



*FINAL
DRAFT
APRIL
2022*

San Antonio Creek Trail Feasibility Study

alta



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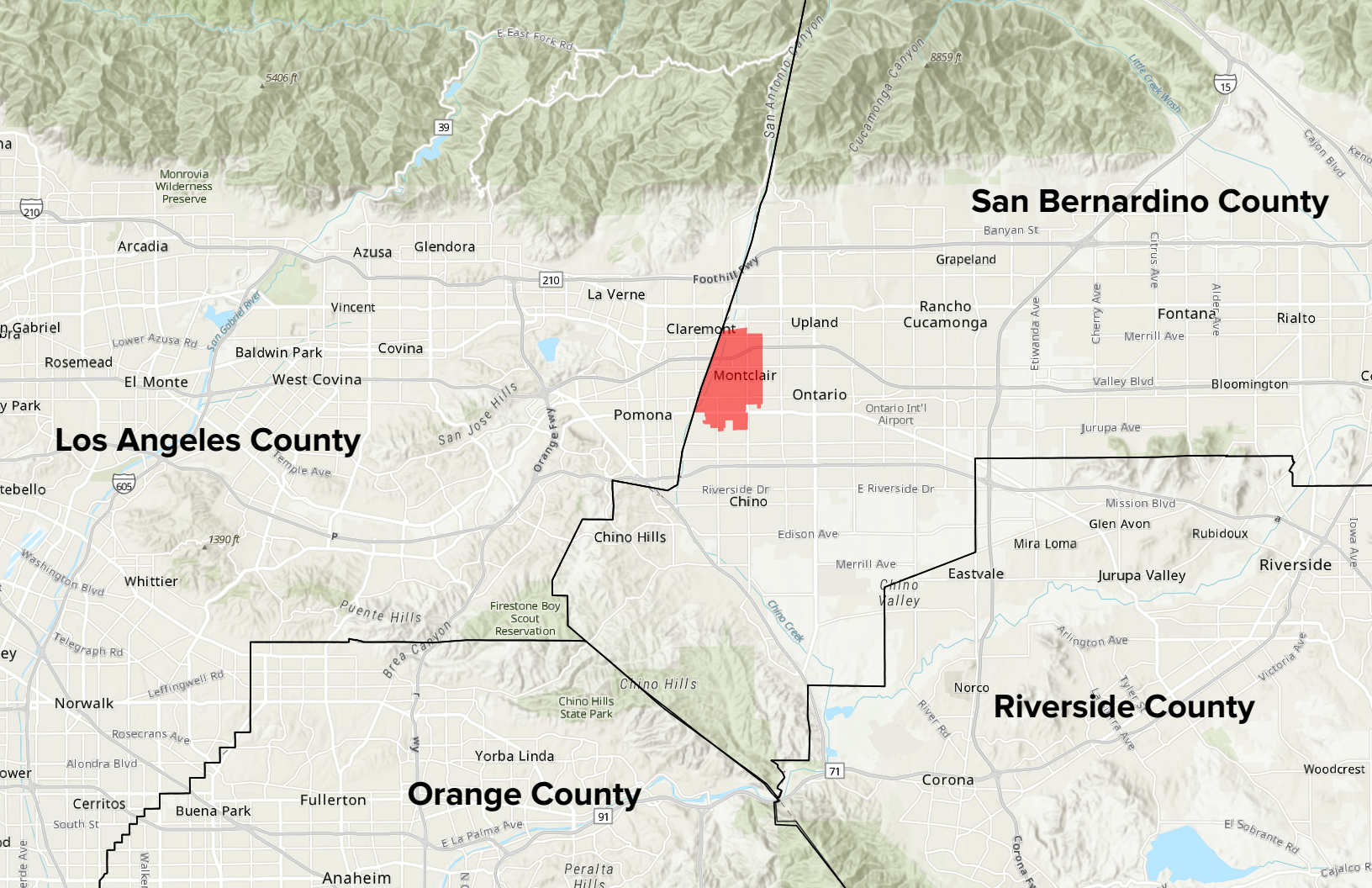
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01. Introduction

Project Overview

This feasibility study lays out the vision and path to implementation for Montclair’s future San Antonio Creek Trail: a vibrant, connected, and safe multi-use greenway path that will run north-south through the entire city, originating from the PE Trail near Monte Vista Avenue and Richton Street, and continuing three miles south to Montclair’s City limits at Mission Boulevard. When complete, the trail will provide new connections between neighborhoods, parks, schools, and other community destinations.

Many communities throughout the region have developed trails along waterways like the San Antonio Creek Channel, such as the Santa Ana River Trail, LA River Trail, the Rio Hondo Trail, and the San Gabriel River Trail.

This study has been developed with input and collaboration from City staff and key stakeholders, including Caltrans, the CBWCD, the Monte Vista Water District, private developers, the San Bernardino County Transportation Authority, Metrolink, Foothill Gold Line Construction Authority, and community members.

WHAT ARE THE BENEFITS OF THE TRAIL?

Building the San Antonio Creek Trail will bring a host of health, economic, environmental, and transportation benefits to both the city and the region. Encouraging people to shift from making personal vehicle trips to more active transportation trips could result in lower traffic congestion, lower greenhouse gas emissions, improved air quality,

and higher levels of physical activity, improving the health and well-being of the region’s residents. The trail provides opportunities for residents making trips across the region to get to work or school, to run errands, or to visit friends and family. The proximity of the trail to Montclair Transcenter will also create an important link for commuters connecting to the future Gold-Line Extension and other public transit routes.

Additionally, because modes such as walking and biking provide some of the lowest-cost forms of transportation, improving the trail could have positive economic, transportation, and equity benefits for those nearby.

WHEN WILL THE TRAIL BE BUILT?

