December 31, 2023

Ballona Creek Bikeway
Phase II

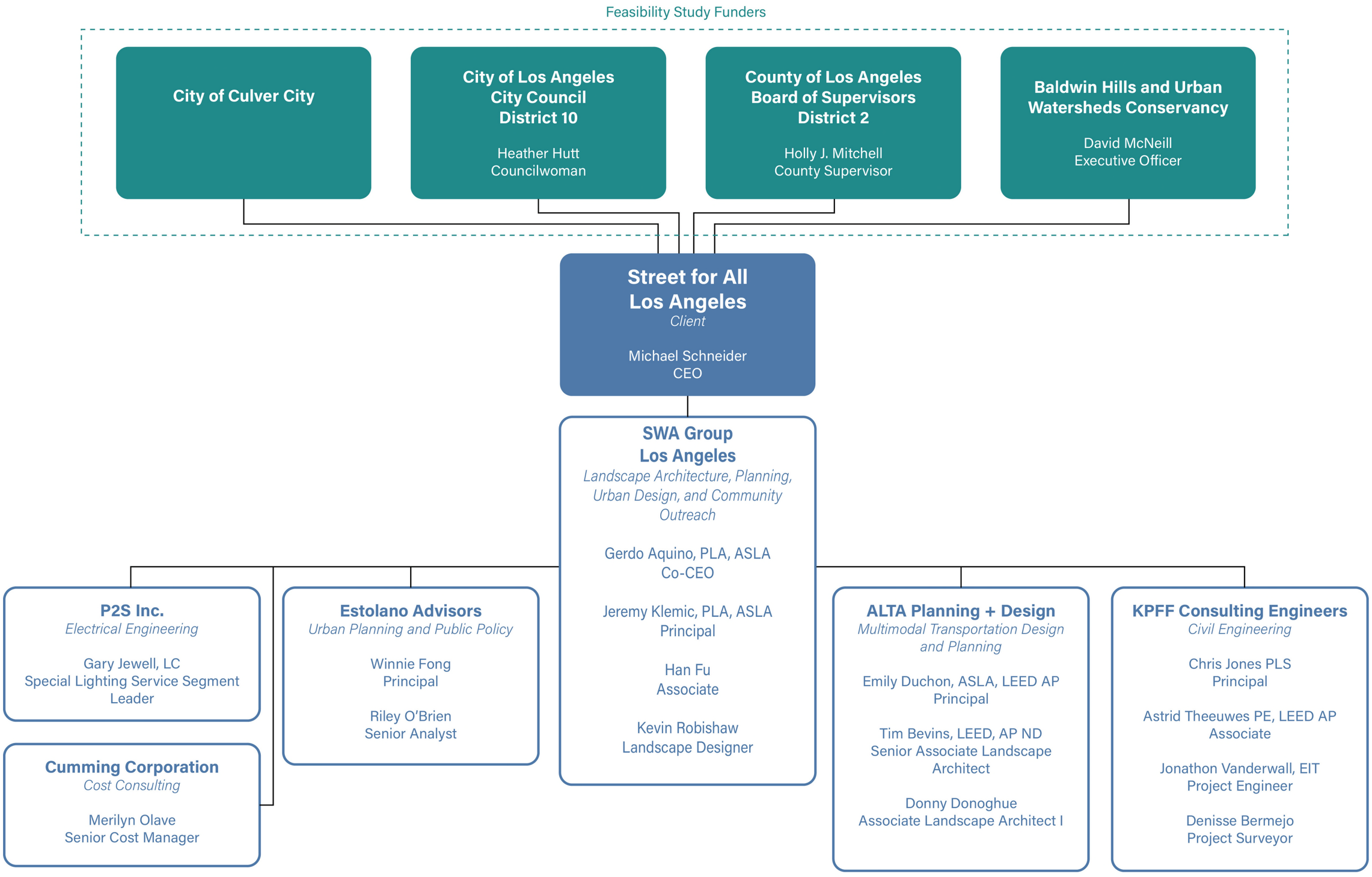




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Feasibility Study Design Report

Organizational Chart



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LA Water Keepers
Heal the Bay

The concepts presented herein are shown for the **purposes of this feasibility study only**. All concepts presented herein are subject to review and approval by the City of Culver City and City of Los Angeles.

Table of Contents

Chapter 1 Introduction

Overview and Purpose
- Project Goals
- Project Background
- Project Boundary and Alignment
- Purpose of Feasibility Study

Chapter 2 Preliminary Site Analysis

Overview
- Existing Site Conditions

Community Fabric Analysis
- Vulnerable Communities
- LA Metro Equity Focus Communities
- Neighborhood Change - Black Population (2010 - 2019)
- Neighborhood Change - White Population (2010-2019)
- Job Center Linkages
- Number of Jobs
- Residents with Jobs
- Unemployment and Sector-Specific Employment
- Workers Commuting By Active Transportation (Bicycle, Walking, or Public Transit)
- Workers Commuting by Bicycle
- Historic, Arts, and Cultural Assets
- Places of Worship, Civic Buildings, and Community Services
- Education and Schools

Mobility Analysis
- Local Transit and Bikeways
- LADOT Livable Streets
- Existing Bike and Transit Access
- Existing and Planned Bike and Transit Connections
- Regional Transit and Bikeway Connections
- Bicycle Collisions (2013-2022)
- Pedestrian Collisions (2013-2022)
- High Injury Network
- Bicycle Level of Traffic Stress
- Pedestrian Level of Traffic Stress

Open Space Analysis
- Parks Proximity
- Analyses by Segment
  - Open Space Adjacent to Channel
  - Space Needed for Class I Pathway
  - Considerations for Development of Class I Pathway
  - Opportunities for Parkspace and Placemaking

Chapter 3 Community Participation

Overview

Outreach Methods

Community Meetings

Online Survey

Survey Results

Chapter 4 Pathway Alignment & Alternatives

Overview
- Key Considerations for Pathway Alignment
- Bikeway Design Standards

Pathway Types
- Primary Route Pathway Types
- Alternative A Pathway Types
- Alternative B Pathway Types

Comparison of Primary Route and Alternatives

Pathway Alignment and Intersection Studies
- Syd Kronenthal Park to Washington Blvd
  - Primary Route
  - Alternative A.1
- Washington Blvd to S Genesee Ave
  - Primary Route
  - Alternative A.2
  - Alternative B
- S Genesee Ave to S Cochran Ave
  - Primary Route

Chapter 5 Row-of-Way Assessment

- **Overview**
- **Property Ownership**
  - Public and Private Owners
  - Property Ownership and Easements
- **Permitting**
  - Permitting Requirements
- **Utilities**
  - Existing Utilities
  - Existing Utility Conflicts and Resolutions
- **Environmental Review (CEQA and NEPA)**

Chapter 6 Preliminary Conceptual Design

- **Overview**
- **Site Amenities**
  - Bike Amenities
  - Seating
  - Trash Receptacles and Water Fountains
- **Lighting**
  - Fixture Types
  - Fixture Placement
- **Signage and Wayfinding**
  - Relevant Plans and Guides
  - Sign Family
  - Wayfinding
    - Primary Route Option
    - Alternative A
    - Alternative B
- **Stormwater Management**
  - Conceptual Stormwater and Drainage Strategy
- **Greenspace Design**
  - Landscape Types
  - Plant Palette
  - Hardscape Materials Palette
  - Linear Park + Parklet Concept
  - Gateway Park Concept

Chapter 7 Supplemental Analysis

- **Overview**
- **Active Trip Potential**
- **Crash Modification Factors**
- **Benefit-Cost Analysis**
  - User Demand
  - Reduction in Motor Vehicle Trips
  - Greenhouse Reduction
- **Safe Routes to School Linkages**

Ch 8 Conceptual Statement of Probable Cost

- **Overview**
- **Probable Costs by Segment**
  - Segment 01 - 07
  - Gateway Park
- **Probable Costs for Route Options**

Ch 9 Options for Implementation

- **Overview**
- **High-Level Summary**
  - Interim Option 01
  - Interim Option 02
  - Full Primary Route Build-Out (from Interim Option 01)
  - Full Primary Route Build-Out (from Interim Option 02)
  - Enhanced Build-Out
- **Grant Opportunities**
  - Funding Needs and Strategic Considerations
  - Active Transportation Grant Opportunities
  - Parks and Green Spaces Grant Opportunities

Appendices

Appendix A: Memorandums on Community Fabric and Traffic Analysis Studies
Appendix B: Community Feedback on Community Fabric and Traffic Analysis Studies
Appendix C: Community Participation Plan
Appendix D: Community Meeting Presentation
Appendix E: Live Meeting Survey Results
Appendix F: Full Online Survey Results
Appendix G: Summary of Civil-Related Opportunities and Constraints
Appendix H: Property Ownership Exhibit
Appendix I: Permitting Requirements Exhibit
Appendix J: Existing Utilities Exhibit
Appendix K: Low Impact Development (LID) Schematic Design
Appendix L: Los Angeles County Flood Control Act
Appendix M: LADWP Encroachment Application Process
Appendix N: CEQA Notice of Exemption Form
Appendix O: Pathway Photometric Studies and Lighting Concepts
Appendix P: Benefit-Cost Analysis Technical Memorandum
Appendix Q: Statement of Probable Cost
Appendix R: Memorandum on Parks and Green Space Funding Opportunities

Chapter 1
Introduction

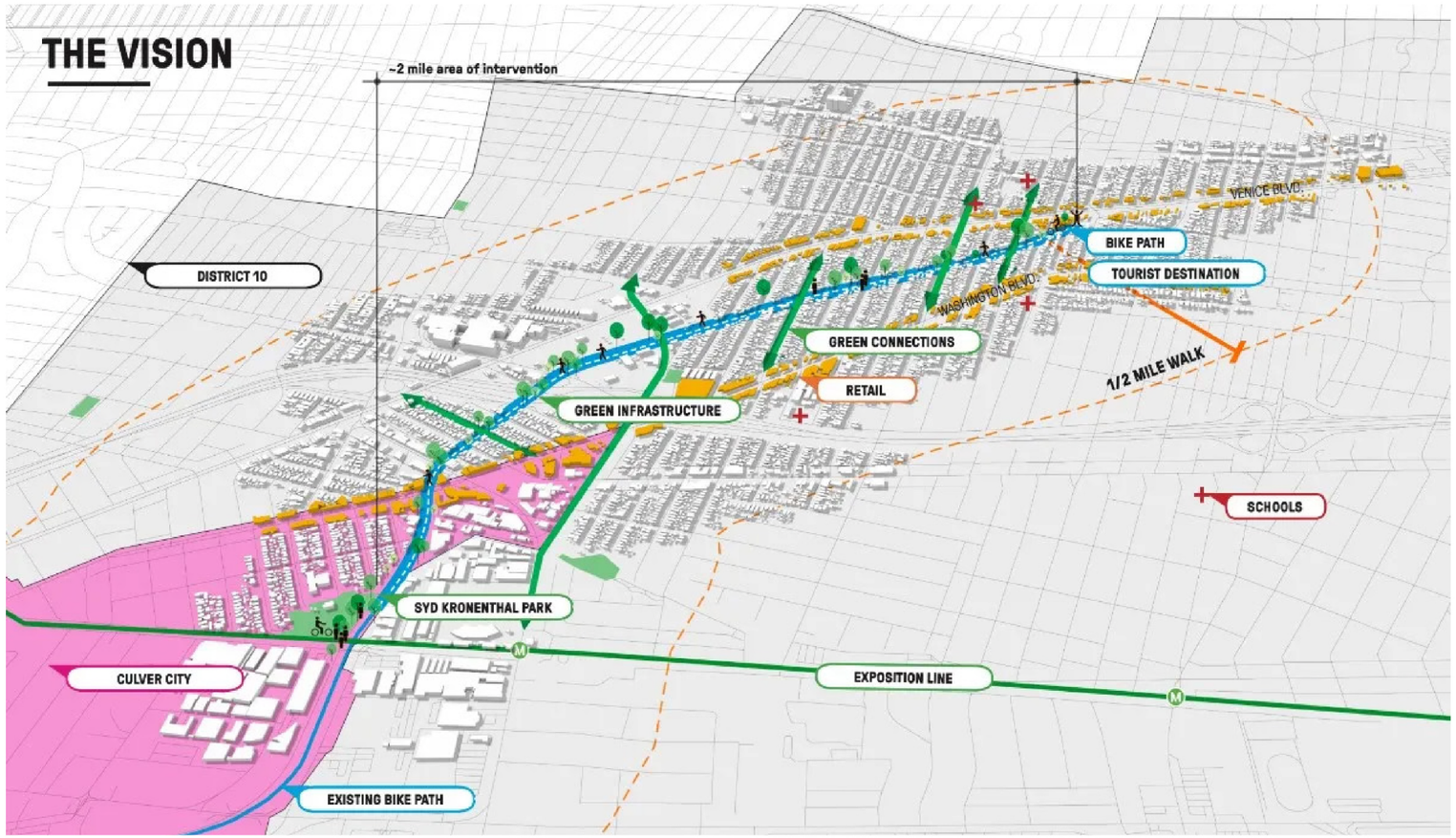
Overview and Purpose

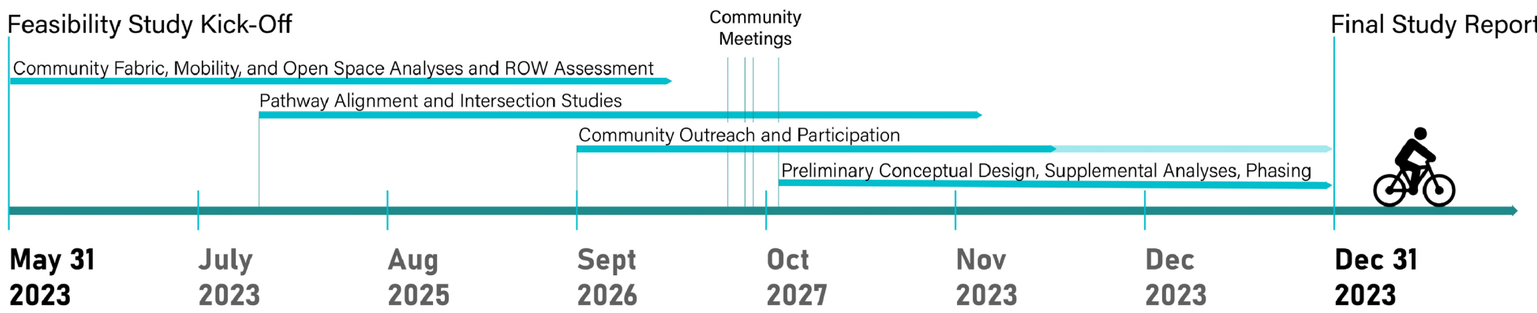
The Ballona Creek Bike Path Phase II Extension will complete a project started decades ago: extending the Ballona Creek Bike Path approximately 2 miles along the remainder of Ballona Creek and creating a primarily Class I off-street shared path all the way from Mid-City, Los Angeles to the ocean at Marina Del Rey.

More than a bike path, the Phase II Extension will generate unique public spaces along Ballona Creek, provide new access to transit, jobs, cultural amenities, and recreation, and model a more sustainable future for mobility on the west side of Los Angeles.

This Feasibility Study examines design challenges, right-of-way jurisdiction, utility conflicts, and permitting requirements, as well as pathway alignment, public space opportunities, and cost alternatives, for extending the Ballona Creek Bike Path by 2 miles from its current terminus at Syd Kronenthal Park in Culver City to the intersection of Cochran Avenue and Venice Boulevard in Mid-City, Los Angeles. As a central component of the Feasibility Study, the project team presented the project to community stakeholders for review and comment and incorporated this feedback into the preliminary conceptual design for the pathway and attendant green spaces.

The Feasibility Study Report consists of a comprehensive report containing community analyses for the area surrounding the proposed extension, assessments of mobility in the surrounding area, an overview the study's community outreach, participation, and feedback processes, conceptual pathway alignment, analyses of property ownership, permitting needs, and potential utility conflicts in the pathway right-of-way, preliminary conceptual design for pathway amenities and green spaces connected to the pathway, supplemental analyses of potential project impacts, estimates of probable project construction costs, and strategies for phasing and grant funding.



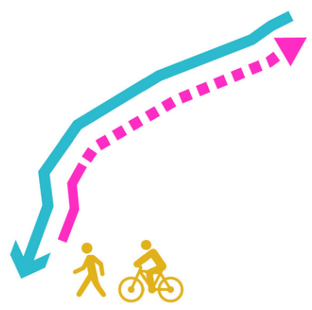


Goals

The goals shown below helped guide the project team's decisions related to pathway alignment, bike and pedestrian facility types, pathway access points, and conceptual green space design. Priorities were further shaped by feedback from surrounding communities. The project goals align with the priorities of potential funding sources, such as those for active transportation (e.g. the California Transportation Commission's Active Transportation Program) and LA County's Safe Clean Water Program, among others. The goals of continuing the existing bike path, connecting communities and people, and creating safe mobility and multi-benefit green spaces are all informed for the urge the construct the project as soon as feasible: originally planned more than 40 years ago but never completed, the time to build Phase II of the Ballona Creek pathway is now. Pathway alignment and design takes into account this desire to "get it done."

Continue

the Ballona Creek Bike Path

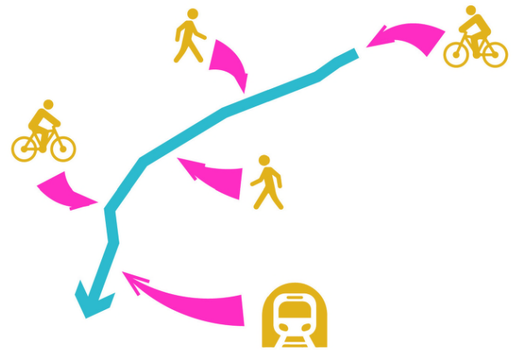


Goals for Experience

- Direct, continuous, and intuitive route
- Pathway continues directly alongside the Ballona Creek channel where feasible
- Trail-like experience - even if the route must continue on-street
- Dedicated facility of adequate width for users

Connect

Communities and People



Goals for Access

- Designed for commuters, as well as recreational cyclists and pedestrians
- 24/7 access and use
- Connected to city-wide transportation networks
- Frequent access points for neighbors around the pathway
- Connected to businesses and amenities

Create

Safe Mobility and Multi-Benefit Green Spaces



Goals for Safety, Mobility, and Public Space

- Safe, low stress pathway for walkers and cyclists of all ages and abilities
- Separated from vehicles
- Road crossings prioritize trail users
- Route minimizes conflict points with vehicles
- Integrated with new multi-benefit green spaces
- Takes advantage of opportunities to capture water and improve water quality along Ballona Creek

Get It Done

Goals for Cost and Feasibility

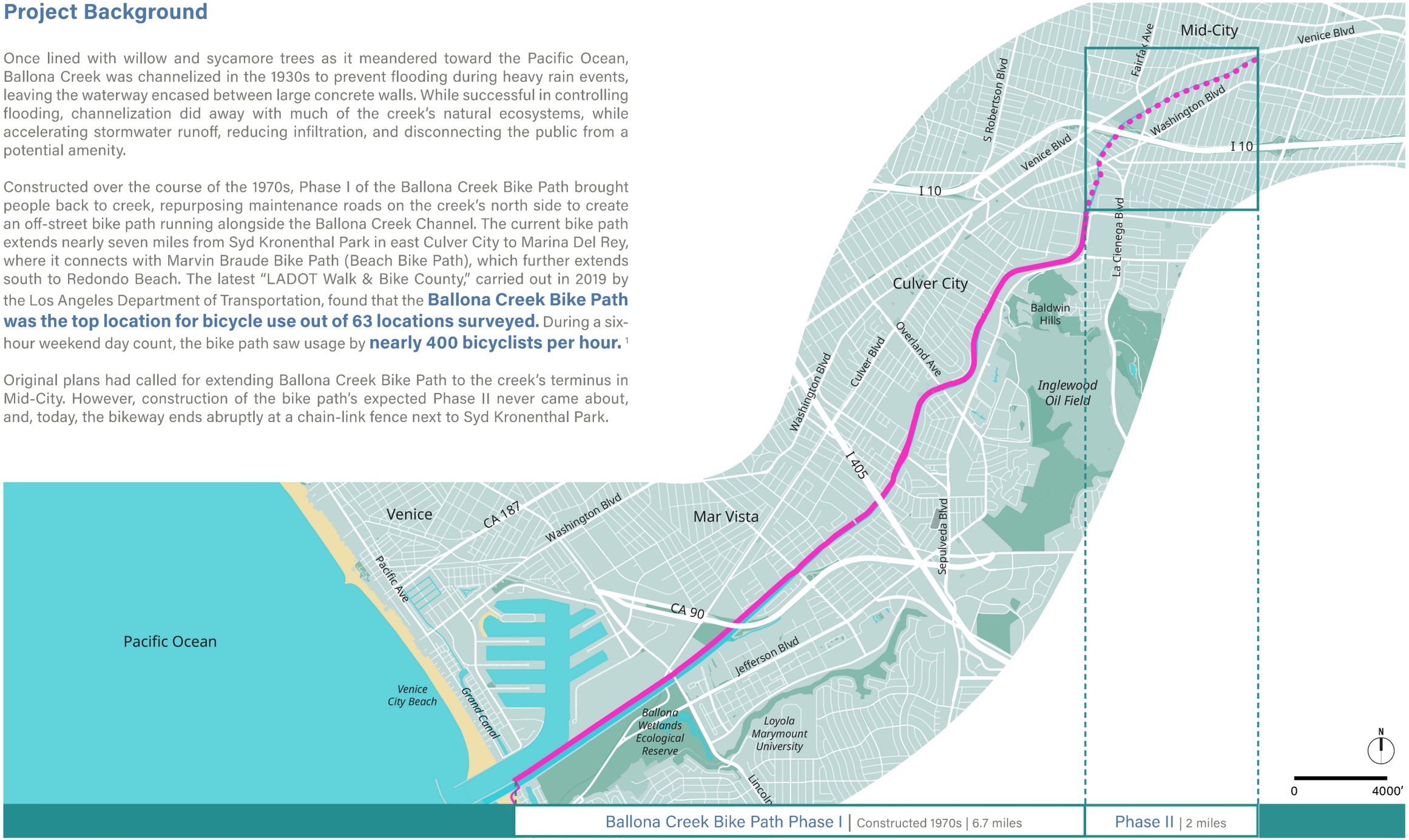
- Minimizes probable costs, amount of coordination needed (number of permitting entities and length of permitting process), and construction timelines to ensure the pathway is built as soon as possible - ideally by the 2028 Olympics in Los Angeles

Project Background

Once lined with willow and sycamore trees as it meandered toward the Pacific Ocean, Ballona Creek was channelized in the 1930s to prevent flooding during heavy rain events, leaving the waterway encased between large concrete walls. While successful in controlling flooding, channelization did away with much of the creek's natural ecosystems, while accelerating stormwater runoff, reducing infiltration, and disconnecting the public from a potential amenity.

Constructed over the course of the 1970s, Phase I of the Ballona Creek Bike Path brought people back to creek, repurposing maintenance roads on the creek's north side to create an off-street bike path running alongside the Ballona Creek Channel. The current bike path extends nearly seven miles from Syd Kronenthal Park in east Culver City to Marina Del Rey, where it connects with Marvin Braude Bike Path (Beach Bike Path), which further extends south to Redondo Beach. The latest "LADOT Walk & Bike County," carried out in 2019 by the Los Angeles Department of Transportation, found that the **Ballona Creek Bike Path was the top location for bicycle use out of 63 locations surveyed.** During a six-hour weekend day count, the bike path saw usage by **nearly 400 bicyclists per hour.** [1]

Original plans had called for extending Ballona Creek Bike Path to the creek's terminus in Mid-City. However, construction of the bike path's expected Phase II never came about, and, today, the bikeway ends abruptly at a chain-link fence next to Syd Kronenthal Park.



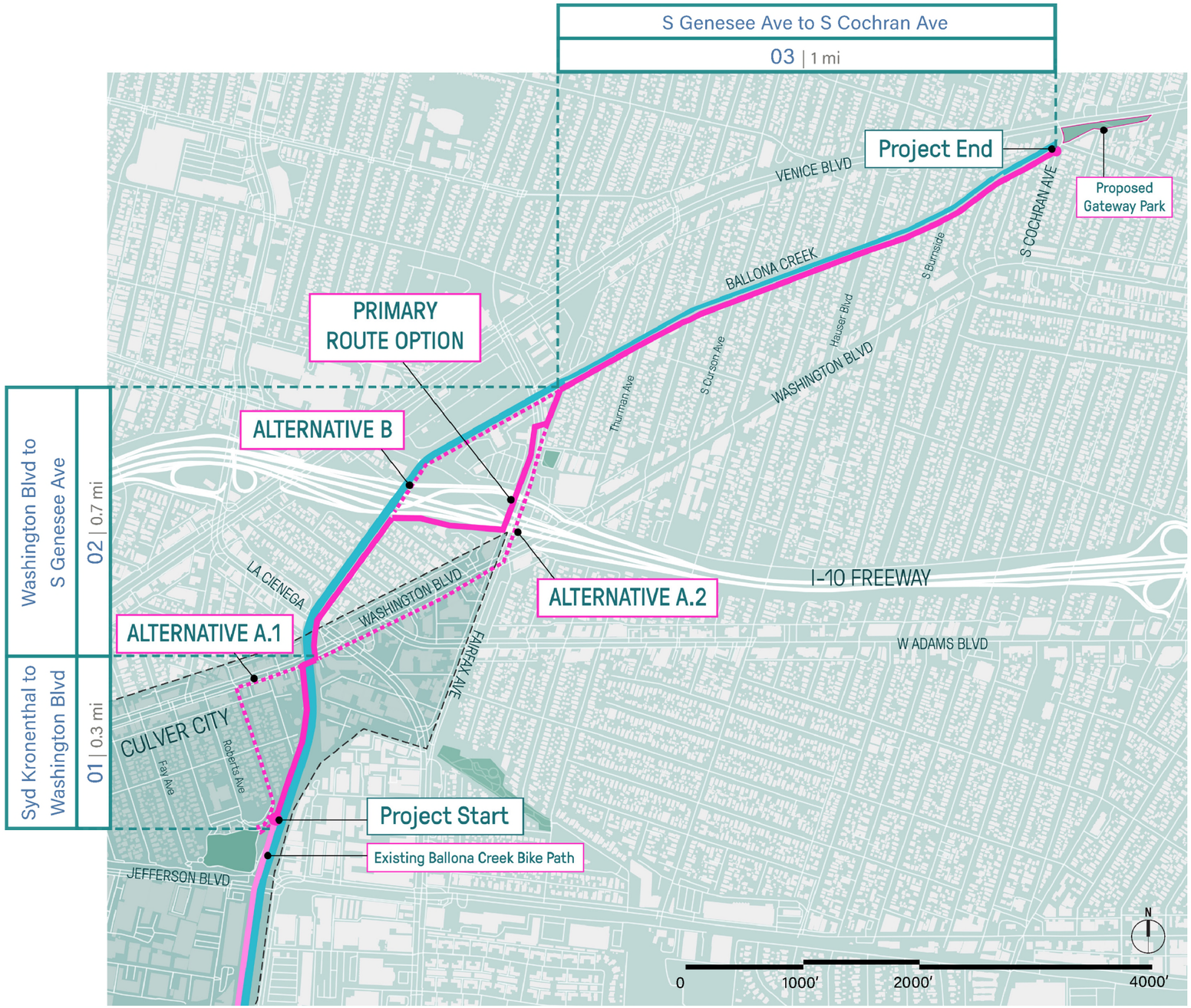
Project Boundary and Alignment

This Feasibility Study examines the feasibility of creating pathway for bicyclists and walkers and new green spaces along the stretch of Ballona Creek running from Syd Kronenthal Park in east Culver City, where Phase I of the Ballona Creek Bike Path ends, to the intersection of Cochran Avenue and Venice Boulevard in Los Angeles, where Ballona Creek ends and where the bikeway might connect with planned and potential improvements to bus and bicycle infrastructure along Venice Blvd. This portion of Ballona Creek covers a distance of approximately two (2) miles. Analyses in support of this Feasibility Study – of transit and bike linkages, demographic data, job center connections, potential bicycle usage, and active transportation modeling - extends to the areas and neighborhoods surrounding this portion of Ballona Creek, including Culver City and the Mid-City and the West Adams neighborhoods of Los Angeles.

Purpose of Feasibility Study

This Feasibility Study covers only the initial stage of development. The study is intended to be utilized to support a separate project which will include schematic design, final design, and construction of the bikeway and adjacent public space. As such, the goals of the Feasibility Study are:

- Identify opportunities for and challenges to extending a Class I off-street shared path along the remainder of Ballona Creek and adding complementary parkspace.
- Evaluate multiple options for pathway alignment and develop treatment options for key road crossings based on project goals related to experience, access, safety, mobility, and feasibility.
- Examine potential usage and user patterns.
- Provide local stakeholders and residents with the opportunity for input during the initial stage of the project.
- Develop a statement of probable cost.



Endnotes

1 Los Angeles Department of Transportation, 2019 LADOT Walk & Bike Count, 2021. https://ladot.lacity.org/walkbikecount
2 Los Angeles Department of Transportation, 2019 LADOT Walk & Bike Count, 2021. https://ladot.lacity.org/walkbikecount

Chapter 2
Preliminary Site Analysis

Overview

The Feasibility Study began with an analysis of existing conditions along the proposed project route. Site analysis was guided by the goal of extending a Class I shared pathway along the remainder of Ballona Creek and complementing the bikeway with a series of linear park spaces tied to the communities the pathway passes through. To that end, site analysis focused on the three following areas.

Community Fabric Analysis

The proposed pathway extension passes through several communities from Mid-City, Los Angeles, to Culver City. These communities range from primarily residential to largely commercial. The project team studied linkages to community assets (from historic, arts, and cultural assets to schools and places of worship), as well as connections between workers and job centers and the proximity of vulnerable communities to the proposed pathway. The pathway holds the potential to strengthen cultural, educational, and economic connections, while softening socioeconomic divisions.

Mobility Analysis

Studies included examinations of existing and planned transit and bicycle facilities, measures of pedestrian and cyclist safety, and levels of stress currently experienced by pedestrians cyclists on streets around the proposed pathway. The project team found that the proposed pathway extension holds the potential to increase pedestrian and cyclist safety, while supplementing existing and planned bicycle and public transit infrastructure.

Open Space Analysis

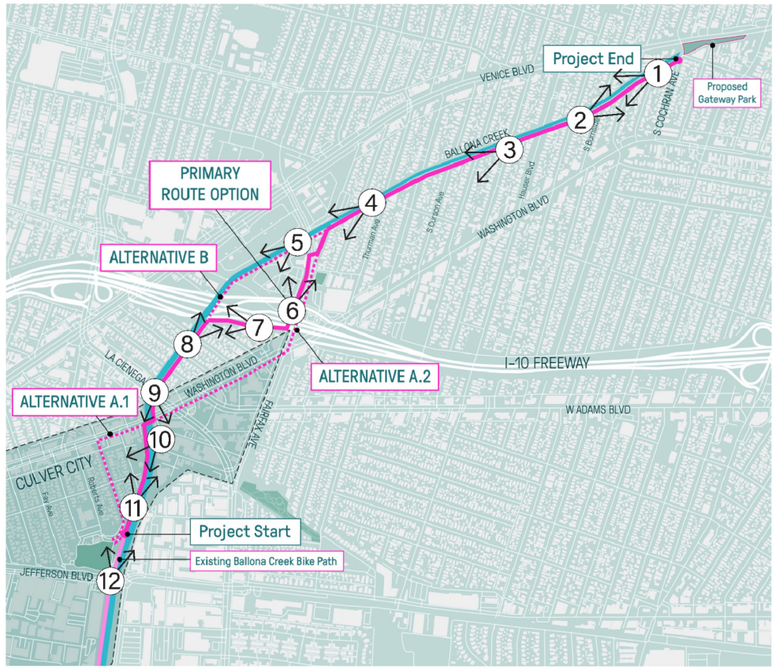
Undeveloped space adjacent to Ballona Creek was examined to determine the feasibility of developing a Class I pathway, as well as linear park space, directly along the channel. Considerations are highlighted, as are opportunities for new public spaces along the pathway's route.



Excerpts from site analysis mapping

Existing Site Conditions

The areas alongside the remainder of Ballona Creek are characterized by stretches of undeveloped, underutilized, and generally unmaintained open space adjacent to the Ballona Creek channel. In the Mid-City portion of the route (from Fairfax Ave to S Cochran Ave), this open space is generally wide (between 20' and 40') and flat (see Photo 1 for instance). In other segments, such as from Syd Kronenthal Park to La Cienega Blvd, this open space is narrower and more steeply sloped (see Photo 10). At points along the route, obstacles to travel immediately alongside the channel had to be considered. These include the DWP Palms Yard (Photo 5), the transition in channel profile near the end of the existing path (see Photo 11), as well as the I-10 Freeway.

























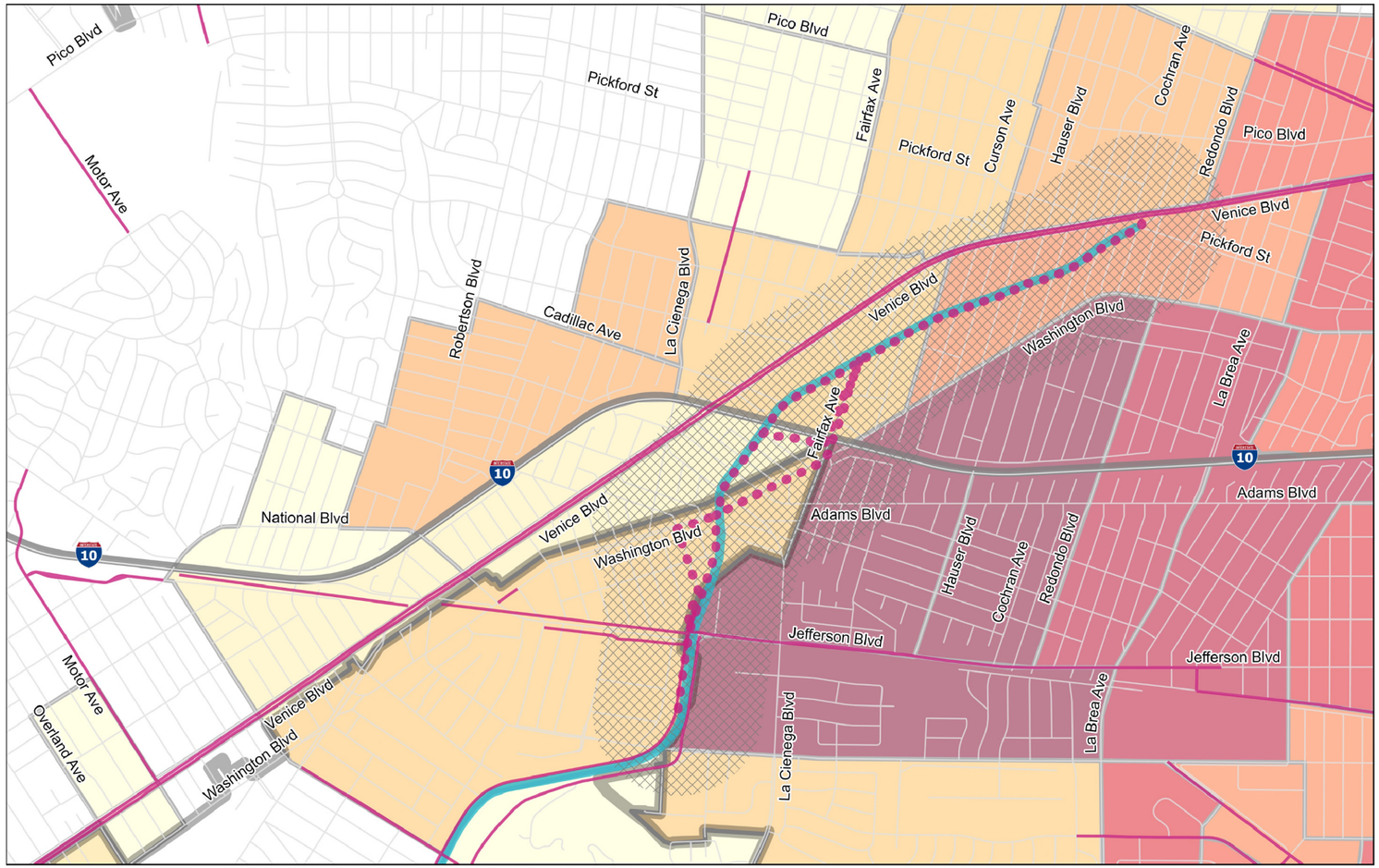


Vulnerable Communities

Pedestrian and bicycle infrastructure can provide substantial benefits to communities facing disproportionate economic and environmental challenges. Many communities of color and low-income communities endure disproportionate harms from pollution and related environmental and health hazards. The concept of "environmental justice" is defined by California state law as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies," and recent legislation such as Senate Bill 535 and Senate Bill 1000 explicitly prioritize programs and investments which advance environmental justice. In Los Angeles County, Metro has also emphasized serving communities facing relatively high transportation needs as part of their 2022 Equity Platform.[1] Investments such as the proposed Ballona Creek Bike Path extension can advance these goals and counteract decades of disinvestment in these communities.

Census tracts within a ¼ mile of the proposed extension range from the **50th to the 100th percentile of the most impacted census tracts in California**. Most of the tracts southeast of the bike path are in the highest percentile categories, indicating that they are **disproportionately burdened by pollution relative to other tracts in the state**.[2] Many of these tracts are also "Equity Focused Communities" according to Metro, as is the tract northeast of Cadillac Ave and Robertson Blvd.[3] Extending the bike path could provide additional travel options, opportunities for exercise, and reductions in vehicle emissions for residents in some of the most vulnerable communities in the area.

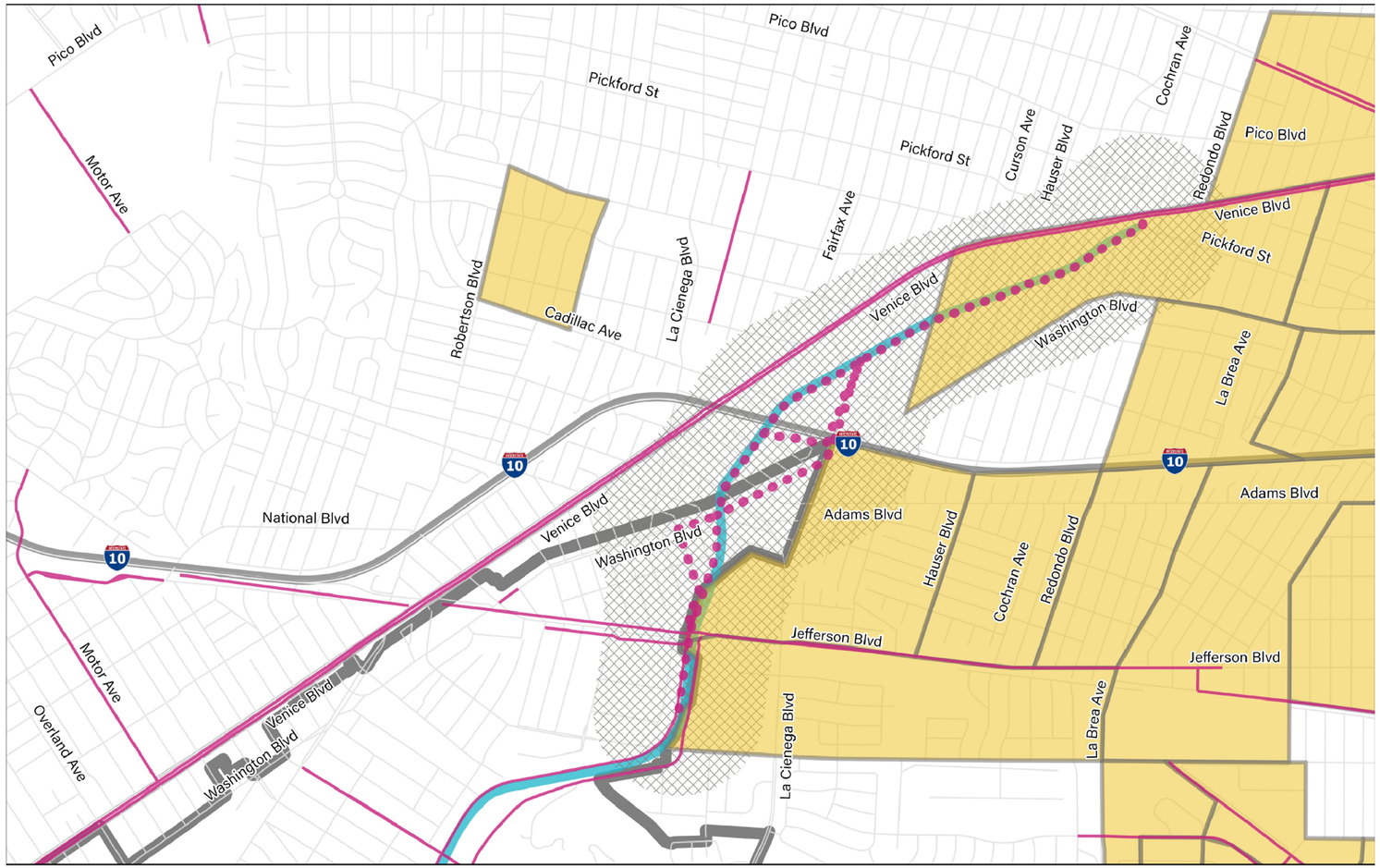
The proposed path extension has the potential to impact property values and the speculative real estate market, which can result in increased gentrification and displacement pressures due to new development and increased rents in the area. City officials and community leaders should enact protections from displacement to ensure that vulnerable community members can realize the benefits of the proposed bikeway extension.



LA Metro Equity Focus Communities

In Los Angeles County, Metro has emphasized serving communities facing relatively high transportation needs as part of their 2022 Equity Platform. The project team examined data on transportation need in Los Angeles County by census tract from Metro, which designates certain census tracts as "Equity Focused Communities" (EFCs). EFCs include high concentrations of low-income households; Black, Indigenous, or People of Color (BIPOC) residents; and/or households without private automobile access.[4] Many of the **census tracts southeast of the proposed extension are Equity Focused Communities (EFCs)** according to Metro, as is the tract northeast of Cadillac Ave and Robertson Blvd.

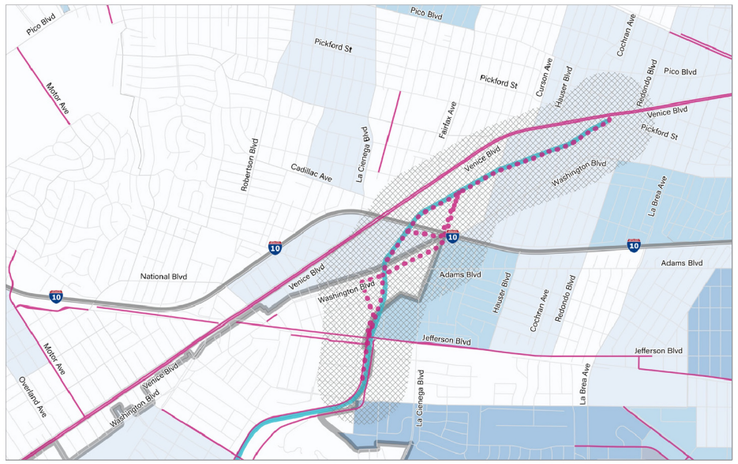
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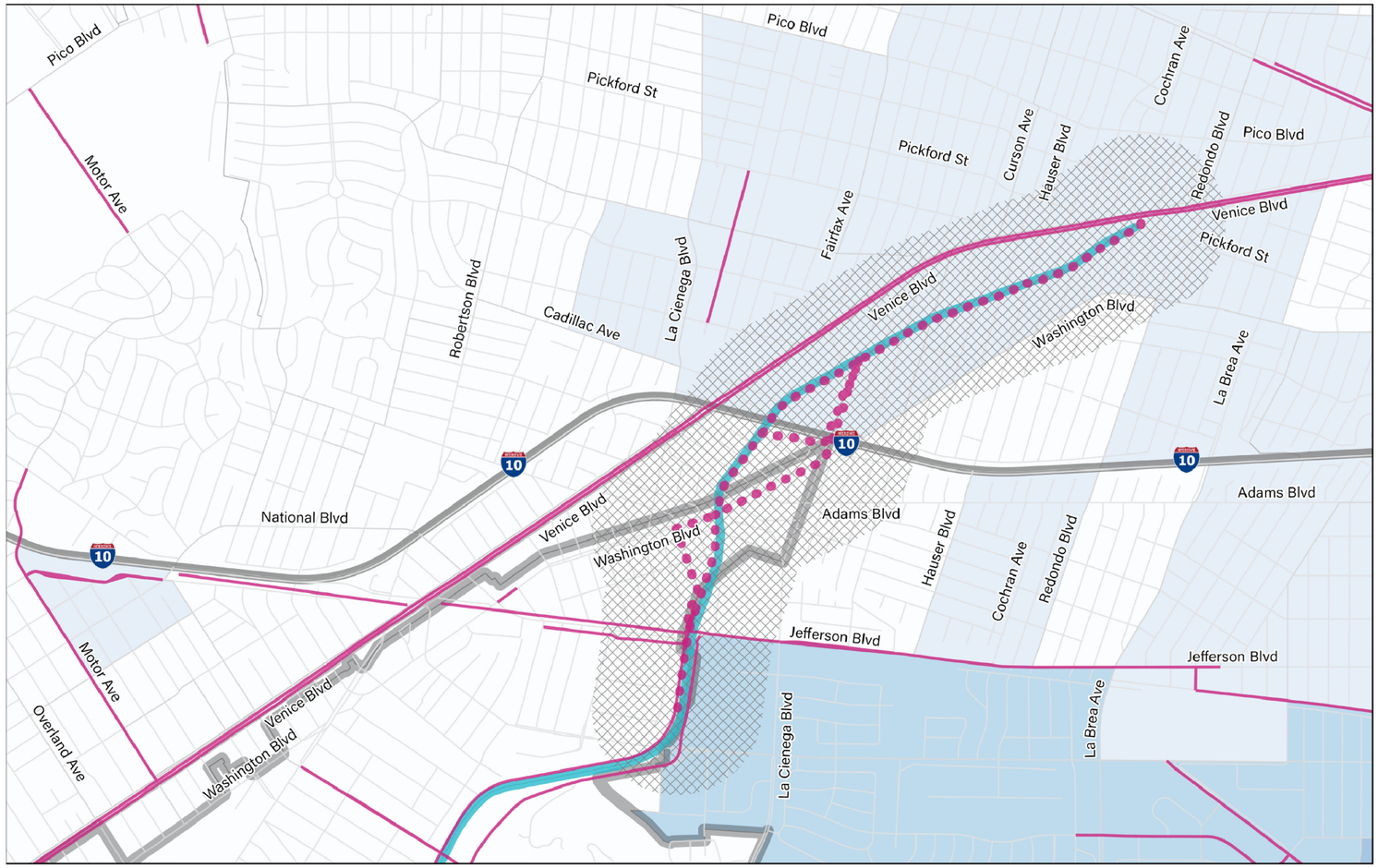
Neighborhood Change
Black Population (2010-2019)

East of the proposed extension, the population share of Black residents has generally declined, whereas the population share of non-Hispanic White residents has generally increased. The census tract immediately southeast of the intersection of Washington Blvd and Fairfax Ave showed a decrease of over 20 percentage points in the population share of Black or African American households between 2010 and 2019.

Black Population Share, 2010



Black Population Share, 2019



Legend

- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Within 1/4 Mile of Proposed Extension
- Existing Class I, Class II, or Class IV Bicycle Facility

Black Population Share

- 81% - 100%
- 61% - 80%
- 41% - 60%
- 21% - 40%
- 0% - 20%

N

0 1,000 '

Neighborhood Change
White Population (2010-2019)

During this period, the share of non-Hispanic White residents increased in the tracts directly northeast of the proposed terminus at Venice Blvd and Cochran Ave. Implementing anti-displacement measures alongside the proposed bikeway extension may help ensure that long-term Black residents, and other residents of color, will benefit from the bikeway and related amenities.

Non-Hispanic White Population Share, 2010



Non-Hispanic White Population Share, 2019



Legend

- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Within 1/4 Mile of Proposed Extension
- Existing Class I, Class II, or Class IV Bicycle Facility

Non-Hispanic White Population Share

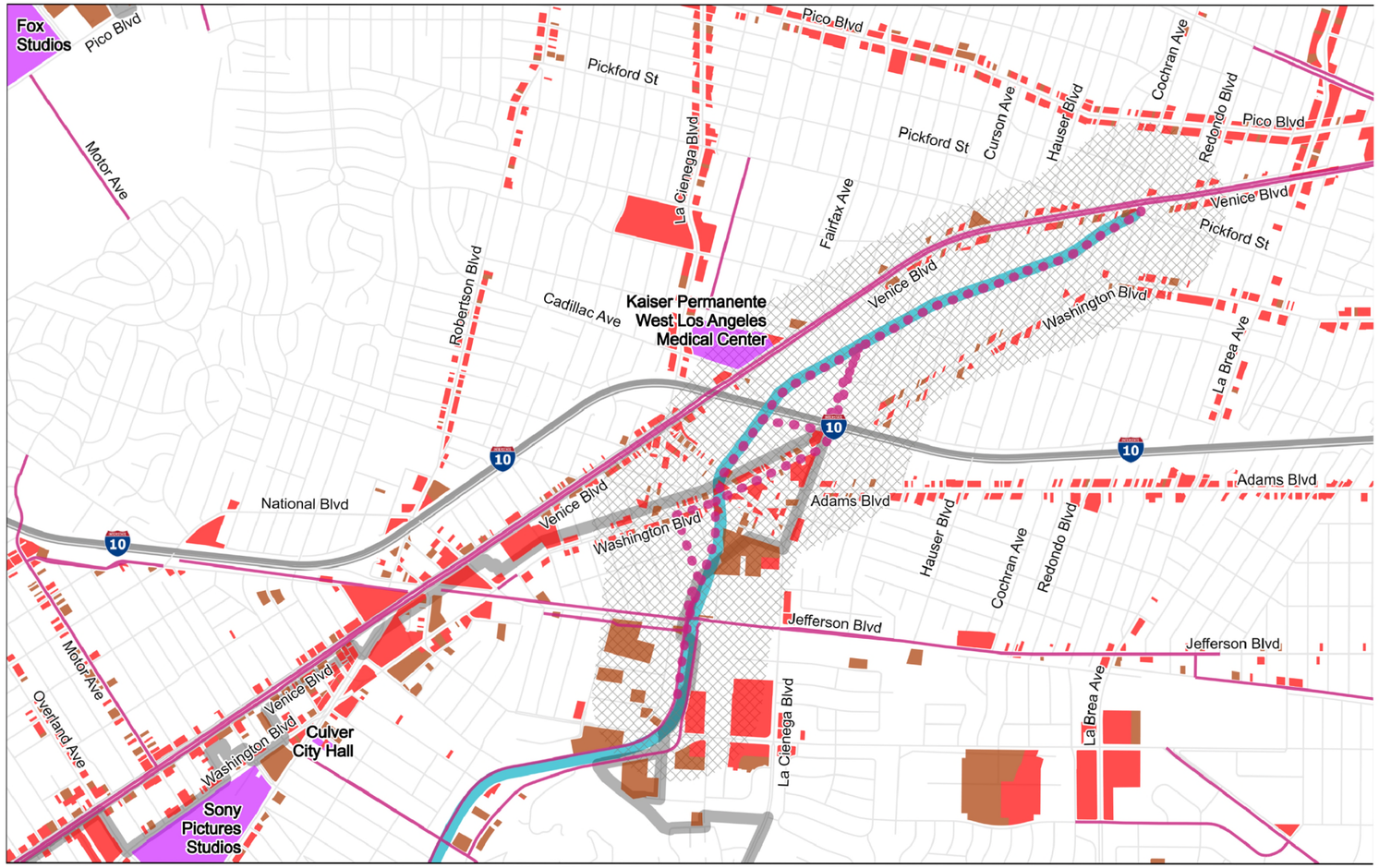
- 81% - 100%
- 61% - 80%
- 41% - 60%
- 21% - 40%
- 0% - 20%

N

0 1,000 '

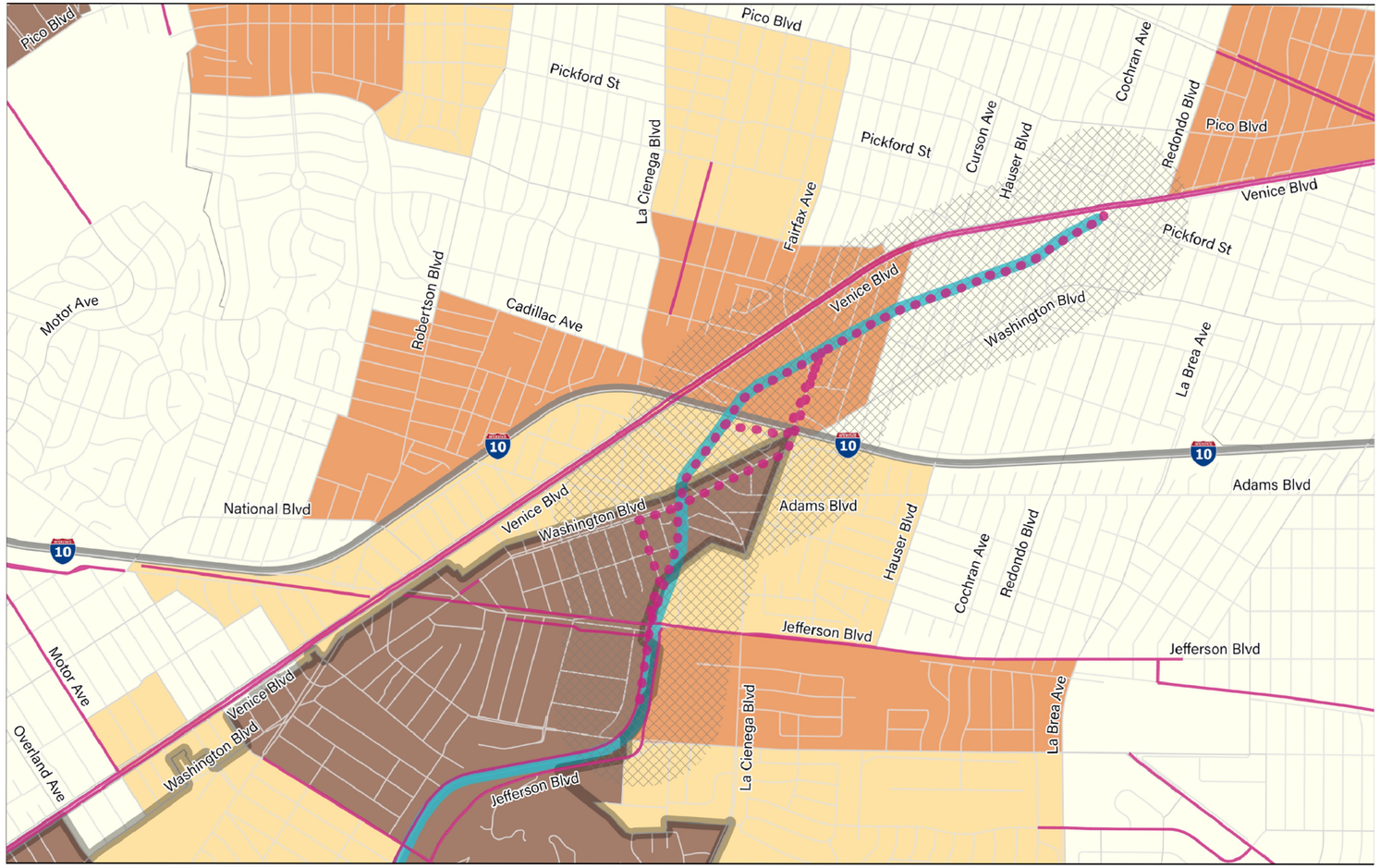
Job Center Linkages

The proposed extension, in concert with existing and planned bikeways, can provide a new, non-automotive means of connecting with several large employers in the broader area. These employers include **Kaiser Permanente West Los Angeles Medical Center** (the largest employer within ¼ mile of the proposed extension), **Sony Pictures Studios** in Culver City, and **Fox Studios** in the Century City neighborhood of Los Angeles,[5] as well as the many technology and media companies which have relocated or expanded to Culver City in recent years (Amazon, Apple, HBO, and Warner Media).[6]



Number of Jobs

Jobs are generally concentrated near the southern end of the proposed bike path extension in Culver City, where commercial land uses are concentrated. The census tract southwest of Fairfax Ave and Washington Blvd includes **13,914 jobs**, and the tract southeast of National Blvd and Jefferson Blvd includes **2,114 jobs**. The four census tracts surrounding the northern end of the proposed extension have the lowest job concentrations, with **fewer than 1,000 jobs** per tract, reflecting land use differences adjacent to the different sections of the proposed pathway, with residential land uses concentrated at the northern end of the pathway and commercial land use at the southern end.



Legend

- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Existing Class I, Class II, or Class IV Bicycle Facility

Total Number of Jobs by Census Tract

- 0 - 1000
- 1001 - 2000
- 2001 - 3000
- 3001 - 160000

Within 1/4 Mile of Proposed Extension

N

0 1,000 '

Residents with Jobs

Whereas jobs are concentrated near the southern end of the proposed extension, employed residents are more evenly distributed along the proposed extension. The tract with the highest concentration of jobs, southwest of Fairfax Ave and Washington Blvd, also has a relatively high concentration of 2,324 residents with jobs. However, the tract surrounding the northern end of the proposed extension has a higher concentration of 2,361 employed residents. Furthermore, **all census tracts within ¼ mile of the proposed extension have at least 1,000 residents with jobs**. This data does not indicate exactly where residents are employed. However, the proposed extension would provide a safe and convenient method for residents near the proposed northern terminus to bike to jobs near the existing northern terminus. As the existing northern terminus is also within ¼ mile of the La Cienega/Jefferson E Line light rail station, the proposed extension would also serve as a connector to more distant jobs accessible by rail. In short, the proposed bikeway holds the potential to bridge a gap between where jobs are located and where workers reside.

Many residents within a ¼ mile of the proposed extension work in the hospitality and service industries, particularly in census tracts along Interstate 10. Many service jobs require before-dawn or late-night commutes. The path extension could provide another viable mode option for these workers, but their access hours and safety needs may differ from commuters with nine-to-five working hours. Features such as path lighting and 24-hour operations may be more of a priority for late-night commuters.



Legend

- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Existing Class I, Class II, or Class IV Bicycle Facility

Residents with Jobs by Census Tract

- Less than 1,000
- 1,501 - 2,000
- 2,001 - 2,500
- More than 2,500

- Within 1/4 Mile of Proposed Extension

0 1,000 '

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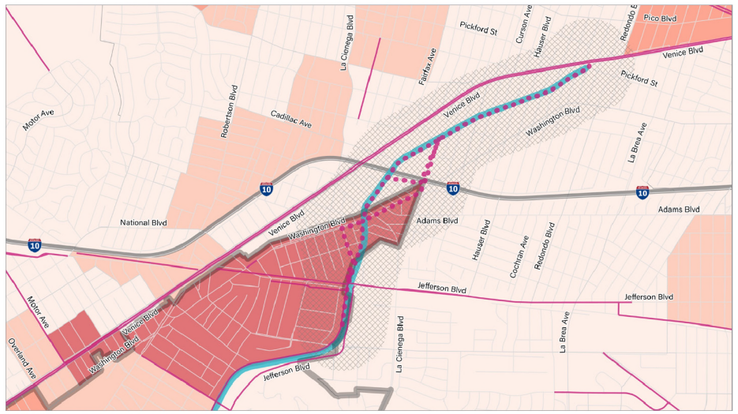
Unemployment and Sector-Specific Employment

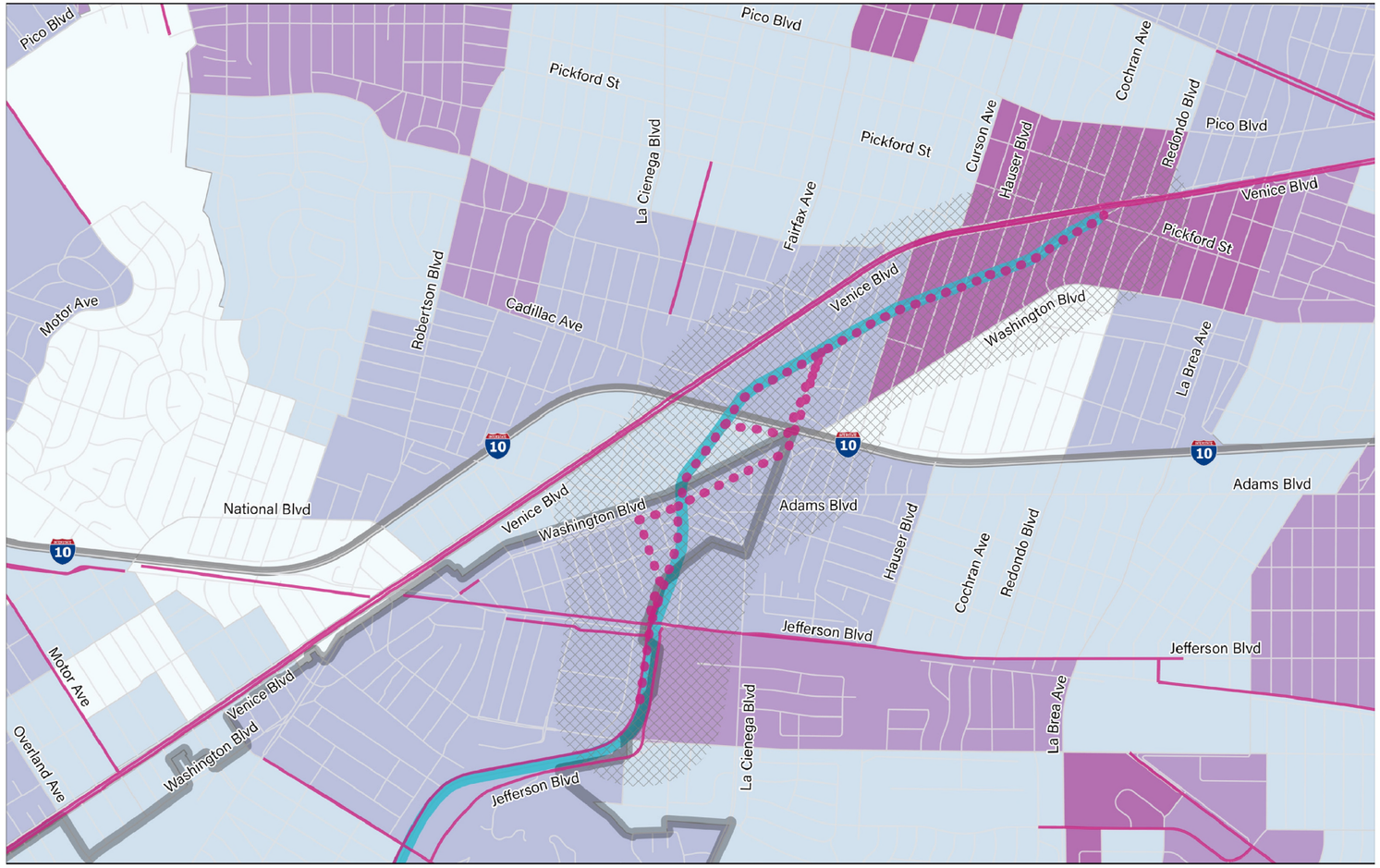
Unemployment is relatively high near the northern terminus of the proposed bikeway. Many residents within a ¼ mile of the proposed extension currently work in the hospitality and service industries, particularly in census tracts along Interstate 10. Many service jobs require before-dawn or late-night commutes. The path extension could provide another viable mode option for these workers, but their access hours and safety needs may differ from commuters with nine-to-five working hours. Features such as **path lighting and 24-hour operations may be more of a priority for late-night commuters.**

Residents with Accommodation and Food Service Jobs



Accommodation and Food Service Jobs





Legend

- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Existing Class I, Class II, or Class IV Bicycle Facility
- Within 1/4 Mile of Proposed Extension

Residents with Accommodation or Food Service Jobs by Census Tract

- 0 - 75
- 76 - 125
- 126 - 175
- 176 - 400

Accommodation and Food Service Jobs by Census Tract

- 0 - 100
- 101 - 400
- 401 - 800
- 801 - 6429

Unemployed Residents Above Age 16 by Census Tract

- Below 3%
- 4% - 6%
- 7% - 9%
- 10% - 12%
- Above 12%

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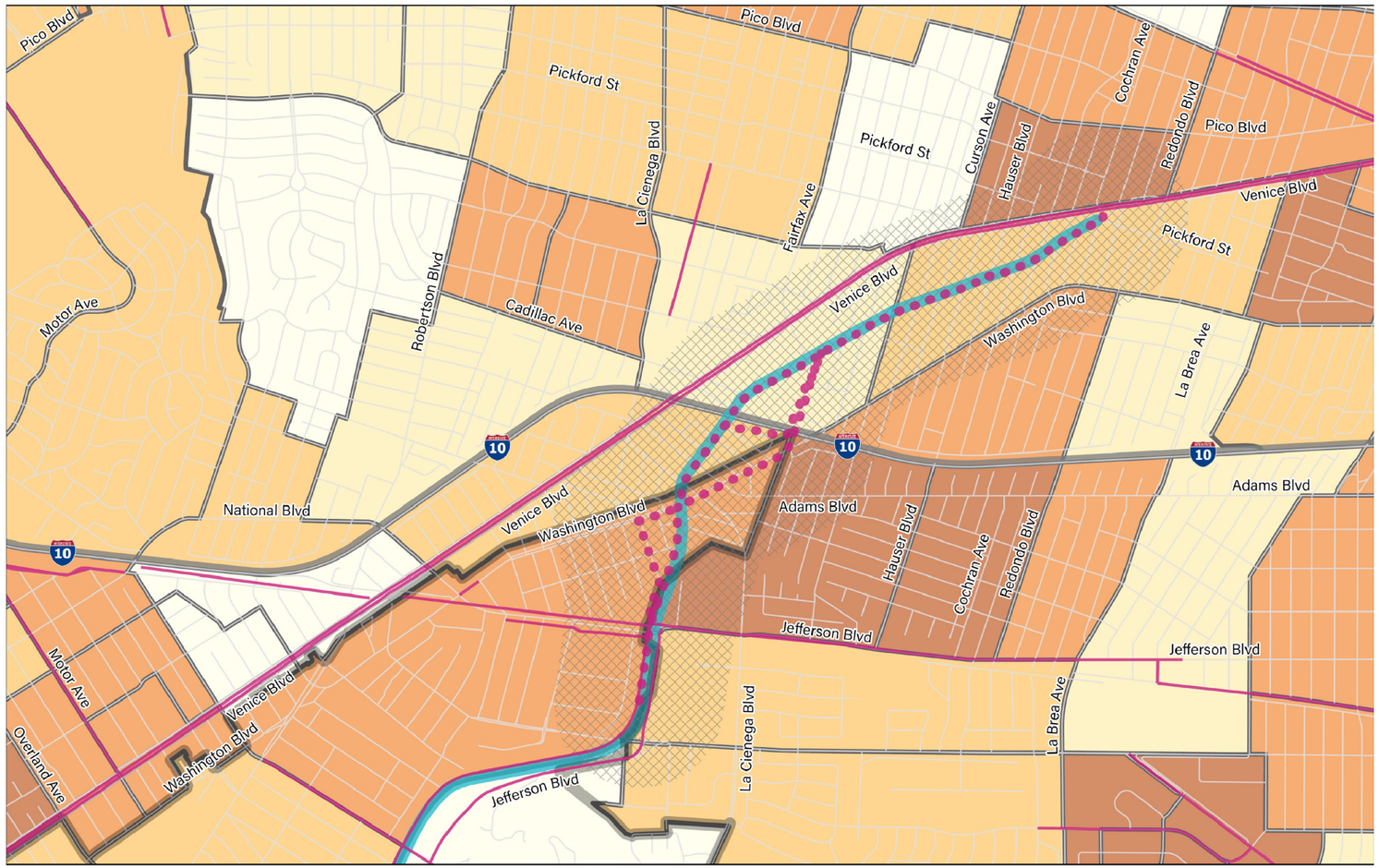
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Workers Commuting by Active Transportation (Bicycle, Walking, or Public Transit)

The proposed bike path extension holds the potential to build upon existing active transportation commute rates (the rate of workers commuting by biking, walking, and/or riding public transit) while encouraging more workers to adopt active transportation commutes by providing safer connections.

Within ¼ mile of the proposed extension, the highest active transportation commute rates are in the census tract east of the extension's southern end, northeast of the intersection of National Blvd and Jefferson Blvd, and in the tract north of the proposed extension between Venice Blvd and Pico Blvd. **Between 15% and 20% of workers in these tracts commute to work by walking, biking, and/or riding public transit.** The lowest active transportation commute rates are in the tract surrounding the center of the proposed extension, the tract southeast of Washington Blvd and Redondo Blvd, and the tract northeast of Venice Blvd and Fairfax Ave. Less than 6% of workers in these tracts commute to work by active transportation.

By providing a safer, primarily off-street bike path which can help connects workers to nearby public transit options (the Metro E Line, for example), the proposed extension holds the potential to increase rates of commuting by biking, walking, or riding public transit.



Legend

- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Existing Class I, Class II, or Class IV Bicycle Facility

% of Workers Commuting by Active Transportation by Census Tract

- Less than 3%
- 3% - 6%
- 6% - 10%
- 10% - 15%
- 15% - 20%
- More than 20%
- Within 1/4 Mile of Proposed Extension

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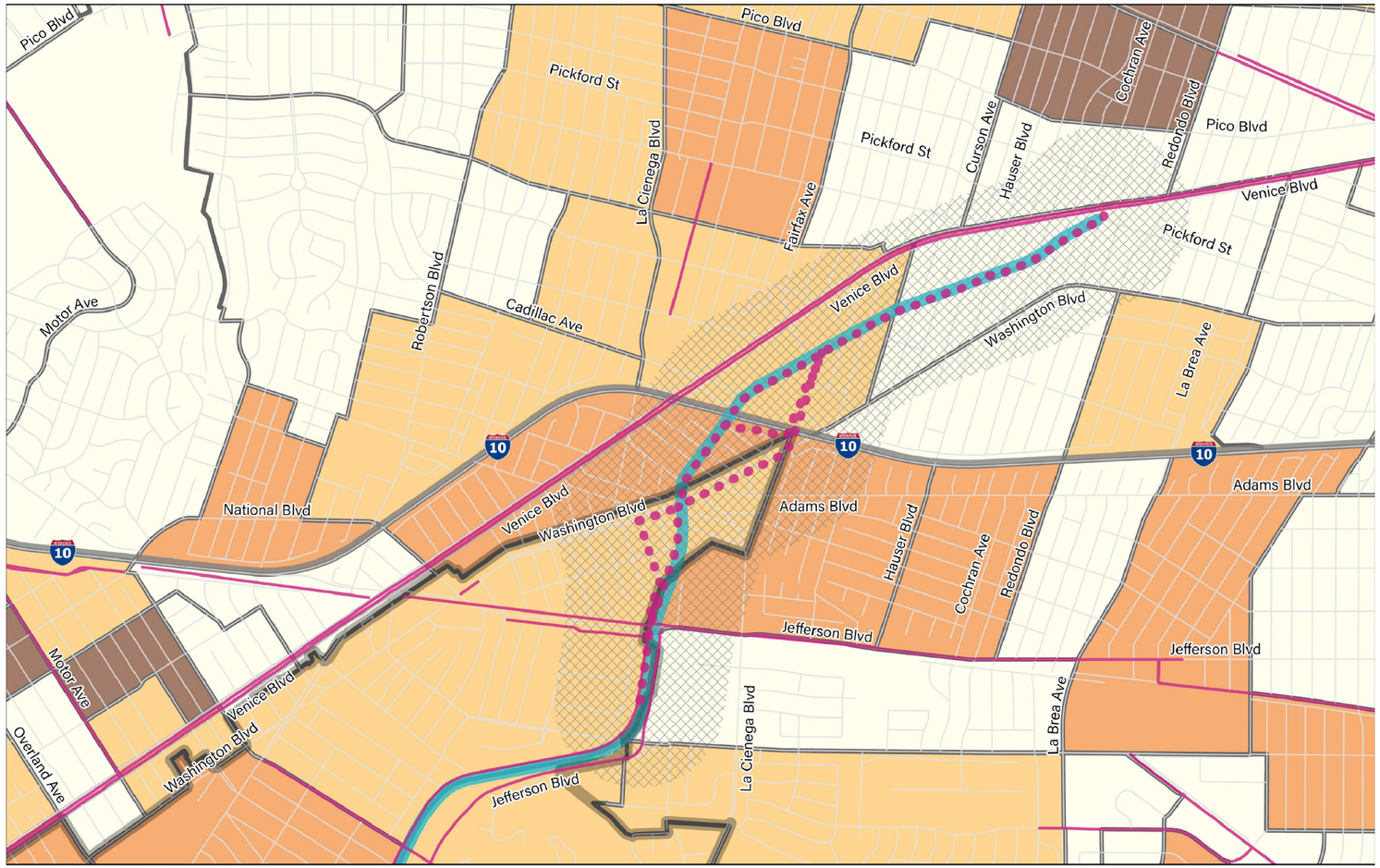
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Workers Commuting by Bicycle

Bicycle commute rates in the US increased by 60% across between 2000 and 2012. However, these "bike-to-work rates" were distributed unevenly between large cities, as Portland's 6.1% bicycle commute rate greatly exceeded Los Angeles's 1.0% rate, which, in turn, significantly exceeded the national average of 0.6% in 2012.[7] Nationally, the average number of workers commuting by bicycle declined rapidly in 2020 and 2021, likely due to the pandemic-induced shift toward working from home.[8]

Still, **between 1.5% and 2% of workers commute by bicycle in multiple census tracts within ¼ mile of the proposed extension**, with the highest bicycle commute rates near the southern portion of the proposed extension. In the census tract northeast of National Blvd and Jefferson Blvd, as well as the census tract directly west of the interchange between I-10 and Washington Blvd, between 1.5% and 2% of workers commute by bicycle. The lowest bicycle commute rates, in which 0% of workers commute by bicycle, are near the northern end of the proposed extension in the three census tracts surrounding Venice Blvd and Curson Ave.

The proposed bike path extension, as primarily a Class I off-street facility, may facilitate mode shift by workers not currently commuting by bicycle, while providing a safer, higher quality experience for workers in the area already commuting by bicycle.



Historic, Arts, and Cultural Assets

Ballona Creek travels through an area rich with arts, culture, and community assets. Collectively, these assets contribute to the creative economy, which can be defined as businesses and individuals involved in producing cultural, artistic and design goods and services.[9] LA County's **creative economy makes up about 19% of the County's total GDP**, outranking manufacturing and healthcare.[10] Cultural and historical institutions also play a large role in developing the creative economy.

In addition to stimulating creative economy, cultural and community assets serve important roles in placemaking and community-building in the neighborhoods surrounding Ballona Creek. Formal assets like the City of Los Angeles Department of Cultural Affairs facilities and nationally protected historical monuments create touch points between residents and their community. Simultaneously, informal assets like street murals represent expressions of urbanism and historic record-keeping that further contribute to a sense of place.

Two art centers, the Nate Holden Performing Arts Center and the William Grant Still Art Center, are within two miles of the proposed extension. A TV and movie studio complex, Sony Pictures Studios, is also within two miles of the extension, as are several mural sites located along the proposed extension.

The proposed Ballona Creek extension provides access to both formal and informal pieces of the creative economy. Those biking, walking, or rolling may be commuting to their creative industry jobs, or interacting with the formal and informal artistic, cultural, and community assets throughout the area.



Legend

- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Within 1/4 Mile of Proposed Extension
- Existing Class I, Class II, or Class IV Bicycle Facility
- Art Centers
- TV and Movie Studios
- Murals
- Museums
- Libraries
- Cultural Centers and Theaters
- Culver City Arts District
- Historic Preservation Overlay Zone (HPOZ)
- National Register of Historic Places (NRHP)

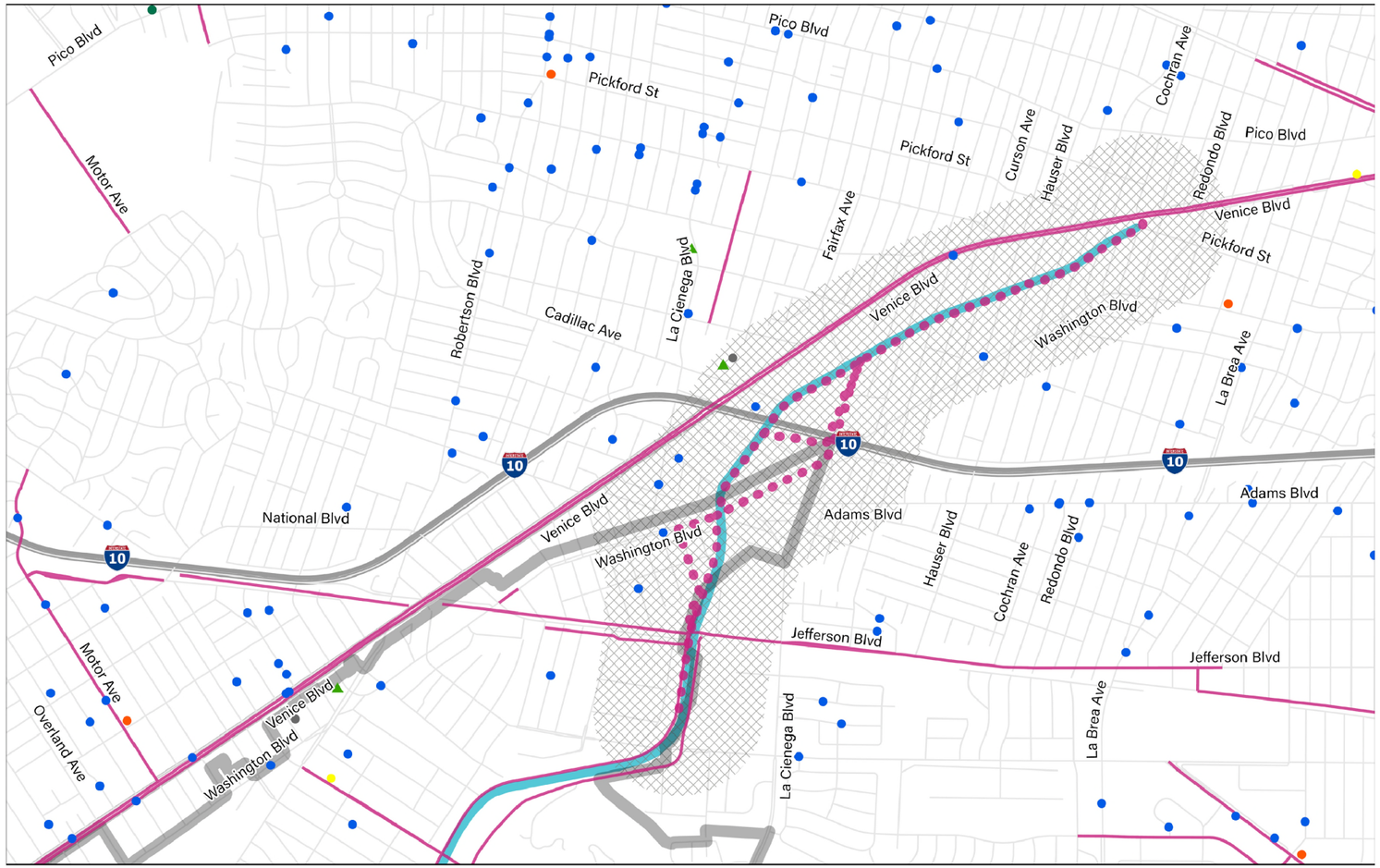
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Places of Worship, Civic Buildings, and Community Services

Numerous places of worship are located within two miles of the proposed extension. Areas of concentration include Pico Blvd northwest and east of the proposed extension. Health and safety services such as police and fire stations, and hospitals and medical centers, are evenly dispersed throughout the two-mile radius. Farmer's markets are located throughout the area, including in Culver City and in Los Angeles neighborhoods such as Miracle Mile and Wellington Square.

Community assets provide the space, facilities, and services to support residents, while offering opportunities for civic engagement and cultural enrichment. The proposed pathway extension holds the potential to provide new linkages to these assets.



Legend

- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Within 1/4 Mile of Proposed Extension
- Existing Class I, Class II, or Class IV Bicycle Facility
- Courthouse
- Police Station
- Fire Station
- Place of Worship
- Hospital or Medical Center
- Farmer's Market

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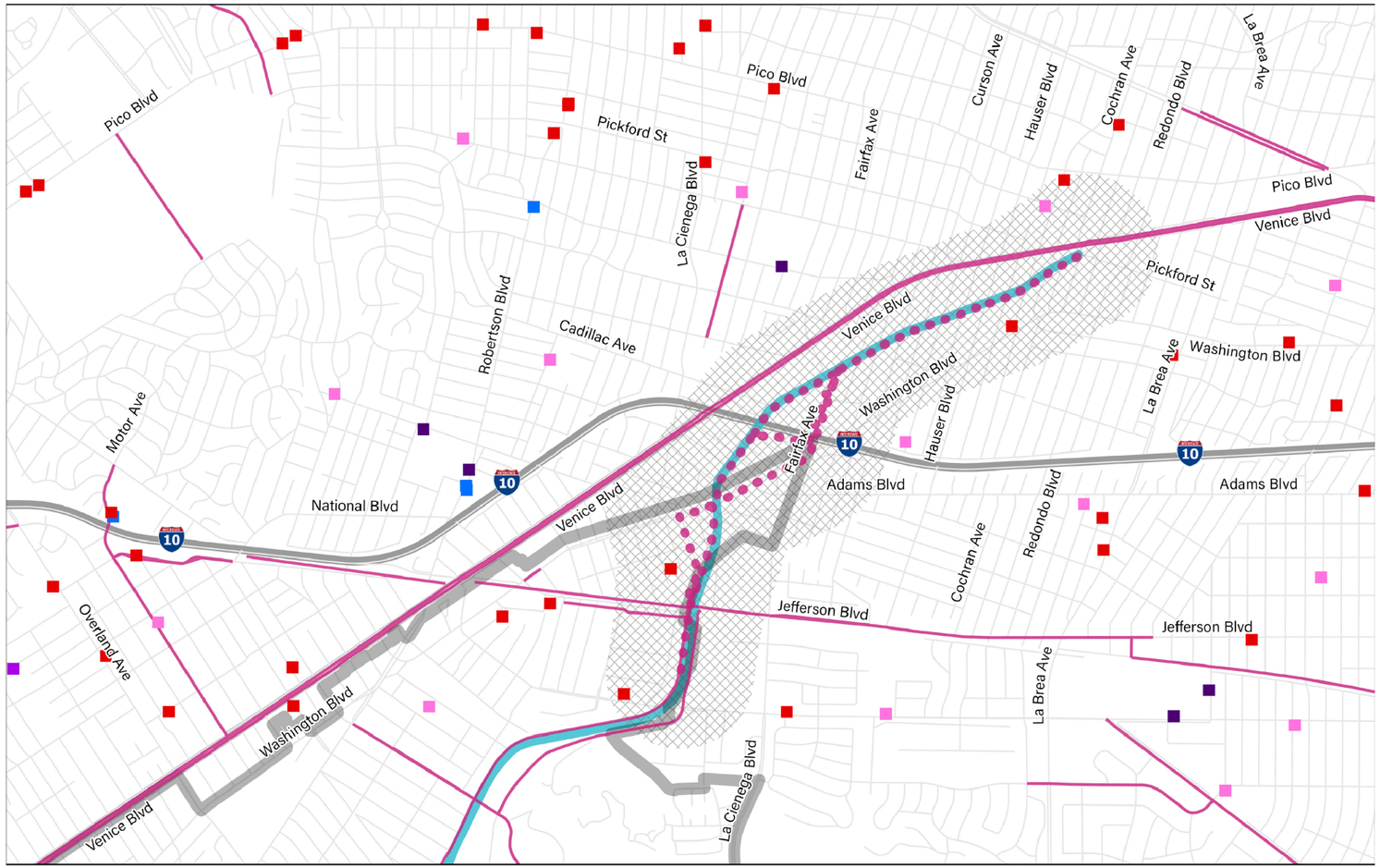
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Education and Schools

Educational facilities provide opportunities for children, younger adults, and prospective professionals to engage with arts and culture in their communities. Within two miles of the extension, there are **twenty public elementary schools, two public middle schools, and five public high schools.** In the same area, private and/or charter schools outnumber public schools, with many of the 45 private and/or charter schools concentrated near Beverly Hills.

Seven higher education institutions are within a two-mile radius of the extension, with Everest College and West Los Angeles College providing associate degree instruction, and a handful of other institutions providing professional degrees such as Marinello Beauty School and West Coast Ultrasound Institute.

The proposed bikeway extension holds the potential to provide safer routes to schools for children, younger adults, and college students in the area.



Local Transit and Bikeways

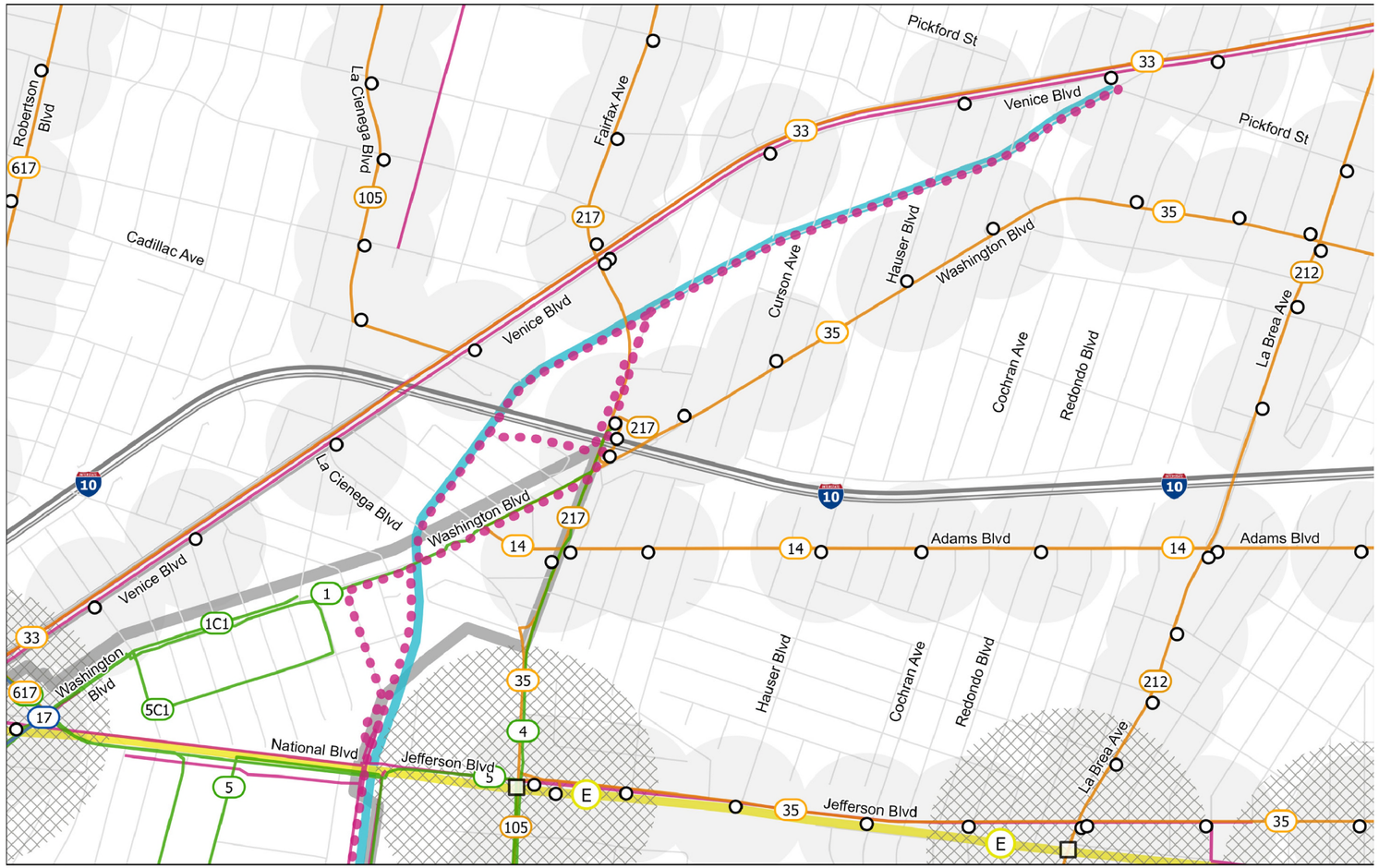
The proposed bikeway can be readily integrated into existing bicycle facilities and public transit infrastructure, creating new opportunities for active transportation which extend beyond the proposed bike path. Due to the diagonal orientation of the bike way and the multiple major streets which intersect it, **nearly all nearby transit routes and bikeways intersect the existing bike path or proposed extension**.

Rail The Metro E Line (formerly Expo Line) station, La Cienega/Jefferson, is approx. ¼ mile from the start of the proposed bikeway extension.

Bicycle The La Cienega/Jefferson station connects to the path via the Class I Expo Line Bikeway, which also provides bicycle access west to Culver City and the Palms neighborhood of Los Angeles. A planned extension of the Expo Line Bikeway would also provide bicycle access further west to the Westwood neighborhood and to Santa Monica. At the northern end of the extension, existing Class II bike lanes on Venice Blvd provide bicycle access to points north and east.

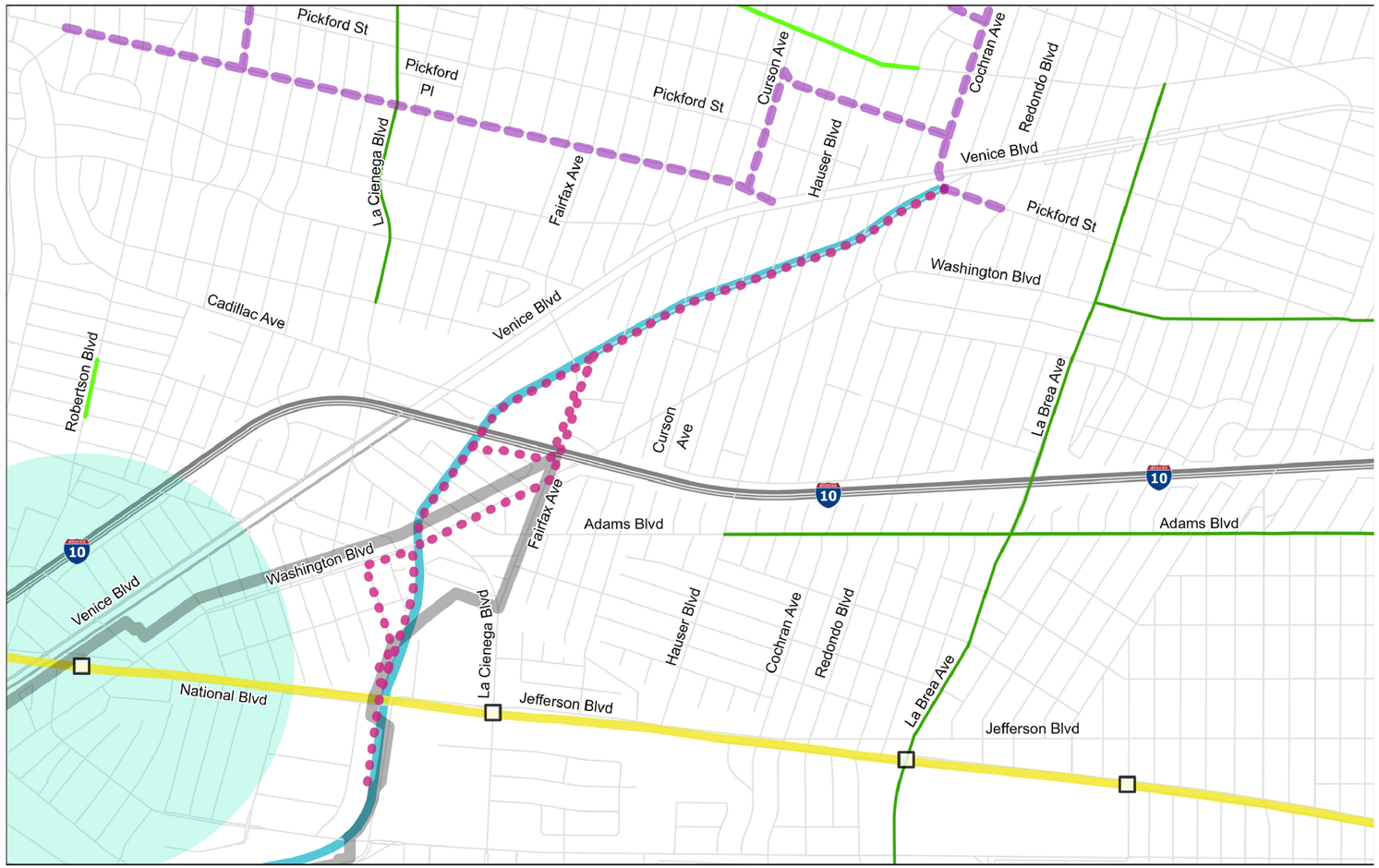
Bus Culver City Bus and the Los Angeles County Metropolitan Transportation Authority (Metro) serve the area surrounding the proposed pathway. Metro operates six nearby bus routes: 14, 33, 35, 105, 212, 217. Culver City Bus operates three: 1, 4, 5. Santa Monica Big Blue Bus operates one: 17.

Together, the proposed bike path extension and existing bike and transit infrastructure can facilitate a shift toward multi-modal transportation, helping to achieve greenhouse gas emission reductions and broader sustainability goals. Buses and trains can be used to close gaps in the bikeway network, cover long distances more quickly, and avoid inclement weather. Bicycle facilities can bridge the "first and last mile" between origins, transit stops, and destinations.[11]



LADOT Livable Streets

The proposed bikeway extension would connect to LADOT's Mid City Stress Free Connections project. The extension would also serve as a **crucial link** between other **LADOT-led active transportation projects.** These projects include the Pico Blvd Great Streets project, the Culver City E Line (Expo) station First/Last Mile Project, and Vision Zero corridors on La Cienega Blvd, Adams Blvd, Robertson Blvd, and La Brea Ave.



Existing Bike and Transit Access

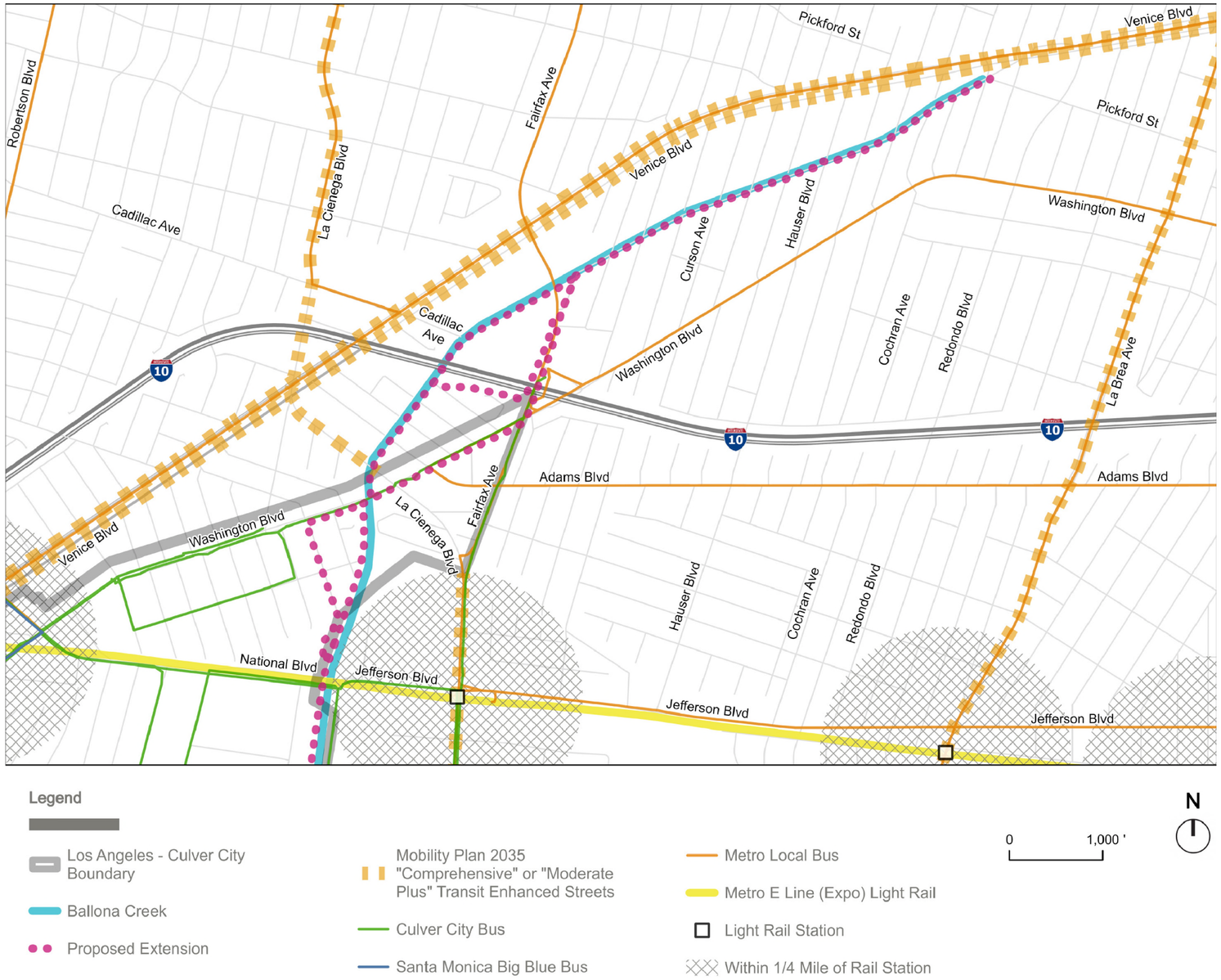
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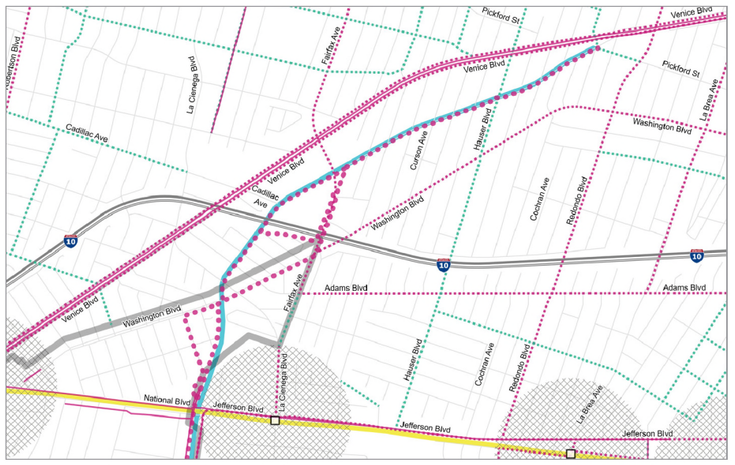
Existing and Planned Bike and Transit Connections

Looking toward the future of mobility in the area of Los Angeles where the pathway is located, the proposed pathway **aligns with the LA Department of City Planning's Mobility Plan 2035**. The Mobility Plan's Enhanced Bicycle and Transit Network on Venice Blvd and other nearby streets can tie into the proposed pathway to provide a safe, high quality supplement to these improvements.

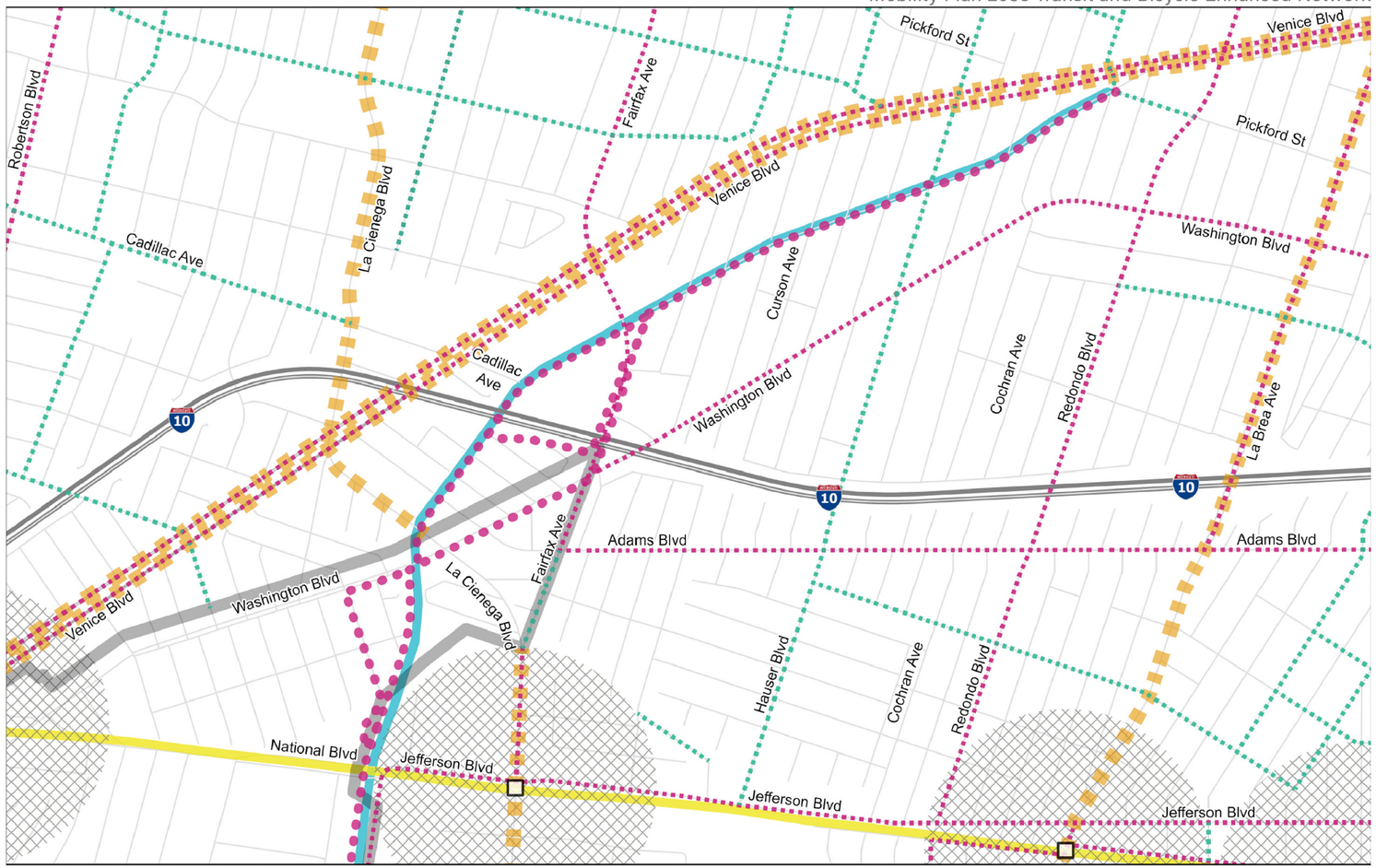
Mobility Plan 2035 Transit Enhanced Network



Mobility Plan 2035 Bicycle Enhanced Network



Mobility Plan 2035 Transit and Bicycle Enhanced Network



Legend

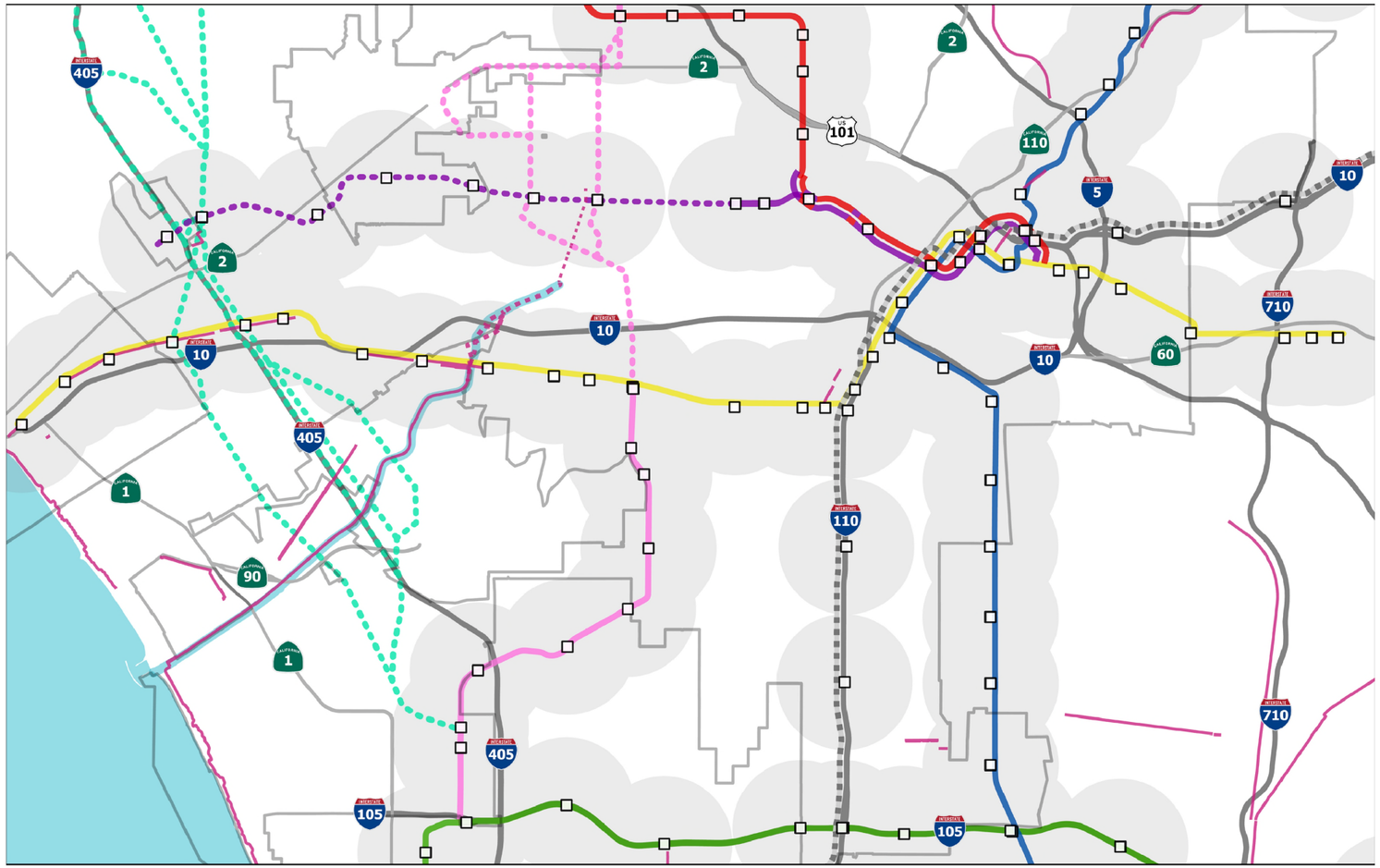
- Los Angeles - Culver City Boundary
- Ballona Creek
- Proposed Extension
- Mobility Plan 2035 Bicycle Enhanced Network
- Mobility Plan 2035 Neighborhood Enhanced Network
- Mobility Plan 2035 "Comprehensive" or "Moderate Plus" Transit Enhanced Streets
- Metro E Line (Expo) Light Rail
- Light Rail Station
- Within 1/4 Mile of Rail Station

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Regional Transit and Bikeway Connections

At a regional scale, the proposed pathway would be connected to an expanding network of transit infrastructure (Metro Heavy Rail and Metro Light Rail) and high-quality bike facilities (Class I Off-Street Bike Paths and Class IV Protected Bike Lanes). The proposed pathway extension connects with the Metro E Line and with the existing Ballona Creek Pathway, which, in turn, connects with the Marvin Braude Bike Path (Beach Bike Path) in Marina Del Rey to extend Class I bike travel south to Redondo Beach. Together with existing and proposed improvements in bicycle and transit facilities, the proposed extension would function as a step toward a multi-modal future in the region. By providing a safe and high-quality experience for a wide range of people, the proposed extension would draw more users into a more sustainable regional transportation system.



