corps (CALCC) on their project.

The CCC and CALCC are programs that employ young people ages 18-24 to work on improving California's natural resources. The local corps works on projects that conserve or enhance natural resources or provide another public benefit, including construction of trails. The project site must be public land or be publicly accessible. CCC crews can be contracted on an hourly basis, an annual basis, or a per-project basis. The CCC can also be listed as a project partner in grant applications.

- **Eligible Applicants:** Non-profits and local, state and federal agencies.
- **Previous Trail Projects:** Constructed and maintained miles of trails in Six Rivers National Forest, the King Range National Conservation Area, and the Headwaters Forest Reserve
- **Application Process:** Call the local CCC center and discuss the project and needs with a project coordinator to determine if CCC crews can be of assistance and in what capacity.
- **Contact information:** Wei Hsieh, California Conservation Corps, phone: 916-341-3154, email: atp@ccc.ca.gov; Dominique Lofton, California Association of Local Conservation Corps, phone: 916-426-9170, email: info@calocalcorps.org, inquiry@atpcommunitycorps.org.

Benefit Assessments

Local governments, special districts, and park and recreation districts may create a benefit assessment district as a revenue source to pay for services and improvements in that district. Only properties that directly benefit from the services or improvements can be assessed and the assessment must be proportional to the special benefit provided to the property. Charges appear annually on property tax bills.

- **Eligible Applicants:** N/A
- **Previous Trail Projects:** N/A
- **Implementation Process:** Prior to creating a new assessment, the local agency must prepare a report outlining the project, cost, and the benefit formula, and conduct a public hearing to solicit feedback on the proposal. After the agency generates its report, it is then responsible for mailing property owners within the proposed district an invitation to attend a public hearing and a ballot for them to vote on the proposed district. If a majority of the ballots received support the district, the district is officially established, and the assessment will be billed on property tax bills from that year forward. Once established, an assessment may always be repealed or reduced by popular vote. Learn more about the process here: http://www.californiataxdata.com/pdf/benefitsassessment.pdf.
- **Contact information:** For more information, contact California Tax Data, phone: (949) 240-1520, email: info@californiataxdata.com.

People for Bikes Community Grant Program

The People for Bikes Community Grant Program supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride. The program has awarded 395 grants to non-profit and local governments in the United States since 1999 for a total of $3.3 million.

- **Eligible Applicants:** People for Bikes accepts grant applications from non-profit organizations with a focus on bicycling, active transportation, or community development, from city or county agencies or departments, and from state or federal agencies working locally. Requests must support a specific project or program and must not include general operating costs.
- **Previously Funded Trail Projects:**
  - John Campbell Memorial Greenway and Strongs Creek Trail Master Plan, Fortuna, CA
  - A full list of past grants awarded can be found here: https://peopleforbikes.org/grants-awarded/
- **Application Process:** People for Bikes generally holds one or two open grant cycles every year. The grant program has two parts: (1) letter of interest, and (2) full application. The letter of interest should include basic information about the organization and contact person, and an overview of the project proposed for funding. There are two annual grant cycles: one in the spring, and one in the fall. More information can be found here: http://www.peopleforbikes.org/pages/community-grants
- **Contact:** Zoe Kircos, Director of Grants and Partnerships, People for Bikes, phone: 303-449-4893 x106, email: zoe@peopleforbikes.org

Special Taxes

A municipality can impose a special tax for a specific purpose, such as park and recreation or transportation and infrastructure improvements. To levy a special tax, a two-thirds voter approval is required.

- **Eligible Applicants:** N/A
- **Previously Funded Trail Projects:** N/A
- **Implementation Process:** Additional information on voter-approval requirements for local taxes can be found here: https://lao.ca.gov/reports/2014/finance/local-taxes/voter-approval-032014.aspx

- **Contact Information:** Brian Uhler, Principal Fiscal & Policy Analyst, Legislative Analyst's Office, State of California, phone: (916) 319-8328, email: Brian.Uhler@LAO.CA.GOV

Quimby Act

Existing California State laws that govern new residential development allow local entities to charge a monetary exaction or "fee" in connection with the approval of a project. These fees are designed to defray all or a portion of the costs necessary to provide new residents with a wide variety of public facilities. Within this framework, many agencies have the ability to assess park mitigation fees, including counties, cities, and public recreation districts that have completed the appropriate legal processes. The nexus between a development project's impact on recreation and an appropriate offsetting fee is the basis for the Placer County Park Dedication Fee program. Regulations that govern the collection and use of these funds are contained in State law (Govt Code 66477 "Quimby Act," and 66000 – AB1600 "Mitigation Fee Act"), and have been incorporated into the Placer County Code (Section 15.34.010 "Building and Development Parks and Recreational Facilities Fees" and 16.080.100 "Subdivisions Parks and Recreation Facilities" and 17.54.1 OO(D) "Planned Developments").

The development of new residential land uses in the unincorporated areas of Placer County generates an additional need for both active and passive recreational facilities. To mitigate this impact and implement goals and objectives of the Placer County General Plan, Placer County has operated a parkland-dedication/in-lieu-fee program since 1979. Through this program, when a development project does not include the construction of amenities or the dedication of parkland, Placer County collects a park dedication fee. In some cases, a combination of parkland dedication, constructed facilities, and fees is provided. These fees are based on the estimated cost to build recreational facilities that maintain a ratio of five acres of active parkland and five acres of passive parkland per 1,000 residents. This successfully assures that new development projects pay their fair share of the significant costs to provide adequate facilities for Placer County citizens.

- **Eligible Applicants:** Placer County, local schools, special districts
- **Previously Funded Trail Projects:** Unknown
- **Application Process:** More information about the Placer County Park Dedication Fee Program can be found here: https://www.placer.ca.gov/DocumentCenter/View/10084/Park-Dedication-Fee-Program-Overview-PDF?bidId=, and https://www.placer.ca.gov/DocumentCenter/View/10086/PDF-Request-Forms-PDF?bidId=

- **Contact Information:** Placer County Parks Division, phone: 530-889-6837, email: lcarnaha@placer.ca.gov