This plan is an important first step to make the San Antonio Creek Trail a reality. Next, the City will seek funding for detailed design, additional community engagement, environmental review, and permitting. Following final design and approvals, the project would likely be constructed in phases. This process typically takes several years.

WHAT’S IN THIS PLAN?

The contents of this plan will help the City secure the funding needed to move to the next steps in the process. The chapters that follow outline the vision and goals of this study, opportunities and challenges that will inform how the trail is designed and built, alignment alternatives studied, and finally the preferred conceptual alignment for the trail and associated cost estimates and funding sources.

Vision, Goals + Objectives

*The vision for the San Antonio Creek Trail is to **create a scenic and enjoyable greenway** along the San Antonio Creek Channel. To achieve this vision, five goals were identified with targeted objectives:*



ACCESS + EQUITY

Connect people and destinations along the trail.

- » Deliver a preferred alignment for an accessible multi-use path.
- » Create new connections across major mobility barriers.
- » Identify trailhead and gateway opportunities.
- » Reinforce access to parks and open spaces, local and regional active transportation, jobs, health services, and community destinations.
- » Focus amenities near park-poor areas.



EDUCATION + INTERPRETATION

Create an engaging trail experience that highlights the local context: history, culture, and natural environment.

- » Identify opportunities for interpretive and creative elements.
- » Seek guidance from stakeholders and community members regarding aesthetic, cultural, and historic aspects to celebrate.
- » Maximize views to the mountains, nature, and the borrowed landscape.



SAFETY + USER EXPERIENCE

Provide a safe and comfortable experience for a variety of trail users.

- » Apply best-practice design standards to create a beautiful and comfortable trail that considers the needs of a wide range of users.
- » Enhance safety at trail crossings to improve pedestrian and cyclist safety, enhance driver awareness, and eliminate vehicle and pedestrian/cyclist conflicts.
- » Design with climate resilience in mind by maximizing shade for trail users, planting where feasible, and providing cooling amenities to reduce the heat island effect.



SUSTAINABILITY + WATER CONSERVATION

Respect the functional role of the San Antonio Creek Channel as a stormwater facility and Chino Basin Water Conservation District's goals of sustainable water resource stewardship.

- » Identify alignment alternatives and planting strategies that avoid conflicts between maintenance needs of the percolation basins and public use of the trail.
- » Seek opportunities to collaborate with the educational arm of the CBWCD and the Waterwise Community Center Park & Gardens.
- » Design with climate resilience in mind by minimizing impervious surfaces and maximizing groundwater infiltration, urban tree canopy, and local habitat.



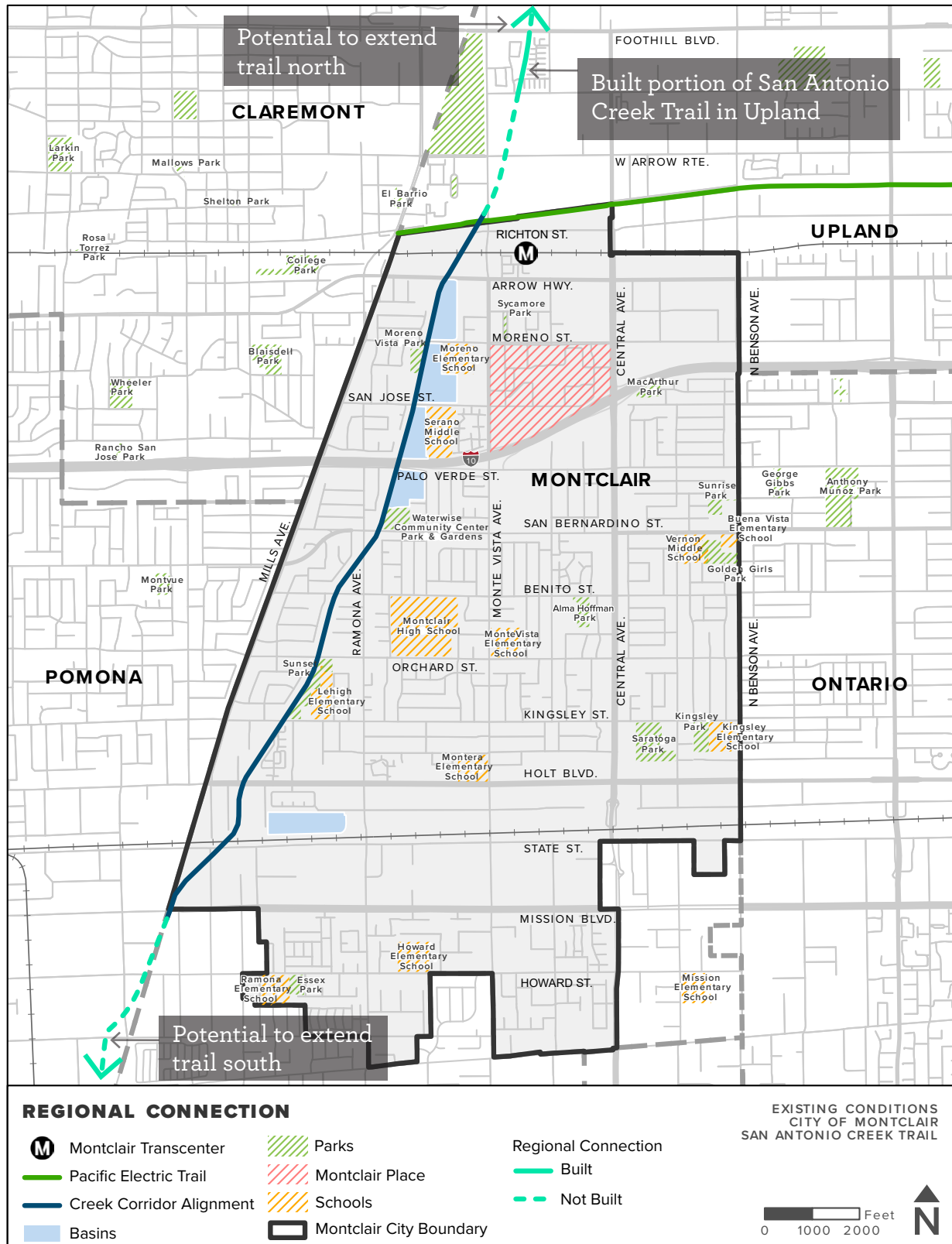
IMPLEMENTATION

Position the City for funding to design and build the trail.