Legend

- City of Los Angeles Boundary
- Ballona Creek
- Proposed Extension
- Existing Class I or Class IV Bicycle Facility

Metro Heavy Rail

- Metro B Line (Red)
- Metro D Line (Purple) - Existing
- Metro D Line (Purple) - Under Construction

Metro Light Rail

- Metro A Line (Blue)
- Metro C Line (Green)
- Metro E Line (Expo)
- Metro K Line (Crenshaw)
- Metro K Line (Crenshaw) - Planned
- Metro Sepulveda Line - Planned
- Metro J Line (Silver) Bus Rapid Transit
- Rail or Busway Station
- Within 1 Mile of Station
- Class III Bikeway Connection to D Line Station

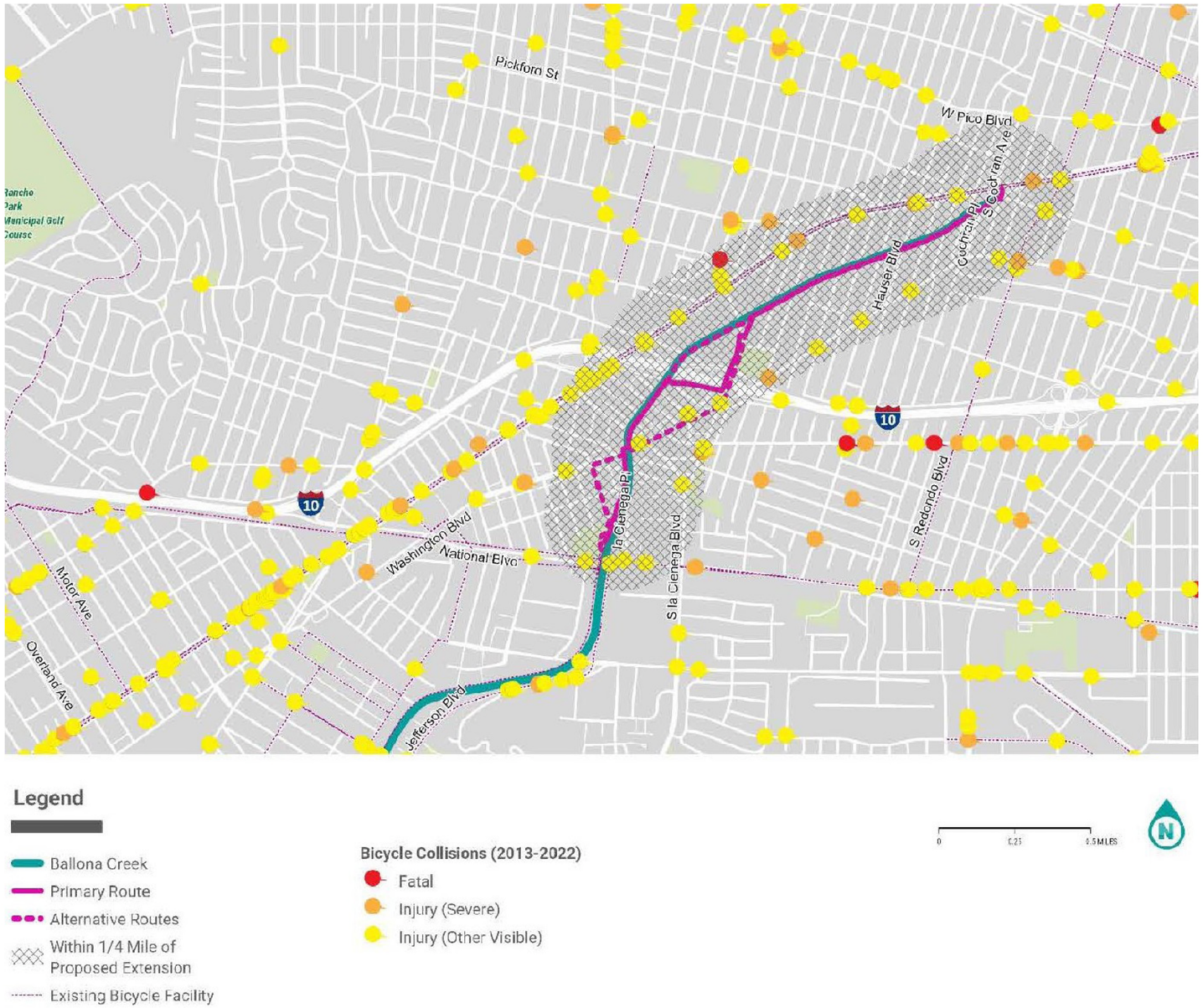
0 1 Mile N

Bicycle Collisions (2013-2022)

The proposed Ballona Creek bike path extension promises to provide a safer alternative to roads where bicyclists have been involved in collisions over the past decade.

The bicycle collision map shows ten-year bike collision data (2013-2022) within a 3-mile buffer area from the proposed extension was extracted from the Statewide Integrated Traffic Records System (SWITRS), and detailed analyses were conducted within ¼ mile of the proposed Ballona Phase 2 Bike Path extension.

In the past ten years, **one fatal bike collision, eight severe injuries, and 39 other visible injuries** happened within ¼ mile of the extension. Significant bike collision patterns can be observed along Venice Boulevard and Washington Boulevard, which are parallel to Ballona Creek, suggesting that, as a primarily off-street facility, the Ballona Creek pathway extension might offer a much-needed safe alternative to travel on these large arterials.



Pedestrian Collisions (2013-2022)

As a shared Class I facility, the Ballona Creek pathway also holds the potential to reduce pedestrian injuries and deaths as a result of being struck being vehicles.

The pedestrian collision map, which shows ten-year pedestrian collision data (2013-2022) within a 3-mile buffer area from the proposed extension, was extracted from the Statewide Integrated Traffic Records System (SWITRS). Detailed analyses were conducted within ¼ mile of the proposed Ballona Phase 2 Bike Path extension.

Of all the 51 pedestrian collisions within ¼ mile of the extension over the past ten years, **five were fatal, 11 were severe injuries, and 35 consisted of other visible injuries**. Most pedestrian collisions are along Venice Boulevard and Washington Boulevard, and most happen near intersections, suggesting again a the Ballona Creek pathway will provide a safer alternative for pedestrians.



Legend

- Ballona Creek
- Primary Route
- Alternative Routes
- Within 1/4 Mile of Proposed Extension
- Existing Bicycle Facility

Pedestrian Collisions (2013-2022)

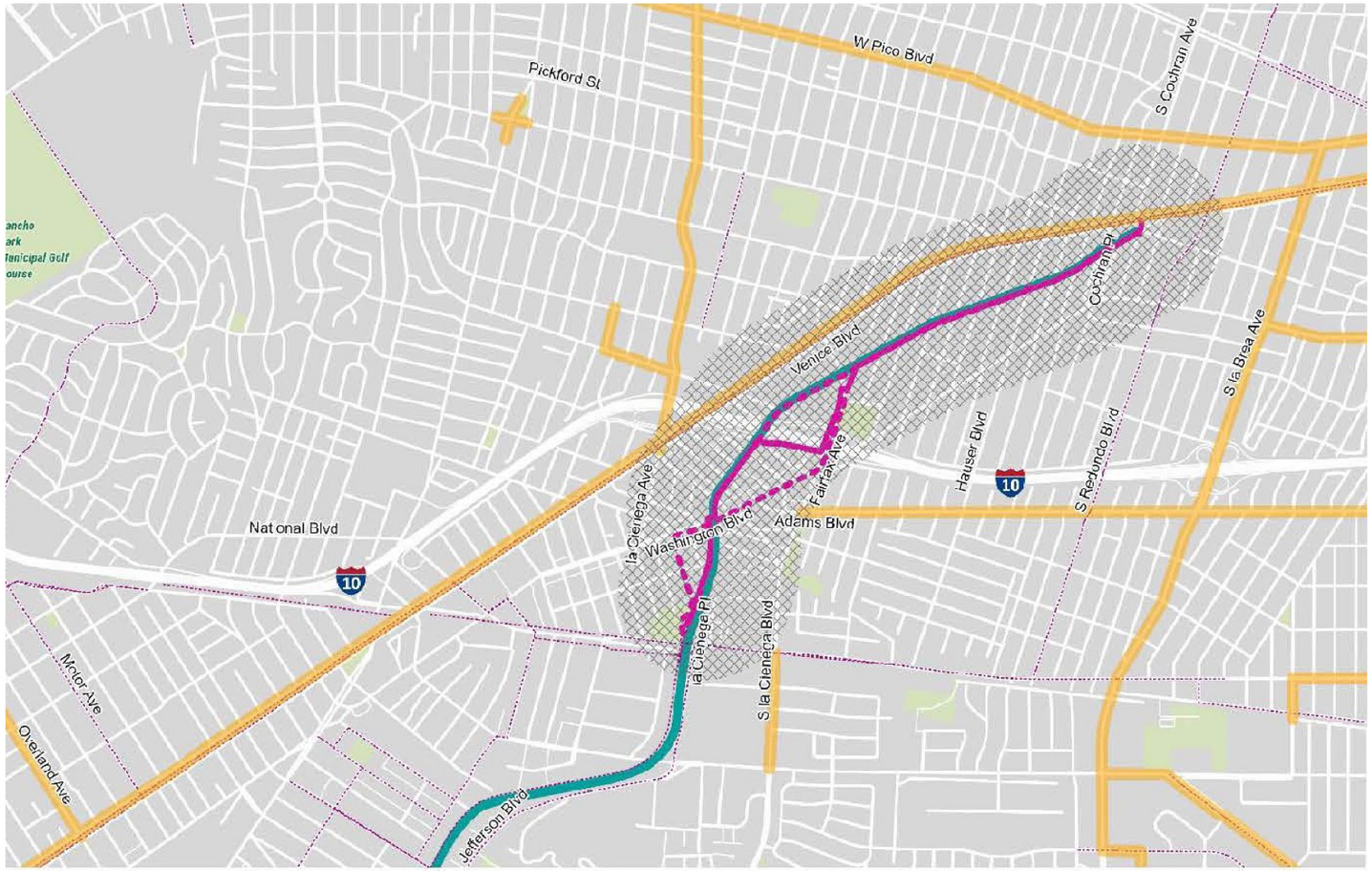
- Fatal
- Injury (Severe)
- Injury (Other Visible)

0 0.25 0.5 MILES

High Injury Network

The High-Injury Network (HIN) represents **6% of city streets** (over 450 miles) that account for **70% of deaths and severe injuries for people walking**. The HIN is the guiding document utilized by LADOT for prioritizing projects and achieving zero traffic deaths by 2025.

The crashes on Venice Boulevard between Jefferson Boulevard and Cochran Avenue could be significantly reduced by installing the Ballona Creek Bike Path extension. The injuries on La Brea Avenue between Jefferson Boulevard and Venice Boulevard could also be potentially reduced if cyclists and pedestrians detour using the Ballona Creek Bike Path extension and Jefferson Boulevard, especially for cyclists since there is no bicycle facility on La Brea Avenue.

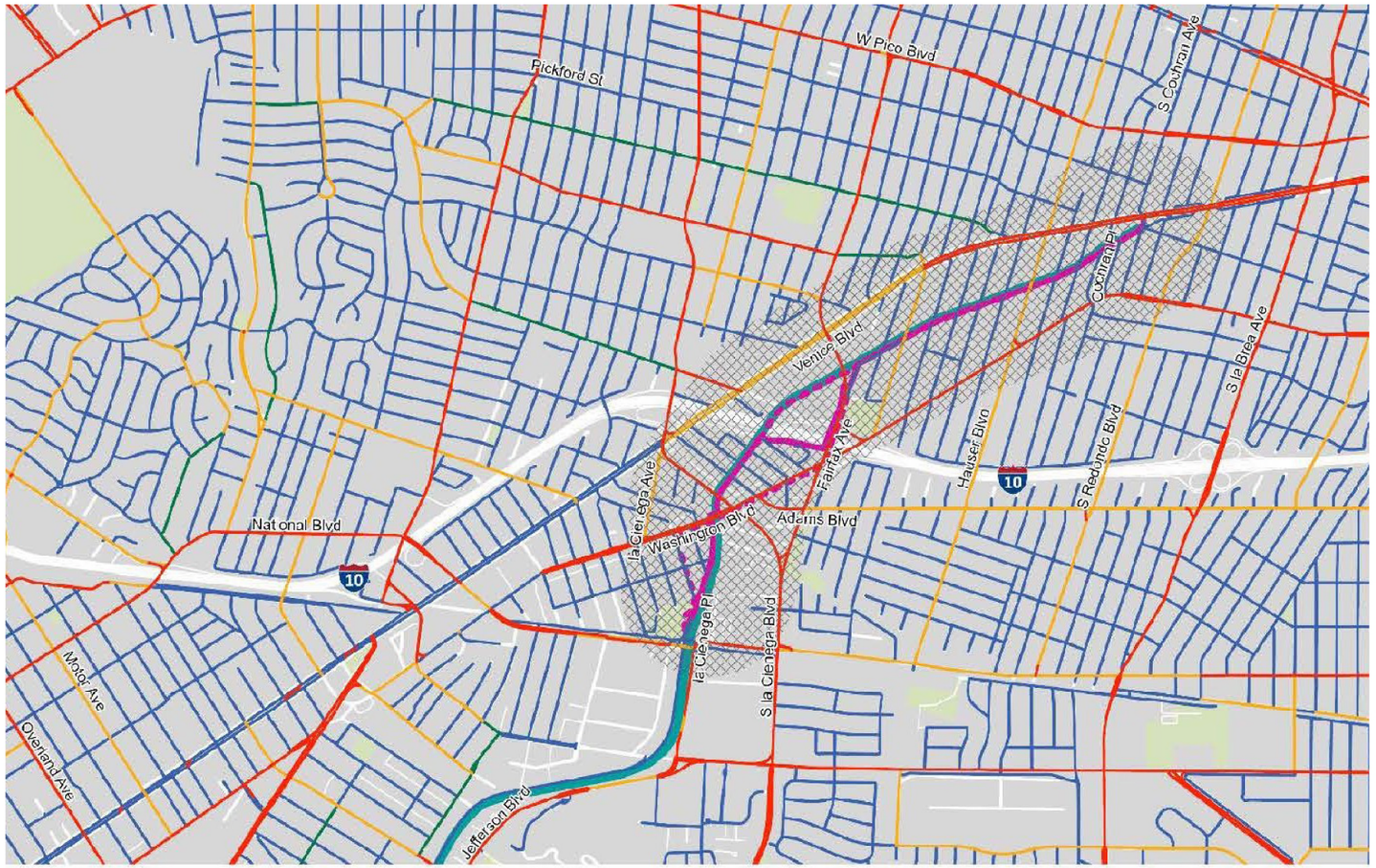


Bicycle Level of Traffic Stress

Roadways can be categorized by Bicycle Level of Traffic Stress (BLTS) - that is, the level of traffic stress experienced by cyclists on different roadways as based on factors including posted speed limit, number of travel lanes, and the presence and type of bicycle facility.

- **BLTS 1** represents roadways where bicyclists of all ages and abilities would feel comfortable riding. These roadways are generally characterized by low volumes, low speeds, no more than two travel lanes, and traffic control measures at intersections. These roadways may have bicycle facilities; separated shared-use paths for bicycles also fall into this category.
- **BLTS 2** represents slightly less comfortable roadways, where most adults would feel comfortable riding.
- **BLTS 3** represents moderately stressful roadways, where most experienced bicyclists would feel comfortable riding.
- **BLTS 4** represents high-stress roadways where only strong and fearless bicyclists would feel comfortable riding. These roadways are generally characterized by high volumes, high speeds, several travel lanes, and complex transitions approaching and crossing intersections.

In the study area, primary roads with high stress levels (BLTS scores of 3 or 4), such as La Cienega and Washington Boulevards, bisect many neighborhoods with low-stress streets, creating **connectivity islands** and **preventing cyclists from traveling between neighborhoods** or other destinations. The proposed Ballona Creek Extension offers a high-quality, low-stress facility to avoid disconnection and safety challenges. Furthermore, The BLTS score on Venice Blvd increased from 1 to 3 as the bikeway changed from Class IV to Class II after La Cienega Boulevard and increased again to 4 as the posted speed limit increased from 35 to 40mph after Thurman Avenue. The Ballona Creek Bike Path extension would provide a low-stress alternative for bicyclists, separating them from motor vehicles and allowing them to avoid the high-stress traffic on Venice Boulevard and other nearby primary roads, such as Washington Boulevard and Fairfax Avenue.

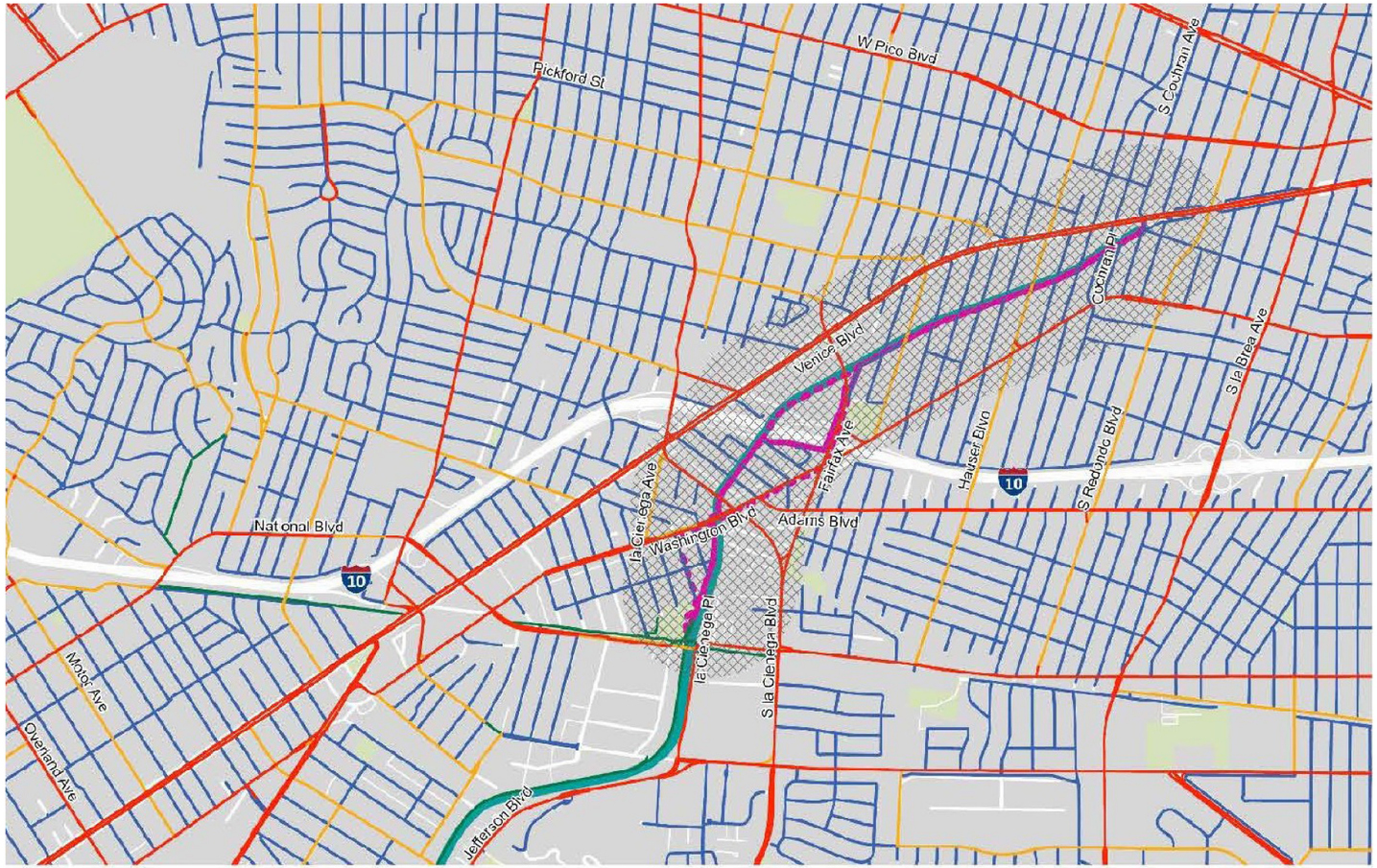


Pedestrian Level of Traffic Stress

Like Bicycle Level of Traffic Stress (BLTS), Pedestrian Level of Traffic Stress (PLTS) ranks the level of traffic stress as experienced by pedestrians on different roadways and is intended as a companion for BLTS. PLTS is determined by factors including sidewalk presence and width, sidewalk buffer width and type, posted speed limit, and number of travel lanes. PLTS scores classify road segments into one of four levels of traffic stress and, while similar to BLTS scores, PLTS considers the level of attention required in addition to the user experience:

- **PLTS 1** represents roadways where pedestrians of all ages and abilities would feel comfortable walking and require little attention to traffic.
- **PLTS 2** represents slightly less comfortable roadways that require more attention to traffic and are suitable for children over 10, teens and adults.
- **PLTS 3** represents moderately uncomfortable roadways, where most able-bodied adults would feel uncomfortable but safe.
- **PLTS 4** represents high traffic stress and would be used only by able-bodied adults with limited route choices.

Similar to the BLTS result, primary roads with high stress levels (PLTS scores of 3 or 4) create **disconnected islands**, preventing pedestrians from traveling between neighborhoods using only the low-stress residential streets. The proposed Ballona Creek Bike path extension offers an alternative route that is high-quality and low-stress for pedestrians who would have originally traveled on Venice Boulevard, Washington Boulevard, La Cienega Boulevard, and Fairfax Avenue, all of which have a PLTS score of 4.



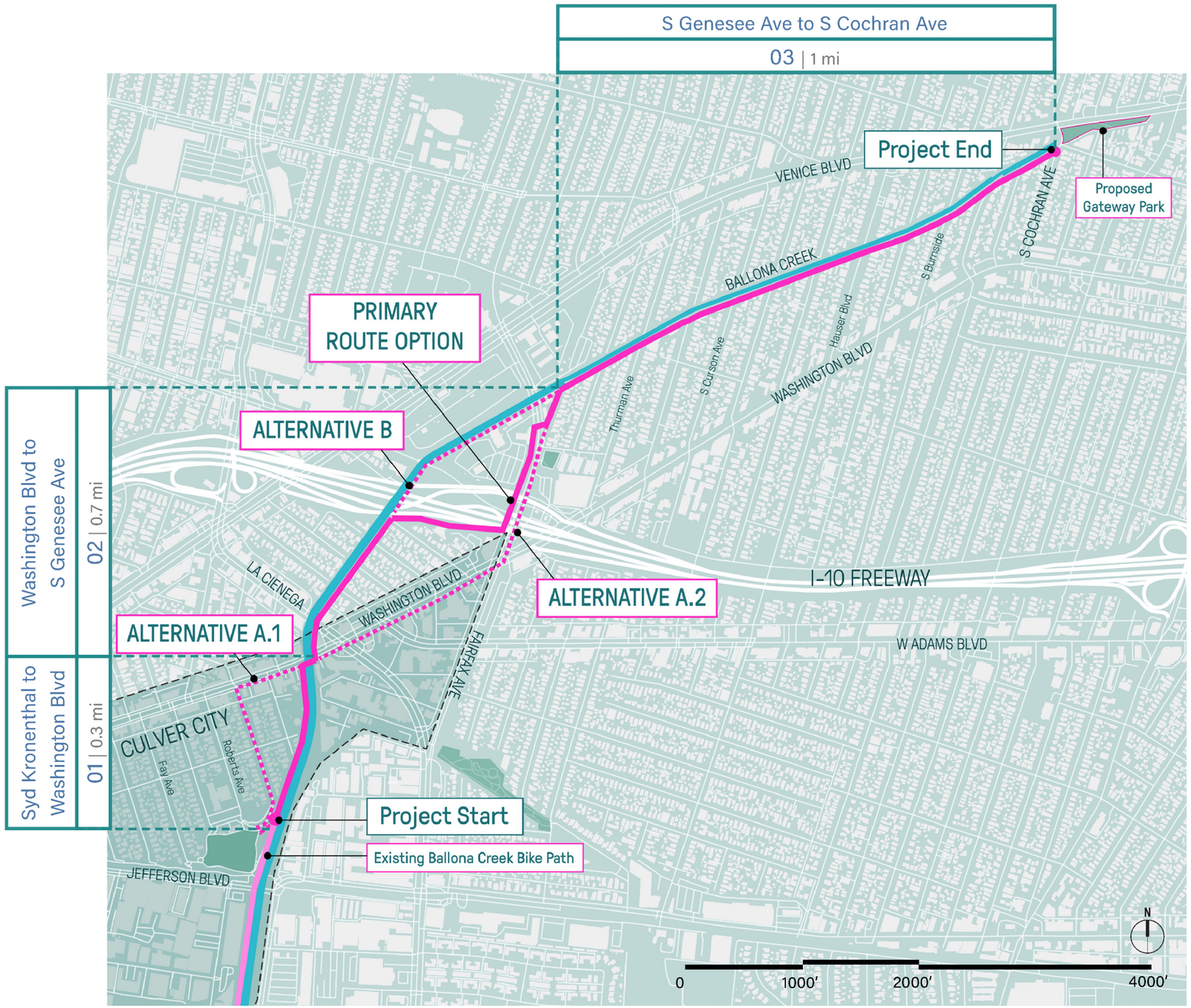
Open Space Analysis

The Feasibility Study examined undeveloped space (i.e. "open space") along the Ballona Creek channel where a Class I shared use path could be developed. **The undeveloped land along much of Ballona Creek in this area presents an unique opportunity in Los Angeles.** The analysis presented here focused on the physical challenges and opportunities to creating a Class I bikeway within undeveloped land along the channel. This analysis should be paired with the Right-of-Way Assessment presented in Chapter 5, which examines the ownership and permitting requirements associated with this land. The following is contained within this section:

- Area-Wide Park Proximity Analysis
- By Segment
  - Analysis of open space adjacent to Ballona Creek
  - Analysis of space necessary for Class I pathway
  - Considerations for development of Class I pathway
  - Linear park and placemaking opportunities



Undeveloped space along Ballona Creek Channel



Parks Proximity

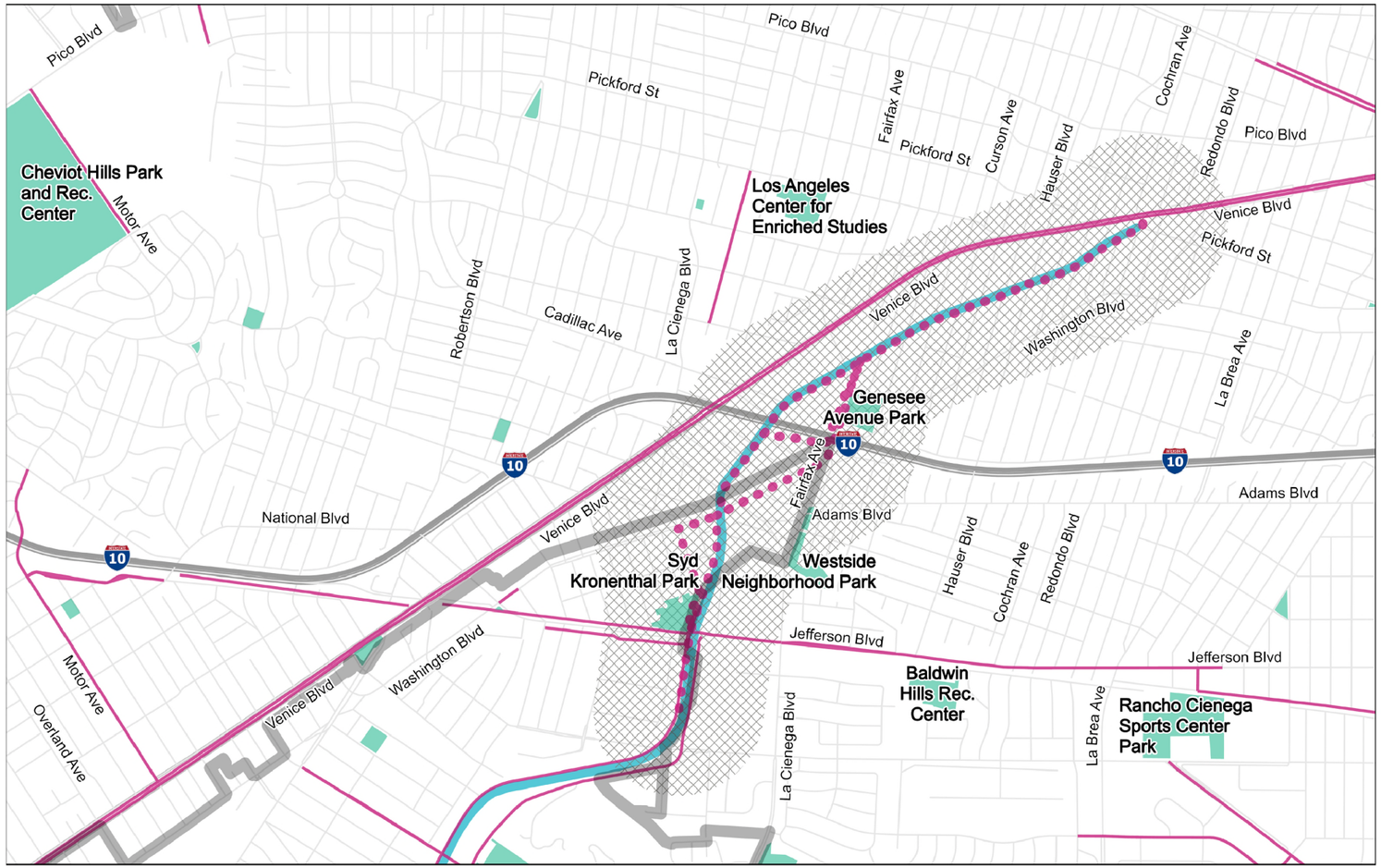
The proposed pathway extension holds the potential to **better connect residents to existing park space** while increasing the amount of quality green space for residents through the **creation of new linear parks** in undeveloped space along the pathway route.

Parks bring communities together and offer recreational areas that contribute to resident health. Each year, approximately 106,000 Los Angeles residents exercise at parks and recreation centers enough to obtain measurable health benefits, saving an estimated $151 million in yearly medical care costs.[13] With almost **40% of bike trips in the U.S. taken for recreation and socializing**, linkages between parks and bikeways offer cyclists and residents additional opportunities to stay active and healthy.[14] There are three neighborhood parks within ¼ mile of the proposed extension:

- Syd Kronenthal Park, a 6-acre park located next to the existing path's northern terminus and 1 mile west from the Metro E Line La Cienega/Jefferson Station.[15]
- Westside Neighborhood Park, a 4.6-acre park located between Clyde and Fairfax Ave, roughly one block from Washington Blvd, in Los Angeles and 0.3 miles from the existing path's northern terminus. [16]
- Genesee Avenue Park, a 5.9-acre park located on Fairfax Ave near the center of the proposed path in Los Angeles and directly next to one the alternative routes under consideration.[17]

Other park facilities, located farther than ¼ mile from the extension, are potential destinations for cyclists and pedestrians using the proposed bike path:

- Baldwin Hills Recreation Center, located 0.67 miles southeast of the existing path's northern terminus, 0.5 miles east of the Metro E Line La Cienega/Jefferson Station, and connected to the Syd Kronenthal Park by an existing Class II bikeway.[18]
- Rancho Cienega Sports Complex, also known as Michelle and Barack Obama Sports Complex, located 1.36 miles east of the Baldwin Hills Recreation Center on Obama Blvd and accessible via bike path along Jefferson Blvd or the Metro E Line.[19]



Open Space Adjacent to Channel

From the end of the existing Ballona Creek bike path at Syd Kronenthal Park to La Cienega Blvd, the open space adjacent to the Ballona Creek channel is characterized by steeper topography, which slopes toward the channel wall, and is covered with a mix of planted and spontaneous vegetation in the form of largely unmaintained grasses, shrubs, and trees. There is more undeveloped land with the potential to hold the bikeway extension on the east side of the channel than on the west side of the channel, a trend that continues throughout the remainder of the reaches under examination. It can be noted that, unlike other segments, the amount of open space on both sides of the channel in this segment is comparable.



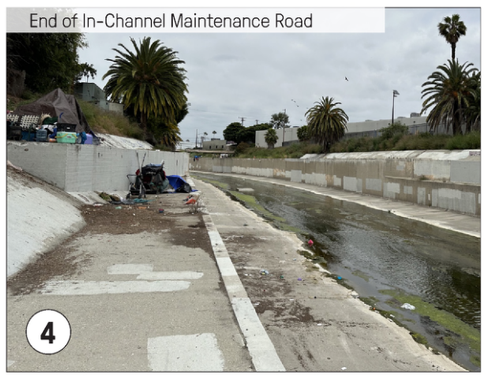
Intersection of La Cienega and Ballona Creek Channel



Southern California Water Co Pipeline



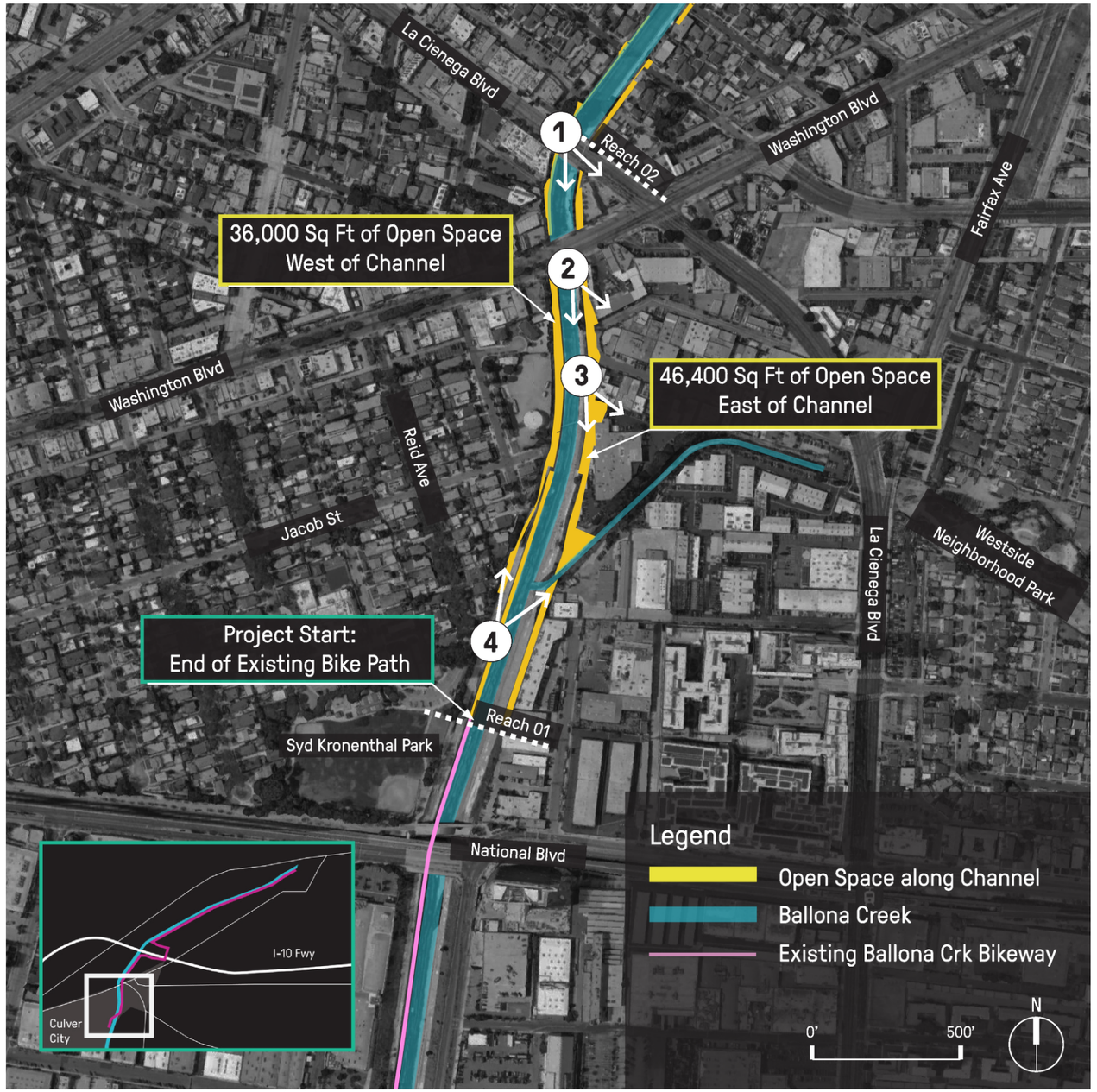
Ballona Creek Channel



End of In-Channel Maintenance Road

Site Photos

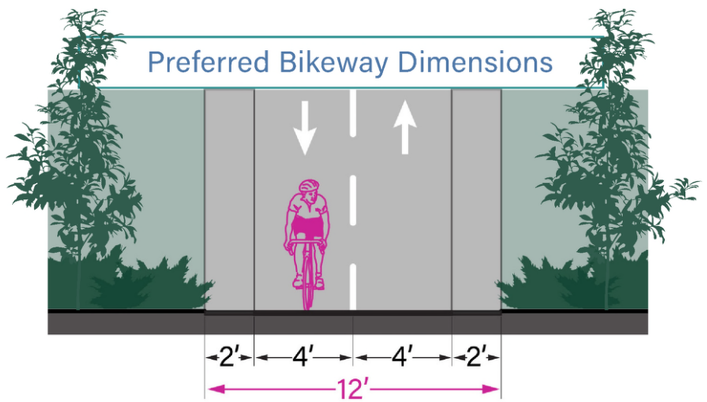
Syd Kronenthal Park to La Cienega Blvd



Space Needed for Class I Bikeway (Preferred Minimum Width)

The project team examined the dimensions of undeveloped space along the Ballona Creek channel to determine where undeveloped space adjacent to the channel would be wide enough to accommodate the 12′ preferred minimum width for a Class I path along the channel.

Open space generally wide enough for the pathway extension exists on both sides of the channel for the majority of the distance from Syd Kronenthal Park to La Cienega Blvd. The existing Ballona Creek bike path sits on the west side of channel. However, further upstream, the majority of channel-top open space available for pathway development exists on east side of the channel. Where undeveloped space may not be wide enough in this segment to accommodate the preferred Class I bikeway width, such the area just south of La Cienega Blvd, a narrower, but still functional, Class I facility might be developed.



Preferred minimum Class I dimensions were selected to match existing Ballona Creek Bike Path

In high-demand zones: two 5′ lanes with two 2′ buffer zones (14′ total) are desired.

Syd Kronenthal Park to La Cienega Blvd



Considerations for Development of Class I Pathway

The project team identified elements for consideration in the development of a Class I bikeway along the preferred route.

The chief consideration in this segment is the transition in channel profile from a trapezoidal channel to a U-shaped channel. At this point, the in-channel maintenance road where the existing path is sited ends at a 7' high wall (see Photo 4 below). Open space available for continuation of the pathway sits atop that wall. These considerations inform the pathway alignment and road crossing treatments outlined in following chapters. Additional elements to consider include necessary road crossings, segments where regrading may be needed, and utility structures, such as power poles, to be considered in designing the pathway alignment. Other considerations include a cross-channel pipeline (Photo 2 below) and the difference in elevation between road crossings and open space atop the channel wall (see Photos 1 and 3 below).

Bridge Fence & Sloped Channel Wall at La Cienega Blvd



Elevation difference: Washington Blvd and Open Space



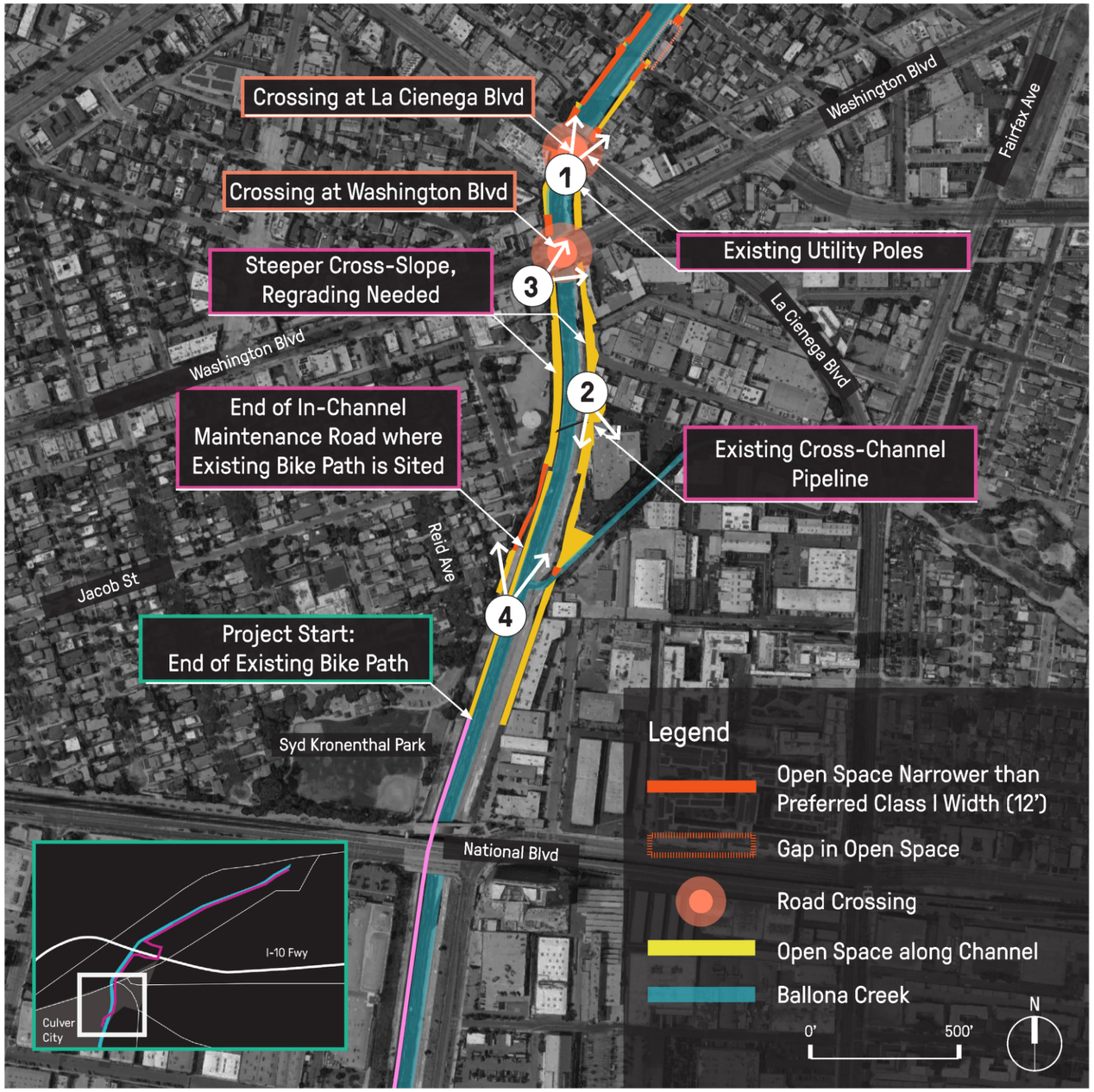
Existing pipeline



Ramp needed



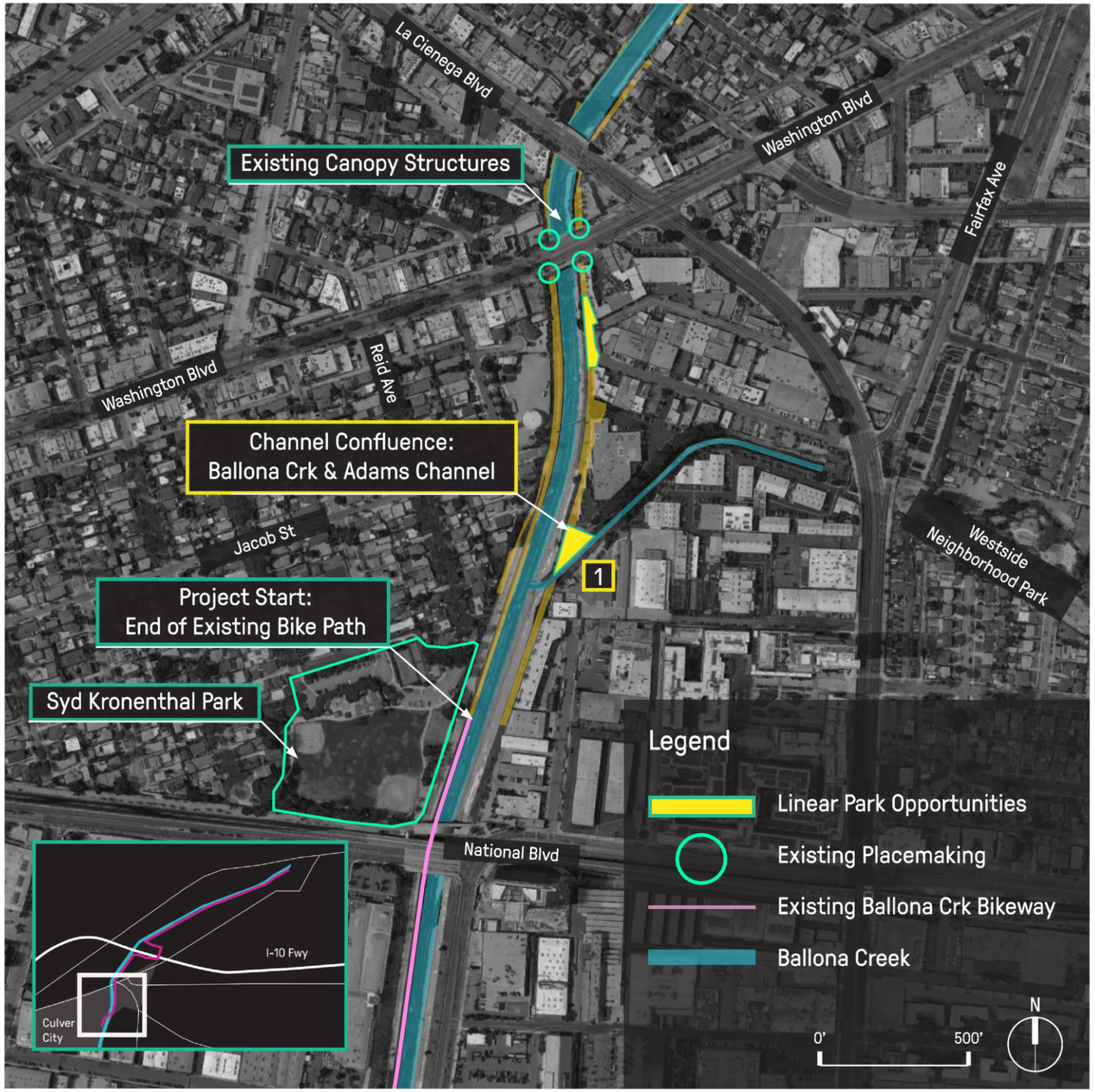
Syd Kronenthal Park to La Cienega Blvd



Opportunities for Parkspace and Placemaking

Opportunities for new parkspace along the channel is limited in this segment due to narrow open space width. Potential park spaces exist on the east side of the channel, but access would require construction of a new channel crossing. On the west side of the channel, where the existing bike path sits, Syd Kronenthal Park holds the potential to become a green node along the extended Ballona Creek bike path with the expansion northward.

Syd Kronenthal Park to La Cienega Blvd

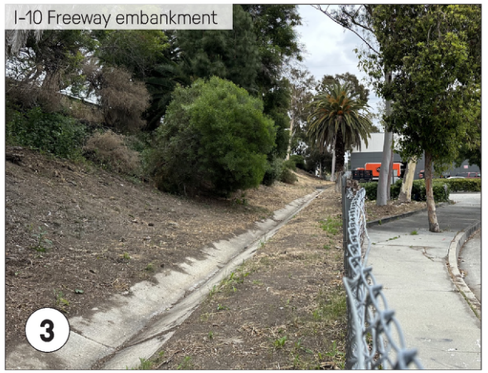


Open Space Adjacent to Channel

Several types of open space are found between La Cienega Blvd and Fairfax Ave. Between Fairfax Ave and the I-10 Freeway sits a stretch of largely unused land located between the LADWP Palms Yard and the southern edge of the channel. This land, fenced off by LADWP, holds a small fenced-in utility yard, power poles, and two drainage outlets.

Vertical clearance beneath the I-10 Freeway and its on- and off-ramps is limited. Alternative means of navigating the I-10 Freeway had to be considered. Where the pathway runs adjacent to the freeway, the steeply sloped embankment supporting the freeway offers both opportunities and challenges to the development of the shared use bike facility. South of the I-10 Freeway, undeveloped space along the channel between La Cienega Blvd and David Ave is generally approximately 16' wide, except where constrained by the presence of a stub road.

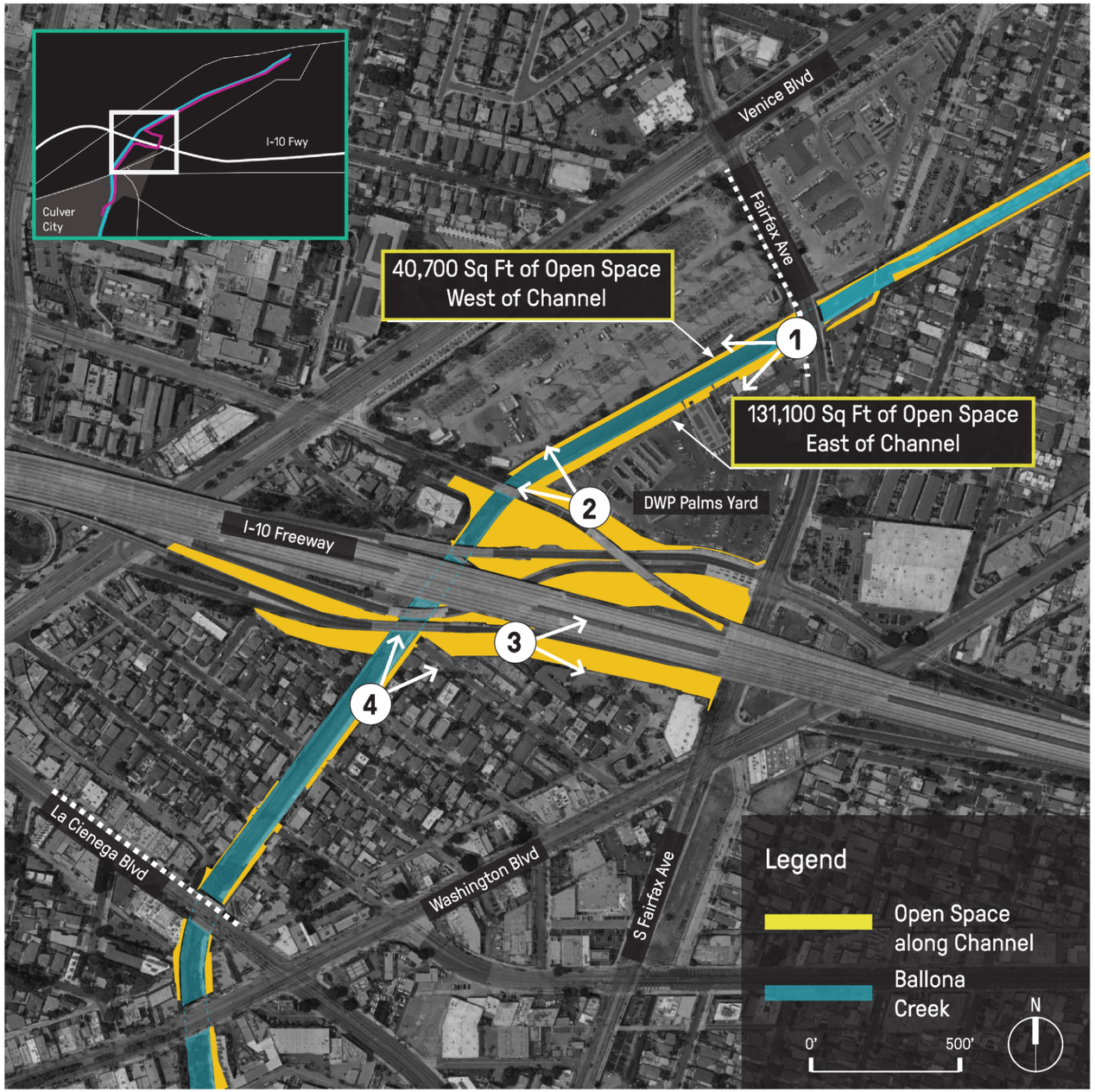








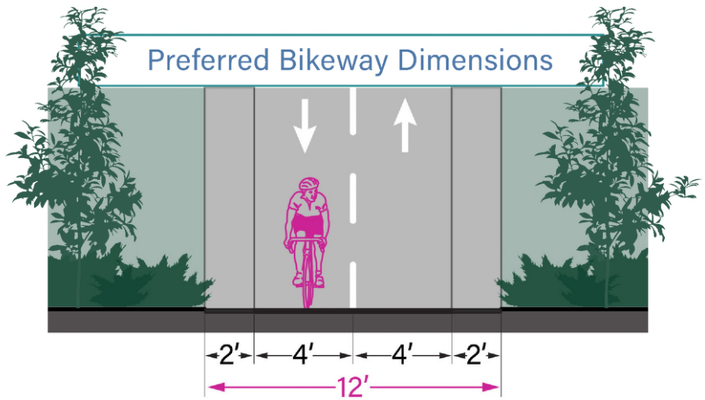
La Cienega Blvd to Fairfax Ave



Space Needed for Class I Bikeway (Preferred Minimum Width)

The project team examined the dimensions of undeveloped space along the Ballona Creek channel to determine where this open space would be wide enough to accommodate the 12′ preferred minimum Class I bikeway width along the pathway route.

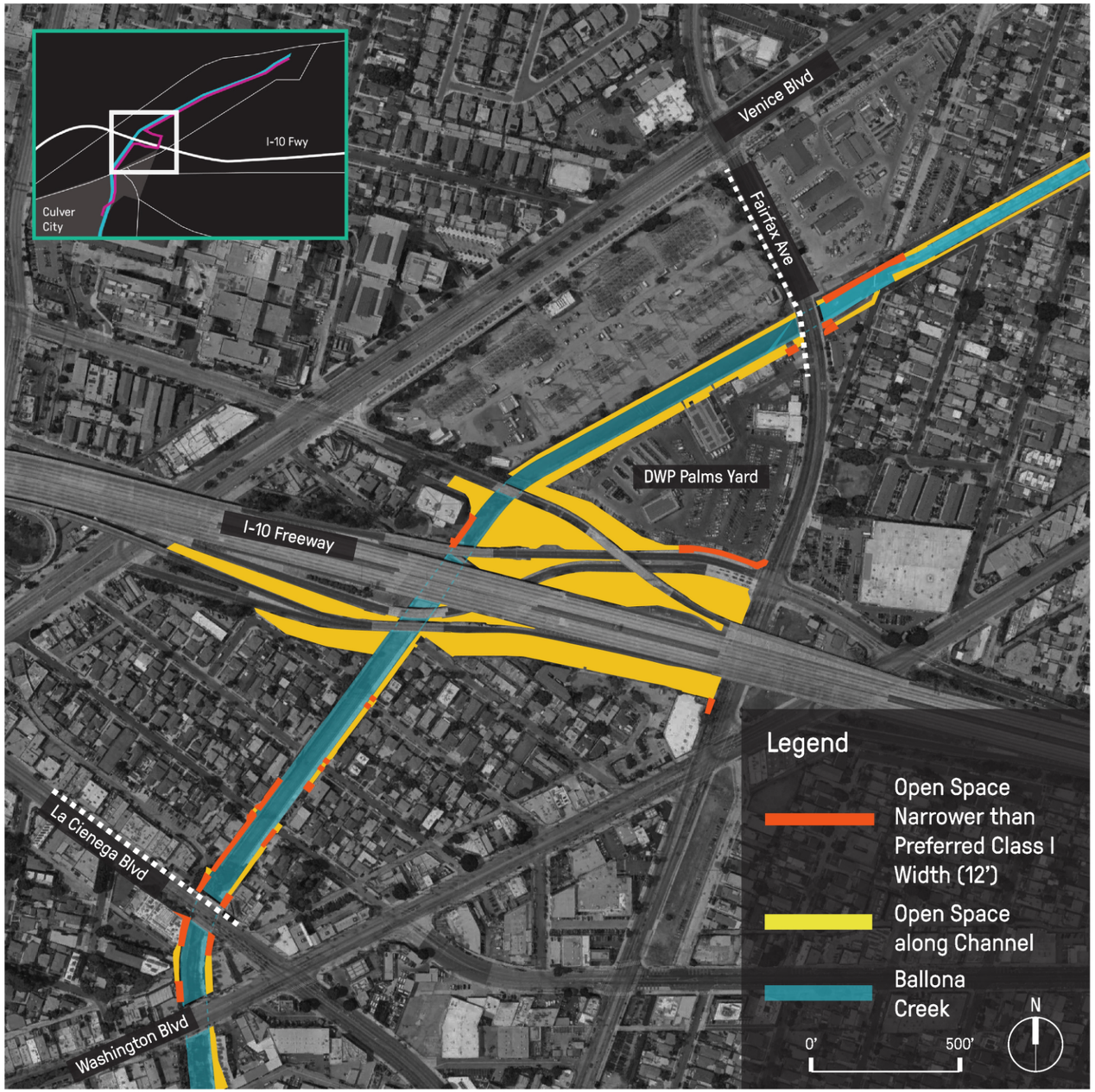
Between La Cienega Blvd and Fairfax Ave, undeveloped space along the majority of the proposed route is likely wide enough to accommodate the preferred minimum Class I path width. Where the undeveloped space is not wide enough to accommodate the preferred Class I bikeway width, such the area just north of La Cienega Blvd or the intersection of Fairfax Ave and Electric Rd, alternative measures may need to be taken. These might include a narrower, but still functional, Class I path at La Cienega Blvd and alternative means of navigating around the point where the I-10 Freeway meets the Ballona Creek channel.



Preferred minimum Class I dimensions were selected to match existing Ballona Creek Bike Path

In high-demand zones: two 5′ lanes with two 2′ buffer zones (14′ total) are desired.

La Cienega Blvd to Fairfax Ave



Considerations for Development of Class I Pathway

The project team identified elements to be considered in the development of a Class I bikeway along the channel between La Cienega Blvd and Fairfax Ave. These elements include necessary road crossings, areas where widening or regrading is needed, and points where pathway alignment and design will need to accommodate existing utilities. The considerations identified within this segment inform the pathway alignment and road crossing treatments outlined in following chapters.

The presence of the I-10 Freeway is the primary obstacle informing the pathway alignment and alternatives for the central portion of the extension route. At the edge of the Ballona Creek channel, the freeway and its on- and off-ramps do not allow for adequate vertical clearance for the pathway. As such, alternatives to continuing the pathway alongside the channel had to be considered in this area.

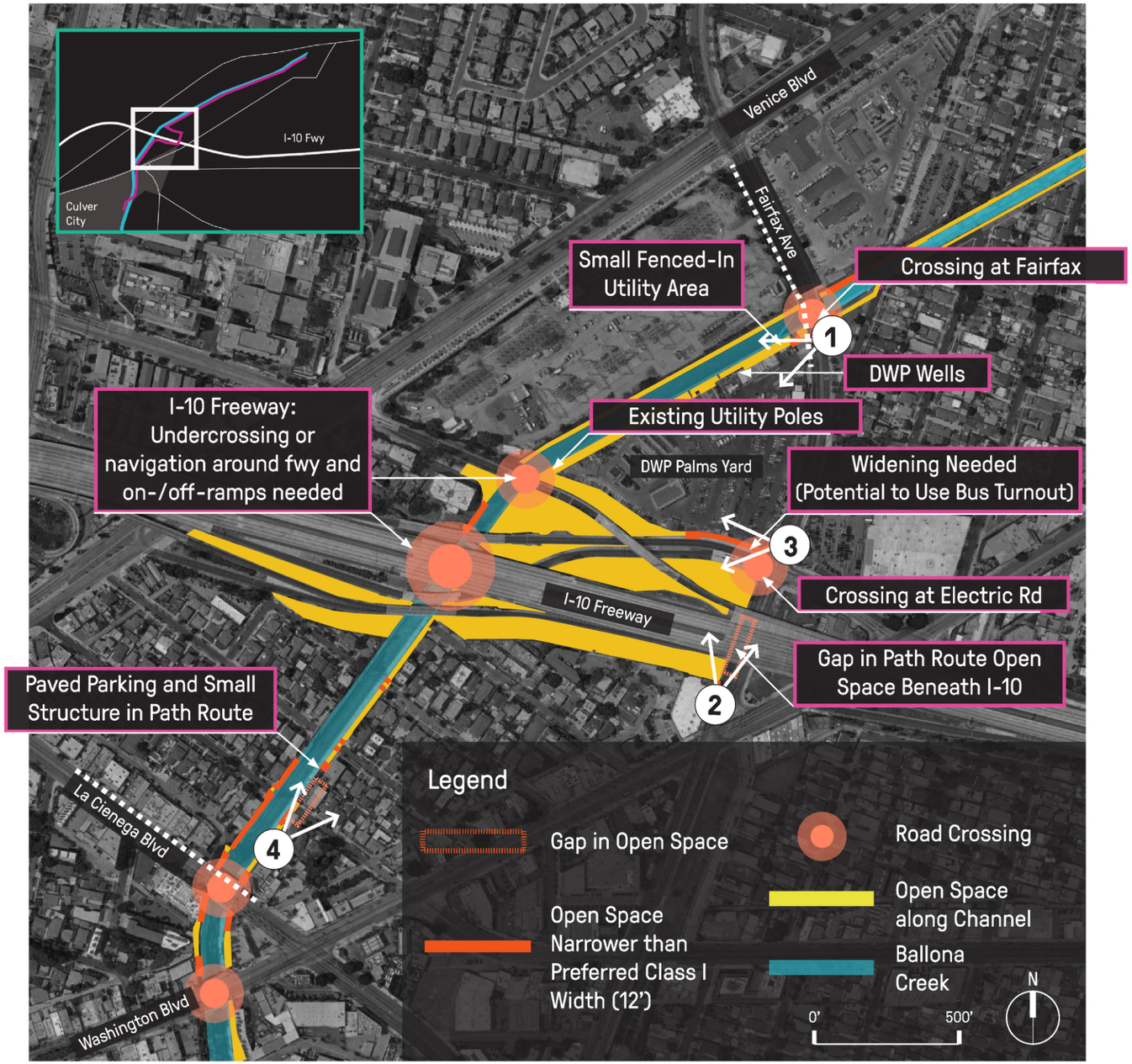








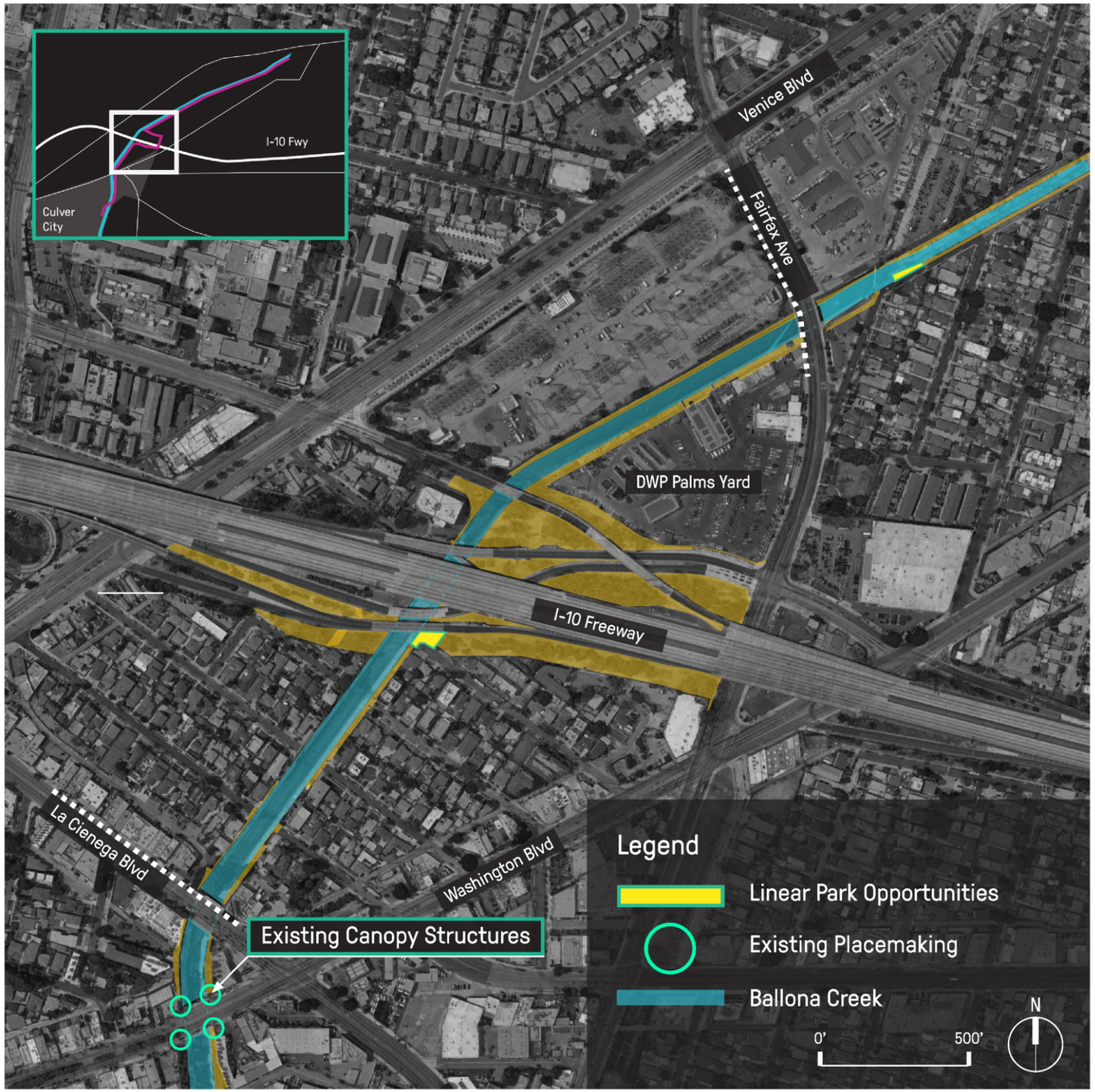
La Cienega Blvd to Fairfax Ave



Opportunities for Parkspace and Placemaking

Opportunities for linear parkspace are relatively limited between La Cienega Blvd and Fairfax Ave due to the steep embankments adjacent to the I-10 Freeway and narrower open space widths along the Ballona Creek channel. A small park space may be feasible where the pathway re-joins Ballona Creek after navigating past the I-10 Freeway. This park space may be complemented by trailhead parklets at the points where the ends of stub roads meet the open space along the channel.

La Cienega Blvd to Fairfax Ave



Open Space Adjacent to Channel

Fairfax Ave to S Cochran Ave

Like the other segments, underutilized open space between Fairfax Ave and S Cochran Ave (ranging from 30'-40' wide) is concentrated on the southern/ eastern side of the channel. Unlike segments to the south, open space in this segment is largely flat, with the exception of a steeper section between S Cochran Ave and Cochran Pl.





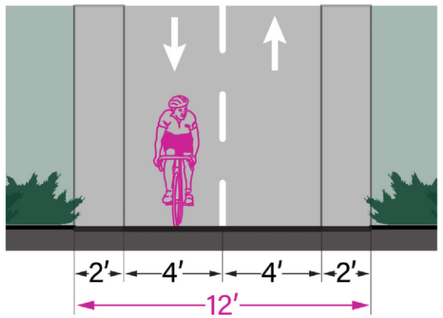


Space Needed for Class I Bikeway (Preferred Minimum Width)

Fairfax Ave to S Cochran Ave

Between Fairfax Ave and S Cochran Ave, significantly more undeveloped space exists south of the channel than north. While challenges remain approx. 86% of the open space south of the channel in this reach is likely wide enough for the preferred Class I bike facility width. Where the undeveloped space is not wide enough for a Class I facility, such as in the stretch from Thurman Ave to S Genesee Ave, measures to close this gap in the Class I facility will need to be taken. A Class IV bikeway along Cologne St is a potential solution.





Preferred minimum Class I dimensions were selected to match existing Ballona Creek Bike Path

In high-demand zones: two 5' lanes with two 2' buffer zones (14' total) are desired.

Considerations for Development of Class I Pathway

Fairfax Ave to S Cochran Ave

The project team identified elements to consider for the development of a Class I pathway in this segment, including crossings needed for a range of road types, as well as the presence of a small paved parking area within the route. These considerations inform the pathway alignment and crossing treatments outlined in following chapters.







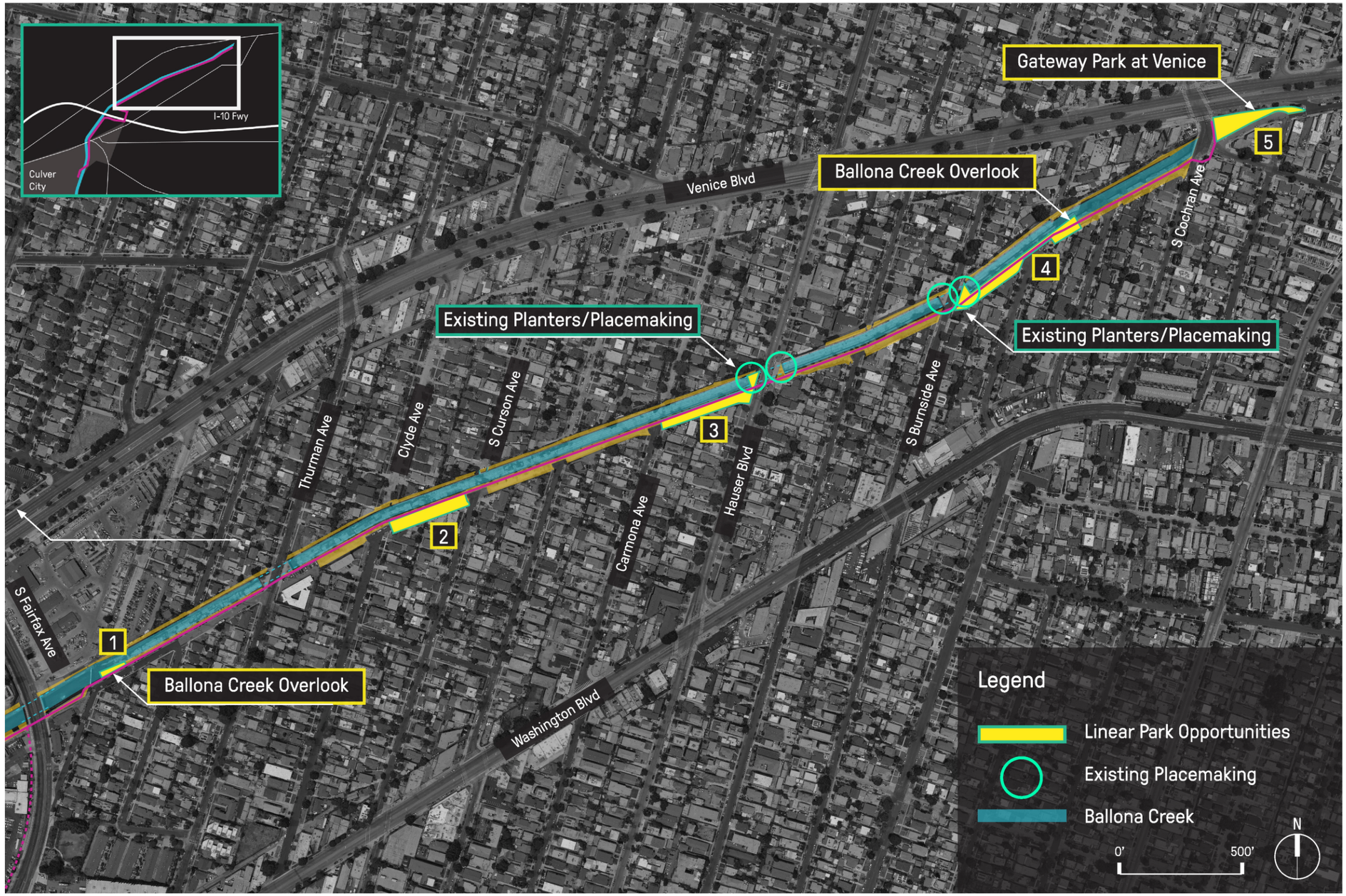


Opportunities for Parkspace and Placemaking

The open space along the preferred pathway route offers a unique opportunity for the creation of new and public green spaces in Mid-City. In numerous locations, the open space between Fairfax Ave and S Cochran Ave along the channel is wide enough to offer space for rest and gathering, as well as shade, habitat, and room for water infiltration. The project team identified a number of linear park and/or channel overlook opportunities between Fairfax Ave and S Cochran Ave, spaced relatively equidistant at points of pathway access. The parkspace opportunities complement past placemaking efforts, such as the planters and artwork where Hauser Blvd and S Burnside Ave cross over Ballona Creek.



Fairfax Ave to S Cochran Ave



Endnotes

1 Equity Platform, Los Angeles County Metropolitan Transportation Authority (Metro), 2022. https://www.metro.net/about/equity-race/

2 CalEnviroScreen 4.0, California Office of Environmental Health Hazard Assessment, 2023. https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

3 Equity Platform, Los Angeles County Metropolitan Transportation Authority (Metro), 2022. https://www.metro.net/about/equity-race/

4 Equity Platform, Los Angeles County Metropolitan Transportation Authority (Metro), 2022. https://www.metro.net/about/equity-race/

5 Major Employers in Los Angeles County, California Employment Development Department (EDD), 2023. https://labormarketinfo.edd.ca.gov/majorer/countymajorer.asp?CountyCode=000037

6 The Culver Steps Now Officially Fully Leased, Hackman Capital Partners, 2023. https://www.hackmancapital.com/the-culver-steps-now-officially-fully-leased/

7 Census report: Commuters biking to work up 60 percent in past decade, KPCC, 2014. https://www.kpcc.org/2014-05-08/census-report-commuters-biking-to-work-up-60-perce

8 First Federal Data on Pandemic-era Bike Commuting, The League of American Bicyclists, 2022. https://bikeleague.org/first-federal-data-pandemic-era-bike-commuting

9 The Creative Economy of Culver City, City of Culver City, 2023. https://www.culvercity.org/files/assets/public/documents/city-hall/cultural-affairs/cecc_report_050817_withapp.pdf

10 Impact of Creative Economy in Los Angeles, Otis College of Art and Design, 2023. https://www.otis.edu/otis-college-report-creative-economy/impact-creative-economy-los-angeles#:~:text=Los%20Angeles'%20creative%20economy%20employs,12%25%20of%20the%20County's%20workforce

11 Active Transportation Strategic Plan Update Fact Sheet, Los Angeles County Metropolitan Transportation Authority (Metro), 2022

12 Active Transportation Strategic Plan Update Fact Sheet, Los Angeles County Metropolitan Transportation Authority (Metro), 2022

13 The Economic Benefits of the Public Park and Recreation System in the City of Los Angeles, California, The Trust for Public Land, 2017. https://www.tpl.org/resource/econbenefits-losangeles

14 National Household Travel Survey, U.S. Department of Transportation, 2017. https://nhts.ornl.gov.

15 Syd Kronenthal Park, County of Los Angeles, 2023. https://locator.lacounty.gov/lac/Location/3185784/syd-kronenthal-park

16 Westside Neighborhood Park, City of LA Department of Parks and Rec, 2023. https://www.laparks.org/park/westside-neighborhood

17 Genesee Avenue Park, City of LA Department of Parks and Rec, 2023. https://www.laparks.org/park/genesee-avenue

18 The Link – Baldwin Hills Parklands, La County Public Works, 2023. https://pw.lacounty.gov/transit/TheLinkBaldwin.aspx

19 Michelle and Barack Obama Sports Complex, City of LA Department of Parks and Rec, 2023. https://www.laparks.org/reccenter/michelle-and-barack-obama-sports-complex

Chapter 3
Community Participation

Overview

The participation of community members and stakeholders was critical in the development of pathway options and design concepts during the Feasibility Study process.

A series of objectives guided the team's approach to community participation:

- Engage a wide range of stakeholders, residents, and potential pathway users in Los Angeles and Culver City.
- Involve residents who live adjacent to the pathway in the project's development.
- Share project information with the community.
- Solicit input, ideas, and feedback that will inform development of the feasibility study.

Stakeholder collaboration was central in the community participation process. Engagement was carried out in close coordination with City of Los Angeles Council District 10, the City of Culver City, Mid-City Neighborhood Council, and Baldwin Hills and Urban Watershed Conservancy. Through this collaboration, the project team sought to reach a wide range of community members and interest groups in the areas of Los Angeles and Culver City where the pathway is located. A diverse range of outreach methods and meeting formats complemented this effort. Appendix C contains the Community Participation Plan prepared for the study.

The numbers reflect the scope of the participation process:

- Outreach fliers sent to over **8,000 addresses** around Ballona Creek
- More than **500 survey responses** received from community members in less than 3 months
- **4 community meetings** held across two cities in coordination with a wide range of local stakeholders



Outreach Methods

The project team conducted outreach through a variety of methods designed to reach a wide range of community members, particularly those who live around the proposed extension or who might use it once built. All of these methods included a direct link to the online survey for the project.

Website

Streets for All promoted the community engagement events and survey through its primary website, as well as through its "Finish the Creek" website: https://finishthecreek.carrd.co/ . The "Finish the Creek" site served as a one-stop hub for information on the pathway extension and hosted a page where potential participants could register for the community meetings. The website featured Spanish language translations of project and outreach materials.

Email Blasts

Streets for All promoted the community engagement events and online survey through its email lists, as did numerous project stakeholders including: the City of Culver City, Mid-City Neighborhood Council; and Baldwin Hills and Urban Watershed Conservancy. Email blasts included information in English as well as Spanish.

Social Media

Streets for All promoted the community engagement events and online survey through ads on Instagram and Facebook, geo-targeted to reach the people in the area of the proposed pathway extension.

Direct Mail

The project team utilized USPS's Every Door Direct Mail (EDDM) service to promote community workshops and online survey by sending to 8,340 addresses (7,458 residential addresses and 882 business addresses) in area around the pathway extension. Using this service, fliers were placed in the mailboxes of addresses along selected USPS routes.



*Irregular boundary of direct mail area is due to irregular boundaries of USPS mail routes.

Outreach Methods

In-Person Outreach

The project team sought to reach community members "where they are." Volunteers distributed fliers on the existing Ballona Creek Bike Path, as well as at local schools and a local farmers market, to promote the community meetings and connect people to the online survey. Fliers were distributed at the following locations:

Existing Ballona Creek Bike Path

Schools within approx. ¼ mile of the proposed extension:

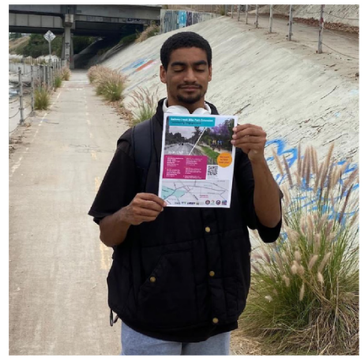
- New Los Angeles Charter Middle School
- Saturn Street Elementary School
- Marvin Avenue Elementary School
- Echo Horizon School

La Cienega Farmers Market











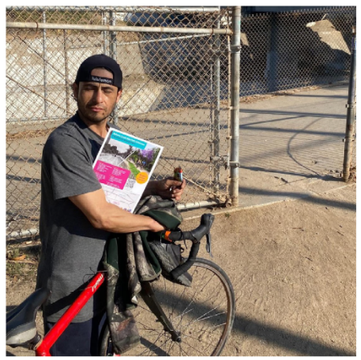




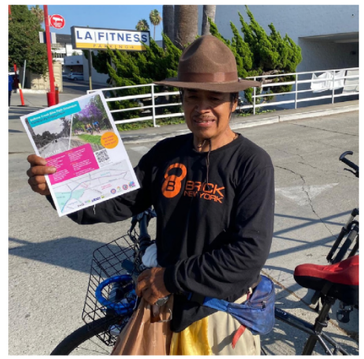












Community Meetings

The project team held four community meetings in late September-early October 2023 in coordination with local stakeholders. Three meetings were held in Los Angeles (one in coordination with Mid-City Neighborhood Council and two in coordination with the Office of Heather Hutt, LA City Council District 10) and one meeting was held in Culver City (in coordination with the City of Culver City). Meetings were organized around a diversity of locations, times, and formats to engage a wide range of participants. These ranged from a gathering held on a Sunday afternoon in Genesee Park in Mid-City, Los Angeles to meetings held after working hours at the Culver City Senior Center and LA City Council District 10 offices to a Saturday morning meeting held entirely online. Feedback was gathered through a variety of methods, including dot voting, placing Post-Its on poster boards, and conducting surveys through Mentimeter, a digital service which allows for live interactive surveys and polling. At all community meetings, Spanish language translation was available, and all slides and materials presented contained Spanish translations. The results of the live in-meeting surveys are included in Appendix E.

Community Meeting - 1
with Mid-City Neighborhood Council

Sept. 24, 2023, 3-5 pm
Genesee Park (2330 S. Genesee Ave., Los Angeles, CA)

Number of Attendees: 26





Community Meeting - 2
with the City of Culver City

Sept. 26, 2023, 7-9 pm
Culver City Senior Center (4095 Overland Ave., Culver City, CA)

Number of Attendees: 14





Community Meeting - 3
with the LA City Council District 10

Sept. 27, 2023, 7-9 pm
CD10 District Office (5213 West Pico Blvd., Los Angeles, CA)

Number of Attendees: 16

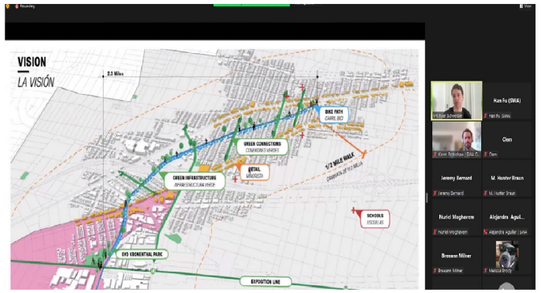


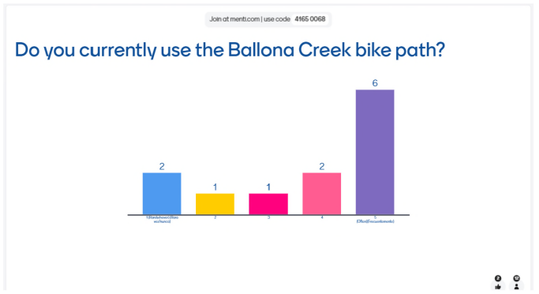


Community Meeting - 4
with the LA City Council District 10

Oct. 07, 2023, 11 am - 12 pm
Online via Zoom

Number of Attendees: 14



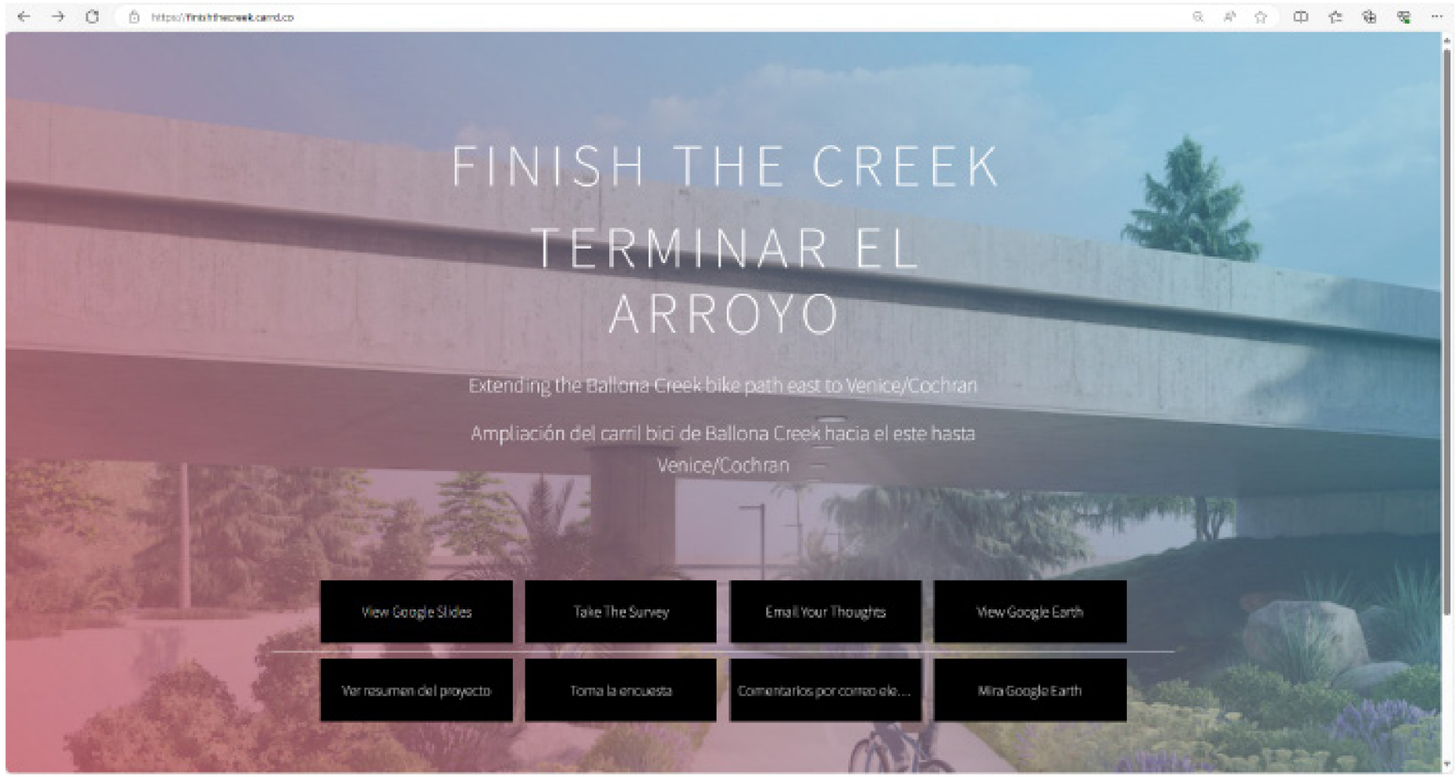


Online Survey

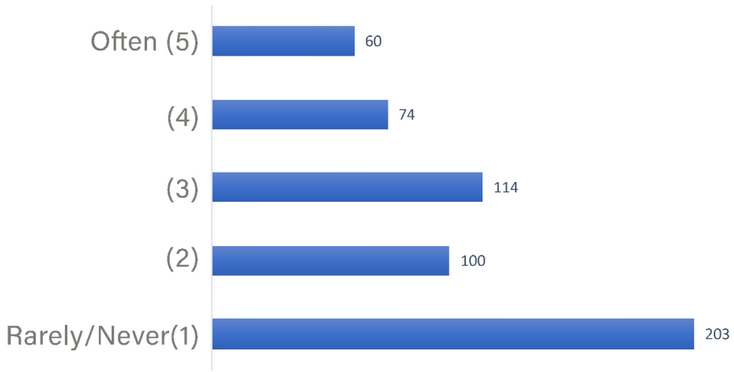
On September 13, Streets for All launched an online survey to gather feedback from communities on the proposed Ballona Creek pathway extension. As of November 24, less than 3 months after its launch, the survey had received **522 responses.**

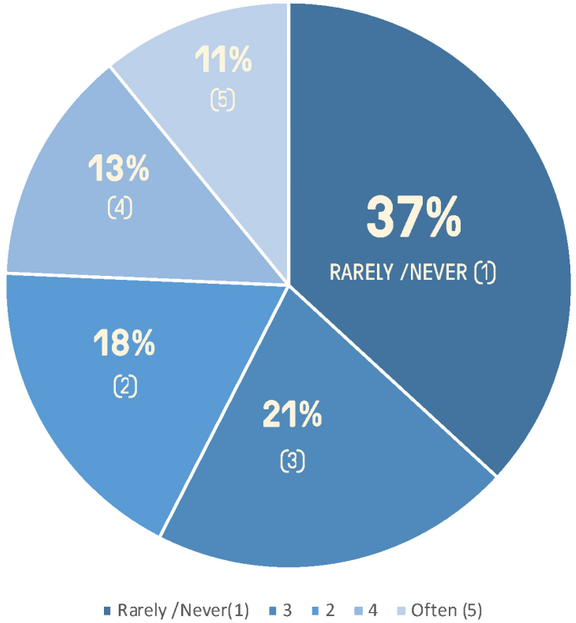
The survey gathered information on how frequently respondents use the existing bike path, their general connection to the Ballona Creek area, their feelings regarding the safety of walking and biking in the area, preferences between different pathway alignment options, and what they desire most within the proposed park spaces - among other topics. In response to the question - Are you supportive of the effort to extend the Ballona Creek bike path East to Venice and Cochran? - 96% answered Yes.

Responses are summarized in the pages that follow. Complete survey responses as of November 24, 2023 are included in Appendix F.

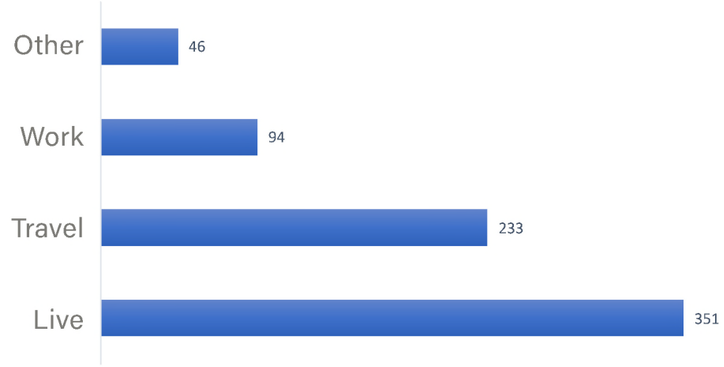


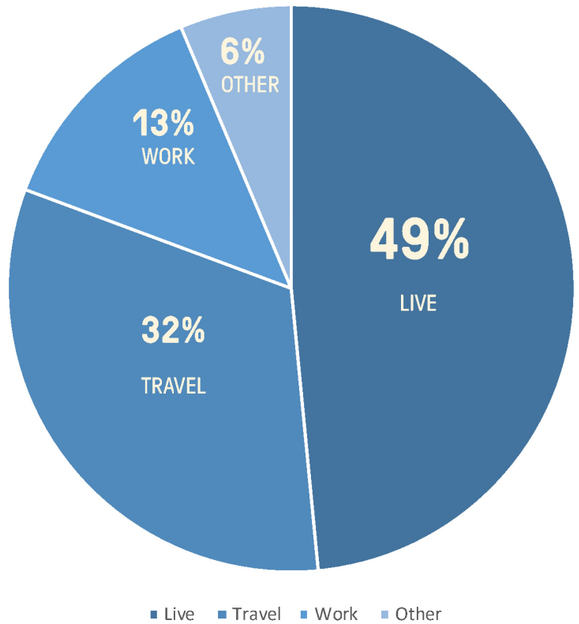
Do you currently use the Ballona Creek bike path?

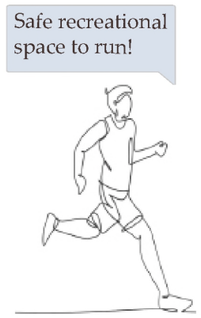




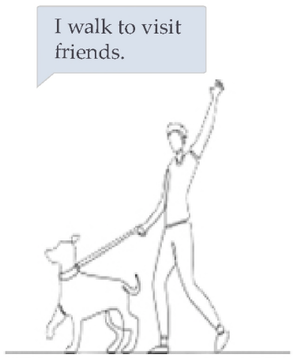
What is your connection to the Ballona Creek area?



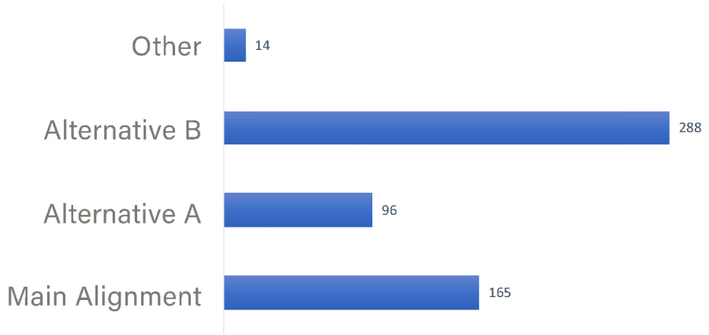


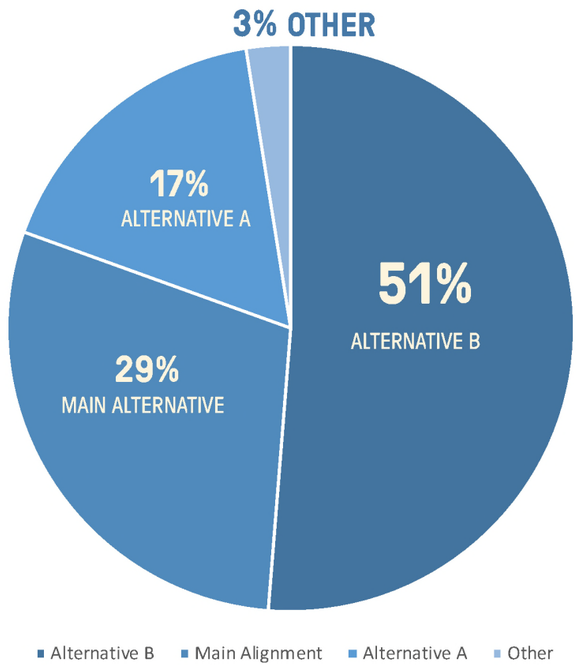


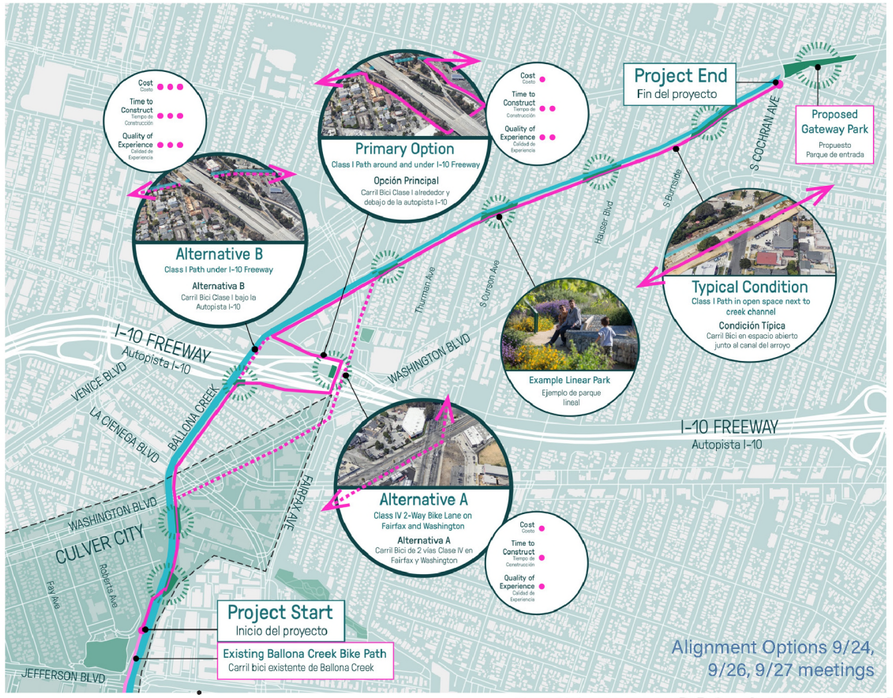




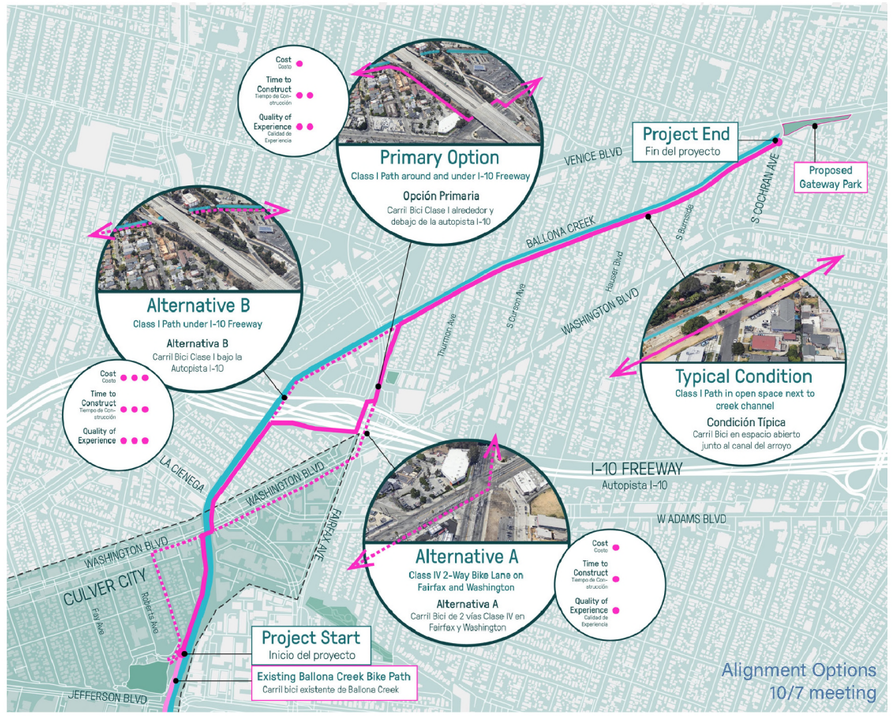
Which alignment do you prefer?







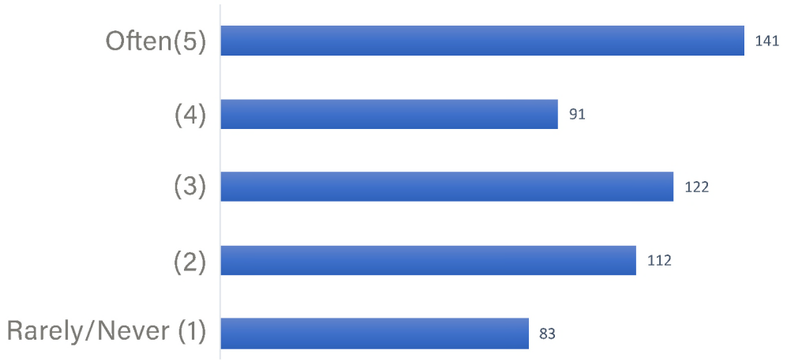
Pathway alignment modified based on community feedback

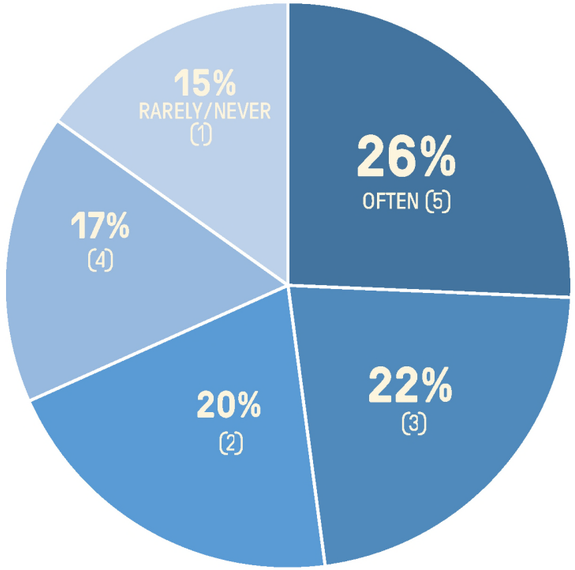


Pathway Alignment Options

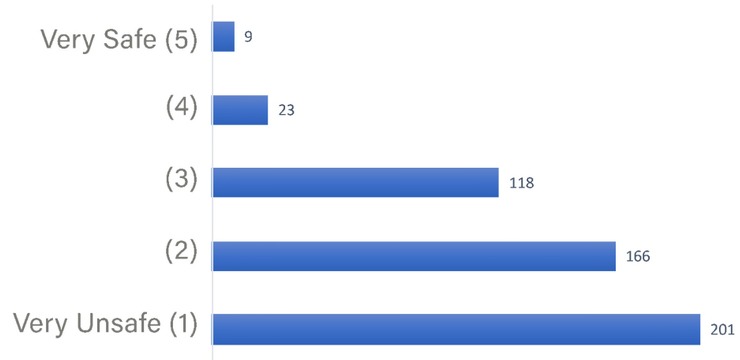
Based on community feedback and ongoing meetings with relevant public agencies, the project team modified the Primary Route option over the course of the community participation process. Specifically, the route for navigating the area north of the I-10 freeway, around the DWP yard, was updated as community engagement was in process - based in large part on community feedback. To the left are the alignment options presented at the first three community meetings. Below are the alignment options presented at the final meeting.

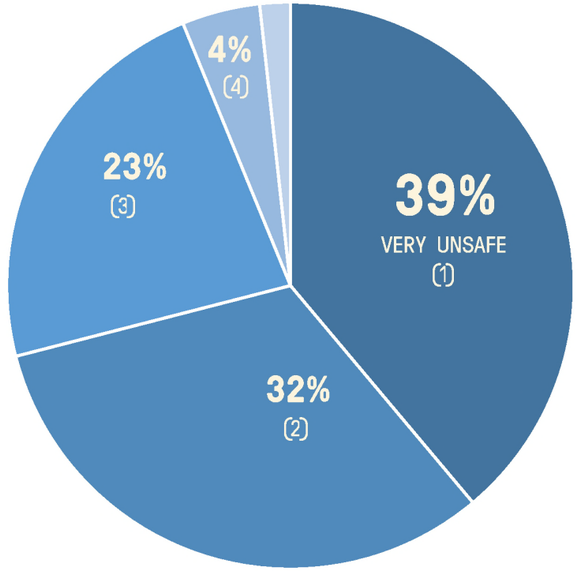
How often have you walked or biked along Venice Blvd. or Washington Blvd. along the area of the proposed extension?



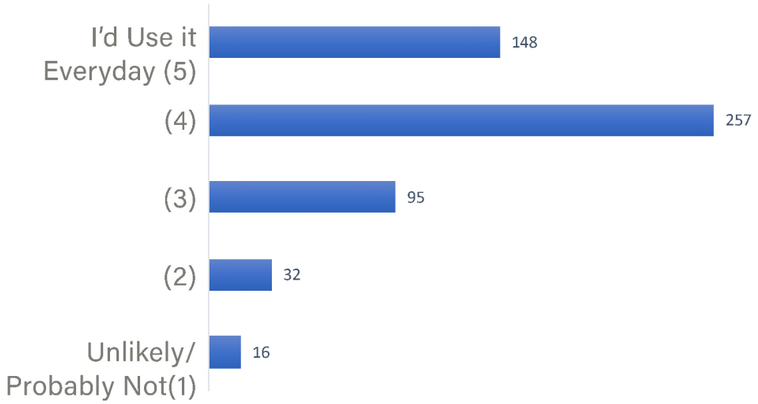


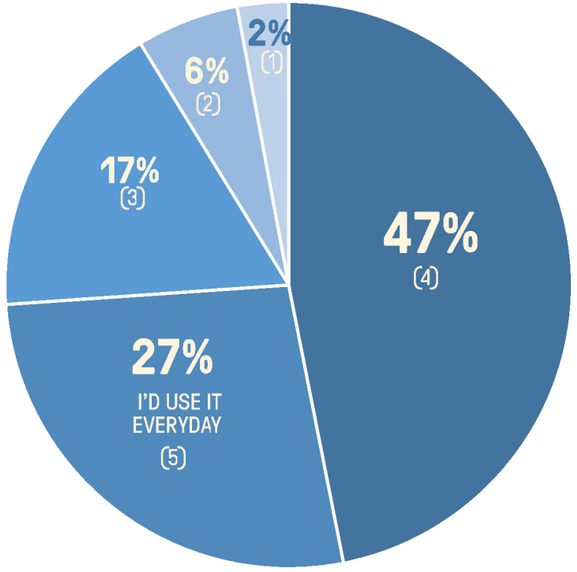
If you have walked or biked along Venice Blvd. or Washington Blvd. along the area of the proposed extension, how safe (from a road safety point of view) did you feel doing so?



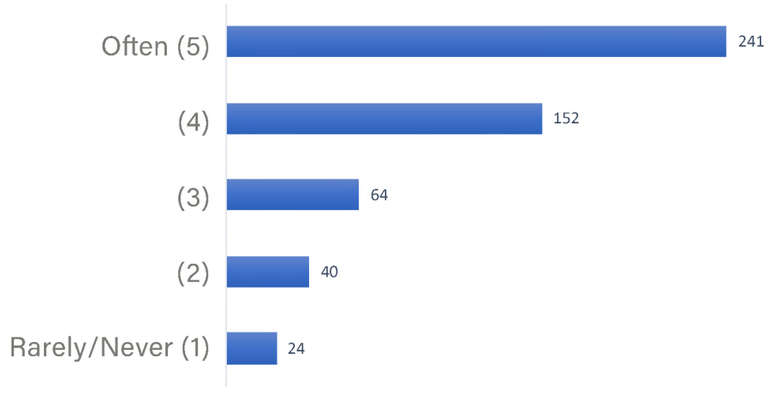


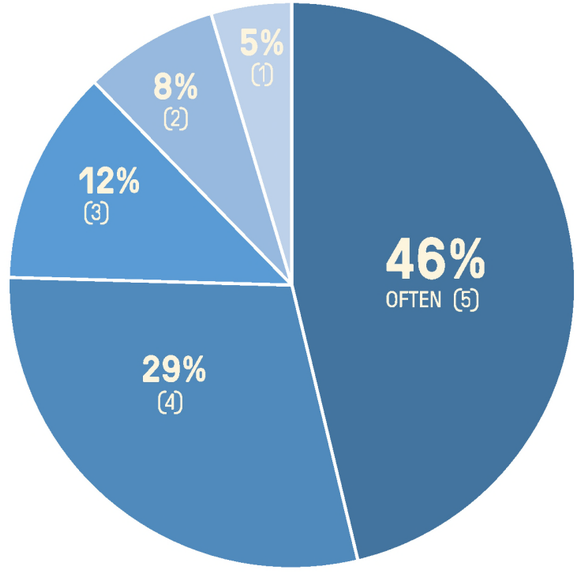
If the bike path was extended to Venice and Cochran, how likely would you be to use it to walk or bike?





How likely would you be to use this space (new linear parks along the path) if it was created?





Are you supportive of the effort to extend the Ballona Creek bike path East to Venice and Cochran?

Of the 520 responses to the question - do you support extending the Ballona Creek bike path to Venice and Cochran? - 96% were in the affirmative, demonstrating an exceptionally high level of support for the fundamental goal of the project.

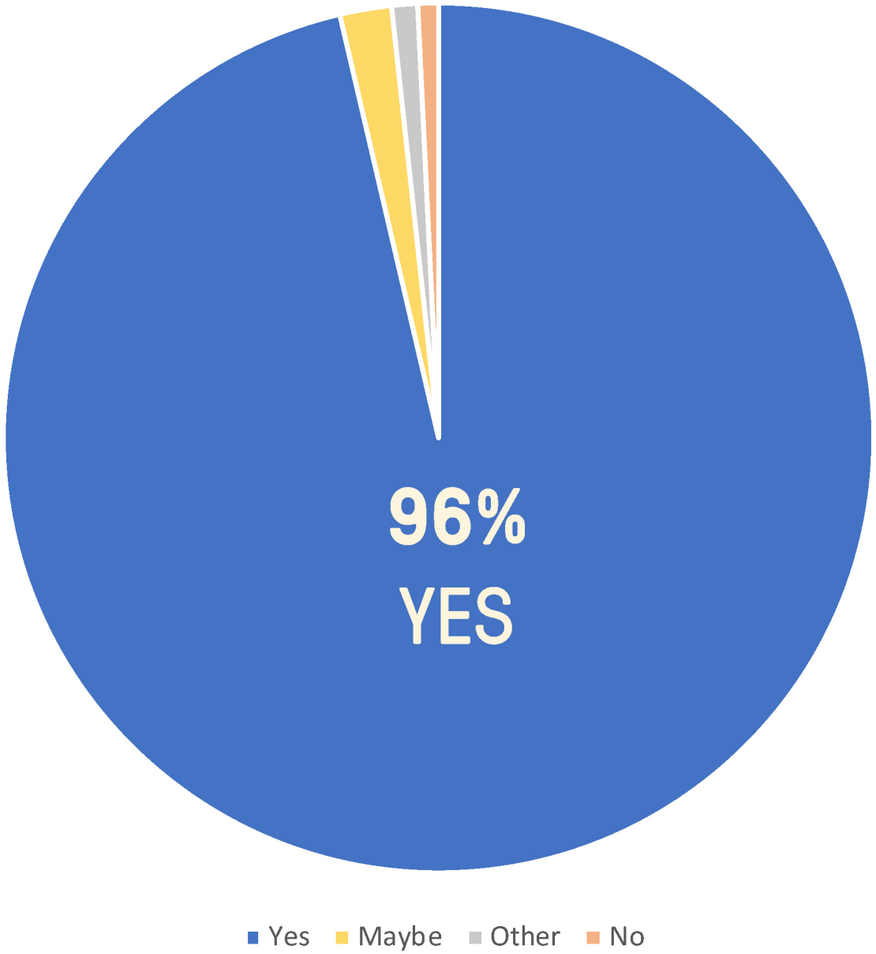


I support this project. Finish the creek! We deserve a beautiful bike path and park for leisure and errands!

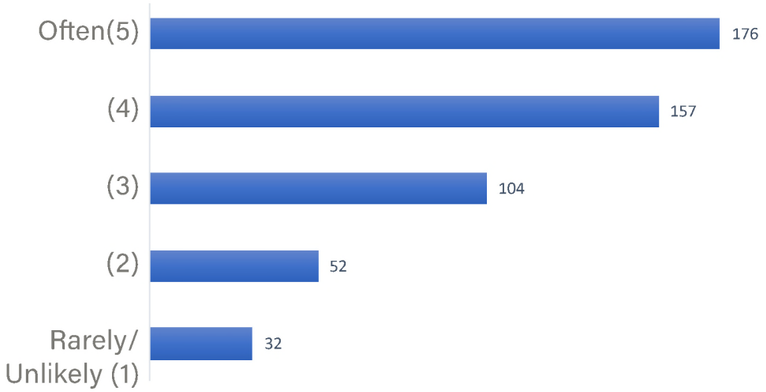


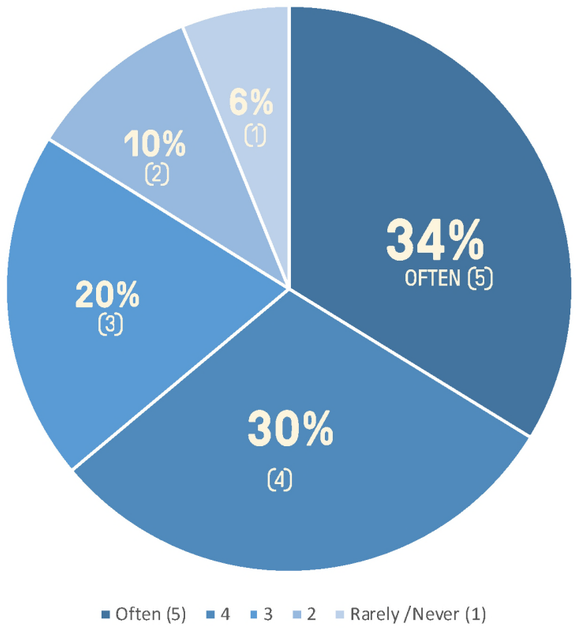
I bike commute 3 times per week. Whenever I make it to Ballona Creek I breathe a huge sigh of relief that I survived another day biking. This extension couldn't come soon enough!





How likely would you be to use the new park at Venice and Cochran if it was created?





What is most important to you?

- Shade Trees and Native plants
- Lighting
- Playground
- Shade Structure
- Art Installation
- Gathering Spot

Shade Trees and Native Plants



Lighting



Playground



Shade Structure

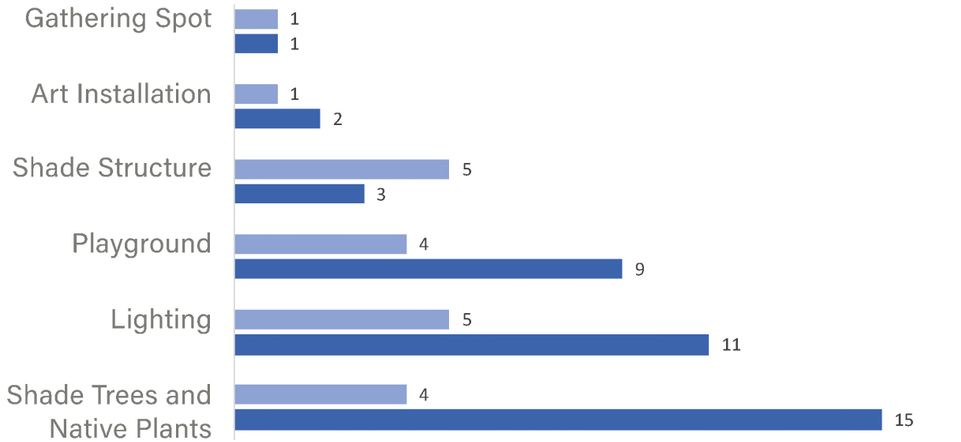


Art Installation



Gathering Spot





	Shade Trees & Native Plants	Lighting	Playground	Shade Structure	Art Installation	Gathering Spot
2nd Choice	4	5	4	5	1	1
1st Choice	15	11	9	3	2	1

Sample of Categorization of Open-Ended Survey Feedback

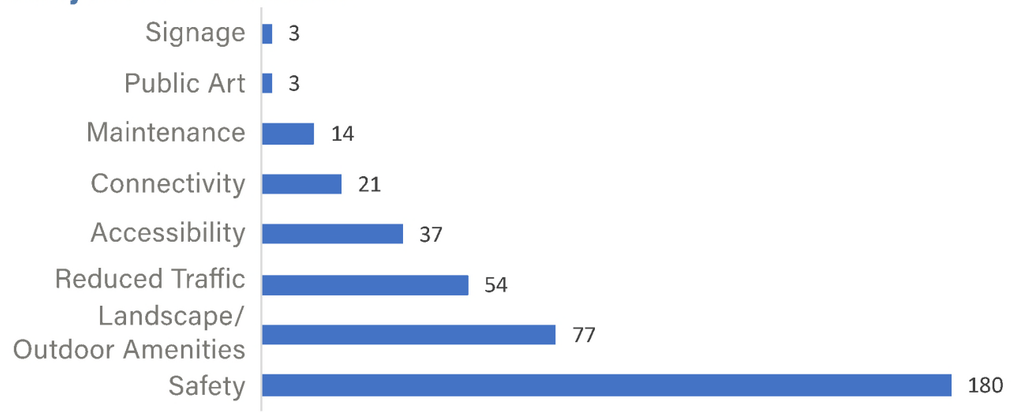
The online survey allowed for open-ended feedback from participants in response to the question 'We would welcome any other feedback you have about the project.' The team reviewed and categorized this feedback to paint a clearer picture of community members' preferences and concerns - particularly those that were not captured in the other survey questions. Below is an image of how the wide-ranging responses to the above survey question were categorized. The following page charts the key concerns and further breaks down responses to the most frequently mentioned of these concerns: safety.

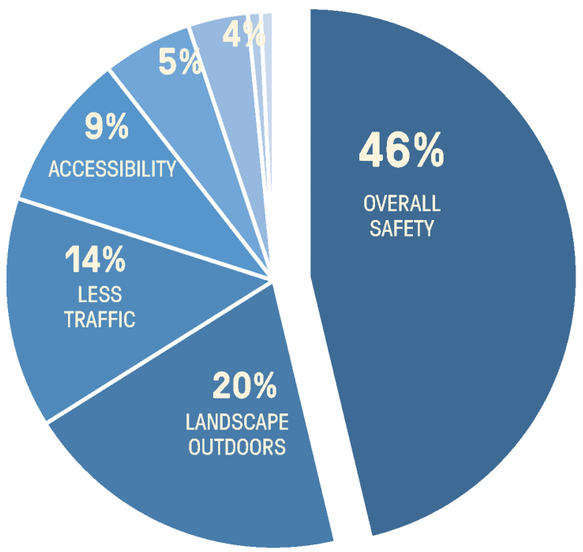
All open-ended survey feedback as of November 24, 2023 is included in Appendix F.

	Traffic: Lessens Traffic	Commuter / Recreational Bikers	Involvement of City Officials/ Unhoused People	Safety: Avoid Car/Cyclist Conflicts/Speed Reduction	Safety: Improve overall safety (Law enforcement Surveillance Cameras/Dedicated Bike Lane)	Safety: Lighting	Safety: Encampment & Homelessness	Safety: Separate Walking/Biking Paths	Safety: Rehabilitation of Existing Bike Paths	Safety: Visibility	Safety: Avoid/Minimize Crossings on Venice & Washington Blvds	Safety: Maintenance & Cleanliness	Public Art	Kids & Adults: Outdoors Amenities (Benches, Trash Rec., Shade Structure, Playground, Restrooms)	Kids & Adults: Outdoor Recreational Spaces; Equity and inclusion; promote wellbeing	Building Community & Connect Neighborhoods; Improving Pedestrian and Biking Culture	Excited/ Supportive	Landscape: Parks, Trees, Shade, and Beautification	Avoid Housing Obstruction/Traffic Creation	Access & Connectivity: More New Bike Paths Connecting to Existing Paths	Access: Extend the path to North of Venice, DTLA, Beverly Hills, Adams Blvd., Koreatown	Access & Connectivity: Metro, Bike-share,Public Transit, Existing Bike Paths	Other	Signage, Path Finding	Surface Material	Parking	Not Supportive	Adding More Protected, Straight, Bike Lanes	Clean Infrastructure	Alignment
This would be a <u>great commuter path for bike commuters</u>. the more people who bike to get where their going will greatly lessen Car Traffic.	x	x																													
This is a great <u>alternative to riding main streets.</u>	x	x																													
99% of public can't bike to work/home due to family obligations, inclement weather, and safety. This idea would work in a very populated dense area. This would be a large expense of taxpayer funds to benefit the very few and weekend recreational bicyclists																										x					
A key aspect for getting more residents (especially those with kids) to use the bike path (both old and new) is making it safe. As part of this, it should be of critical importance to avoid <u>encampments</u> along the bike path (especially along the routes that are close to schools). There should be alignment with city officials that this should be part of the planning/funding process. It should also apply for the existing path (e.g. there's a large encampment next to the "wrapper" resulting in broken glass, human feces etc. on the bike trail and piles of trash in the water).The other part is minimizing the number of intersections with streets used by cars (that's what makes the existing trail so nice).			x	x	x		x		x			x																			
Add Metro Bikeshare.																							x								
Adequate lighting at night. Parts of the trail become dark and for a round-trip excursion could dissuade ppl from using the space						x			x																						
Also would like to see further rehabilitation of the existing bike path									x																						
Any additional activities/playground for toddlers and kids													x	x																	
Any project that helps avoid biking alone Venice Blvd is a good one. Even with the bike lanes, it's just not safe.					x						x																				
As a frequent Ballona cyclist who rides west on Washington from Thurman to get to Kronenthal Park, I enthusiastically endorse any eastward extensions. There have been multiple proposals along these lines for many years, and it's exciting to see things moving forward at last.																	x														
As I bet you are aware District 10 is short on park space and cars often pass through our district dangerously, this would be a transformative project. Can it be accelerated?				x													x	x													

We would welcome any other feedback you have about the project.

Subject of Feedback

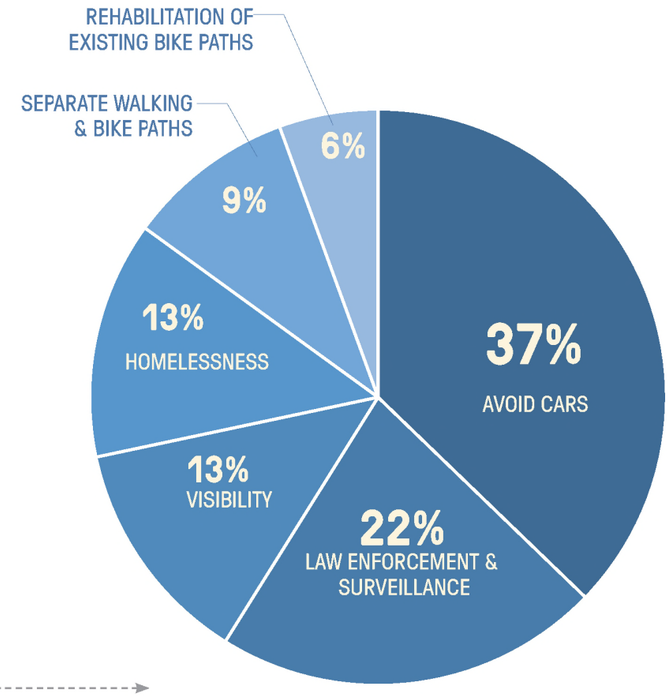




- Overall Safety
- Landscape, Outdoor Amenities, Recreational Open Spaces
- Reduced Traffic/Recreational or Communal Biking
- Connectivity to Neighborhoods and Communities
- Accessibility to New and Existing Bike Paths & Public Transit
- Maintenance & Cleanliness
- Signage
- Public Art

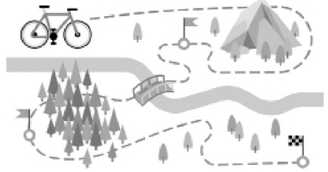
Overall Safety:

- Avoid Car Conflicts, Road Crossing (Venice and Washington Blvd.)
- Law Enforcement, Surveillance, Dedicated Bike Lane
- Lighting and Visibility
- Encampment and Homelessness
- Separate Walking and Cycling Paths
- Rehabilitation of Existing Bike Paths



We would welcome any other feedback you have about the project.

Connecting to existing bike paths!



Less Traffic !!



Safety!!!!
Avoid cars !!



Native Landscaping



Lighting for safety!





Connecting neighborhoods





Playground!



Safer to commute or recreational biking!



Parks, Shade trees and amenities





Outdoor recreational space for kids and adults



Accessibility to Metro and public transit



Chapter 4
Pathway Alignment and Alternatives

The pathway alignment and design concepts presented herein are shown for the **purposes of this feasibility study only**. All design concepts are subject to review and approval by the City of Culver City and City of Los Angeles.

Overview of Alignment and Alternatives

Chapter 2 (Preliminary Site Analysis) examined the physical opportunities and considerations associated with extending the Ballona Creek Bike Path along the remainder of Ballona Creek. Chapter 3 (Community Participation) detailed community members' preferences related to the pathway extension.

The following pages outline primary and alternative options for pathway alignment, based on the overarching goals defined at the outset of the project and feedback received over the course of the study.

Primary Route

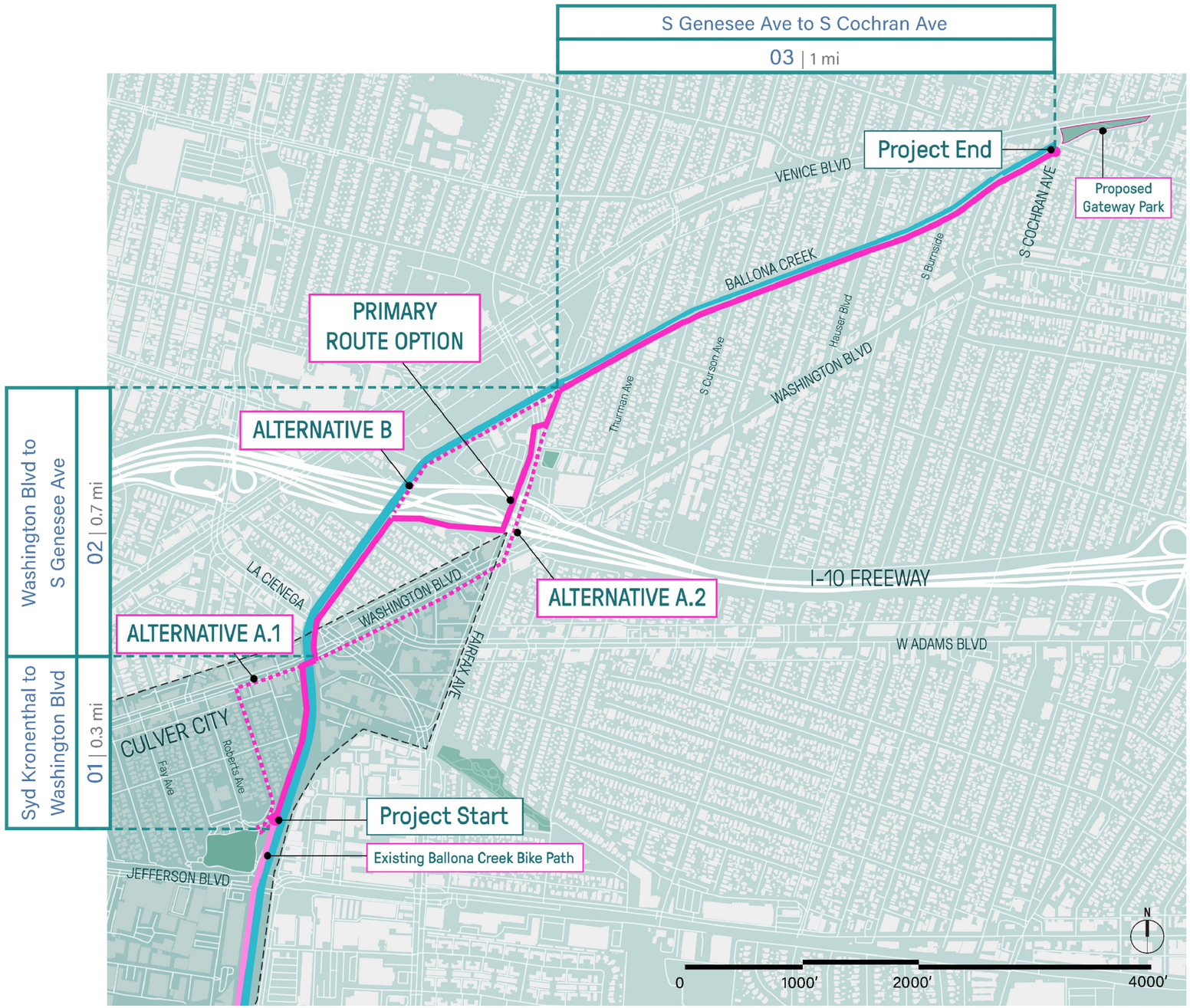
The primary route provides an option for navigating key pathway challenges through a combination of off-street and on-street adjacent path facilities. The primary route option exceeds the broadest range of project goals (for experience, access, safety, mobility, and public space) while maintaining the potential for funding, permitting, and constructing the pathway in a relatively expeditious manner.

Alternative A

Alternative A provides a largely on-street or on-street adjacent option for navigating challenging portions of the pathway extension. In this way, Alternative A seeks to minimize challenges of cost, permitting, and construction timeframes, while providing more direct access to businesses and transit. In doing so, however, Alternative A diverges from the channel for a significant portion of the pathway route. Alternative A is divided into Alternative A.1 and A.2, each of which can be combined with other route segments for complete routes.

Alternative B

Alternative B provides an entirely off-street pathway, entirely alongside or within the Ballona Creek channel. At the same time however, this option substantially increases the potential for higher costs and timelines for construction and permitting.



Pathway Alignment

Key Considerations

In assessing the primary and alternative route options, it is important to understand key considerations along each segment of the route.



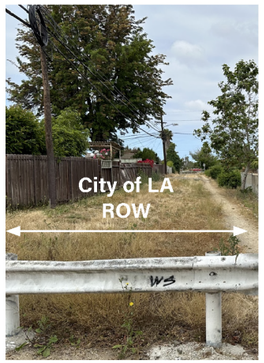
Syd Kronenthal Park to Washington Blvd

The existing Ballona Creek bike path ends at Syd Kronenthal Park. Here, the channel profile transitions from a trapezoidal channel to a U-shaped channel, and the in-channel maintenance road used by the existing path ends. Moreover, looking upstream, the majority of land available for the pathway extension sits on the opposite side of the channel.



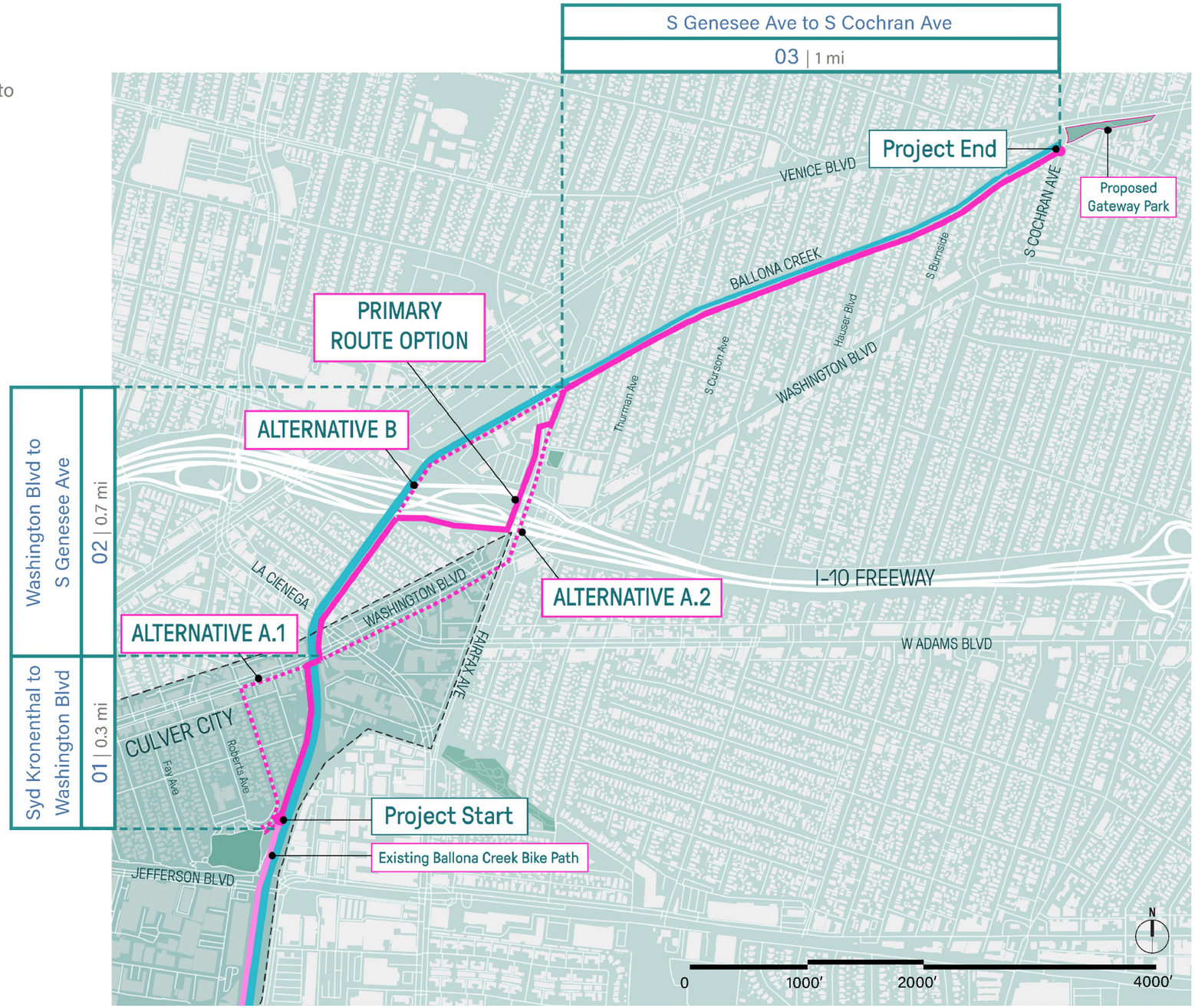
Washington Blvd to S Genesee Ave

The presence of the I-10 Freeway is the primary obstacle informing the pathway alignment and alternatives for the central portion of the extension route. At the edge of the Ballona Creek channel, the freeway and its on- and off-ramps do not allow for adequate vertical clearance for the pathway. Alternative options for navigating around the freeway must be considered.



S Genesee Ave to S Cochran Ave

The final mile of the pathway extension is characterized a street that never was. Cologne St, which runs alongside Ballona Creek, is paved for two blocks from S Genesee Ave to S Thurman Ave. Beyond that point, it is undeveloped, never paved but still City of LA right-of-way. The space here is generally wide enough to accommodate an off-street bike path along with a separate pedestrian path.



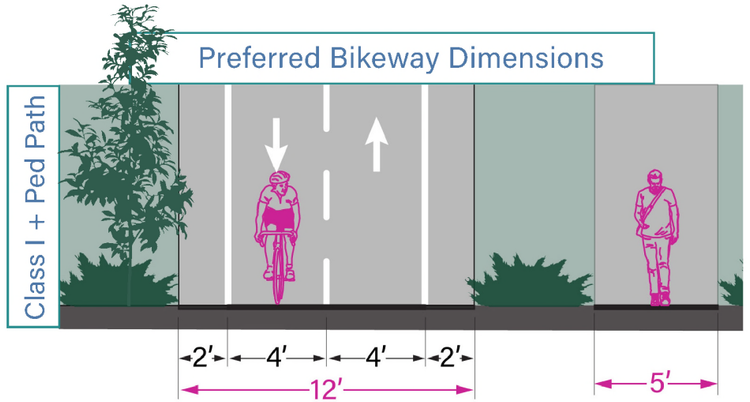
Bikeway Design Standards

The overarching goals outlined in Chapter 1 guided the project team's pathway alignment studies. To meet these goals, a Class I (Off-Street) shared use path alongside the Ballona Creek channel is preferred. Class I pathways offer the greatest separation from vehicles, highest quality of experience, and lowest levels of traffic stress for pedestrians and cyclists. Where not feasible due to physical, jurisdictional, cost, or other constraints, alternative bikeway classes - and variations within each - were considered.

Bicycle Facility Types

To the right, bikeway classes are ordered based on a rough comparative ranking of the level of separation from vehicles and quality of experience offered by each. Refer to the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide for more information on bikeway types and dimensions.[1]

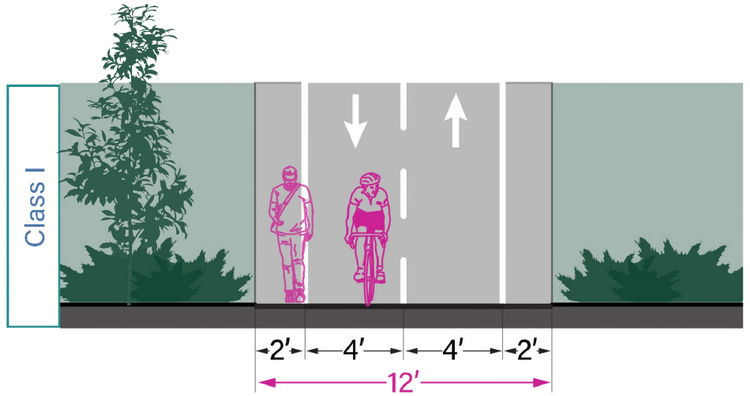
- Class I Path with Separate Pedestrian Pathway is recommended where space allows for an additional, separate pedestrian-only pathway. Class I shared use paths offer exclusive right of way for bicyclists, pedestrians, and other non-motorized users, away from roadways and with dedicated user crossings. The addition of a separate pedestrian path can increase pathway safety and comfort by separating users who travel at different speeds.
- Class I shared use paths offer exclusive right of way for bicyclists, pedestrians, and other non-motorized users, away from roadways and with minimal automobile crossings. The existing Ballona Creek Bike Path provides an example of a Class I bike facility.
- Raised Class IV (Sidewalk Level) bikeways are located along streets but are elevated onto sidewalk level (6" above adjacent street level), providing an additional degree of separation from roadway traffic to increase cyclist safety and comfort. Sidewalk space for pedestrian travel is maintained alongside the raised Class IV bike facility. Such facilities are two-way along the Ballona Creek pathway extension. Raised buffer space can be widened to create a floating bus island.



Preferred 5' wide separate pedestrian path where feasible.

In high-demand zones: 5′ lanes with two 2′ buffer zones (14′ total) desired for Class I, in addition to 5' wide pedestrian path

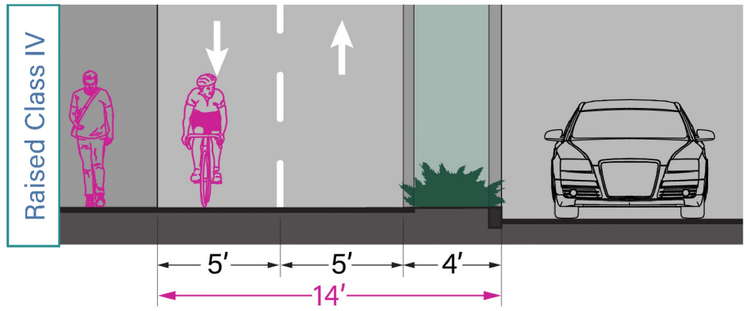




Preferred Class I dimensions selected to match existing Ballona Creek Bike Path.

In high-demand zones: two 5′ lanes with two 2′ buffer zones (14′ total) desired.





Prefer to elevate bike facility to sidewalk level when traveling along roadway.

Preferred: 5′ lanes, 4′ buffer
Minimum: 4′ lanes, 2′ buffer in constrained locations

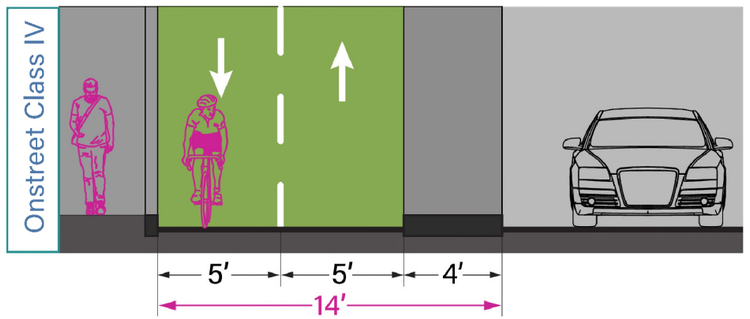
Buffer may be hardscape or planted.



Bikeway Design Standards

Bicycle Facility Types (Continued)

- On-Street Class IV bikeways are located on existing street level but are physically separated from automobile traffic by a vertical feature. This vertical feature can consist of grade separation, flexible posts, curbs, or landscape buffers. Protected bike routes can be one- or two-way, but, along the pathway route, two-way Class IV routes are preferred.
- Class II (On-Street Bike Lane) bikeways provide a defined bike lane using striping and signage to designate a portion of the roadway for use by cyclists. Bike lanes are one-way facilities, typically moving with the direction of adjacent automobile traffic. Where street parking is present, bike lanes are located between the parking and vehicular lanes. Striped buffers may be provided for additional clearance.
- Class III bikeways designate a route for bicyclists on streets shared with automobile traffic. Class III bikeways are used where necessary to connect segments of the bikeway. They are only suitable on low-speed local roads and should be paired with other traffic calming measures, such as curb extensions, chicanes, or ground murals to slow traffic. Signage is key.

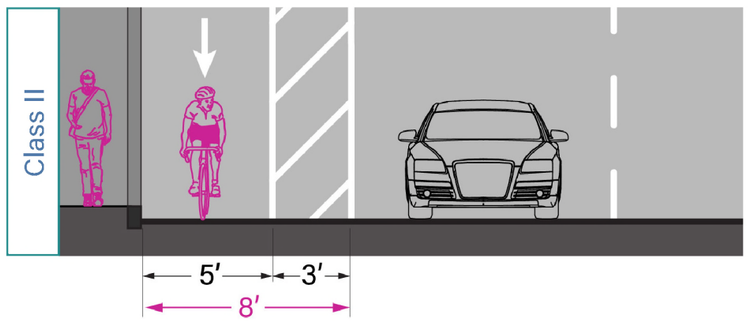


Preferred: 5′ lanes, 4′ buffer
Minimum: 4′ lanes, 3′ buffer in constrained locations

Vertical separation (preferred: curb) required.

Two-way facility along route.

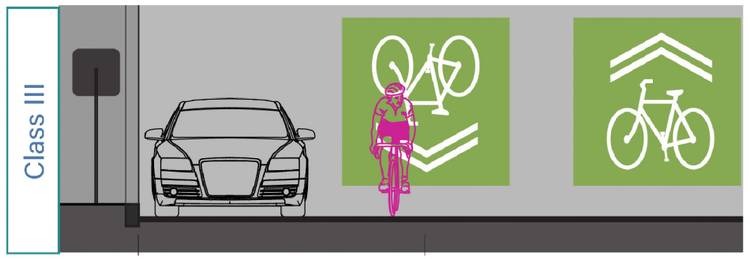




Preferred: 5′ lane, 3′ striped buffer
Minimum: 4′ lane, 18″ striped buffer

When next to parking lane, 14.5′ from curb to outer bike lane edge is preferred





Only suitable for low-speed local roads; should be paired with other traffic calming techniques; Signage is critical

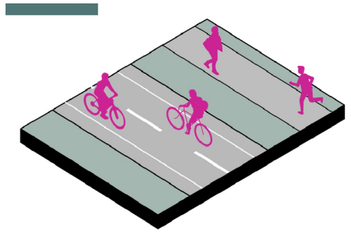


Pathway Types

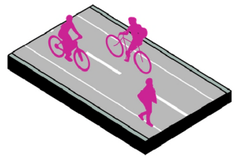
Primary Route and Alternatives

The project goals outlined at the outset of this report guided the specific pathway types recommended for the Ballona Creek Bike Path extension. Where feasible, the project team recommends the creation of an off-street shared-use (Class I) path along the remainder Ballona Creek, with an additional pedestrian path where space permits. Where such a path is not feasible or may not be recommendable given steep costs and/or permitting requirements, other pathway types are proposed.

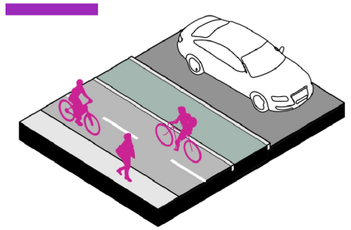
Class I Shared Use Path + Pedestrian Path



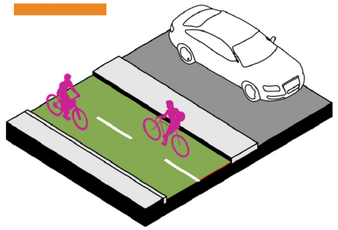
Class I Shared Use Path



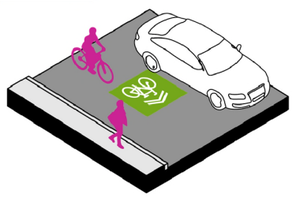
Raised 2-Way Class IV

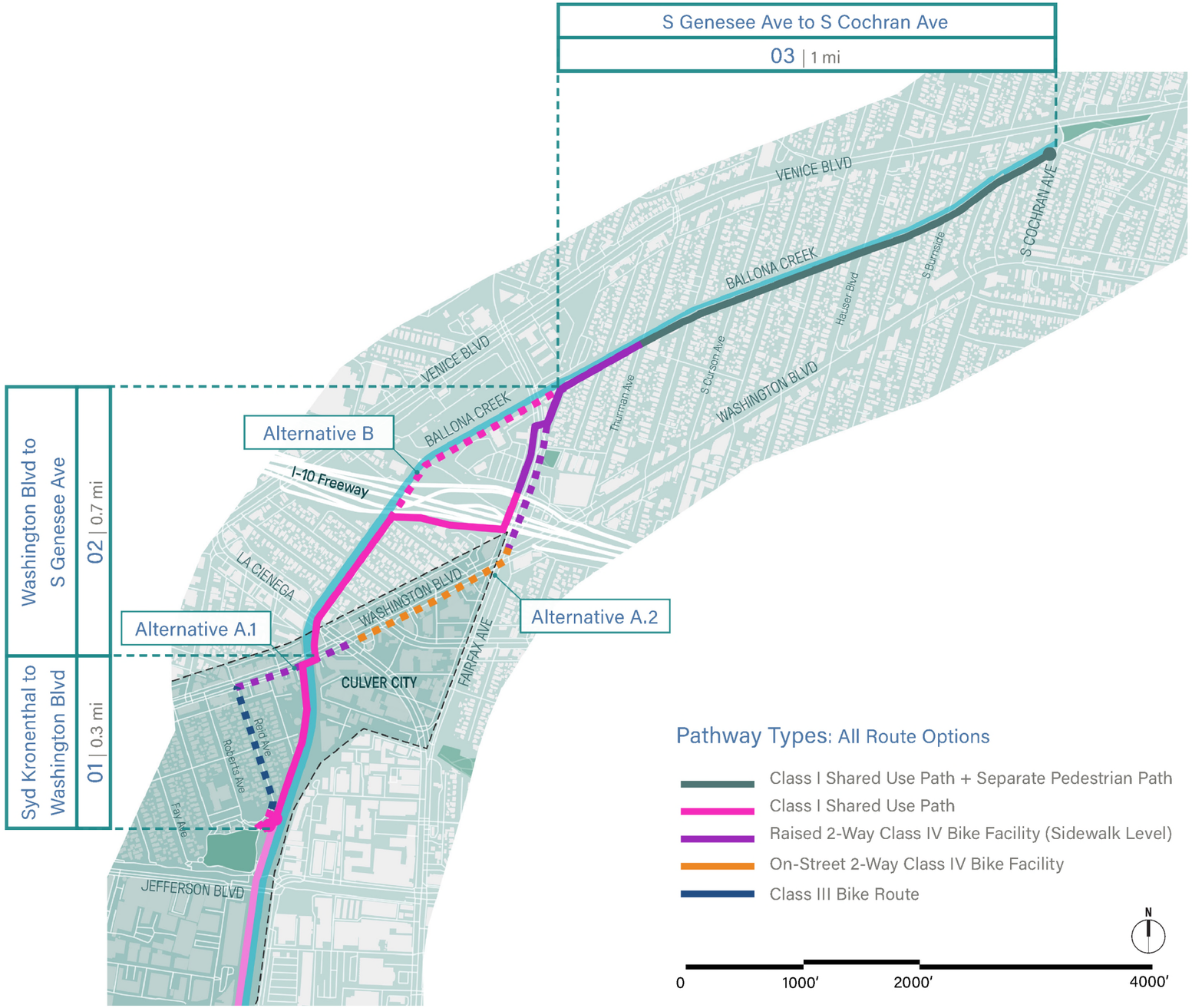


On-Street 2-Way Class IV



Class III Route



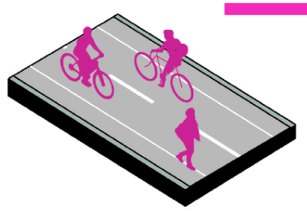


Primary Route Pathway Types

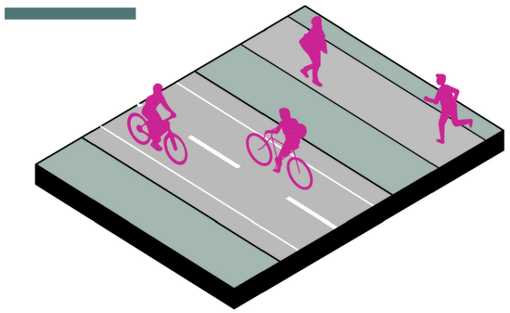
The primary route travels alongside Ballona Creek for the remainder of the creek, with the exception of the segment navigating around the I-10 Freeway and the DWP Palms Yard. The following pathway types are recommended for the Primary Route.

Approximate Route Length: 2.0 mi

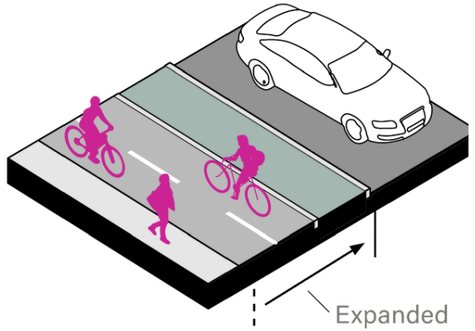
Class I Shared Use Path



Class I Shared Use Path + Pedestrian Path



Raised 2-Way Class IV



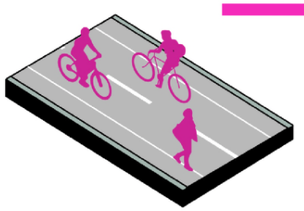


Alternative A Pathway Types

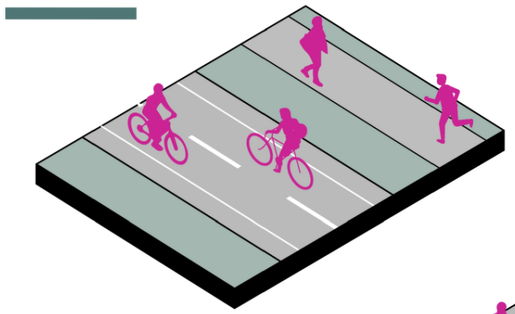
Alternative A uses existing road and sidewalk ROW to navigate around challenging points and is broken into Alternatives A.1 and A.2, which can be used together or combined with other route options. The following pathway types are recommended for a route which incorporates Alternative A.

Approximate Route Length: 2.1 mi

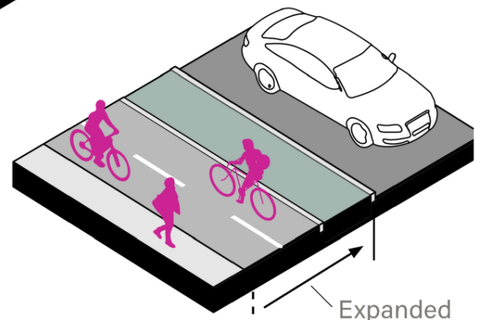
Class I Shared Use Path



Class I Shared Use Path + Pedestrian Path

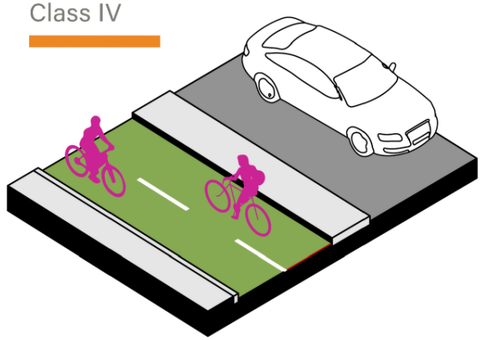


Raised 2-Way Class IV

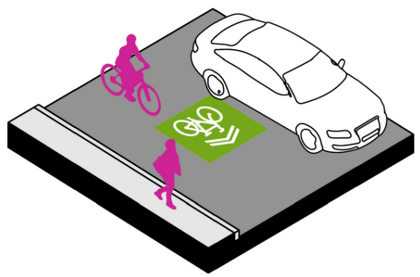


Expanded Sidewalk

On-Street 2-Way Class IV



Class III





Pathway Types

- Class I Shared Use Path + Separate Pedestrian Path
- Class I Shared Use Path
- Raised 2-Way Class IV Bike Facility (Sidewalk Level)
- On-Street 2-Way Class IV Bike Facility
- Class III Bike Route

N

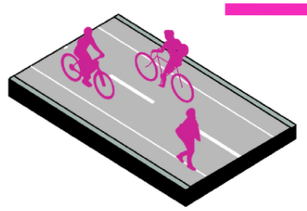
0 1000′ 2000′ 4000′

Alternative B Pathway Types

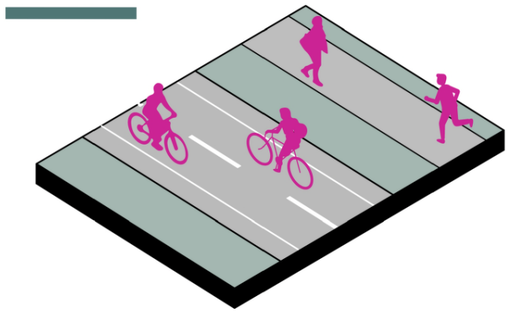
Alternative B travels entirely alongside - or within - the Ballona Creek channel. Where the pathway travels beneath the I-10 freeway, the pathway descends into the channel where it is elevated on pillars. Together, the following pathway types are recommended for a route which incorporates Alternative B.

Approximate Route Length: 1.9 mi

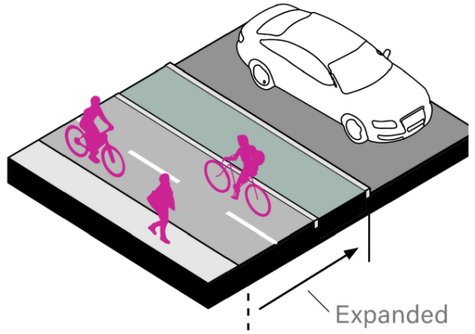
Class I Shared Use Path

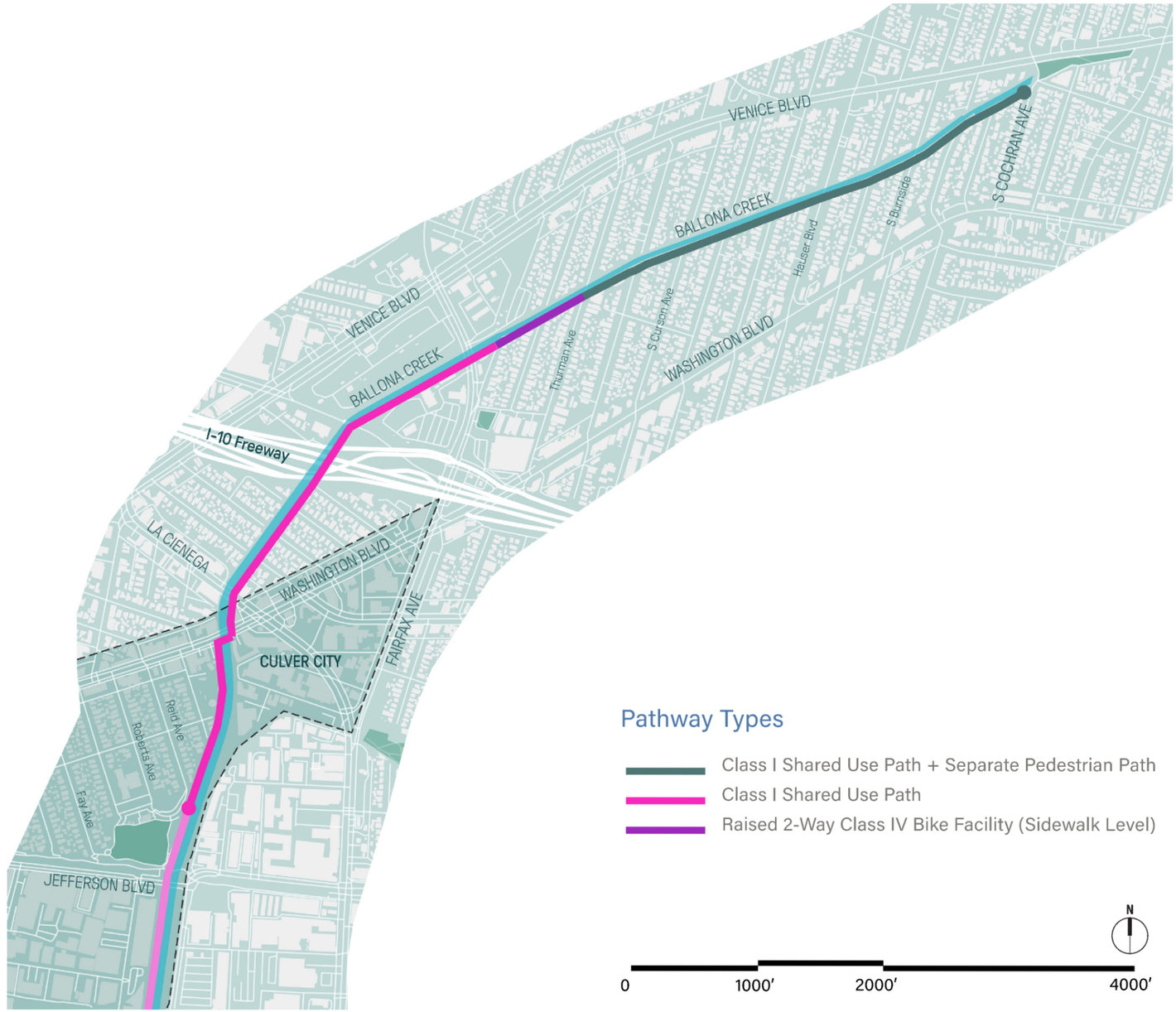


Class I Shared Use Path + Pedestrian Path



Raised 2-Way Class IV





Pathway Types

- Class I Shared Use Path + Separate Pedestrian Path
- Class I Shared Use Path
- Raised 2-Way Class IV Bike Facility (Sidewalk Level)

N

0 1000′ 2000′ 4000′

Comparison of Primary Route and Alternatives

To better assess trade-offs between different route options, the project team developed a rough-order-of-magnitude rating system, based on the overarching project goals, for comparing different route options. A series of specific metrics were developed for each to evaluate whether the route option meets, exceeds, or far exceeds the project goal. All of the route options are designed to meet the project goals. **The Primary Route option exceeds the broadest range of project goals and, hence, is the preferred route.** By contrast, Alternatives A and B each far exceed particular goals (Alternative A in terms of cost and feasibility goals, Alternative B in terms of experience goals), but they only just meet other goals.

Far Exceeds Goal
Exceeds Goal
Meets Goal

			Crossing the Ballona Creek Channel:		**Navigating around the I-10 Freeway:**			**Mid-City:**
			Syd Kronenthal Park to Washington Blvd		**Washington Blvd to S Genesee Ave**			**S Genesee Ave to S Cochran Ave**
Goal	**Subject**	**Metric**	Primary Option	Alternative A.1	Primary Option	Alternative A.2	Alternative B	Primary Option
Continue the Ballona Creek Bike Path	Experience	Direct, continuous, and intuitive route						
		Pathway continues directly alongside the Ballona Creek						
		Distinct, trail-like experience						
		Dedicated facility of adequate width for users						
Connect Communities and People	Access	24/7 access and use						
		Connected to city-wide transportation networks						
		Frequest access points for neighbors around the pathway						
		Connections to businesses and amenities						
Create Safe Mobility and Multi-Benefit Green Spaces	Safety, Mobility, and Public Space	Separated from vehicles						
		Road crossings prioritize trail users						
		Route minimizes conflict points with vehicles						
		Potential integration with new multi-benefit green spaces						
		Potential to capture water and improve water quality						
Get It Done	Cost and Feasibility	Minimize probable construction costs						
		Minimizes amount of coordination needed						
		Minimize construction timeframes						
Preference			Preferred		Preferred			Preferred

Pathway Alignment - Conceptual Plan Enlargements

Enlargement Locations

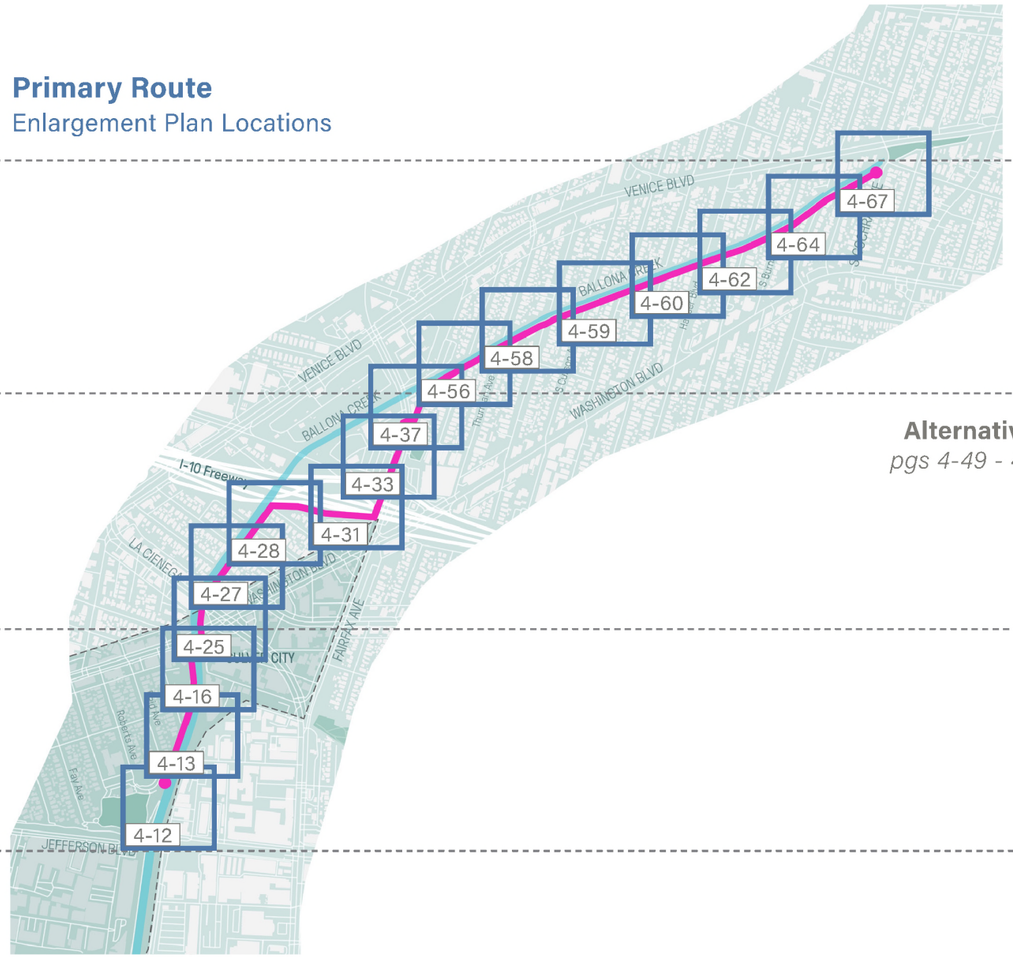
The following pages present the conceptual pathway alignment and alternatives for the Ballona Creek pathway extension in a series of enlarged plans. These are accompanied by sections and text descriptions. These pages include feasibility study concepts for potential pathway facility types, lighting fixture types and locations, location of trailhead access points, linear park space, channel overlooks, and road crossing treatments. The diagram below provides the page number of each enlargement plan.

Primary Route
Enlargement Plan Locations

Syd Kronenthal Park to Washington Blvd
pgs 4-56 - 4-67

Washington Blvd to S Genesee Ave
pgs 4-25 - 4-53

S Genesee Ave to S Cochran Ave
pgs 4-12 - 4-22

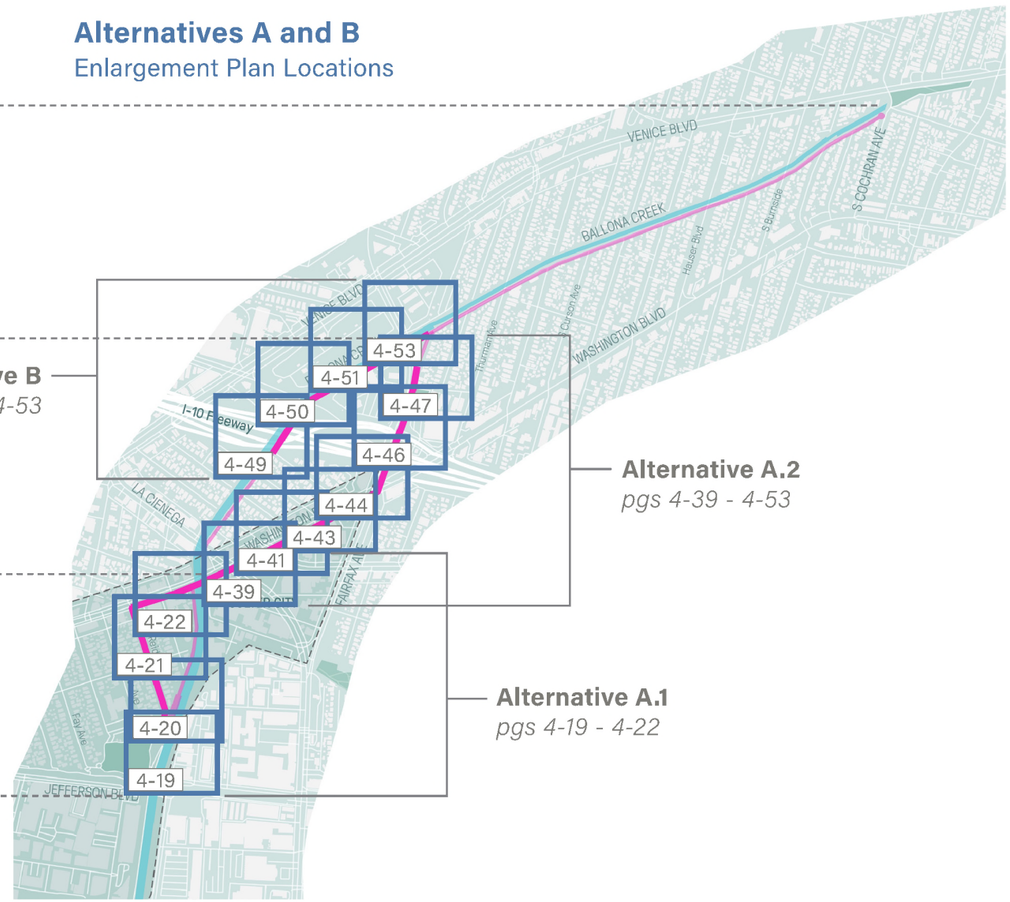


Alternatives A and B
Enlargement Plan Locations

Alternative B
pgs 4-49 - 4-53

Alternative A.2
pgs 4-39 - 4-53

Alternative A.1
pgs 4-19 - 4-22



Primary Route

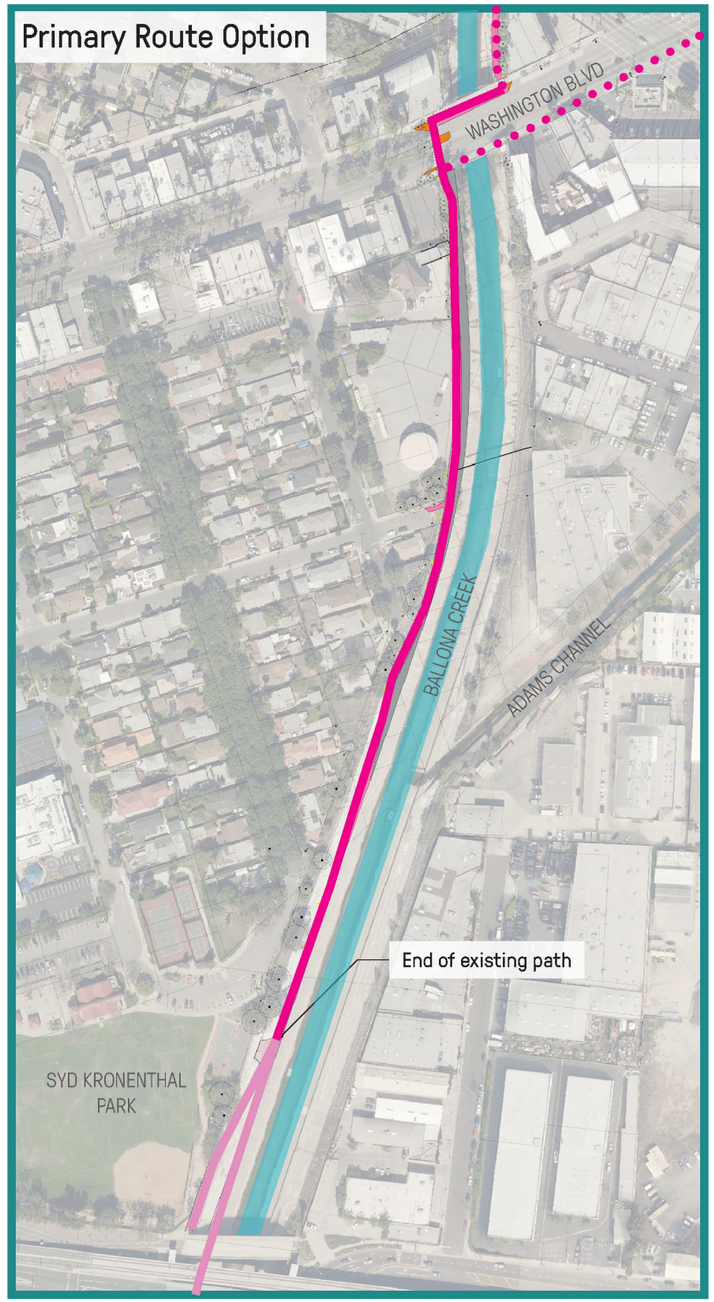
Syd Kronenthal Park to Washington Blvd (Culver City)

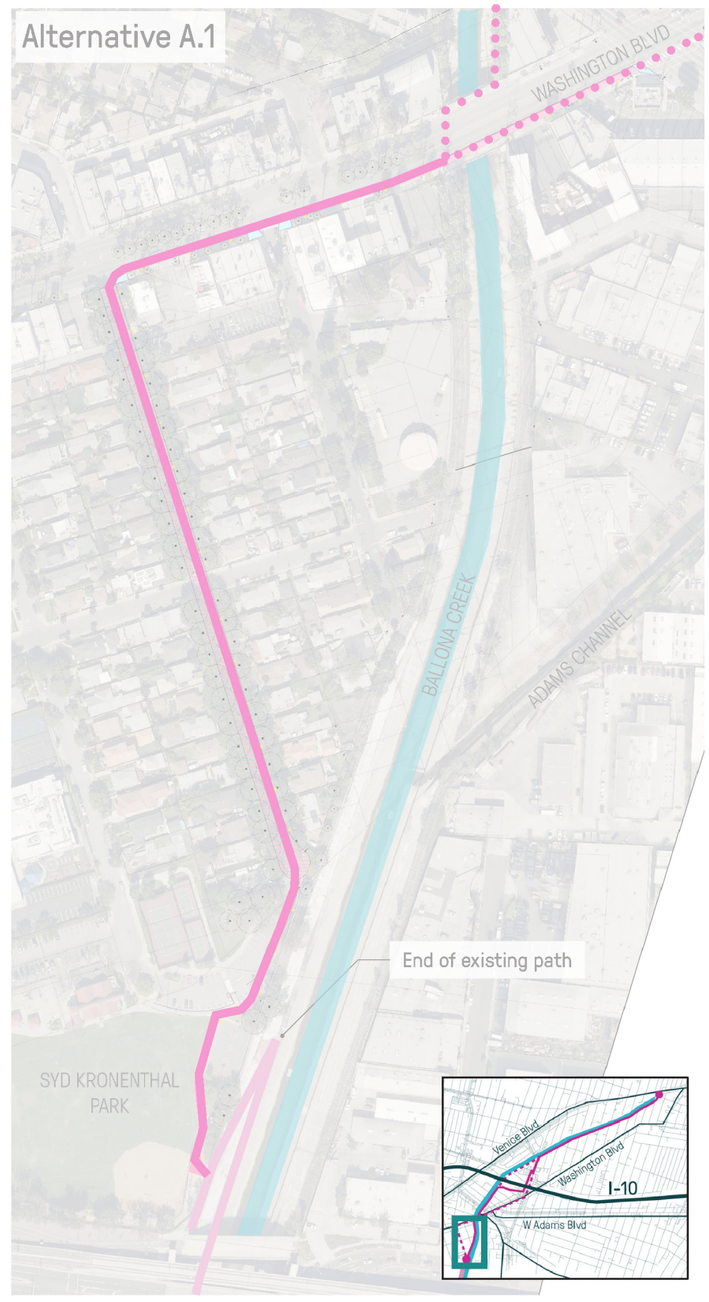
The project team recommends one of two alternatives for the segment of the pathway extension from where the current pathway ends at Syd Kronenthal Park to Washington Blvd: the Primary Route option and Alternative A, shown to the right. Two chief obstacles must be overcome in this portion of the route:

1. The in-channel maintenance road which hosts the existing bike path ends at a wall where the channel profile changes from trapezoidal to a U-shaped. Some form of ramp is needed at this point to stay along the channel.
2. The existing pathway sits on the west side of Ballona Creek. The majority of land available for extending the pathway to S Cochran Ave sits on the east side of Ballona Creek. The pathway must cross the channel at some point.

The project team considered a new bridge crossing just north of the point where Adams channel intersects Ballona Creek. However, following conversations with the US Army Corps of Engineers and analysis of alternatives, the project team pivoted away from this option, in light of the potential for significantly high costs and long timeframes associated with permitting and construction. Moreover, the existing channel crossing at Washington Blvd to the north provides an option for crossing the channel without construction of a new bridge. Still, some means of navigating the transition in channel profile is needed. The primary option proposes construction of a ramp to connect the existing pathway within the channel to the pathway extension sits atop the U-shaped channel wall.

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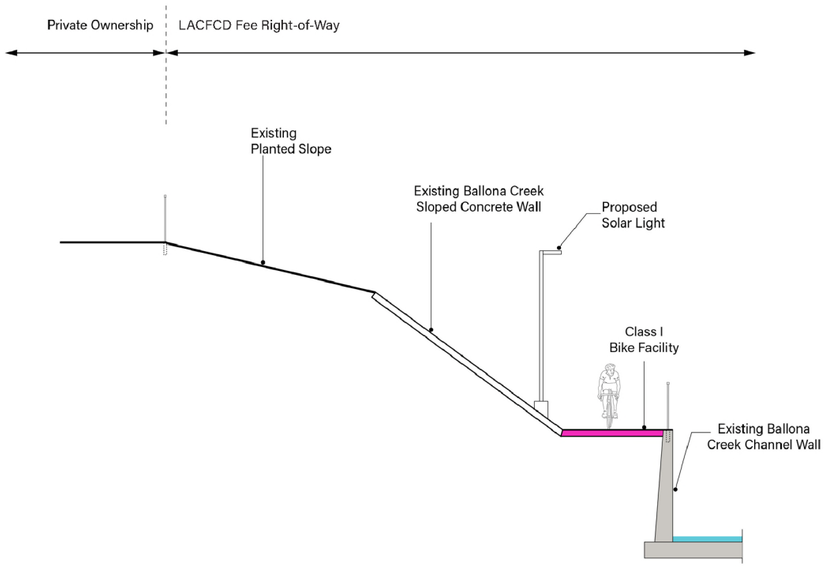




Primary Route

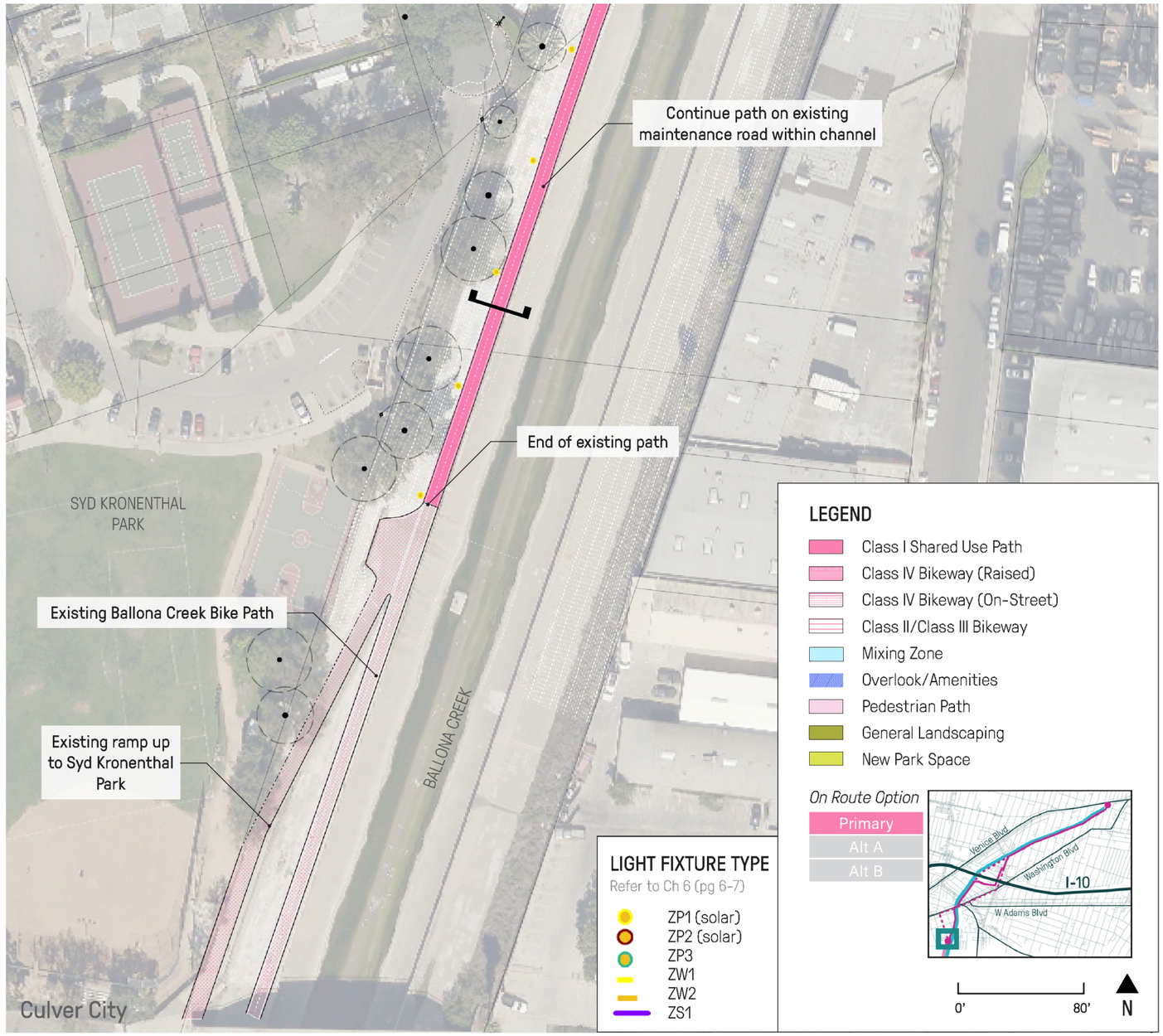
Syd Kronenthal Park to Washington Blvd

The primary route in this segment continues northward using the in-channel maintenance road, in the same manner as the existing bike path.



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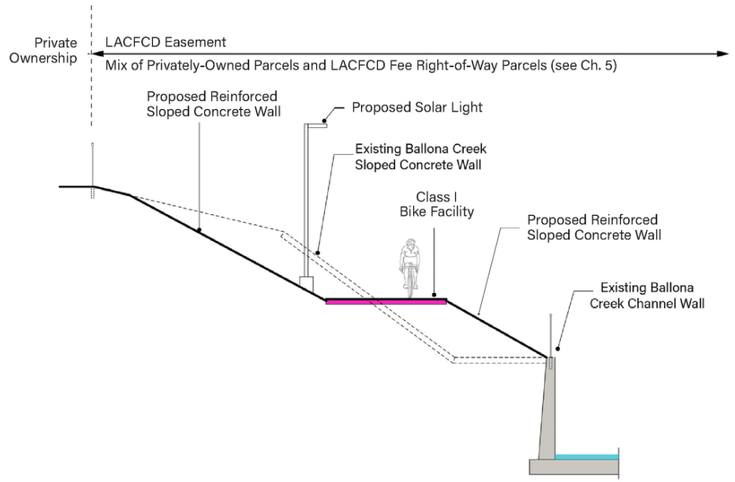
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Primary Route

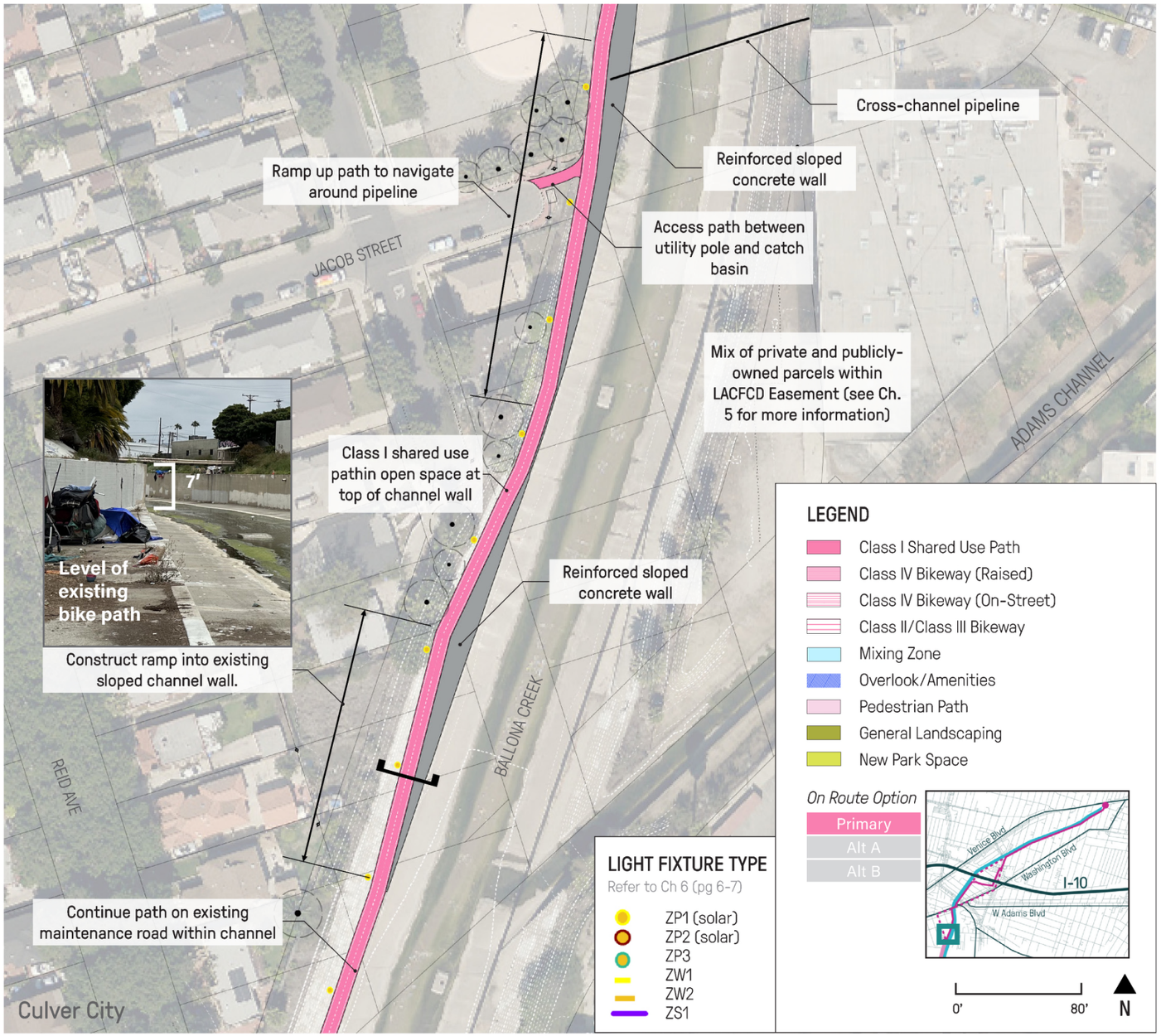
Syd Kronenthal Park to Washington Blvd

The primary route in this segment includes a ramp (approx. 200' long, less than 5% slope, built into the sloped channel) which connects the elevation of the existing bike path on the in-channel maintenance road to the elevation of the proposed extension in the open space on top of the channel wall. A second ramp is needed to navigate around the terminus of the cross-channel pipeline in this segment. This ramp brings the pathway up to the elevation of the road crossing at Washington Blvd.



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End of In-Channel Maintenance Road - Existing Condition



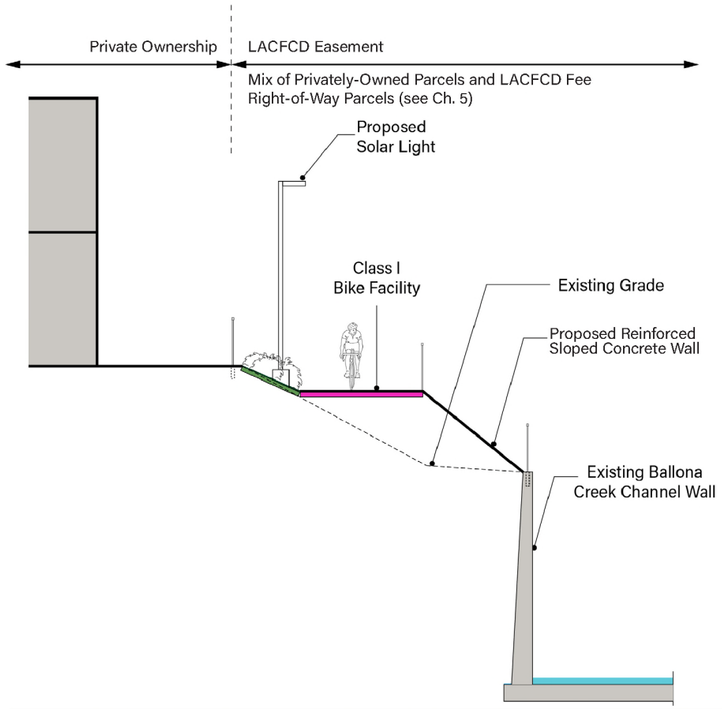
Ramp Connection - Proposed Concept



Primary Route

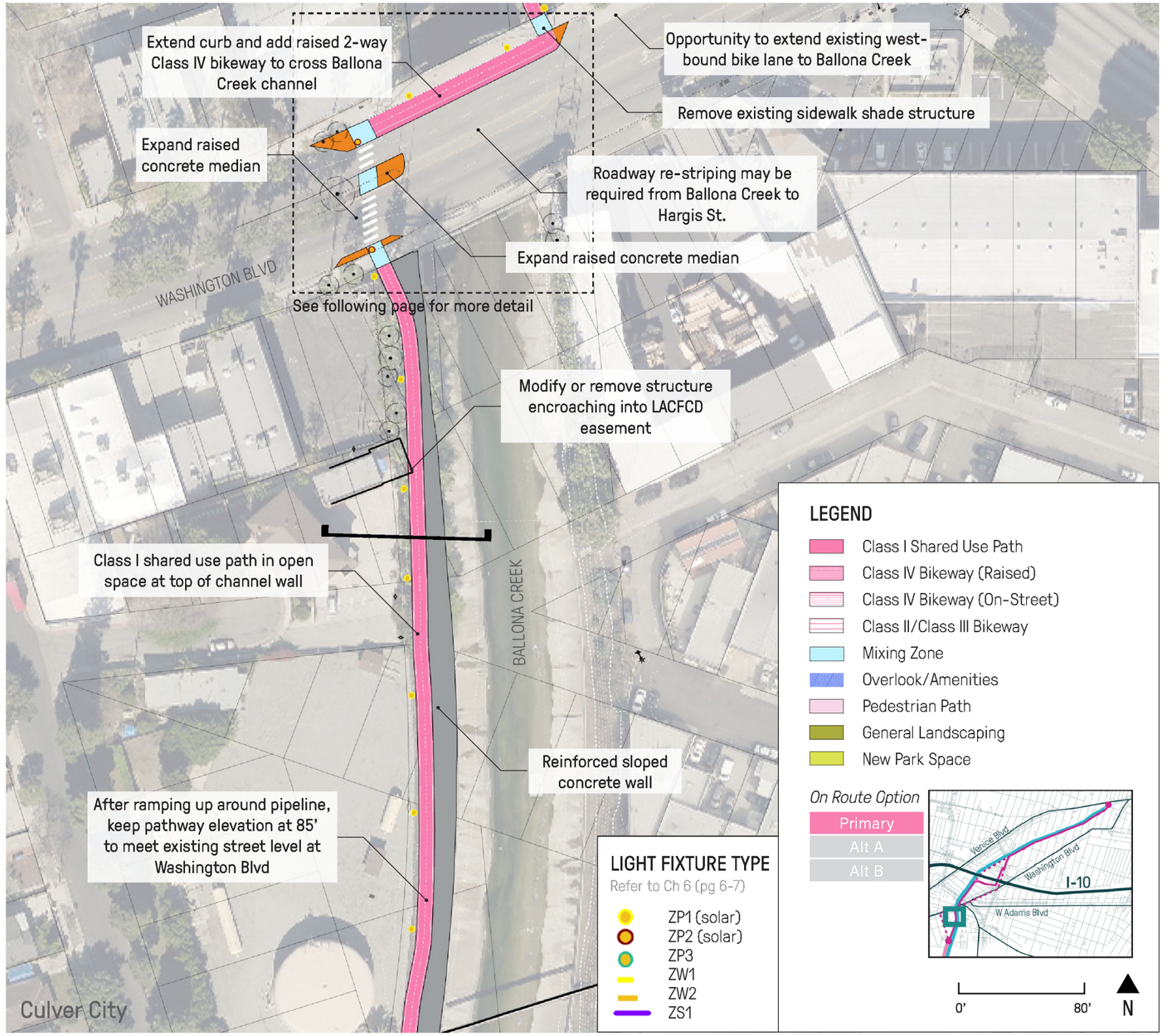
Syd Kronenthal Park to Washington Blvd

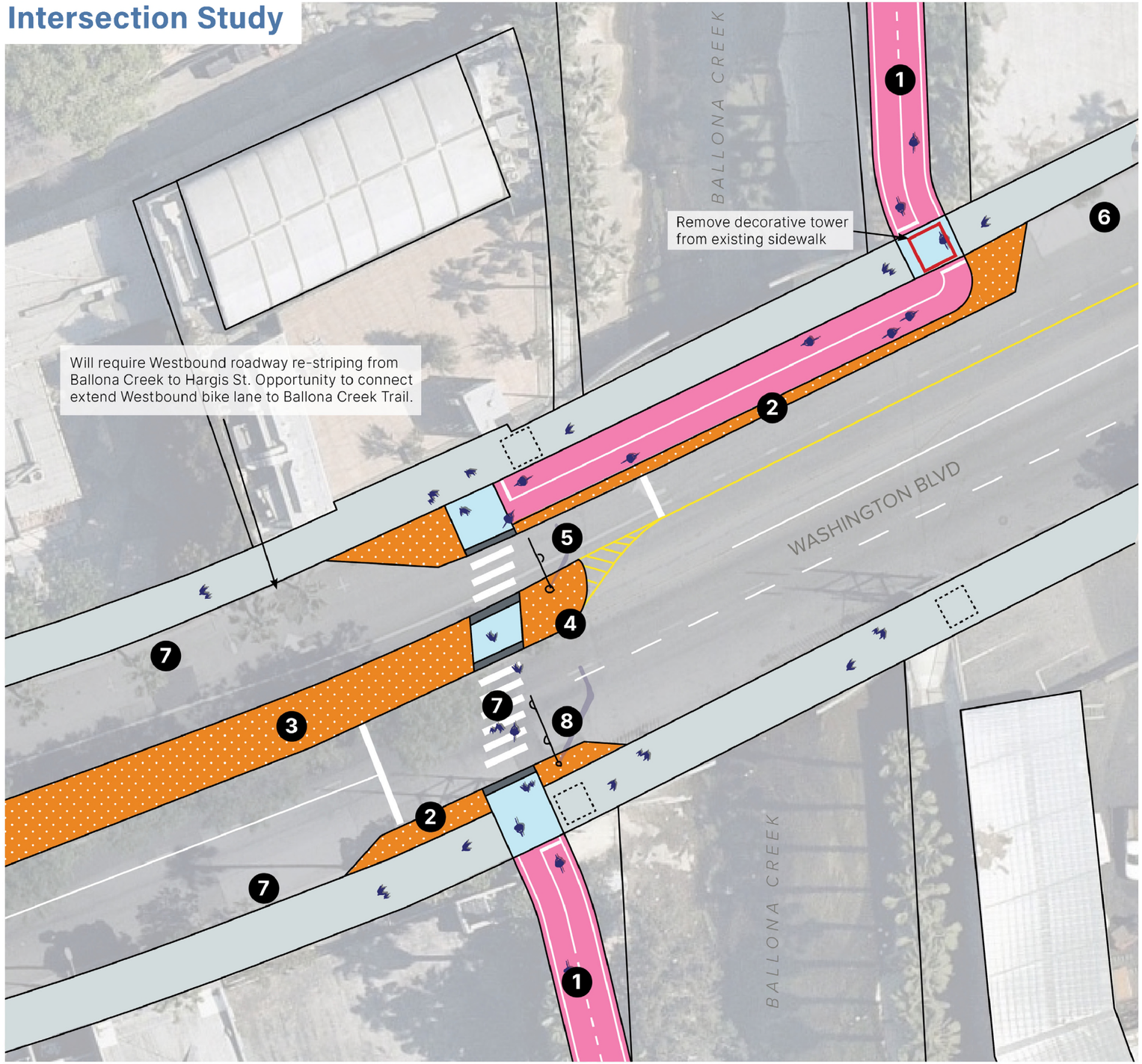
The primary route in this segment continues within the open space on top of the channel wall. A signalized crossing takes users across Washington Blvd and a short Class IV facility on Washington Blvd takes users to the east side of the channel.



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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.





Washington Blvd

Signalized midblock crossing across Washington Blvd with direct crossing and refuge island.

Opportunities

- Large median provides shorter crossing distances.
- Could be constructed much faster than an overcrossing or undercrossing.
- Lower cost. Most costly items are new signal infrastructure.

Challenges

- Coordination with LADOT & LA Metro due to impacts to existing left turn lane, bus stop, new signal, and extended median. Due to bridge, unlikely to add concrete curbs on existing structure.
- Requires crossing multiple lanes of a multi-lane and high-speed roadway.
- May require Army Corps of Engineers involvment on bridge approaches.

Alternate Options (not shown)

Overcrossing and undercrossing options were explored. While they would offer grade-separated crossings, they would be costly and require extensive permitting that would delay implementation.

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N 0' 30' 60'

Legend

1. Ballona Creek Trail, Class I Path
2. Curb extension, striped and flexible bollards
3. Center median, concrete curb and landscape
4. Crossing with median refuge island
5. Pedestrian signal (preferred) or HAWK signal
6. Existing bus stop
7. Opportunity for future bike lane extension to connect to existing bike lanes along Washington Blvd to the west

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Alternative A.1

Syd Kronenthal Park to Washington Blvd (Culver City)

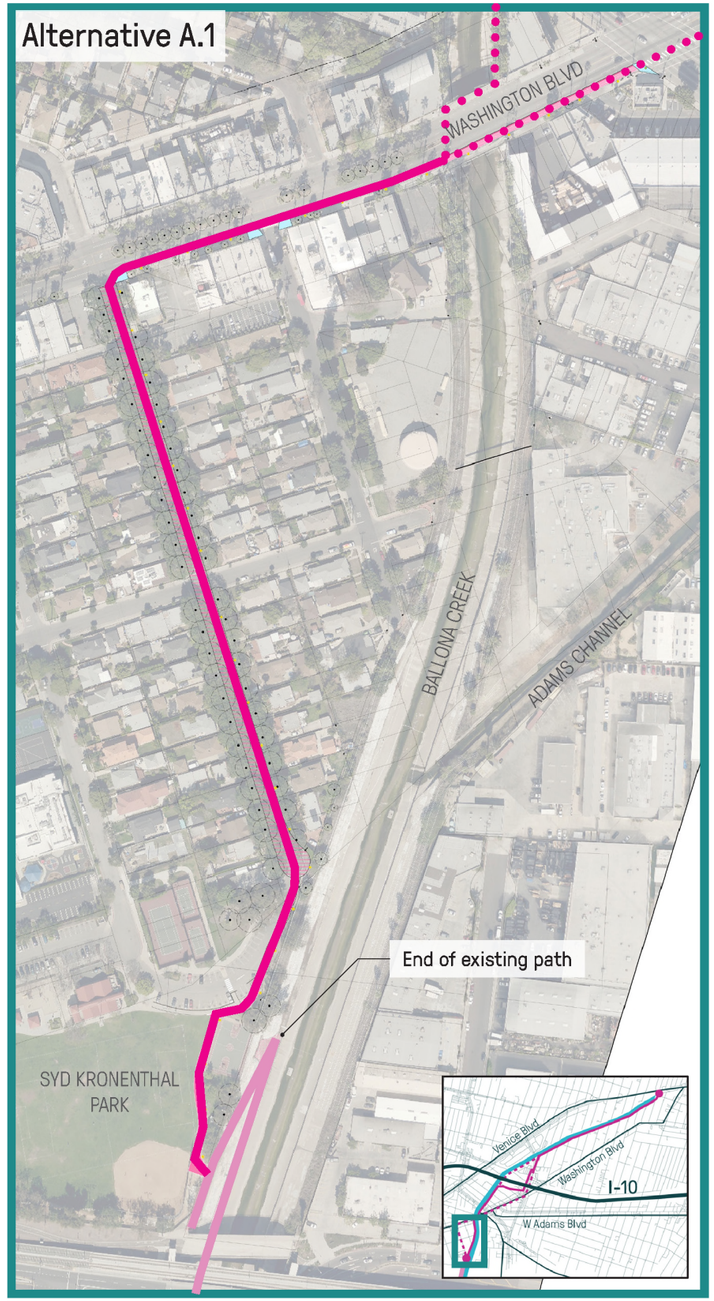
Alternative A.1 addresses the two chief obstacles of this portion of the route - i.e. the change in channel profile and the need to cross the channel - by temporarily traveling away from the channel and instead using Reid Ave, a tree-lined residential street, and Washington Blvd to navigate from the end of the existing channel to the existing channel crossing at Washington Blvd.

The following pages detail Alternative A.1 for the segment from Syd Kronenthal Park (where the current pathway ends) to Washington Blvd.

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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.

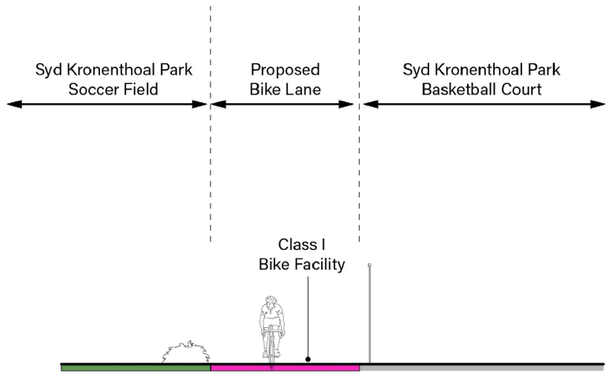




Alternative A.1

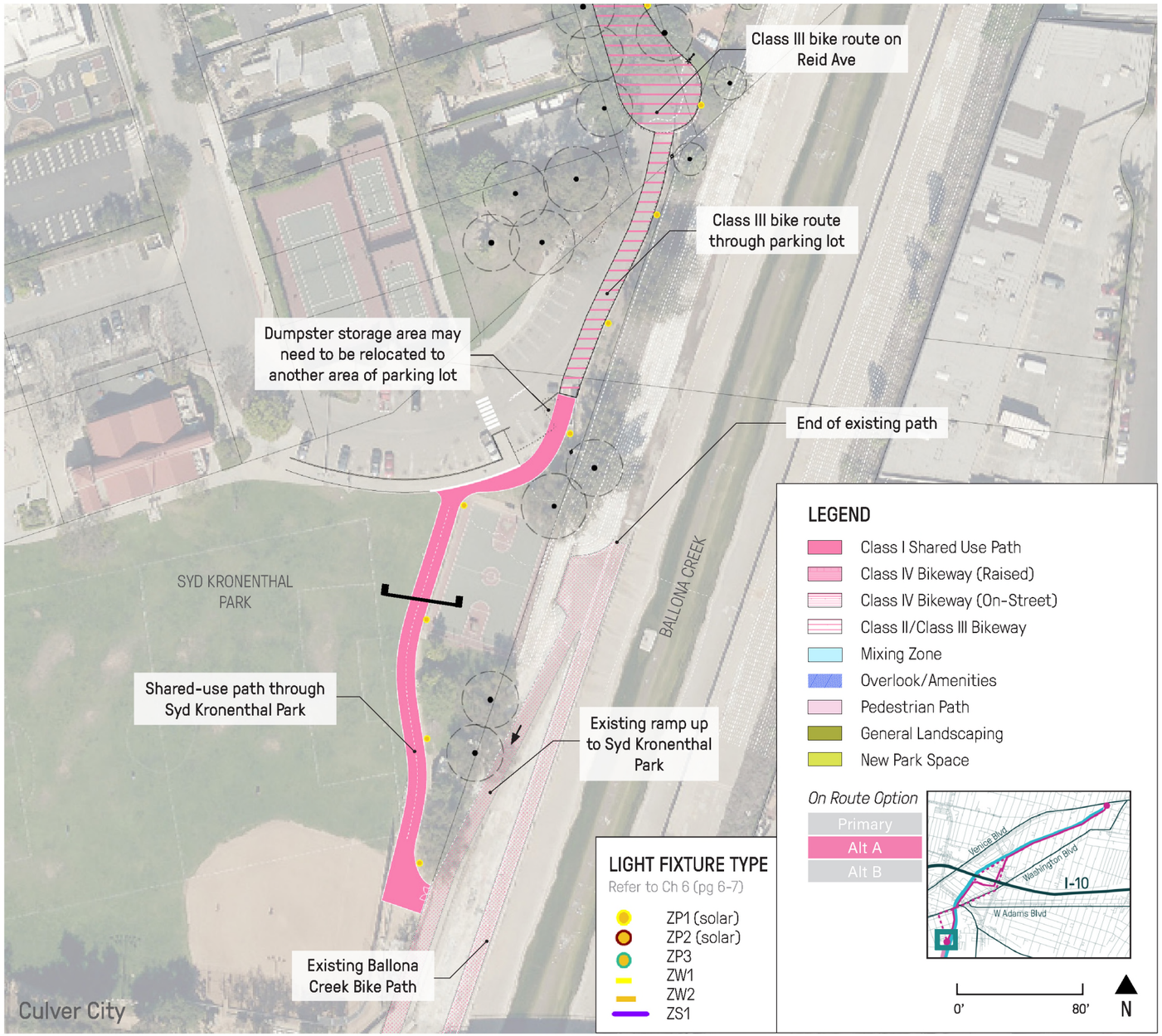
Syd Kronenthal Park to Washington Blvd

Alternative route A.1 in this segment uses the existing ramp to Syd Kronenthal Park to bring users from the existing bike path up to the park. The route continues through the park and on Reid Ave as a Class III facility.



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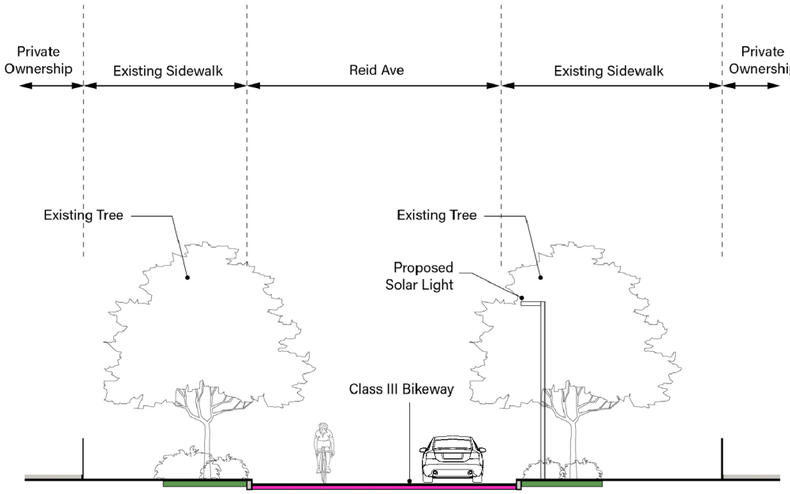
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Alternative A.1

Syd Kronenthal Park to Washington Blvd

Alternative route A.1 in this segment continues on Reid Ave as a Class III facility. The intersection of Jacob St and Reid Ave is converted from a 2-way to a 4-way stop intersection.