- » Identify a robust range of funding sources that can provide funding for detailed design and implementation of the trail.
- » Deliver maps, project budget, and narratives that can easily be folded into grant applications.

SAN ANTONIO CREEK TRAIL

Figure 01. San Antonio Creek Channel Context Map



Relationship to Previous Plans

There are several existing City plans that establish a vision and need for a trail along the San Antonio Creek Channel. These plans have been reviewed, and relevant elements have been incorporated into the planning and analysis documented in this feasibility study. Descriptions of relevant plans follow:

GENERAL PLAN UPDATE (PENDING APPROVAL)

The *Montclair General Plan* provides policy guidance and guides the vision and direction on the physical structure of the city. A major pillar of the new general plan vision is to implement a city-wide green network of trails, green streets, open spaces, and parks. The general plan acknowledges the San Antonio Creek Channel as an important ecological feature that has the potential to offer a great new asset to the city and region's daily life. The plan positions the channel as the backbone connecting other parks and open spaces throughout the city. Policies proposed in the general plan include elements that relate to the enhancement and protection of natural vegetation and habitat. Actionable items detailed in the plan include the development of a trail along the San Antonio Creek Channel.

ACTIVE TRANSPORTATION PLAN (DECEMBER 2020)

The *Montclair Active Transportation Plan* is a vehicle to help the City achieve its vision and goals as they relate to active transportation. The plan proposed an active transportation network and provided a list of prioritized corridors. The San Antonio Creek Channel was ranked 7 out of 23 corridors. The bicycle network detailed in the plan includes a proposed Class I bike path along the channel from the PE Trail to the southern city limits.

SAFE ROUTES TO SCHOOL PLAN (NOVEMBER 2020)

The *Montclair Safe Routes to School Plan* provides a framework for the City to improve the health, safety, and equity of students, parents, and the community in areas surrounding schools. The four goals employed by the plan include safety, accessibility, public health, and equity. The strategies to achieve such goals largely revolve around improving facilities and encouraging active transportation and the use of public transit near schools. The San Antonio Creek Channel is within a walkable distance as identified by the safe routes to school plan from four schools in Montclair. The plan identifies the channel as an opportunity to create a multi-use trail.



02. Existing Conditions and Opportunities + Constraints

Existing Conditions

Because the San Antonio Creek Channel spans the length of the entire City, it is a true cross section of Montclair - it runs through a wide range of neighborhoods and land use contexts, and intersects with nearly all of the City's planned and existing bikeways. This section of the document takes a close look at the surrounding context of the channel. It also identifies opportunities and constraints related to the future design of the San Antonio Creek Trail. Additional City-scale maps that supplement this section can be found in Appendix A, along with the Opportunities and Constraints Mapbook in Appendix B which synthesizes information from the existing conditions assessment and field visits, and shows the full range of alternative path alignments studied around conflict areas, as well as crossing alternatives at road and railway intersections.

All existing conditions maps display a quarter-mile buffer surrounding the San Antonio Creek Channel. This buffer represents a five to ten minute walkable distance from the future San Antonio Creek Trail.

DEMOGRAPHICS

The major demographic factors examined include population density, concentrations of vulnerable populations, and disadvantaged areas.

Population Density

Population density along the San Antonio Creek Channel Corridor increases as the channel moves south through the City. The most densely populated portion of the study area is situated between Benito Street to the north and Kingsley Street to the south, and between Mills Avenue to the west and Monte Vista Avenue to the east.

Disadvantaged Areas + Vulnerable Populations

Disadvantaged communities (DACs) are located in areas that are disproportionately burdened by socioeconomic factors such as poverty and unemployment, environmental factors such as air and water pollution, and health conditions like asthma and heart disease. DACs have historically seen unfair treatment and have been excluded from policy and decision-making processes. These communities have also experienced underinvestment, or have been negatively impacted by transportation improvements. People living within DACs are also more likely to walk or bike for transportation purposes as they may not have access to a vehicle or do not have high quality public transit options.

Per SB535, the State of California defines disadvantaged communities as the top 25% scoring areas from CalEnviroScreen. This measure is used in a number of different grant programs that will be considered for implementation funding of this project, including the Caltrans Active Transportation Program (ATP). Nearly the entire City of Montclair is classified as disadvantaged (See Appendix A).

LAND USE + TRANSPORTATION

Understanding how the San Antonio Creek Trail interacts with surrounding land uses and overall transportation systems in the City will help determine priority locations for trailhead and crossing safety enhancements.

Collisions

Between 2015-2019 there were a total of 1,276 collisions in Montclair, 163 of which involved a pedestrian or cyclist. Of those 163 pedestrian or cyclist related collisions,

73% resulted in a severe or fatal injury. Collisions appear to be concentrated along major corridors including Holt Boulevard, Ramona Avenue, and Monte Vista Avenue. The addition of the San Antonio Creek Trail would provide a safe route for pedestrians and cyclists, separated from motor vehicles, to travel north or south through Montclair, potentially decreasing the total number of annual collisions.