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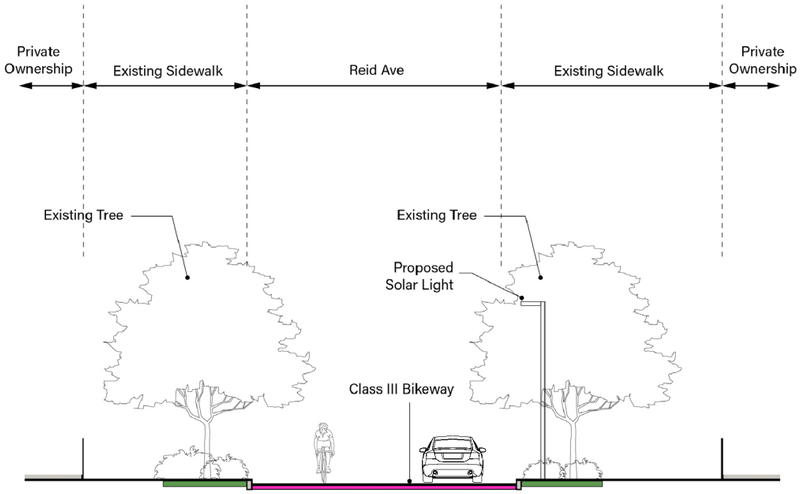
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Alternative A.1

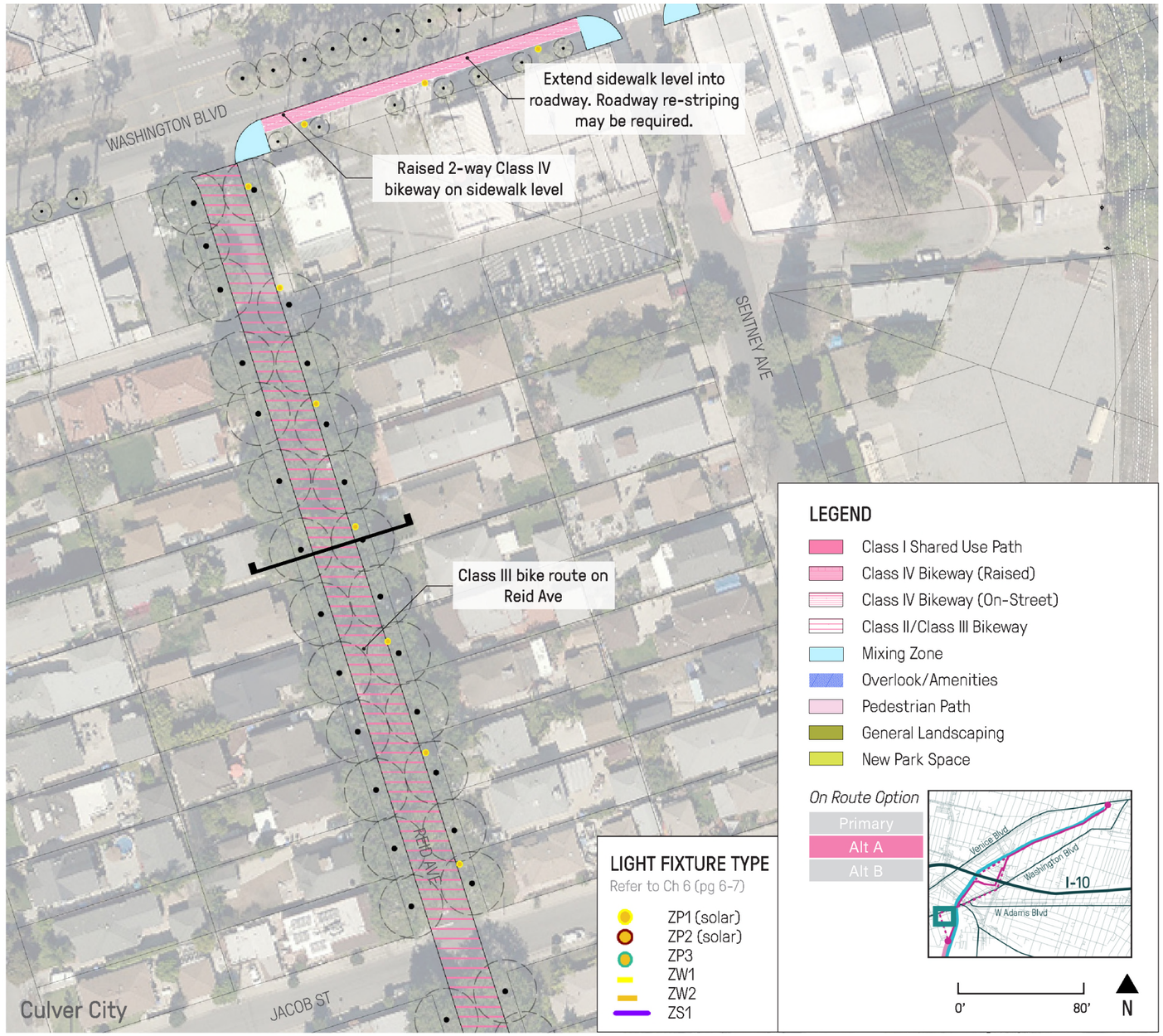
Syd Kronenthal Park to Washington Blvd

Alternative route A.1 continues as a Class III facility on Reid Ave before turning eastward on Washington Blvd where it continues as a raised 2-way Class IV facility.



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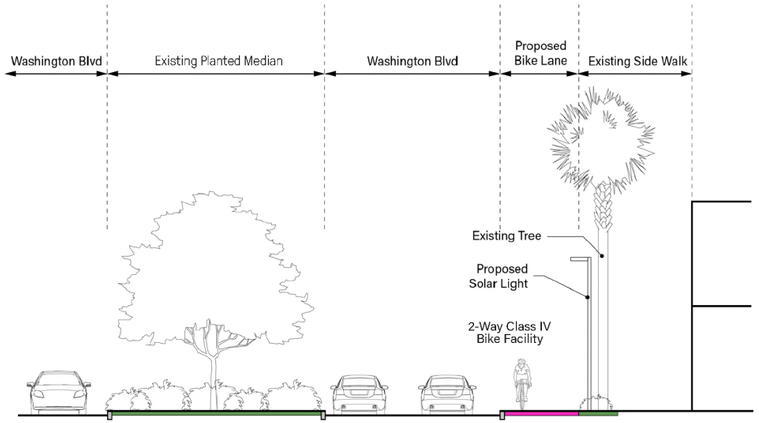
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Alternative A.1

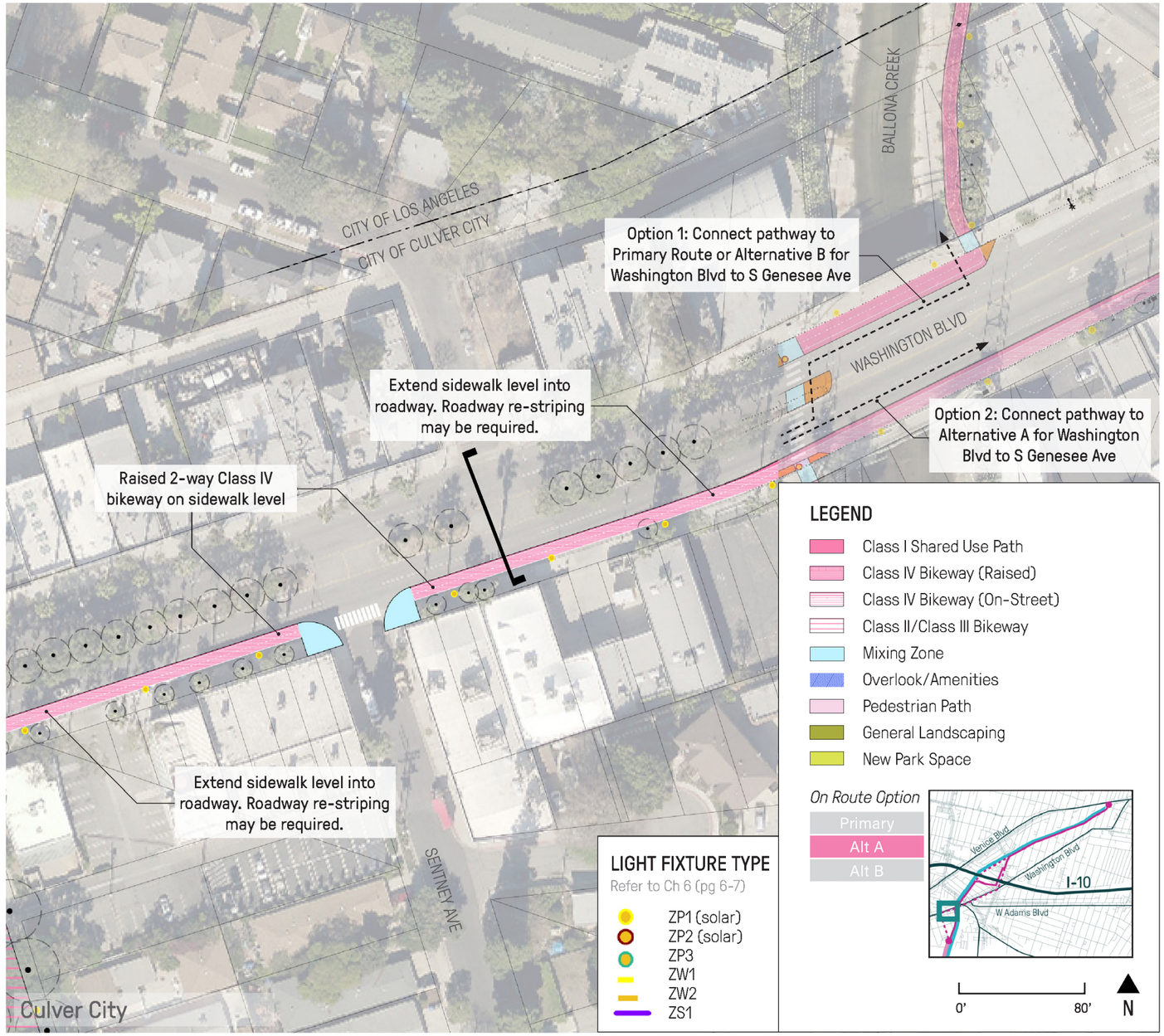
Syd Kronenthal Park to Washington Blvd

Alternative route A.1 continues on Washington Blvd as a raised 2-way Class IV facility. At the point where Washington Blvd crosses the Ballona Creek channel, Alternative A.1 can connect to either the Primary Route along Ballona Creek or to Alternative A.2, which continues eastward on Washington Blvd.



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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



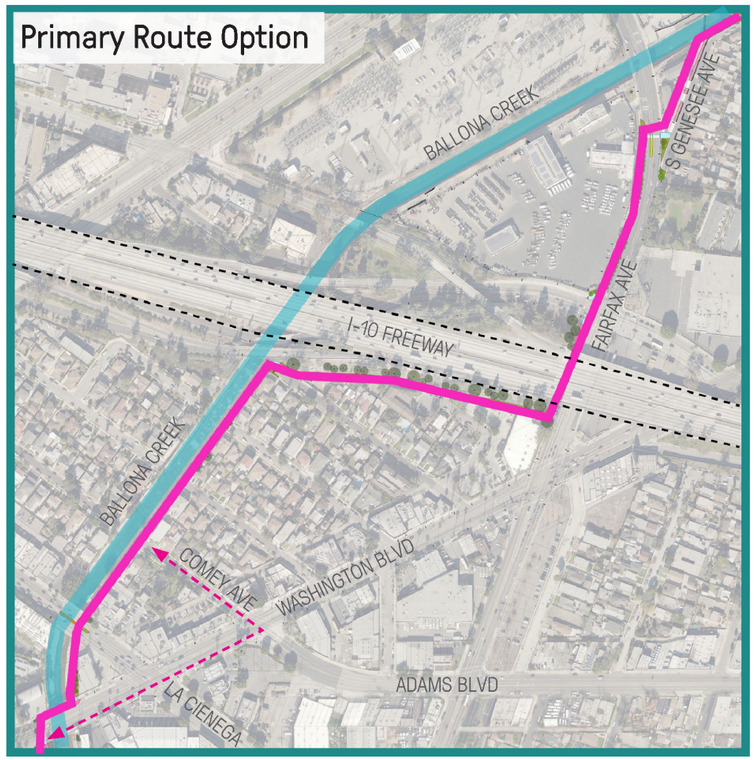
Primary Route

Washington Blvd to S Genesee Ave (Culver City - Los Angeles)

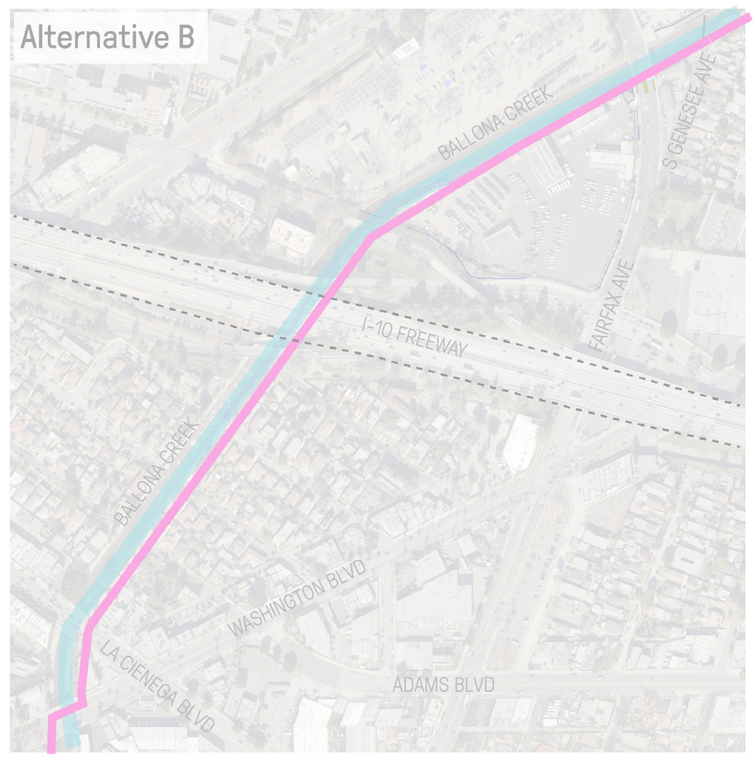


Between Washington Blvd and S Genesee Ave, the chief consideration is how best to navigate around the I-10 freeway. The vertical clearance beneath the freeway and its on- and off-ramps is too constrained for the pathway to continue alongside the channel using the space atop the channel wall. The project team considered a range of options for navigating this challenging segment while adhering to the project goals of continuing the Ballona Creek bike path, connecting to residents, communities, and broader transportation systems, creating safe, low-stress mobility and unique public space, and minimizing obstacles of cost, permitting, and construction timelines.

The Primary Route option exceeds the broadest range of these goals. To avoid lengthy permitting processes and high construction costs, the Primary Route diverges from the channel to navigate around the I-10 freeway and the DWP Palms Yard before re-joining the channel at S Genesee Ave.







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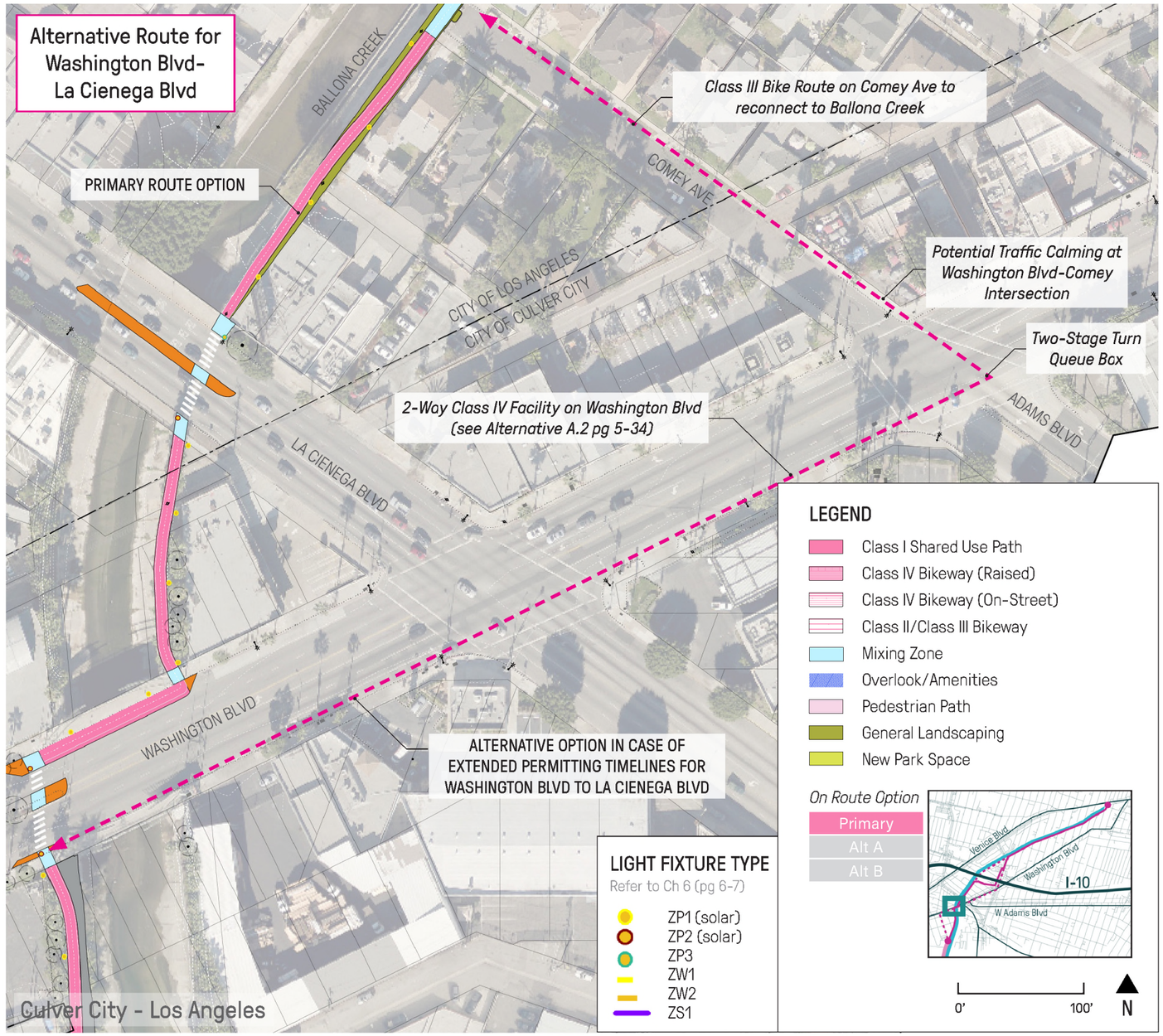
Primary Route

Washington Blvd to S Genesee Ave

The Primary Route in this segment continues alongside Ballona Creek, using the open space atop the channel wall between Washington Blvd and La Cienega Blvd. It is also necessary to provide an alternative means of navigating around this area in the event that extended permitting and/or environmental review timelines significantly delay the development of the Primary Route along the channel between Washington Blvd and La Cienega Blvd. This alternative involves continuing the route on Washington Blvd as a 2-way Class IV facility, crossing Washington Blvd at Adams Blvd, and continuing northward on Comey Ave as a Class III facility before reconnecting with the Ballona Creek channel.

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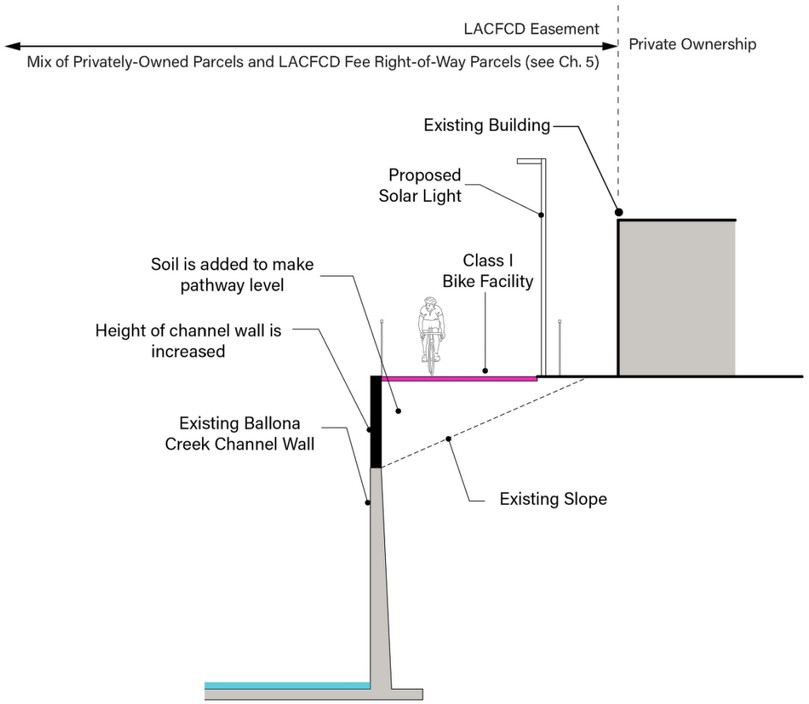
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Primary Route

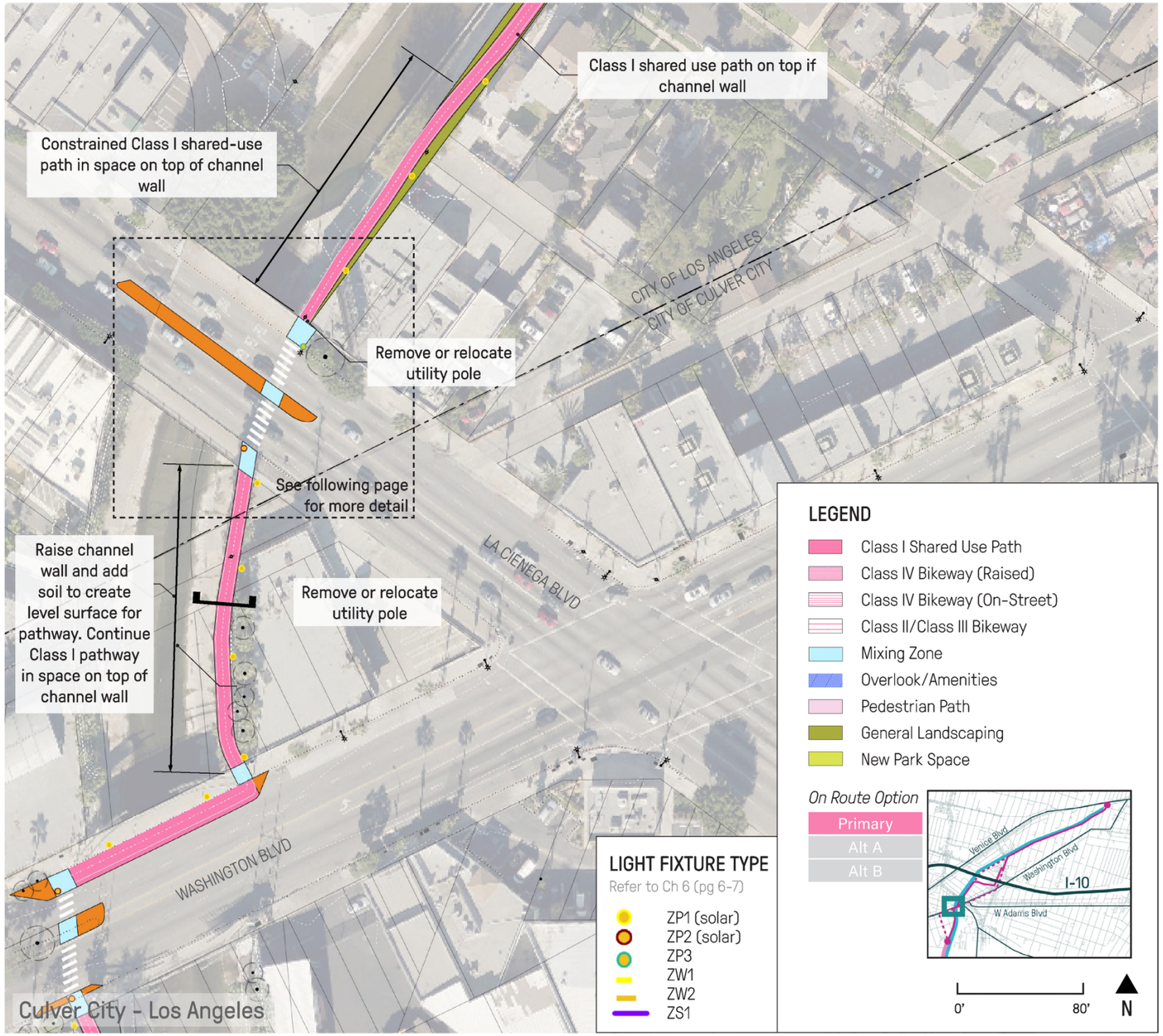
Washington Blvd to S Genesee Ave

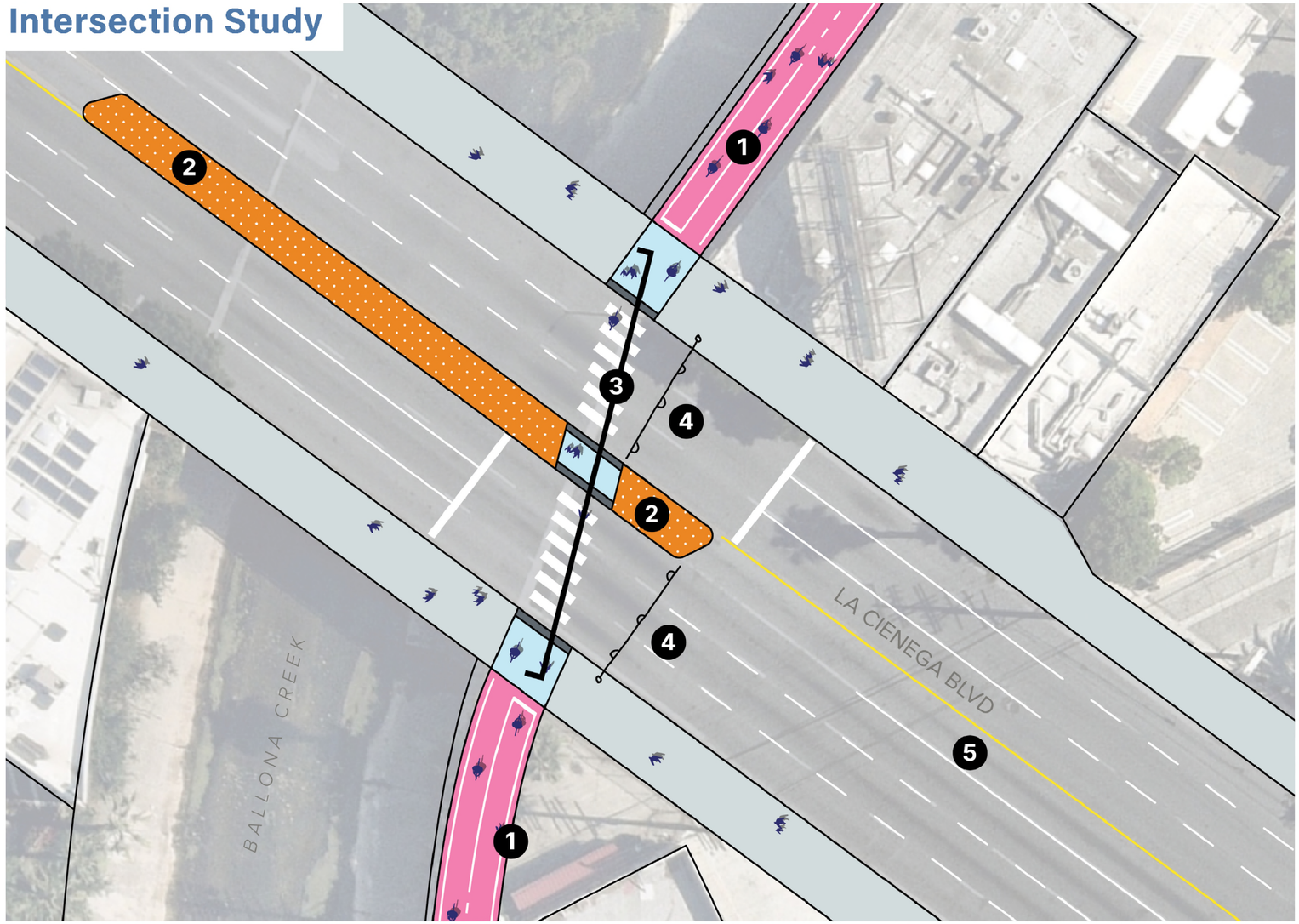
The Primary Route in this segment continues alongside Ballona Creek channel and crosses La Cienega Blvd using a new signalized crossing.

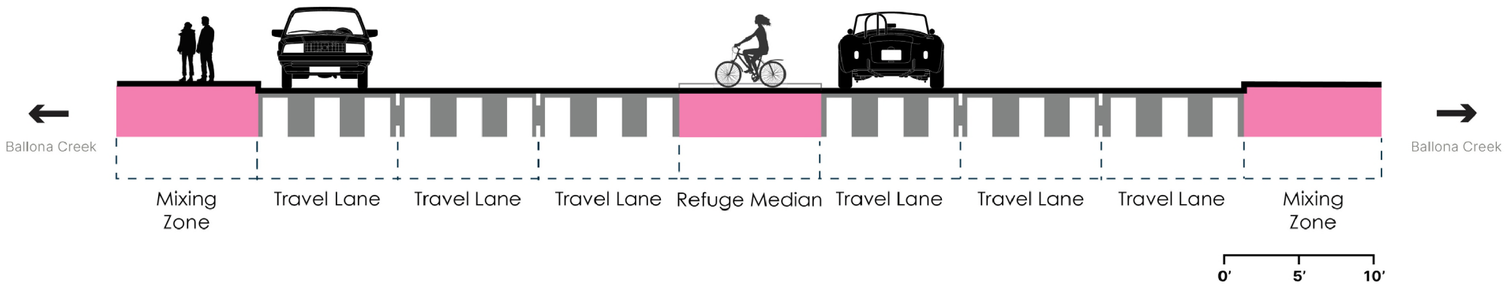


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La Cienega Blvd

Signalized midblock crossing across La Cienega Blvd with direct crossing and refuge island.

Opportunities

- Large median provides shorter crossing distances.
- Could be constructed much faster than an overcrossing or undercrossing.
- Lower cost. Most costly items are new signal infrastructure.

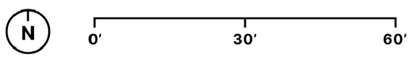
Challenges

- Coordination with LADOT due to impacts to existing left turn lane, new signal, and extended median. Due to bridge, there may be constraints regarding additional loading.
- Requires crossing multiple lanes of a multi-lane and high-speed roadway.
- Roadway already undersized for number of lanes. Requires converting center median and shortening existing turn lane. Limited space (10ft max) for refuge island.

Alternate Options (not shown)

Overcrossing and undercrossing options were explored. While they would offer grade-separated crossings, they would be costly and require extensive permitting that would delay implementation.

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Legend

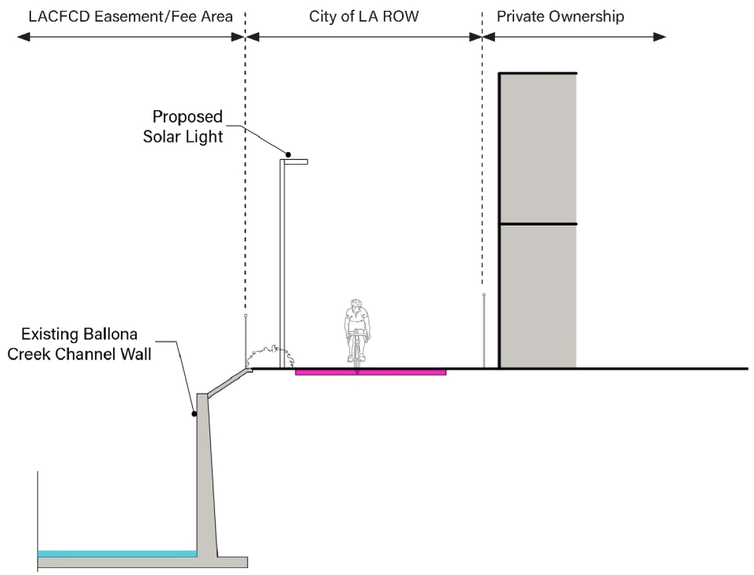
1. Ballona Creek Trail, Class I Path
2. Center median, concrete curb and/or landscape
3. Single stage crossing with refuge median
4. Pedestrian signal (preferred) or HAWK signal
5. Shorten left turn lane

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Primary Route

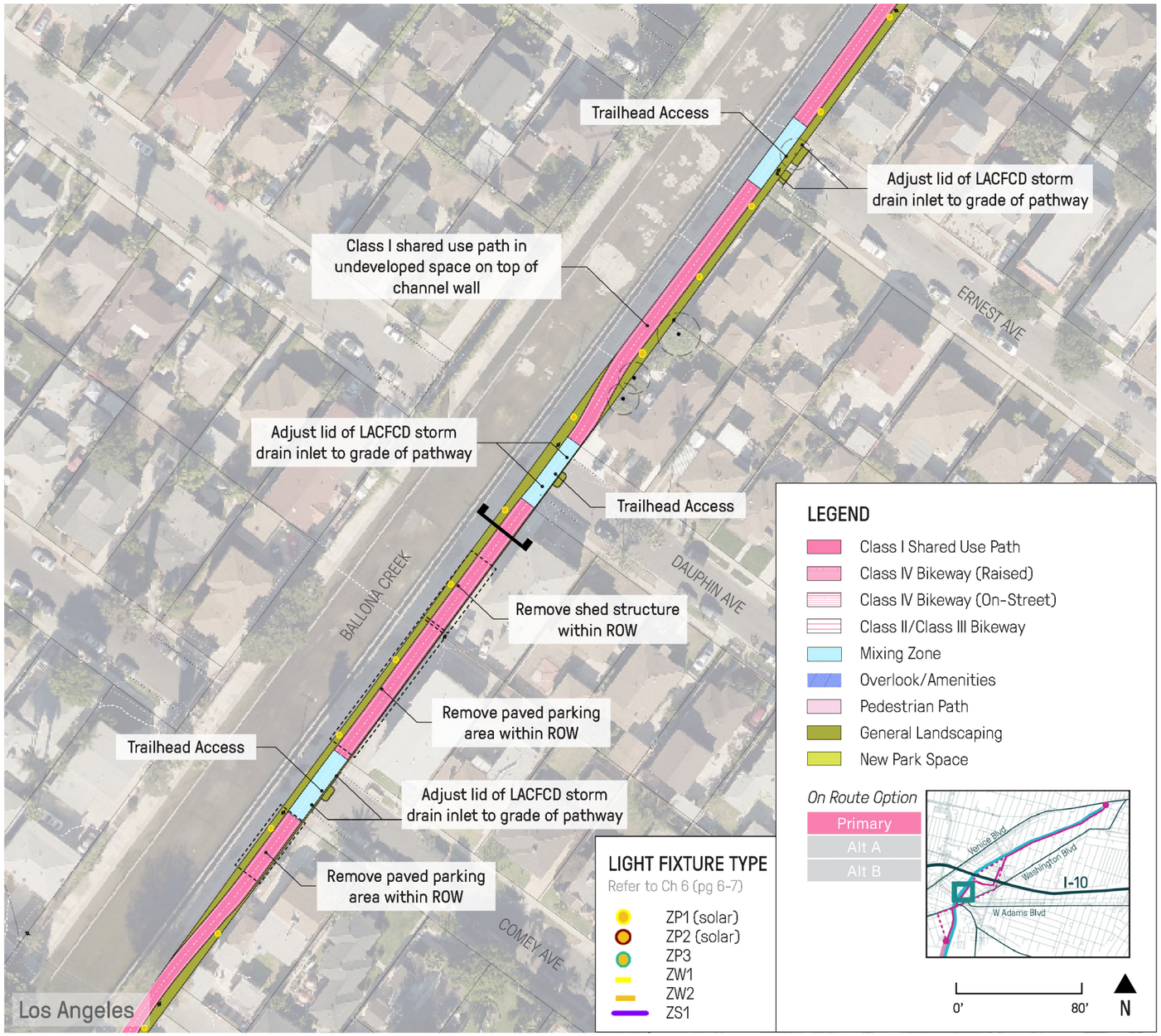
Washington Blvd to S Genesee Ave

The Primary Route in this segment continues alongside Ballona Creek channel utilizing largely undeveloped space in the City of Los Angeles ROW. Stub roads at Comey Ave, Dauphin Ave, and Ernest Ave provide trailhead access.



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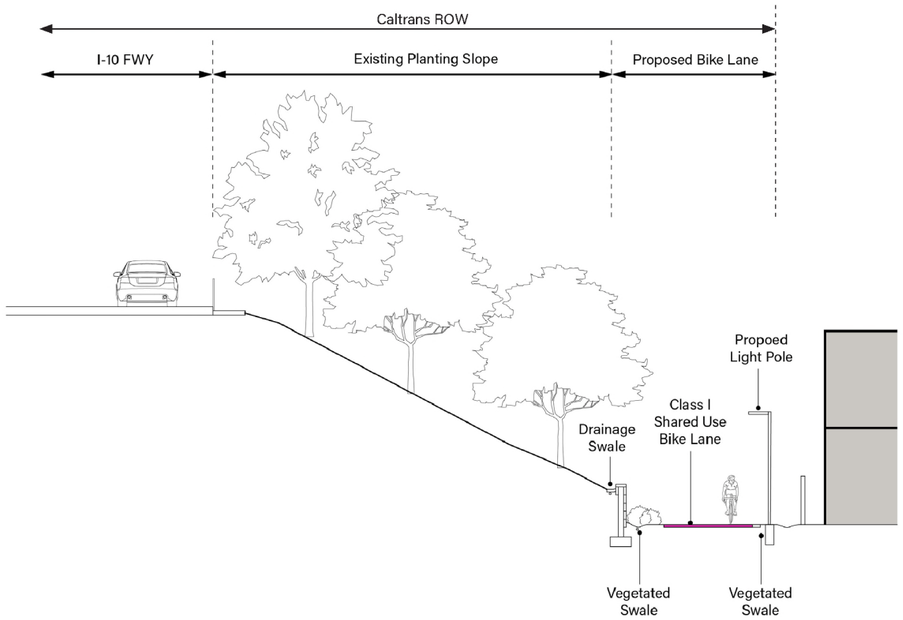
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Primary Route

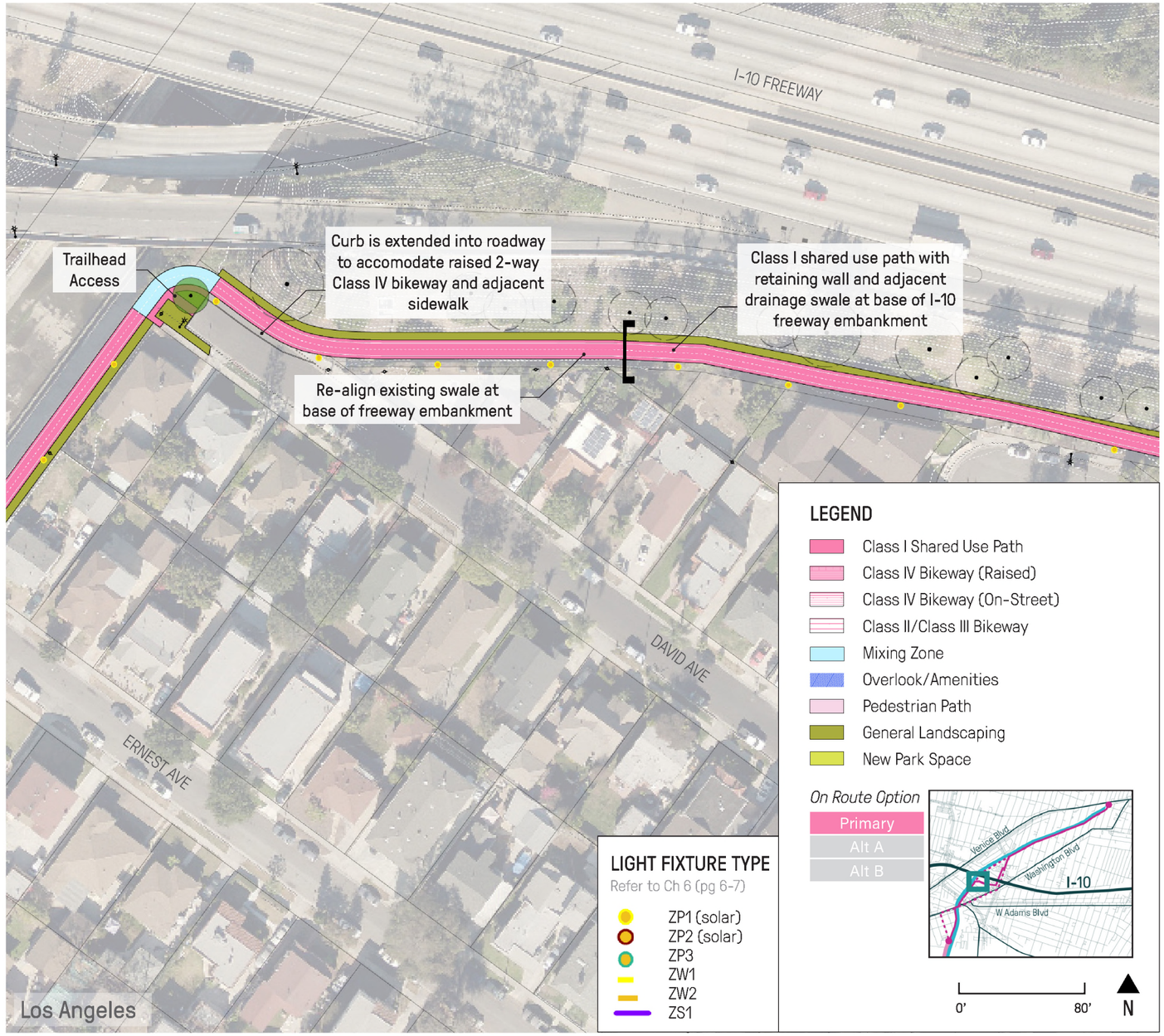
Washington Blvd to S Genesee Ave

The Primary Route in this segment turns away from the channel at the I-10 Freeway (vertical clearance beneath the freeway and its on- and off-ramps is insufficient to continue the pathway atop the channel wall beneath the freeway). Instead, the pathway continues in the Caltrans ROW at the base of the I-10 embankment. This segment features a new retaining wall and stormwater drainage elements.



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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Base of I-10 Embankment - Existing Condition



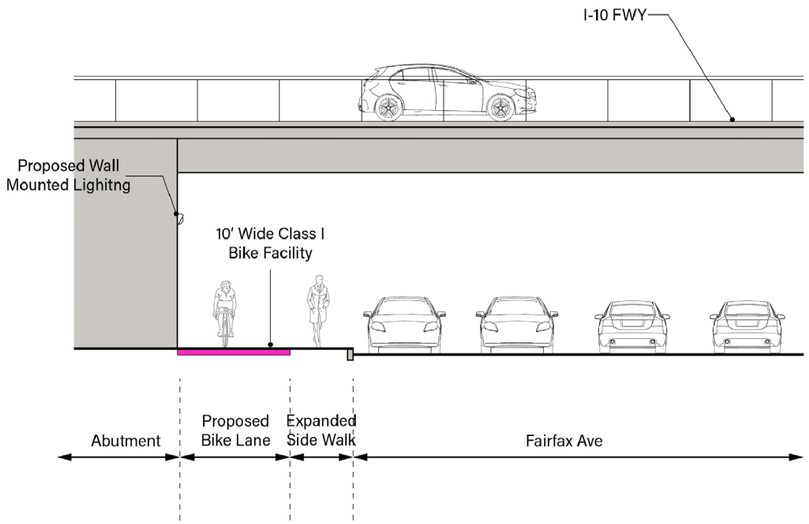
Path at Base of I-10 Embankment - Proposed Concept



Primary Route

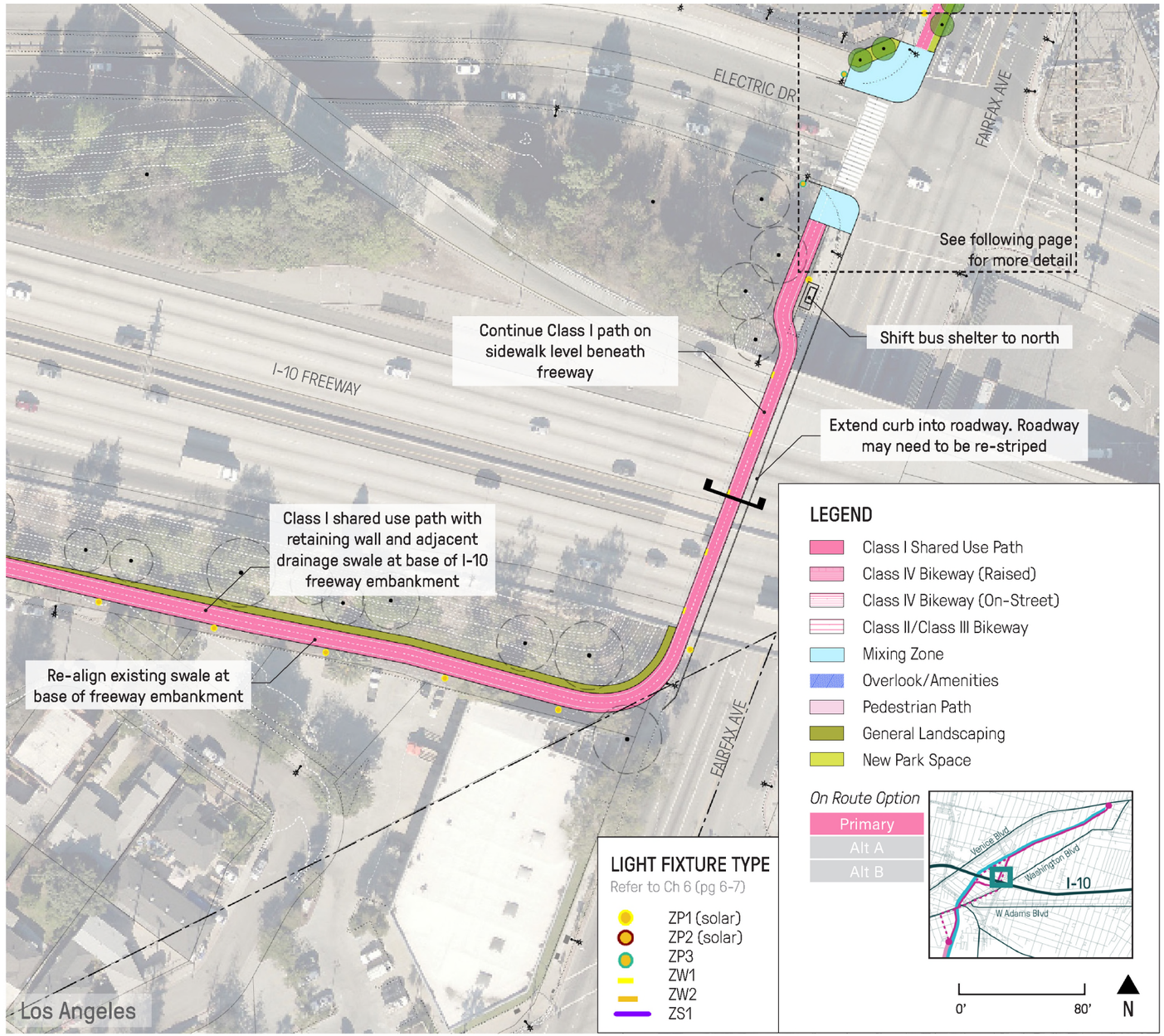
Washington Blvd to S Genesee Ave

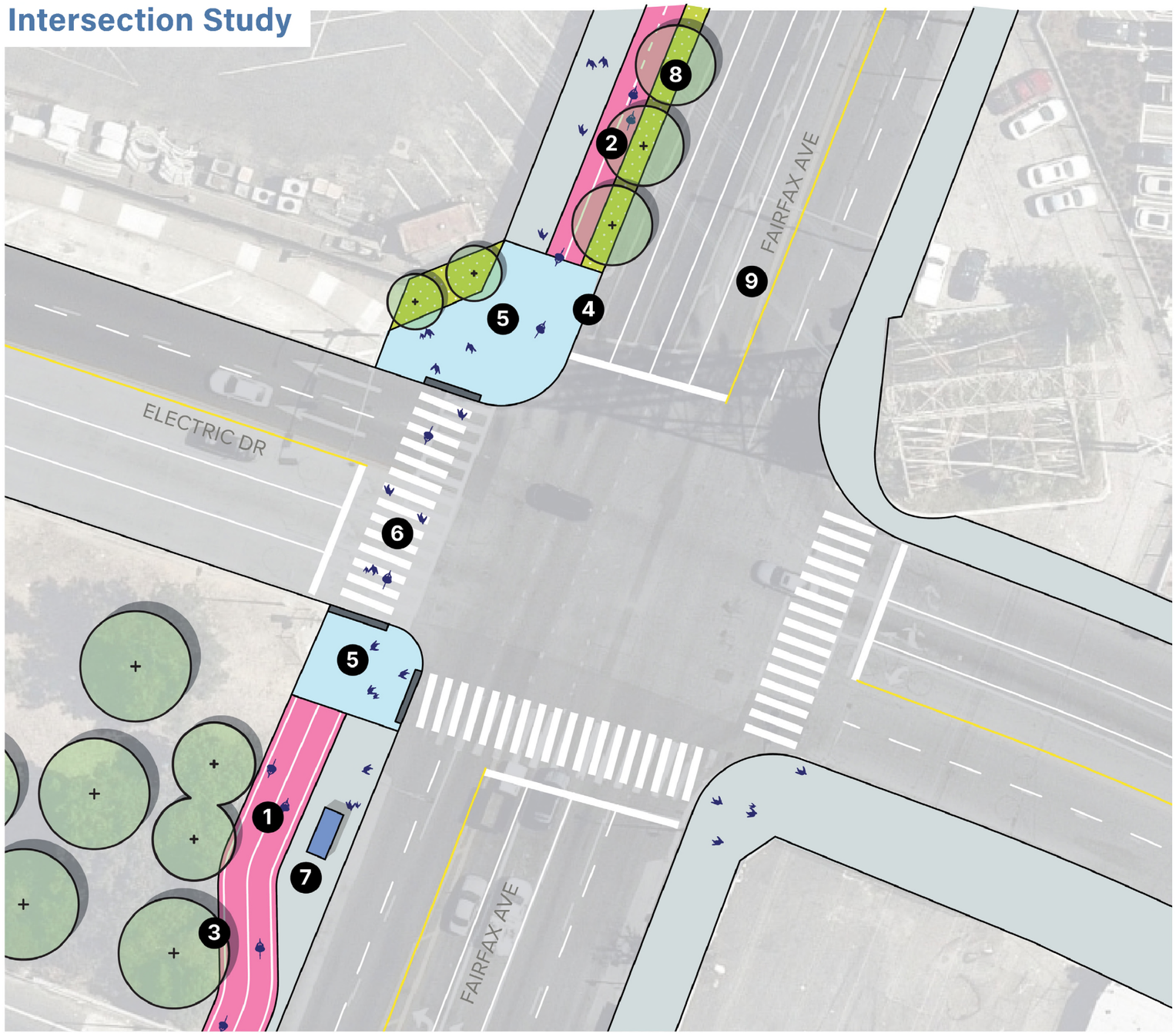
The Primary Route in this segment continues at the base of the I-10 Freeway embankment before turning northward on Fairfax Ave. Here, the curb is expanded to host an off-street bike facility. The location of the bus shelter at Fairfax Ave and Electric Dr is shifted northward.



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Electric Dr. / I-10 Off-Ramp

Class I path crossing at Electric Dr on-ramp with dedicated signal phase and large corner mixing zone. Connects to mid-block crossing at Genessee further north.

Opportunities

- Potential to create floating bus island and route trail behind sidewalk into Caltrans ROW.
- Opportunity to repurpose NW corner with curb extension to provide spatious mixing zone for the trail and transition to separated bikeway.
- Ample space at crossing for small trailhead and amenities.

Challenges

- Coordination with LADOT, Caltrans, and Metro due to impacts to crossing signal (requires no turn on red, dedicated bike/ped signal phase,) roadway modifications, bus stop improvements, and impacts to Caltrans ROW.
- Requires crossing a freeway onramp.
- Operational impacts on left and right vehicular turning movement. Right turn on red will have to be prohibited for southbound Fairfax and Eastbound Electric.

Alternate Options (not shown)

Two-stage crossing and diagonal crossing options were explored, both of which shifted the trail from the SW to NE corners. These options would result in greater delays for trail users and greater impacts to existing traffic function.

N 0′ 30′ 60′

Legend

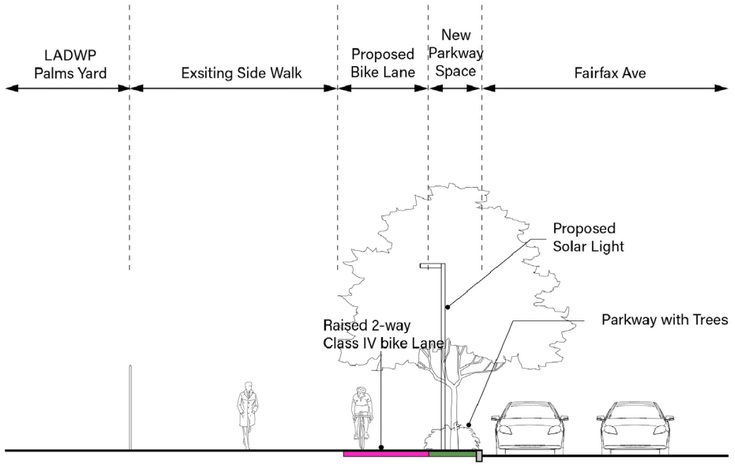
1. Ballona Creek Trail, Class I Path
2. Ballona Creek Trail, Raised Class IV Bi-directional protected pathway.
3. Shift trail alignment behind bus stop location
4. Curb extension
5. Mixing zone for pedestrians and cyclists to queue
6. Signal phase modifications and dedicated crossing at Electric Dr and I-10 Ramp
7. Existing bus stop
8. Concrete curb and landscape buffer (5 feet)
9. Restriping of Fairfax north of intersection

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Primary Route

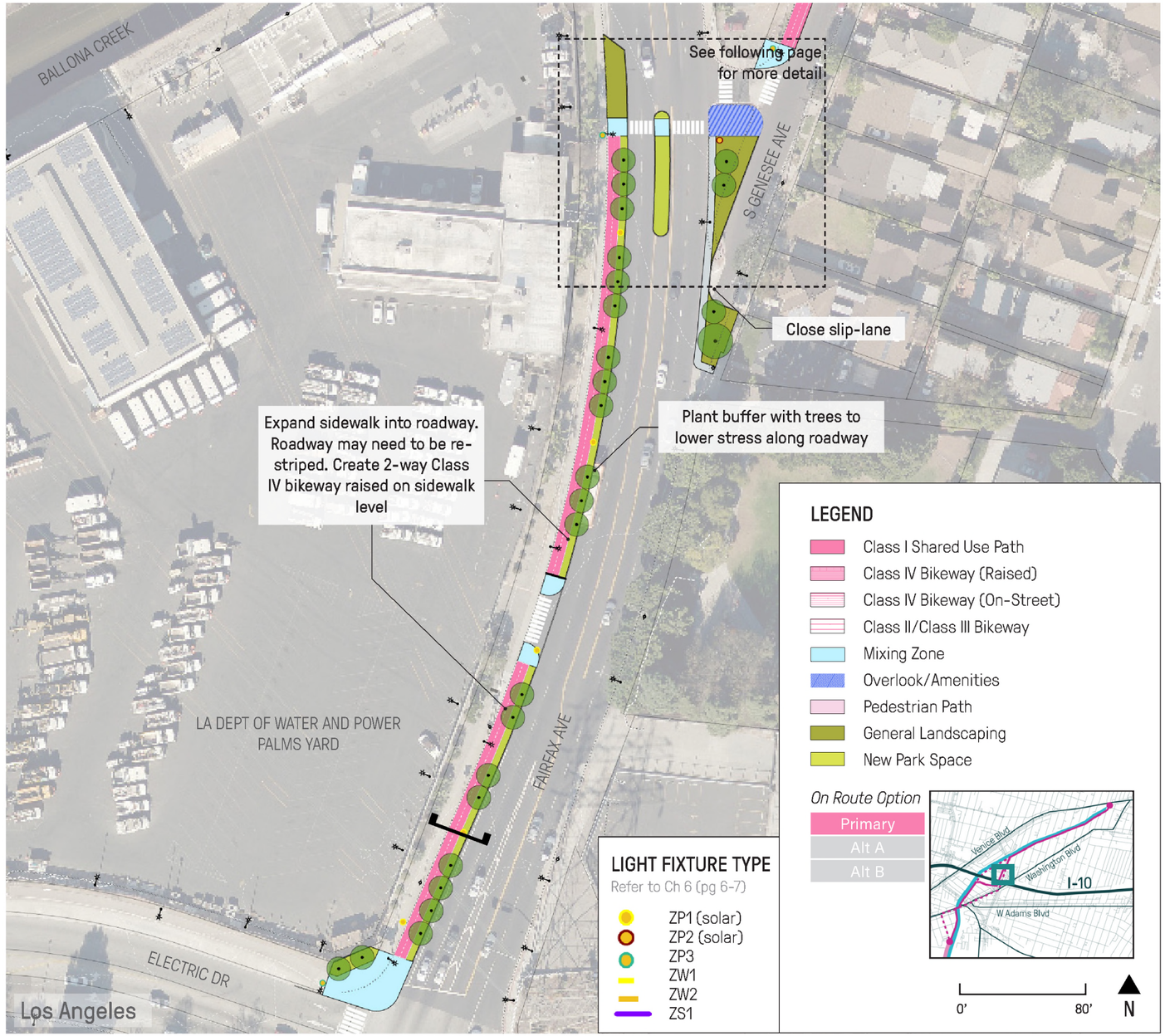
Washington Blvd to S Genesee Ave

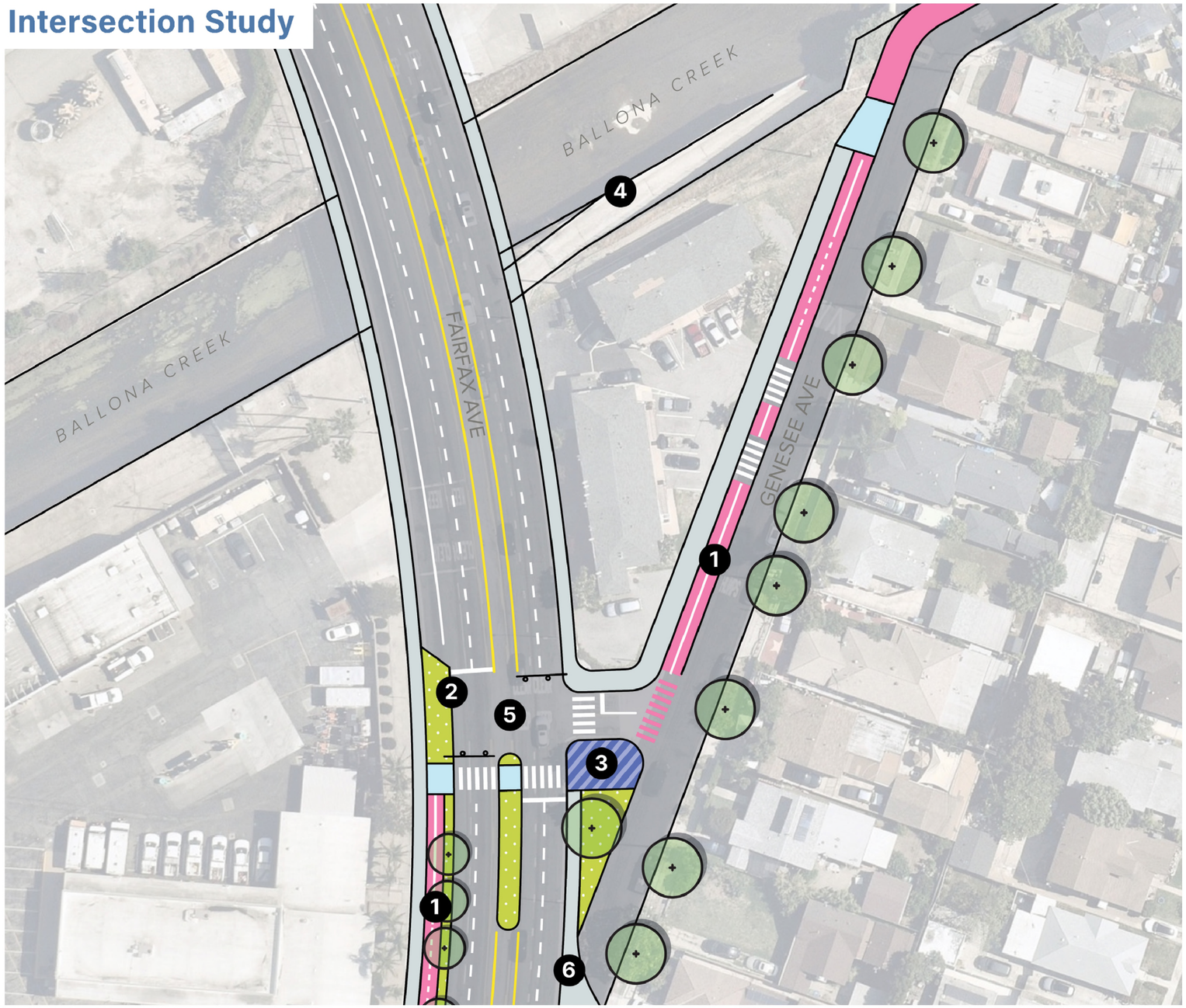
The Primary Route in this segment continues along Fairfax Ave. The curb is expanded to create a raised 2-way bike facility on Fairfax Ave. A planted buffer is created between the bike facility and the roadway. The route crosses Fairfax Ave (via a new signalized crossing) where S Genesee Ave intersects with Fairfax Ave.



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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.





Fairfax and Genesee Ave

Connection between Class IV protected bikeway along Fairfax Ave and Preferred Alt along Cologne St via Genesee Ave.

Opportunities

- Opportunity to reconfigure Fairfax to provide a pedestrian refuge island and curb extensions.
- Opportunity for formalize crossing at Genesee with a fully signalized intersection.
- Ample space for trail amenities at triangle plaza on east side of Fairfax.

Challenges

- Coordination with LADOT.
- Requires coordination with adjacent property owners. Needs to maintain existing residential access.

Alternate Options (not shown)

Two-stage crossing and diagonal crossing options were explored at the intersection of Fairfax and Electric. These alignments would have negated the need for a crossing of Fairfax at Genesee. Those options would result in greater delays for trail users and greater impacts to existing traffic function.

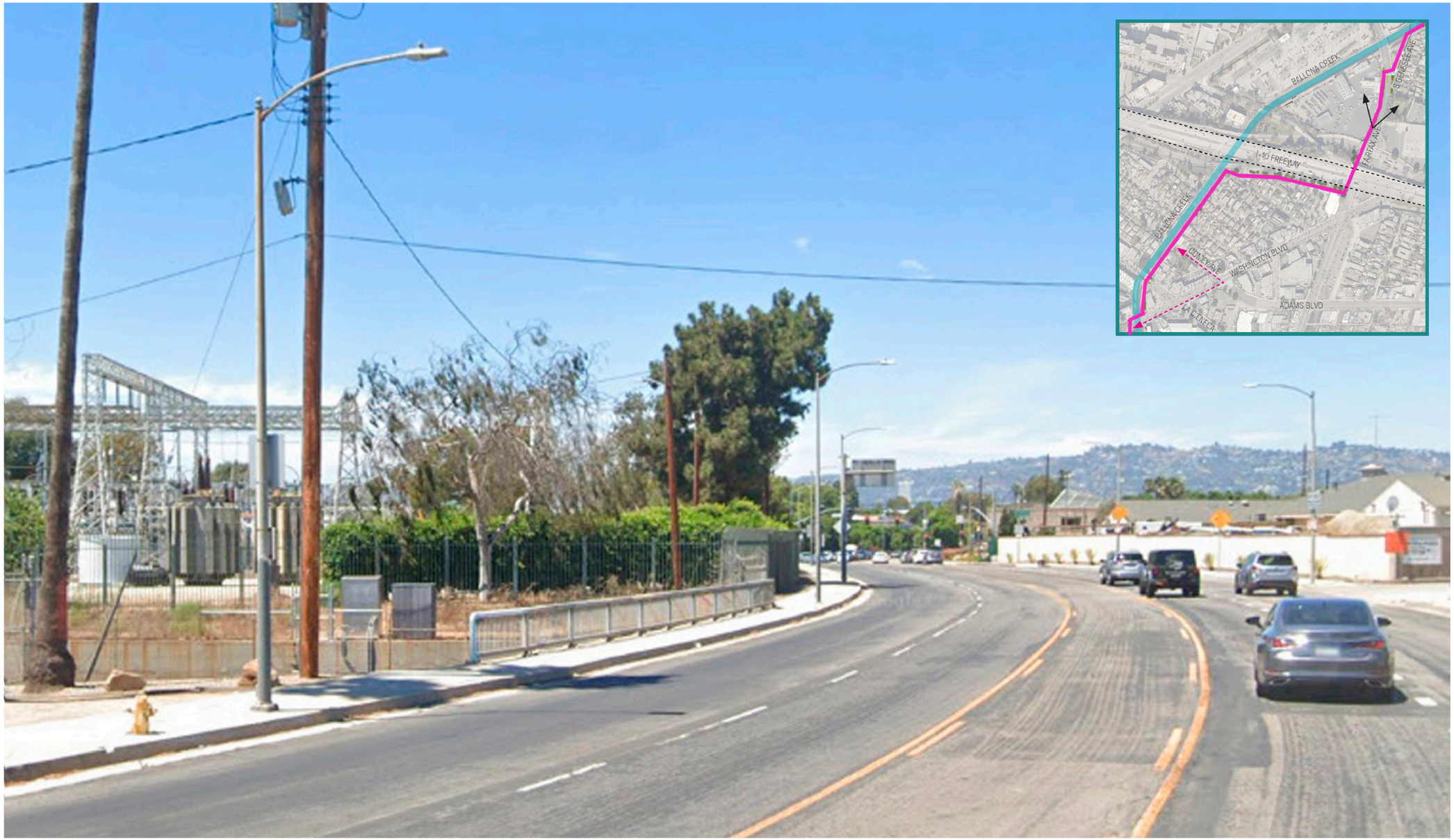
N 0′ 50′ 100′

Legend

1. Ballona Creek Trail, raised Class IV Bi-directional Protected Bikeway
2. Curb extensions
3. Trailhead/trail amenities
4. Existing creek maintenance access
5. Signalized Intersection (Preferred) or HAWK
6. Slip-lane closure

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Path at Base of I-10 Embankment - Existing Condition



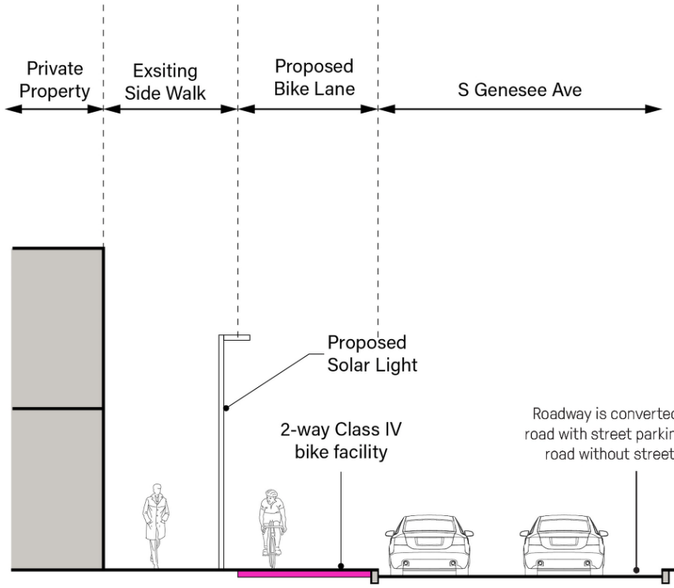
Path at Base of I-10 Embankment - Proposed Concept



Primary Route

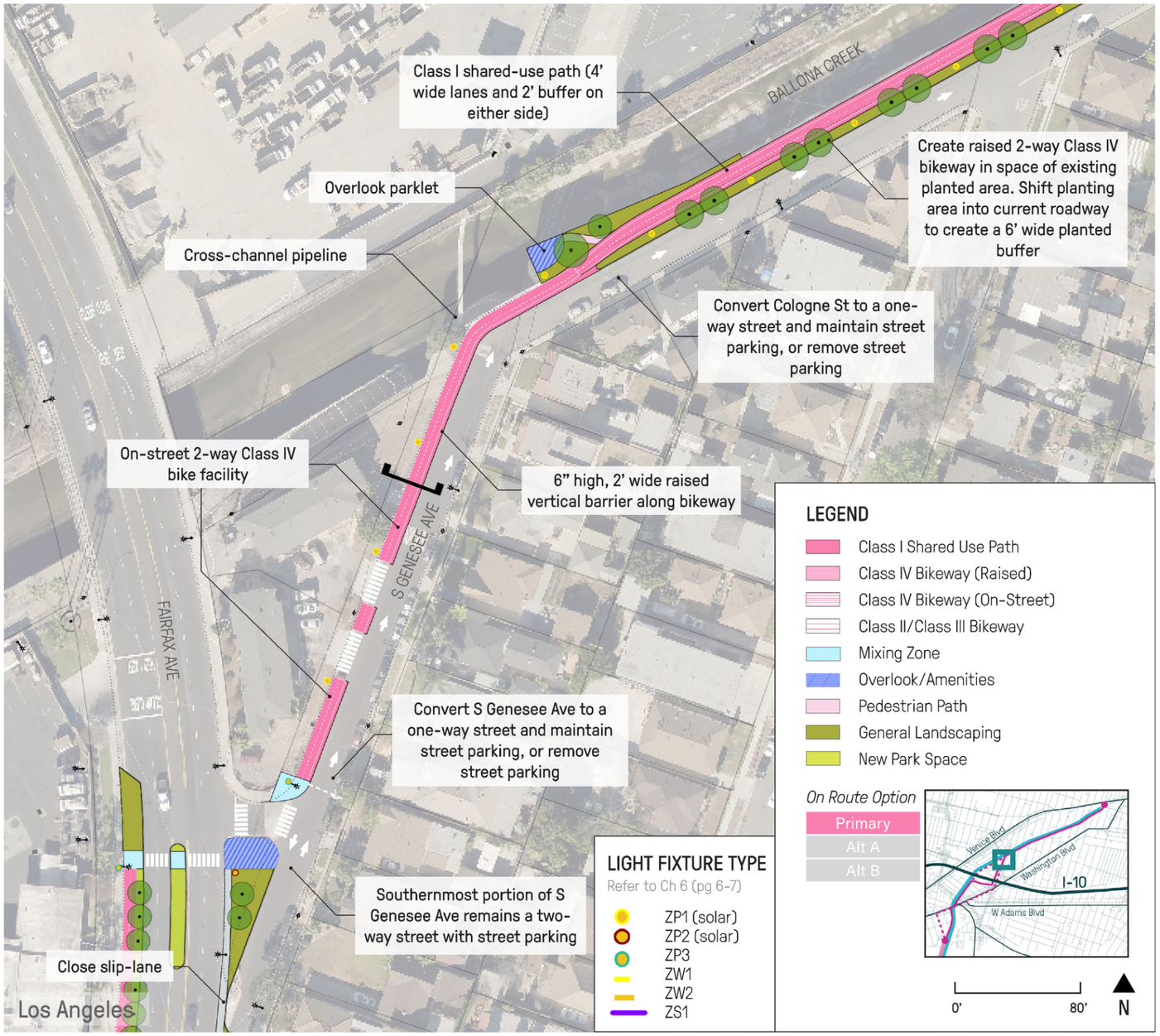
Washington Blvd to S Genesee Ave

The Primary Route in this segment continues as a raised 2-way Class IV facility on S Genesee Ave to Cologne St (alongside the channel). This segment involves the potential conversion of Cologne St and most of S Genesee Ave to 1-way streets with street parking or to 2-way streets with no street parking.



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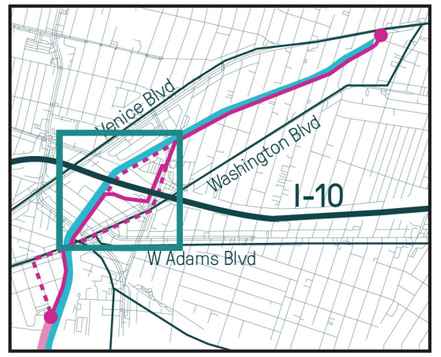
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.

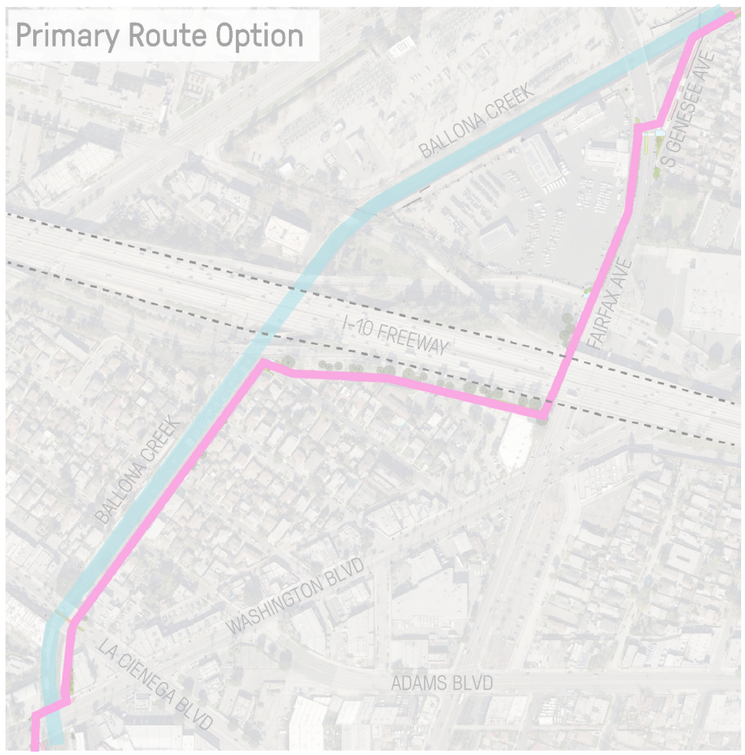


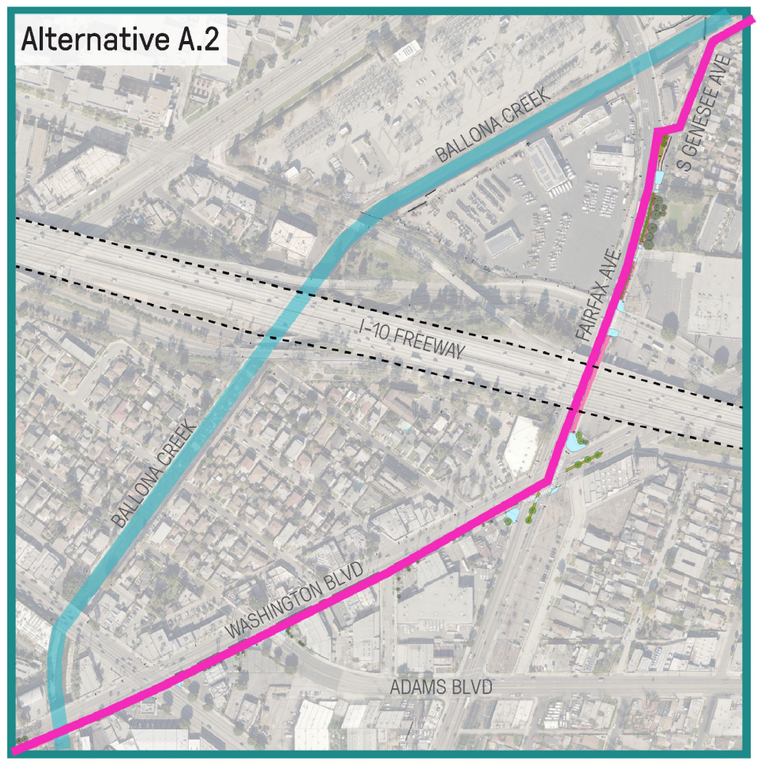
Alternative A.2

Washington Blvd to S Genesee Ave (Culver City - Los Angeles)

Alternative A.2 navigates around the I-10 freeway using the existing roadway and sidewalk right-of-way. On Washington Blvd, a primarily on-street two-way Class IV bikeway travels up Washington Blvd before continuing onto Fairfax Ave as a raised two-way Class IV bikeway. Here, the sidewalk is extended into the existing roadway to create space for a sidewalk-level bikeway along Fairfax Ave.







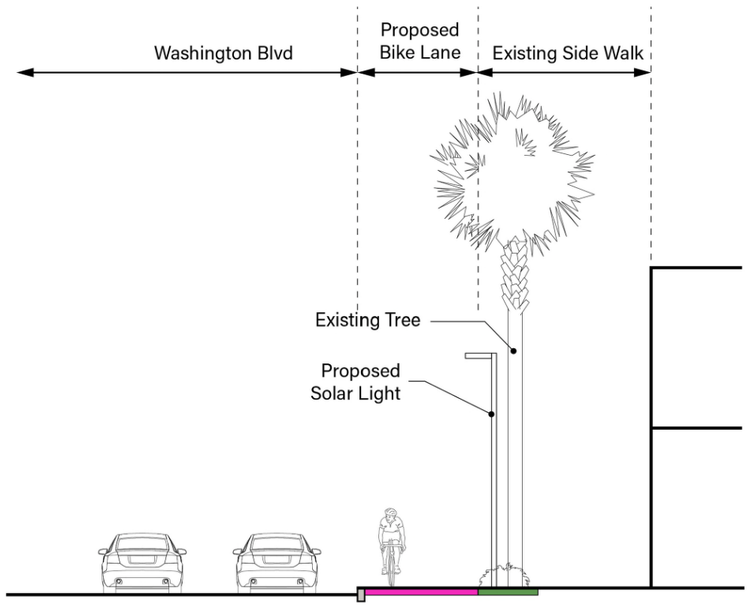


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Alternative A.2

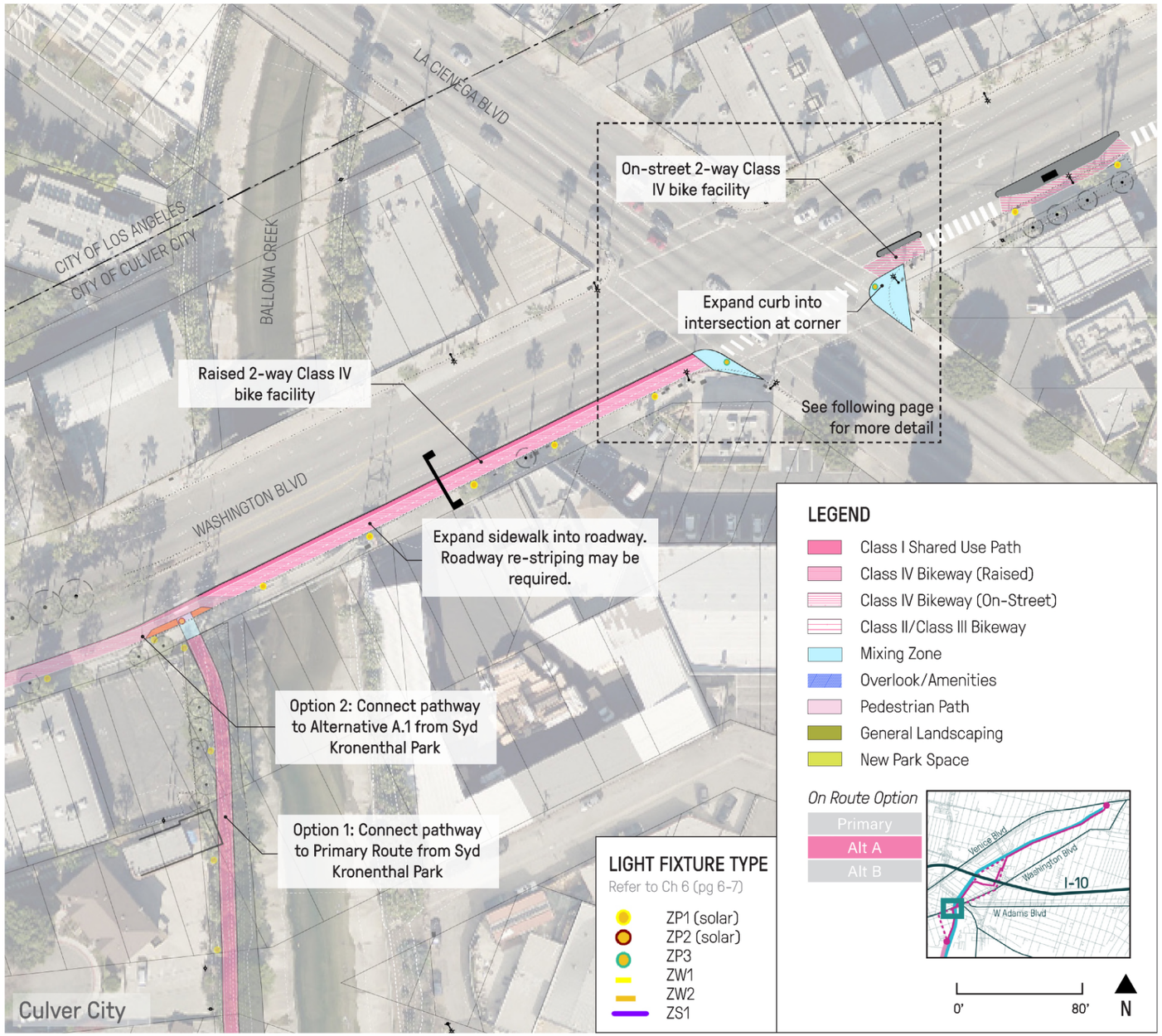
Washington Blvd to S Genesee Ave

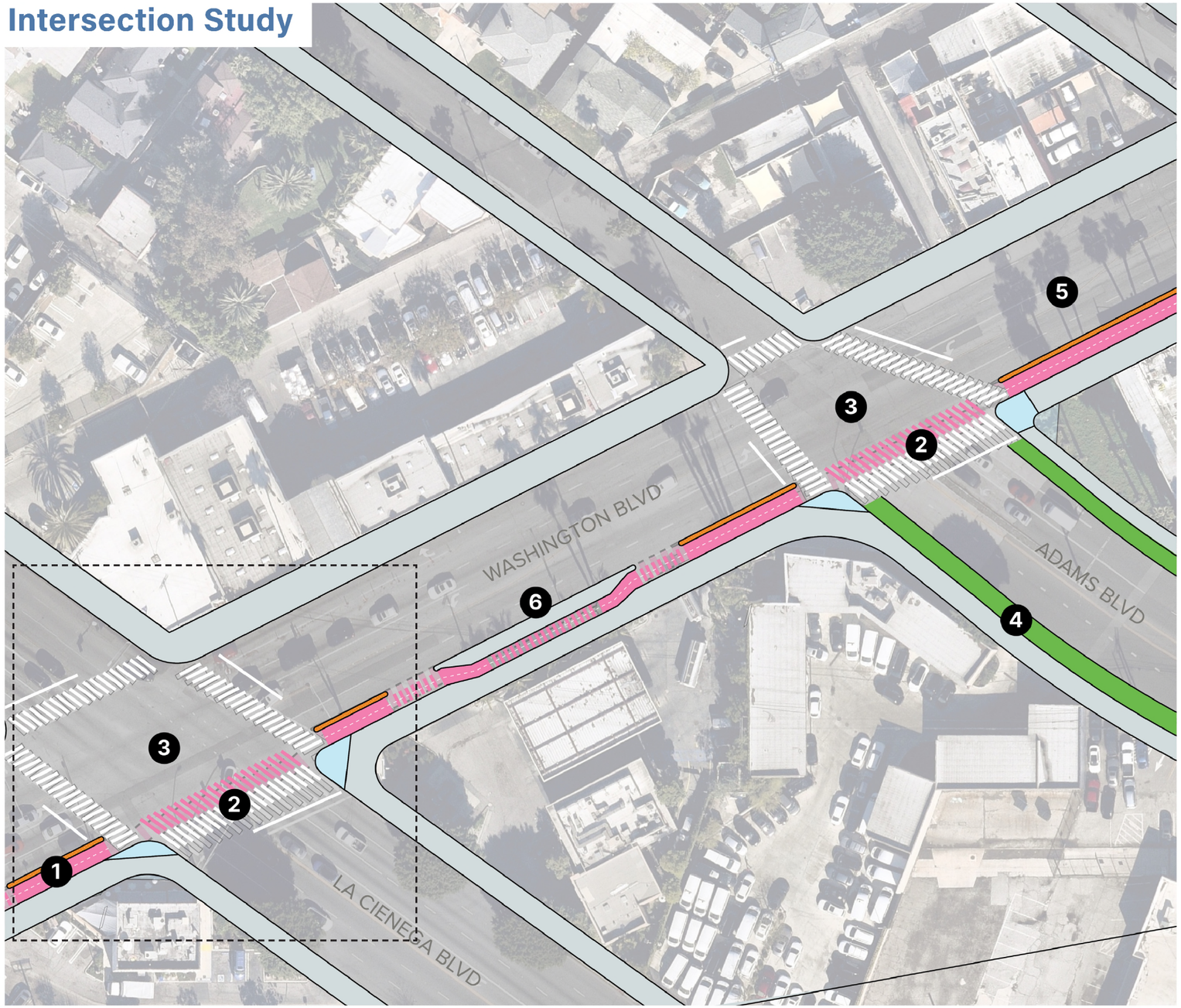
Alternative A.2 provides another option for navigating between Washington Blvd to S Genesee Ave and around the intersection of Ballona Creek and the I-10 Freeway. Alternative A.2 continues on Washington Blvd as a raised 2-way Class IV facility until La Cienega Blvd.



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La Cienega & Adams

2-way Class IV separated protected bikeway along the south edge of Washington Blvd with dedicated signal phases.

Opportunities

- Improves local bikeway connections to Adams Blvd bikeway.
- Opportunity to minimize impact to existing roadway function, removal of parking lanes only.
- Wide existing sidewalk provides flexibility for integrating floating bus island.

Challenges

- Coordination with LADOT and Metro due to impacts on existing roadway, signal placement, and overall crossing phase optimization.
- Requires removing at least one parking lane.
- Operational impact on intersection curb corners prohibiting left and right vehicular turning movement.
- Existing bus stops on Washington require coordination.
- Existing street stormwater system needs to be considered in design.

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N 0′ 60′ 120′

Legend

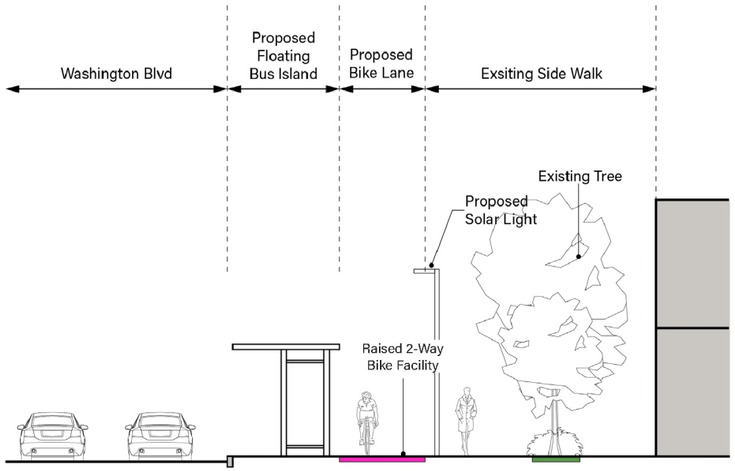
1. Ballona Creek Trail, Class IV Bi-directional Protected Bikeway
2. Signal phasing modifications and dedicated crossing for Ballona Creek Trail at La Cienega and Adams Blvd.
3. Improved crosswalks and reduced curb radii, all corners of intersections.
4. Planned Buffered Bike Lanes on Adams to Fairfax, by others.
5. Roadway modification, loss of at least one parking lane.
6. Floating bus island at existing bus stop location

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Alternative A.2

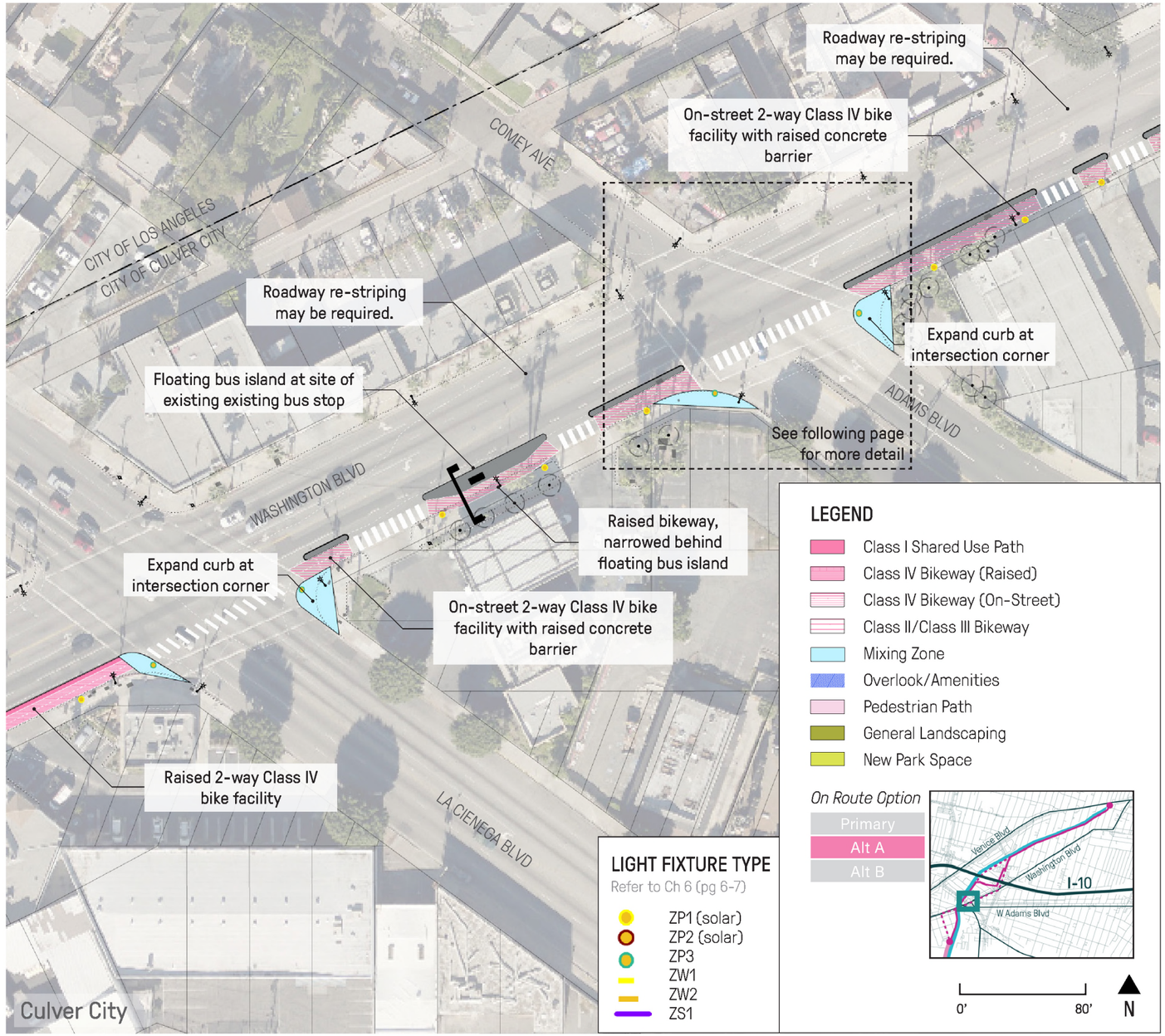
Washington Blvd to S Genesee Ave

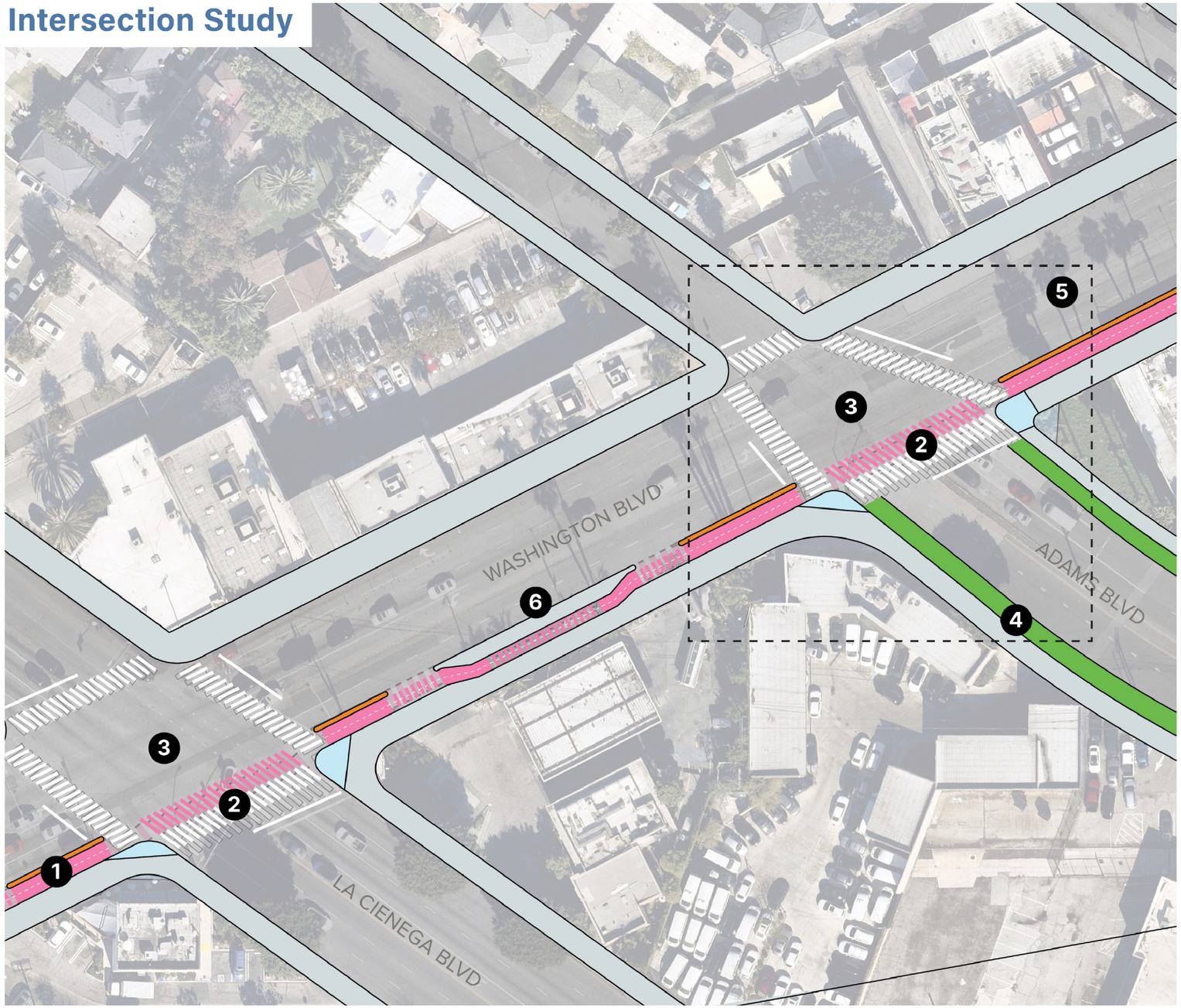
Alternative A.2 continues on Washington Blvd as an on-street Class IV facility. This segment includes curb expansions at intersection corners and the creation of a floating bus island at the location of an existing bus stop.



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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.





La Cienega & Adams

2-way Class IV separated protected bikeway along the south edge of Washington Blvd with dedicated signal phases.

Opportunities

- Improves local bikeway connections to Adams Blvd bikeway.
- Opportunity to minimize impact to existing roadway function, removal of parking lanes only.
- Wide existing sidewalk provides flexibility for integrating floating bus island.

Challenges

- Coordination with LADOT and Metro due to impacts on existing roadway, signal placement, and overall crossing phase optimization.
- Requires removing at least one parking lane.
- Operational impact on intersection curb corners prohibiting left and right vehicular turning movement.
- Existing bus stops on Washington require coordination.
- Existing street stormwater system needs to be considered in design.

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N 0' 60' 120'

Legend

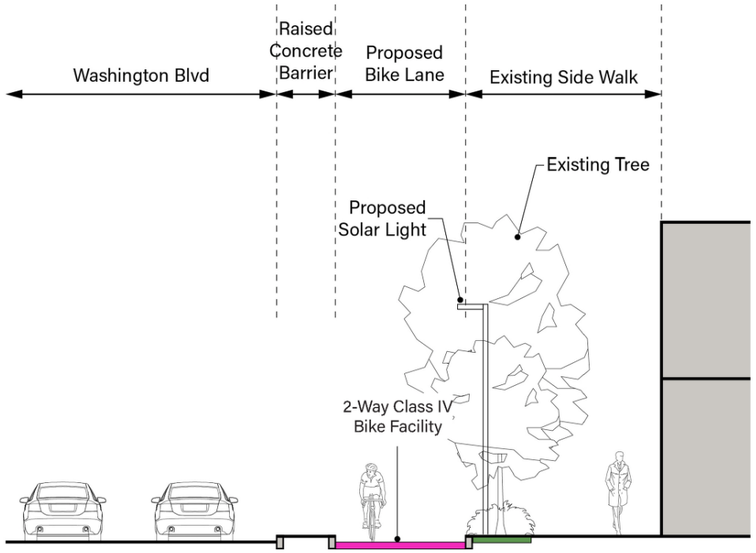
1. Ballona Creek Trail, Class IV Bi-directional Protected Bikeway
2. Signal phasing modifications and dedicated crossing for Ballona Creek Trail at La Cienega and Adams Blvd.
3. Improved crosswalks and reduced curb radii, all corners of intersections.
4. Planned Buffered Bike Lanes on Adams to Fairfax, by others.
5. Roadway modification, loss of at least one parking lane.
6. Floating bus island at existing bus stop location

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Alternative A.2

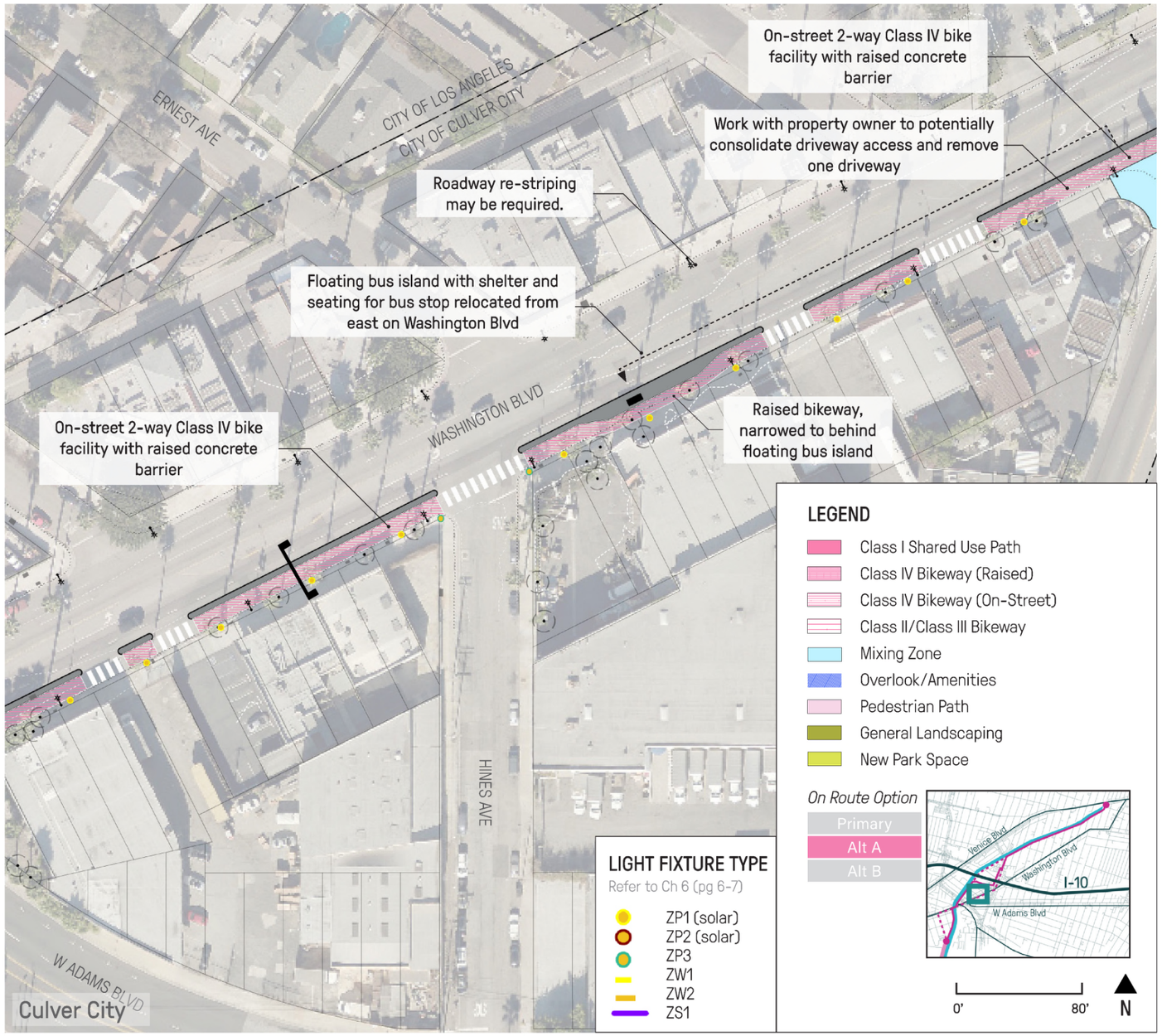
Washington Blvd to S Genesee Ave

Alternative A.2 continues on Washington Blvd as an on-street Class IV facility. This segment includes shifting an existing bus stop at Fairfax Ave and Washington Blvd a short distance westward on Washington Blvd and creating a floating bus island with a shelter at the location of the new bus stop.



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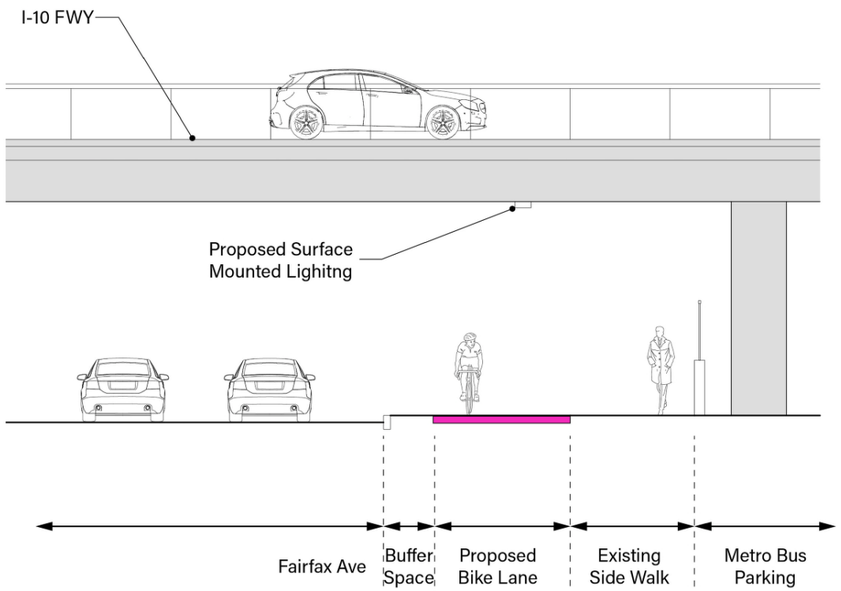
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Alternative A.2

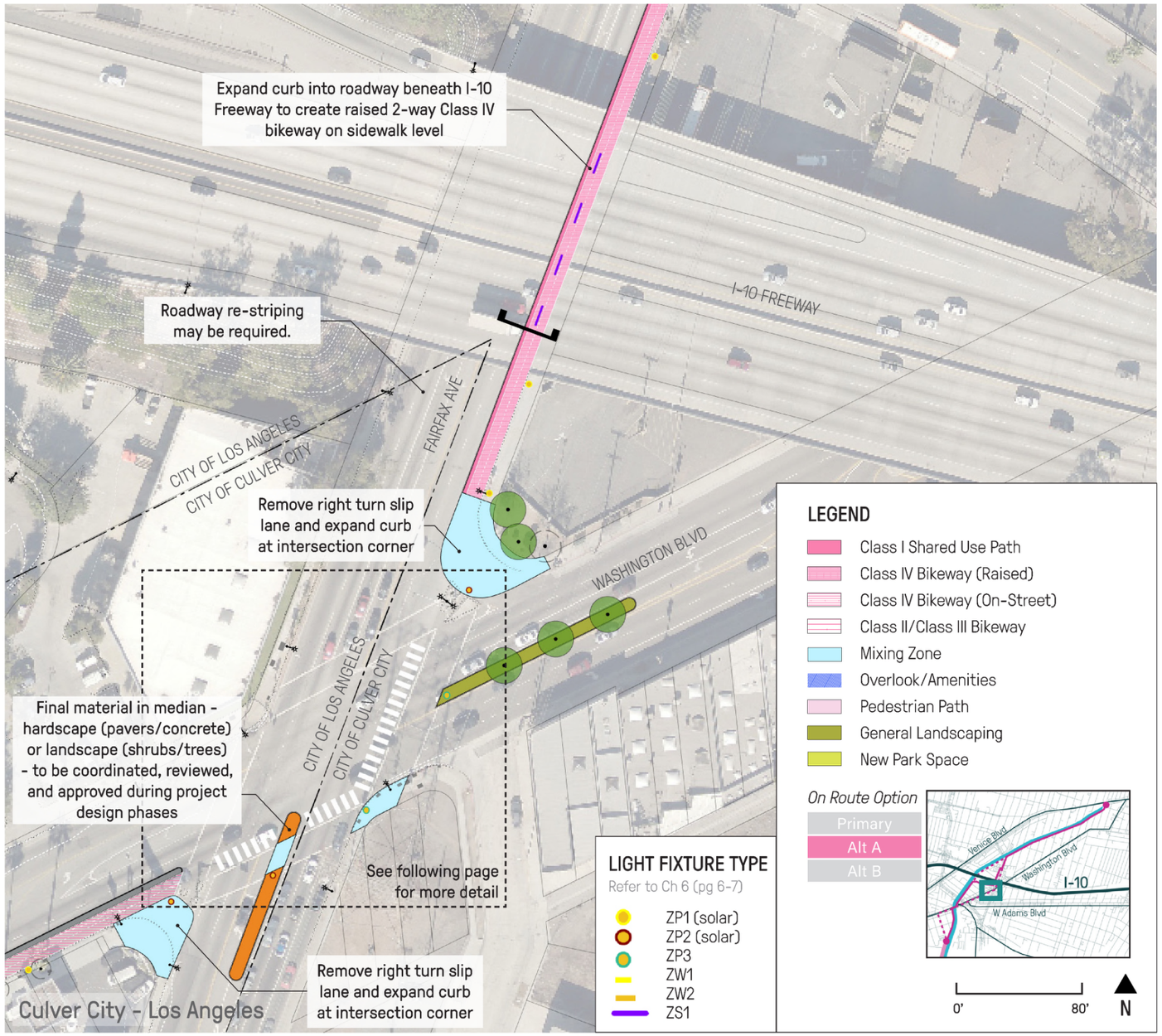
Washington Blvd to S Genesee Ave

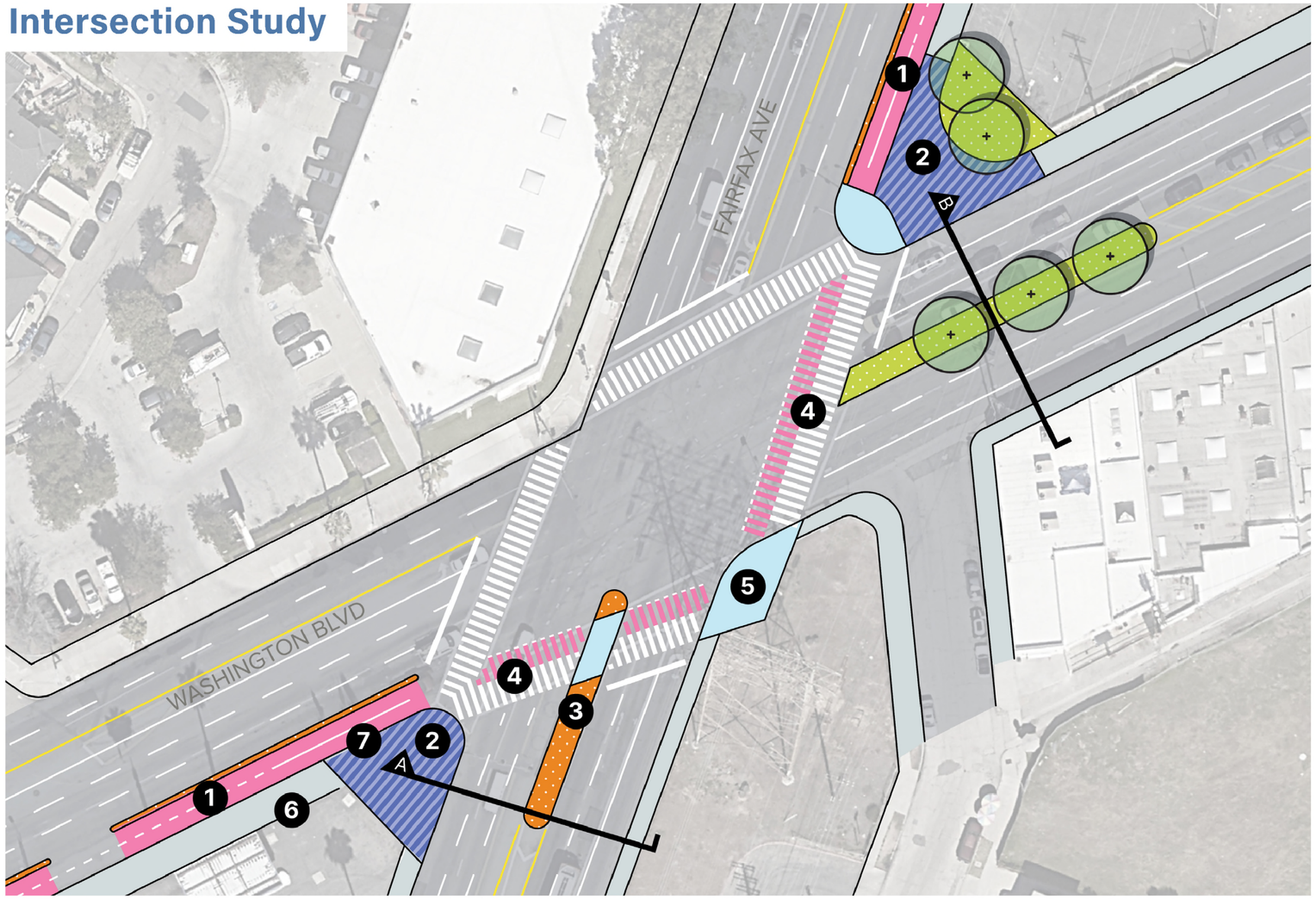
Alternative A.2 crosses Fairfax Ave and Washington Blvd at the existing intersection and travels northward as a raised 2-way Class IV facility on Fairfax Ave.



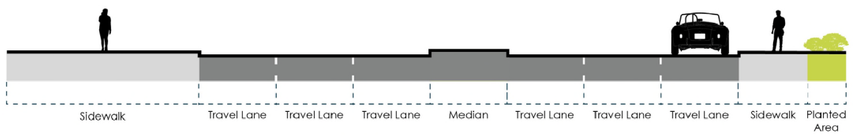
The concepts presented herein have not been approved by the City of Culver City and are shown for purposes of this feasibility study only. Final alignment and design is subject to review and approval by the City of Culver City where the project falls within its jurisdiction.

Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.

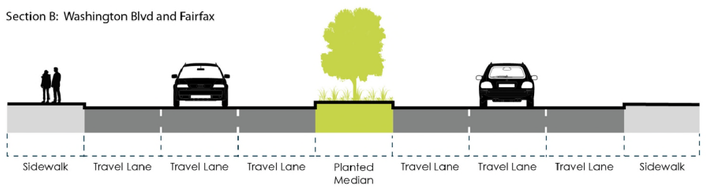




Section A: Washington Blvd and Fairfax 1



Section B: Washington Blvd and Fairfax



Washington Bl & Fairfax Ave

2-way Class IV protected bikeway with two-stage crossing of Fairfax Ave and Washington Blvd with dedicated signal phases.

Opportunities

- Ample ROW for trailhead amenities and bike waiting space at crossings.
- Improves pedestrian and vehicular safety at busy or complex crossings.

Challenges

- Coordination with LADOT due to impacts on existing lane configuration, signal modification, and impact DASH bus stop.
- Requires crossing multiple lanes on two high speed and high volume streets. Trail users will need to cross one leg and then wait for the next bike signal phase.
- Driveway consolidation at SW corner of intersection is a challenging coordination item with private landowner.
- Operational considerations: Bus and truck turning movements may require reduced turn radius or slip lane. Additional coordination required.

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N 0' 50' 100'

Legend

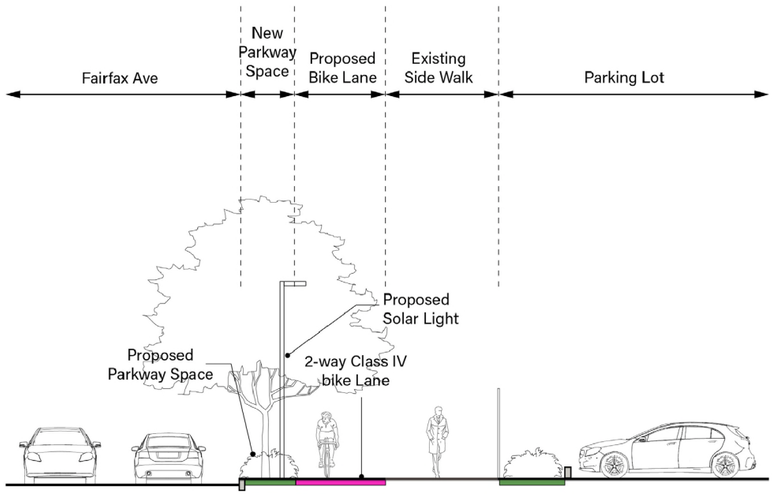
1. Ballona Creek Trail, Class IV Bi-directional Protected Bikeway
2. Curb extensions with trail amenities
3. Pedestrian refuge island, concrete curb or landscape
4. Signal phase modifications and dedicated crossing for Fairfax Ave and Washington Blvd
5. Mixing zone for pedestrians and cyclists to queue
6. Driveway consolidation/removal
7. Existing bus stop. Recommended to relocate to farside of Hines Ave.

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Alternative A.2

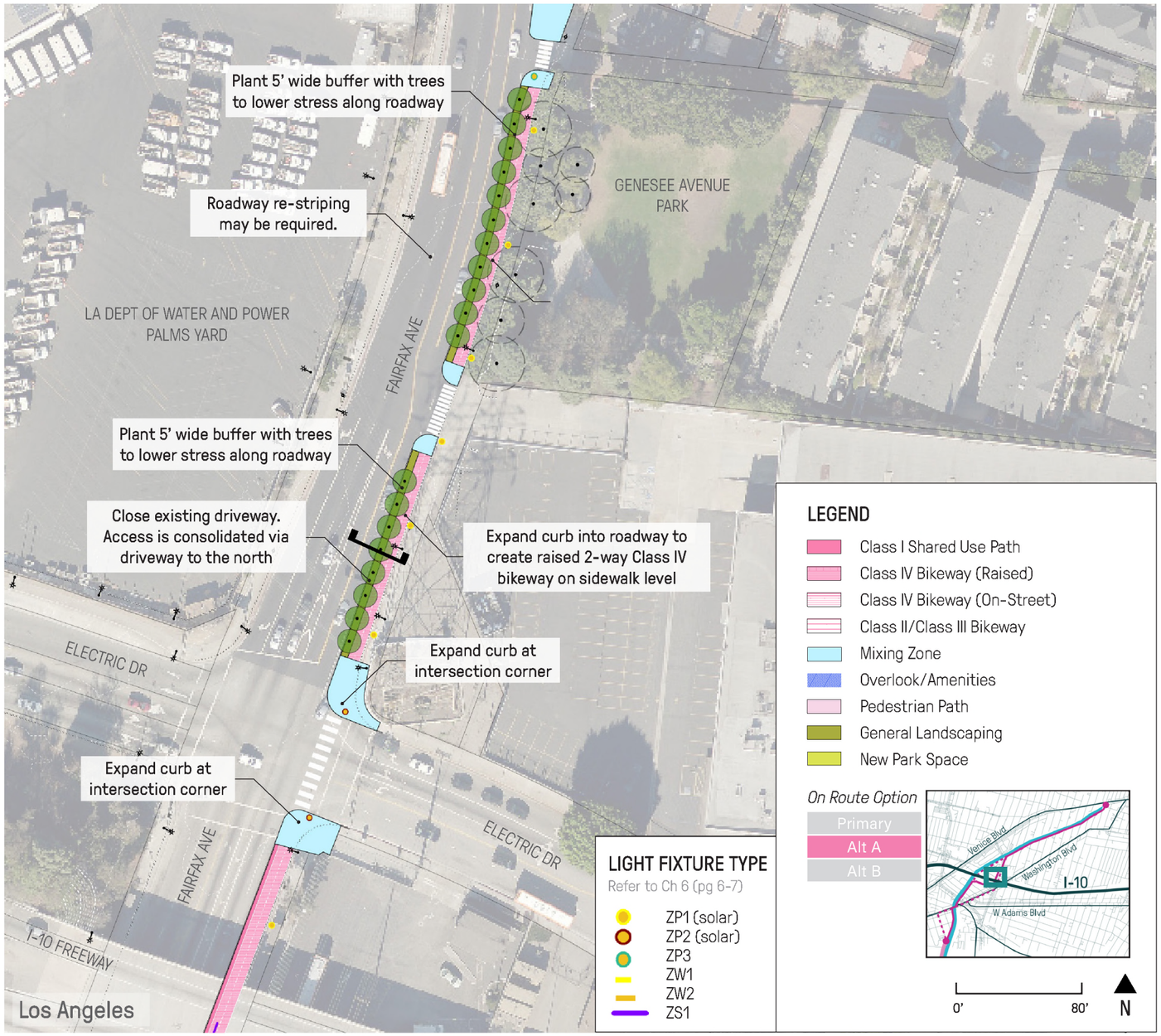
Washington Blvd to S Genesee Ave

Alternative A.2 in this segment continues northward on Fairfax Ave as a raised 2-way facility. The curb is expanded into the Fairfax Ave roadway and a planting buffer is created between the bike facility and roadway.



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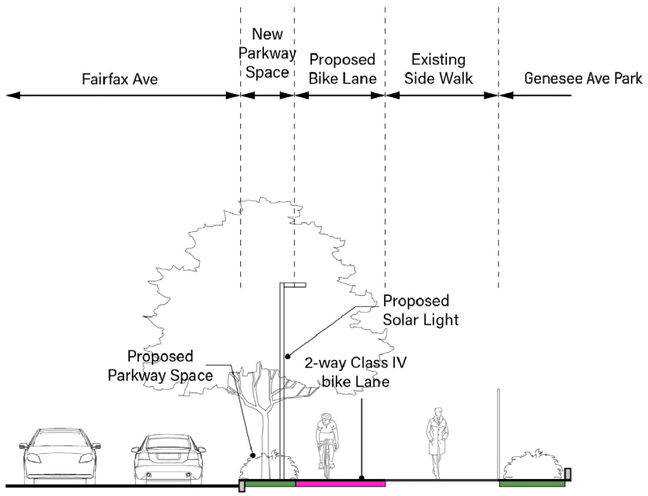
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Alternative A.2

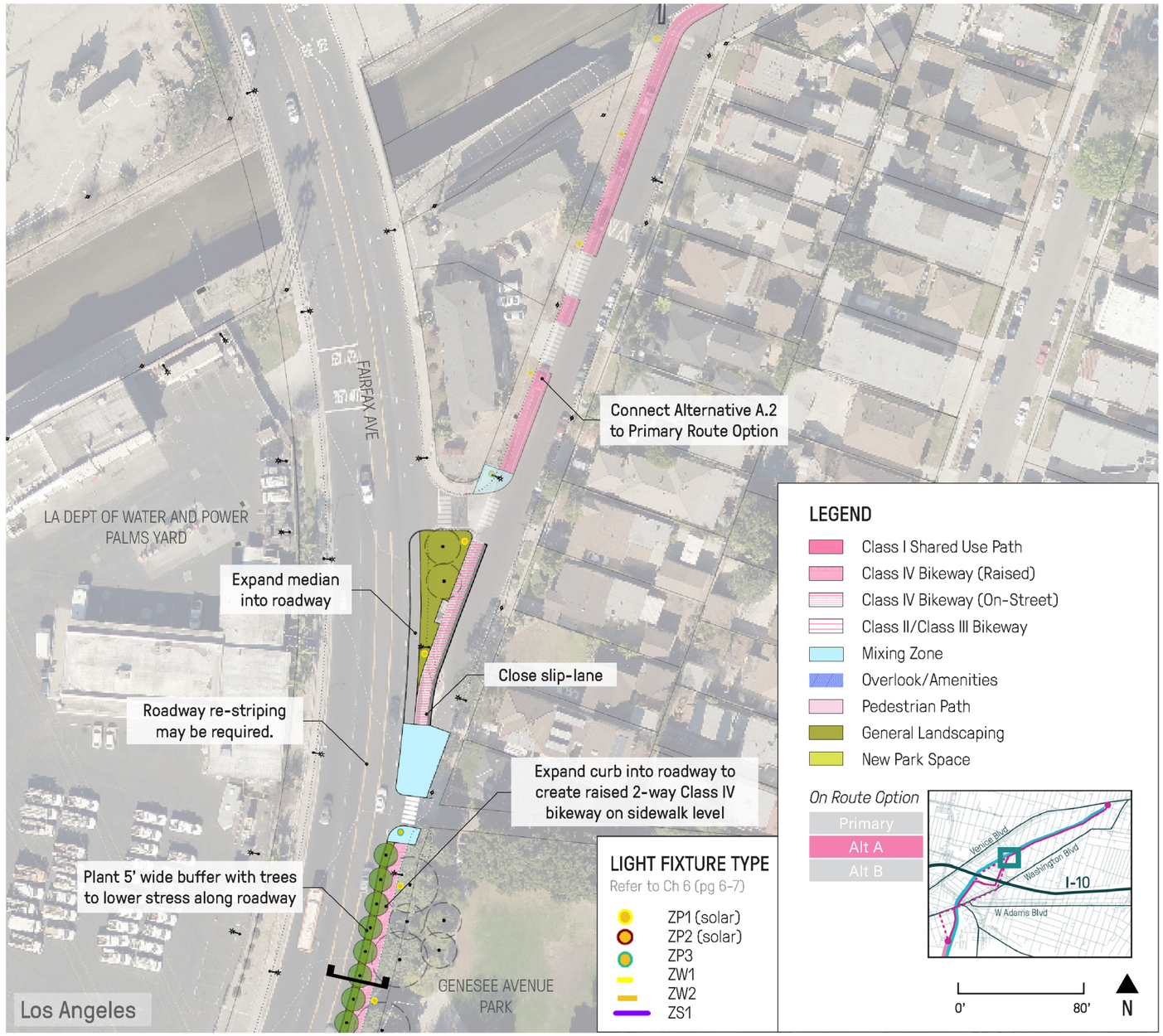
Washington Blvd to S Genesee Ave

Alternative A.2 in this segment continue alongside Fairfax Ave and continues onto S Genesee Ave. A slip lane between S Genesee Ave and Fairfax Ave is closed to increase user safety. At this point, Alternative A.2 can reconnect with the Primary Route.



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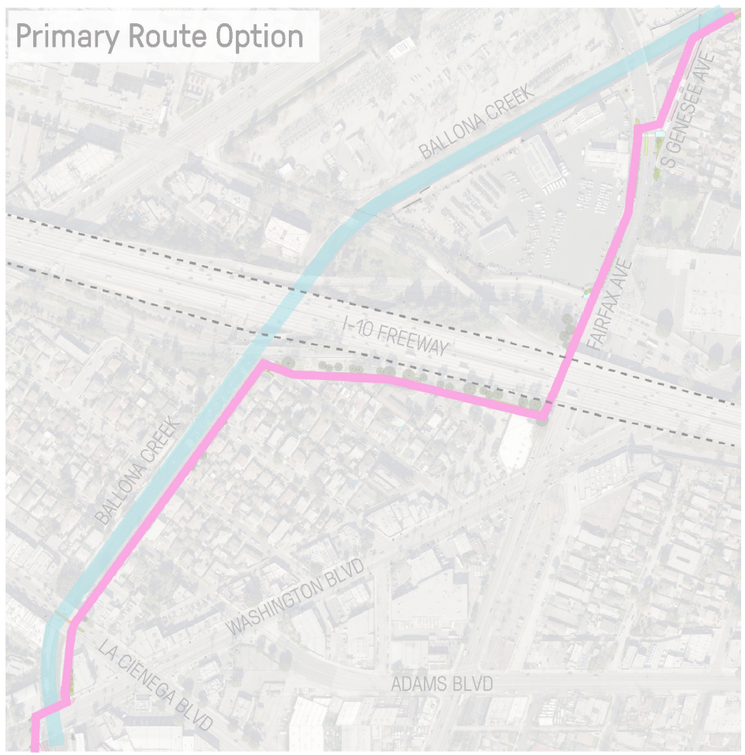
Alternative B

Washington Blvd to S Genesee Ave (Culver City - Los Angeles)

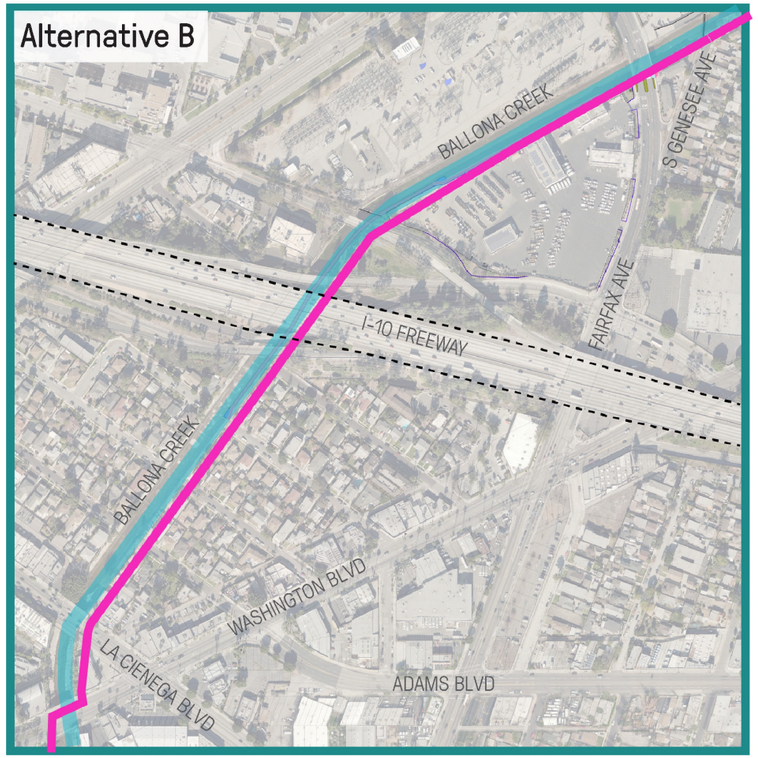
Between Washington Blvd and S Genesee Ave, the chief consideration is how best to navigate around the I-10 freeway. The vertical clearance beneath the freeway and its on- and off-ramps is too constrained for the pathway to continue alongside the channel using the space atop the channel wall. The project team considered a range of options for navigating this challenging segment while adhering to the project goals of continuing the Ballona Creek bike path, connecting to residents, communities, and broader transportation systems, creating safe, low-stress mobility and unique public space, and minimizing obstacles of cost, permitting, and construction timelines.

Alternative route B descends into the channel itself, traveling beneath the I-10 Freeway and its on- and off-ramps as a pathway elevated on pillars within the channel, before continuing through the edge of the LADWP property. As a result, project costs are projected to be higher and permitting timeframes and environmental reviews potentially much longer.







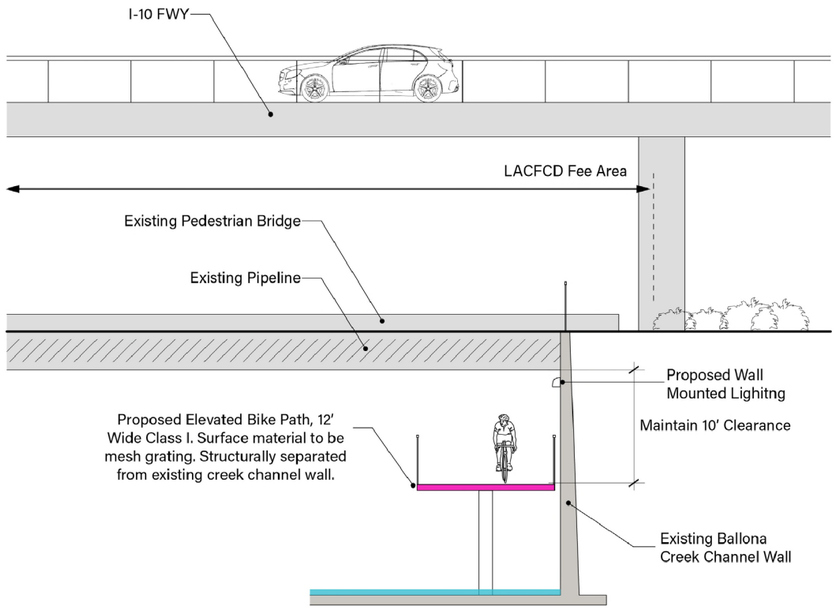


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Alternative B

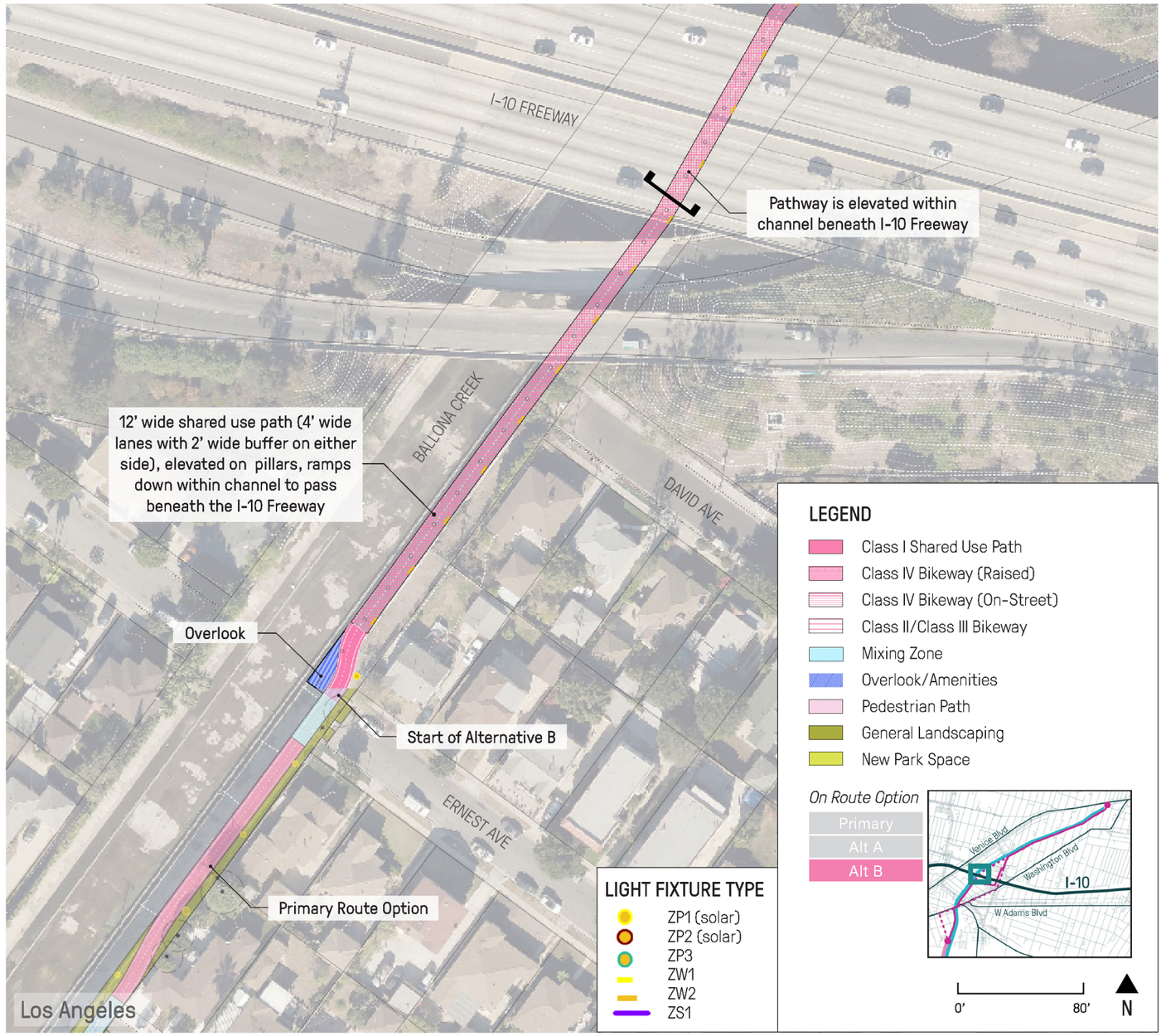
Washington Blvd to S Genesee Ave

Alternative B provides an alternative means of navigating the intersection of the Ballona Creek channel and the I-10 Freeway. Alternative B in this segment descends into the Ballona Creek channel via a ramp and continues within the channel, traveling, as an elevated pathway beneath an existing cross-channel pipeline, the I-10 Freeway, and the freeway's on- and off-ramps.



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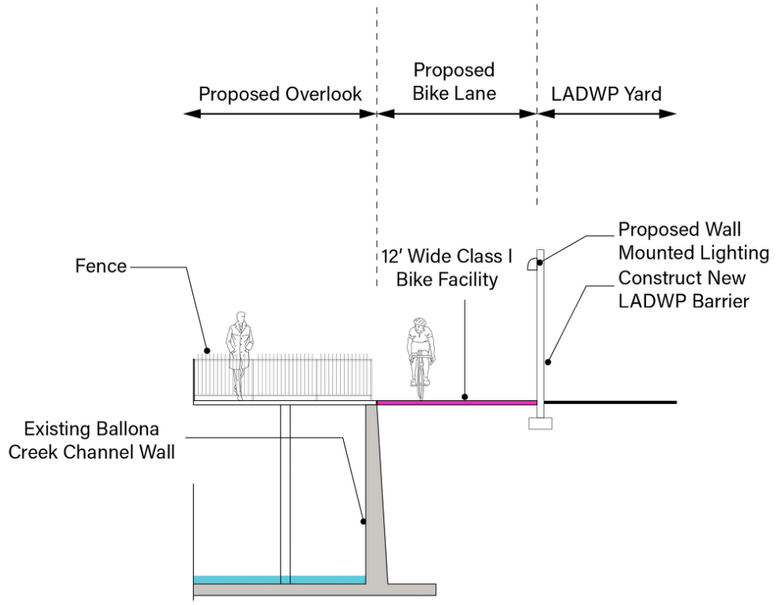
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Alternative B

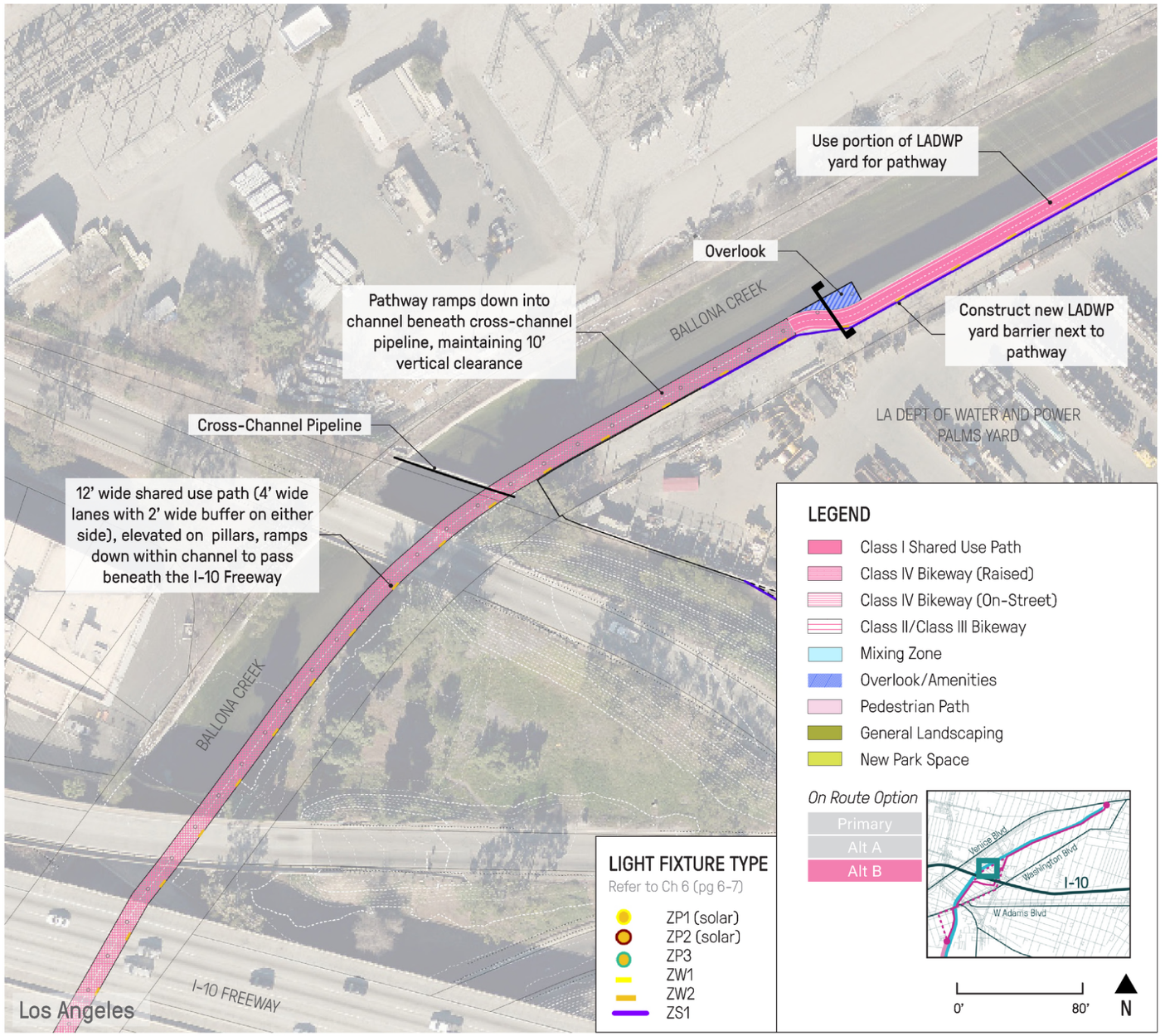
Washington Blvd to S Genesee Ave

Alternative B in this segment continues as an elevated pathway within the Ballona Creek channel before ascending to re-meet the top of channel wall adjacent to the LADWP Palms Yard. Here, a portion of the DWP property is used to continue the pathway in the area on top of the channel wall. The following two pages outline potential use of LADWP property and the possibility of a land swap to compensate for the use of this property.



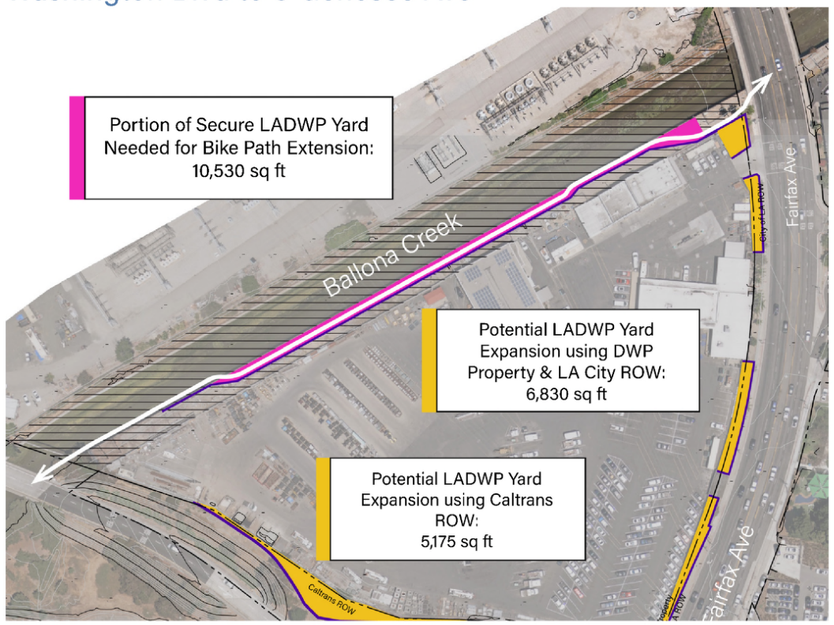
The concepts presented herein are shown for the purposes of this feasibility study only. Final alignment and design is subject to review and approval by the City of Los Angeles where the project falls within its jurisdiction.

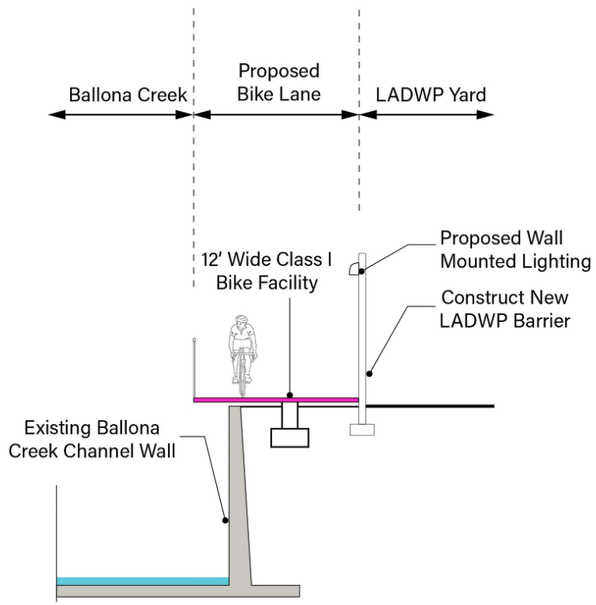
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.

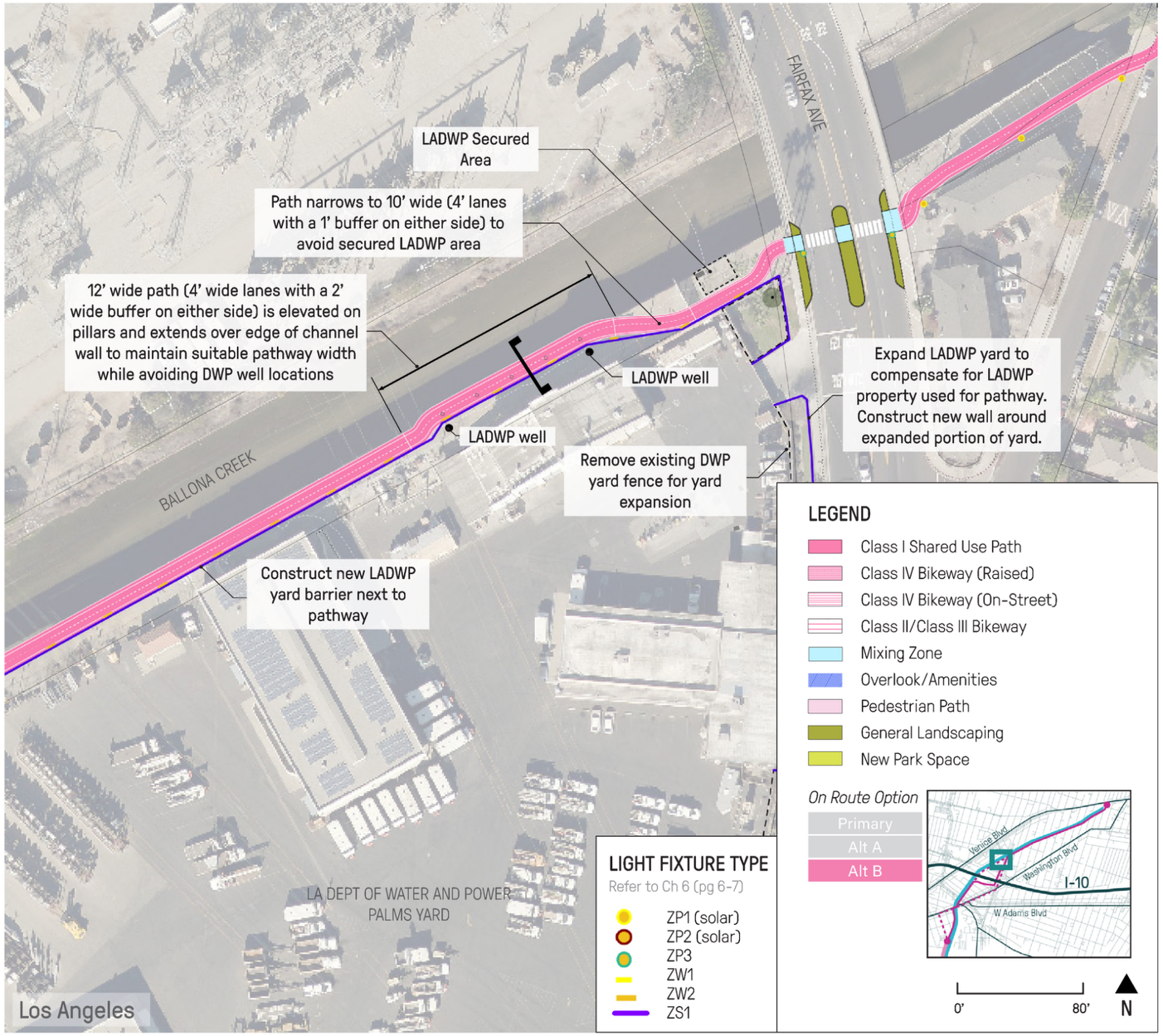


Alternative B

Washington Blvd to S Genesee Ave



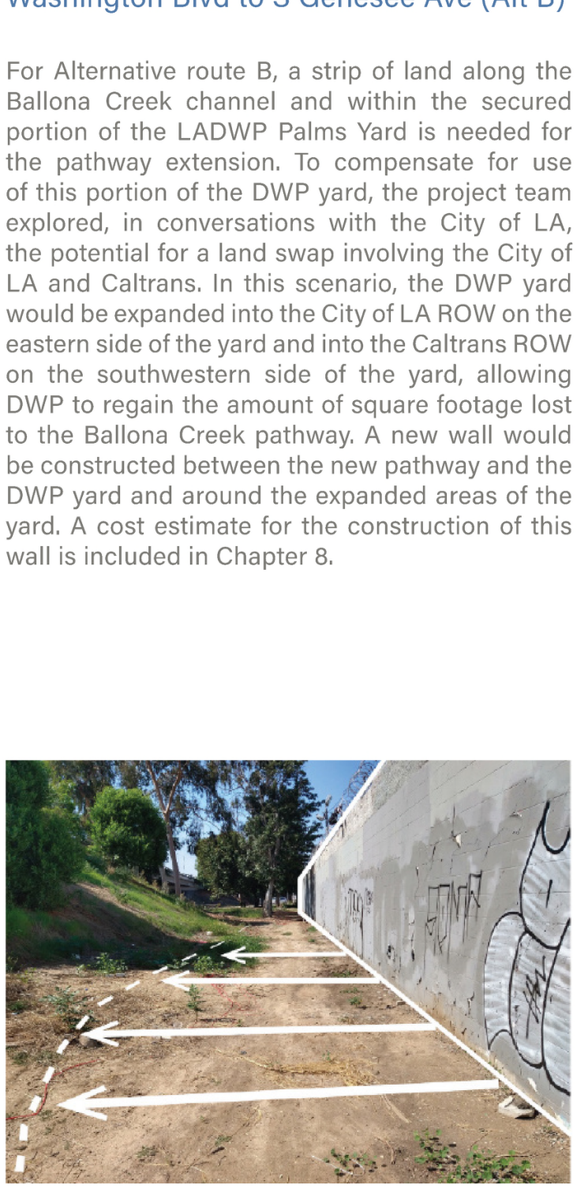




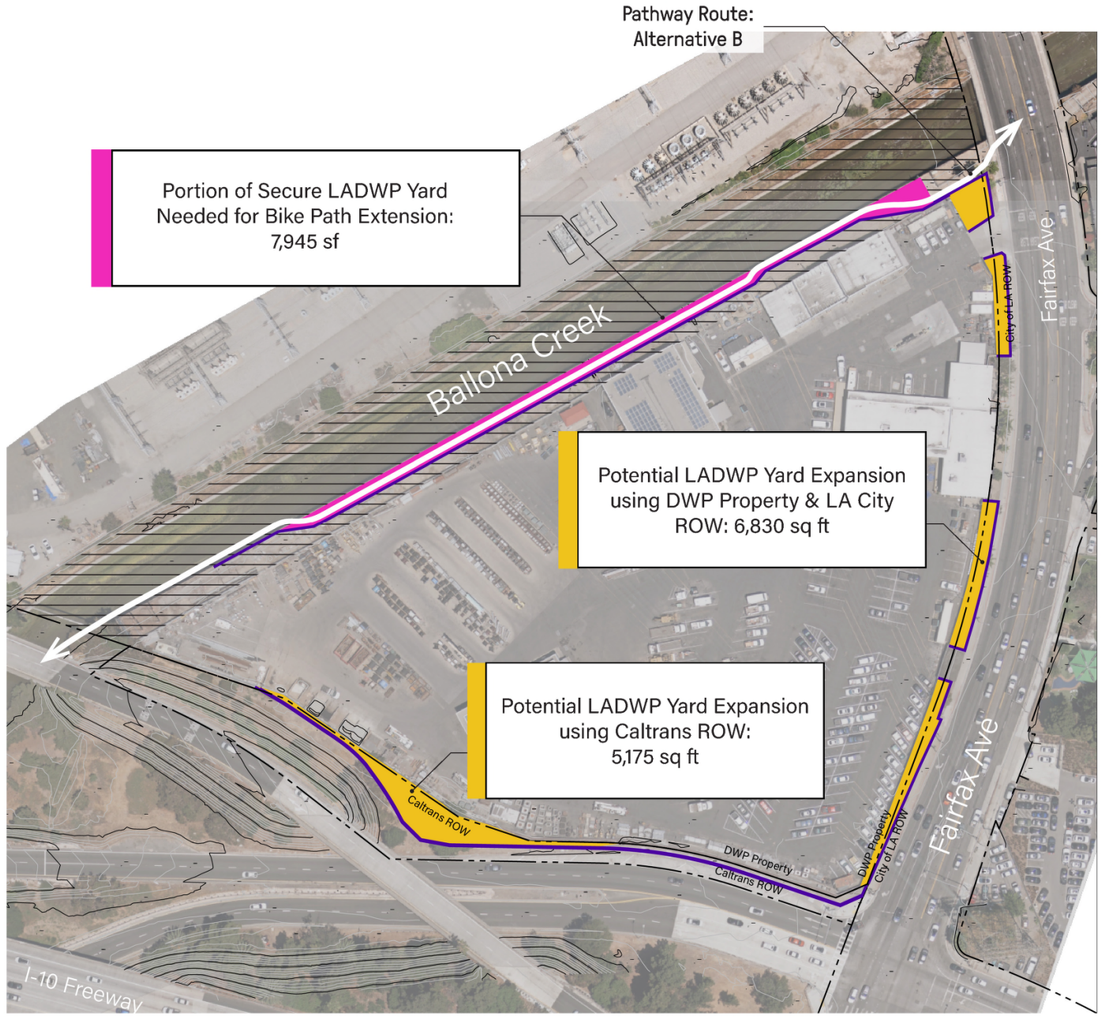
Potential DWP Yard Expansion

Washington Blvd to S Genesee Ave (Alt B)

For Alternative route B, a strip of land along the Ballona Creek channel and within the secured portion of the LADWP Palms Yard is needed for the pathway extension. To compensate for use of this portion of the DWP yard, the project team explored, in conversations with the City of LA, the potential for a land swap involving the City of LA and Caltrans. In this scenario, the DWP yard would be expanded into the City of LA ROW on the eastern side of the yard and into the Caltrans ROW on the southwestern side of the yard, allowing DWP to regain the amount of square footage lost to the Ballona Creek pathway. A new wall would be constructed between the new pathway and the DWP yard and around the expanded areas of the yard. A cost estimate for the construction of this wall is included in Chapter 8.



Potential expansion of DWP yard using Caltrans ROW adjacent to I-10 Freeway



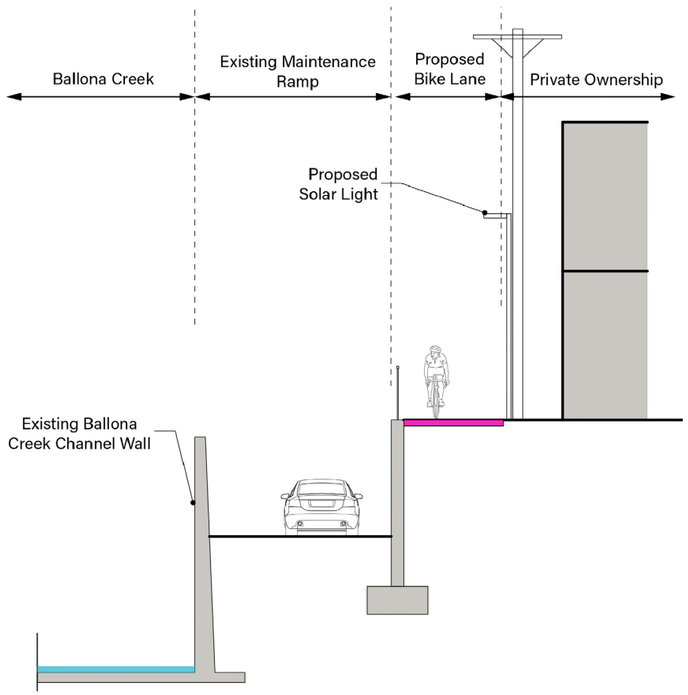


Potential expansion of DWP yard using DWP property and LA City ROW along Fairfax

Alternative B

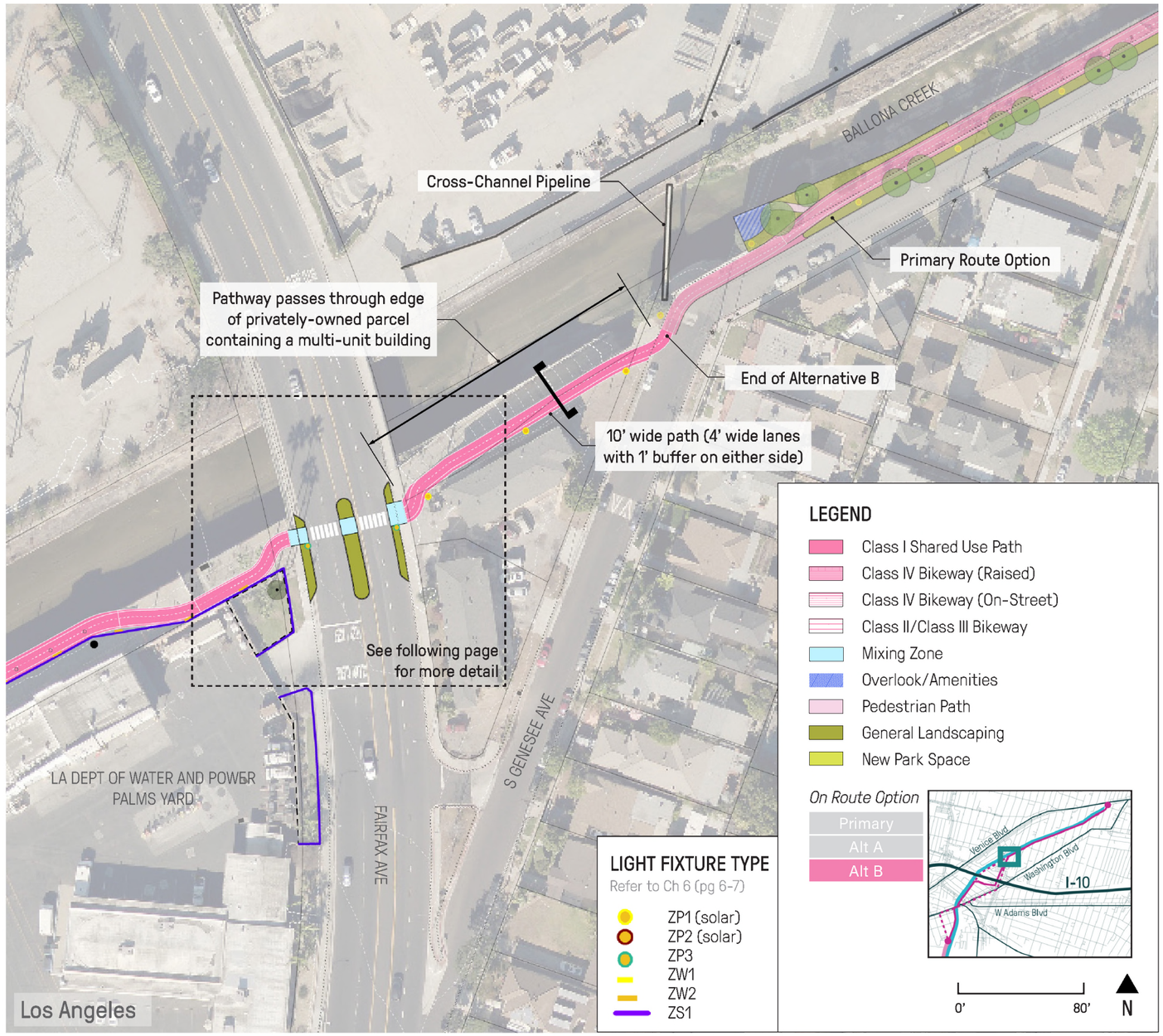
Washington Blvd to S Genesee Ave

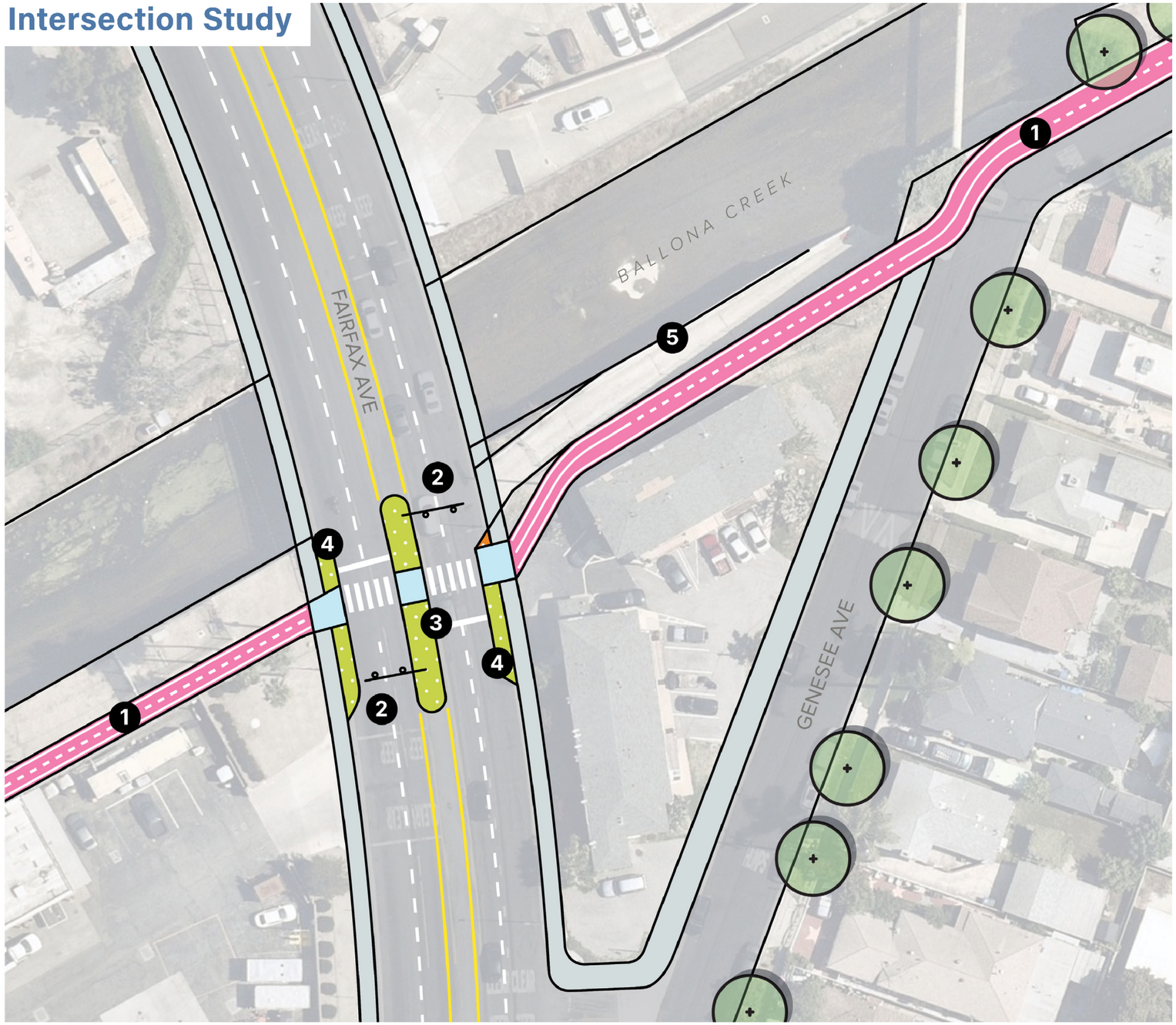
Alternative B in this segment crosses Fairfax Ave and continues between an existing channel access ramp and a private parcel holding a multi-family building. A portion of the private property is needed for the pathway.



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Fairfax Ave

Signalized midblock crossing across Fairfax Ave with direct crossing and refuge island.

Opportunities

- Improves connectivity across Fairfax Ave.
- Opportunity for trailhead amenities along Fairfax or Genesee. Existing striped center median provides convenient conversion to refuge island.

Challenges

- Coordination with LADOT. Requires new signal to be added.
- Constrained trail condition on approach from both sides due to utility and land use conflicts.

N 0′ 40′ 180′

Legend

1. Ballona Creek Trail, Class I Path
2. Pedestrian signal (preferred) or HAWK signal.
3. Pedestrian refuge island, concrete curb and landscape
4. Curb extension
5. Existing creek maintenance access

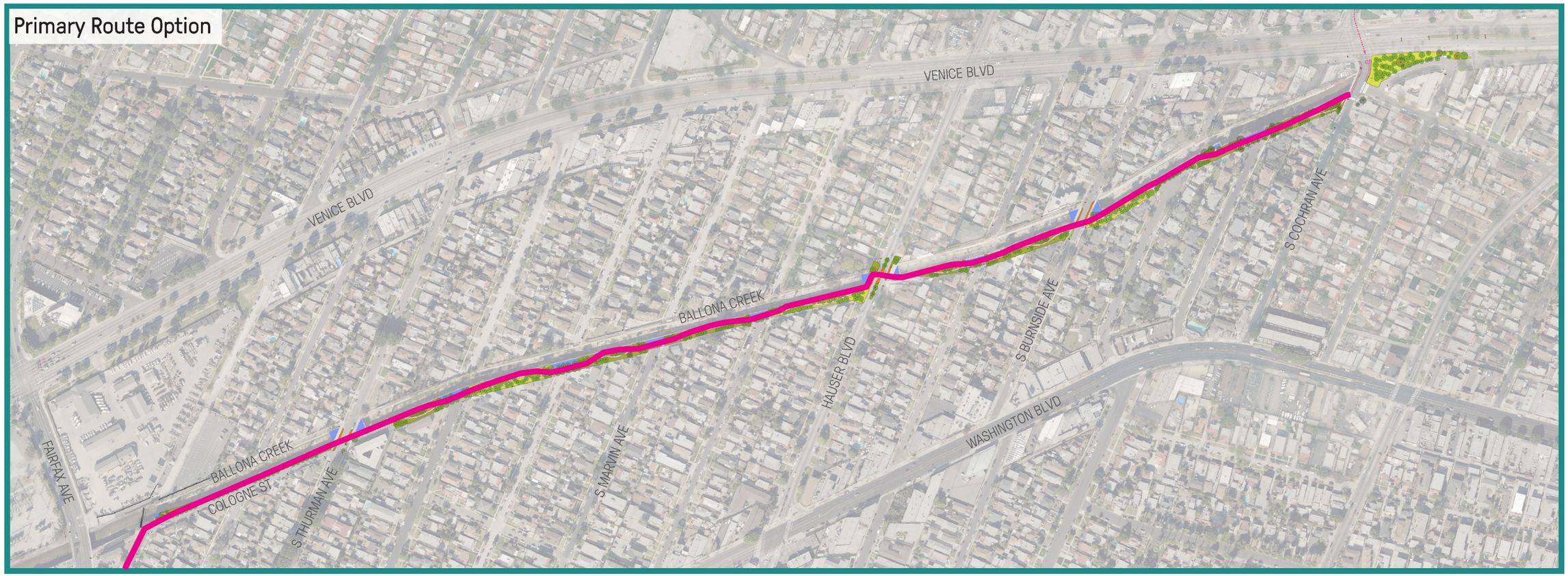
- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Primary Route

S Genesee Ave to S Cochran Ave (Los Angeles)

All route options rejoin the Primary Route at S Genesee Ave. From here, the route continues onto Cologne St. For two blocks, until S Thurman Ave, Cologne St is paved. A raised two-way Class IV bikeway is created along this segment of Cologne St using a portion of the existing roadway. From Thurman Ave until S Cochran Ave, the pathway continues within City of LA ROW along Ballona Creek. The width of this largely unpaved and undeveloped area along the channel is sufficient to develop a separate pedestrian pathway alongside a Class I shared use facility, as well as a series of linear parks.

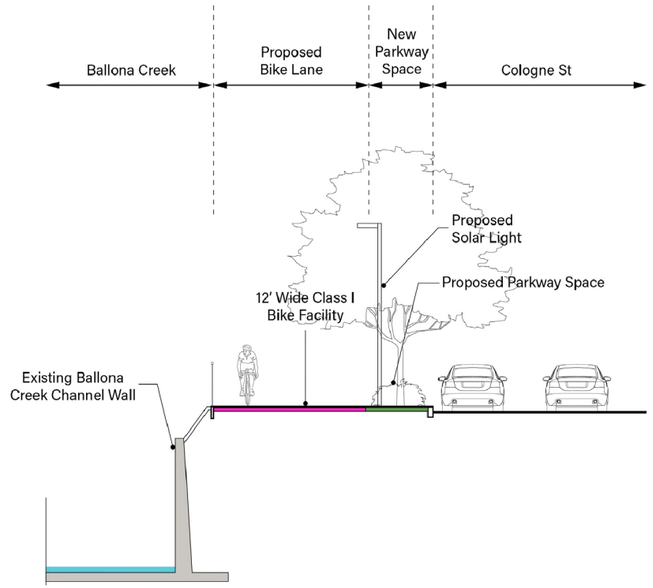




Primary Route

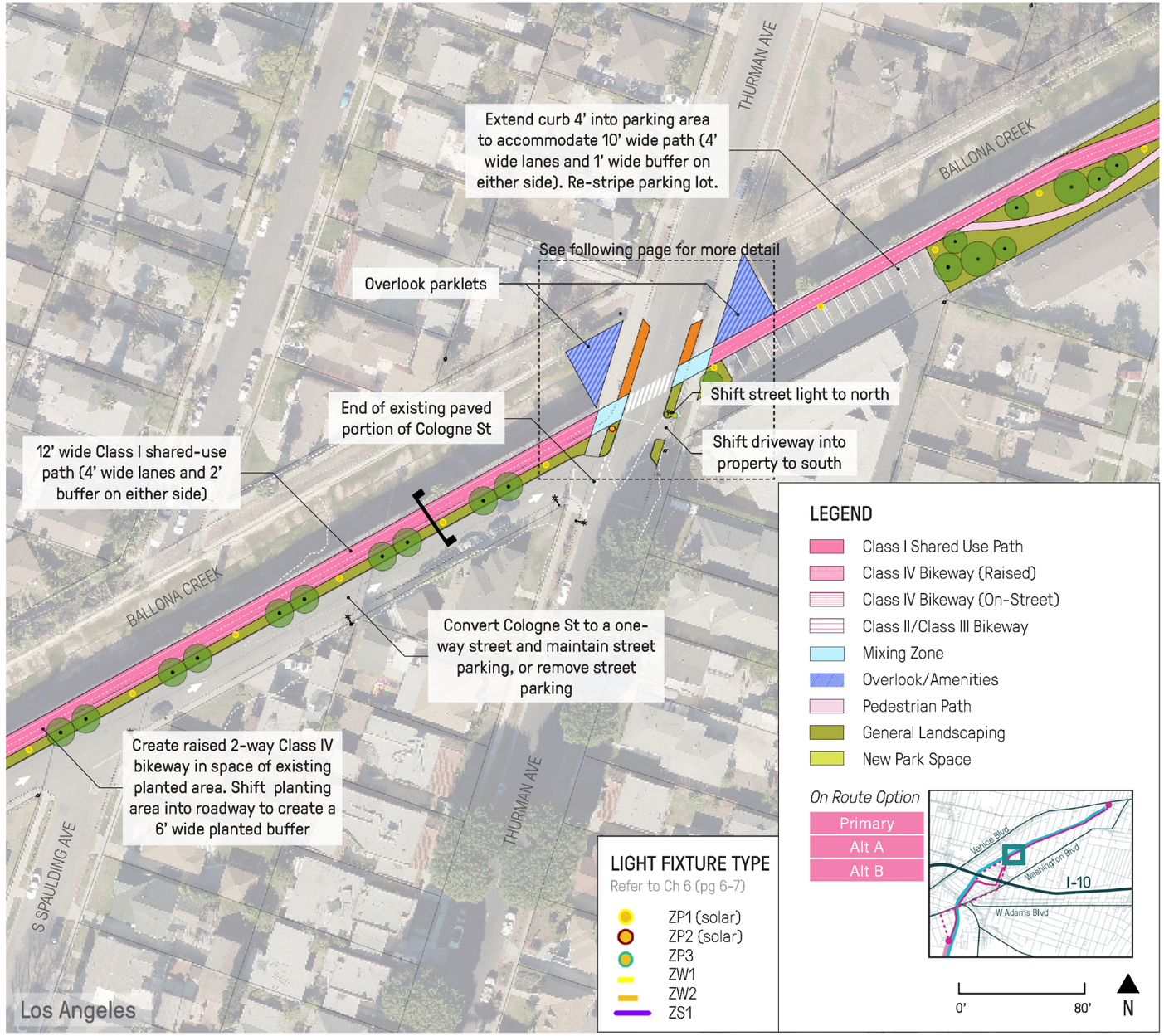
S Genesee Ave to S Cochran Ave

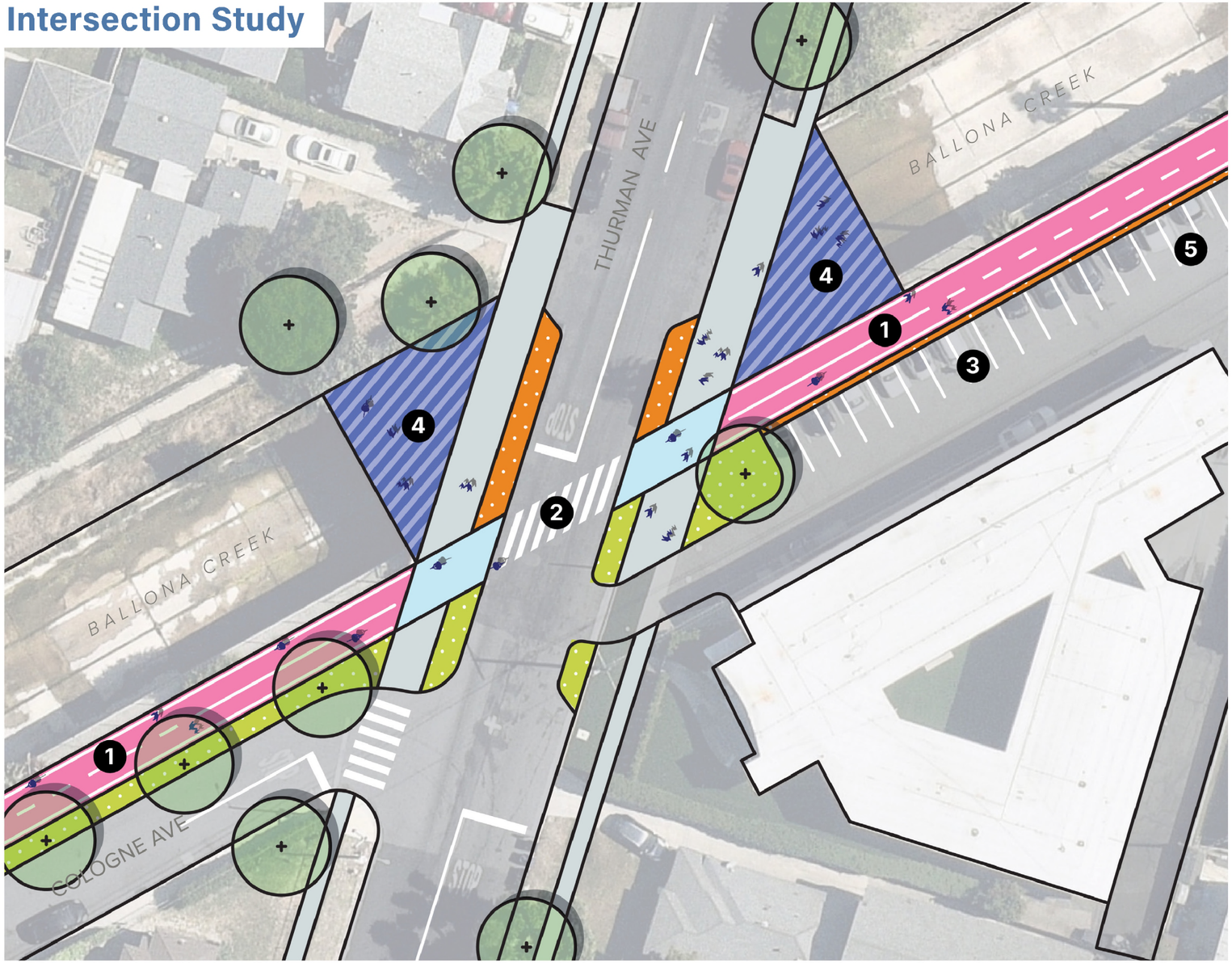
The Primary Route in this segment continues as a raised 2-way Class IV facility between Cologne St and the Ballona Creek channel. The route crosses Thurman Ave. Here, a parking area, built within the public ROW, must be adjusted and restriped to continue the pathway in this segment.



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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.





Thurman Ave

Stop-controlled crossing across Thurman Ave with curb extensions.

Opportunities

- Opportunity for trailhead and creek overlook with small rest area with trails amenities.
- Ample space for shade trees.
- Opportunity to maintain existing roadway function while improving crossing.

Challenges

- Coordination with LADOT and adjacent residences.

N

0' 30' 60'

Legend

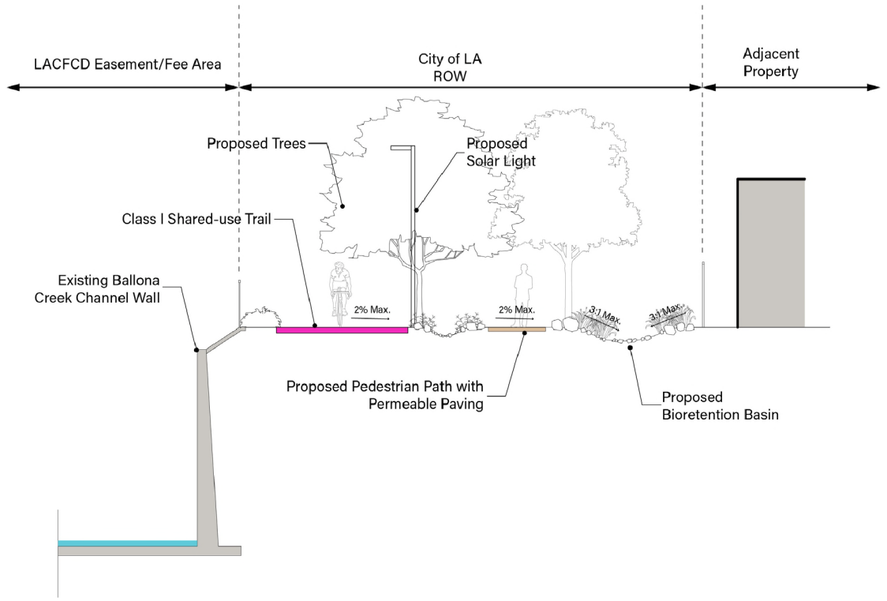
1. Ballona Creek Trail, Class I Path
2. Stop controlled crossing and trail crossing signs, relocate existing stop signs
3. Modified parking lot
4. Trailhead opportunity
5. Possible parking lot extension for public use

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Primary Route

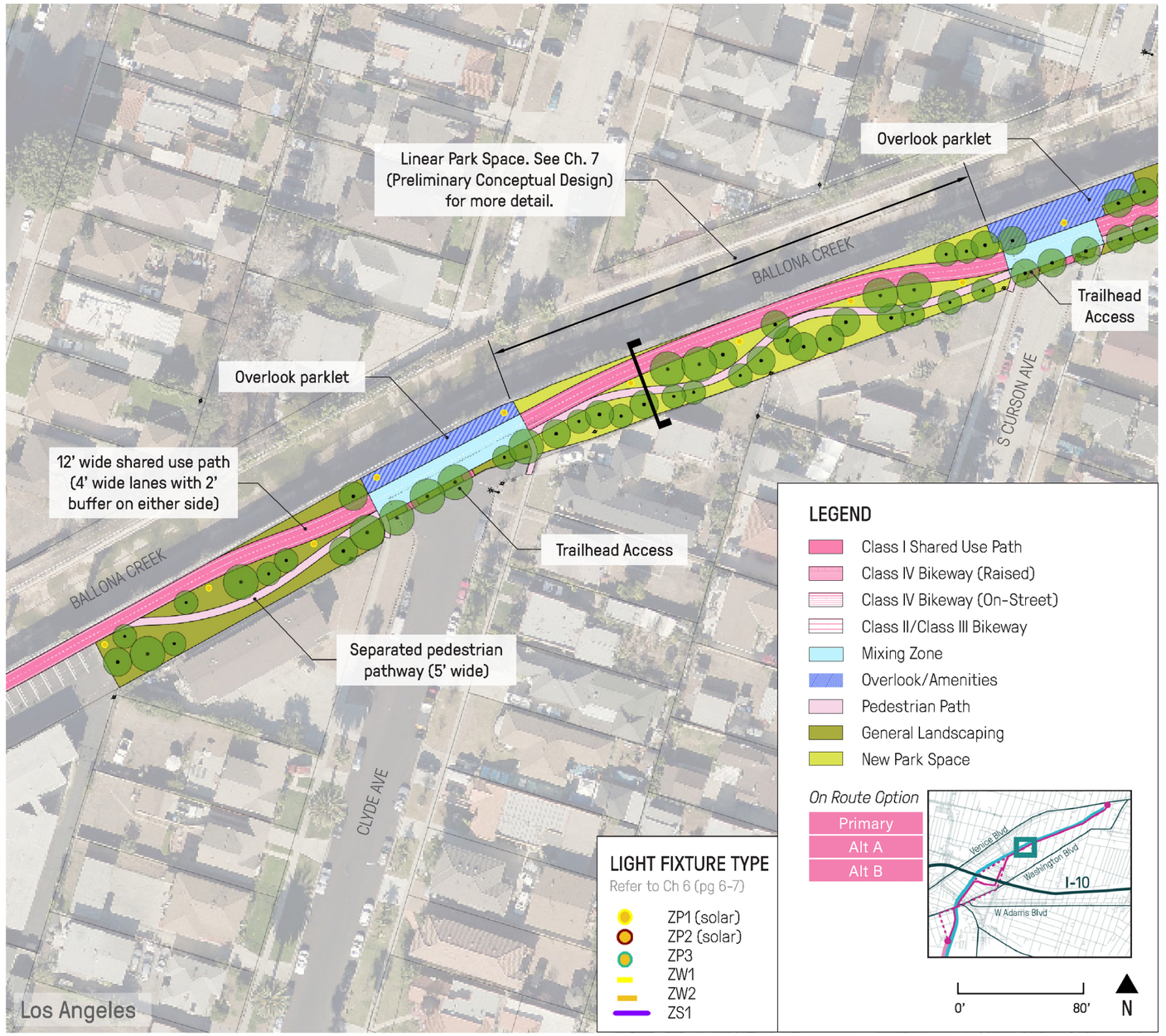
S Genesee Ave to S Cochran Ave

The Primary Route in this segment includes a Class I off-street path along with a separate pedestrian path. Trailhead access points at the end of stub roads lead to channel overlooks. Biofiltration basins are sited adjacent to pathways. Linear park spaces are developed along this portion of the pathway route (see Ch. 6 for more detail).



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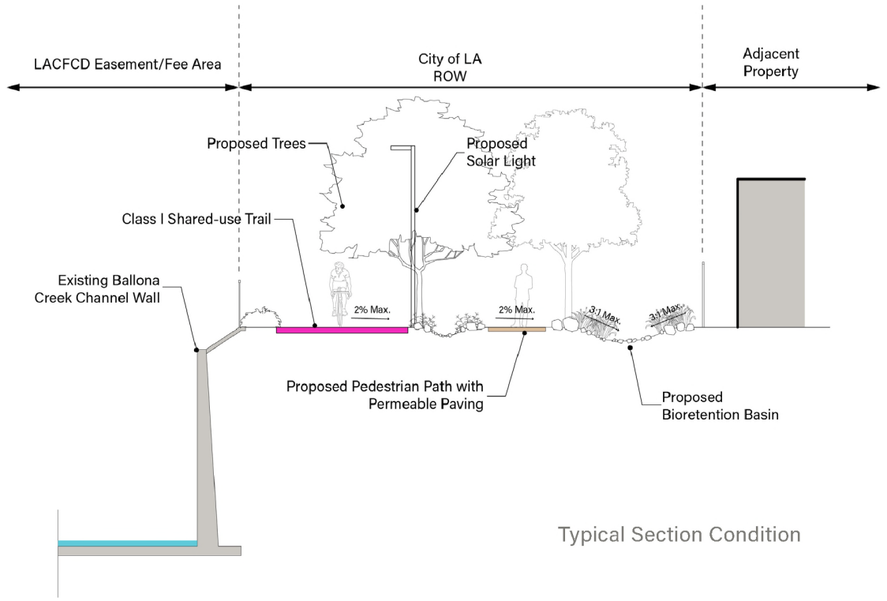
Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Primary Route

S Genesee Ave to S Cochran Ave

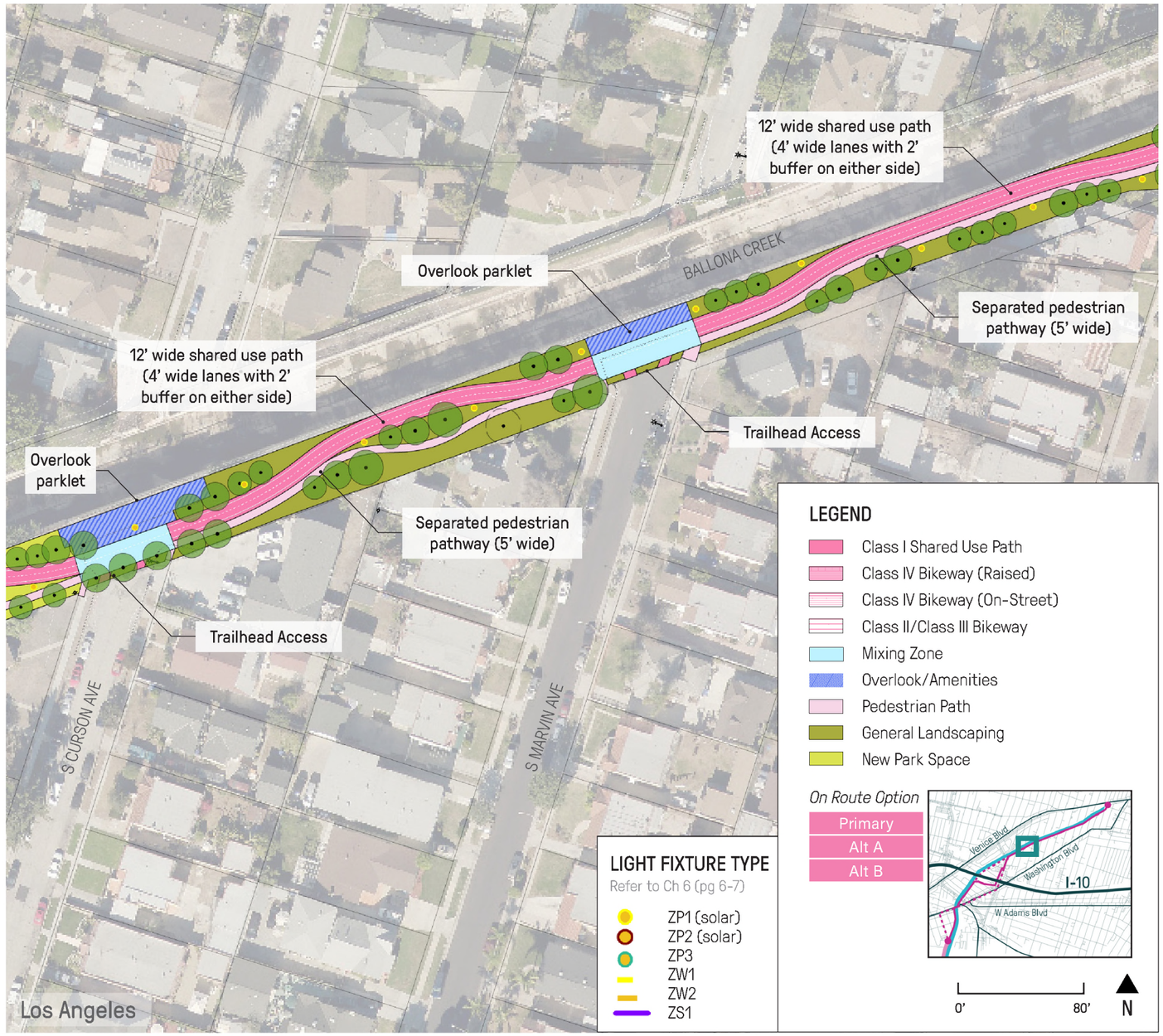
The Primary Route in this segment includes a Class I off-street path along with a separate pedestrian path. Trailhead access points at the end of stub roads lead to channel overlooks. Biofiltration basins are sited adjacent to pathways. Linear park spaces are developed along this portion of the pathway route (see Ch. 6 for more detail).



Typical Section Condition

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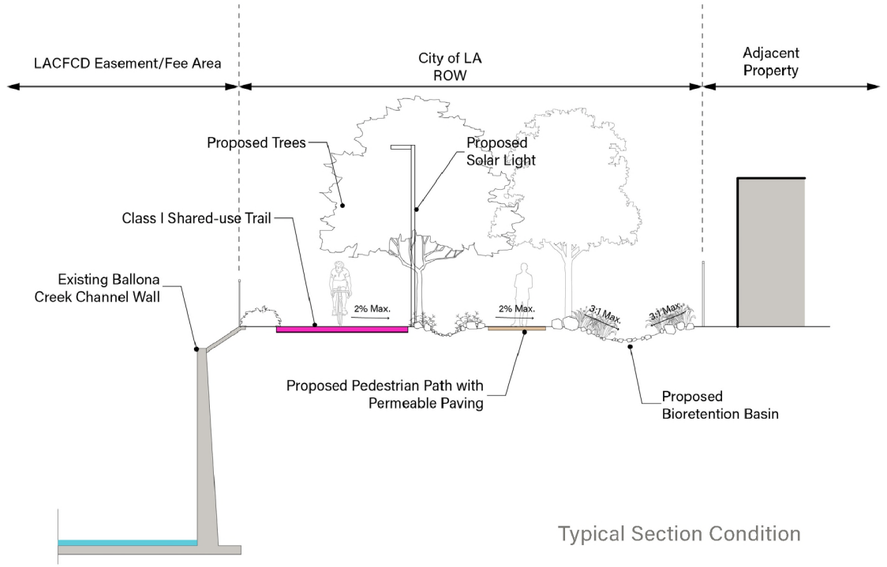


Primary Route

S Genesee Ave to S Cochran Ave

The Primary Route in this segment includes a Class I off-street path along with a separate pedestrian path. Trailhead access points at the end of stub roads lead to channel overlooks. Biofiltration basins are sited adjacent to pathways. Linear park spaces are developed along this portion of the pathway route (see Ch. 6 for more detail).

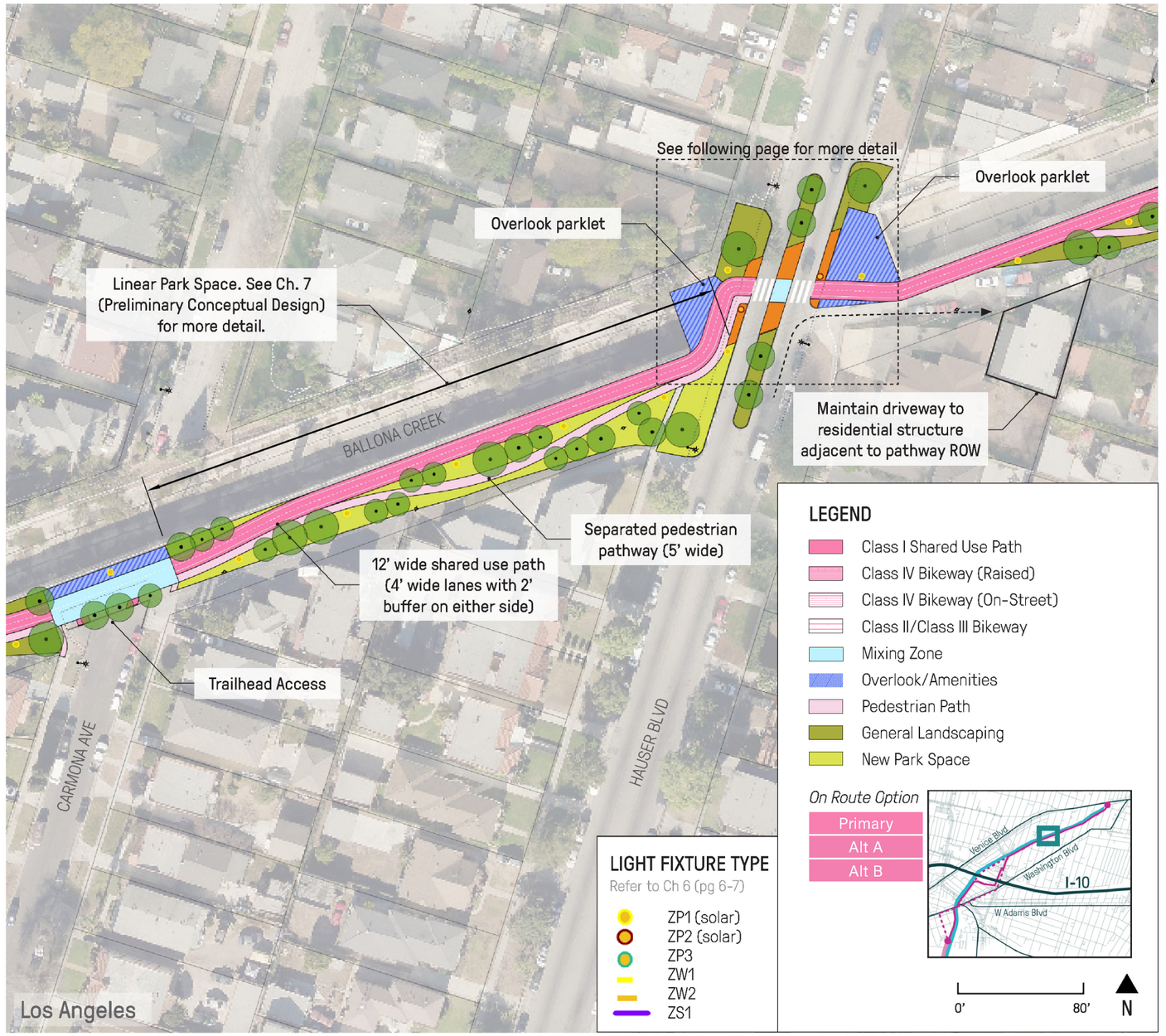
Access to a private residential structure is maintained through the public ROW immediately east of Hauser.

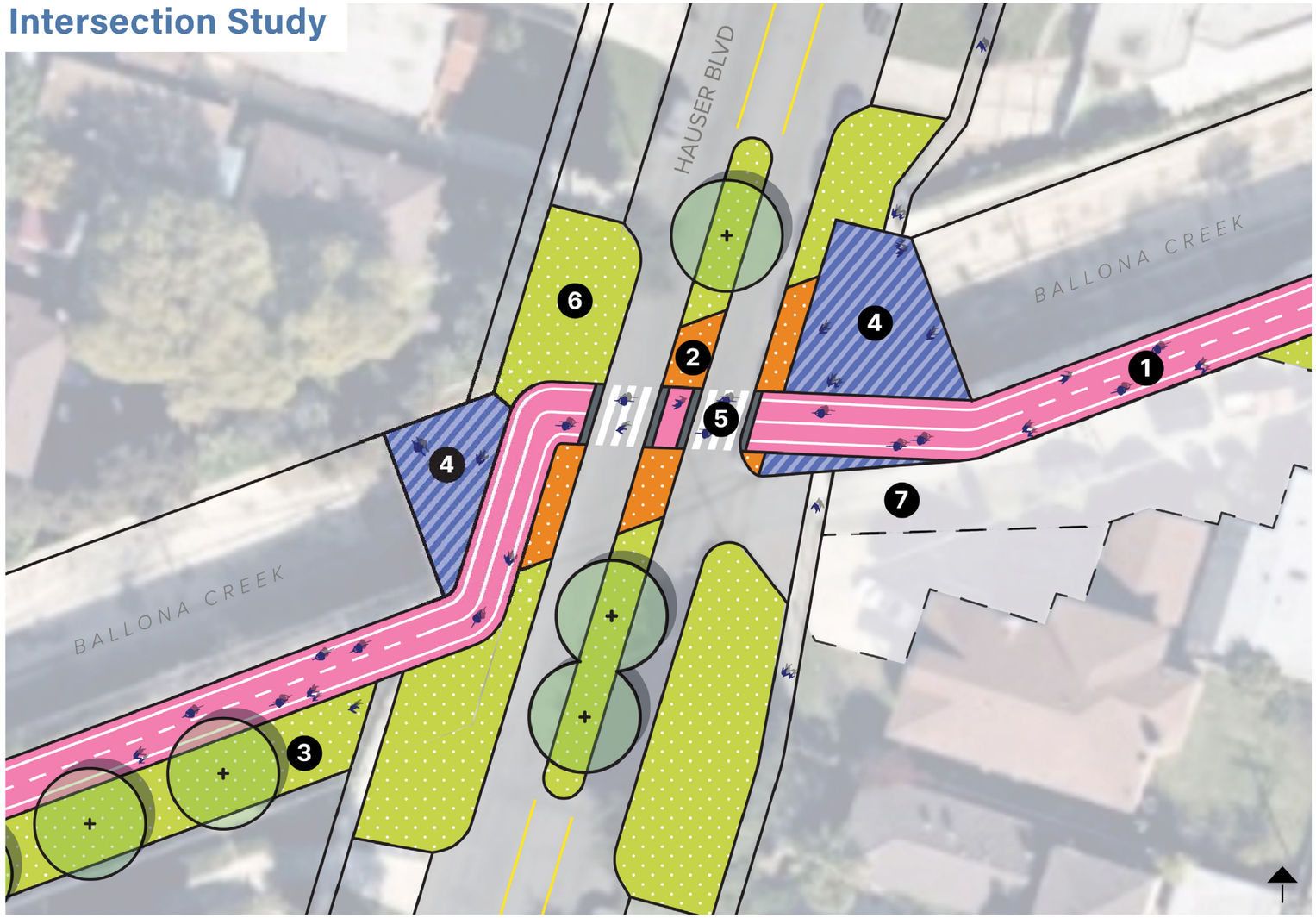


Typical Section Condition

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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.





Hauser Blvd

Stop-controlled crossing across Hauser Blvd with refuge island.

Opportunities

- Opportunity for trailhead and creek overlook with small rest area with trail amenities.
- Ample space for shade trees.
- Existing street is oversized with opportunity to create refuge island.

Challenges

- Coordination with LADOT and adjacent residences.
- Existing driveway needs to be maintained. Constrained area for trail alignment.

N 0' 30' 60'

Legend

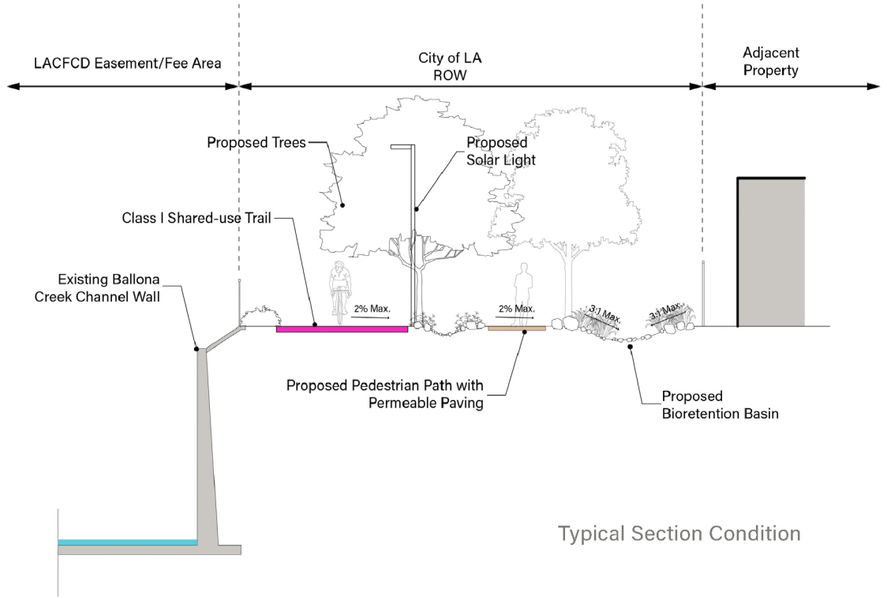
1. Ballona Creek Trail, Class I Path
2. Pedestrian refuge island, concrete curb and/or landscape
3. Landscape buffer
4. Potential for trailhead or rest area
5. RRFB with yield markings on approach
6. Curb Extensions
7. Existing Residential Driveway

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Primary Route

S Genesee Ave to S Cochran Ave

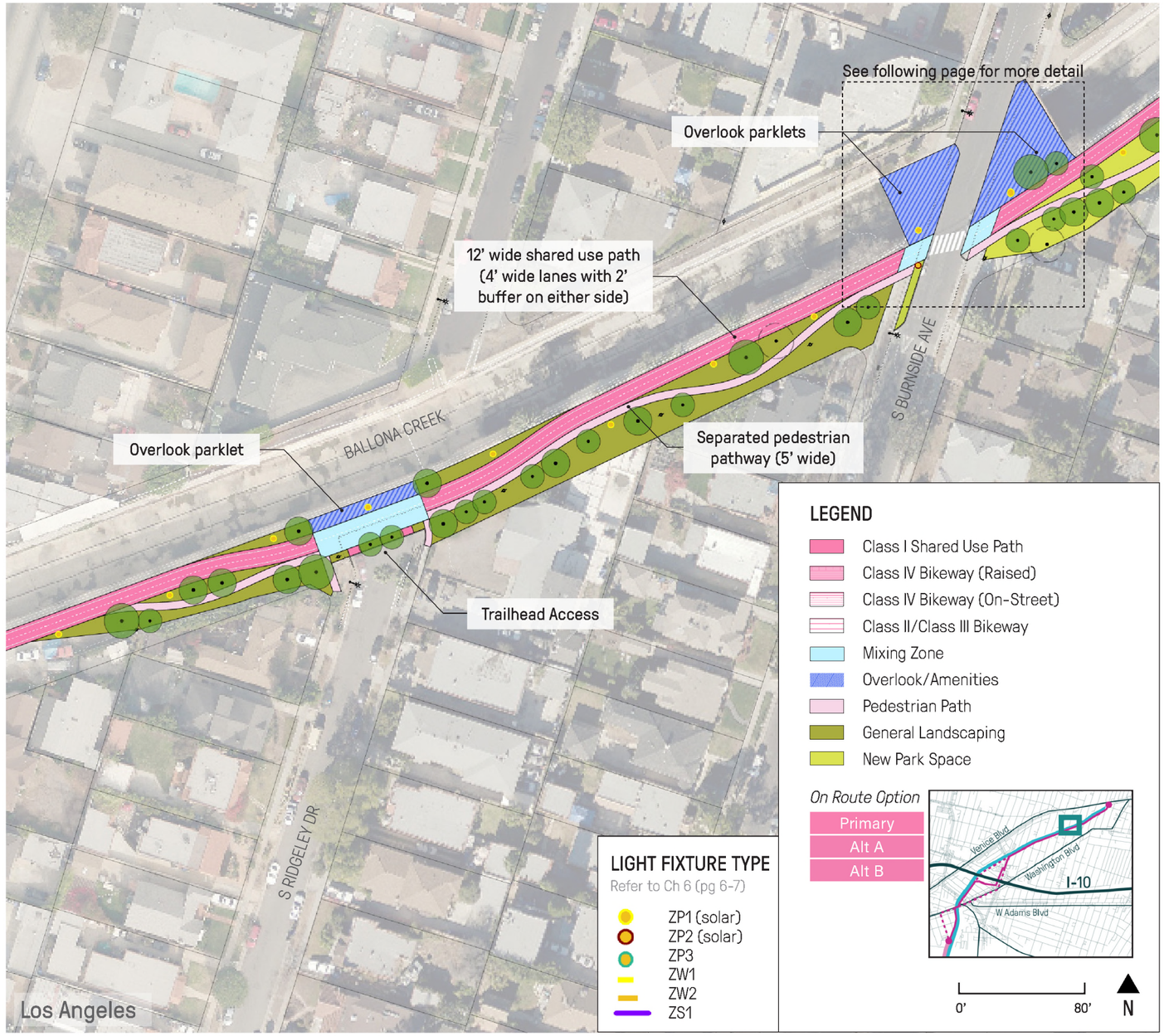
The Primary Route in this segment includes a Class I off-street path along with a separate pedestrian path. Trailhead access points at the end of stub roads lead to channel overlooks. Biofiltration basins are sited adjacent to pathways. Linear park spaces are developed along this portion of the pathway route (see Ch. 6 for more detail).

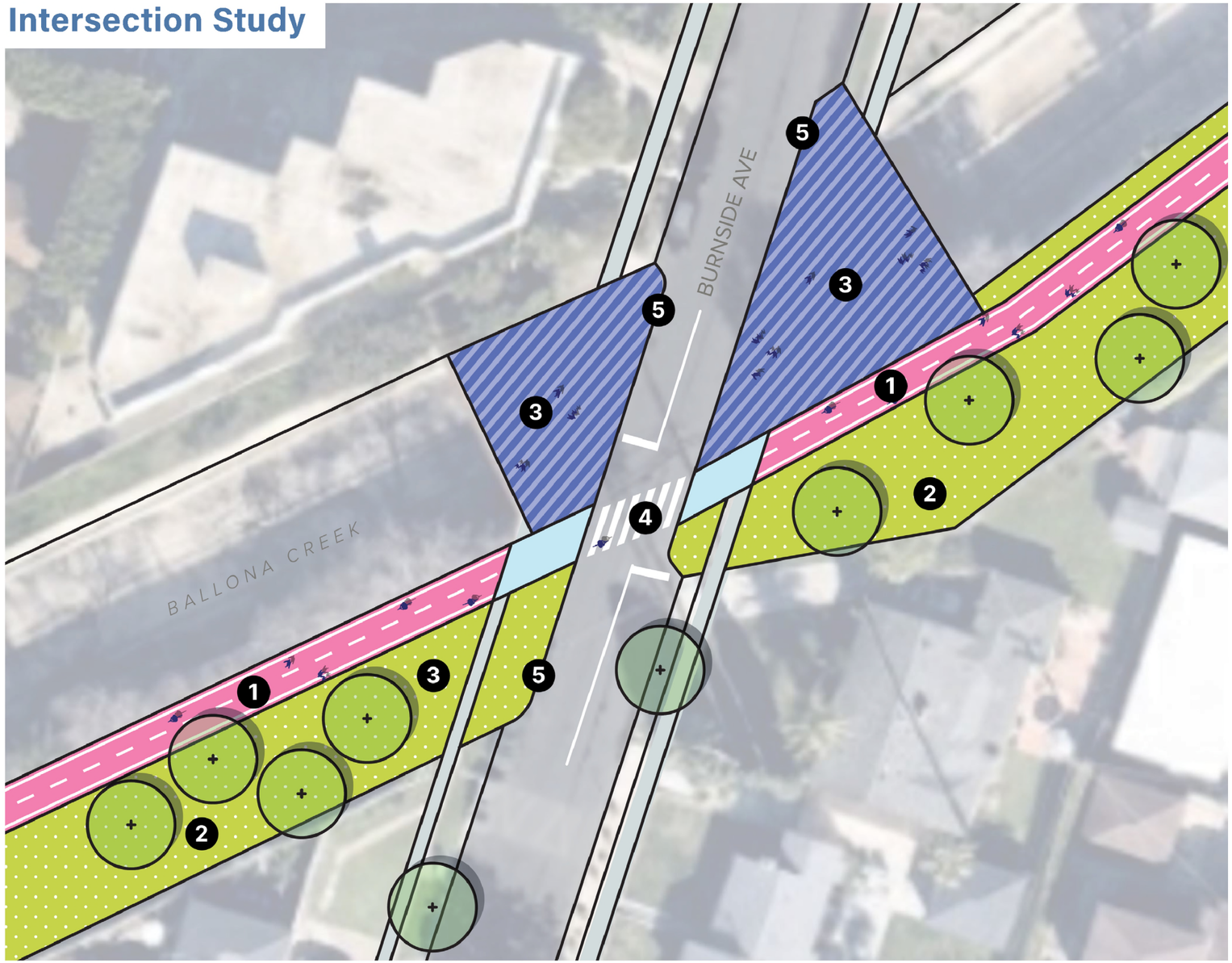


Typical Section Condition

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Burnside Ave

Stop-controlled crossing across Burnside Ave with curb extensions.

Opportunities

- Opportunity for trailhead and creek overlook with small rest area with trails amenities.
- Ample space for shade trees.
- Opportunity to maintain existing roadway function while improving crossing.

Challenges

- Coordination with LADOT and adjacent residences.

N 0' 30' 60'

Legend

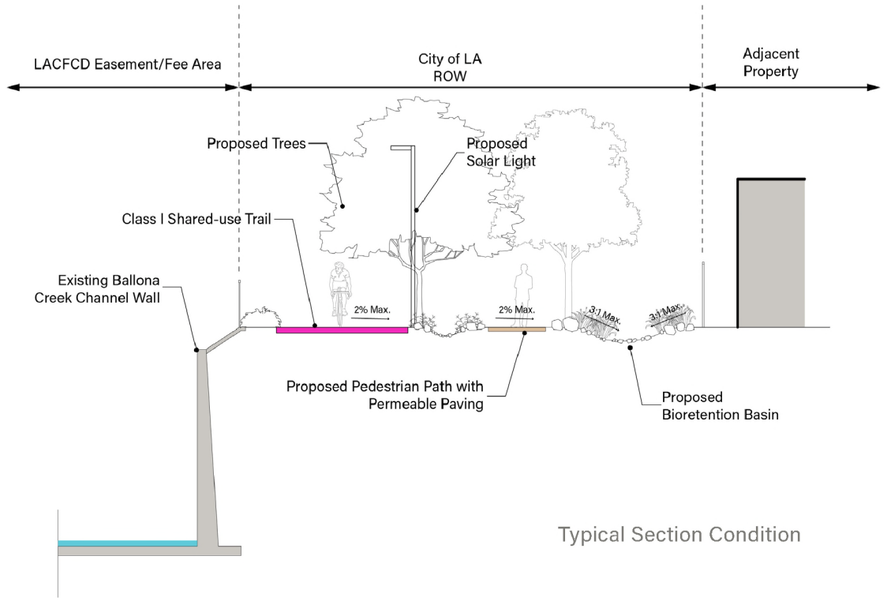
1. Ballona Creek Trail, Class I Path
2. Landscape Buffer
3. Potential for trailhead or rest area
4. Stop controlled mid-block crossing with trail crossing signs
5. Curb Extensions

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Primary Route

S Genesee Ave to S Cochran Ave

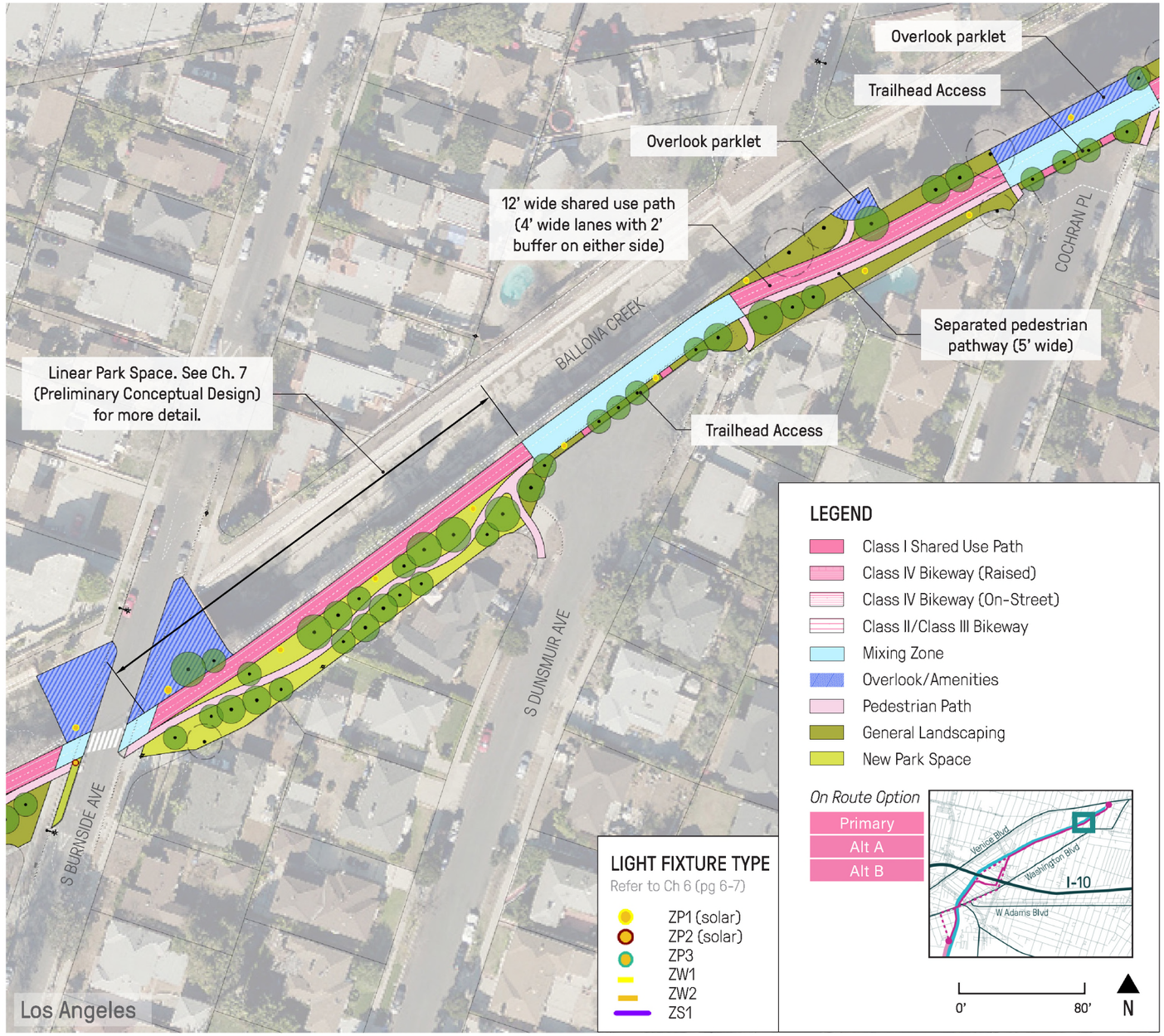
The Primary Route in this segment includes a Class I off-street path along with a separate pedestrian path. Trailhead access points at the end of stub roads lead to channel overlooks. Biofiltration basins are sited adjacent to pathways. Linear park spaces are developed along this portion of the pathway route (see Ch. 6 for more detail).