Bike Network

While there are many proposed bike lanes and bike routes throughout the City, there are only two existing connections to the San Antonio Creek Trail. There are existing Class II bike lanes along Mills Avenue, Orchard Street, and Monte Vista Avenue between the PE Trail and Arrow Highway. Class II bike lanes are planned along streets that intersect the San Antonio Creek Channel including Palo Verde Street, San Bernardino Street, Holt Boulevard, and Mission Boulevard. Class III bike boulevards are planned along streets that intersect the San Antonio Creek Channel including on Arrow Highway, Moreno Street, San Jose Street, Benito Street, and Kingsley Street. At the northern end of the City, the class I PE Trail intersects the San Antonio Creek Channel.

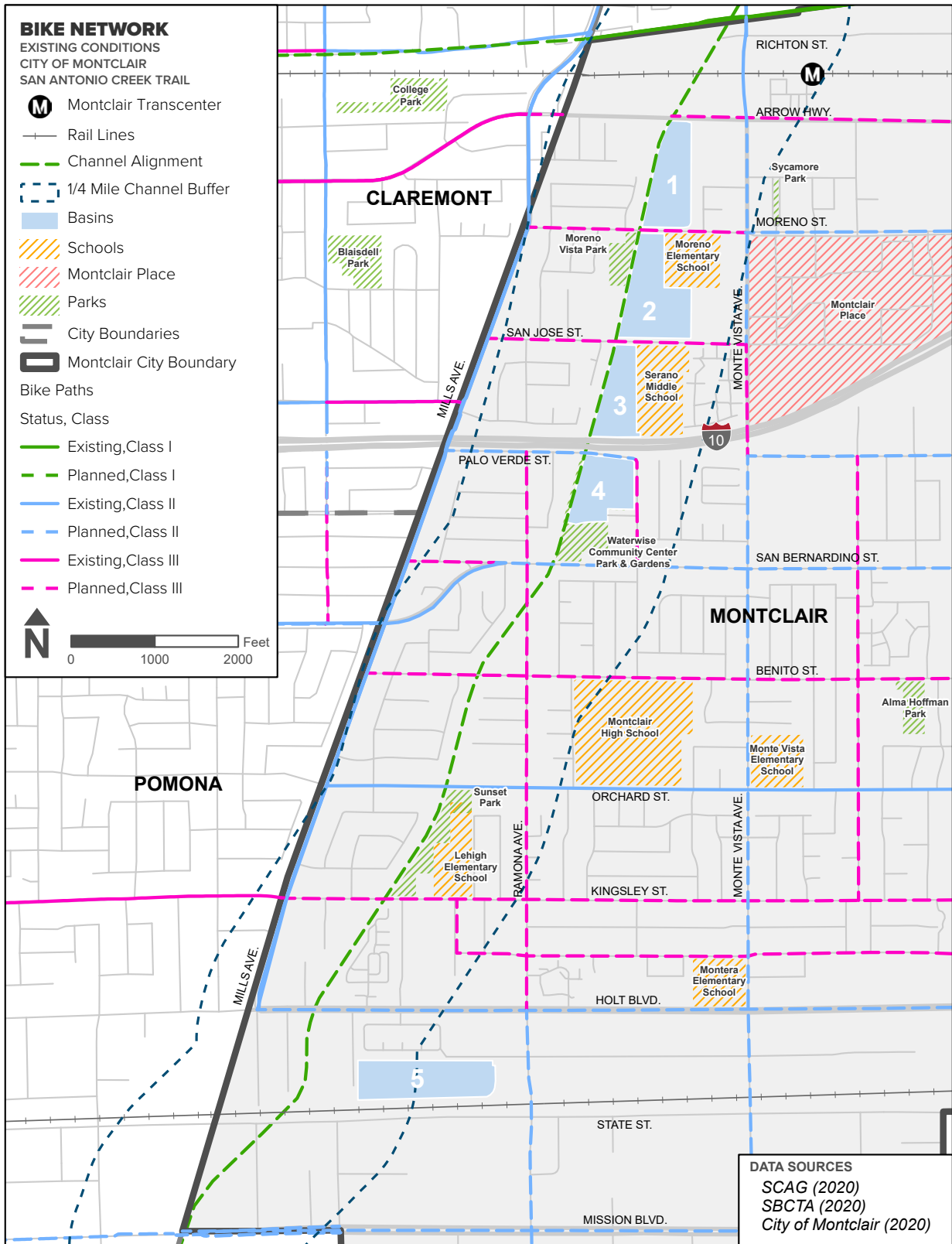
The bike network map combines bike network data from the City of Montclair 2020 Active Transportation Plan, San Bernardino County Transit Authority

Table 01. Number of Collisions by Mode + Injury Severity (SWITRS 2015–2019)

Collision Type	Number of Collisions	Fatal/ Severe Injury Collisions
Pedestrian Collisions	88	61
Bicycle Collisions	75	58
Vehicle Collisions	1,276	42

Note:
SWITRS: Statewide Integrated Traffic Records System

Figure 02. Bike Network



(SBCTA), and the Southern California Association of Governments (SCAG).

Public Transit

There are four public transportation operators within Montclair including Metrolink, Omnitrans, Foothill Transit, and Riverside Transportation Authority (RTA). Metrolink, Foothill Transit, and RTA lines are all regional connectors, whereas Omnitrans serves as Montclair's local connector. Monte Vista Avenue between the I-10 Freeway and Arrow Highway is a major public transit corridor as lines from all operators travel towards Montclair Transcenter. The Foothill Gold Line Extension from Glendora to Montclair will add new light rail stations to the Metro Gold Line system in the cities of Glendora, San Dimas, La Verne, Pomona, Claremont and Montclair. It will utilize the existing Montclair Transcenter located about a quarter mile east of the San Antonio Creek Channel and the development of the San Antonio Creek Trail will allow commuters living near the trail to easily access the future Gold Line transit stop.

Ownership / Zoning / Land Use

There are a multitude of different parcel owners throughout the corridor. The vast majority of land is privately owned, as shown in gray in Figure 03, and most of the privately owned parcels are owned by different entities. The CBWCD is the second largest land owner, controlling

the land around the percolation basins. Additional details regarding parcel ownership opportunities and constraints are documented in the Opportunities and Constraints synthesis map found in Appendix B of this document.

Commercial land use is concentrated in the north and south ends of Montclair, whereas residential land use is concentrated in the center of the City between Kingsley Street to the south and the I-10 Freeway to the north. Given the locations of residential land use there is a higher residential density south of the I-10 Freeway with the highest density between Kingsley Street and Benito Street.

Heavier manufacturing and industrial use is zoned below Holt Boulevard at the southern end of the City.

Park Priority Areas

Pockets of park priority areas are present across the City of Montclair, and signify areas that are in need of green space and recreational amenity investments. The area along the San Antonio Creek Channel just north of the I-10 Freeway, and the area south of Holt Boulevard are designated as park priority areas.

Areas in a City that fall outside of a 10-minute walk service area are assigned a level of park priority based on an index of six equally weighted metrics. The index includes population density, density of low income households, density of people of color, community health, urban heat

Figure 03. Parcel Ownership

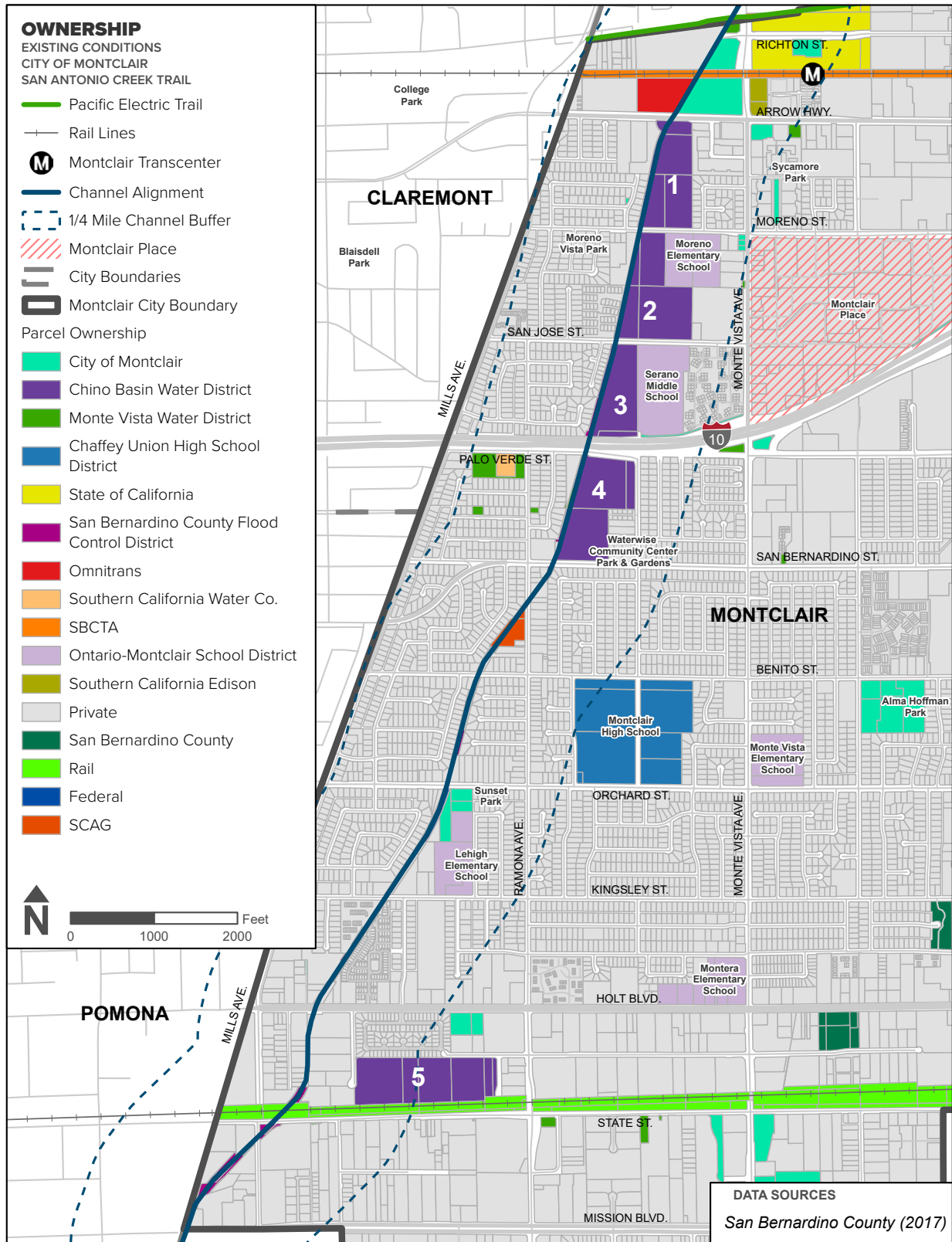
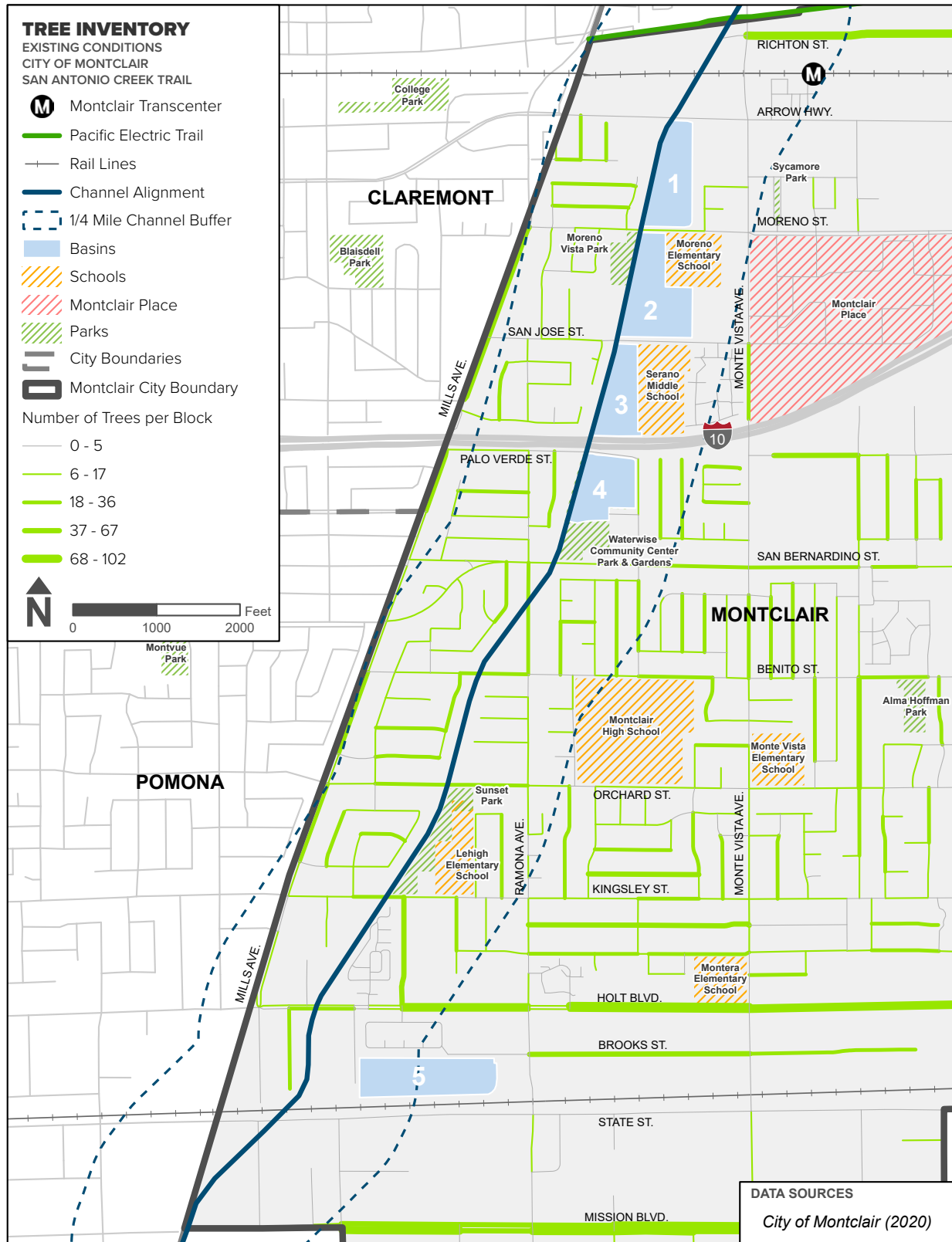