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Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.



Mid-City Landscape Connections - Existing Condition



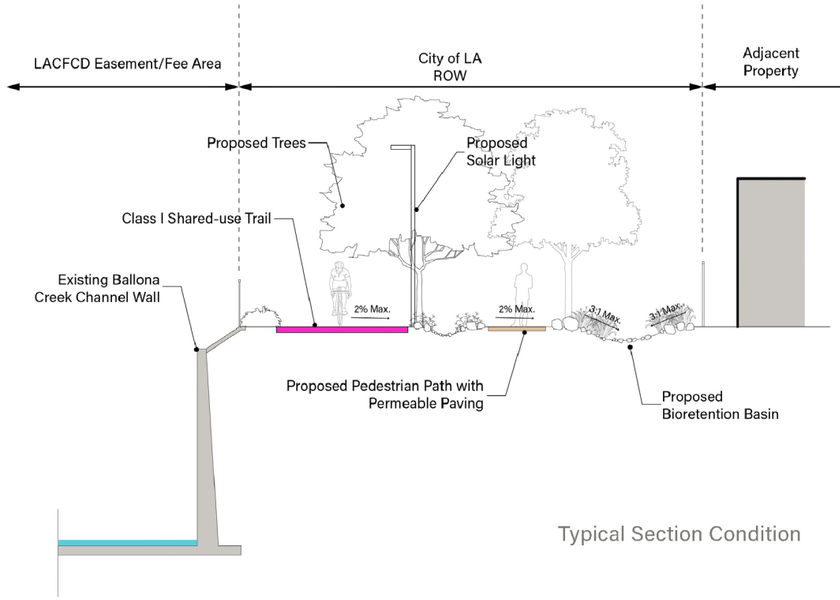
Mid-City Landscape Connections - Proposed Concept



Primary Route

S Genesee Ave to S Cochran Ave

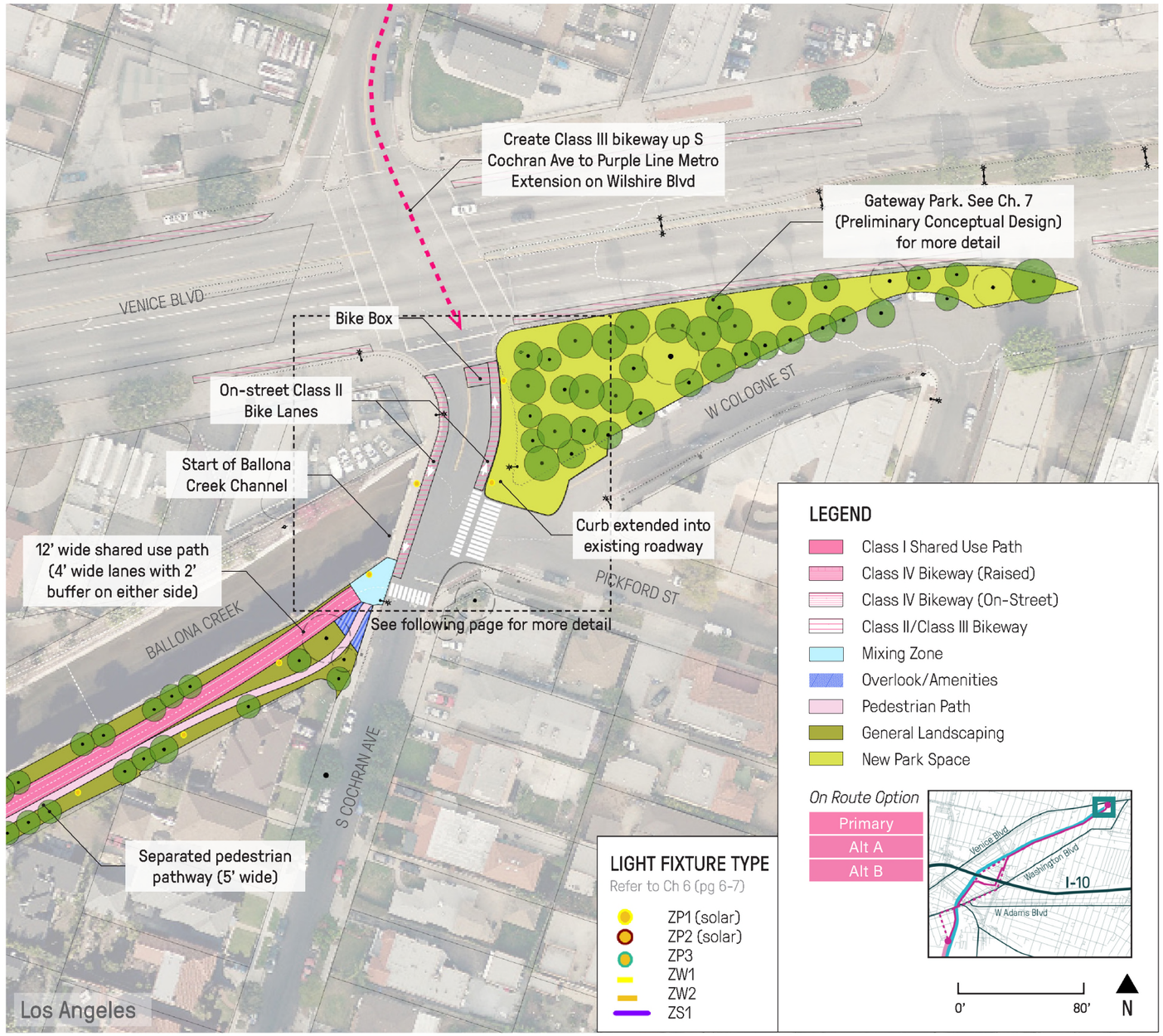
At the point where the Ballona Creek channel begins, a new 'gateway park' is developed in an existing triangular median space. Here, the proposed pathway extension connects with bike lanes on Venice Blvd. There is also the potential to create a Class III bikeway traveling north-south on S Cochran Ave to connect the project to the Purple Line Metro Extension on Wilshire Blvd to the north.

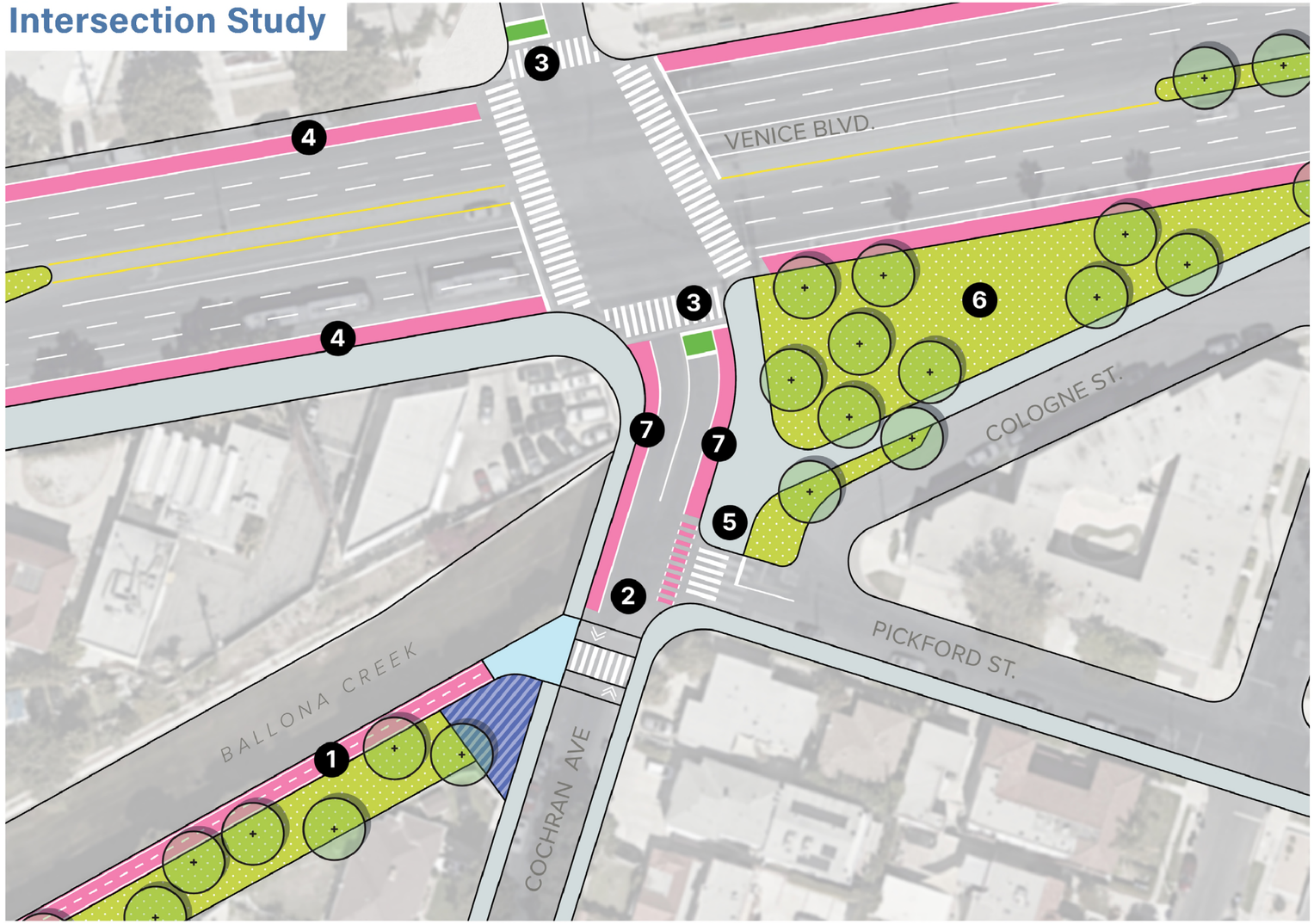


Typical Section Condition

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Cochran St

Trail termination with connection to existing Class II bike lanes along Venice Blvd.

Opportunities

- Expands sidewalk and park space for the community.
- Opportunity for trailhead at Cochran Ave and Venice Blvd.
- Provides bike connection between Ballona Creek Trail and existing bike lanes on Venice Blvd.

Challenges

- Providing a transition from the trail to existing bike lanes on Venice Blvd.
- Coordination with LADOT and adjacent residences.

N 0' 60' 120'

Legend

1. Ballona Creek Trail, Class I Path
2. Stop controlled raised crosswalk with trail crossing signs and transition to bike lanes
3. Bike boxes to transition to bike lanes on Venice Blvd
4. Existing Class II buffered bike lanes on Venice Blvd
5. Curb extension
6. Park improvements
7. Class II Bike lanes

- Ballona Creek Trail
- Trailhead or amenities
- Mixing zone
- Landscaped buffer, median, or curb extension
- Concrete median or curb extension

Endnotes

1 National Association of City Transportation Officials Urban Bikeway Design Guide, https://nacto.org/publication/urban-bikeway-design-guide/

Chapter 5
Right-of-Way Assessment

Overview

Chapter 2 included an analysis of undeveloped space along the Ballona Creek channel where a Class I shared path might be constructed. Chapter 4 presented potential alignment options and bikeway types for the pathway route. In this chapter, property ownership and easements, permitting requirements, and environmental review considerations along the primary pathway route and its alternatives are examined, with the goal of identifying opportunities and constraints in this critical component of the pathway's development.

The Feasibility Study examined property ownership and permitting requirements along the primary and alternative routes for the Ballona Creek Bike Path Phase II extension. The proposed pathway alignment and alternatives (as described in Chapter 4) were selected to minimize impacts on private properties, while taking advantage of opportunities for new and unique public spaces along the proposed route.

The following pages will present property boundaries, ownership, easements, and fee areas along the proposed route and alternatives, along with associated permitting requirements for the development of the bikeway.



Public Owners

Multiple public bodies own or control, via easements and/or fee areas, land through which the proposed pathway alignment and its alternatives run. The missions of these various entities may or may not closely align with the goal of developing a shared use path and public spaces along the Ballona Creek channel. However, these parcels - by nature of being publicly owned - provide the best opportunity for realizing the project.

County of Los Angeles

Los Angeles County Flood Control District (LACFCD): LACFCD owns or controls, via easements or fee areas, land through which the proposed bikeway passes. Holly Mitchell, County Supervisor for District 2, where the proposed pathway is located, supports the project.

LACFCD is charged with providing flood protection, water conservation, recreation, and aesthetic enhancements. The County of Los Angeles Board of Supervisors governs the LACFCD. The Watershed Management Division is responsible for providing flood protection, improving water quality, conserving water, and expanding habitat, open space, and recreational opportunities – in-line with many of the Ballona Creek Bikeway Phase II project goals. The Watershed Management Division is the planning and policy arm of the LACFCD, while the LA County Public Works Flood Maintenance and Water Resources Divisions are responsible for LACFCD's maintenance and operational efforts.

City of Los Angeles

The City of Los Angeles, through the Department of Public Works (Bureau of Engineering, specifically), owns the majority of land through which the proposed pathway and its alternatives run. A portion of Alternatuve route B travels through property owned by the Department of Water and Power. These City departments, along with others listed below, will need to be involved in the development, construction, and maintenance of the Ballona Creek pathway. Heather Hutt, City Councilmember for District 10 where the pathway is located, supports the project.

Department of Public Works (LA City DPW): The Department of Public Works is responsible for the design, construction, renovation, and operation of public projects.

- Bureau of Engineering (LA City BOE): The Bureau of Engineering (LA City BOE), housed within LA City DPW, owns land through which the proposed pathway runs, specifically between La Cienega Blvd and the I-10 Freeway and within the Mid-City portion of the route between S Thurman Ave and S Cochran Ave. LA City BOE is the lead agency for the planning, design and construction management of public buildings, infrastructure, and open space projects. The Bureau of Engineering supports the project.

Los Angeles Department of Water and Power (LA City DWP): The Department of Water and Power is responsible for providing water and electric energy to the City of Los Angeles and its inhabitants. The department constructs, operates, and maintains infrastructure throughout the City. LA City DWP owns and operates the DWP Palms Yard, located between Fairfax Ave and the I-10 Freeway and through which Ballona Creek and the proposed bike path run.

Los Angeles Department of Recreation and Parks (LA City Parks): LA City Parks does not own or control property through which the proposed pathway or alternatives run, though Genesee Avenue Park, located on Fairfax Ave just south of Ballona Creek, does abut one of the proposed alternative routings. Coordination with LA City Parks will be important, however, in determining how the proposed linear parks and trailhead parklets can best supplement the City's existing park system.

City of Culver City

The City of Culver City owns property through which the proposed pathway and its alternatives would run. The City's Department of Public Works is responsible for construction, maintenance, and oversight of Culver City's infrastructure, including street improvements and maintenance and mobility management (including biking) and would be the entity with which to coordinate for development of the project. The City of Culver City supports the project.

California Department of Transportation (Caltrans)

Caltrans owns property – namely, the I-10 Freeway right-of-way – through which proposed pathway and its alternatives run. Caltrans is responsible for more than 50,000 miles of California's highway and freeway lanes as well as providing inter-city rail service. Caltrans has expressed support for the project.

United States Army Corps of Engineers (USACE)

USACE maintains the Ballona Creek channel spanning from National Blvd to Washington Blvd. USACE is responsible for developing and managing the nation's waterways and related environmental resources. Given the potential need to modify the channel wall for portions of the Primary Route option and the elevated in-channel pathway under consideration for Alternative B, USACE will need to be involved.

Private Owners

Vacant Parcels:
Within Culver City, portions of a number of small parcels are within the pathway route. All of these parcels are subject to LACFCD easements and/or fee areas. Coordination will be needed to develop the pathway through these properties. Please see pages 5-3 and 5-4 for more information.

Residential Property Owners:
Numerous single-family and multi-family residences are adjacent to the proposed pathway route. Coordination with property owners will be needed for development of the bikeway.

Businesses:
An alternative route down Fairfax Ave and Washington Blvd would involve coordination with businesses along those roads.

Large Landowners:
Redcar Ltd. owns property across the channel from the southern end of the extension route and has expressed support for the project.

Property Ownership and Easements

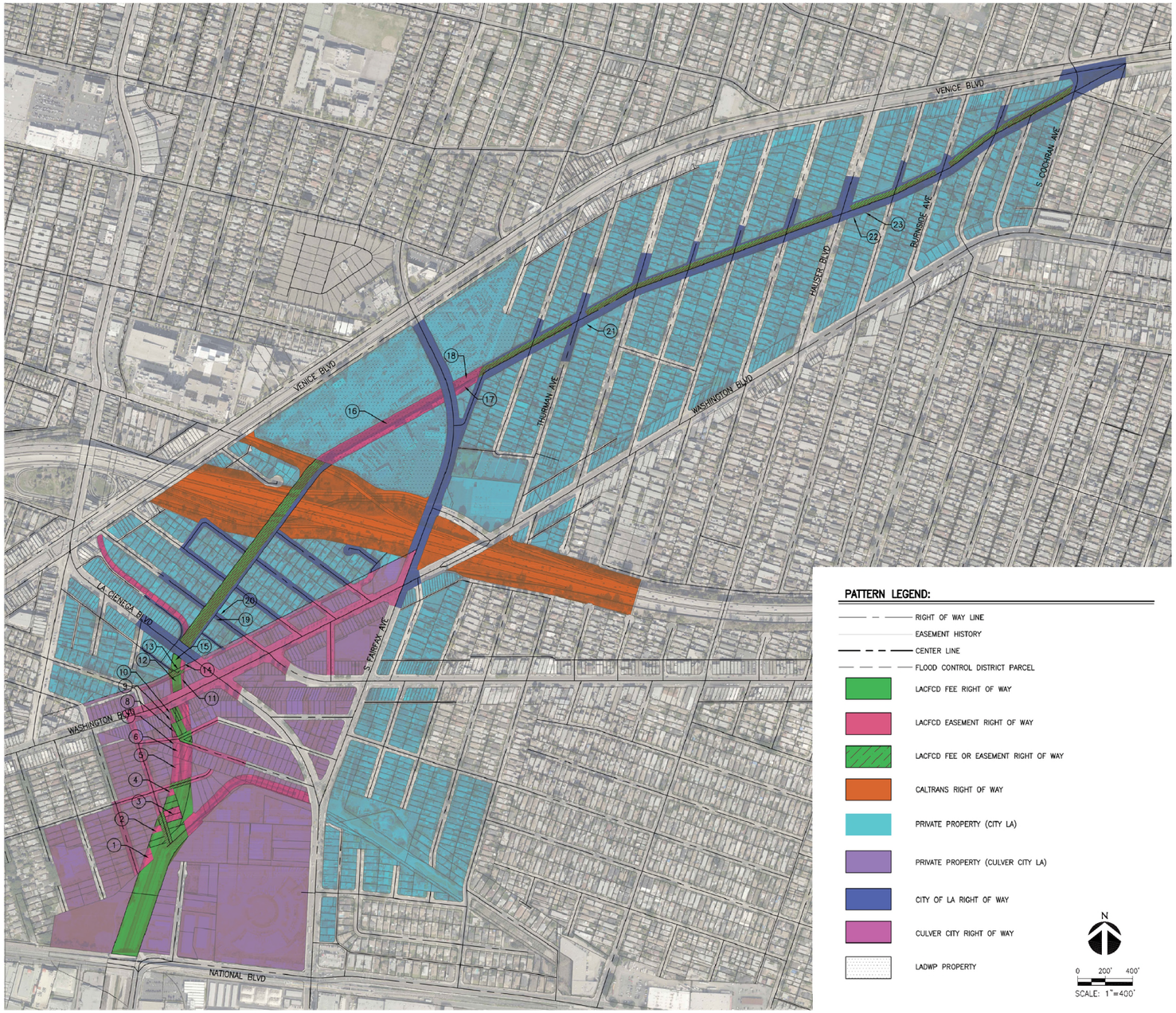
For property along the proposed pathway route and its alternatives, the project team investigated property ownership and easements for private owners, public entities such as City of Los Angeles and Culver City, and state and county government entities such as Caltrans and LACFCD. The parcels located within the LACFCD Easement areas have been tabulated below, as have other parcels in potential conflict with the pathway route.

Parcels in LACFCD Easement

Map index	Assessor ID	Property Type	Address
1	4205-008-017	Single Family Residential	3138 REID AVE CULVER CITY CA 90232
2	4205-008-014	Vacant Land	N/A
3	4205-007-901	Other	N/A
4	4205-007-026	Single Family Residential	3004 SENTNEY AVE CULVER CITY CA 90232
5	4205-006-025	Vacant Land	N/A
6	4205-006-012	Vacant Land	N/A
7	4205-006-026	Vacant Land	N/A
8	4205-005-908	Vacant Land	N/A
9	4205-005-009	Vacant Land	N/A
10	4205-005-008	Vacant Land	N/A
11	5065-004-001	Commercial / Industrial	5931 WASHINGTON BLVD CULVER CITY CA 90232
12	5065-004-901	Other	N/A
13	5065-004-902	Other	N/A
14	5065-004-015	Vacant Land	N/A
15	5065-004-900	Other	N/A
16	5064-029-907	Other	N/A
17	5064-029-001	Multi-Family Residential	2211 S GENESEE AVE LOS ANGELES CA 90016
18	5064-029-905	Other	N/A

Other Parcels in Conflict with Pathway Route

Map index	Assessor ID	Property Type	Address
19	5065-013-016	Multi-Family Residential	5940 W COMEY AVE 90034
20	5065-016-015	Multi-Family Residential	5941 1-5 W COMEY AVE 90034
21	5064-022-028	Multi-Family Residential	2002 S THURMAN AVE 90016
22	5064-007-035	Single Family Residential	1802 S HAUSER BLVD 90019
23	5064-007-036	Single Family Residential	1800 S HAUSER BLVD 90019



Property Ownership and Easements

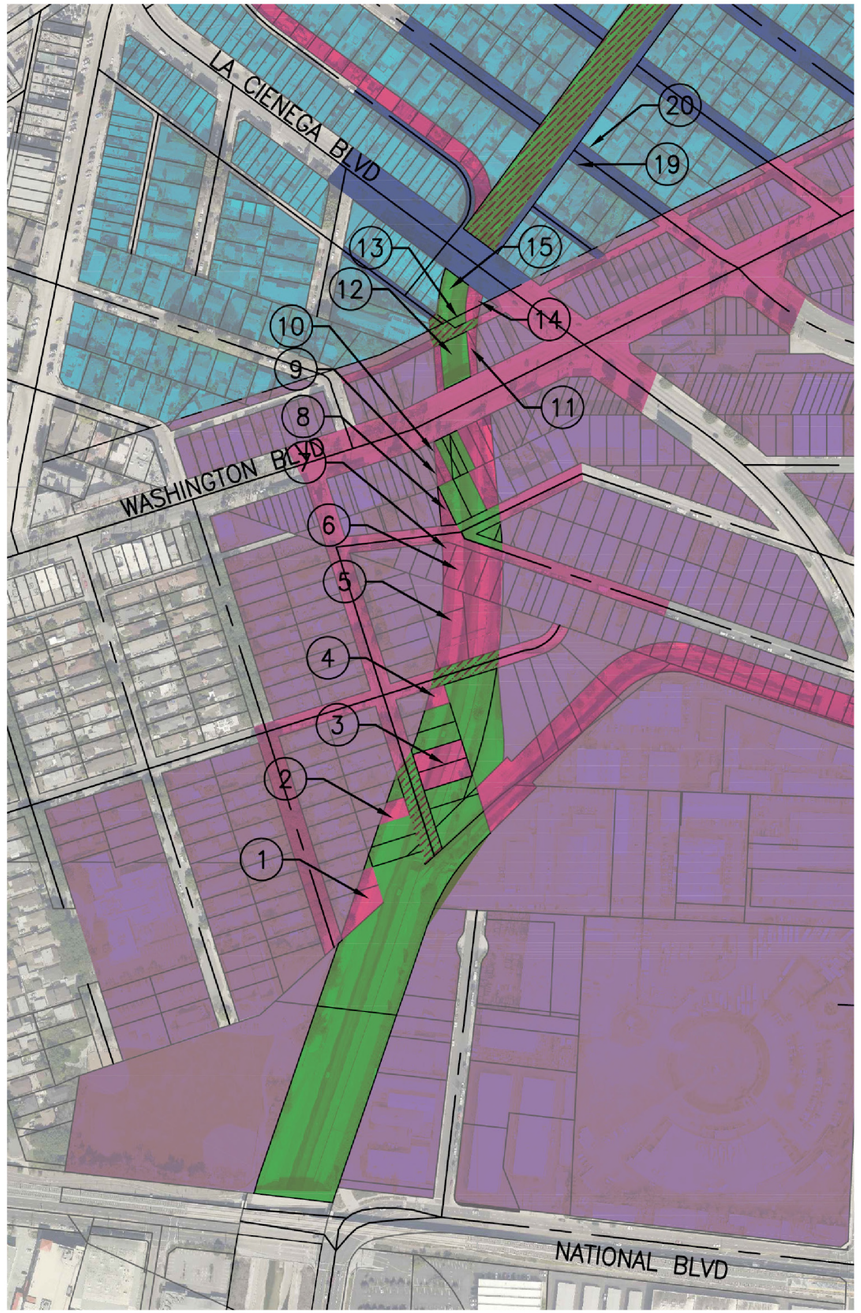
Within the southernmost segment of the proposed pathway extension, a mix of privately- and publicly-owned parcels exist within the space of the Ballona Creek channel and the LACFCD Easement and intersect with the Primary Route option for the pathway extension. The enlargement to the right shows ownership in the area. Potential solutions are outlined on page 5-6 below.

Parcels in LACFCD Easement

Map index	Assessor ID	Property Type	Address
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2	4205-008-014	Vacant Land	N/A
3	4205-007-901	Other	N/A
4	4205-007-026	Single Family Residential	3004 SENTNEY AVE CULVER CITY CA 90232
5	4205-006-025	Vacant Land	N/A
6	4205-006-012	Vacant Land	N/A
7	4205-006-026	Vacant Land	N/A
8	4205-005-908	Vacant Land	N/A
9	4205-005-009	Vacant Land	N/A
10	4205-005-008	Vacant Land	N/A
11	5065-004-001	Commercial / Industrial	5931 WASHINGTON BLVD CULVER CITY CA 90232
12	5065-004-901	Other	N/A
13	5065-004-902	Other	N/A
14	5065-004-015	Vacant Land	N/A
15	5065-004-900	Other	N/A
16	5064-029-907	Other	N/A
17	5064-029-001	Multi-Family Residential	2211 S GENESEE AVE LOS ANGELES CA 90016
18	5064-029-905	Other	N/A

Other Parcels in Conflict with Pathway Route

Map index	Assessor ID	Property Type	Address
19	5065-013-016	Multi-Family Residential	5940 W COMEY AVE 90034
20	5065-016-015	Multi-Family Residential	5941 1-5 W COMEY AVE 90034
21	5064-022-028	Multi-Family Residential	2002 S THURMAN AVE 90016
22	5064-007-035	Single Family Residential	1802 S HAUSER BLVD 90019
23	5064-007-036	Single Family Residential	1800 S HAUSER BLVD 90019





PATTERN LEGEND:

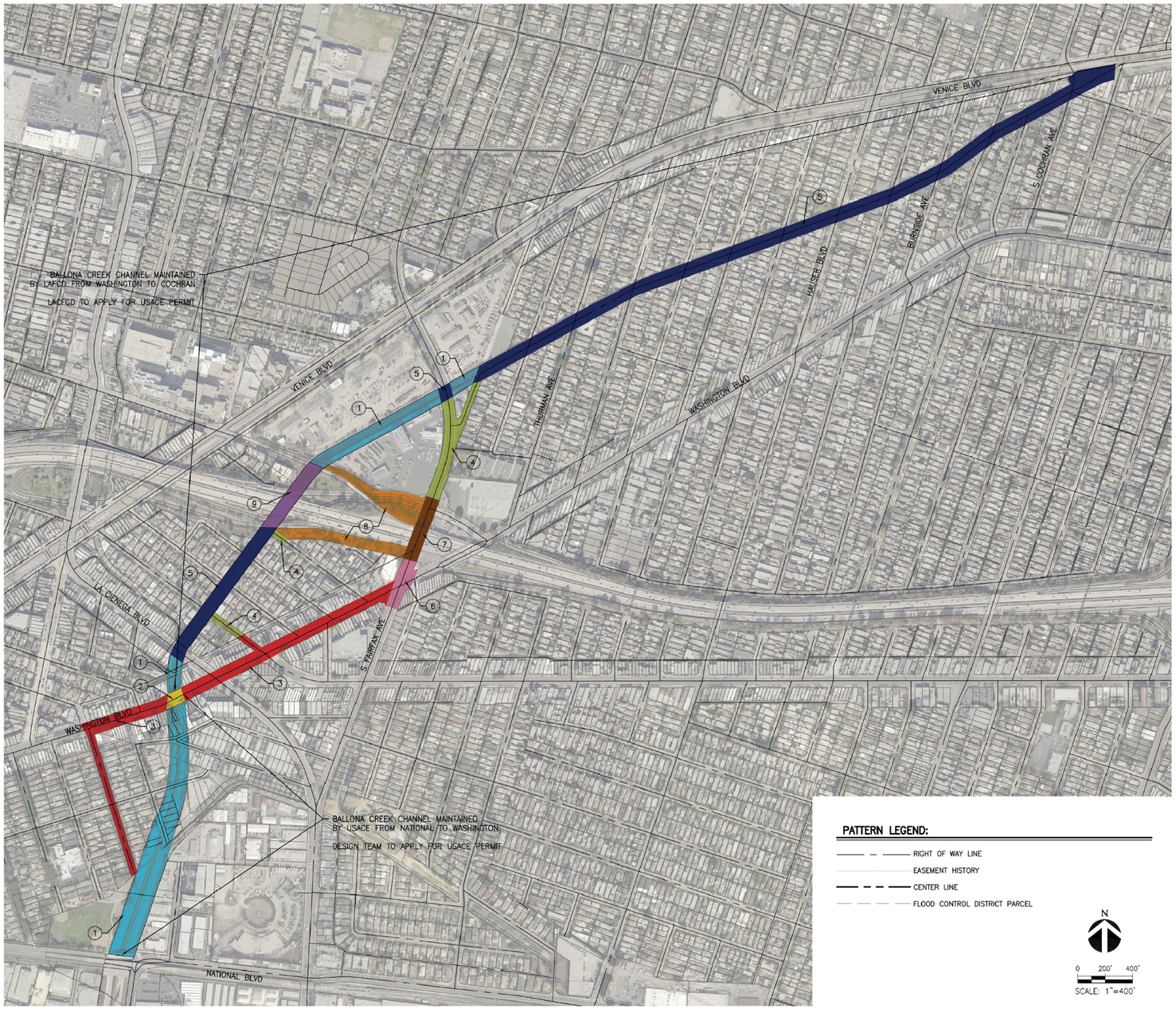
- RIGHT OF WAY LINE
- EASEMENT HISTORY
- CENTER LINE
- FLOOD CONTROL DISTRICT PARCEL
- LACFCD FEE RIGHT OF WAY
- LACFCD EASEMENT RIGHT OF WAY
- LACFCD FEE OR EASEMENT RIGHT OF WAY
- CALTRANS RIGHT OF WAY
- PRIVATE PROPERTY (CITY LA)
- PRIVATE PROPERTY (CULVER CITY LA)
- CITY OF LA RIGHT OF WAY
- CULVER CITY RIGHT OF WAY
- LADWP PROPERTY

Permitting Requirements

Most pathway segments will require permits from multiple agencies for construction of the proposed pathway. The table below summarizes permitting requirements for each segment. Permits are required from the following governing bodies for different segments:

- City of Culver City
- Department of Public Works (DPW)
- City of Los Angeles
- Bureau of Engineering (BOE)
- Los Angeles County Flood Control District (LACFCD)
- California Department of Transportation (Caltrans)
- US Army Corps of Engineers (USACE)

The following pages outline information received from the above governing bodies, along with general information related to the project corridor and its surroundings.



PERMIT REQUIREMENTS PER PATH SEGMENT

Path Segment	LACFCD Construction Permit	LACFCD Access Permit	City of LA BOE Permit	Culver City PW Permit	USACE 408 Permit	Caltrans Permit
1	X				X	
2		X		X		
3				X		
4			X			
5		X	X			
6			X	X		
7			X	X		X
8						X
9	X				X	X

Permitting Requirements

The project team gathered the following information from the relevant governing bodies related to permitting for the project.

Culver City

Proposed Bike Path Category and Permitting Considerations:

- Clarification will be required at the beginning of the project to confirm whether the Bike Path project would be categorized as a City project. A "City project" - typically initiated by the city - gets its permitting fees waived. For any improvements within the Culver City right-of-way, a "Street Use Permit" would be required. Access Ramps to the Bike Path will need to be confirmed.

Syd Kronenthal Park Stormwater Capture project:

- Independent project planned by the City adjacent to the proposed southern end of the Bike Path, located along the west edge of Ballona Creek just north of National Boulevard in the Ballona Creek Watershed.
- Intends to provide stormwater management through water storage during wet weather, year-round irrigation, filtration, or any combination of treatment mechanisms for its 77-acre tributary drainage area.
- While a connection from the Adams Channel to the Syd Kronenthal Park Stormwater Capture Project was envisioned at first, it has been since abandoned due to concerns from LACFCD regarding the need to cross Ballona Creek.
- The Syd Kronenthal Park Stormwater Capture Project does not propose stormwater infiltration based on site-specific geotechnical investigations. The City team indicated that any stormwater infiltration alongside the Ballona Creek would require coordination with USACE.

Adjacent Bike Path Improvements project:

- The Culver City Public Works team is also working on a project proposing improvements along an existing bike path segment along the Creek with specific challenges related to lighting and planters.

City of Los Angeles

LABOE Permits:

A large portion of this project is located within the City of LA Jurisdiction and will require off-site improvements approval by the City Bureau of Engineering (BOE) through an A-Permit or a B-Permit. Based on the extent of work, a B-Permit can be anticipated.

As part of the required B-permit work, coordination and clearance may be required with other City of LA agencies such as Bureau of Street Services, Bureau of Sanitation, City of LA Fire department, Los Angeles Department of Transportation, and other departments and government agencies.

LADWP Encroachment Permits:

An LADWP Encroachment clearance is required for where the project proposes any construction within 10 feet of an LADWP easement, in LADWP's easement, or within 15 feet of LADWP pole. Encroachment clearance takes approximately 24 months for approval and final recording.

Los Angeles County Flood Control District (LACFCD)

The majority of the Ballona Creek Channel in area of this study is maintained by LACFCD. The Right-of-Way maps on pages 5-3 and 5-4 above show the following area categories:

- LACFCD Fee-owned property in green, where both a LACFCD Construction permit and a Rental agreement will be required for any new construction within the Creek.
- LACFCD Easements in red, where a LACFCD Construction Permit will still be required.
- LACFCD Quitclaimed areas in blue (i.e. areas no longer owned by LACFCD)

The LACFCD Fee-owned properties and easements are both considered LACFCD right-of-way and require permits for construction.

Privately-Owned Parcels within LACFCD Easement

Owner's agreement is required for LACFCD Easement Parcels with Private Owners, such as those along the channel in the Culver City segment of the Primary Route. Possible approaches to accommodate private owners are to:

- Change/Amend the Easement to include the bike path
- Provide compensation for the land through rental agreement of LACFCD Fee
- The district could use eminent domain or otherwise acquire property rights, see Flood Control Act, enumerated Powers of District 4, 5, and 6 (Appendix L). Please also note enumerated Powers of District 14 and 15.

LACFCD Construction & Access Permits:

- Any part of the Bike Path project that crosses over or under the Ballona Creek Channel will require a LACFCD Construction Permit. This would portions of the Alternative B route.
- Portions of the Bike Path project that would be located on an existing bridge over the Ballona Creek Channel will not require a LACFCD Construction Permit.
- If access is needed to the Channel for construction purposes for example, a LACFCD Access Permit is required. This would likely be needed for portions of the Primary Route along the channel, particularly from Syd Kronenthal Park to La Cienega Blvd.

LACFCD is open to permitting portions of the project in stages to help mitigate the typically long permitting timelines.

Along the northern end of the project, where the Bike Path is proposed within Cologne Street right-of-way alongside the Ballona Creek, further coordination will be required to confirm whether a LACFCD Construction Permit would be required (in addition to a permit from the City of Los Angeles for the work proposed within Cologne right-of-way).

Permitting Requirements

California Department of Transportation (Caltrans)

Caltrans requires an Encroachment Permit for work within their Right of Way. If the proposed work requires City, County, or other entity approval, a document indicating their approval (permit, letter, etc) must be included with the permit application.

US Army Corps of Engineers (USACE)

USACE built the channel in 1936. The map to the right shows the Ballona Creek segments color-coded based on the entity in charge of its maintenance:

- Segments maintained by LACFCD (in blue) subject to improvements will require a Construction permit from LACFCD. LACFCD would submit a 408-permit application to USACE internally.
- Segments maintained by USACE (green) subject to improvements will require a 408-permit from USACE. The design team would need to coordinate the permitting with USACE directly.

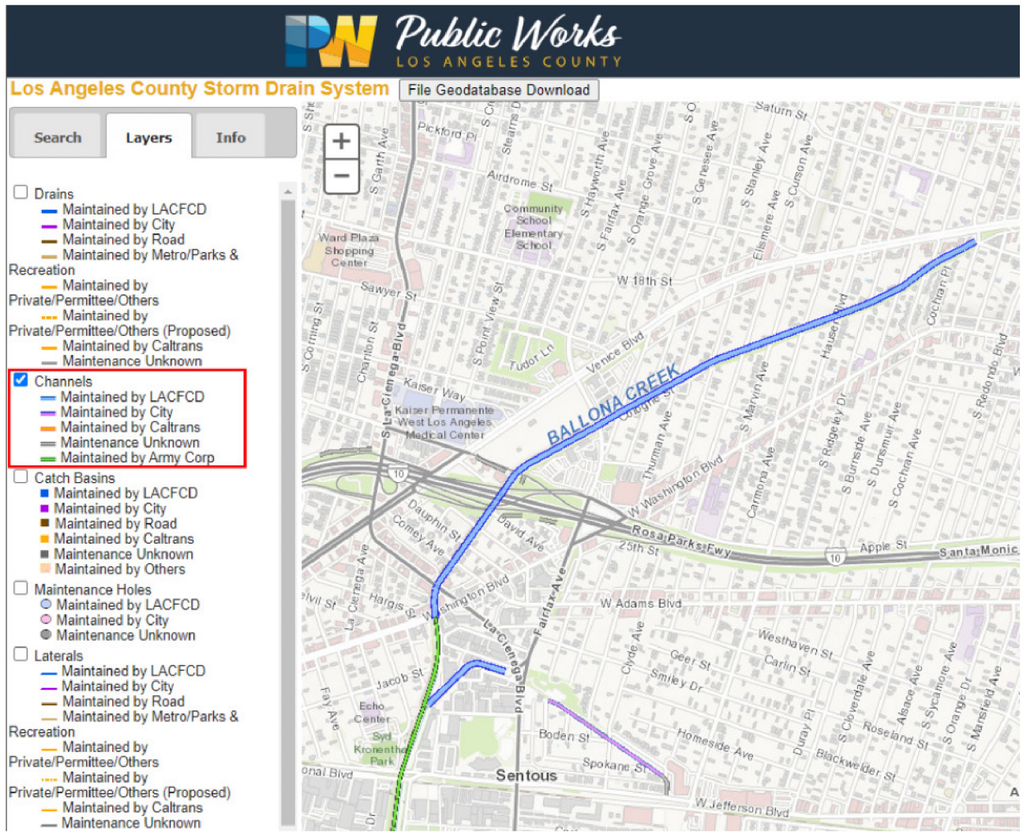
USACE 408 Permit

Based on preliminary input received from USACE and preliminary research, the project team understands the following:

- Ballona Creek right-of-way, including the access roads, is subject to the USACE 408 Permit.
- The USACE 408 Permit would require the following Analysis/Reports:
  - Geotechnical Review – Horizontal and Vertical Boring
  - Structural Review – Proposed alterations to Channel Walls
  - Hydrologic and Hydraulic Analysis – determined by USACE
  - Environmental Assessment (EA) considerations:
    - An EA would be triggered if a portion of the proposed bike path were to cross over the Creek.
    - An EA is required for construction within Flood Control Right of Way of new bike/pedestrian route, where none already exist.
    - An EA review takes approximately 8-10 months and occurs during the 408 permit review. A template is provided on USACE website for the Environmental Assessment.
  - Cultural Resources Report:
    - Required document that is included in the 408 permit application.
    - Provided by an Archaeologist.
  - Risk Assessment Review
    - Depending on the scope of the project, a risk assessment may be required as part of the application package submittal.
    - The Risk assessment would aid in the determination of a Safety Assurance Review (See notes below)
    - The Corps defines risk assessment as "a systematic, evidence-based approach for quantifying and describing the nature, likelihood and magnitude of risk associated with the current condition and the same values resulting from a change condition due to some action."
  - The following is the answers needed for the risk assessment:
    - What can go wrong?
    - How can it happen?
    - How likely is it?
    - What would be the consequences?

Other USACE Permits considerations:

- Typically 60% level project documents need to be submitted for USACE to assess which permits and reviews are required for the project.
- If the project proposes to place any fill below



Source: https://pw.lacounty.gov/fcd/StormDrain/index.cfm

the Ordinary High Water (OHW) of the Creek, a USACE Section 404 permit would be required and trigger the need for a Clean Water Act Section 401 permit.

- USACE would need to review and confirm whether the project could fall under the NEPA Categorical Exclusions (https://www.ecfr.gov/current/title-33/chapter-II/part-230/section-230.9). It seems like the project may fit within a Categorical Exclusion under section b (EA would not be required). See NEPA section below.
- Safety Assurance Review (SAR):
  - SAR is a 3rd party consultant review of the project.
  - SAR is dependent on the Risk Assessment review during the initial 408 submittal review.
  - May be required for the potential Highway 10 bike lane underpass (Alternative B)
  - If triggered, SAR process could take 2-3 years and cost $200,000-$300,000. Approval is not guaranteed.

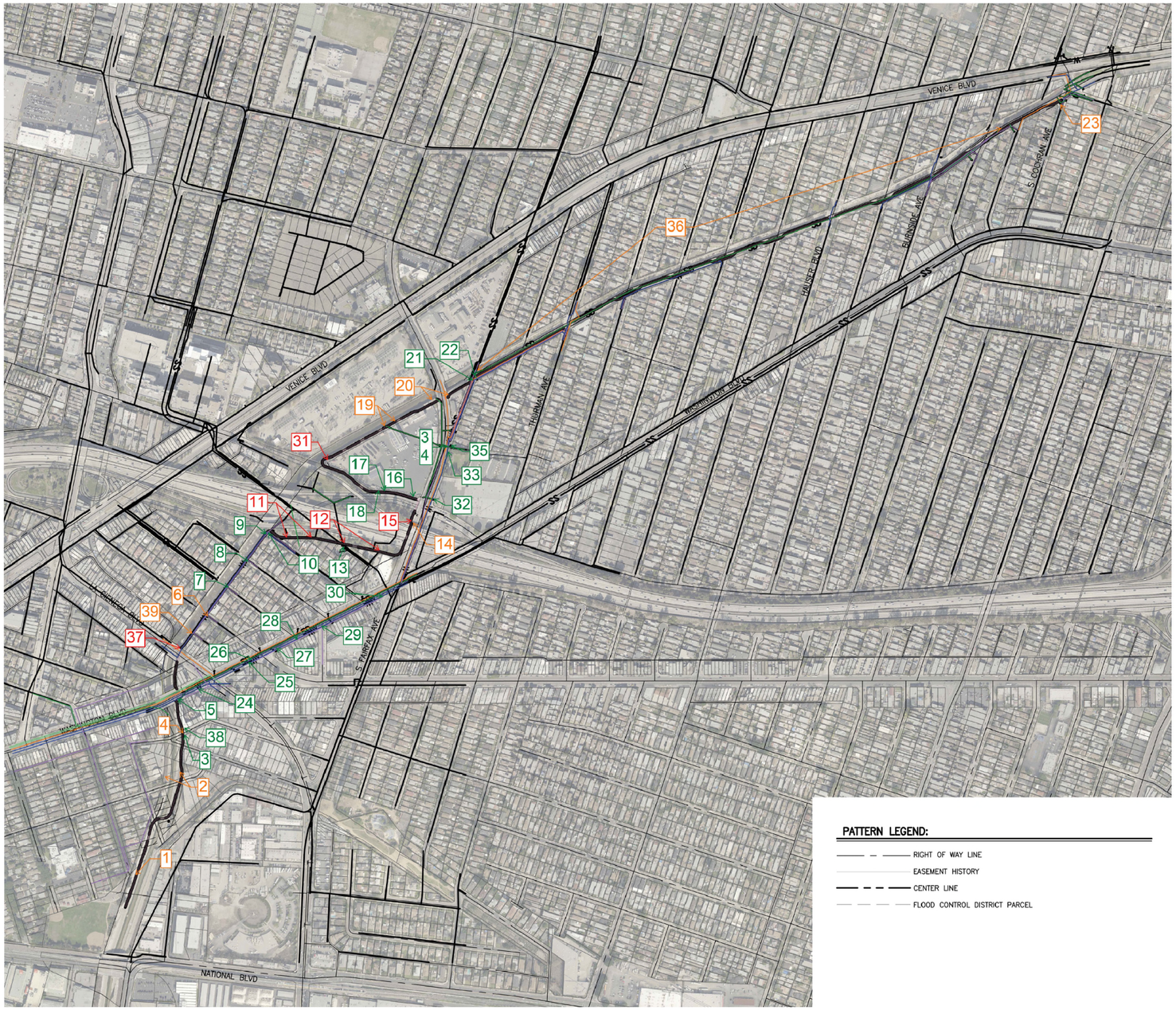


Ballona Creek Channel beneath I-10 Freeway

Existing Utilities

Information regarding the existing utilities located along the proposed Bike Path corridor was researched using the City of Los Angeles NavigateLA website. As-built plans and substructure maps have also been obtained from LADWP (Water maps) and both the City of LA and Culver City records (for sewer maps, storm water maps, etc.). The project team has developed a layer of "Existing Utilities" information.

Existing utilities conflicting with the proposed bike path alignment include LADWP utility poles and vaults, stormwater catch basins, and raised sewer manholes. The adjustment of existing utilities, potential relocations or other mitigation measures that may be required are listed in the table on the following pages.



Existing Utility Conflicts and Resolutions

As the pathway design progresses, coordination will be needed with the respective utility purveyors to confirm the required mitigation measures. Utility Coordination Effort is based on a Low-Medium-High range and located on the map on the preceding page.

- Utilities labeled as "Low" should be noted on plans but should have very low conflict with the bike path alignment.
- Utilities labeled as "Medium" may conflict with the proposed bike path but have a low design coordination with the utility purveyor.
- Utilities labeled as "High" conflict with the proposed bike path and will require extensive design coordination with the utility purveyor.

Item #	Location	Utility Purveyor	Potential Impact to Existing Conditions	Potential Resolution	Coordination Effort	Plan Referenced From
1	Ballona Creek Channel (Below Reid Ave)	LACFCD	Storm Drain Outlet (Reid Ave Catch Basin Outlet Structure)	Protect in Place, Design for Drainage Across Path	Medium	17-FD66.20
2	Ballona Creek Channel (North of Jacob St)	Golden State Water	Elevated Pipe Crossing Creek	Protect in Place, Design Bike Path to Cross Over without Surcharging Pipe	Medium	Obtained During Design
3	Blackwelder St & Smiley Dr	Unknown	Utility Vault	Protect in Place	Low	Obtained During Design
4		LACFCD	Valley-Gutter Outlet into Ballona Creek	Convert V-gutters to Culvert	Medium	N/A
5	Washington Blvd (South Side in Front of A&G Lumber	LACFCD	57" Storm Drain (18' bgs 12.5' cover Below Washington Blvd Grade)	Protect in Place	Low	275-648-D5.03
6	Comey Ave	LACFCD	2 Valley-gutters outlet into Ballona Creek	Convert Valley gutters to Culverts	Medium	17-FD66.7
7	Dauphin St	LACFCD	2 Storm Drain Inlets Along Proposed Bike Path	Protect in Place/Adjust Lid to Grade, or Relocate	Low	17-FD66.7
8	Ernest Ave	LACFCD	2 Storm Drain Inlets Along Proposed Bike Path	Protect in Place/Adjust Lid to Grade, or Relocate	Low	17-FD66.7
9	David Ave	LACFCD	2 Storm Drain Inlets Along Proposed Bike Path	Protect in Place/Adjust Lid to Grade, or Relocate	Low	17-FD66.7
10	David Ave	LA City SAN	Raised Sewer Manhole (77.44' INV ELEV)	Adjust to Grade	Low	22641
11	Embankment Between David Ave & I-10	Caltrans	Concrete Swale on Northern Side of David Ave	Realign Swale, Build Next to it, or Convert to a Pipe	High	70000953
12	Embankment Between Burchard Ave & I-10	Caltrans	Concrete Swale on Northern Side of Burchard Ave	Realign Swale, Build Next to it, or Convert to a Pipe	High	70000953
13	Northern Side of	Unknown	Utility Cabinet	Relocate/Adjust to Grade	Low	Obtained During Design
14	Washington Blvd & I-10 Westbound On/Offramps	Bureau of Street Lighting	Bus Stop Light Poles	Relocate/Adjust to Grade	Medium	Obtained During Design
15		Metro	Covered Bus Stop	Relocate/Protect in Place	High	Obtained During Design
16		Unknown	Utility Pull Boxes	Protect in Place	Low	Obtained During Design
17	Washington Blvd/I-10 Westbound Onramp	Bureau of Street Lighting	Streetlight & Pull Box Along Bike Path Alignment	Relocate/Adjust to grade	Low	Obtained During Design
18	I-10 Westbound Onramp	Unknown	Abandoned Street Light Foundation and Pull Box	Remove	Low	N/A
19	LADWP Palms Yard	LADWP/LACFCD	2 V-gutters Discharging into Ballona Creek	Convert V-gutters to Culverts	Medium	N/A

20	Fairfax & Ballona Creek	LADWP	LADWP Vault & Utility Poles	Relocate/Adjust to Grade	Medium	Obtained During Design
21	Cologne St & Genesee Ave	LA City SAN	Sewer Manholes	Protect in Place	Low	D-10016
22		LACFCD	Storm Drain Inlet	Protect in Place	Low	17-FD66.6
23	Cochran Ave	LACFCD	Storm Drain Catch Basin	Protect in Place	Medium	D-25200
24	5900 Washington Blvd	AT&T	Telecom Manhole	Adjust to Grade	Low	Obtained During Design
25	Washington Blvd & Adams Blvd	Culver City Public Works	Sewer Manhole	Adjust to Grade	Low	A7
26		SoCal Edison	Electric Vault	Adjust to Grade	Low	Obtained During Design
27		Golden State Water	Water Vault	Adjust to Grade	Low	Obtained During Design
28	Washington Blvd & Dauphin Av	Culver City Public Works	Sewer Manhole	Adjust to Grade	Low	A7
29	Washington Blvd & Hines Ave	Culver City Public Works	Sewer Manhole	Adjust to Grade	Low	A7
30	Washington Blvd & Fairfax Ave	Culver City Public Works	Sewer Manhole	VIF-Adjust to Grade	Low	A7
31	Ballona Creek Channel near I-10 Onramp	LADWP	Utility poles	Relocate utility poles in conflict of path	High	Obtained During Design
32	Fairfax Ave & Electric Dr	Caltrans	Storm Drain inlet	Protect in Place	Low	Obtained During Design
33	Fairfax Ave & Glennie Ln	LADWPWS	Water Valve	Protect in Place	Low	Obtained During Design
34		Caltrans/LA City SAN	Storm Drain Manhole	Protect in Place	Low	Obtained During Design
35		LA City SAN	Storm Drain Inlet	Protect in Place	Low	Obtained During Design
36	Ballona Creek Genessee to Cochran	LACFCD	21.5'W x 16.5'H Box Culvert	Protect in Place	Medium	PD002708
37	La Cienega Blvd at Ballona Creek Channel	LADWP	Utility Pole	Protect in Place or Relocate	High	Obtained During Design
38	Blackwelder St & Smiley Dr	LADWP	Utility Pole	Protect in Place	Low	Obtained During Design
39	Alley near La Cienega Blvd	LADWP	Utility Pole	Protect in Place	Medium	Obtained During Design



Existing concrete swale on north side of David Ave within Caltrans ROW

Environmental Review (CEQA and NEPA)

The project team explored whether environmental review under the California Environmental Quality Act (CEQA) and/or the National Environmental Quality Act (NEPA) would be applicable to the Ballona Creek pathway extension project. Further input from an environmental specialist is needed to understand whether NEPA and/or CEQA is required or the project is eligible for Categorical Exceptions from these environmental reviews. The results of the project team's preliminary investigations are below.

CEQA

The California Environmental Quality Act (CEQA) applies to projects receiving any form of approval, permit, or oversight from public bodies on the state or local level. Compliance with CEQA involves either determining that a project is exempt from CEQA or preparing an environmental analysis (typically a negative declaration (ND), mitigated negative declaration (MND) or environmental impact report (EIR)). Therefore, CEQA applies to the Ballona Creek Phase II project. A 2017 report found that the typical initial study and ND or MND for CEQA costs approximately $65,000-$90,000. A typical CEQA EIR may cost between $300,000-$400,000.[1] Processing times for a Negative Declaration is typically 12 to 18 weeks. A typical EIR takes at least one year to complete.[2]

Exemptions

The possibility of preparing Categorical Exemptions for the project was investigated. A number of greenway and bicycle path segments along the Los Angeles River – a channelized river relatively similar to Ballona Creek – have been approved and/or completed using Categorical Exemptions. It appears that project segments for the Ballona Creek extension project may be eligible for exemption under multiple classes:

- CEQA Guidelines Section 15301, or Class 1 ("Existing Facilities"), exempts projects from environmental review for the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of an existing use beyond that existing at the time of the lead agency's determination. This exemption includes: "Existing highways and streets, sidewalks, gutters, bicycle and pedestrian trails, and similar facilities (this includes road grading for the purpose of public safety, and other alterations such as the addition of bicycle facilities, including but not limited to bicycle parking, bicycle-share facilities and bicycle lanes, transit improvements such as bus lanes, pedestrian crossings, street trees, and other similar alterations that do not create additional automobile lanes)."[3]

Therefore, segments of the proposed project where all changes would occur within the existing street and sidewalk right-of-way may be exempt under Class I categorical exemption. This includes the portions of the Primary Route and Alternative A on Reid Ave, Washington Blvd, Fairfax Ave, S Genesee Street, and the paved portion of S Genesee Ave, as well as proposed road crossings.

- CEQA Guidelines Section 15304, or Class 4 ("Minor Alterations to Land"), provides an exemption from environmental review for minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes. Among the examples of this exemption class included in the regulatory language are new landscaping and the development of bicycle lanes within existing right-of-way.[4]

Therefore, if the proposed project includes new bicycle lanes within the existing right-of-way and existing "healthy, mature, scenic" trees would remain in place, then that segment of the proposed pathway may be exempt from environmental review under Class 4. Such segments would potentially include the portions of the Primary Route option along Ballona Creek between La Cienega Blvd and David Ave and the unpaved portion of Cologne St from Thurman Ave to S Cochran Ave, both of which are within the City of Los Angeles right-of-way. The portion of the Primary Route at the base of the I-10 freeway embankment is within the Caltrans right-of-way and may also be exempt for this reason. In a meeting with Caltrans, Caltrans indicated that the pathway would be exempt from CEQA. The portion of the project which runs through Caltrans' right-of-way may also qualify for a Categorical Exclusion under NEPA pursuant to 23 CFR 771.117(c): activity (c)(3) Construction of bicycle and pedestrian lanes, paths, and facilities.[5]

This exemption may also apply to the segments of the Primary Route between Washington and La Cienega Blvd and between Syd Kronenthal Park to Washington, though the examples provided in the regulatory language are less clear in the applicability of this exemption to these segments. More significant grading is needed in these segments for development of the pathway, and a ramp must be constructed to connect the existing pathway to the proposed extension.

For all segments, existing trees will be left intact where feasible. Across these segments, it is not feasible to leave all existing trees intact while making space for the necessary bike and pedestrian facilities. Moreover, further investigation is needed to determine if the trees to be removed are "healthy, mature, and scenic" per the regulation's language. Many of the trees within the path right-to-way are non-native palms. The project envisions planting more than 200 new trees along the route, exceeding the number of trees that would need to be removed for construction of the pathway.

To apply for a Categorical Exemption from environmental review under CEQA, the lead agency for the project must file a Notice of Exemption with the State Office of Planning and Research. A sample Notice of Exemption is included in Appendix N.[6]

NEPA

The scope of the National Environmental Quality

Act (NEPA) is more limited than CEQA, applying only the federal actions. This includes projects and programs entirely or partially financed by federal agencies and that require a federal permit or other regulatory decision. NEPA applies to the segments of the Ballona Creek Phase II project that require a federal permit – namely, those portions requiring a permit from the US Army Corps of Engineers (USACE). Those portions are the segment of the Primary Route from Syd Kronenthal Park to La Cienega Blvd and the segment of Alternative B which would be constructed within the channel itself (from Ernest Ave to the edge of the LADWP Palms Yard).

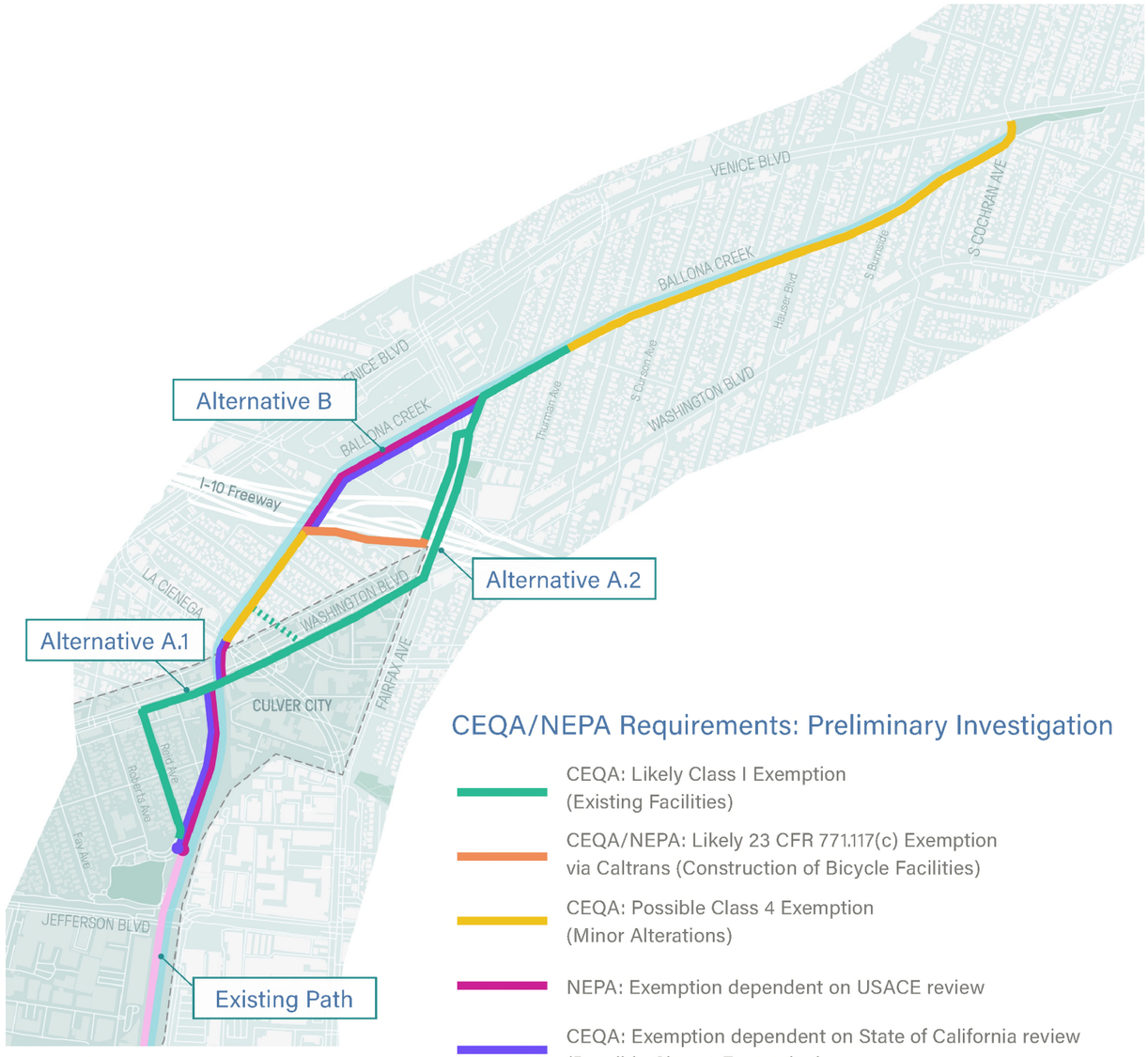
Environmental reviews under NEPA are carried out for actions that have significant environmental impacts. If it is unknown whether the proposed action will induce a significant impact, an Environmental Assessment is prepared. This assessment, in turn, determines whether or not an Environmental Impact Statement (EIS) is required. The median length of the NEPA EIS process is 3.5 years. Quantitative information on the typical cost of preparing a NEPA EIS is limited. However, federal government reports have found that median NEPA EIS contractor costs from 2003 to 2012 were $1.4 million.[7] A 2003 report found the typical cost of a NEPA EIS is between $250,000 and $2 million.[8] Adjusting for inflation, that cost may be between $420,000 and $3.4 million.[9]

Exemptions

Categorical Exemptions to NEPA are typically prepared for actions which do not have significant effects on the quality of the human environment. They are actions that: "Do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulatively, have any significant environmental impacts."

Initial investigations have not uncovered a clear Categorical Exemption to environmental review under NEPA for the project. Given that the portions of the Ballona Creek Phase II project where NEPA is applicable fall under USACE permitting/approval jurisdiction, USACE is responsible for determining whether the project qualifies for a Categorical Exemption from environmental review under NEPA.

Whether or not environmental review under NEPA and/or CEQA is required can help determine the optimal assembly of pathway segments and strategies for project phasing (see Ch. 9).



CEQA/NEPA Requirements: Preliminary Investigation

- CEQA: Likely Class I Exemption (Existing Facilities)
- CEQA/NEPA: Likely 23 CFR 771.117(c) Exemption via Caltrans (Construction of Bicycle Facilities)
- CEQA: Possible Class 4 Exemption (Minor Alterations)
- NEPA: Exemption dependent on USACE review
- CEQA: Exemption dependent on State of California review (Possible Class 4 Exemption)

Note: Verification of preliminary findings will require further investigation by an environmental specialist during the schematic design phase of the subsequent project.

Endnotes

1 California Natural Resources Agency, Standardized Regulatory Impact Assessment: CEQA Guidelines Updates, 2017. https://dof.ca.gov/wp-content/uploads/sites/352/Forecasting/Economics/Documents/CEQAUpdatesSRIA_CNRA_12-6-17.pdf

2 Sacramento County, Planning and Environmental Review. https://planning.saccounty.gov/applicants/Pages/FAQ_ER.aspx#:~:text=In%20either%20case%2C%20it%20is,limits%20of%20CEQA%20noted%20above

3 State of California, CEQA, 12-0U350 RTE. 91 Signing, Delineation, Signal & Lighting. https://ceqanet.opr.ca.gov/2023110060

4 Case Text, Cal. Code Regs. tit. 14 § 15304, 2023: https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-6-resources-agency/chapter-3-guidelines-for-implementation-of-the-california-environmental-quality-act/article-19-categorical-exemptions/section-15304-minor-alterations-to-land

5 California Department of Transportation (Caltrans), Chapter 30 - Categorical Exclusions. https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-30-categorical-exclusions

6 State of California, CEQA, Notice of Exemption. https://opr.ca.gov/docs/NOE.pdf

7 EXECUTIVE OFFICE OF THE PRESIDENT COUNCIL ON ENVIRONMENTAL QUALITY, ENVIRONMENTAL IMPACT STATEMENT TIMELINES (2010-2018) 2020. https://ceq.doe.gov/docs/nepa-practice/CEQ_EIS_Timeline_Report_2020-6-12.pdf

8 United States Government Accountability Office, Report to Congressional Requesters, NATIONAL ENVIRONMENTAL POLICY ACT, Little Information Exists on NEPA Analyses, 2014. https://www.gao.gov/assets/gao-14-369.pdf

9 U.S. Bureau of Labor Statistics, CPI Inflation Calculator. https://www.bls.gov/data/inflation_calculator.htm

Chapter 6
Preliminary Conceptual Design

The design concepts and material selections presented herein are shown for the **purposes of this feasibility study only**. All design concepts are subject to review and approval by the City of Culver City and City of Los Angeles.

Overview

Chapter 4 Pathway Alignment and Alternatives detailed route options and associated bicycle and pedestrian facilities for extending the Ballona Creek pathway northeastward to the start of the Ballona Creek channel at S Cochran Ave. With the extension of the Ballona Creek pathway also comes a unique and significant opportunity for the creation of new green spine running through the heart of Los Angeles. This chapter provides preliminary conceptual designs for this new green space, in addition to proposing options for pathway amenities, wayfinding, lighting, and stormwater management.

Preliminary concepts envision a system of linear parks, overlook points, and trailhead parklets coming together around the Ballona Creek pathway, offering space for neighbors to gather, stormwater to collect, and native plants to take root. A gateway park is created where the pathway and Ballona Creek begin their journey together toward the ocean some 10 miles away. Enthusiasm for the potential of this new green space, and the native planting and shade trees which might come with it, was evident at community meetings and in resident feedback. The undeveloped area through which the Mid-City portion of the pathway runs (from S Thurman Ave to S Cochran Ave), in particular, offers a rare opportunity for the creation of such green space in an urbanized section of LA.

This chapter will cover the following:

Bike Amenities
Seating
Trash Receptacles and Water Fountains
Lighting
Signage and Wayfinding
Stormwater Management
Greenspace Design
- Landscape Types
- Plant Palette
- Hardscape Palette
- Linear Park + Pocket Conceptual Design
- Gateway Park Conceptual Design





Bike Amenities

Bike parking racks will be designed and placed strategically at the bike trails and seating areas, where they can be easily accessed. They provide a place for cyclists to securely park their bikes.

Bike repair stations are equipped with the tools cyclists need to fix, tune and repair the most common mechanical issues.

Bike counters will help to detect cyclist use volumes, as well as speeds and directions of travel.

Where possible, the design team should select from families of furnishings to provide a cohesive look and feel in site amenities.

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Bike Racks



Powder-coated stainless steel tubing racks



Powder-coated aluminum solid cast racks



Inverted-U rack, approx. 36" tall and 24" long (currently used in Culver City)



Metro Los Angeles bike share station



Untreated hardwood racks



Corten steel, with plastic bumper strip racks

Bike Repair Station



Public Bike Repair Stand With Pump



Public Bike Repair Station

Bike Counter



Bike Counter

Seating

Seating can be placed in designated seating areas along the pathway and in the proposed linear park spaces. Benches provide a place for cyclists and pedestrians to rest, relax, and gather. Some benches will be placed under tree canopies for shade, while others will be exposed to enjoy the sun. The seating options presented here were selected for their potential to encourage interaction between users, as well as material durability and comfort.

Where possible, the design team should select from families of furnishings to provide a cohesive look and feel in site amenities.

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Seating



Powder-coated metal



Table top and seating surface material is recycled high density polyethylene (HDPE)



Cumaru hardwood slats with durable Powder-coated finish steel parts



Powder-coated stainless steel



Bench seat and back is made of recycled High-density polyethylene (HDPE)



Powder-coated metal Pangard II
With wood-grains (Exterior - no finish)



Backless Concrete Bench



Backrest Concrete Bench



Concrete Bench with Bolt-on Back and Arm

Trash Receptacles and Water Fountains

Trash and recycling receptacles are intended to minimize litter along the pathway and in park spaces.

Water fountain and bottle fillers will provide accessible hydration to cyclists and other users. The water fountain should be ADA compliant and may include a bottle filler and dog-level drinking fountain.

Where possible, the design team should select from families of furnishings to provide a cohesive look and feel in site amenities.

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Trash Receptacles



Powder-coated metal



Powder-coated metal



Powder-coated metal



Powder-coated metal



Powder-coated metal



Molded Polyethylene



ADA,Bi-level, bottle filler, with Pet fountain



ADA, Dual station bottle filler fountain

Lighting

Proper illumination along the alignment is an effective way to promote commuting and recreational use during extended trail hours. Trail lighting that is well placed, properly installed, and frequently maintained can improve visibility, increase overall trail access and convenience, and give trail users a sense of security during nighttime use.

Pole-mounted, solar-powered LED light fixtures are proposed along the bike path at approximately **70ft on center** and at varying **heights ranging from 15ft to 20ft** to maintain a minimum of 0.5 footcandles on the pathway per IES recommendations.

Solar lighting is a clean and renewable energy source that produces no greenhouse gas emissions, making it an environmentally friendly option. By using solar lighting along the bike path, the city can reduce its energy consumption and carbon emissions, while still providing safe and reliable lighting for cyclists. As these paths are located in remote areas and require extensive electrical infrastructure to connect to the grid, solar lighting can be a practical and affordable alternative. In addition, solar lighting helps to create a more sustainable and harmonious environment for everyone, with target levels of light that meet the needs of pedestrians and cyclists while minimizing light trespass at neighboring properties along the trail.

Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.

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ZW1 - Wall Mounted LED
Wall mounted LED light fixtures to be mounted at the underpass locations with approximately 40′ spacing at 8′ to 10′ AFF mounting height



ZW2 - Wall Mounted LED
Wall mounted LED fixtures will provide illumination for the elevated bike path on alternate B plans with approximately 40′ spacing



ZS1 - Surface Mounted LED
Ceiling-mounted LED fixtures will provide illumination in areas where the alignment extends under the freeway with approximately 35′ spacing



ZP1 - Solar Pole Mounted Fixture
Solar pole light fixtures to be placed along the bike path where there are no existing poles with approximately 70′ spacing and at 15′ to 20′ mounting height



ZP2 - Solar Pole Mounted Fixture
Solar pole light fixtures to be placed at street crossings where there are no exiting poles with approximately 70′ spacing and at 15′ mounting height



ZP3- LED Pole Mounted Fixture
New LED luminaire to be added to the existing poles at street crossings on existing street lighting poles with approximately 70′ spacing and at 15′ to 20′ mounting height

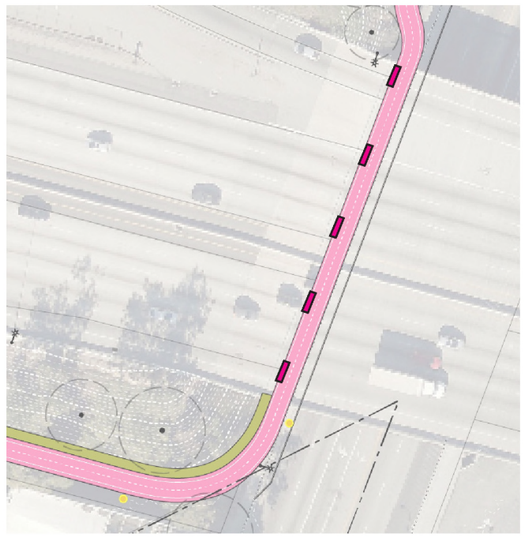
Lighting

Where the alignment parallels roadways, new LED fixtures will be added to existing light poles. Existing fixtures currently illuminating the roadway will remain. New fixtures will be added at a lower mounting height as required to illuminate the bike path. New fixtures will connect to the existing lighting circuit in place.

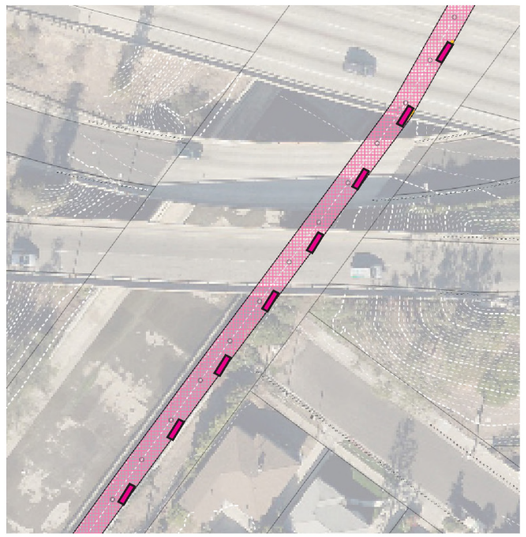
New wall-mounted and ceiling-mounted LED fixtures will provide illumination in areas where the alignment extends under the freeway. Proposed wall-mounted luminaires will be fed from existing circuits currently serving adjacent light fixtures. The proposed ceiling-mounted luminaires will replace 1 for 1 the existing recessed downlights and connect to the existing lighting circuits in place.

Note on Light Fixtures: Potential lighting fixtures selected to meet photometric requirements along pathway. Final lighting fixture selection and location to be coordinated with the City of Culver City and the City of Los Angeles.

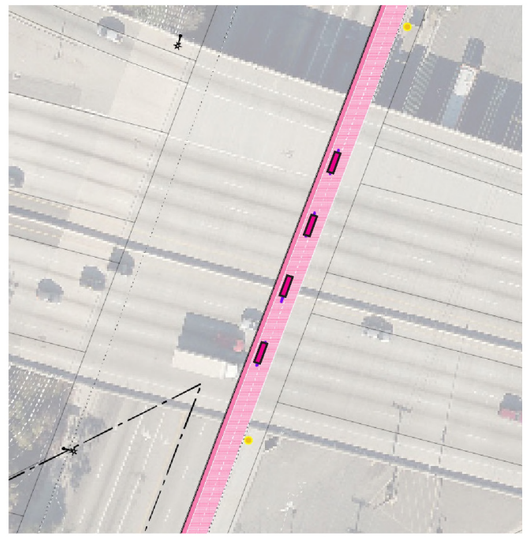
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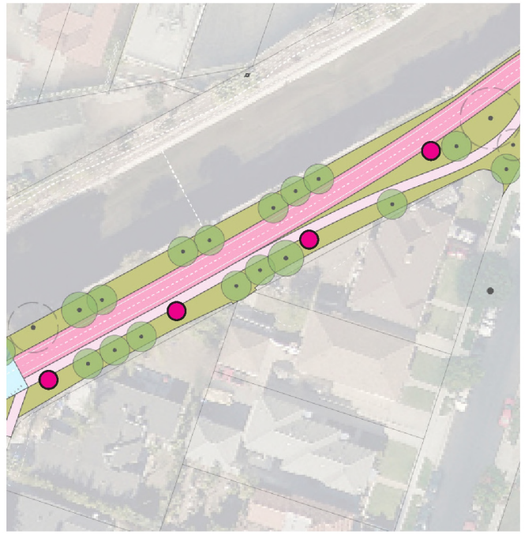
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Wall mounted LED light fixtures to be mounted at the underpass locations with approximately 40′ spacing at 8′ to 10′ AFF mounting height



ZW2 - Wall Mounted LED
Wall mounted LED fixtures will provide illumination for the elevated bike path on alternate B plans with approximately 40′ spacing



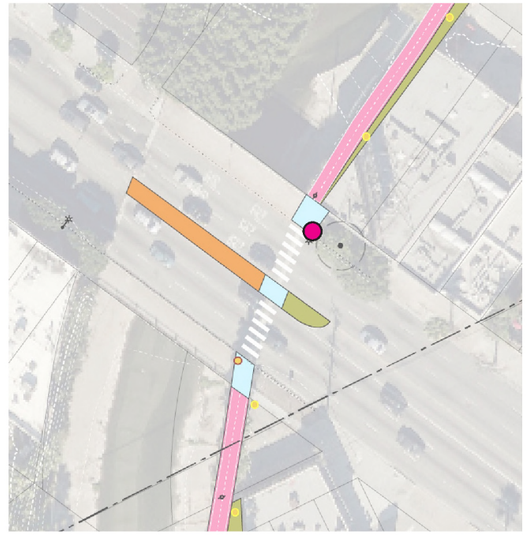
ZS1 - Surface Mounted LED
Ceiling-mounted LED fixtures will provide illumination in areas where the alignment extends under the freeway with approximately 35′ spacing



ZP1 - Solar Pole Mounted Fixture
Solar pole light fixtures to be placed along the bike path where there are no existing poles with approximately 70′ spacing and at 15′ to 20′ mounting height



ZP2 - Solar Pole Mounted Fixture
Solar pole light fixtures to be placed at street crossings where there are no exiting poles with approximately 70′ spacing and at 15′ mounting height



ZP3- LED Pole Mounted Fixture
New LED luminaire to be added to the existing poles at street crossings on existing street lighting poles with approximately 70′ spacing and at 15′ to 20′ mounting height

Signage and Wayfinding

Comprehensive and innovative signage, map, and marking systems (collectively "wayfinding") make trail and pathway networks outstanding. A good wayfinding system helps users know about, find, follow, and enjoy the trail. A signage and directional system has been developed to inform and educate users about the Ballona Creek Trail and to help them find their way. A good wayfinding plan depends on an accurate understanding of the trail system: its routes, features, users, local origins and destinations of users, and the needs and abilities of those who maintain, manage, and provide emergency services for the trail. The benefits of a wayfinding system include:

- A consistent and reliable **identity** that relates to the broader Ballona Creek Trail and the regional trail system.
- Improved **awareness** of the trail and increased use
- Enhanced **legibility** for the public to find and follow the trail
- A greater sense of **security and comfort**
- **Increased trips** by cyclists and pedestrians
- Improved **emergency and maintenance access** and coordination

The following guiding principles, based on best practices from around North America, will help create an effective wayfinding system in along the Ballona Creek Trail.

The concepts for signage and wayfinding presented herein have not been approved by the City of Culver City and are shown for purposes of this feasibility study only. Final alignment and design is subject to review and approval by the City of Culver City where the project falls within its jurisdiction.

Connect Places
An effective trail wayfinding system should directly connect to places that locals and visitors want to access and enable them to discover new destinations that can be reached. Wayfinding provides benefits that go beyond physical signage. It can help connect and encourage trail users to use or visit local services.

Keep Information Simple
Wayfinding should provide clear information in a logical succession, and not overburden users with excess information. It is important to provide information in manageable amounts. Too much information can be difficult to process quickly; too little, and decision-making becomes impossible.

Promote Active Travel
Wayfinding should encourage active transportation by creating an accessible, clear, and attractive system that is intuitive to navigate. Whether directed towards trail users or indirectly seen by passing vehicles, the trail should be easy to find and easy to understand.

Maintain Motion
Wayfinding information should be presented in a way that is quickly understood. Cycling require physical effort, and frequent stopping and starting to check directions may cause frustration, discourage use, or present safety hazards. Information should be provided in advance of where users need to make a maneuver or change in direction so they can maintain motion.

Be Predictable
Wayfinding should be predictable and consistent. When information is predictable, it can be recognized and quickly understood. Predictability relates to all aspects of wayfinding placement and design (i.e., sign materials, dimensions, colors, forms, and placement). Design consistency for signs and maps ensures continuity of experience as landscapes and contexts change along the trail.

Relevant Plans and Guides

CA MUTCD (2014)
The Manual on Uniform Traffic Control Devices (CA MUTCD) provides state-approved design guidance for vehicular, on-street bikeway, and trail signs. In addition to providing a framework for detailed sign design, CA MUTCD covers required horizontal and vertical clearances for the trail.

Park to Playa Trail Feasibility Study and Wayfinding Plan (2011)
This plan commissioned by Mountains Recreation and Conservation Authority (MRCA) provides the vision for a trail network that connects the Ballona Wetlands area in Marina Del Rey east along Ballona Creek to the Baldwin Hills. The vision to create a seamless trail that connects urban residents with the Pacific coast will be realized through a cooperative effort between several agencies and jurisdictions. The wayfinding plan includes trail branding, detailed sign design, and comprehensive wayfinding standards for a range of trail types.

Existing Sign Analysis

The majority of existing wayfinding along the Ballona Creek Trail or within nearby parks are CA MUTCD or Park to Playa signs. Additional custom sign graphics specific to the Ballona Creek Trail are used selectively as well, typically to mark an access point or trailhead. Wayfinding is predominantly located at trailheads, with inconsistent pavement markings and interpretive signs placed along the trail. CA MUTCD signs are used on intersecting streets and bikeways to guide users to the trail. Public art is utilized on ground surfaces, walls, and in fencing/gates to create a sense of arrival at key trailheads.



Several trailheads, as well as trailheads in nearby parks, include a Park to Playa map kiosk



Many trailheads include a custom trail identification sign



Most wayfinding along the trail follow CA MUTCD standards



Pavement markings are used in select locations along the trail to identify street crossings



Entry gates along the trail feature integrated art and provide a sense of arrival



CA MUTCD signs are used to get users to the trail from intersecting streets

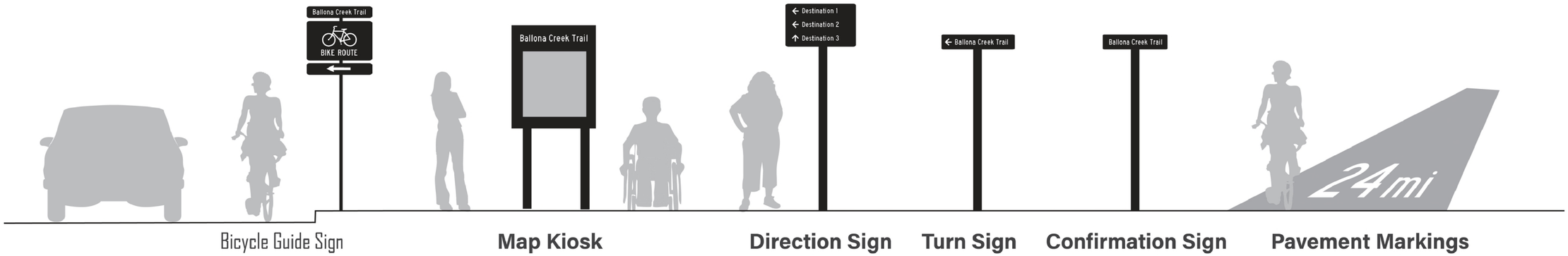
Sign Family

This section outlines a standard suite of wayfinding and signage elements for the Ballona Creek Trail. The sign family is largely informed by existing signage along the Ballona Creek Trail as well as the Park to Playa trail network.

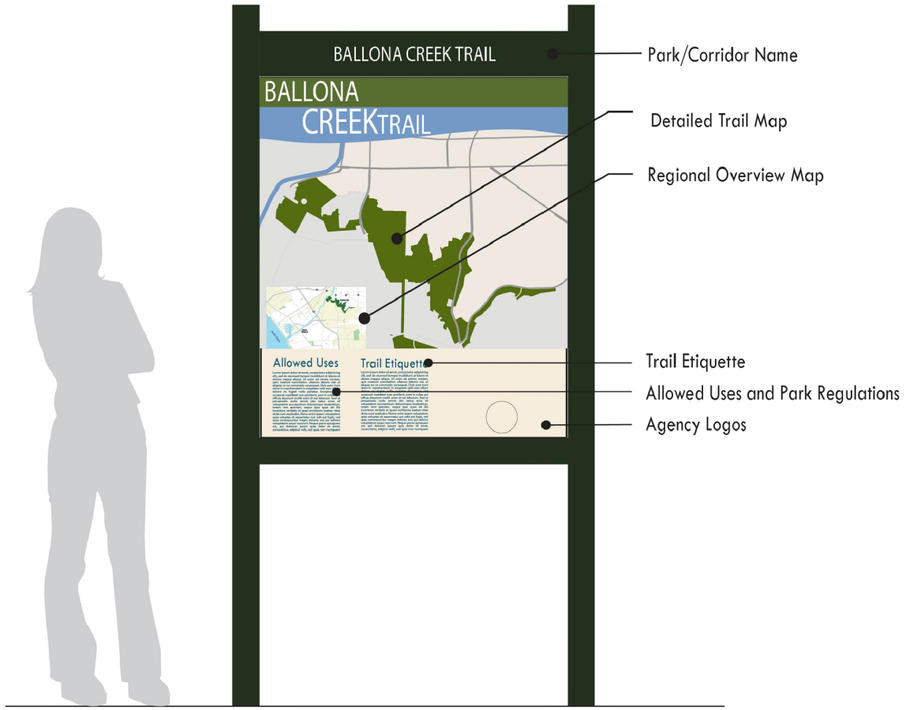
The sign family is illustrated below, and includes:

- ▷ Gateway Elements (not shown)
- ▷ Map Kiosks
- ▷ Direction Signs
- ▷ Turn Signs
- ▷ Confirmation Signs
- ▷ Pavement Markings and Mile Markers
- ▷ Bicycle Guide Signs
- ▷ Warning Signs

Sign Type	Description	Application/Location	Based On
Gateway Elements	Major art or gateway sign elements to announce the beginning or end of the trail and provide a sense of arrival.	At northern trail terminus.	Custom feature to reflect community or trail identity
Map Kiosks	Large displays to orient users through maps, educational and guidance information.	Trailheads, park spaces, and trail terminus.	Park to Playa Wayfinding
Direction Signs	Guide users to destinations along or off the trail. Destination information includes name and direction.	In advance of trail decision points and junctions with intersecting bikeways.	CA MUTCD
Turn Signs	Guide users to or along trail. Inform users of abrupt turns or provide clarity of direction of trail route.	In advance of abrupt turns and complex intersections along the trail, or on an approach to the Ballona Creek Trail from perpendicular bikeways.	CA MUTCD
Confirmation Signs	Provide reassurance to trail users that they are on the trail route.	Following abrupt turns and complex intersections at trail junctures.	CA MUTCD
Pavement Markings and Mile Markers	Mark paved portions of the path and provide mile marker information.	General striping and mile markers every 1/2 mile.	Custom
Bicycle Guide Sign	MUTCD Bicycle Guide Sign with Park to Playa supplemental plaque.	Along on-street bicycle facilities.	CA MUTCD
Warning Signs	MUTCD vehicular warning signs.	At and on approach to road crossings.	CA MUTCD



Map Kiosk



Description

Map kiosks provide trail users with a broad overview of the trail. Map kiosks are freestanding two sided information displays that orient users to the trail system, destinations, rules of use, and safety information. More than just a sign, the kiosks represent a meeting place for people to meet and plan their route along the trail. Kiosks provide detailed maps, showing the trail and destinations, indicate "you are here", highlight trailheads and connections, landmarks, parking lots, restrooms and other trail networks. The kiosk will also detail trail etiquette and could illustrate ecological or cultural interpretive information. Map kiosks should be located at major trailheads and parks.

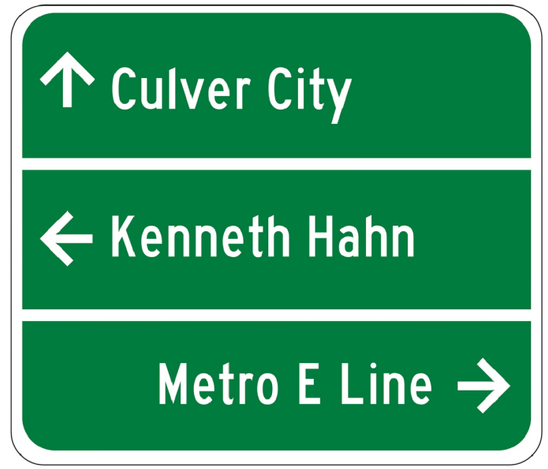
Content

- Based on Park to Playa Map Kiosk.
- Includes "You are here"; Parklands and trails, Existing / proposed bicycle facility network, Parking, Restrooms and Transit Stops
- Agency Logos
- Permitted Uses and Trail Etiquette

Materials

- Phenolic Resin Panel (high pressure laminate)
- Mount to powder coated steel frame with 3"x3" posts and custom header.

Direction Sign



Description

Direction signs provide directional information to major destinations along or off of the trail. Install direction signs along the trail at trailheads, intersecting bikeways, or significant decision points for users. Depending on number of destinations, sign may be 2 or 3 lines.

Content

- Based on CA MUTCD D1-2 or D1-3. Green background with retroreflective white symbols and border per CA MUTCD.

Materials

- 0.080 inch aluminum sign panel
- Apply anti-graffiti coating.
- Mount to 2" square perforated pole or existing post adjacent to road where available.

Turn Sign



Description

Turn signs guide users to or along the trail, and inform of abrupt turns and provide clarity of direction of trail route. Install turn signs in advance of abrupt turns and complex intersections along the trail, or on an approach to the Ballona Creek Trail from perpendicular bikeways.

Content

- Based on CA MUTCD D1-1. Green background with retroreflective white symbols and border per CA MUTCD.

Materials

- 0.080 inch aluminum sign panel
- Apply anti-graffiti coating.
- Mount to 2" square perforated pole or existing post adjacent to road where available.

Confirmation Sign



Description

Confirmation signs provide en route reassurance of trail identity and visually mark the trail. Confirmation signs should be installed following abrupt turns and complex intersections at trail junctures.

Content

- Based on CA MUTCD D3-1. Green background with retroreflective white symbols and border per CA MUTCD.

Materials

- 0.080 inch aluminum sign panel
- Apply anti-graffiti coating.
- Mount to 2" square perforated pole or existing post adjacent to road where available.

Bike Guide Sign



Description

Bicycle Guide Signs act as a "map on the street" for cyclists. Bicycle Guide (D11-1) signs with a Ballona Creek Trail plaque should be provided at regular intervals and decision points along on-street segments of the trail, or at intersections with adjoining bike routes.

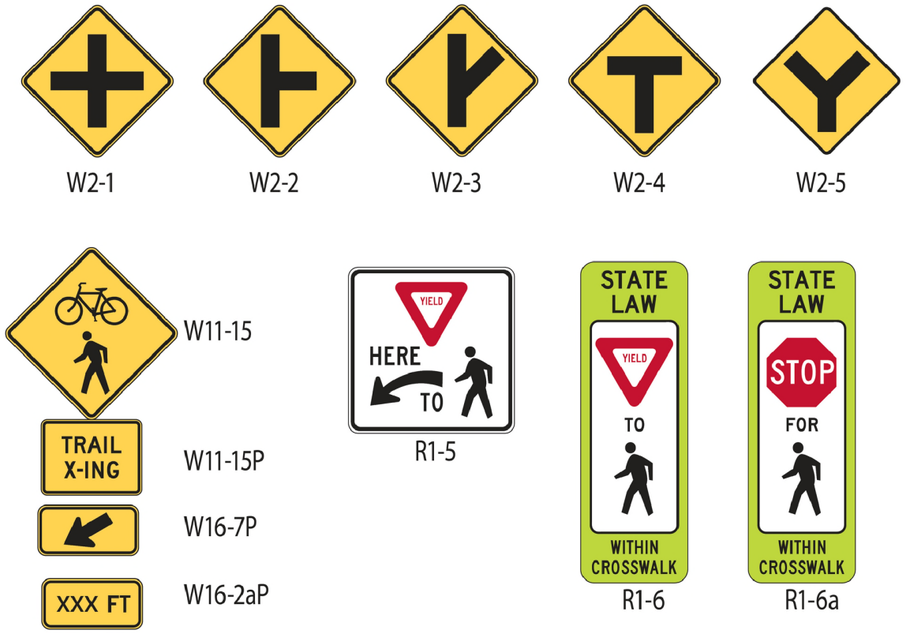
Content

- Based on CA MUTCD D11-1: Bicycle Route Guide Sign. Green background with retroreflective white symbols and border per CA MUTCD.

Materials

- 0.080 inch aluminum sign panel
- Apply anti-graffiti coating.
- Mount to 2" square perforated pole or existing post adjacent to road where available.

Warning Signs



Description

Vehicular traffic signs are required to be installed to warn and control motorists and trail users at road crossings. Intersection Warning (W2-1 through W2-5) signs may be used on a roadway, street , or shared-use path in advance of the intersection. Pedestrian and Bicycle Warning (W11-15) sign alter the road user to unexpected entries into the roadway and other crossing activities that might cause conflict. Yield lines and "Yield Here to Pedestrian" signs should be considered at all uncontrolled crossings, such as free right turns. Traffic safety signs and surface striping are to comply with state and federal standards and best management practices.

Content

- Per CA MUTCD

Materials

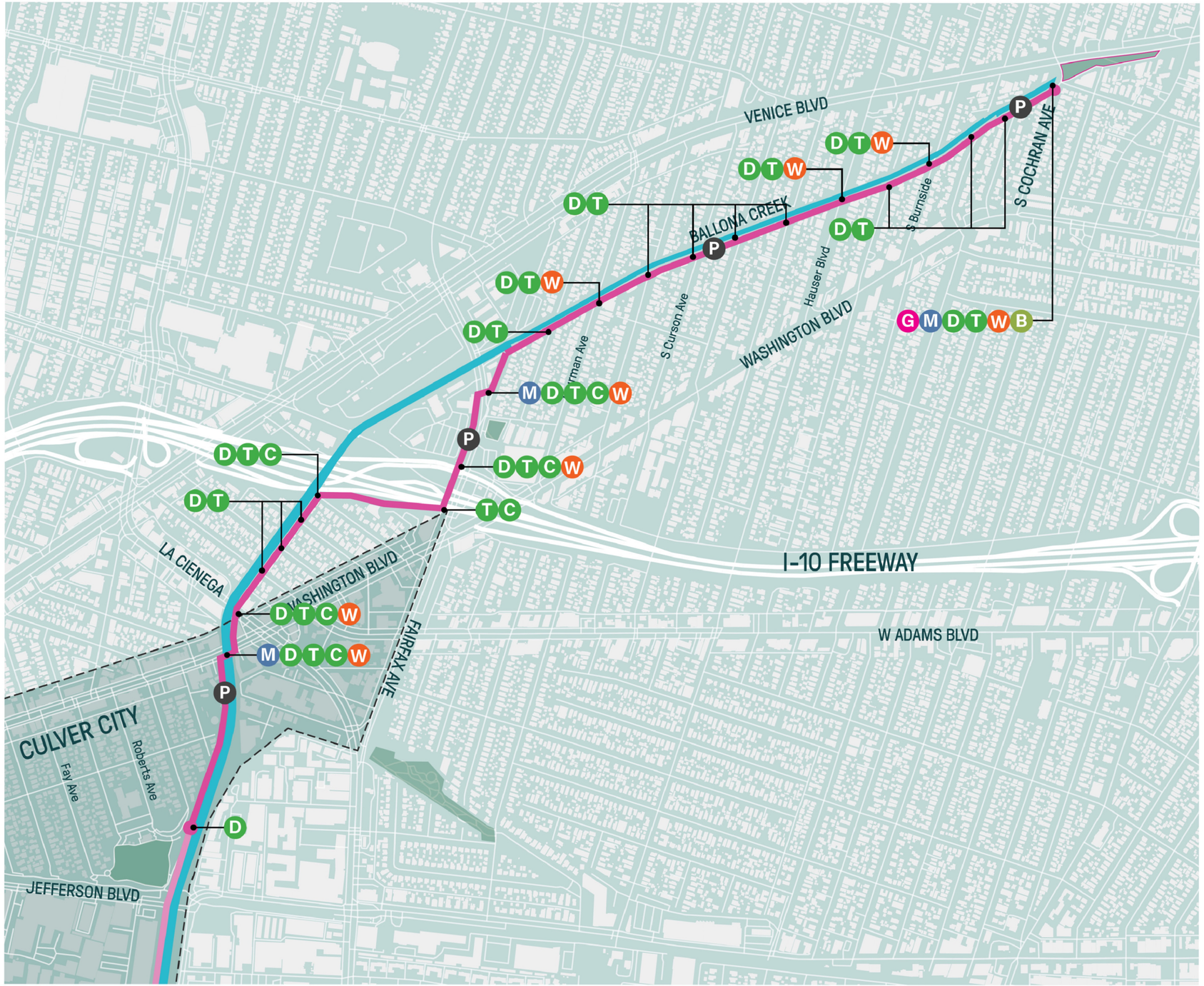
- 0.080 inch aluminum sign panel
- Apply anti-graffiti coating.
- Mount to 2" square perforated pole or existing post adjacent to road where available.

Wayfinding Alternatives

The three alternatives feature similar approaches to wayfinding and signage, with slight variations based on trail typology and context.

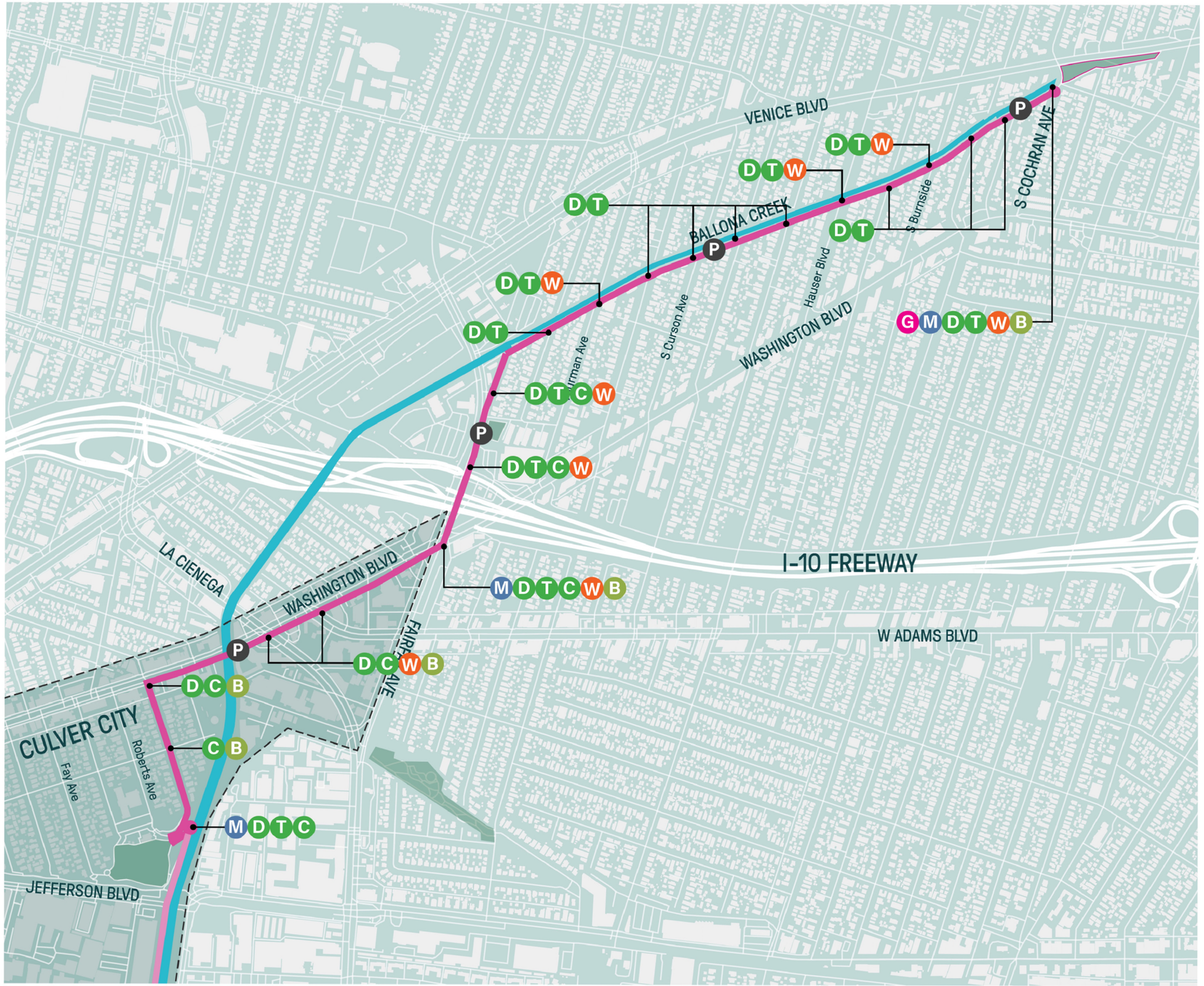
Preferred Alternative Legend

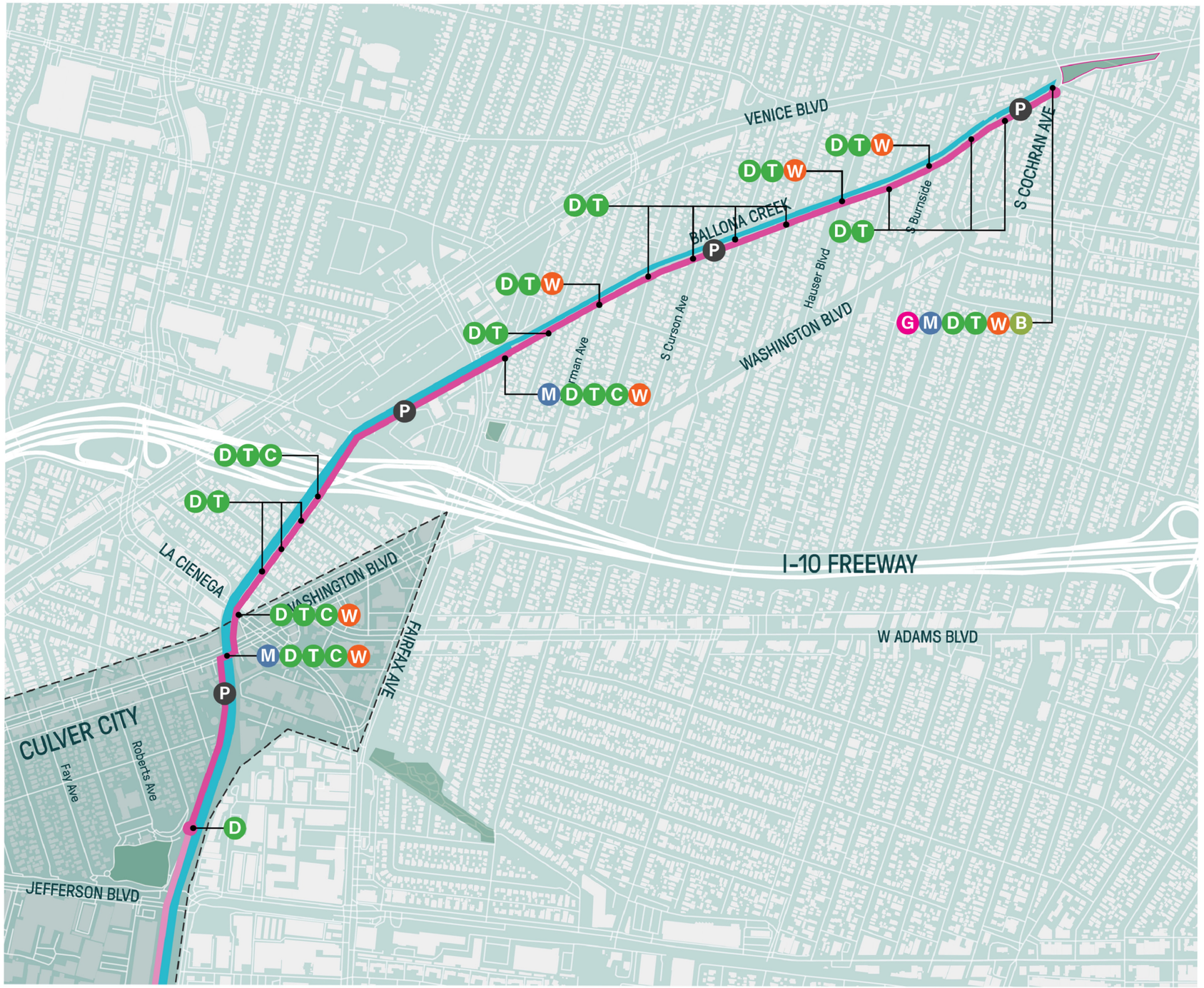
- G Gateway Elements
- M Map Kiosks
- D Direction Signs
- T Turn Signs
- C Confirmation Signs
- P Pavement Markings and Mile Markers
- B Bicycle Guide Signs
- W Warning Signs



Alternative A Legend

- G Gateway Elements
- M Map Kiosks
- D Direction Signs
- T Turn Signs
- C Confirmation Signs
- P Pavement Markings and Mile Markers
- B Bicycle Guide Signs
- W Warning Signs





Alternative B Legend

- G Gateway Elements
- M Map Kiosks
- D Direction Signs
- T Turn Signs
- C Confirmation Signs
- P Pavement Markings and Mile Markers
- B Bicycle Guide Signs
- W Warning Signs

Stormwater Management

The project team investigated requirements for stormwater management along the proposed pathway. Specific stormwater management requirements along the pathway will depend on the Authority Having Jurisdiction (AHJ) over the respective segments:

Los Angeles County Flood Control District (LACFCD)

The existing stormwater management condition within the width of the Ballona Creek is that storm water runoff is directed into the Ballona Creek Channel untreated.

From the 2014 LA County LID manual: "In October 2008, the County adopted an LID Ordinance into the Los Angeles County Code Title 12, Chapter 84 to require the use of LID principles in all development projects except road and flood infrastructure projects." For the bike path segments that would be proposed within the LACFCD right-of-way or easements, input from the LA County Plan check team will be required during the design phase to confirm whether the project can be considered a "road and flood infrastructure" project and therefore not require LID implementation.

City of Los Angeles

The proposed bike path segments falling within the City of LA Right-of-way are the following (from west to east): :

- City of LA segment 1: From La Cienega Blvd to David Ave, within the existing earth embankment located outside of the channel well;
- City of LA Segment 2: From Genesee Ave to half a block E/O Thurman Ave, within the improved Cologne Street ROW;
- City of LA Segment 3: From half of block E/O Thurman Ave (half a block W/O Clyde Ave) to S Cochran Ave, within the existing unimproved Cologne Street ROW.

The design team understands based on conversation with Ammar Eltawil with the City of Los Angeles Bureau of Sanitation / Watershed Protection Division that the general LID permit requirements would be the following:

- If the existing street is paved, improvements might be considered routine maintenance / in-kind replacement. This would potentially apply to City of LA Segment 2.
- If the existing ROW is unimproved and new pavement is proposed, the project will need to follow the Green Street Standards. This would potentially apply to City of LA Segments 1 and 3.

Example of Green Streets Standards that would need to be tailored to the project's specific layout include:

- Vegetated Swale along the path;
- Permeable pavement systems which would need to be coordinated with/approved by a geotechnical engineer;
- Passive irrigation systems provided they seem viable based on landscape architect input.

The detailed design of LID Best Management Practices (BMPs) or Green Streets Standards, including the possibility for stormwater infiltration, will need to be supported by a Geotechnical Engineer's recommendations for the project based on site specific investigations. Based on current existing conditions, a majority of Cologne Street within City of LA is undeveloped. In this relatively wider area, the project could potentially implement LID BMPs such as Bioretention areas with Underdrain and Vegetated Swales along the bike path to collect and treat the 85th percentile storm volume for the respective tributary areas. See next page and the appendix for a conceptual LID approach sketch along the bike path. The vegetative swale along the path would be utilized to direct overland flow into a bioretention area. Guidelines for sizing Bioretention areas and Vegetative Swales would be calculated based on the City of LA LID Design Manual.

The design team also understands that the City of LA has 2 regional stormwater management projects under construction (Ballona Creek TMDL projects 1 and 2). Further input from the City of LA sanitation team will be required to understand whether the bike segments are included in these TMDL projects Tributary Areas and how this project may affect or benefit from the TMDL project.

Culver City

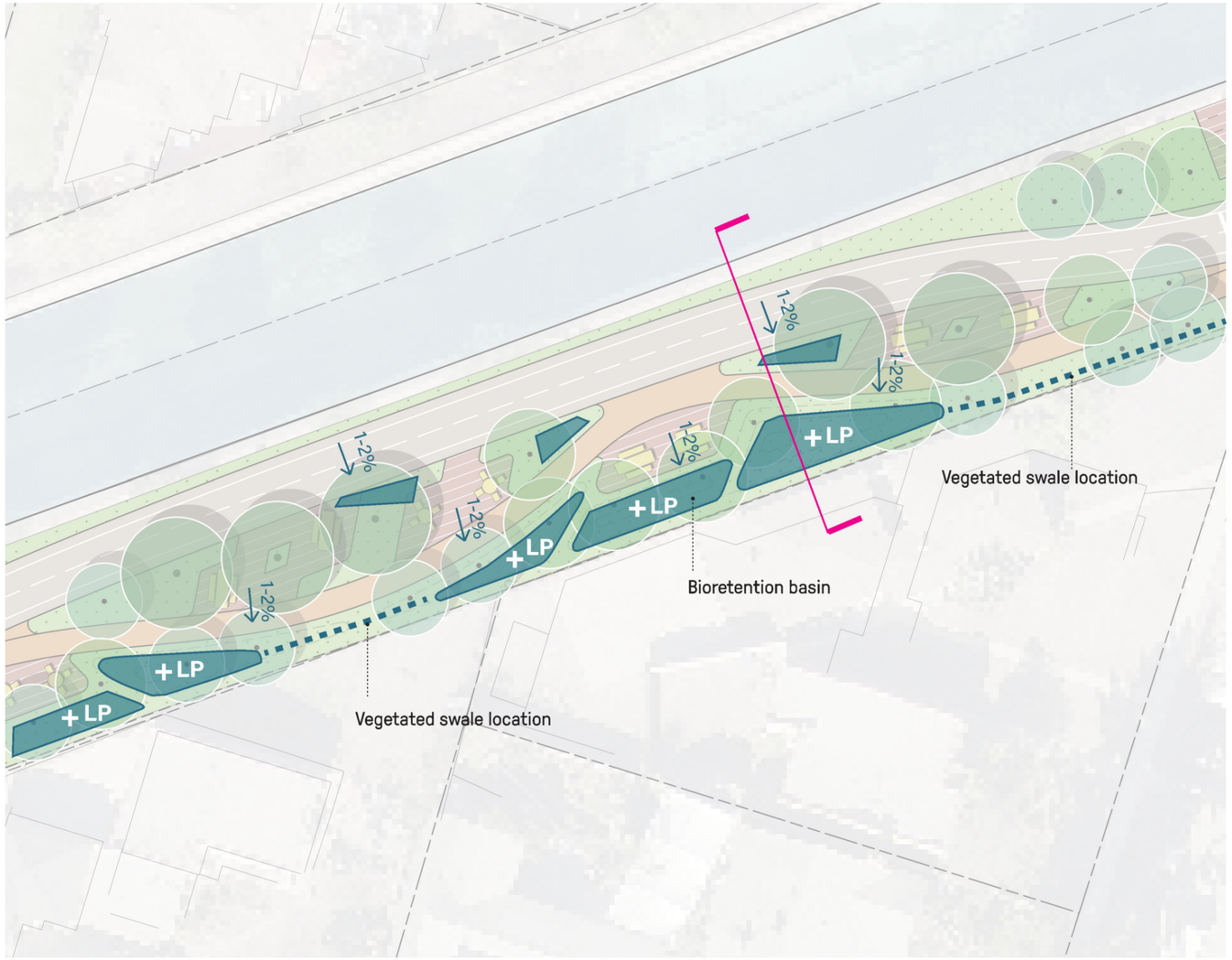
We understand that the Culver City "Street Use Permit" which would be required for new bike lanes within existing streets, would not require LID BMP implementation.

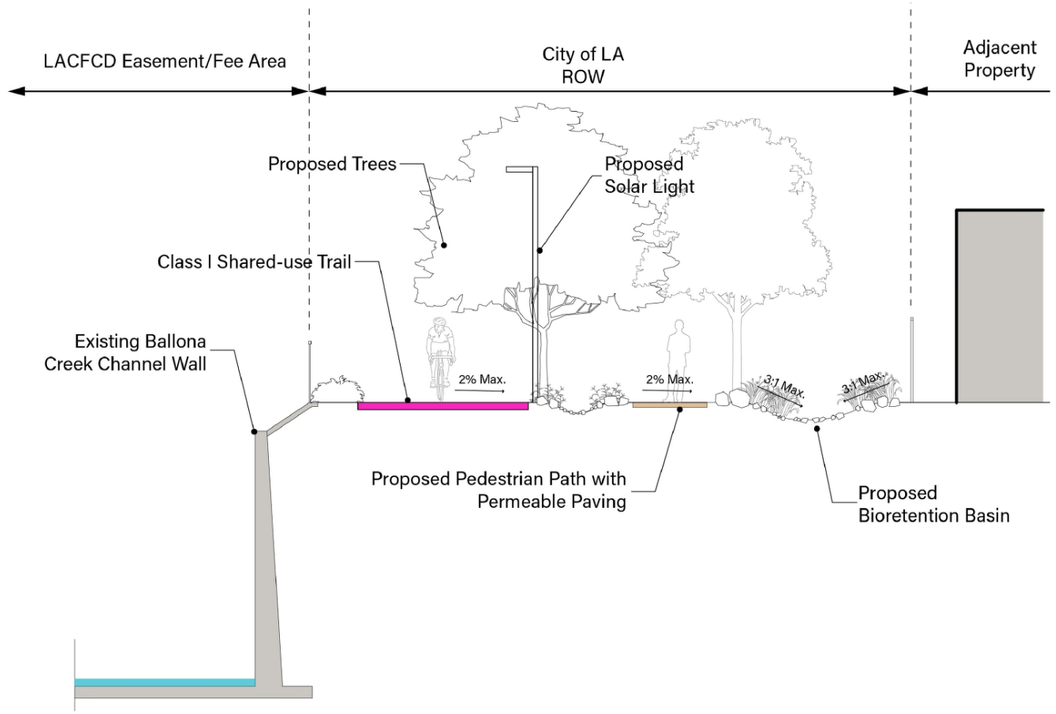
Funding Considerations

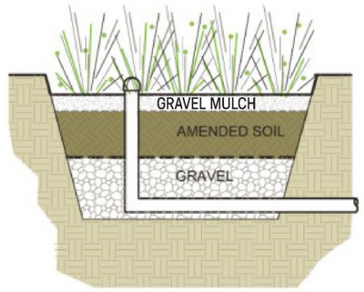
Stormwater management could be a requirement under certain grant approvals. For example, the project team understands that an independent ongoing project aimed to provide improvements to the existing bike lane located south of National Boulevard is providing a small strip of pervious pavement along the bike lane as Best Management Practice (BMP) to comply with the requirements of the Proposition 1 funding received through the Baldwin Hills Conservancy.

Conceptual Stormwater and Drainage Strategy

The project team investigated Low Impact Development Best Management Practices for stormwater along the route. Strategies for stormwater management along the pathway in adjacent landscape areas include vegetated swales, bioretention basins and permeable paving to capture and filter stormwater runoff. Detail design of BMPs facilities will need to be supported by a geotechnical engineer's recommendations for the project based on site specific investigations. The BMPs shown below are proposed only for segments of the project located within the City of Los Angeles.

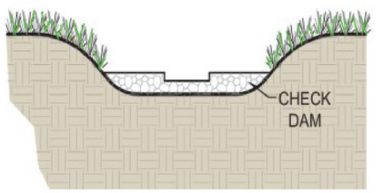






Bioretention Basin with Underdrain

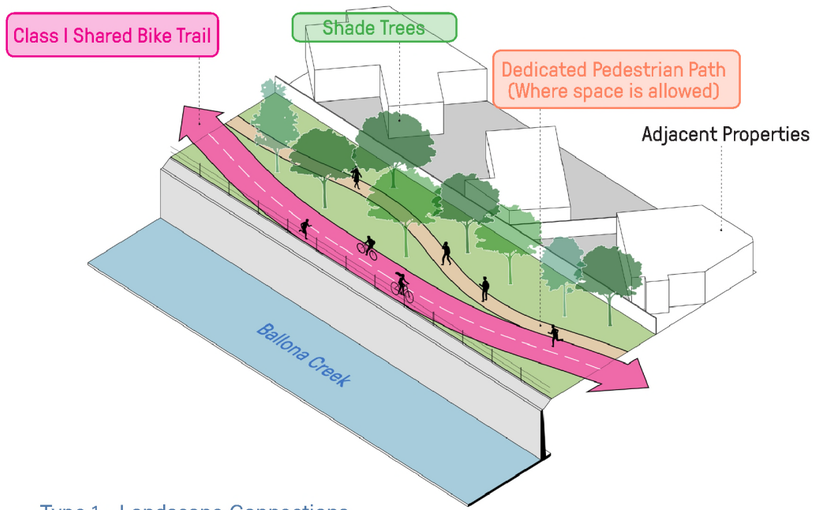
Landscaped shallow depressions are proposed as biorentetion facilities to capture and filter stormwater runoff. As stormwater passes down through the planting soil, pollutants are filtered, adsorbed, and biodegraded by the soil and plants.



Vegetated Swales

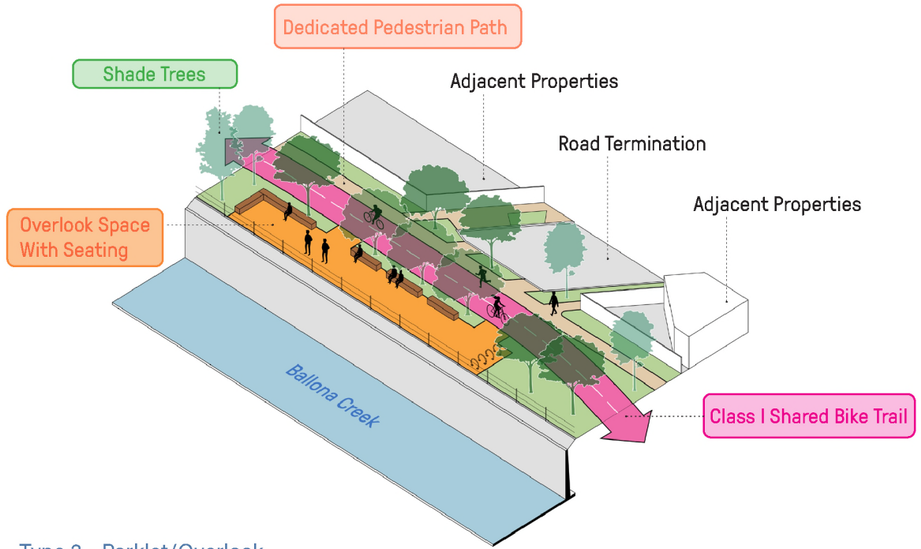
Vegetated swales are proposed with low-lying vegetation that covers side slopes and bottom. These swales will collect and slowly convey runoff to downstream discharge points.

Greenspace Design - Landscape Types



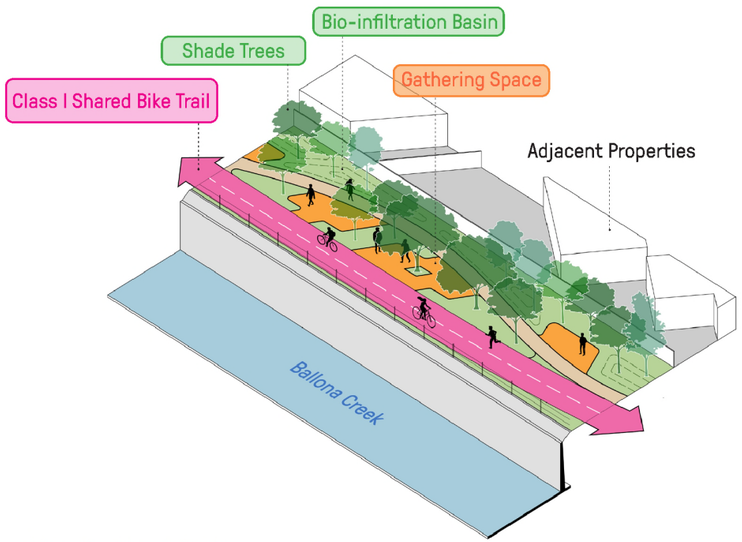
Type 1 - Landscape Connections

Landscaping is proposed along the Ballona Creek pathway extension where space allows.



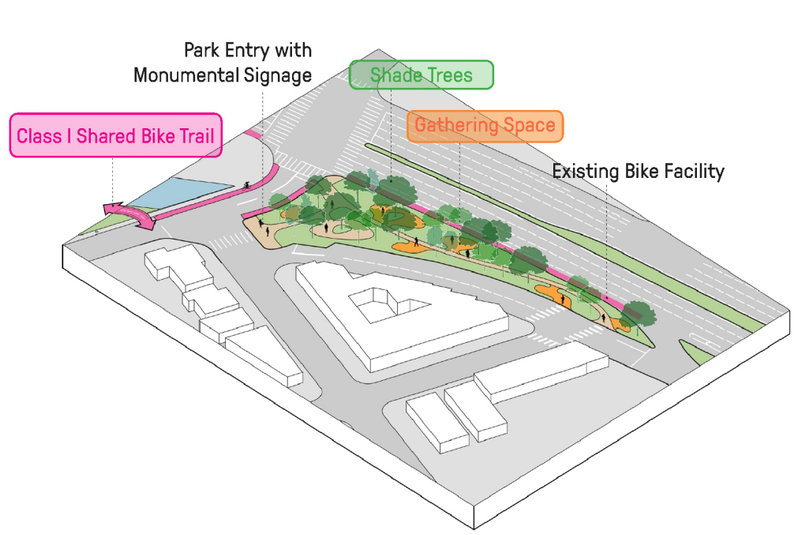
Type 2 - Parklet/Overlook

Parklet spaces are proposed at key access points along the pathway. Existing sidewalks are connected for pedestrian access and channel overlook/gathering spaces are created along the channel edge.



Type 3 - Linear Park

A series of linear park spaces are proposed where space allows along the pathway route. Programmable gathering places with biofiltration basins are included.



Type 4 - Gateway Park

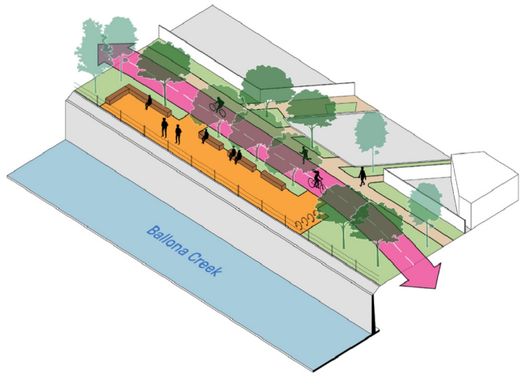
A gateway park is proposed for the intersection of Venice Blvd & S Cochran Ave. The park is designed to be a destination and to mark the start of extended Ballona Creek pathway - the car-free route from Mid-City LA to the ocean.

Type 5 - Green Streetscape

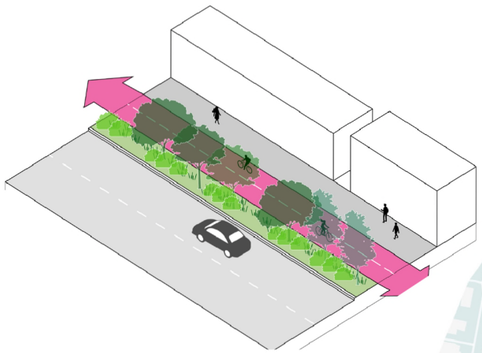
A vegetated buffer is envisioned along two-way Class IV bike facilities where space allows. This buffer will separate the bike path from vehicular traffic and provide a relatively shaded and enhanced trail experience.

Greenspace Design - Landscape Types

Type 2 - Parklet/Overlook



Type 5 - Green Streetscape



Type 1 - Landscape Connections

Type 3 - Linear Park

Type 4 - Gateway Park

Plant Palette

The conceptual plant palette selected for the project was guided by the following: 1) the historic ecologies which existed in and around Ballona Creek prior to channelization, and 2) the strong desire, voiced by community members, for native plants and shade trees along the pathway extension and in adjacent park space. These two elements work together to produce green spaces that appeal to users and enhance connections to local nature, while increasing biodiversity and opportunities for habitat.

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Linear Parks & Gateway Park



Cercis occidentalis
Western Redbud



Prunus ilicifolia ssp lyonii
Catalina Cherry



Quercus agrifolia
Coast Live Oak



Atriplex lentiformis ssp breweri - *Brewers Salt Bush*



Berberis nevinii
Navin's Barberry



Rhus ovata
Sugar Bush



Asclepias fascicularis
Narrow Leaf Milkweed



Baccharis pilularis 'Pigeon Point' - *Dwarf Coyote Brush*



Epilobium canum
California fuchsia



Eriogonum fasciculatum 'warriner Lytle'
Warriner Lytle Buckweat



Hesperoyucca whipplei
Chaparral yucca



Muhlenbergia rigens
Deergrass

Parklets



Quercus agrifolia
Live Coast Oak



Carex tumulicola
Foothill Sedge



Ribes viburnifolium
Catalina Current



Salvia spathacea
Hummingbird Sage

Plant Palette (continued)

Bioswale



Platanus racemosa
California Sycamore



Carex praegracilis
California Field Sedge



Grindelia hirsutula
Hairy Gumweed



Yuncus patens
California Gray Rush



Leymus condensatus ‘ Canyon Prince’
Canyon Prince Wild Rye



Leymus triticoides
Creeping Wild Rye



Artemisia douglasiana
Mugwort



Sporobolus airoides
Alkali Sacaton

Landscape Connections



Juglans californica
California Black Walnut



Koeleria macrantha
Prairie junegrass



Melica imperfecta
Coast Range Melic



Oenothera hookeri
Hookers Evening Primerose



Stipa pulchra
Purple Needlegrass

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Hardscape Materials Palette

The project's hardscape material palette is centered on durable and low-maintenance materials appropriate for a public project that will receive frequent pedestrian and cyclist use. All depths and reinforcement shall be as outlined by the geotechnical report. The hardscape material selections emphasize sustainability and prioritize locally-sourced options.

Bike Trail + Pedestrian Walkway



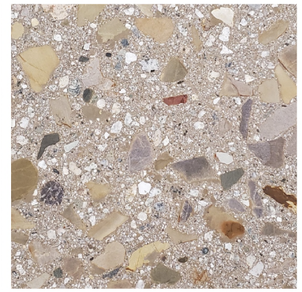
Cast in Place Concrete
Integral Color, Topcast Finish



Cast in Place Concrete
Integral Color, Topcast Finish



Pervious Concrete
With Perktop Finish



Cast in Place Concrete
Accent Aggregate

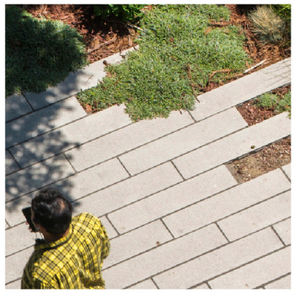


Cast in Place Concrete
Accent Aggregate



Decomposed Granite
Stabilized

Pocket / Gathering Space



Concrete Unit Pavers



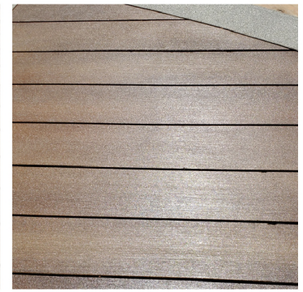
Concrete Unit Pavers



Cobble Stone
Tumbled Finish



Wood Decking
Modified Ash or Pine wood
Locally sourced

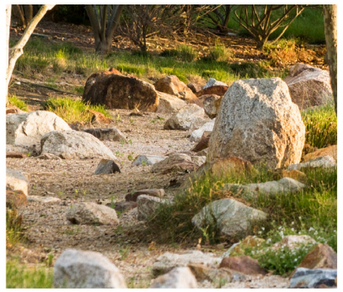


Cast in Place Concrete
Wood Finish

Dry Creek / Bio-infiltration Basin



Crushed Stone

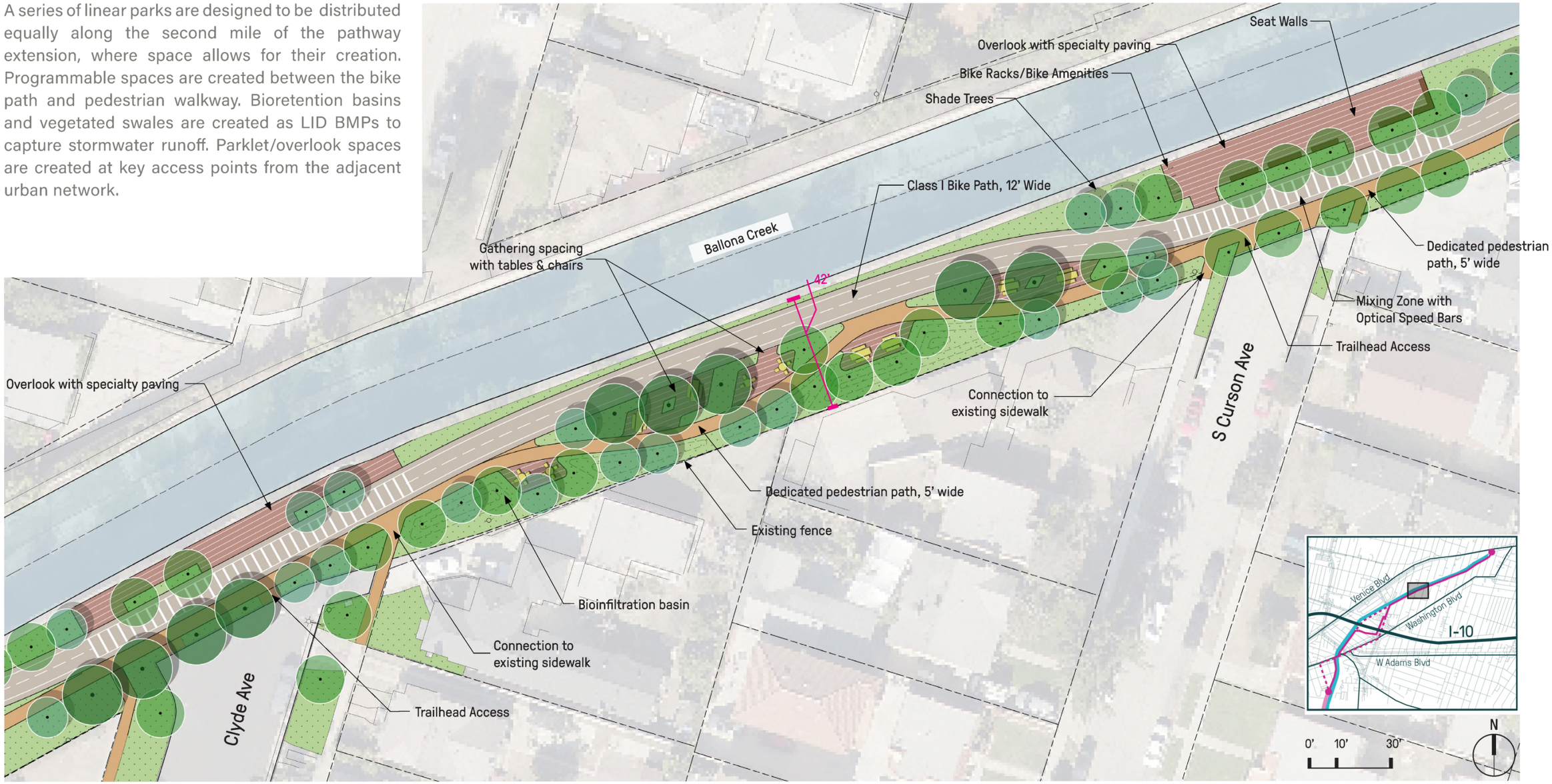


Boulders

The concepts presented herein have not been approved by the City of Culver City and are shown for purposes of this feasibility study only. Final alignment and design is subject to review and approval by the City of Culver City where the project falls within its jurisdiction.

Linear Park + Parklet Concept

A series of linear parks are designed to be distributed equally along the second mile of the pathway extension, where space allows for their creation. Programmable spaces are created between the bike path and pedestrian walkway. Bioretention basins and vegetated swales are created as LID BMPs to capture stormwater runoff. Parklet/overlook spaces are created at key access points from the adjacent urban network.



Linear Park + Parklet Concept

Existing Site Condition - Between Clyde Ave and S Curson Ave



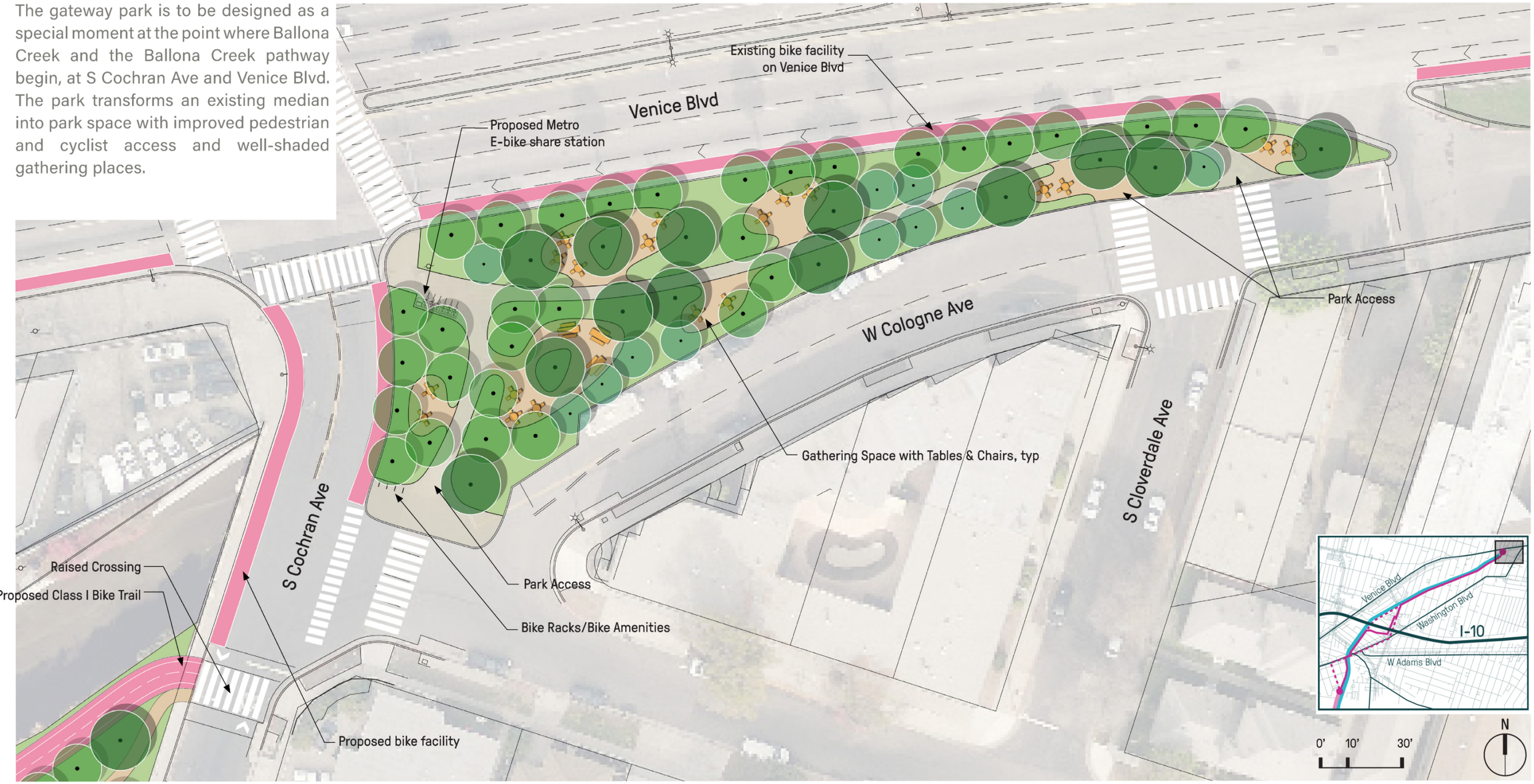
Linear Park + Parklet Concept

Proposed Conceptual Scheme



Gateway Park Concept

The gateway park is to be designed as a special moment at the point where Ballona Creek and the Ballona Creek pathway begin, at S Cochran Ave and Venice Blvd. The park transforms an existing median into park space with improved pedestrian and cyclist access and well-shaded gathering places.



Gateway Park Concept

Existing Site Condition - Venice Blvd & Cochran Ave



Gateway Park Concept

Proposed Conceptual Scheme



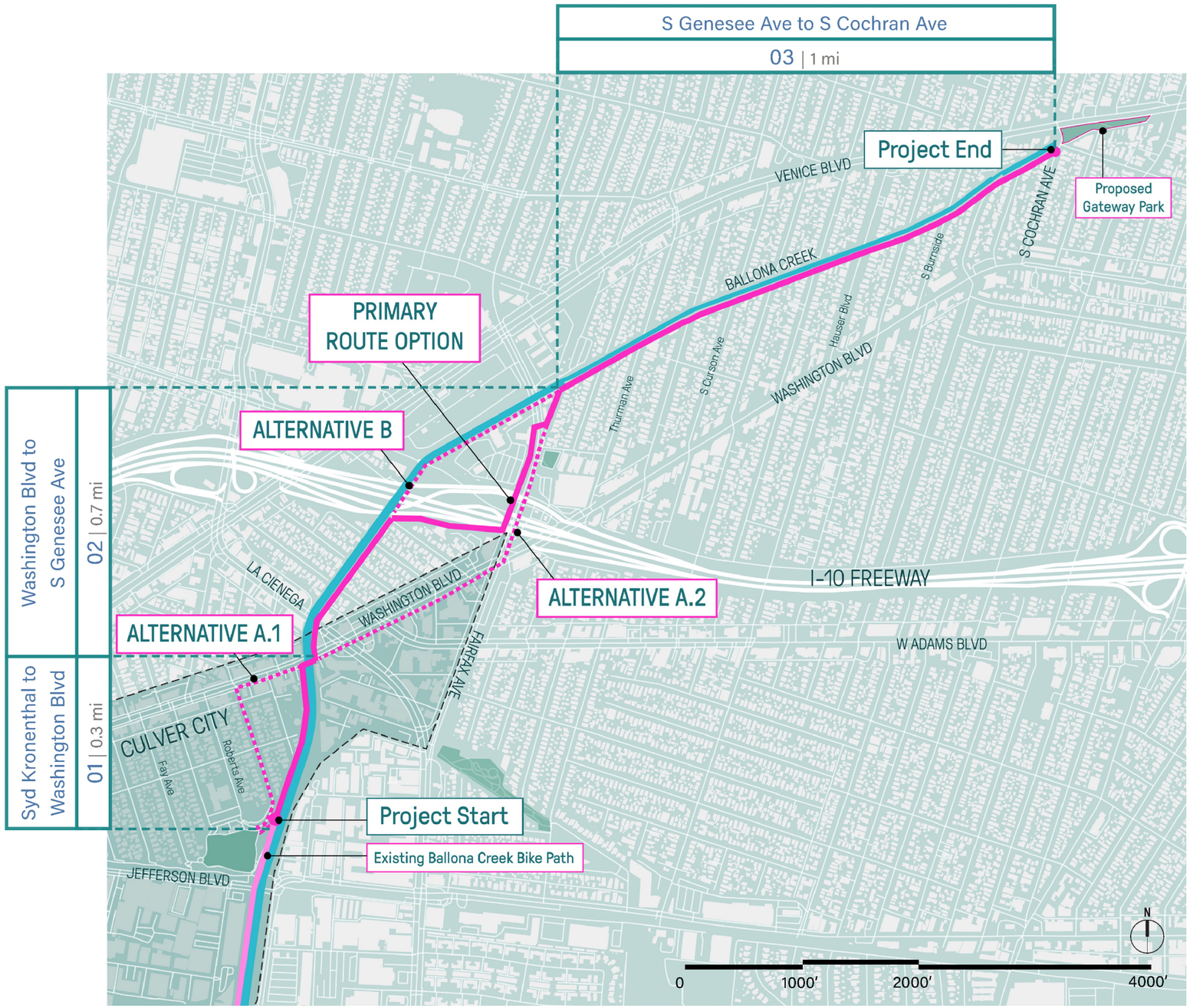
Chapter 7
Supplemental Analysis

Overview

Chapter 2 Preliminary Site Analysis focused on analysis of existing conditions in the communities surrounding the proposed pathway extension. The following chapter focuses on assessing the potential impacts of the expected built project's preferred alignment and proposed alternatives.

The project team performed evidence-based analysis for a series of topics using qualitative and quantitative standards of practice. The following topics are presented in this chapter:

- Active Trip Potential
- Crash Modification Factors
- Benefit-Cost Analysis
  - User Demand
  - Reduction in Motor Vehicle Trips
  - Greenhouse Reduction
- Safe Routes to School Linkages



Active Trip Potential

Areas around the Ballona Creek bike path extension have the potential for high volumes of active trips.

Active Trip Potential represents trips with distances short enough (less than 3 miles) to be accommodated by walking or biking. Block groups with the highest Active Trip Potential are those in dark orange, typically the locations of shopping centers/retail, offices, schools, and parks, such as Midtown Shopping Center, La Cienega Plaza, and Hayden Tract. Those with the lowest Active Trip Potential are those in white/light orange, and are mainly low-density residential neighborhoods.

Near Ballona Creek, most active trips occur along the existing Ballona Class I Bike Path and Venice Boulevard, which has a Class II bikeway. There are also several block groups along Washington Boulevard, north of National Boulevard/Jefferson Boulevard, that are also **potential destinations for a high volume of active trips**. The proposed bike path extension offers the potential to ensure a safer biking environment for reaching those destinations.



Legend

- Ballona Creek
- Primary Route
- Alternative Routes
- Within 1/4 Mile of Proposed Extension
- Existing Bicycle Facility

Active Trip Potential Destinations / Acres* by Block Group

- 240 - 1081
- 1082 - 1255
- 1256 - 2095
- 2096 - 6152
- 6153 - 25729

* This metric displays the amount of trips of 3 miles or less that end in a block group, standardized by the amount of acreage of a block group.

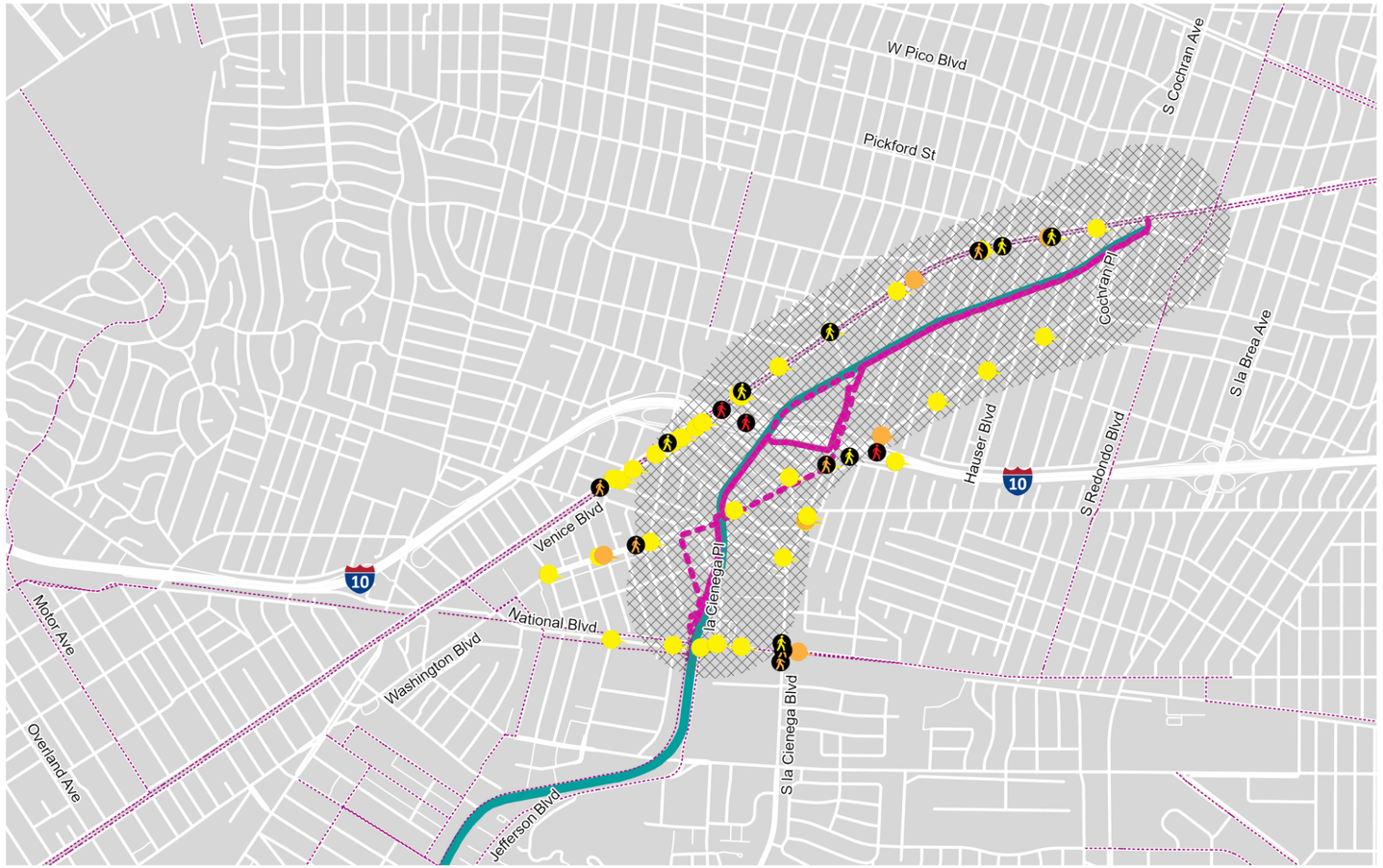
Crash Modification Factors

Overall, the Ballona Creek Bike Path extension project **could have eliminated 46 bicycle crashes and 14 pedestrian crashes** between 2013 and 2022, including 3 fatal pedestrian crashes, 6 severe bicycle crashes, 5 severe pedestrian crashes, 6 minor pedestrian crashes, and 40 minor bicycle crashes.

The Crash Modification Factors (CMF) map to the right demonstrates the collisions between 2013-2022 which could have been eliminated by the provision of the Ballona Creek Phase 2 Bike Path.

CMFs are used to estimate the number of collisions that a respective active transportation infrastructure treatment can have. The CMFs used in the analysis are as follows:

- Install Shared Path
- Install Crosswalk at Midblock Locations
- Install Median Raised Islands at Crossings
- Install pedestrian signal or HAWK at midblock crossings



Legend

- Ballona Creek
- Primary Route
- Alternative Routes
- Within 1/4 Mile of Proposed Extension
- Existing Bicycle Facility

Collisions which could have been eliminated by the provision of the Ballona Creek Phase 2 Bike Path

Pedestrian	Bike
Fatal	Fatal
Injury (Severe)	Injury (Severe)
Injury (Other Visible)	Injury (Other Visible)

Benefit-Cost Analysis

Overview

The benefit-cost analysis (BCA) for this project follows the principles documented in the USDOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs (2023) and uses the recommended parameter values where applicable. The BCA includes the benefits and costs for Ballona Creek Phase 2 Pathway if construction were to proceed. The analysis period was 25 years (five years of construction and 20 years of operation) and assumes a useful service life of 30 years for the project. All costs and benefits are presented in 2023 base year dollars and assume the trail is open to the public in 2028. Appendix P contains a detailed explanation of the BCA methodology, assumptions, and results.

Extents of Analysis

While construction of the project will benefit all residents of and visitors to the region, those living within three miles (about a 15-minute bike ride) and one-half mile (about a 10-minute walk) of the project will have the most convenient access and will gain the most from its completion. Accordingly, this BCA focuses on the benefits attributed to residents living within three miles of the project and on the walking benefits attributed to residents living within one-half mile of the project.

User Demand

To understand the benefits of the proposed alignment, a demand analysis was conducted to estimate the expected number of biking and walking trips that would occur after the project is implemented. The primary inputs to demand analysis were counts at similar location to proposed project. Counts were selected based on land use, comparable alignment function and count type. The estimated number of annual bike trips is 184,325 and the estimated number of annual pedestrian trips is 597,140 for a total of 781,465 trips per year.

Reduction in Motor Vehicle Trips

To estimate the number of vehicle-miles of travel (VMT) that might be replaced by bicycling and walking trips, the number of vehicle miles reduced due to bicycle and pedestrian trips was calculated by multiplying the number of biking or walking trips by industry standard trip replacement and trip distance factors. The analysis estimates that the 781,465 walking and biking trips on the proposed alignment would reduce vehicle miles traveled by 213,700 miles in the project's first year of operation.

GHG Reduction

For every VMT reduced, there is an assumed decrease in greenhouse gases (GHG). The two primary greenhouse gases that are reduced are carbon dioxide and nitrous oxides. In total, a reduction of 90.3 metric tons of GHG emissions is estimated annually (annual metric is anticipated to increase each year, result is for 2028.

Benefit	GHG Emission Reduction (metric tons)
Nitrous oxides	0.2
Carbon dioxide	89.9
Total (2028)	**90.3**
Total over 25 years	**1,923.7**

GHG emsision reductions.

597,140
Annual Walking Trips

184,325
Annual Biking Trips

213,700
Reduction in Annual VMT Reduction

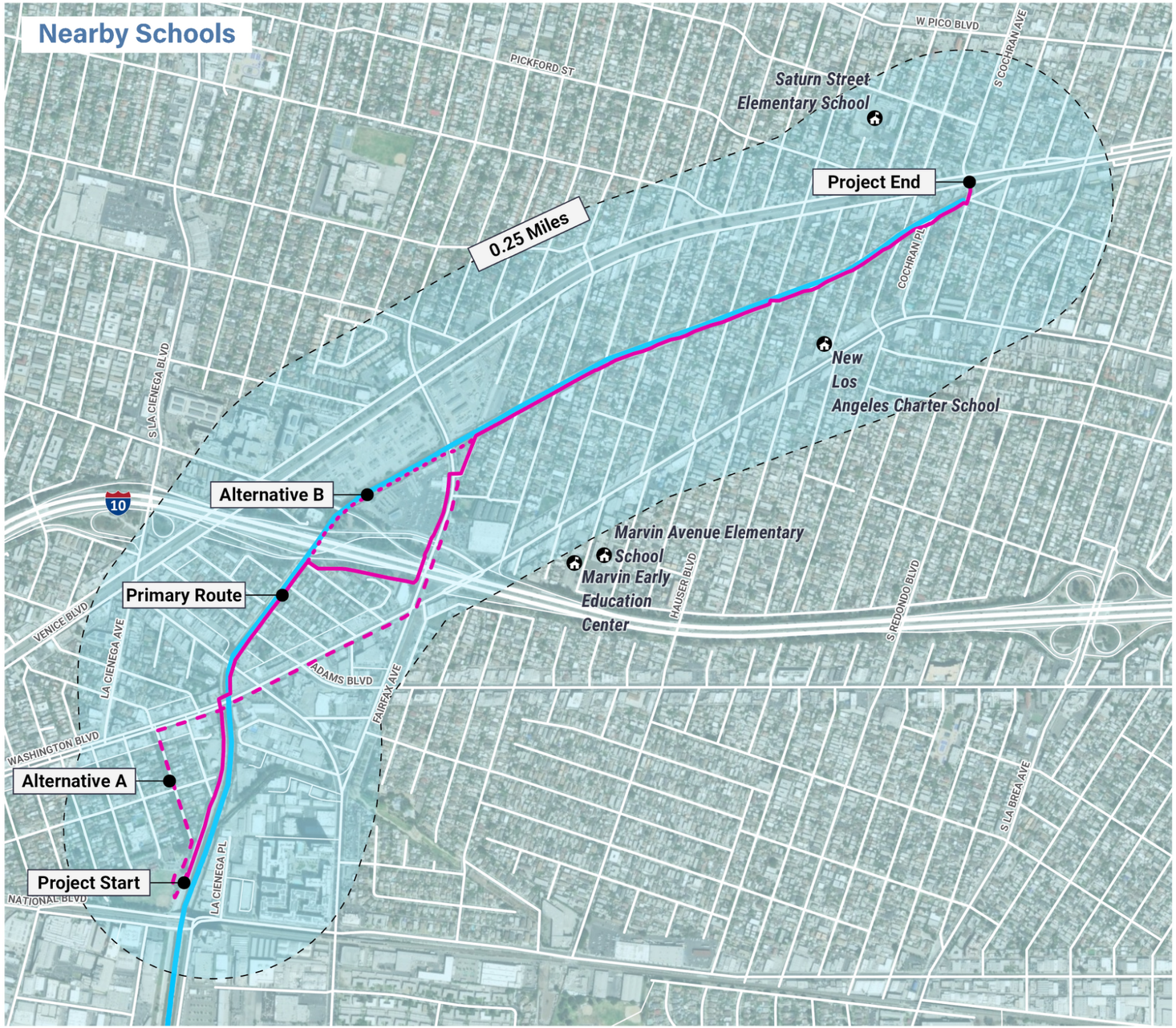
90.3 metric tons
Reduction in Annual GHG Emissions

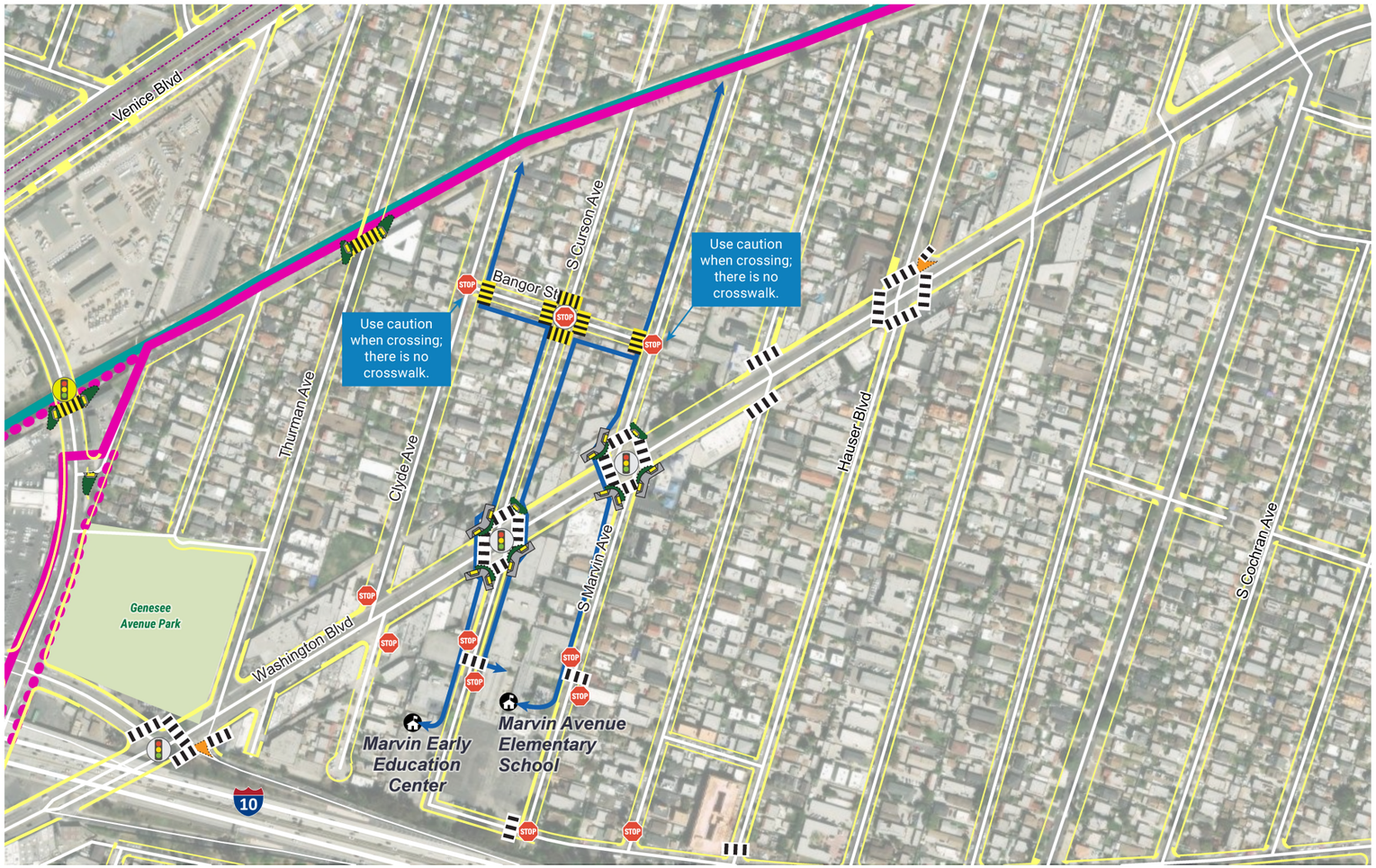
Annual benefits of the implementation of the Ballona Creek Trail. Results reported for the first year the path is open to the public (2028).

Safe Routes to School Linkages

Safe Routes to School (SRTS) is an international effort to increase the number of students who walk and bike to school through infrastructure improvements and community programs. The project team identified four schools within approximately 1/4 mile from the proposed pathway extension route, as shown in the map to the right.

The following pages illustrate the potential for safer routes to these schools utilizing the proposed pathway extension.





Legend

- Ballona Creek
- Primary Route
- Alternative Routes
- Existing Bicycle Facility
- Schools

Existing Conditions

- Existing Sidewalks
- Existing Traffic Signal
- Existing Stop Sign
- Existing Crosswalk
- Existing Right-turn Slip Lane

Recommendations

- Curb Extension
- Stop Sign Warrent Study
- New Traffic Signal
- New High Visibility Crosswalk
- Suggested Walking Routes

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This map is intended for informational purposes only. Parents and caregivers should decide the best travel options for their students.

Marvin Early Education Center & Marvin Avenue Elementary School

School Profile

School Name	Marvin Early Education Center	Marvin Avenue Elementary School
Grades	Pre-K to K	K to 5
School Type	Neighborhood	Neighborhood
Enrollment	92	639

Suggested Routes for Marvin Early Education Center

Walking Time	7 minutes
Directions	1. Walk along S Curson Ave heading north; 2. Cross Washington Blvd using the crosswalk; 3. Continue heading north on S Curson Ave; 4. Turn left on Bangor St before crossing; 5. Turn right on Clyde Ave crossing Bangor St.

** Parents and caregivers are advised to accompany their children to ensure their safety considering the students attending Marvin Early Education Center are young.*

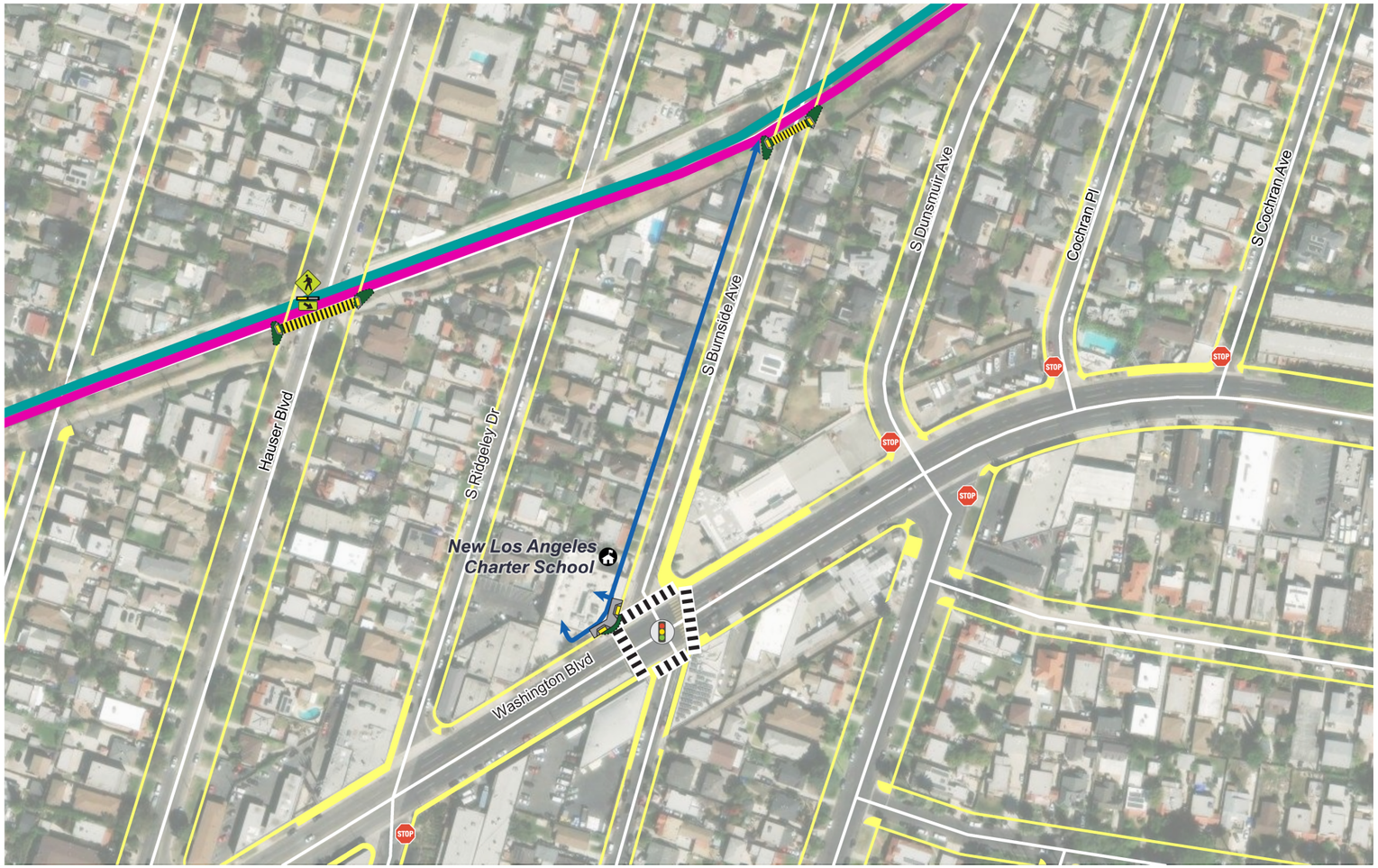
Suggested Routes for Marvin Avenue Elementary School

	Alternative Route 1 (School access point on S Curson Ave)	Alternative Route 2 (School access point on S Marvin Ave)
Walking Time	9 minutes	8 minutes
Directions	1. Walk along S Curson Ave heading north; 2. Cross Washington Blvd using the crosswalk; 3. Continue heading north on S Curson Ave; 4. Turn right on Bangor St before crossing; 5. Turn left on S Marvin Ave crossing Bangor St.	1. Walk along S Marvin Ave heading north; 2. Cross Washington Blvd using the crosswalk; 3. Continue heading north on S Marvin Ave until reaching the proposed extension.

Potential Improvements along Suggested Routes

- Install curb extensions on all corners at the intersection of Washington Blvd and S Curson Ave.
- Install curb extensions on all corners at the intersection of Washington Blvd and S Marvin Ave.
- Install all-way STOP at the intersection of Bangor St and S Curson Ave.
- Install high visibility crosswalk at all legs at the intersection of Bangor St and S Curson Ave.
- Install high visibility crosswalk across the eastern leg of the intersection of Bangor St and Clyde Ave.
- Install high visibility crosswalk across the western leg of the intersection of Bangor St and S Marvin Ave.

New Los Angeles Charter School



School Profile

School Name	New Los Angeles Charter School
Grades	6 to 8
School Type	Charter
Enrollment	300

Suggested Routes for New Los Angeles Charter School

Walking Time	6 minutes
Directions	Walk along South Burnside Avenue in a northerly direction until reaching the proposed extension.

Potential Improvements along Suggested Routes

- Install a curb extension on the northwest corner at the intersection of Washington Blvd and S Burnside Ave.

Legend

- Ballona Creek
- Primary Route
- Existing Bicycle Facility
- Schools

Existing Conditions

- Sidewalks
- Existing Traffic Signal
- Existing Stop Sign
- Existing Crosswalk

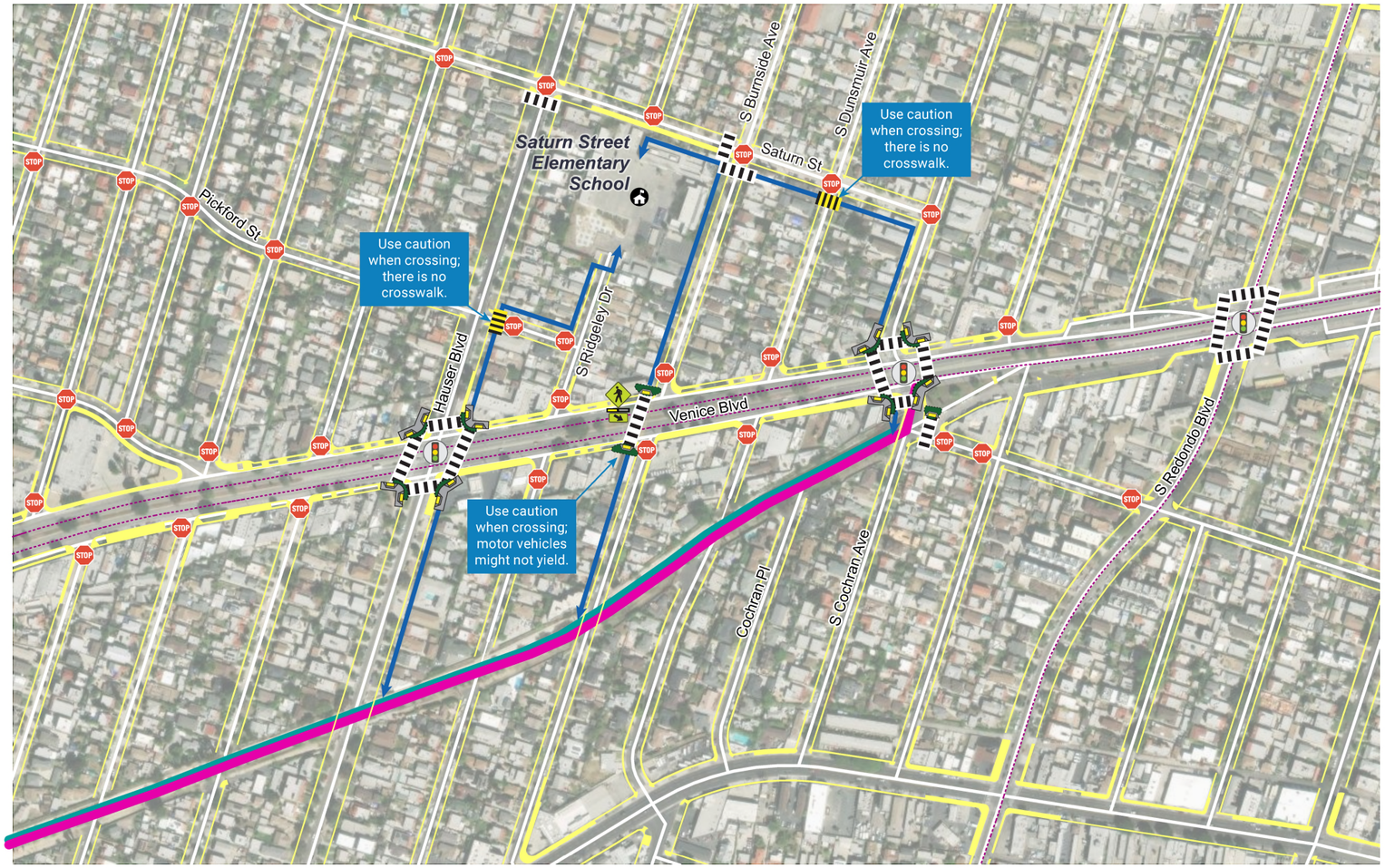
Recommendations

- Curb Extension
- New High Visibility Crosswalk
- New Rectangular Rapid Flashing Beacon
- Suggested Walking Routes

0 100 '

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This map is intended for informational purposes only. Parents and caregivers should decide the best travel options for their students.



Saturn Street Elementary School

School Profile

School Name	Saturn Street Elementary School
Grades	K to 5
School Type	Neighborhood
Enrollment	291

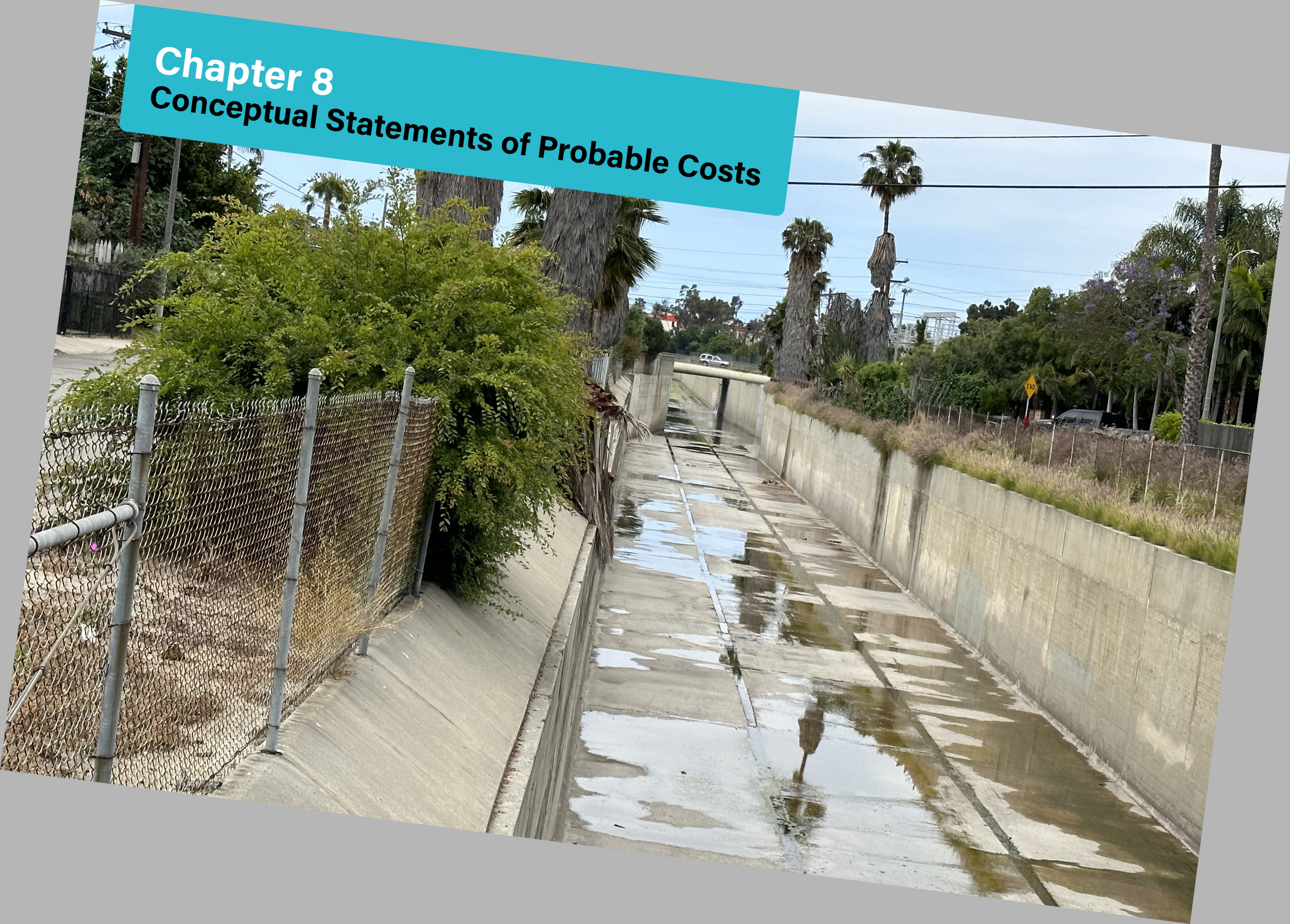
Suggested Routes for New Los Angeles Charter School

	Alternative Route 1 (School access point on S Ridgeley Dr)	Alternative Route 2A (School access point on Saturn St)	Alternative Route 2B (School access point on Saturn St)
Walking Time	8 minutes	8 minutes	7 minutes
Directions	1. Walk along S Ridgeley Dr heading south; 2. Turn right on Pickford St heading west; 3. Cross Pickford St at Hauser Blvd; 4. Continue heading south on Houser Blvd until reaching the proposed Ballona Phase 2 Bike Path extension.	1. Walk along Saturn St heading east; 2. Turning right at S Burnside Ave and continue heading south; 3. Use the push button to trigger the Rectangular Rapid Flashing Beacon (RRFB) at S Burnside Ave and Venice Blvd to cross Venice Blvd; 4. Keep heading south until reaching the bike path.	1. Walk along Saturn St heading east until reaching S Cochran Ave; 2. Make a right turn and continue walking south; 3. At the traffic light, students can cross Venice Blvd to reach the eastern entry point of the proposed Ballona Phase 2 Bike Path extension.

Potential Improvements along Suggested Routes

- Install curb extensions on all corners at the intersection of Hauser Blvd and Venice Blvd.
- Install curb extensions on all corners at the intersection of S Cochran Ave and Venice Blvd.
- Install curb extensions at the Rectangular Rapid Flashing Beacon crossing at the intersection of S Burnside Ave and Venice Blvd.
- Install high visibility crosswalk across the eastern leg of the intersection of Pickford St and Hauser Blvd.
- Install high visibility crosswalk across the southern leg of the intersection of S Dunsmuir Ave and Saturn St.

Chapter 8
Conceptual Statements of Probable Costs



Overview

A statement of the probable cost of construction for the pathway extension was prepared for the future project as part of the feasibility study.

Estimates of probable costs were extrapolated for each of the segments shown to the right. A full detailed statement of probable cost can be found in Appendix Q. The statement of probable cost includes the direct and indirect construction costs listed below.

Direct Construction Costs

- **Building Demolition**
- **Selective Demolition**
- **Hazardous Material**
- **Site Survey**
- **Earthwork & Grading**
- **Erosion Control**
- **Traffic Control**
- **Asphalt Paving**
- **Site Concrete**
- **Planting**
- **Irrigation Systems**
- **Wood Decking**
- **Paving**
- **Fencing and Gates**
- **Specialties**
- **Signage**
- **Exterior Painting**
- **Site Structure**
- **Furnishing**
- **Water Features**
- **Site Lighting**
- **Miscellaneous Utilities**
- **Domestic Water**
- **Fire Water**
- **Sanitary Sewer Systems**
- **Storm Drainage Systems**
- **Gas Systems**
- **Site Electrical**
- **Traffic Signals**
- **Off-Site Utilities**

- **Design Contingency** (15.00% - to cover unknown design scope and protect the design team/owner)
- **Market Escalation** (10.52% - to cover fluctuations in construction markets between the initial concept of an estimate and the actual period of construction)

Indirect Construction Costs

- **General Conditions** (8.00% - all costs during construction including: field supervision, project engineer, mobilization and demobilization)
- **General Requirements** (3.00% - all temporary works such as job trailer, temporary fencing, safety and general cleaning)
- **Bonds** (1.10% - to protect against an adverse event that causes disruptions, failure to complete the project due to insolvency of the builder(s), or the job's failure to
- meet contract specifications.)
- **General Liability Insurance** (1.50% - covers claims for damages resulting from injury to or destruction of property, bodily injury, property damage arising out of completed operations, damages insured by usual personal injury liability insurance, and claims for damages because of bodily injury, sickness or disease, or death of any person other than the contractor's employees)
- **Overhead & Profit** (4.50% - the general overhead and operating costs, as well as profit)

The cost estimate assumes a construction duration of 24 months and construction start date of February 1, 2026.

Exclusions

The cost estimate does not include construction contingency and soft costs. It does not include estimated permitting fees or potential costs associated with preparing permit applications, nor does it include estimated costs for environmental reviews (NEPA/CEQA), though general cost information can be found in Chapter 5 ROW Assessment.

Methodology

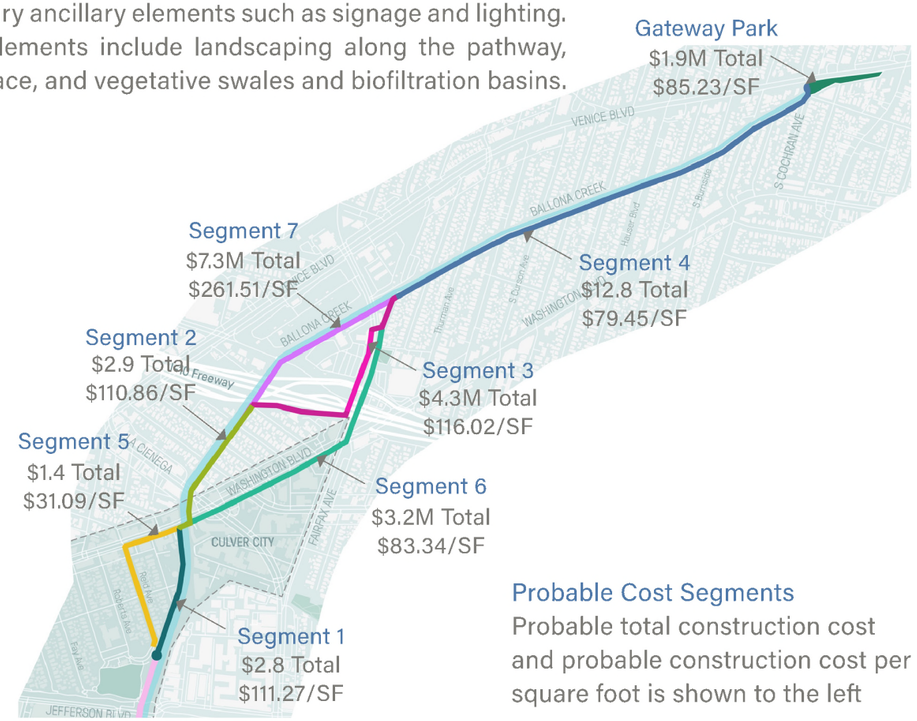
The cost estimate reflects fair market value construction costs obtainable in a competitive bidding market in Los Angeles, California. The estimate assumes a Design Bid Build contract, with bids from a minimum of three subcontractors per trade. The estimate is a determination of fair market value for the construction of the project and is not intended to be a prediction of low bid. Please note that experience indicates a lower number of bidders may result in a higher bid amount, thus more bidders may result in a lower bid result.

Design Costs and Permitting Fees

A general estimate of design costs associated with bringing the project from the feasibility study phase to the construction phase can be determined as a percentage (10.00%) of construction costs. Permitting can be estimated at +/- 1.00% of construction costs. More precise design costs and permitting fees will need to be gathered in future phases of the subsequent project.

Active Transportation vs. Other Elements

To aid in seeking grant funding for different elements of the project, the following pages break-up costs between estimates for active transportation elements and other elements, primarily landscape. Active transportation elements include facilities for biking and walking, as well as necessary ancillary elements such as signage and lighting. Other elements include landscaping along the pathway, park space, and vegetative swales and biofiltration basins.



Probable Cost Segments

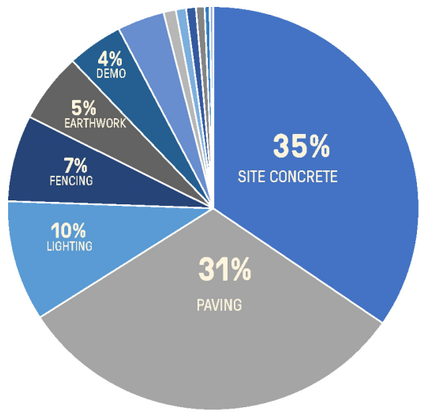
Probable total construction cost and probable construction cost per square foot is shown to the left

Segment 01

Route: Primary
Location: End of the existing Ballona Creek bike path at Syd Kronenthal Park to Washington Blvd (Culver City)
Length: 1600 ft
Description: Segment 01 travels along the west side of the channel. It includes a ramp, built into the sloped channel wall, to navigate the change in channel profile, a ramp to navigate around a cross-channel pipe, and regrading to create a level pathway surface. No new landscape elements are included. See Chapter 4 Pathway Alignment for more detail.

Total Construction Cost	**$2,820,927**
Sub-Total Direct Construction Cost	$2,369,929
Site Development:	$1,888,021
Site Concrete	$653,640
Paving	$590,931
Site LIghting	$182,007
Fencing & Gates	$130,560
Earthwork & Grading	$104,700
Selective Demolition	$82,891
Miscellaneous Utilities	$70,000
Site Electrical	$18,200
Site Survey	$15,211
Furnishing	$14,500
Erosion Control	$12,676
Traffic Control	$7,605
Signage	$5,100
Design Contingency (15%)	$283,203
Market Escalation (10.93%)	$198,705
Sub-Total Indirect Construction Cost	$450,998
General Conditions - 8%	$189,594
General Requirements - 3%	$71,098
Bonds - 1.10%	$28,937
General Liability Insurance - 1.5%	$39,893
Overhead & Profit - 4.50%	$121,475
Design Costs - 10%	**$282,092**
Permitting Fees - 1%	**$28,209**

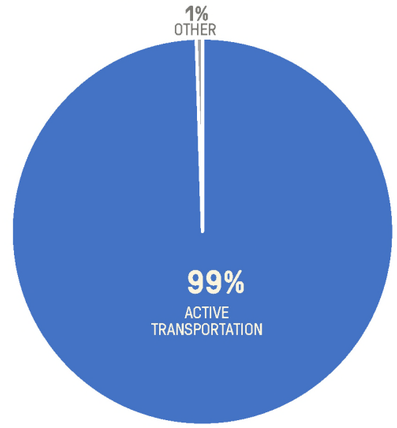
Site Development Costs



Site Development Total: $1,888,021

- Site Concrete
- Paving
- Site Lighting
- Fencing and Gates
- Earthwork & Grading
- Selective Demolition
- Miscellaneous Utilities
- Site Electrical
- Site Survey
- Furnishing
- Erosion
- Traffuc Control
- Signage

Active Transportation vs Other Costs



- Active Transportation Costs
- Other Costs (e.g. Landscape)

Additional Considerations

Environmental Reviews (CEQA/NEPA)	Permitting Requirements
Subject to NEPA from Washington to La Cienega: Exemption Unclear (Determination needed from USACE) Subject to CEQA: Exemption Unclear (Possible Class 4 Exemption)	LACFCD Construction Permit USACE Section 408 Permit *(Agreement with owners of private parcels within LACFCD Easement between Syd Kronenthal Park and La Cienega is needed)*

Please refer to Chapter 5 ROW Assessment for more information on permitting requirements.

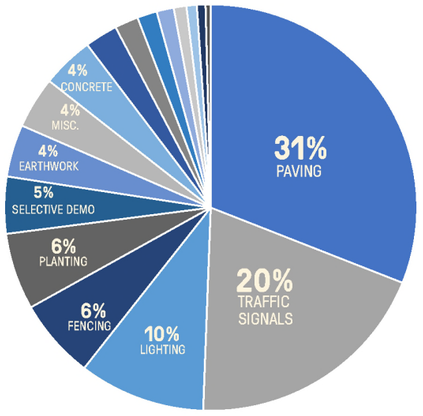


Segment 02

Route: Primary
Location: Washington Blvd to I-10 Freeway (25% Culver City / 75% Los Angeles)
Length: 1600 ft
Description: Segment 02 crosses the channel at Washington Blvd and continues in open space atop the channel wall until the I-10 Freeway embankment.

Total Construction Cost	**$2,920,777**
Sub-Total Direct Construction Cost	$2,453,816
Site Development:	$1,954,851
Paving	$606,591
Traffic Signals	$382,240
Site Lighting	$193,910
Fencing and Gates	$123,845
Planting	$119,115
Selective Demolition	$88,463
Earthwork & Grading	$81,217
Miscellaneous Utilities	$80,000
Site Concrete	$79,940
Irrigation System	$50,442
Furnishing	$36,261
Storm Drainage System	$30,261
Signage	$26,300
Site Electrical	$19,391
Site Survey	$15,808
Erosion Control	$13,174
Traffic Control	$7,904
Design Contingency (15%)	$293,227
Market Escalation (10.93%)	$205,739
Sub-Total Indirect Construction Cost	$466,961
General Conditions - 8%	$196,305
General Requirements - 3%	$73,614
Bonds - 1.10%	$29,961
General Liability Insurance - 1.5%	$41,305
Overhead & Profit - 4.50%	$125,775
Design Costs - 10%	$292,077
Permitting Fees - 1%	$29,208

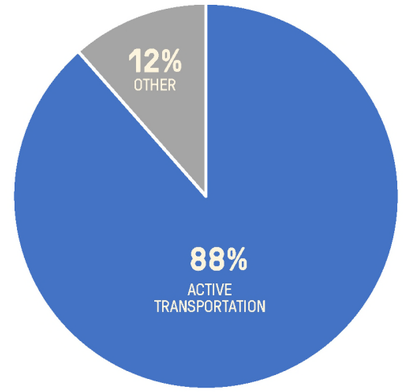
Site Development Costs



Site Development Total: $1,954,851

- Paving
- Traffic Signals
- Site Lighting
- Fencing and Gates
- Planting
- Selective Demolition
- Earthwork & Grading
- Miscellaneous Utilities
- Site Concrete
- Irrigation System
- Furnishing
- Storm Drainage
- Signage
- Site Electrical
- Site Survey
- Erosion Control
- Traffic Control

Active Transportation vs Other Costs

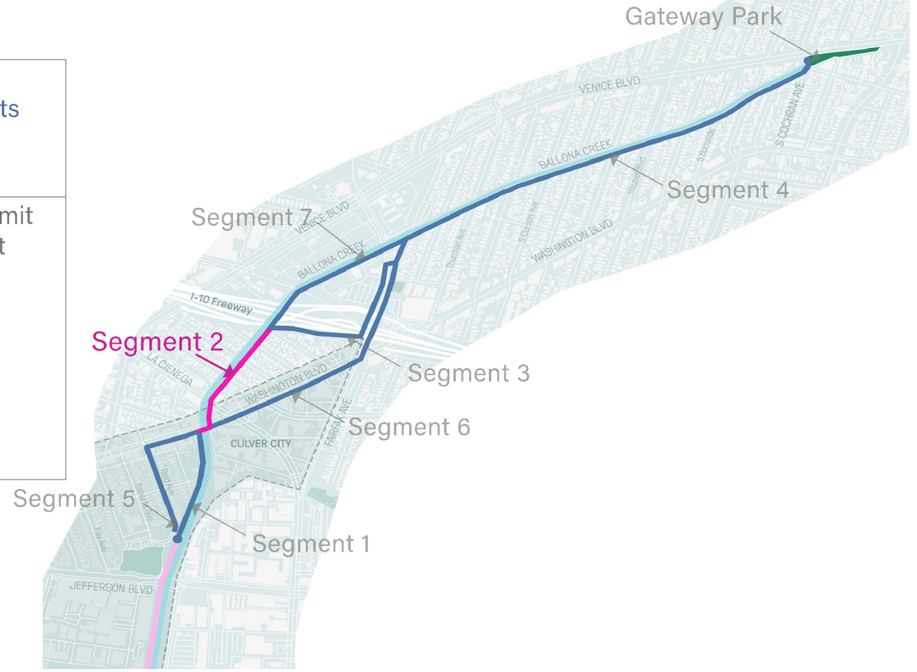


- Active Transportation Costs
- Other Costs (e.g. Landscape)

Additional Considerations

Environmental Reviews (CEQA/NEPA)	Permitting Requirements
Subject to NEPA from Washington to La Cienega: Exemption Unclear (Determination needed from USACE) Subject to CEQA: Exemption Unclear (Possible Class 4 Exemption)	LACFCD Construction Permit USACE Section 408 Permit City of LA BOE Permit LACFCD Access Permit

Please refer to Chapter 5 ROW Assessment for more information on permitting requirements.

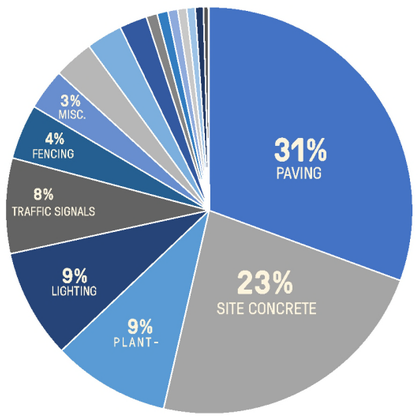


Segment 03

Route: Primary
Location: I-10 Freeway embankment to S Genesee Ave
Length: 2500 ft
Description: Segment 03 travels as Class I path at the base of the I-10 embankment before turning northward on the west side of Fairfax Ave as a raised 2-way Class IV. The route crosses Fairfax at S Genesee Ave and continues up S Genesee Ave to Ballona Creek.

Total Construction Cost	**$4,339,933**
Sub-Total Direct Construction Cost	$3,646,083
Site Development:	$2,904,678
Paving	$888,643
Site Concrete	$668,160
Planting	$270,418
Site Lighting	$251,875
Traffic Signals	$220,000
Fencing & Gates	$126,745
Miscellaneous Utilities	$95,000
Earthwork & Grading	$91,841
Selective Demolition	$83,125
Irrigation Systems	$63,714
Storm Drainage Systems	$25,300
Site Electrical	$25,187
Site Survey	$22,444
Signage	$20,800
Furnishing	$19,500
Erosion Control	$18,704
Traffic Control	$11,222
Site Structure	$2000
Design Contingency (15%)	$435,702
Market Escalation (10.93%)	$305,703
Sub-Total Indirect Construction Cost	$693,850
General Conditions - 8%	$291,6387
General Requirements - 3%	$109,382
Bonds - 1.10%	$44,519
General Liability Insurance - 1.5%	$61,375
Overhead & Profit - 4.50%	$186,887
Design Costs - 10%	$433,993
Permitting Fees - 1%	$43,399

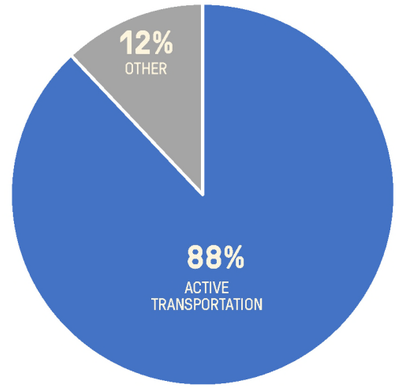
Site Development Costs



Site Development Total: $2,904,678

- Paving
- Site Concrete
- Planting
- Site Lighting
- Traffic Signals
- Fencing & Gates
- Miscellaneous Utilities
- Earthwork & Grading
- Selective Demolition
- Irrigation System
- Storm Drainage
- Site Electrical
- Site Survey
- Signage
- Furnishing
- Erosion Control
- Traffic Control
- Site Structure

Active Transportation vs Other Costs

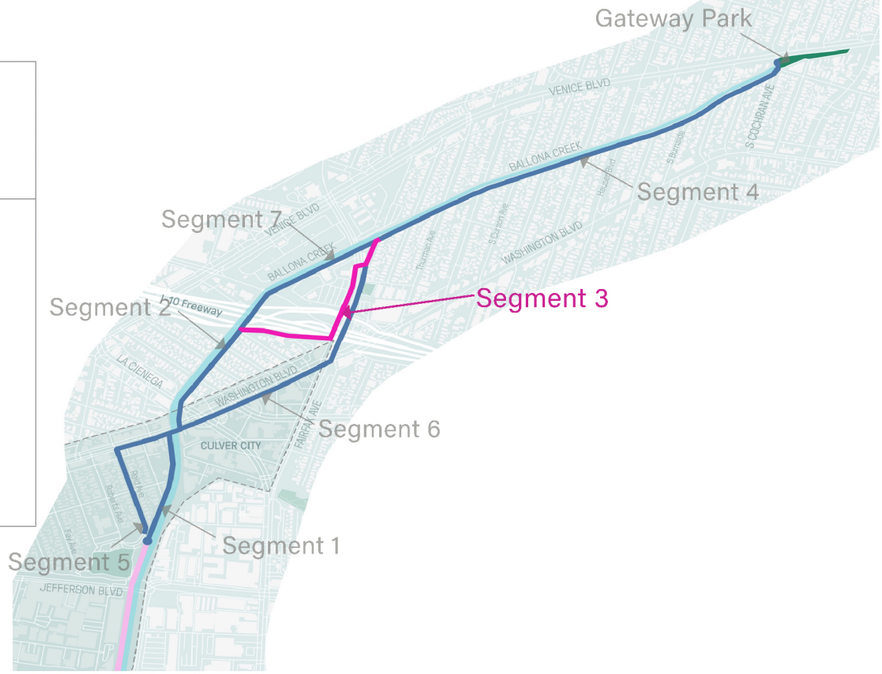


- Active Transportation Costs
- Other Costs (e.g. Landscape)

Additional Considerations

Environmental Reviews (CEQA/NEPA)	Permitting Requirements
Subject to CEQA: Possible Class 1 and/or Class 4 Exemption Segment in Caltrans ROW may be subject to NEPA: Possible Exemption pursuant to 23 CFR 771.117(c): activity (c)(3) Construction of bicycle and pedestrian lanes, paths, and facilities	Caltrans Permit City of LA BOE Permit Culver City PW Permit

Please refer to Chapter 5 ROW Assessment for more information on permitting requirements.

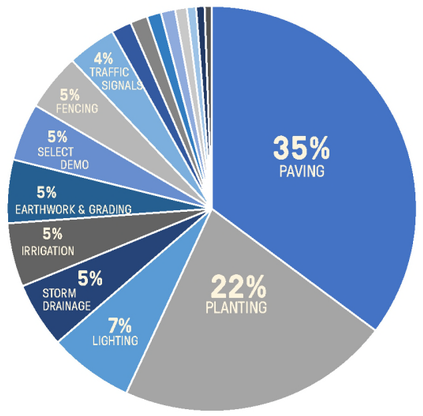


Segment 04

Route: Primary
Location: S Genesee Ave to S Cochran Ave
Length: 5100 ft
Description: Segment 04 travels as a Class I path in the undeveloped space adjacent to the Ballona Creek channel. For much of its length, a separate pedestrian path travels alongside it. Linear parks and general landscaping is largely concentrated to Segment 04.

Total Construction Cost	**$12,793,795**
Sub-Total Direct Construction Cost	$10,748,378
Site Development:	$8,562,771
Paving	$3,018,547
Planting	$1,849,808
Site Lighting	$574,470
Storm Drainage Systems	$445,492
Irrigation Systems	$435,820
Earthwork & Grading	$432,502
Selective Demolition	$393,760
Fencing and Gates	$389,640
Traffic Signals	$330,000
Furnishing	$136,500
Site Concrete	$116,600
Site Survey	$96,622
Miscellaneous Utilities	$96,500
Erosion control	$78,752
Signage	$62,000
Site Electrical	$57,447
Traffic Control	$48,311
Design Contingency (15%)	$1,284,415
Market Escalation (10.93%)	$93,701
Sub-Total Indirect Construction Cost	$2,045,417
General Conditions - 8%	$859,870
General Requirements - 3%	$322,238
Bonds - 1.10%	$131,238
General Liability Insurance - 1.5%	$180,929
Overhead & Profit - 4.50%	$550,929
Design Costs - 10%	$1,279,380
Permitting Fees - 1%	$127,938

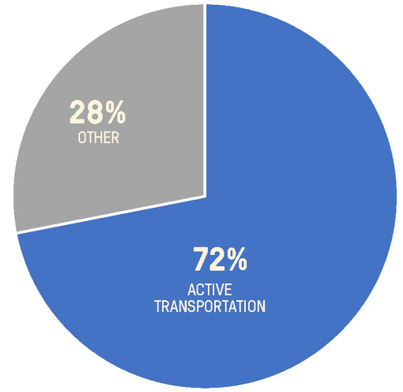
Site Development Costs



Site Development Total: $8,562,771

- Paving
- Planting
- Site Lighting
- Storm Drainage System
- Irrigation Systems
- Earthwork & Grading
- Selective Demolition
- Fencing & Gates
- Traffic Signals
- Furnishing
- Site Concrete
- Site Survey
- Miscellaneous Utilities
- Erosion Control
- Signage
- Site Electrical
- Traffic Control

Active Transportation vs Other Costs

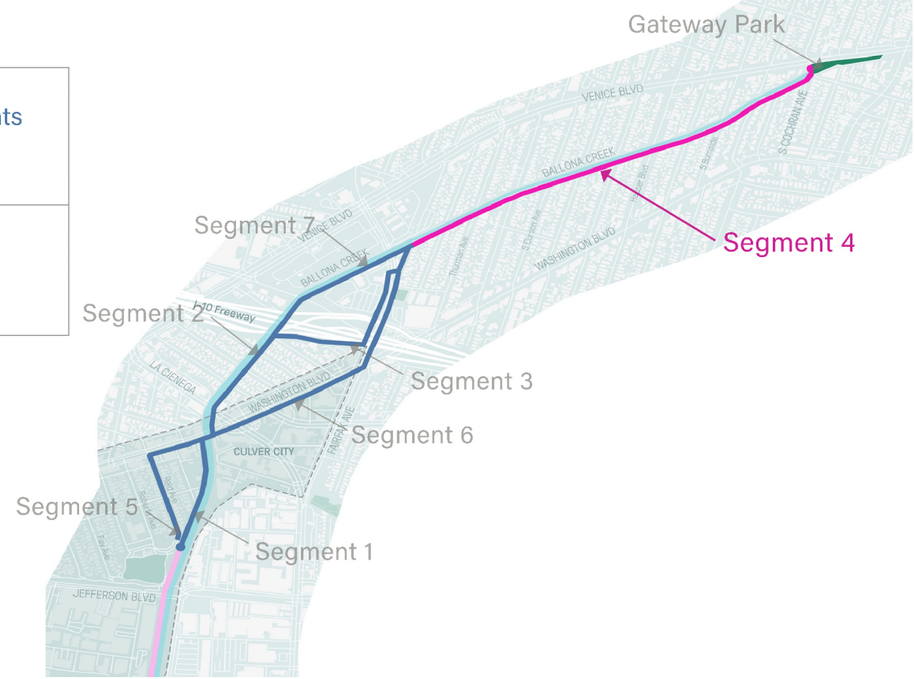


- Active Transportation Costs
- Other Costs (e.g. Landscape)

Additional Considerations

Environmental Reviews (CEQA/NEPA)	Permitting Requirements
Subject to CEQA: Possible Class 1 and Class 4 Exemptions	City of LA BOE Permit LACFCD Access Permit

Please refer to Chapter 5 ROW Assessment for more information on permitting requirements.

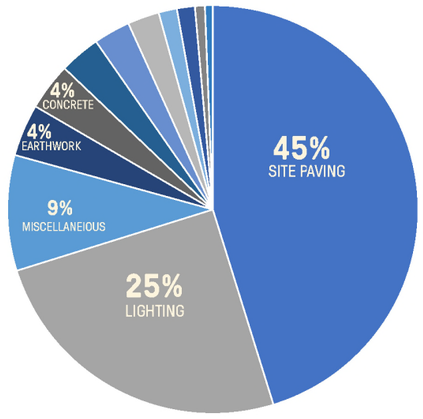


Segment 05

Route: Alternative A.1
Location: End of the existing Ballona Creek bike path at Syd Kronenthal Park to the Washington Blvd crossing over Ballona Creek (Culver City)
Length: 2500 ft
Description: Segment 05 provides an alternate means of routing the pathway northward from the end of the existing trail. After traveling up the existing ramp to Syd Kronenthal Park, the route continues as a Class III route on Reid Ave and a raised Class IV route on Washington Blvd.

Total Construction Cost	**$1,388,563**
Sub-Total Direct Construction Cost	$1,166,565
Site Development:	$929,353
Paving	$420,368
Site Lighting	$231,645
Miscellaneous Utilities	$85,000
Earthwork & Grading	$38,287
Site Concrete	$34,740
Selective Demolition	$29,861
Site Survey	$26,796
Site Electrical	$23,165
Traffic Control	$13,398
Signage	$13,100
Furnishing	$7,250
Erosion Control	$5,743
Design Contingency (15%)	$139,403
Market Escalation (10.93%)	$97,810
Sub-Total Indirect Construction Cost	$221,997
General Conditions - 8%	$93,325
General Requirements - 3%	$34,997
Bonds - 1.10%	$14,244
General Liability Insurance - 1.5%	$19,637
Overhead & Profit - 4.50%	$59,795
Design Costs - 10%	$1,138,856
Permitting Fees - 1%	$13,886

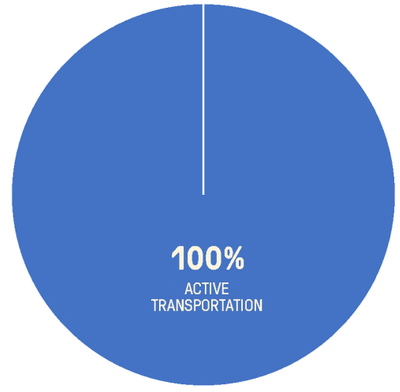
Site Development Costs



Site Development Total: $929,353

- Paving
- Site Lighting
- Miscellaneous Utilities
- Earthwork & Grading
- Site Concrete
- Selective Demolition
- Site Survey
- Site Electrical
- Traffic Control
- Signage
- Furnishing
- Erosion Control

Active Transportation vs Other Costs

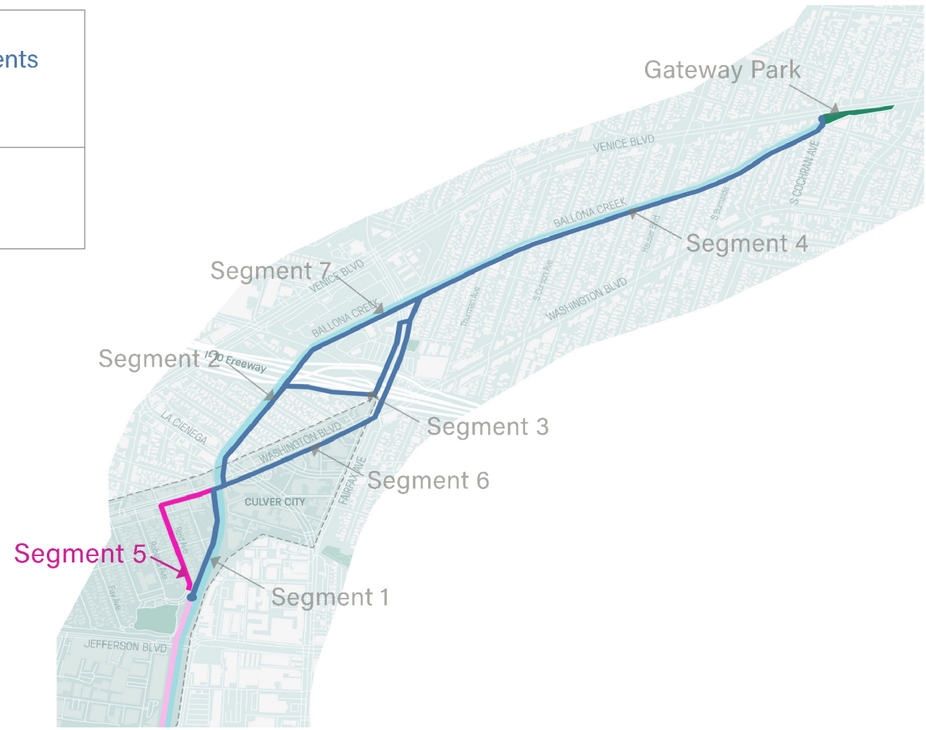


- Active Transportation Costs
- Other Costs (e.g. Landscape)

Additional Considerations

Environmental Reviews (CEQA/NEPA)	Permitting Requirements
Subject to CEQA: Possible Class 1 Exemption	Culver City PW Permit

Please refer to Chapter 5 ROW Assessment for more information on permitting requirements.

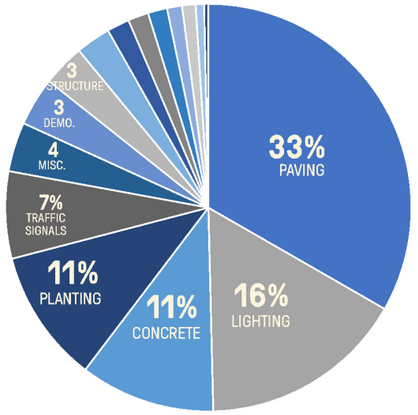


Segment 06

Route: Alternative A.2
Location: Washington Blvd crossing over Ballona Creek (Culver City) to S Genesee Ave
Length: 3600 ft
Description: Segment 06 provides an alternative means of navigating around the I-10 Freeway crossing over Ballona Creek. The route travels as a two-way on-street Class IV on Washington Blvd before turning onto Fairfax Ave where it continues as a raised two-way Class IV to S Genesee Ave.

Total Construction Cost	**$3,241,039**
Sub-Total Direct Construction Cost	$2,722,875
Site Development:	$2,169,198
Paving	$721,845
Site Lighting	$354,463
Site Concrete	$233,100
Planting	$229,851
Traffic Signals	$150,000
Miscellaneious Utilities	$85,000
Earthwork & Grading	$83,617
Selective Demolition	$72,780
Site Structure	$60,000
Traffic Control	$38,891
Site Electrical	$35,446
Irrigation Systems	$33,264
Signage	$25,800
Site Survey	$23,335
Erosion Control	$14,556
Furnishing	$7,250
Design Contingency (15%)	$325,380
Market Escalation (10.93%)	$228,298
Sub-Total Indirect Construction Cost	$518,163
General Conditions - 8%	$217,830
General Requirements - 3%	$81,686
Bonds - 1.10%	$33,246
General Liability Insurance - 1.5%	$45,835
Overhead & Profit - 4.50%	$139,566
Design Costs - 10%	$324,104
Permitting Fees - 1%	$32,410

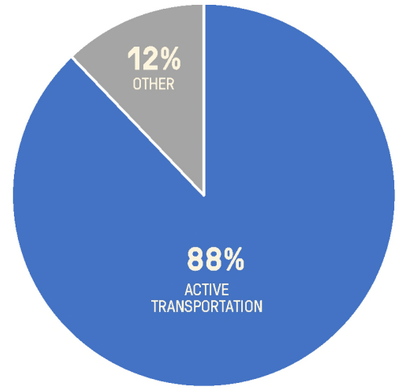
Site Development Costs



Site Development Total: $2,169,198

- Paving
- Site Lighting
- Site Concrete
- Planting
- Traffic Signals
- Miscellaneous Utilities
- Earthwork & Grading
- Selective Demolition
- Site Structure
- Traffic Control
- Site Electrical
- Irrigation Systems
- Signage
- Site Survey
- Erosion Control
- Furnishing

Active Transportation vs Other Costs

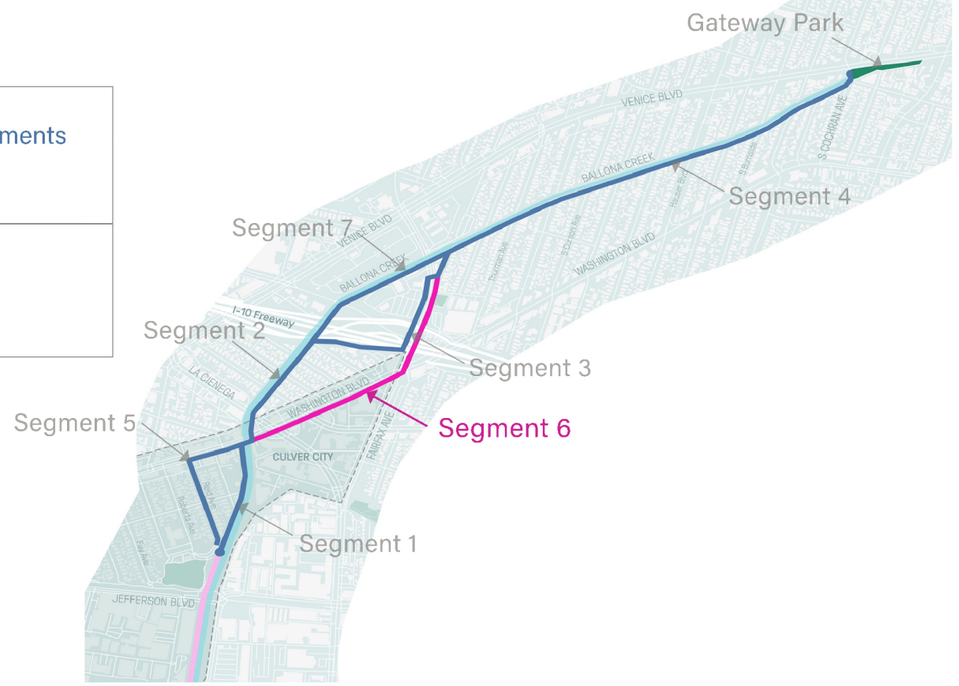


- Active Transportation Costs
- Other Costs (e.g. Landscape)

Additional Considerations

Environmental Reviews (CEQA/NEPA)	Permitting Requirements
Subject to CEQA: Possible Class 1 Exemption	Culver City PW Permit City of LA BOE Permit Caltrans Permit

Please refer to Chapter 5 ROW Assessment for more information on permitting requirements.