Figure 04. Tree Inventory by Street



islands, and pollution burden. The Park Priority Areas map uses data from the Trust for Public Land's 2020 Parkserve database.

ENVIRONMENT

The major environment related factors examined in the feasibility study include a City-wide tree inventory, soils, and slopes.

Tree Inventory

The presence or absence of shade cast by tree canopies may influence how comfortable people feel using active transportation facilities. The tree inventory map shows the distribution of trees throughout Montclair. Residential streets generally have trees spaced 40 to 50 feet apart on average, whereas some larger arterial streets have poorer coverage such as Arrow Highway, Moreno Street, San Jose Street, State Street, Ramona Avenue, and Monte Vista Avenue. Additionally, where the channel intersects roadways there is generally poor tree coverage.

Soils

The soils adjacent to the majority of the San Antonio Creek Channel and Basins 1 through 4 are of the Soboba Series. These soils have characteristics that allow them to have extremely rapid permeability and very slow runoff. The native vegetation that typically grows in these soil types include annual grasses, forbs, and chaparral shrubs. South of Orchard Street the soil shifts to the Tujunga Series.

Tujunga soils also have very slow runoff and high permeability. The soils adjacent to the channel provide optimal conditions for the percolation basins to maximize groundwater recharge.

Additionally, given the level of development in the City and land use context, soils throughout the study area are likely to include urban fill.

Slopes

The topography of Montclair is relatively flat with a gradual slope moving from north to south. From national elevation data, it is clear that the steepest areas of the City are found within each of the five basins.

Opportunities and constraints that will inform the design process are summarized on the following pages. This combines what was learned from the desktop assessment with information collected in the field. Observations and insight from the consultant project team, City staff, and Chino Basin Water District (CBWCD) staff, who provided insight into the operational flood control needs and concerns of the channel, have been captured. Refer to Appendix B for a detailed map of opportunities and constraints.

Opportunities + Constraints Synthesis

Building off of the information gathered during the field visit and existing conditions analysis, the opportunities and constraints analysis developed a wide range of possible alignment alternatives for a multi-use path throughout the corridor.

PROJECT SEGMENTS

The corridor was divided into three areas as shown in Figure 05. The areas allow for evaluation of alignment alternatives between major barriers and may inform implementation phasing of the project.

This section details the opportunities and constraints for each area with accompanying mapbook pages found in Appendix B.

AREA 1: EARLY OPPORTUNITIES

Area 1 covers the northernmost segment of the project corridor between the PE Trail and San Jose Street. In Area 1 the corridor connects to the PE Trail, Metrolink rail corridor, and CBWCD percolation basins.

Opportunities + Constraints

There are eight alignment alternatives and two supplemental basin alignments in this Segment for a multi-use path. Primarily, the alternatives focus around the connection from the PE trail and Montclair Transcenter to Arrow Highway. Major differences and opportunities include alignments adjacent to roadways, undercrossings, and overcrossings.