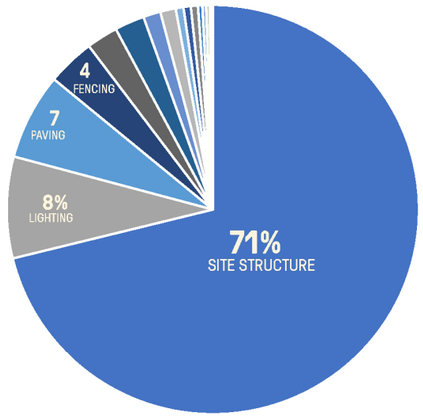


Segment 07

Route: Alternative B
Location: Intersection of Ernest Ave and Ballona Creek to S Genesee Ave
Length: 2500 ft
Description: Segment 07 provides an alternative means of navigating around the I-10 Freeway crossing over Ballona Creek. The pathway descends into the channel as an elevated pathway before ascending to top of channel within LADWP property. Features include an elevated segment to navigate around DWP wells and the construction of a new wall around the DWP yard (see Ch. 4).

Total Construction Cost	**$7,258,443**
Sub-Total Direct Construction Cost	$6,097,994
Site Development:	$4,858,011
Site Structure	$3,456,851
Site Lighting	$389,569
Paving	$331,161
Fencing & Gates	$181,560
Miscellaneious Utilities	$120,000
Selective Demolition	$113,286
Earthwork & Grading	$65,989
Site Electrical	$58,987
Planting	$29,621
Traffic Control	$27,756
Site Concrete	$27,060
Site Survey	$16,654
Furnishing	$14,500
Erosion Control	$13,878
Irrigation Systems	6,370
Signage	$4,800
Design Contingency (15%)	$728,702
Market Escalation (10.93%)	$511,282
Sub-Total Indirect Construction Cost	$1,160,449
General Conditions - 8%	$487,840
General Requirements - 3%	$182,940
Bonds - 1.10%	$74,457
General Liability Insurance - 1.5%	$102,648
Overhead & Profit - 4.50%	$312,565
Design Costs - 10%	$725,844
Permitting Fees - 1%	$72,584

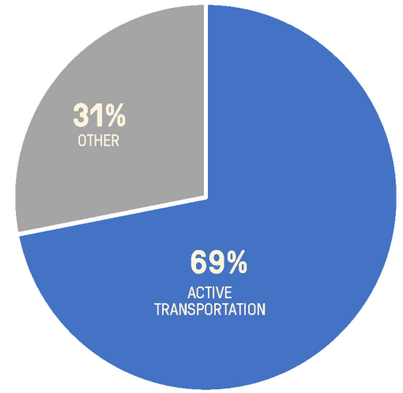
Site Development Costs



Site Development Total: $4,858,011

- Site Structure
- Site Lighting
- Paving
- Fencing
- Miscellaneous Utilities
- Selective Demolition
- Earthwork & Grading
- Site Electrical
- Planting
- Traffic Control
- Site Concrete
- Site Survey
- Furnishing
- Erosion Control
- Irrigation System
- Signage

Active Transportation vs Other Costs



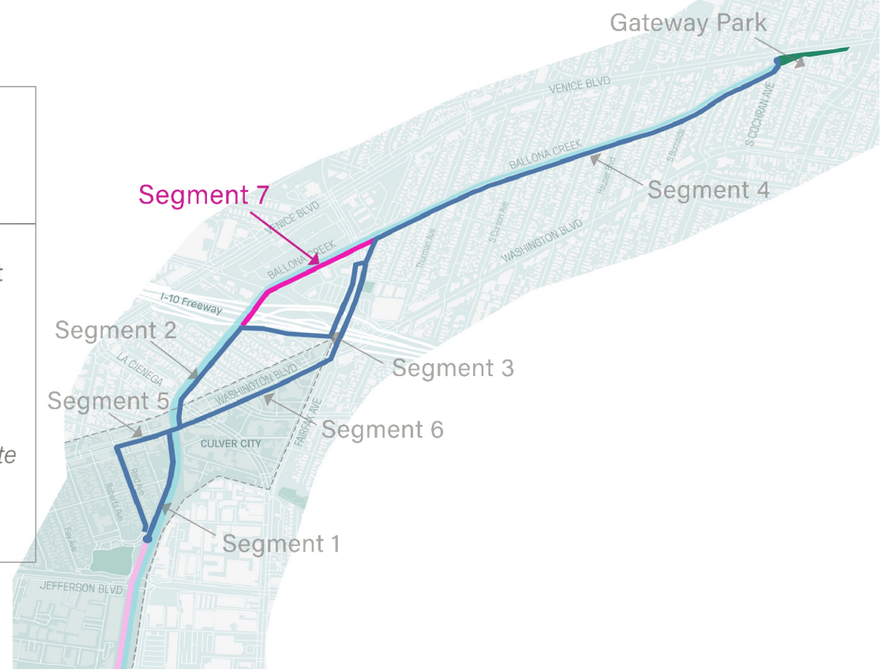
- Active Transportation Costs
- Other Costs

Note: "Other Costs" for Segment 7 primarily consist of costs for constructing new wall around expanded DWP yard. See Ch 4 (pg 4-50).

Additional Considerations

Environmental Reviews (CEQA/NEPA)	Permitting Requirements
Subject to NEPA: Exemption Unclear Subject to CEQA: Exemption Unclear	City of LA BOE Permit LACFCD Construction Permit Caltrans Permit USACE Section 408 Permit USACE Section 404 Permit USACE Section 401 Permit *(Use of DWP property of private property between Fairfax and Genesee is needed)*

Please refer to Chapter 5 ROW Assessment for more information on permitting requirements.

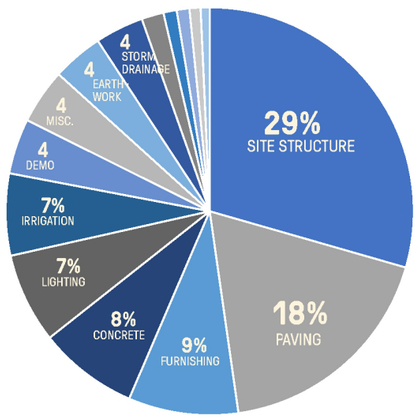


Gateway Park

Route: Primary
Location: Intersection of S Cochran Ave and Venice Blvd
Size: 22,325 sf
Description: A new Gateway Park provides a unique starting point to the extended Ballona Creek path, as well as a place for neighbors and visitors to gather. Features include hardscape, furnishing, and new plantings.

Total Construction Cost	**$1,902,794**
Sub-Total Direct Construction Cost	$1,598,583
Site Development:	$1,273,523
Planting	$375,065
Paving	$233,027
Furnishing	$110,900
Site Concrete	$100,500
Site Lighting	$91,003
Irrigation Systems	$82,684
Selective Demolition	$55,813
Miscellaneious Utilities	$55,500
Earthwrok & Grading	$51,381
Storm Drainage Systems	$48,867
Traffic Control	$22,325
Site Survey	$13,395
Signage	$12,800
Erosion Control	$11,163
Site Electrical	$9,100
Design Contingency (15%)	$191,028
Market Escalation (10.93%)	$134,032
Sub-Total Indirect Construction Cost	$304,211
General Conditions - 8%	$127,887
General Requirements - 3%	$47,958
Bonds - 1.10%	$19,519
General Liability Insurance-1.5%	$26,909
Overhead & Profit - 4.50%	$81,938
Design Costs 10%	$190,279
Permitting Fees 1%	$19,028

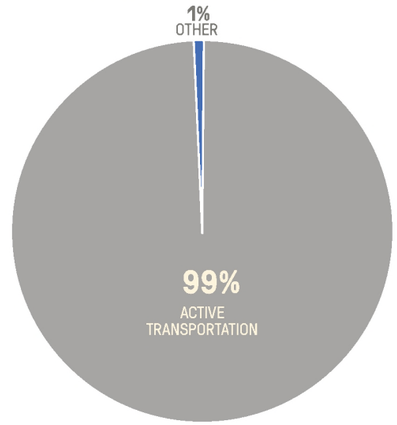
Site Development Costs



Site Development Total:$1,273,523

- Planting
- Paving
- Furnishing
- Site Concrete
- Site Lighting
- Irrigation Systems
- Selective Demolition
- Miscellaneous Utilities
- Earthwork & Grading
- Storm Drainage Systems
- Traffic Control
- Site Survey
- Signage
- Erosion Control
- Site Electrical

Active Transportation vs Other Costs

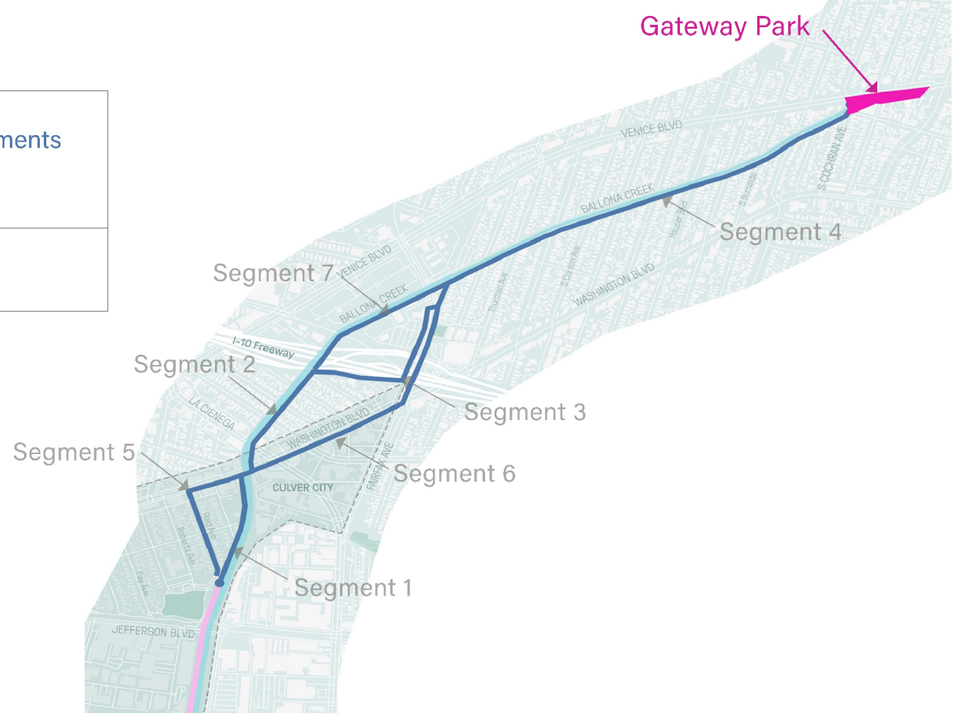


- Active Transportation Costs
- Other Costs

Additional Considerations

Environmental Reviews (CEQA/NEPA)	Permitting Requirements
Subject to CEQA	City of LA BOE Permit

Please refer to Chapter 5 ROW Assessment for more information on permitting requirements.



Statements of Probable Costs for Route Options

Using the cost estimates provided for each of the pathway's potential segments, probable construction costs for the Primary Route and routes including Alternatives A and B can be extrapolated.

Note: The cost estimate for each of the route options shown below includes the probable construction cost for the Gateway Park.



Primary Route

Total Construction Cost	$24,778,226
Culver City	$3,551,121
City of Los Angeles	$21,227,105

*Inclusive of total probable construction costs; does not include design costs or permitting fees



Alternative A

Total Construction Cost	$19,846,982
Culver City	$3,009,082
City of Los Angeles	$16,837,900

*Inclusive of total probable construction costs; does not include design costs or permitting fees



Alternative B

Total Construction Cost	$27,170,997
Culver City	$3,419,686
City of Los Angeles	$23,751,310

*Inclusive of total probable construction costs; does not include design costs or permitting fees

Chapter 9
Options for Implementation

The options for project phasing and implementation presented herein are shown for the **purposes of this feasibility study only**. All options for project phasing and implementation are subject to review and approval by the City of Culver City and City of Los Angeles.

Overview

The project team envisions a full build-out of the Primary Route proposed for the Ballona Creek pathway extension, integrated with parks and green space, as described in Chapter 6 Preliminary Conceptual Design. As described in Chapter 4 Pathway Alignment, the route designated as the Primary Route exceeds the broadest range of project goals - including the aim to "get it done."

However, if a full build-out is not feasible due to constraints in funding and/or unexpectedly lengthy timeframes for permitting, a phased approach may be necessary to move the project forward.

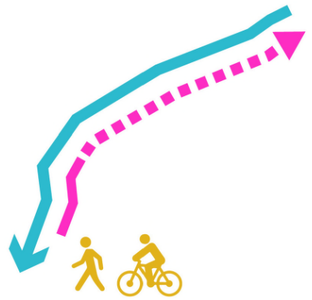
Full build-out of the Primary Route option for the Ballona Creek Phase II extension is estimated to cost close to $25 million. The Enhanced build-out (described in the following pages) is expected to cost over $27 million and potentially require significant permitting timeframes and environmental review. Development will require substantial permitting coordination between multiple agencies as it travels between two cities.

As a result, build-out of the pathway extension may need to be completed in multiple phases. A phasing strategy plan is needed so that the pathway can provide the maximum benefits to users and surrounding neighborhoods, while meeting transit and environmental sustainability goals as each phase is constructed. As shown in the preceding chapter, the cost estimate was broken up into a series of different segments to allow for a phased combination of segments over time.

The phasing options presented in this chapter are based around a synthesis of all elements assessed during the Feasibility Study. At their basis are the project goals outlined at the beginning of this report. **Two objectives in particular came to the fore when developing the phasing strategy: Continue and Get It Done.**

Continue

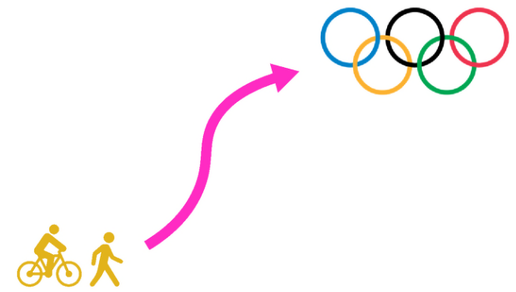
the Ballona Creek Bike Path



- Direct, continuous, and intuitive route
- Pathway continues directly alongside the Ballona Creek channel where feasible
- Trail-like experience - even if the route must continue on-street
- Dedicated facility of adequate width for users

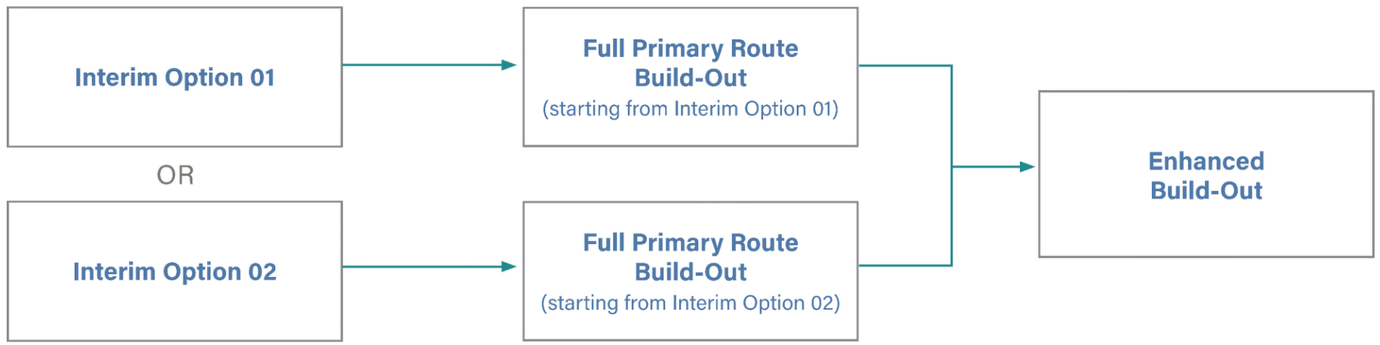
Get it Done

Goals for Cost and Feasibility



- Minimizes probable construction and permitting costs
- Minimize amount of coordination needed (number of permitting entities and length of permitting processes)
- Minimize construction timelines to ensure the pathway is built as soon as possible

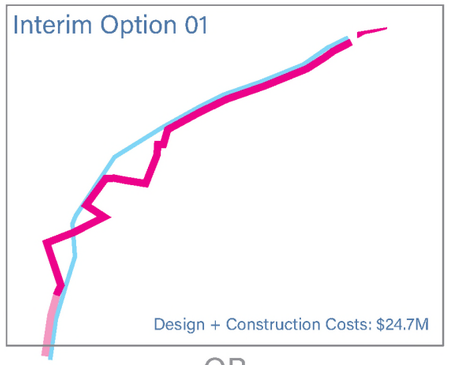
Phasing Strategy



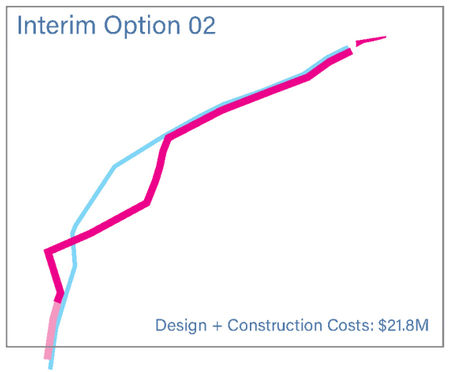
Options for Implementation - High-Level Summary

NOTE: This page contains a general overview of potential considerations at each point in the phasing strategy outlined in this chapter. It is intended to outline primary considerations rather than to be comprehensive. Cost ranges listed below are estimates of probable design and construction costs. The need for and timing of environmental reviews is based on preliminary analysis; further assessment by an environmental consultant will be needed to determine necessary environmental reviews.

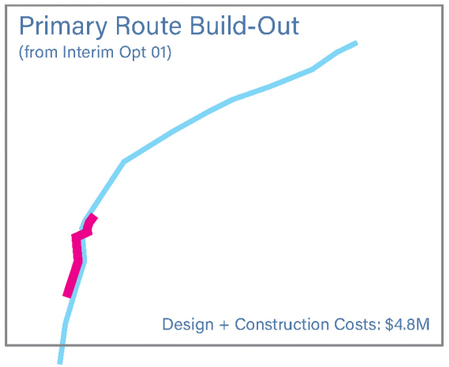
Initial Interim Build-Out

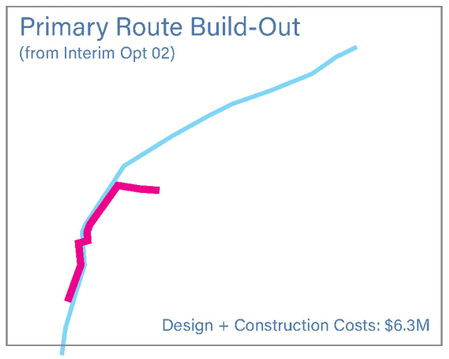


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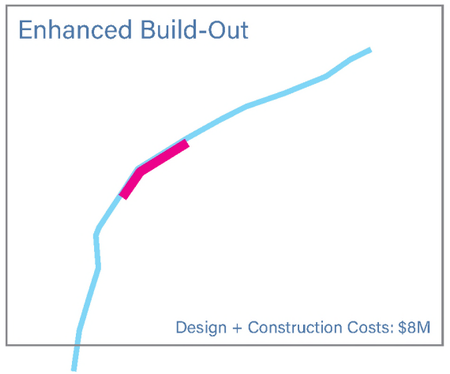


Additions for Full Primary Route Build-Out





Additions for Enhanced Build-Out



	Initial Interim Build-Out	Additions for Full Primary Route Build-Out	Additions for Enhanced Build-Out
Estimated Costs	$22M - 25M	+ $5M - 7M	+ $8M
Permitting Overview	Culver City PW Permit City of LA BOE Permit Caltrans Permit LACFCD Access Permit LACFCD Construction Permit USACE Section 408 Permit USACE 408 SAR USACE Section 404 Permit USACE Section 401 Permit		
Environmental Reviews	CEQA: *Potential Class 1 and Class 4 CEQA Exemptions* NEPA:	CEQA: *CEQA Exemption unclear* NEPA: *USACE determines if project is exempt from NEPA environmental review*	
Ownership Considerations		***Private Parcels in LACFCD Easement:*** *Agreement needed with owners of private parcels in LACFCD Easement from Syd Kronenthal Park to La Cienega Blvd*	***LADWP:*** *Agreement needed with LADWP for use of Palms Yard property* ***Private Parcel:*** *Agreement needed with owner of multi-family property between Fairfax Ave and S Genesee*

Time →

Interim Option 01

Alternative A.1 + Primary Route Option

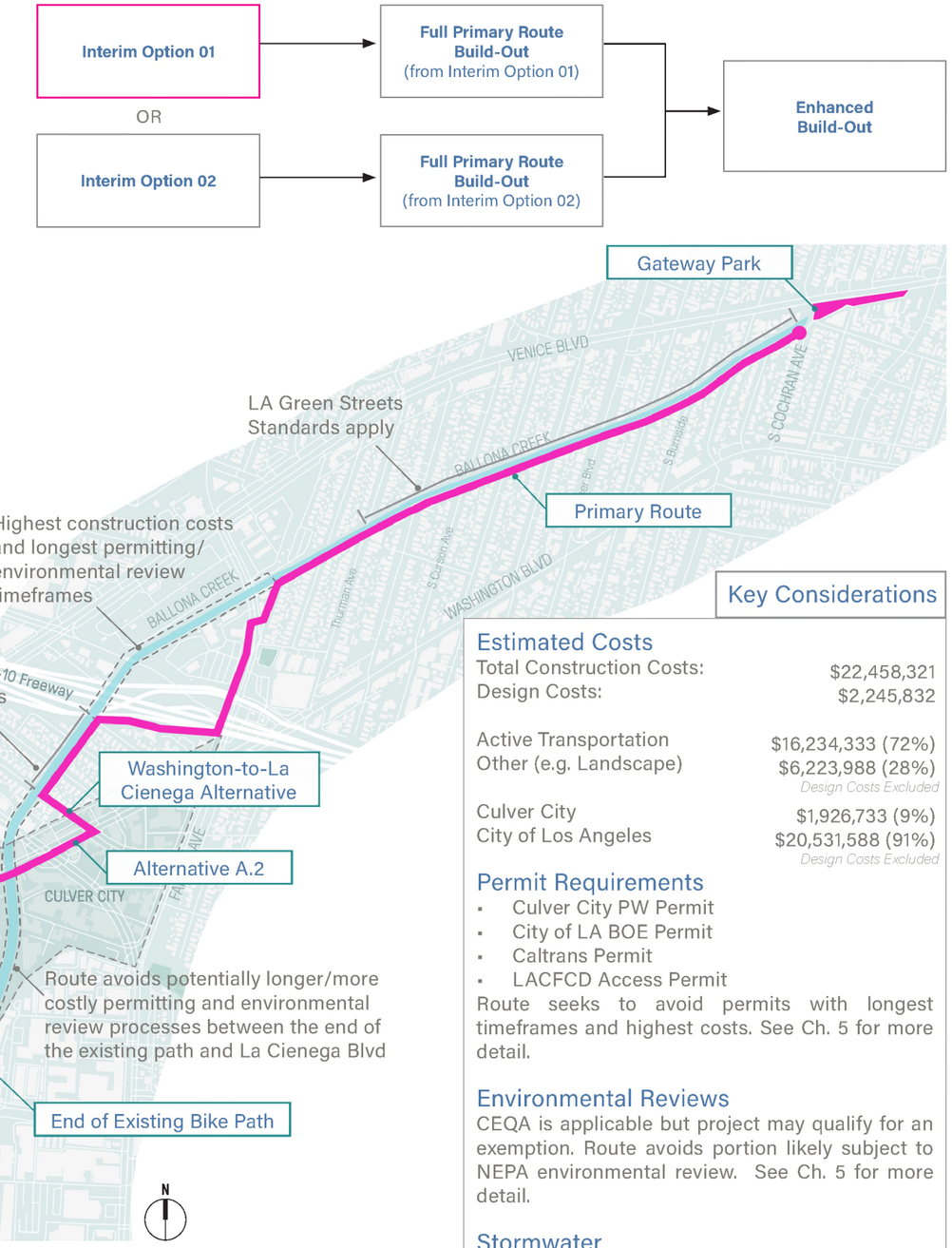
Overview

Interim Option 01 combines a portion of Alternative A (Alternative A.1 from Syd Kronenthal Park to Washington Blvd) with the Primary Route. The route provides an option for avoiding the potentially challenging segments of the Primary Route for permitting (USACE) and environmental review (NEPA, CEQA), while, at the same time, continuing the pathway and remaining aligned with project goals. Interim Option 01 includes the following features (please refer to Chapter 4 for more details).

Route Overview

- Route travels up existing ramp to Syd Kronenthal Park and travels north through the park.
- Route continues as Class III bike route on Reid Ave to Washington Blvd.
- Route travels east on raised (sidewalk-level) 2-way Class IV facility on Washington Blvd until La Cienega Blvd.
- Route continues as an on-street 2-way Class IV facility from La Cienega to Adams Blvd.
- At Adams Blvd, route turns to travel northwest as a Class III bike route on Comey Ave for one block to the Ballona Creek channel.
- Route continues along top of channel as a Class I shared use facility between Comey Ave and the I-10 Freeway embankment.
- Route travels east along the base of the I-10 Freeway embankment as a Class I shared use facility.
- Route travels north on Fairfax Ave as a raised (sidewalk-level) 2-way Class IV facility.
- Route crosses Fairfax Ave at the intersection of S Genesee Ave and Fairfax Ave and continues north on S Genesee Ave as a raised 2-way Class IV facility.
- Route continues on the paved portion of Cologne St (until S Thurman Ave) as a raised 2-way Class IV facility.
- After S Thurman Ave, the route continues within the unpaved ROW of Cologne St on the top of the Ballona Creek channel. This portion features a separate pedestrian path, linear park space, and trailhead/ overlook parklets.

Given the desire for the Gateway Park within LA Council District 10, the development of this green space, as well as linear park space and general landscaping, is included in this option. The portions of the route which run through unimproved City of LA ROW must meet LA's Green Streets Standards, meaning elements such as permeable paving and vegetative swales may be required between Comey Ave and the I-10 embankment and between S Genesee Ave and S Cochran Ave.



Key Considerations

Estimated Costs

Total Construction Costs:	$22,458,321
Design Costs:	$2,245,832
Active Transportation	$16,234,333 (72%)
Other (e.g. Landscape)	$6,223,988 (28%)
	Design Costs Excluded
Culver City	$1,926,733 (9%)
City of Los Angeles	$20,531,588 (91%)
	Design Costs Excluded

Permit Requirements

- Culver City PW Permit
- City of LA BOE Permit
- Caltrans Permit
- LACFCD Access Permit

Route seeks to avoid permits with longest timeframes and highest costs. See Ch. 5 for more detail.

Environmental Reviews

CEQA is applicable but project may qualify for an exemption. Route avoids portion likely subject to NEPA environmental review. See Ch. 5 for more detail.

Stormwater

City of LA Green Streets Standards apply to pathway in unimproved portions of City of LA ROW.

Except where noted otherwise, costs included above pertain to construction costs

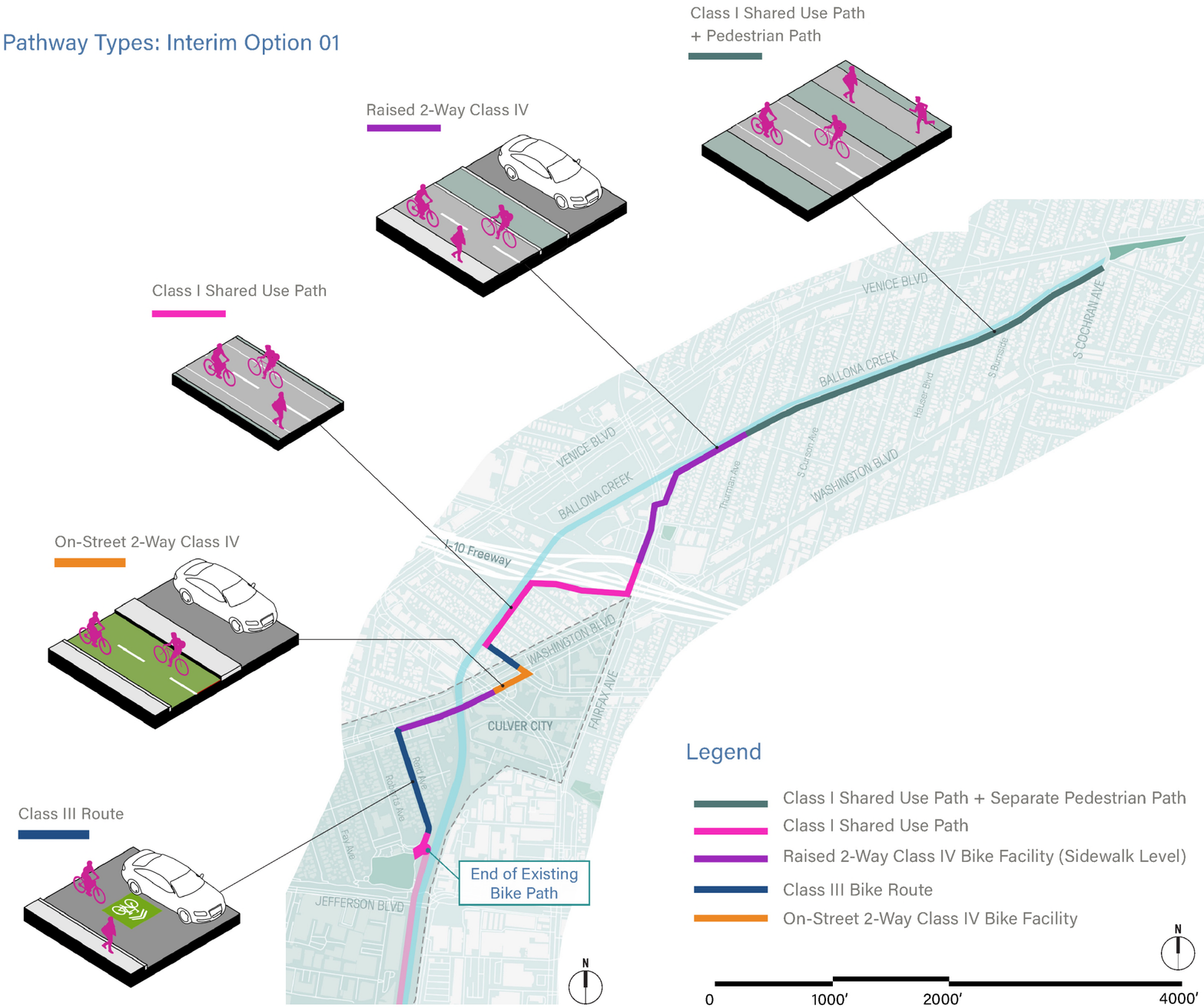
Pros

- Directly incorporates Syd Kronenthal Park into the pathway route
- Significant portions of route (approx. 50%) are sited alongside Ballona Creek as off-street Class I shared use pathways
- Reduces likelihood of requiring NEPA environmental review
- Increases likelihood of exemption from CEQA under Class 1 and Class 4 exemptions
- Avoids USACE permitting requirements in segment between Syd Kronenthal and La Cienega Blvd and for undercrossing within channel below the I-10 freeway
- Avoids timelines and potential costs associated with travel through private parcels between Syd Kronenthal Park and Washington Blvd
- Development of park space within the Mid-City portion of route is included as a key amenity and may encourage travel through interim segments of the route. Note that, where pathway is developed in currently unimproved City of LA ROW, the project must meet the City of LA's Green Streets Standards (including such as elements as permeable paving, vegetative swales, and passive irrigation systems). The park space and connective landscape areas within Mid-City feature such elements

Cons

- Route does not continue directly along Ballona Creek from existing bike path
- Route does follow a direct and intuitive route for the southernmost portion; more intensive wayfinding is needed for the route in these portions (can be mitigated through signage)
- Approx. 50% of route is not located alongside Ballona Creek and is instead site on-street or on-street adjacent

Pathway Types: Interim Option 01

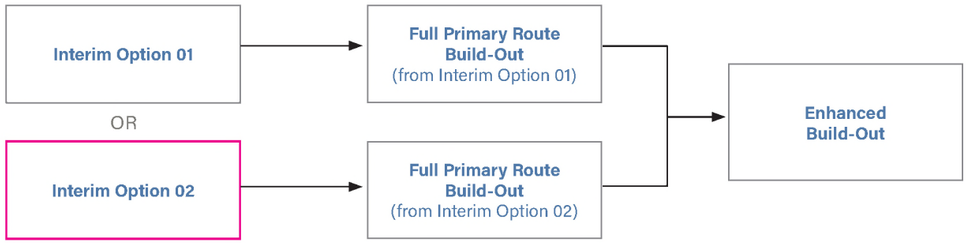


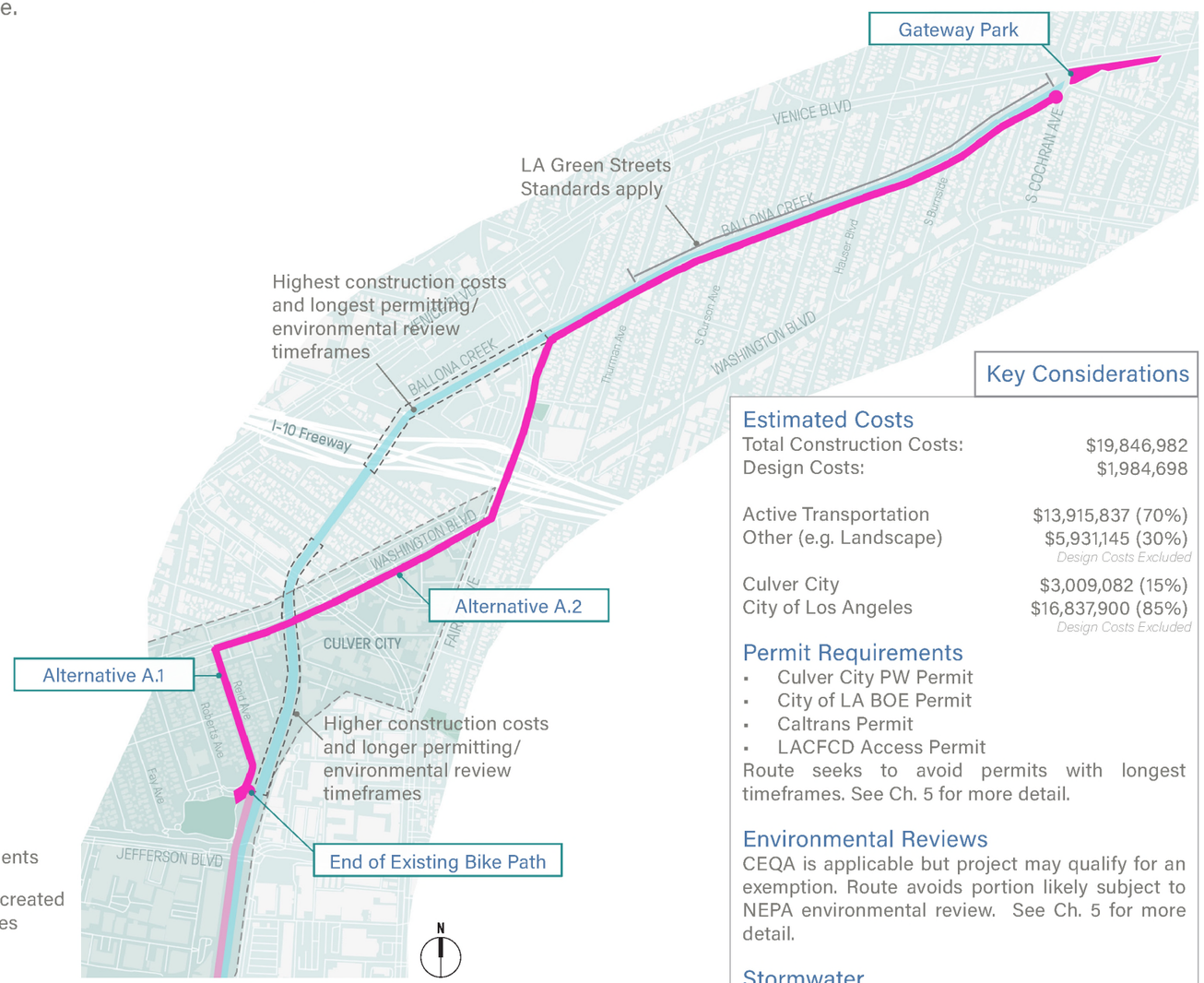
Interim Option 02
Alternative A

Overview
Interim Option 02 (or Alternative A) provides an alternate interim for continuing the Ballona Creek pathway, while remaining aligned with project goals. Like Interim Option 01, Interim Option 02 navigates around stretches of the Primary, or preferred, route that are subject to longer and more costly permitting and environmental review processes. Unlike Interim Option 01, Interim Option 02 navigates around these stretches using existing street and sidewalk ROW. Interim Option 02 includes the following features (refer to Chapter 4 for detailed conceptual pathway alignment):

Route Overview
- Route travels up existing ramp to Syd Kronenthal Park and travels north through the park.
- Route continues as Class III bike route on Reid Ave to Washington Blvd.
- Route travels east on raised (sidewalk-level) 2-way Class IV facility on Washington Blvd until La Cienega Blvd.
- Route continues as an on-street 2-way Class IV facility from La Cienega to the Fairfax Ave.
- Route turns northward and travels on Fairfax Ave as a raised (sidewalk-level) 2-way Class IV facility.
- Route continues north on S Genesee Ave as a raised (sidewalk-level) 2-way Class IV facility.
- Route continues onto the paved portion of Cologne St along the creek channel (until S Thurman Ave) as a raised (sidewalk-level) 2-way Class IV facility.
- After S Thurman Ave, the route continues within the unpaved ROW of Cologne St on the top of the Ballona Creek channel. This portion features a separate pedestrian path, linear park space, and trailhead/ overlook parklets.

Given the desire for the Gateway Park within LA Council District 10, the development of this green space, as well as linear park space and general landscaping, is included in this option. The portions of the route which run through unimproved City of LA ROW must meet LA's Green Streets Standards, meaning elements such as permeable paving and vegetative swales may be required between S Genesee Ave and S Cochran Ave.





Key Considerations

Estimated Costs

Total Construction Costs:	$19,846,982
Design Costs:	$1,984,698
Active Transportation	$13,915,837 (70%)
Other (e.g. Landscape)	$5,931,145 (30%)
	Design Costs Excluded
Culver City	$3,009,082 (15%)
City of Los Angeles	$16,837,900 (85%)
	Design Costs Excluded

Permit Requirements
- Culver City PW Permit
- City of LA BOE Permit
- Caltrans Permit
- LACFCD Access Permit

Route seeks to avoid permits with longest timeframes. See Ch. 5 for more detail.

Environmental Reviews
CEQA is applicable but project may qualify for an exemption. Route avoids portion likely subject to NEPA environmental review. See Ch. 5 for more detail.

Stormwater
City of LA Green Streets Standards apply to pathway in unimproved portions of City of LA ROW.

Except where noted otherwise, costs included above pertain to construction costs

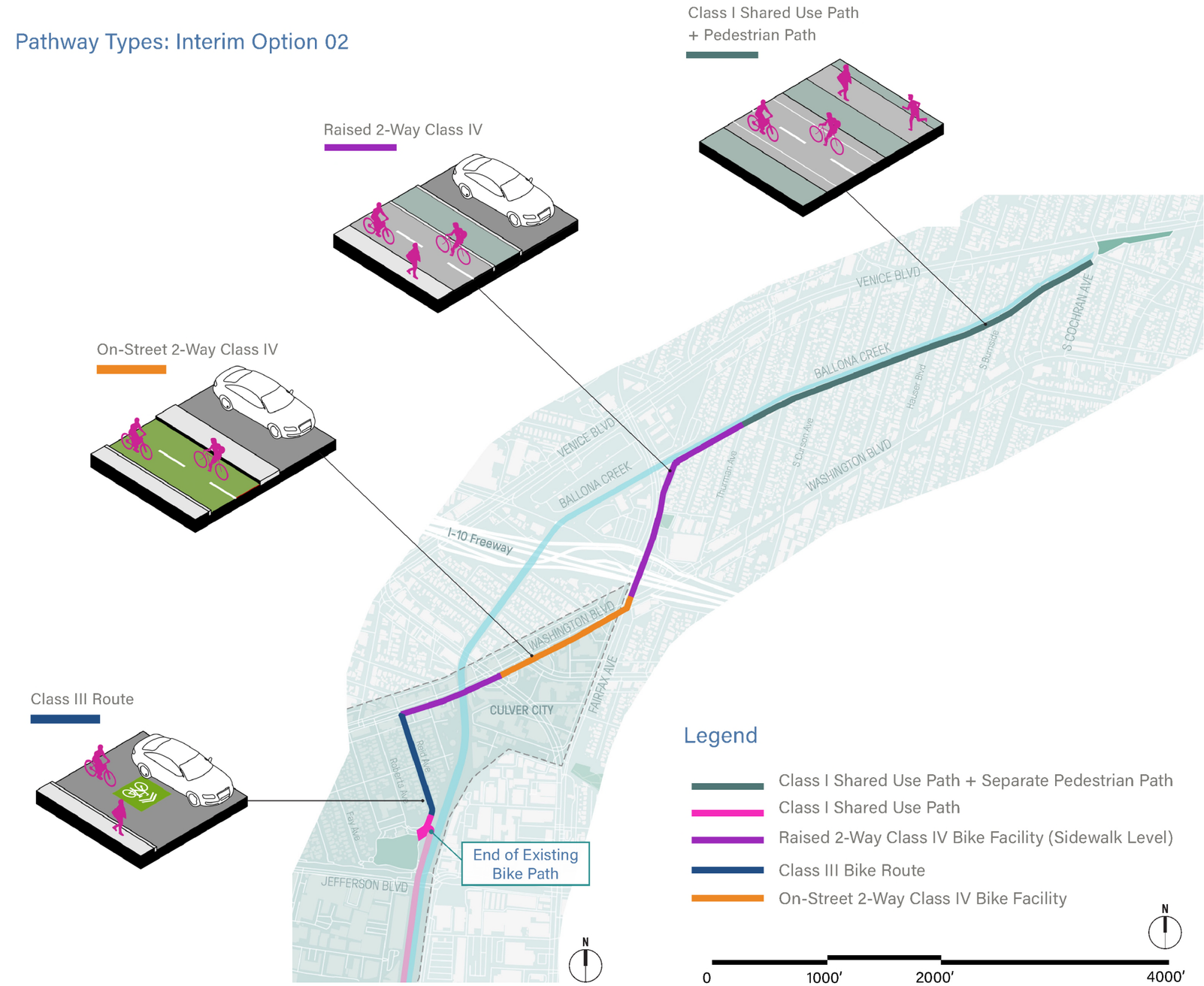
Pros

- Decreases likelihood of USACE permitting and NEPA environmental review
- Increases likelihood of exemption from CEQA environment review relative to Interim Option 01 (by modifying existing roadways and sidewalks - Class I exemption)
- Provides more direct access to transit and businesses along Washington Blvd
- Reduces probable project cost
- Though the route diverges from the Ballona Creek channel, the route does proceed in relatively direct manner (there are a minimal number of sharp turns in route)
- Includes development of park space within Mid-City portion of route as a key amenity. Note that, where pathway is developed in currently unimproved City of LA ROW, the project must meet the City of LA's Green Streets Standards (including such as elements as permeable paving, vegetative swales, and passive irrigation systems). The park space and connective landscape within Mid-City feature such elements

Cons

- Pathway is away from channel and on-street (Class IV) or on-street adjacent (raised Class IV) for majority of route (54%)
- Higher amount of interaction with vehicles through road crossings and driveways
- Relatively higher levels of traffic stress for users given location of segments of route on and adjacent to roads.
- Increases the potential need for traffic lane reconfiguration and road re-striping

Pathway Types: Interim Option 02



Full Primary Route Build-Out

Primary Route Option (from Interim Option 01)

Overview

Build-out of the full Primary Route option can start from either Interim Option 01 or Interim Option 02 (outlined in the preceding pages). The following two pages detail the build-out of the full Primary Route if starting from Interim Option 01. In this phase, the pathway is constructed alongside the channel from Syd Kronenthal Park to La Cienega Blvd, connecting directly to the existing Ballona Creek bike path.

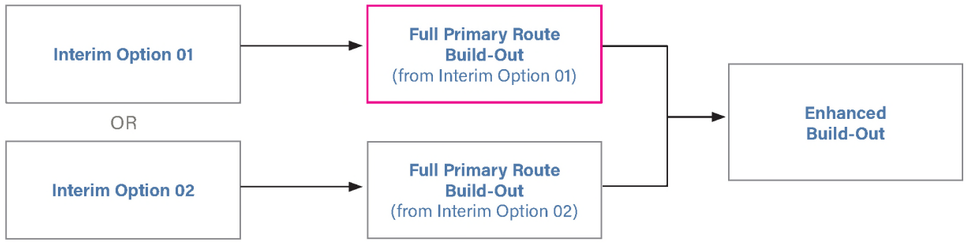
The new segment for this build-out involves a USACE Section 408 Permit, along with the potential need for an Environmental Assessment and, following that, a potential Environmental Impact Statement (EIS) under NEPA. The USACE is responsible for determining whether the project is exempt from these NEPA reviews. A number of privately-owned parcels exist within the LACFCD Easement in this portion of the route. Owners' agreement will be needed to pass the pathway through these parcels (refer to Ch. 5 ROW assessment for more detail).

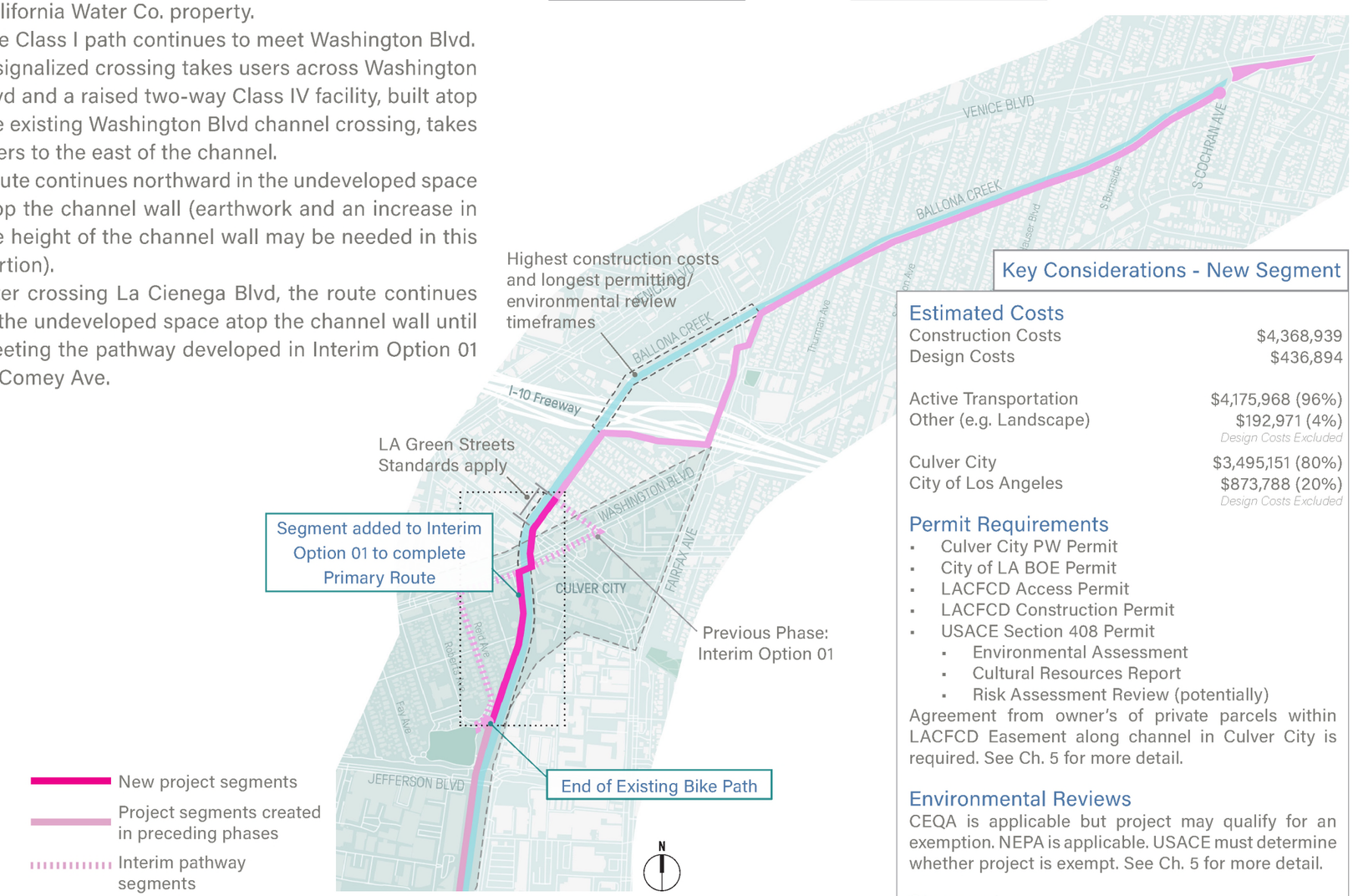
With the goal of constructing the project within the near-term, the full build-out of the Primary Route still avoids the most challenging portions for continuing the pathway along Ballona Creek: the segment beneath the I-10 Freeway and adjacent to the the LADWP Palms Yard.

Route Overview

This new segment includes the following features (refer to Chapter 4 for detailed conceptual pathway alignment):

- The route continues atop the existing in-channel maintenance road (like the existing bike path) at the point where the existing bike path ends.
- Route continues northward on a ramp (approx. 200' long, less than 5% slope, built into the existing sloped channel wall) which takes users from the elevation of the existing in-channel maintenance road to the top of the channel wall where the pathway continues as a Class I shared use path.
- Another ramp takes users around the terminus of a cross-channel pipeline adjacent to the Southern California Water Co. property.
- The Class I path continues to meet Washington Blvd.
- A signalized crossing takes users across Washington Blvd and a raised two-way Class IV facility, built atop the existing Washington Blvd channel crossing, takes users to the east of the channel.
- Route continues northward in the undeveloped space atop the channel wall (earthwork and an increase in the height of the channel wall may be needed in this portion).
- After crossing La Cienega Blvd, the route continues in the undeveloped space atop the channel wall until meeting the pathway developed in Interim Option 01 at Comey Ave.





Key Considerations - New Segment

Estimated Costs

Construction Costs	$4,368,939
Design Costs	$436,894
Active Transportation	$4,175,968 (96%)
Other (e.g. Landscape)	$192,971 (4%)
	Design Costs Excluded
Culver City	$3,495,151 (80%)
City of Los Angeles	$873,788 (20%)
	Design Costs Excluded

Permit Requirements

- Culver City PW Permit
- City of LA BOE Permit
- LACFCD Access Permit
- LACFCD Construction Permit
- USACE Section 408 Permit
  - Environmental Assessment
  - Cultural Resources Report
  - Risk Assessment Review (potentially)

Agreement from owner's of private parcels within LACFCD Easement along channel in Culver City is required. See Ch. 5 for more detail.

Environmental Reviews

CEQA is applicable but project may qualify for an exemption. NEPA is applicable. USACE must determine whether project is exempt. See Ch. 5 for more detail.

Stormwater

City of LA Green Streets Standards apply to pathway in unimproved portions of City of LA ROW. See pg 6-17.

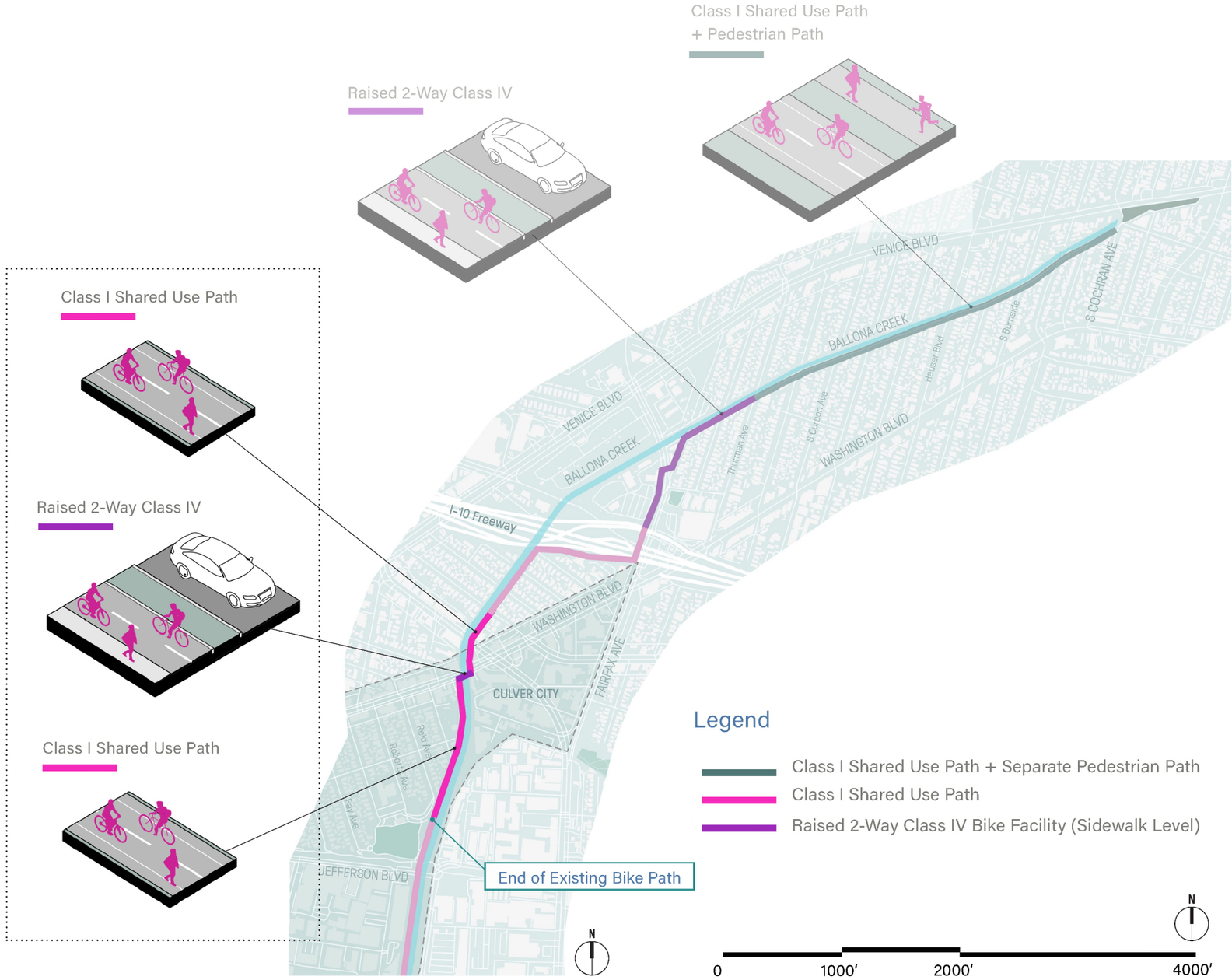
Except where noted otherwise, costs included above pertain to construction costs

Pros

- Continues pathway route alongside Ballona Creek beyond point where existing pathway ends (no complicated wayfinding needed to continue)
- 75% of route is alongside Ballona Creek
- Likely avoids most costly and time-consuming USACE permitting (associated with Alternative B, the I-10 undercrossing)
- Avoids higher probable construction costs associated with construction of I-10 undercrossing (Alternative B)
- Reduces user interaction with vehicles, as entire route is either Class I off-street or raised two-way Class IV. Crossings are minimized by travel along creek

Cons

- Route diverges from the channel at the I-10 freeway and is away from channel for approx. 25% of its length
- Cost, construction, and permitting timeframes associated with construction of ramps between Syd Kronenthal Park to Washington Blvd
- Must address private parcels through which route travels
- Potential for NEPA review (see Ch 5 for more detail)
- Potential for CEQA review, though an exemption may be possible (see Chapter 5)



Full Primary Route Build-Out

Primary Route Option (from Interim Option 02)

Overview

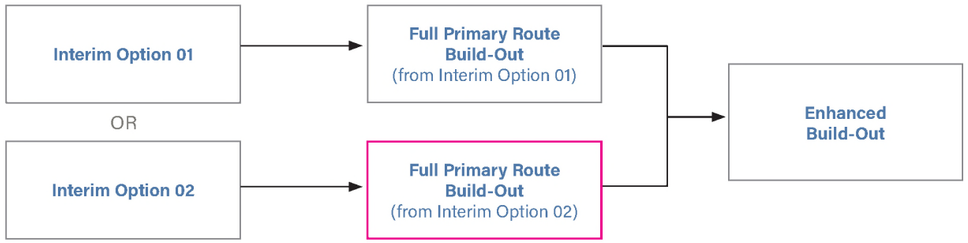
The following two pages detail the build-out of the full Primary Route if starting from Interim Option 02. In this phase, the pathway is constructed alongside the channel from Syd Kronenthal Park to La Cienega Blvd, connecting directly to the existing Ballona Creek bike path.

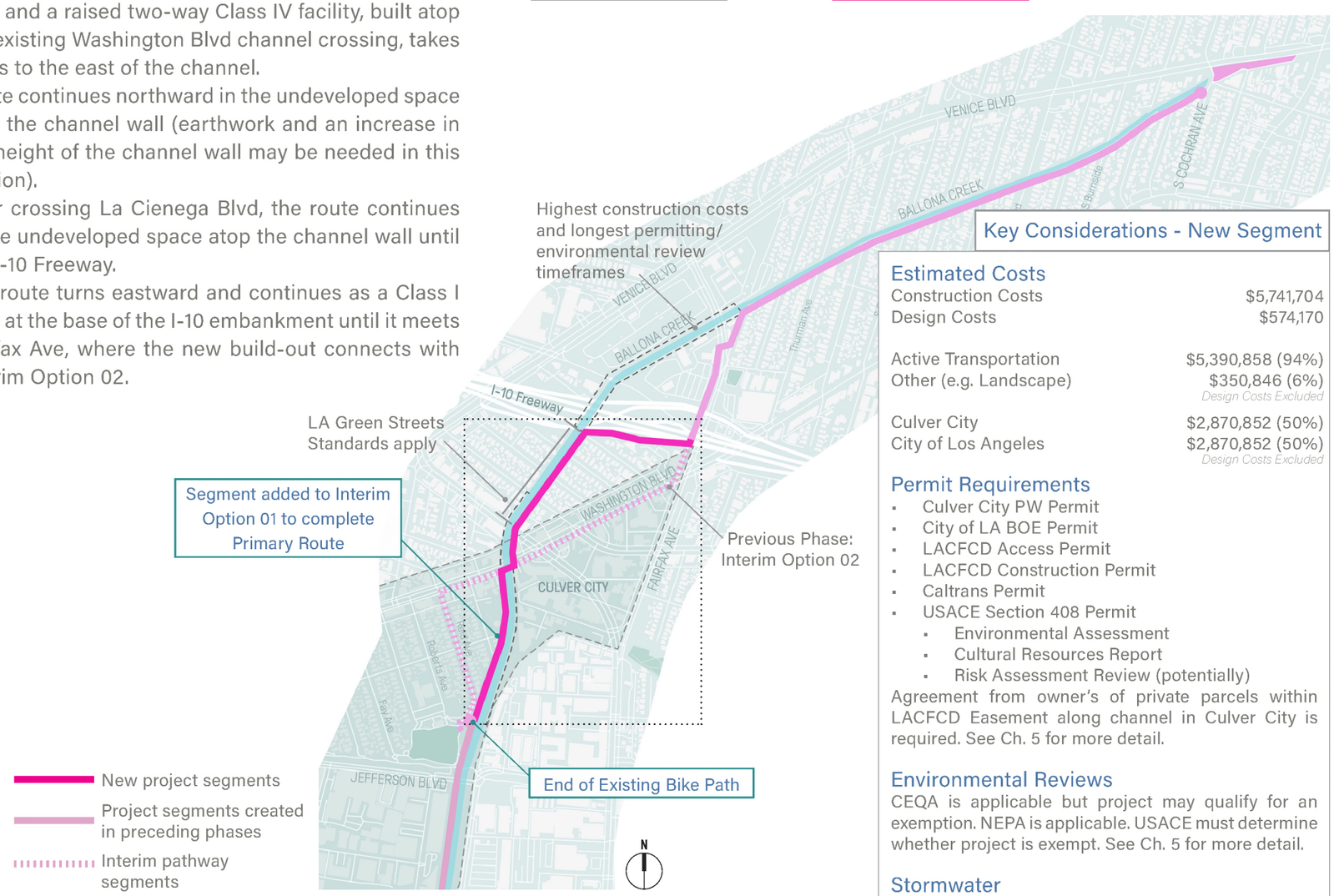
The new segment for this build-out involves a USACE Section 408 Permit, along with the potential need for an Environmental Assessment and, following that, a potential Environmental Impact Statement (EIS) under NEPA. The USACE is responsible for determining whether the project is exempt from these NEPA reviews. A number of privately-owned parcels exist within the LACFCD Easement in this portion of the route. Owners' agreement will be needed to pass the pathway through these parcels (refer to Ch. 5 ROW assessment for more detail). The build-out from Interim Option 02 also involves a Caltrans permit for development of the pathway at the base of the I-10 freeway embankment. With the goal of constructing the project within the near-term, the full build-out of the Primary Route still avoids the most challenging portions for continuing the pathway along Ballona Creek: the segment beneath the I-10 Freeway and adjacent to the the LADWP Palms Yard.

Route Overview

This new segment includes the following features (refer to Chapter 4 for detailed conceptual pathway alignment):

- The route continues atop the existing in-channel maintenance road (like the existing bike path) at the point where the existing bike path ends.
- Route continues northward on a ramp (approx. 200' long, less than 5% slope, built into the existing sloped channel wall) which takes users from the elevation of the existing in-channel maintenance road to the top of the channel wall where the pathway continues as a Class I shared use path.
- Another ramp takes users around the terminus of a cross-channel pipeline adjacent to the Southern California Water Co. property.
- A signalized crossing takes users across Washington Blvd and a raised two-way Class IV facility, built atop the existing Washington Blvd channel crossing, takes users to the east of the channel.
- Route continues northward in the undeveloped space atop the channel wall (earthwork and an increase in the height of the channel wall may be needed in this portion).
- After crossing La Cienega Blvd, the route continues in the undeveloped space atop the channel wall until the I-10 Freeway.
- The route turns eastward and continues as a Class I path at the base of the I-10 embankment until it meets Fairfax Ave, where the new build-out connects with Interim Option 02.





Key Considerations - New Segment

Estimated Costs

Construction Costs	$5,741,704
Design Costs	$574,170
Active Transportation	$5,390,858 (94%)
Other (e.g. Landscape)	$350,846 (6%)
	Design Costs Excluded
Culver City	$2,870,852 (50%)
City of Los Angeles	$2,870,852 (50%)
	Design Costs Excluded

Permit Requirements

- Culver City PW Permit
- City of LA BOE Permit
- LACFCD Access Permit
- LACFCD Construction Permit
- Caltrans Permit
- USACE Section 408 Permit
  - Environmental Assessment
  - Cultural Resources Report
  - Risk Assessment Review (potentially)

Agreement from owner's of private parcels within LACFCD Easement along channel in Culver City is required. See Ch. 5 for more detail.

Environmental Reviews

CEQA is applicable but project may qualify for an exemption. NEPA is applicable. USACE must determine whether project is exempt. See Ch. 5 for more detail.

Stormwater

City of LA Green Streets Standards apply to pathway in unimproved portions of City of LA ROW. See pg 6-17.

Except where noted otherwise, costs included above pertain to construction costs

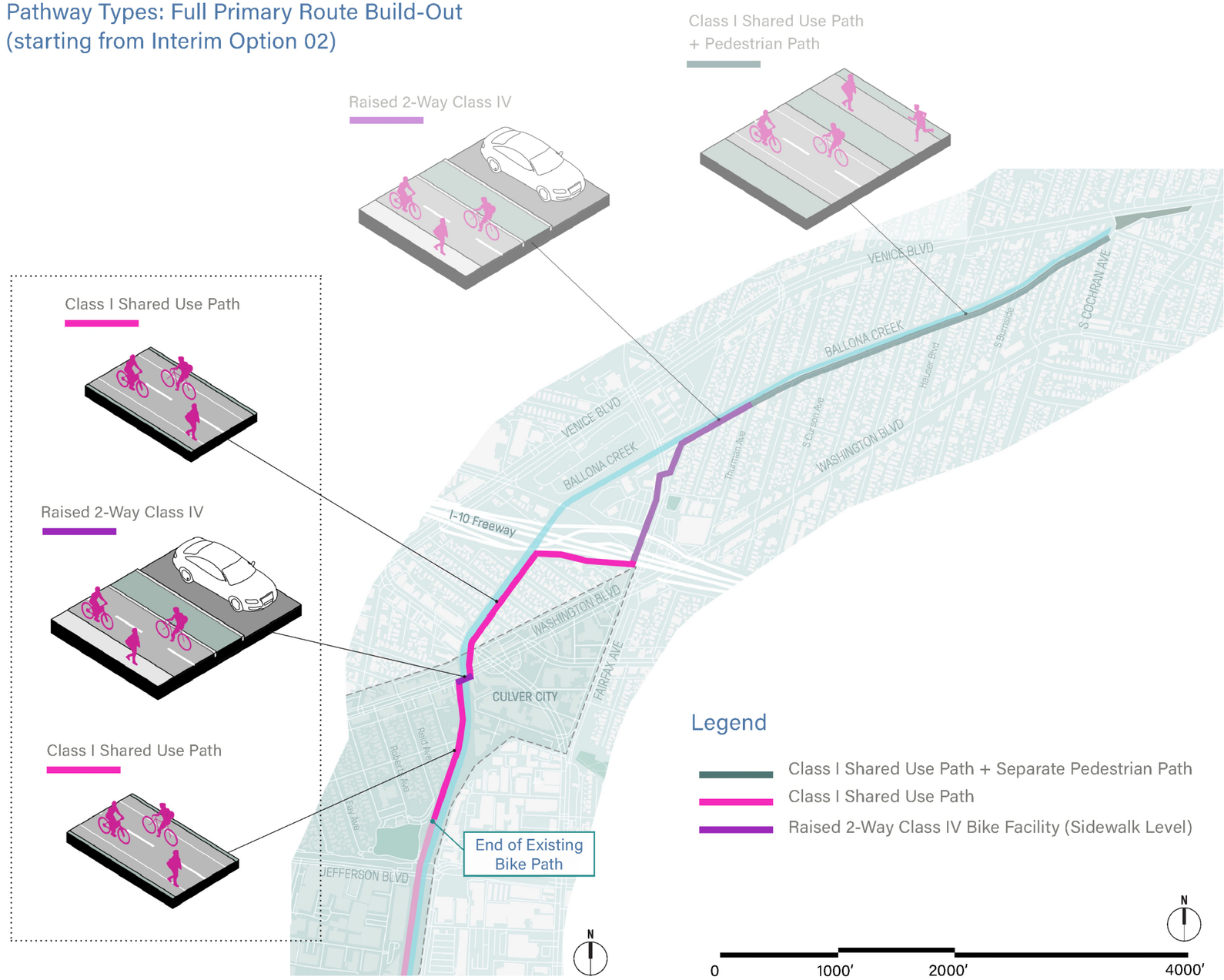
Pros

- Continues pathway route alongside Ballona Creek beyond point where existing pathway ends (no complicated wayfinding needed to continue)
- 75% of route is alongside Ballona Creek
- Likely avoids most costly and time-consuming USACE permitting (associated with Alternative B, the I-10 undercrossing)
- Avoids higher probable construction costs associated with construction of I-10 undercrossing (Alternative B)
- Reduces user interaction with vehicles, as entire route is either Class I off-street or raised two-way Class IV. Crossings are minimized by travel along creek.

Cons

- Route diverges from the channel at the I-10 freeway and is away from channel for approx. 25% of its length
- Cost, construction, and permitting timeframes associated with construction of ramps between Syd Kronenthal Park to Washington Blvd
- Must address private parcels through which route travels
- Potential for NEPA review (see Ch 5 for more detail)
- Potential for CEQA review, though an exemption may be possible (see Chapter 5)

Pathway Types: Full Primary Route Build-Out (starting from Interim Option 02)



Enhanced Build-Out

Alternative B

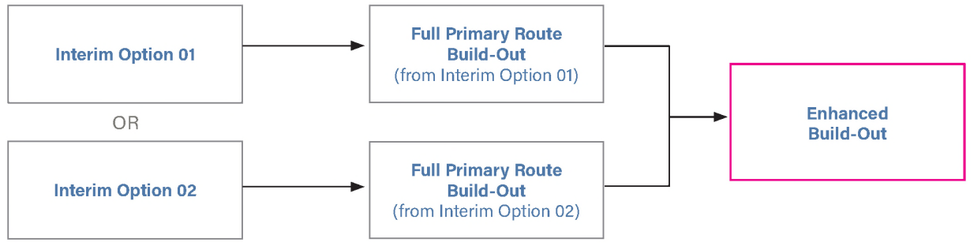
Overview

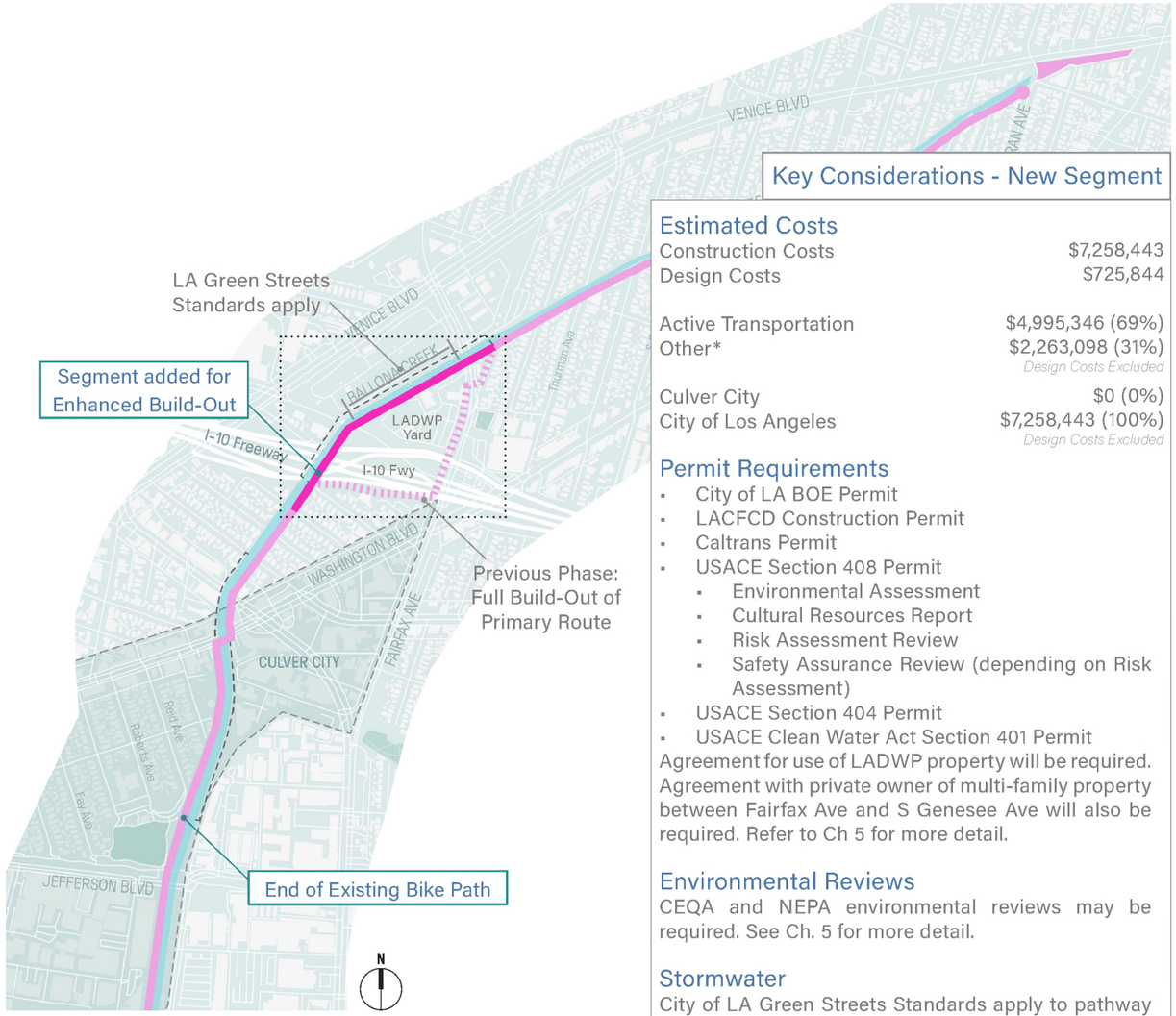
The Enhanced Build-Out goes beyond the full build-out of the Primary Route to continue the pathway alongside - or within - the Ballona Creek channel for the entirety of Ballona Creek. To do this, the project must engage with the challenging portion of the route beneath the I-10 Freeway and alongside the DWP Palms Yard. In this portion, the pathway must descend into the channel itself, where it is elevated on pillars, to fit beneath the I-10 Freeway and its on- and off-ramps. As a result, project costs are higher and permitting timeframes and environmental reviews potentially much longer.

Route Overview

This new segment includes the following features (refer to Chapter 4 for detailed conceptual pathway alignment):

- The Primary Route travels in the undeveloped space atop the channel from La Cienega to the I-10 Freeway
- To navigate beneath the I-10 Freeway and adjacent infrastructure (namely, a cross-channel pipeline), the pathway descends into the channel where Ernest Ave intersects with Ballona Creek.
- An elevated pathway, constructed within the channel, travels beneath the I-10 Freeway and adjacent infrastructure before ascending to the top of the channel wall adjacent to the DWP Palms Yard.
- The pathway uses a portion of the DWP Palms Yard property to continue along the channel.
- To avoid DWP wells, the pathway is briefly elevated on pillars and hangs over the edge of the channel wall before returning back to grade once the pathway has navigated around the well locations.
- A new secure barrier is constructed between the pathway and the DWP yard.
- After crossing Fairfax, the pathway continues between a channel access ramp and a privately-owned multi-family property. A portion of the privately-owned property is required for the pathway in this portion.
- After crossing S Genesee Ave, the pathway connects again with the Primary Route.





Key Considerations - New Segment

Estimated Costs

Construction Costs	$7,258,443
Design Costs	$725,844
Active Transportation	$4,995,346 (69%)
Other*	$2,263,098 (31%)
	Design Costs Excluded
Culver City	$0 (0%)
City of Los Angeles	$7,258,443 (100%)
	Design Costs Excluded

Permit Requirements

- City of LA BOE Permit
- LACFCD Construction Permit
- Caltrans Permit
- USACE Section 408 Permit
  - Environmental Assessment
  - Cultural Resources Report
  - Risk Assessment Review
  - Safety Assurance Review (depending on Risk Assessment)
- USACE Section 404 Permit
- USACE Clean Water Act Section 401 Permit

Agreement for use of LADWP property will be required. Agreement with private owner of multi-family property between Fairfax Ave and S Genesee Ave will also be required. Refer to Ch 5 for more detail.

Environmental Reviews

CEQA and NEPA environmental reviews may be required. See Ch. 5 for more detail.

Stormwater

City of LA Green Streets Standards apply to pathway in unimproved portions of City of LA ROW. See pg 6-17.

*"Other" costs for this segment primarily consist of constructing a new wall around LADWP's Palms Yard (see Ch 5)

Except where noted otherwise, costs included above pertain to construction costs

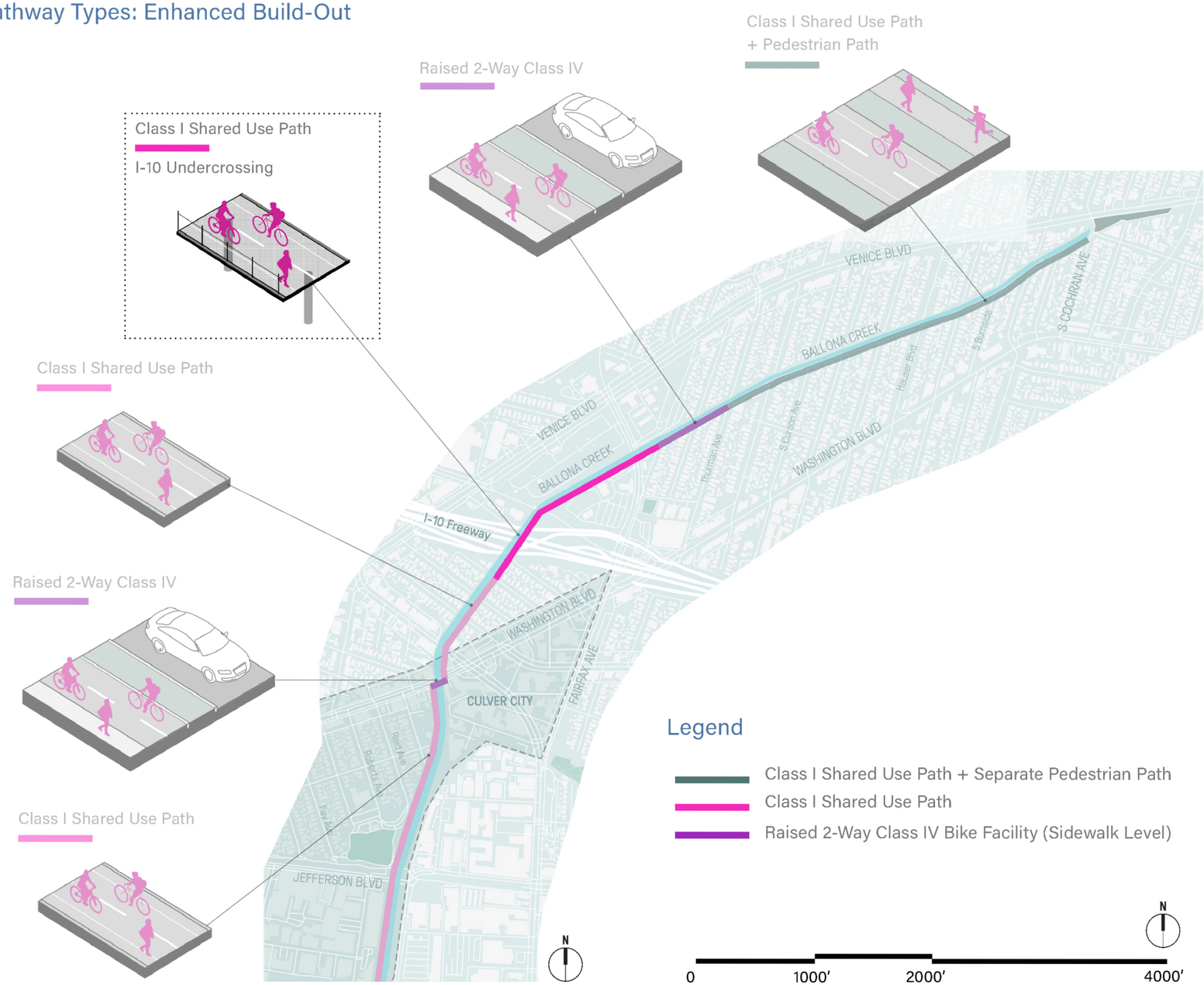
Pros

- Continues pathway route alongside and within Ballona Creek channel for 100% of route
- Highly clear, direct, and intuitive route
- Connection to Ballona Creek is maintained for entire route
- Provides the unique experience of travel on an elevated platform within the channel.
- Minimal interaction with vehicles

Cons

- Higher construction costs
- Likely longer and more costly permitting processes than any other portion of the route (related primarily to USACE permitting - see Ch 5 for more detail)
- Higher potential for costly and time-consuming environmental reviews under NEPA and CEQA (see Chapter 5 for more detail)

Pathway Types: Enhanced Build-Out



Grant Opportunities

This section describes potential funding sources and approaches to funding for the development of the Ballona Creek pathway extension, including for the small parks and green spaces along its route.

Funding Needs and Strategic Considerations

Community members and stakeholders have identified the need for safer and more sustainable modes of transportation in the project area, as well as the need for more parks, green space, and shade trees along and near the proposed bikeway. Analyses of the area around the proposed pathway extension also demonstrate these needs.

A strategic approach to funding these improvements would consider the proposed bikeway's proximity to Ballona Creek, I-10, dense urban neighborhoods, and high-need residents. The neighborhoods surrounding the proposed pathway expansion demonstrate public health and safety needs. The funding approach should consider these needs in creating grant applications, while highlighting the potential for Safe Routes to School, reductions in vehicle miles traveled and greenhouses, and increased proportions of trips completed by walking and/or biking.

Ballona Creek's presence establishes watershed health, flood control, and stormwater capture funding eligibility. The air pollution and greenhouse gas emissions from I-10 enhances the corridor's competitiveness for pollution reduction and climate resilience funding. Due to its proximity to dense neighborhoods and major job centers, the proposed bikeway would also be eligible for sustainable mobility and urban tree canopy funding. According to the 2022 Los Angeles County Parks Needs Assessment Plus, the proposed bikeway falls within priority areas for environmental restoration and increasing access to regional recreation, enhancing the bikeway's competitiveness for countywide funding.

The following pages will outline grant opportunities for 1) the project's active transportation elements and 2) the project's park and green space elements.

Active Transportation Grant Opportunities

Several grant opportunities exist to fund active transportation improvements - that is, improvements encourage increased use of active modes of transportation, such as walking and biking.

Among the most pertinent to the Ballona Creek Phase II project is the Active Transportation Program (ATP) grant administered by the California Transportation Commission.

California Transportation Commission: Active Transportation Program (ATP)

The ATP is focused on increasing the proportion of trips accomplished by walking and biking, increasing the safety and mobility of non-motorized users, advancing efforts of regional agencies to achieve greenhouse gas reduction goals, enhancing public health, and providing a broad spectrum of projects to benefit many types of users including disadvantaged communities.

Since its creation, the Active Transportation Program has funded over 800 active transportation projects across California in both urban and rural areas. More than half of the funded projects are Safe Routes to Schools projects and programs that encourage a healthy and active lifestyle throughout students' lives. Every ATP cycle has seen more than 85% of funds going towards projects that will benefit disadvantaged communities throughout the state.

Eligible ATP applicants include:

- Local, Regional, or State Agencies
- Caltrans
- Transit Agencies
- Natural Resources or Public Land Agencies.
- Public Schools or school districts.
- Tribal Governments
- Private nonprofit tax-exempt organizations that are responsible for the management of public lands

Projects eligible for ATP funding include (one of the following categories must be selected when applying):

- Infrastructure Projects: Capital improvements that will further the goals of the ATP program.
- Non-Infrastructure (NI) Projects: Education, encouragement, and enforcement activities that further the goals of the ATP.
- Combination Projects: A project that combines Infrastructure and Non-Infrastructure components.
- Plans: The development of a community wide bicycle, pedestrian, safe routes to school, or active transportation plan that is located in a disadvantaged community.

The mapping analyses of LA Metro Equity Focus Communities and vulnerable populations in proximity of the proposed expansion (see Ch. 2 Site Analysis) are relevant in the preparation of the ATP application.

The ATP only funds active transportation elements. Per conversations with LADOT, this would include signage and lighting along the pathway not landscape features, such as planting and bioswales. Some segments may require the development of both active transportation and landscape features in conjunction. Specifically, where the City of LA's Green Streets Standards apply, landscape elements may be required to be developed along with active transportation (see Ch 5).

ATP Cycle 7 is expected to include roughly $555M made up of Federal, State SB1, and State Highway Account (SHA) funding. The funding/programming years include the 23/24, 24/25, 25/26, and 26/27 fiscal years. The project application deadline is June 17, 2023.

Additional Active Transportation Funding Opportunities

The California Transportation Commission also has gathered a list of funding programs other than the ATP that may include active transportation elements. That list is included on the following pages.

Additional Grant Opportunities for Active Transportation

PROGRAM	ADMINISTERING AGENCY	PURPOSE/DESCRIPTION	OVERLAP WITH ATP	ACTIVE TRANSPORTATION			PROJECT EXAMPLES
				Inf.	NI	Plan	
Sustainable Communities Planning Grants	Caltrans Division of Transportation Planning	The program includes $29.5 million to encourage local and regional planning that furthers state goals, including, but not limited to, the goals and best practices cited in the Regional Transportation Plan Guidelines adopted by the California Transportation Commission.	Eligible Types: ● Active Transportation Plan ● Bike Plan ● Pedestrian Plan ● Safe Routes to School Plan			X	• Safe Routes to School Plan • Active Transportation Plan • Bike/ped Trail/Path Feasibility Study • Complete Streets Plan • Sustainable Communities Plan • Transit-Oriented Development Plan • First/Last Mile Connectivity Plan
Affordable Housing and Sustainable Communities Program (AHSC)	Strategic Growth Council and Department of Housing and Community Development	The Program funds land-use, housing, transportation, and land preservation projects to support infill and compact development that reduce greenhouse gas emissions. The Program included $550M in its latest round. (California Climate Investments)	Eligible Types: ● Bike and pedestrian facilities ● NI Programs - Education *(Must connect with affordable housing component of the grant)*	X	X		• Class I, II, III, & IV bike lanes • Active transportation projects to encourage connectivity to transit networks • Bikeways and sidewalks to affordable housing and transit center • Install dedicated bicycle facilities • Pedestrian facilities such as bulb-outs
Urban Greening	California Natural Resources Agency	The Program supports the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Must include at least one of the following: ● Sequester and store carbon by planting trees ● Reduce building energy use by strategically planting trees to shade buildings ● Reduce commute vehicle miles traveled by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools. (California Climate Investments)	Eligible Types: ● Bicycle and pedestrian facilities	X			• Non-motorized urban trails that provide safe routes for both recreation and travel between residences, workplaces, commercial centers, and schools • Projects that expand or improve the usability of existing active transportation routes (e.g., walking or bicycle paths) or create new active transportation routes that are publicly accessible by walking • Complete Green Streets
Transformative Climate Communities (TCC)	Strategic Growth Council and Department of Conservation	The Program funds community-led development and infrastructure projects that achieve major environmental, health, and economic benefits in California's most disadvantaged communities. (California Climate Investments)	Eligible Types: ● Bicycle and pedestrian facilities ● Bike share programs *(However must be part of a larger place-based strategy)*	X			• Bike share program • Creating and considering active transportation corridors for better non-motorized connections • Multi-use paths • Urban greening for pedestrian facilities
Office of Traffic Safety Grant Program	Office of Traffic Safety	The Program provides annual funds to prevent serious injury and death resulting from motor vehicle crashes so	Eligible Types:		X		• Safety education and encouragement • Campaigns to promote safety • SRTS safety programs

List of "FUNDING PROGRAMS THAT MAY INCLUDE ACTIVE TRANSPORTATION ELEMENTS " generated by the California Transportation Commission[1]

Grant Opportunities - Active Transportation

PROGRAM	ADMINISTERING AGENCY	PURPOSE/DESCRIPTION	OVERLAP WITH ATP	ACTIVE TRANSPORTATION			PROJECT EXAMPLES
				Inf.	NI	Plan	
		that all roadway users arrive at their destination safely. Funds can be used for bicycle and pedestrian safety	• NI Programs – education, campaigns				
Clean Mobility Options	Air Resources Board	The Program makes $20 million available for zero-emissions shared mobility projects (such as car sharing, bike sharing, and on-demand sharing) in disadvantaged and low-income communities, including some tribal and affordable housing communities (California Climate Investments)	Eligible Types: • Bike Share • Infrastructure improvement projects	X			• Bikeshare programs • "Quick build" right-of-way safety improvements for bicycles and scooters
Sustainable Transportation Equity Project (STEP)	Air Resources Board	The Program makes $2 million available for planning and capacity building grants. Funding is intended to help low-income and disadvantaged communities identify residents' transportation needs and prepare to implement clean transportation and land use projects. The Program makes $20 million available for one to three implementation block grants to fund clean transportation and land use projects in disadvantaged communities. Funded projects will work together to increase community residents' access to key destinations so they can get where they need to go without the use of a personal vehicle (California Climate Investments)	Eligible Types: • Bike or pedestrian facilities • Active Transportation Plan • Bike Plan • Pedestrian Plan • Safe Routes to School Plan • Capacity Building (NI Programs– education, engagement, demo projects, campaigns)	X	X	X	• New bike routes (Class I, Class II, or Class IV) and supporting infrastructure • Publicly-accessible bike parking, storage, and repair infrastructure (e.g., bike racks, bike lockers, bike repair kiosks) • New walkways that improve mobility/access/safety of pedestrians (non-motorized users) • Street crossing enhancements, including accessible pedestrian signals • Plans
Transit and Intercity Rail Capital Program (TIRCP)	CalSTA and Caltrans Division of Rail and Mass Transportation	The TIRCP provides grants from the Greenhouse Gas Reduction Fund (GGRF) to fund transformative capital improvements that will modernize California's intercity, commuter, and urban rail systems, and bus and ferry transit systems, to significantly reduce emissions of greenhouse gases, vehicle miles traveled, and congestion.	Eligible Types: • First/Last Mile • NI Education and Outreach • Bicycle and pedestrian facilities at Transit sites	X	X	X	• Pedestrian and bike trail • First/last mile connections via bike lanes and separated paths • Bike share programs • Bike parking facilities • Plans
Local Partnership Program (LPP)	California Transportation Commission	The primary objective of this program is to provide funding to counties, cities, districts, and regional transportation agencies in which voters have approved fees or taxes dedicated solely to transportation improvements or that have imposed fees, including uniform developer fees, dedicated solely to transportation improvements. Funding includes $200M/year to improve aging Infrastructure, Road Conditions, Active Transportation, Transit and rail, Health and Safety Benefits	Eligible Types: • Bicycle and pedestrian facilities	X			• Close sidewalk gap, install class II bike lanes and cycle track, curb extensions, pedestrian enhancements, improvements to lighting and signage • Construct 4 single-lane and 1 multi-lane roundabouts, and improvements to street, pedestrian and bicycle facilities • Expressway pedestrian overcrossing

List of "FUNDING PROGRAMS THAT MAY INCLUDE ACTIVE TRANSPORTATION ELEMENTS " generated by the California Transportation Commission

Grant Opportunities - Active Transportation

PROGRAM	ADMINISTERING AGENCY	PURPOSE/DESCRIPTION	OVERLAP WITH ATP	ACTIVE TRANSPORTATION			PROJECT EXAMPLES
				Inf.	NI	Plan	
Local Streets and Roads (LSR) Program	California Transportation Commission	The purpose of the program is to provide approximately $1.5 billion per year to cities and counties for basic road maintenance, rehabilitation, and critical safety projects on the local streets and roads system.	Eligible Types: ● Complete Streets Components ● Safety Projects ● Bike Lanes	X			• Implement enhanced crosswalk signing and striping • Create safety separation between motorists, bicyclists and pedestrians • Design and construction of school access and safety improvements to six schools (SRTS)
Solutions for Congested Corridors (SCCP)	California Transportation Commission	The purpose of the program is to provide funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce congestion throughout the state. This statewide, competitive program makes $250 million available annually for projects that implement specific transportation performance improvements and are part of a comprehensive corridor plan by providing more transportation choices while preserving the character of local communities and creating opportunities for neighborhood enhancement.	Eligible Types: ● Bike Lanes ● Ped Improvements	X			• Construct Class I and Class II bikeways • Pedestrian improvements and plaza at a transit station • Intersection improvements
Highway Safety Improvement Program (HSIP)	Caltrans Local Assistance/ FHWA	The Program funds work on any public road or publicly owned bicycle or pedestrian pathway or trail, or on tribal lands for general use of tribal members, that improves the safety for its users. Project maximum funding- $10M. Solicitation varies from annually to semi-annually.	Eligible Types: ● Safety projects on Bike facilities ● Safety projects on Ped facilities	X		X	• Install hybrid pedestrian signals • Improve pedestrian and bicycle safety at locations with uncontrolled crossings • Plans
State Highway Operations and Protection Program (SHOPP)	Caltrans Office of SHOPP Management	The Office of SHOPP Management is responsible for planning, developing, managing and reporting the four-year SHOPP portfolio of projects. The Program is the State Highway System's "fix it first" program that funds repairs and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System.	Eligible Types: ● Bike & Pedestrian elements *(In the context of facility type, right of way, project scope, and quality of nearby alternative facilities)*	X			• Upgrade sidewalks to ADA compliance • Reconstruct damaged pavement • Add bike lanes to updated corridors • Upgrade pedestrian push buttons, refresh striping, and improve pedestrian and bicycle access
State Transportation Improvement Program (STIP)	California Transportation Commission	The STIP is the biennial five-year plan adopted by the Commission for future allocations of certain state transportation funds for state highway improvements, intercity rail, and regional highway and transit improvements. Local agencies should work through their Regional Transportation Planning Agency (RTPA), County Transportation Commission, or Metropolitan Planning Organization (MPO), as appropriate, to nominate projects for inclusion in the STIP.	Eligible Types: ● Bicycle & Pedestrian projects *(Must be eligible for State Highway Account or Federal funds)*	X			• Bike/ped Overcrossing and Access Improvements and bicycle and pedestrian bridge • Class I, II, III, & IV bike lanes • Multi-Use paths • Complete Streets improvements

List of "FUNDING PROGRAMS THAT MAY INCLUDE ACTIVE TRANSPORTATION ELEMENTS " generated by the California Transportation Commission

Grant Opportunities - Active Transportation

PROGRAM	ADMINISTERING AGENCY	PURPOSE/DESCRIPTION	OVERLAP WITH ATP	ACTIVE TRANSPORTATION			PROJECT EXAMPLES
				Inf.	NI	Plan	
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	FHWA	The purpose of the CMAQ program is to provide a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. The program supports surface transportation projects and other related efforts that contribute air quality improvement and provide congestion relief.	Eligible Types: • Bicycle facilities	X			• Travel Demand Management to promote clean commutes • Public Education and Outreach • Bicycle amenities; Class I, II, III, & IV bike lanes

List of "FUNDING PROGRAMS THAT MAY INCLUDE ACTIVE TRANSPORTATION ELEMENTS " generated by the California Transportation Commission

Grant Opportunities - Water

Los Angeles County
Safe Clean Water Program (Measure W)

The Los Angeles County Flood Control District's (District) Safe Clean Water Program (SCWP) is charged with investing approximately $280 million annually into multi-benefit stormwater capture projects and programs. The SCWP is designed to clean and conserve stormwater that would otherwise be lost to the ocean when it rains, and to do so in a manner that improves the livability and resilience of LA County's communities through development of green space, recreational opportunities, and other enhancements. The SCWP encourages regional collaboration, prioritizes investment in disadvantaged communities, and favors projects that employ nature-based elements.

Specifically, the Safe, Clean Water Program funds projects and programs that:

- Implement a new plan for L.A.'s water system to capture the billions of gallons of water that are currently lost to the ocean each year;
- Help protect rivers, streams, coastal waters and beaches from the trash and contaminants in stormwater that make people sick and threaten marine life;
- Modernize the 100-year-old water system infrastructure, using a combination of nature, science, and new technology;
- Help protect public health, ensuring safer, greener, healthier, and more livable spaces for all;
- Prepare the region for the effects of a changing climate — including recurring cycles of drought, wildfire, and flooding.

These projects can be large stormwater capture facilities that infiltrate into groundwater, store and treat water before releasing the cleaner water to downstream rivers, or diversion projects that transport stormwater to existing sewer treatment plants for recycling, creating a new source of water supply. The program prioritizes projects that utilize nature-based solutions, projects that use natural processes to mimic the natural water cycle by slowing, detaining, infiltrating or filtering stormwater.[2]

The SCWP may provide an opportunity for funding the proposed stormwater elements of the project.

Grant Opportunities - Parks and Green Spaces

Local Funding Sources

Funding Source	Disbursing Agency	Program Summary and Eligible Uses
City of LA Park Fee Program	City of Los Angeles Department of Recreation and Parks[3]	As of 2017, all residential developers in the City of Los Angeles must either dedicate land or pay a "Quimby Fee" to the city to fund new parks or capital costs at existing parks. Subject to City Council Approval
Measure A Competitive Grant Programs	Los Angeles County Regional Park and Open Space District (RPOSD)[4]	Eligible programs increase Los Angeles County residents' accessibility to public lands, park facilities, and park amenities, including education, interpretive services, safety information, transportation, and other activities, especially for those in high and very high-need areas. Next Application Deadline is TBD

State Funding Sources

Funding Source	Disbursing Agency	Program Summary and Eligible Uses
Urban Greening Program	California Natural Resources Agency[7]	Eligible urban greening projects will reduce GHG emissions, mitigate the effects of extreme heat, a decrease in air and water pollution or a reduction in the consumption of natural resources and energy. Eligible projects will result in the conversion of an existing built environment into green space that uses natural and green infrastructure approaches to create sustainable and vibrant communities.
Sustainable Transportation Equity Project (STEP)	California Air Resources Board[8]	Provides up to $15 million for active transportation infrastructure, tree planting, and other projects which expand mobility options while reducing greenhouse gas emissions in high-need communities.

State Funding Sources

Funding Source	Disbursing Agency	Program Summary and Eligible Uses
Outdoors for All Initiative	California Natural Resources Agency[5]	The Outdoors for All initiative includes $500 million in grants to local communities for parks infrastructure and transportation and education programs. The initiative has six key priorities: ▪ Establishes spaces for people and nature to thrive by creating and maintaining more high-quality outdoor spaces of all shapes and sizes, especially in park-limited places; ▪ Fosters belonging in the outdoors through policies and programs that build a welcoming and inclusive culture; ▪ Connects people and the outdoors by improving information and transportation; ▪ Co-creates with communities through frequent and meaningful tribal consultation and community engagement, with attention to underserved communities; ▪ Builds equitable career pathways and a representative workforce by improving opportunities for all Californians to enter and sustain outdoor recreation, natural resources and restoration professions; ▪ Aligns funding to achieve Outdoors for All in partnership with federal, state and non-governmental entities.
Climate Resilience, Wildfire Prevention, Community Access, and Natural Resource Protection Fund	Baldwin Hills & Urban Watersheds Conservancy[6]	Funds programs which: ▪ Acquire, preserve, or restore natural areas or ecological reserves at risk due to development patterns to improve the long-term health of the region and avoid emissions associated with development. ▪ Develop parks and greenways in urban areas to mitigate climate change effects and promote public health and recreation.Establish wildlife corridors and linkages to provide connections between areas of undeveloped lands, particularly significant public lands and key habitat ecosystems. ▪ Develop or improve multi-use trails that connect communities, provide access to public resources, and help reduce vehicle miles traveled. ▪ Protect, enhance, or restore water resources including urban waterways ▪ Implement water saving technologies and techniques to yield quantifiable water and energy savings. Such techniques may include, recycled water, the use of drought-efficient landscaping, stormwater filtration, permeable surfaces, green roofs and other forms of water capture and storage,

Grant Opportunities - Parks and Green Spaces

State Funding Sources

Funding Source	Disbursing Agency	Program Summary and Eligible Uses
Land and Water Conservation Fund (LCWF)	California State Parks[9]	Provides funding for the acquisition or development of land to create new outdoor recreation opportunities for the health and wellness of Californians. Eligible projects must meet Statewide Comprehensive Outdoor Recreation Plan priorities, which for local agencies include: ▪ New Park Access ▪ Multi-Use Parks Designed for All Age Groups ▪ Health Design Goals ▪ Safety and Beautification ▪ Preservation Next Anticipated Application Deadline is June 2025
Recreational Trails Program (RTP) Non-Motorized	California State Parks[10]	Helps states develop and maintain recreational trails and trail-related facilities for non-motorized and motorized recreational trail uses. Development and Rehabilitation of trails, Trailside and Trailhead Facilities. Eligible uses include: ▪ Acquisition of easements and fee simple title to property for Recreational Trails or Recreational Trail corridors (must involve a willing seller) ▪ Development and Rehabilitation of trails, Trailside and Trailhead Facilities. ▪ Construction of new trails.
Regional Park Program (RPP)	California State Parks[11]	Creates, expands, and improves regional parks. RPP projects will create at least one new recreation feature that attracts visitors from at least a 20-mile radius or county-wide population to a regional park. The new recreation features will offer nature appreciation, or athletic activities, historical or cultural enrichment, or other recreational activities in an open space area.
Natural Community Conservation Planning Local Assistance Grants (NCCP LAG)	California Department of Fish and Wildlife[12]	Assists local public and non-profit entities in the implementation of Natural Community Conservation Plans (NCCPs) throughout California which allows the California Department of Fish and Wildlife (CDFW) to grant funds for fish and wildlife habitat preservation, restoration, and enhancement.

State Funding Sources

Funding Source	Disbursing Agency	Program Summary and Eligible Uses
Transformative Climate Communities	California Strategic Growth Council[13]	Provides up to $30 million for at least three coordinated climate resilience infrastructure projects providing community benefits while reducing greenhouse gas emissions in high-need communities. Eligible project categories include Transit Access and Mobility, Active Transportation, Water Efficiency and Resiliency, Urban Greening and Green Infrastructure, and several others.

Funding Source	Disbursing Agency	Program Summary and Eligible Uses
USDA Forest Service Urban & Community Forestry	US Forest Service[14]	Funds investments that: ▪ Increase equitable access to urban tree canopy and associated human health, environmental and economic benefits in disadvantaged communities ▪ Broaden community engagement in local urban forest planning ▪ Improve community and urban forest resilience to climate change, pests and storm events through best management and maintenance practices. Next Application Deadline is TBD
Aquatic Ecosystem Restoration Projects	Department of Defense – Army Corps of Engineers[15]	Authorizes the Corps of Engineers to participate in the planning, engineering, and construction of projects to restore degraded aquatic ecosystem structure, function, and dynamic processes to a less degraded, more natural condition. Aquatic ecosystems include creeks, rivers, lakes, and wetlands. Projects typically involve restoration of aquatic and/or floodplain areas. They can include wetland creation or enhancement, water management features, aquatic and floodplain native plantings, bank stabilization, habitat creation, fish passage, and the restoration of pool and riffle complexes in streams. State and Local Governments May Request Federal Funding

Endnotes

1 FUNDING PROGRAMS THAT MAY INCLUDE ACTIVE TRANSPORTATION ELEMENTS, California Transportation Commision, 2023. https://catc.ca.gov/-/media/ctc-media/documents/programs/atp/2020/funding-programs-that-fund-active-transportation-a11y.pdf

2 Los Angeles County, Safe Clean Water Program, https://safecleanwaterla.org/

3 City of Los Angeles Department of Recreation and Parks, https://www.laparks.org/planning/park-fees

4 Los Angeles County Regional Park and Open Space District (RPOSD), https://rposd.lacounty.gov/competitive-grant-programs/

5 California Natural Resources Agency, https://resources.ca.gov/Initiatives/Access-for-All?utm_medium=email&utm_source=govdelivery

6 Baldwin Hills & Urban Watersheds Conservancy, https://bhc.ca.gov/grants/

7 California Natural Resources Agency, https://resources.ca.gov/grants/urban-greening/

8 California Air Resources Board, https://ww2.arb.ca.gov/planning-cmis-step-fy-22-23

9 California State Parks, Land and Water Conservation Fund (LCWF), https://www.parks.ca.gov/?page_id=21360

10 California State Parks, Recreational Trails Program (RTP) Non-Motorized, https://www.parks.ca.gov/?page_id=24324

11 California State Parks, Regional Park Program (RPP), https://www.parks.ca.gov/?page_id=29940

12 California Department of Fish and Wildlife, https://wildlife.ca.gov/Conservation/Planning/NCCP/Grants

13 California Strategic Growth Council, https://sgc.ca.gov/programs/tcc/

14 US Forest Service, https://www.fs.usda.gov/managing-land/urban-forests/ucf

15 Department of Defense – Army Corps of Engineers, https://www.lrn.usace.army.mil/Missions/Corps-of-Engineers-Assistance-and-Outreach/Continuing-Authorities-Program/Aquatic-Ecosystem-Restoration/


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