OPPORTUNITIES

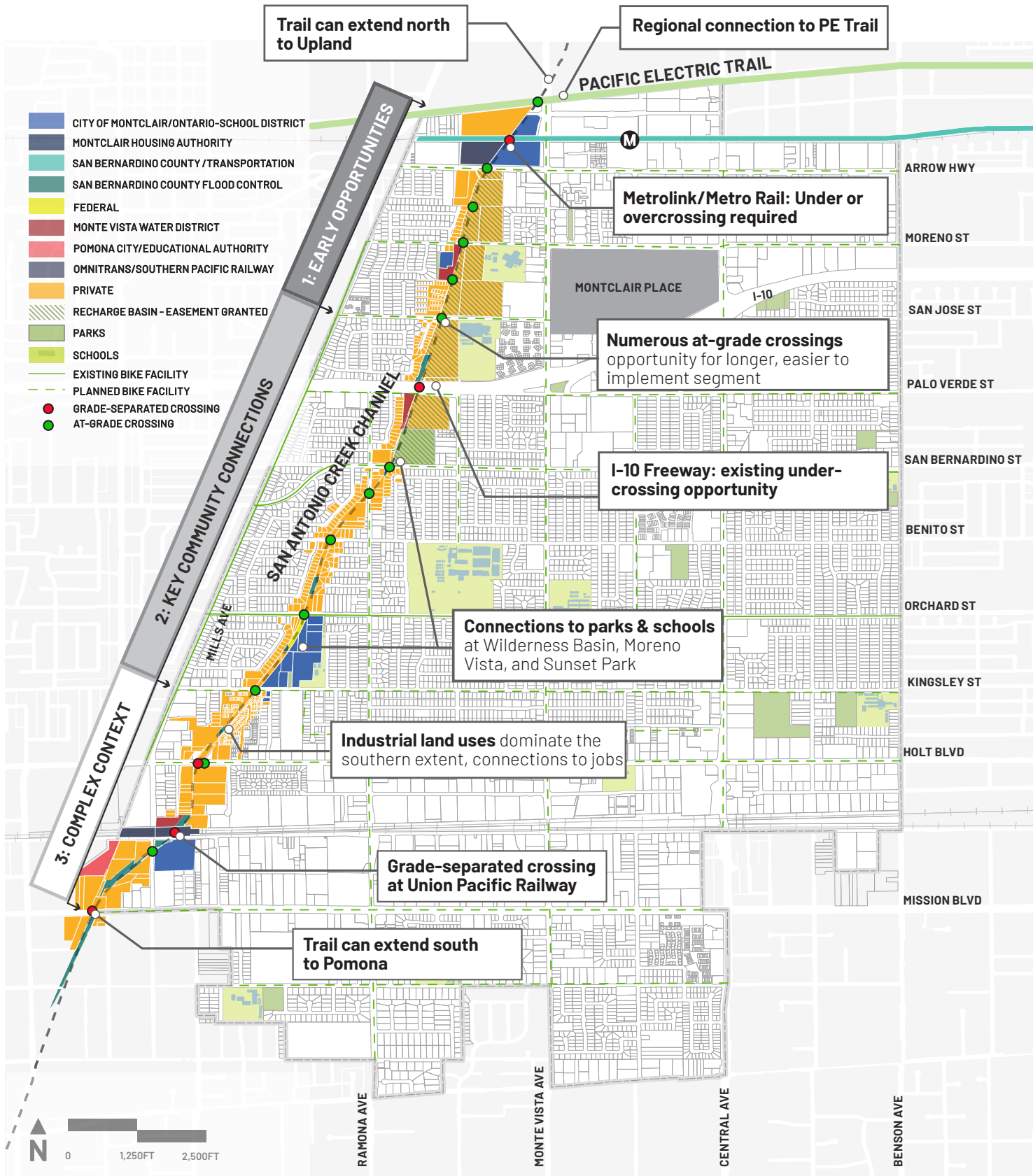
- » Direct regional trail connection to the PE Trail to serve both local residents and nearby communities.
- » Multiple at-grade crossing connections.
- » An existing undeveloped parcel immediately south of the PE Trail along the west side of the channel is slated for development presenting an opportunity for the City to condition trail improvements along the edge of the parcel adjacent to the creek channel.
- » Integrate the construction of a rail undercrossing as part of the Gold Line extension construction.
- » Trailhead and open space opportunity at Moreno Vista Park along Moreno Street positioned on the west side of the channel.

CONSTRAINTS

- » The Metrolink rail corridor presents a constraint and requires the trail along the corridor to make an overcrossing or undercrossing.
- » Along the western edge of the basin area California Edison has an easement and maintains high tension power lines which places limitations on what can be constructed in this area.
- » Shade trees may not be feasible along the channel due to spacing requirements from both Southern California Edison and the Army Corps of Engineers.

SAN ANTONIO CREEK TRAIL

Figure 05. Opportunities + Constraints Summary by Segment



- » Alignments on Chino Basin Water District property are challenging due to safety concerns at the basins with steep slopes and rain events.

AREA 2: COMMUNITY CONNECTIONS

Area 2 covers the Segment from San Jose Street to Kingsley Street. Through this Segment the channel crosses the I-10 Freeway and connects to the Waterwise Community Center Park & Gardens and Sunset Park.

Opportunities + Constraints

There are two alignment alternatives, a supplemental freeway crossing alignment, and two supplemental basin alignments in this Segment that focus around the I-10 crossing. Major differences and opportunities include alignments that travel around, under, or are elevated in order to navigate the I-10 barrier.

OPPORTUNITIES

- » South of San Bernardino Street there are multiple at-grade crossing connections, as well as East and West Alignment opportunities.
- » Existing 15' wide easement on both sides of 25' channel for a bike/pedestrian trail.
- » Potential trailhead and terminus at Kingsley Street adjacent to Sunset Park, owned by the City of Montclair.

CONSTRAINTS

- » Multiple property owners to obtain rights for permission on west bank.
- » On east bank, similar to Basins 2 and 3, concerns were raised regarding trail users' safety around the basin, as

well as the water district's ability to maintain this piece of critical water infrastructure. It was noted by the CBWCD that parts of the circulatory trail alignment would be completely inundated during storm events.

AREA 3: COMPLEX CONTEXT

Area 3 covers the segment of the corridor from Kingsley Street to the southern City limits at Mission Boulevard. The channel crosses Holt Boulevard, the Union Pacific Railroad (UPRR) corridor, and terminates at Mission Boulevard in Area 3. This section of the channel presents the most challenges in terms of grade separated crossing considerations.

Opportunities + Constraints

There are two alignment alternatives and one supplemental rail crossing alignment alternative in this Segment. Primarily the alternatives focus around the UPRR crossing between Holt and Mission Boulevard.

OPPORTUNITIES

- » Continue the trail to the southernmost end of the city limits. Potential to extend the trail south into Pomona in the future.

CONSTRAINTS

- » Multiple over or undercrossings needed.
- » The existing overhead clearance at the Holt Boulevard undercrossing is not sufficient and would require a lowering of the elevation of the trail in that location. This will require carving out space under the abutment on the west side of the channel.

SAN ANTONIO CREEK TRAIL

Area 1: PE Trail to San Jose Street



An ideal location for the trail on the west side of the channel - connection opportunity to the PE Trail and a new community development.



At grade crossing and trailhead opportunity at Moreno Vista Park at Moreno Street.

Area 2: San Jose Street to Kingsley Street



Existing undercrossing at the I-10 Freeway.



Four percolation basins are located directly adjacent to the San Antonio Creek Channel. The future trail will need to balance flood control needs with open space access.

Area 3: Kingsley Street to Mission Boulevard



There is an existing easement through this section of the corridor, between San Bernardino Street and Benito Street that allows the City to construct a bike and pedestrian trail.



The channel runs beneath the UPRR rail line to the south, where an overcrossing will be needed for the trail.

Continued, Area 3: Complex Context Opportunities

- » The undercrossing at Mission Boulevard has similar constraints to the crossing at Holt, and will require the relocation of a deck drain.
- » The UPRR crossing between Holt and Mission Boulevard limits trail options in this area. A crossing would require a long span bridge over the railway. At the railway intersection the path along the channel could turn west along a parcel that is slated for development to reach Mills Avenue. An overcrossing from Mills Avenue to Kadota Avenue would reduce the crossing distance over the rail corridor. The bridge deck would be required to maintain a minimum height of at least 22.5' feet above the rail line.

CORRIDOR-WIDE TAKEAWAYS

Connections

- » Northern terminus of San Antonio Creek Trail connects to the regional PE Trail.
- » Montclair Transcenter is adjacent to trail.
- » Trail is immediately adjacent to two elementary schools and a middle school.
- » Trail directly connects with or goes through at least two City parks.

Crossings

- » Nine City street crossings appear to be feasible at-grade. Two undercrossings through grade change to allow vertical clearance appear to be feasible at Holt Boulevard and Mission Boulevard.
- » At the Metrolink railway, alignment alternatives provide options to cross over, under, or go around the crossing entirely. An under or overcrossing in this location would be intensive from a planning and cost perspective.
- » At the I-10 Freeway, alignment alternatives provide options to go over, under, or around the crossing entirely. An undercrossing is feasible in this location with the relocation of an existing 30-inch waterline.
- » One overcrossing is necessary at the UPRR.
- » Railway corridors present limitations with trail crossings as overcrossings must allow 22.5' of clearance from the top of rail to the bottom of the crossing structure. Undercrossings in these locations require a minimum of 16.5' clearance from the top of rail to the bottom of the crossing structure.

Right-of-Way

- » Southern California Edison has an easement on the western edge of the CBWCD percolation basins where they service high-tension power lines.
- » The Army Corps of Engineers owns the right-of-way (ROW) for the creek channel and has limitations regarding planting near channel walls and requires clear space adjacent to the channel for maintenance operations.
- » Future developments along the channel can be made to include parts of the trail development in their plans if they are adjacent to the channel.
- » A 1982 map of Tract #12228 between San Bernardino Street and Benito Street shows a 15' easement to the City of Montclair for bike trail purposes and pedestrian use.

Basins

- » Percolation basins are critical pieces of water infrastructure and cannot be altered or impacted through the construction of a trail. This limits options to design circulatory trails around the basins.
- » Conflicts exist between allowing public access to the basins for recreational uses and the stormwater/recharge function of the basins. Areas where there is enough space to provide secondary loop trails for public recreational use may be feasible.

- » While CBWCD staff indicated they are not in support of public access now, they have been supportive in years past. An exploration of case studies of local and regional examples of similar trail loops is presented under “Precedent Examples” on page 20 to facilitate future discussions regarding the feasibility of trail alignment alternatives shared with maintenance facilities.

Areas for Further Study

- » The undercrossing location at Metrolink railway needs further investigation to see feasibility and integration of construction into the Gold-Line extension.
- » The undercrossings at the I-10 Freeway, Holt Boulevard, and Mission Boulevard need further investigation to determine structural feasibility.
- » The overcrossing at UPRR needs further investigation to determine feasibility and identify potential alternatives.

Precedent Examples

Communities throughout the region have built and maintained trails and parks adjacent to waterways, flood control facilities, and ground water recharge basins as described below.

CV LINK

Location: Coachella Valley, CA

Description: The CV Link Trail is a 40-mile trail that connects six different cities throughout the Coachella Valley. The Palm Desert segment of the trail includes a segment adjacent to both recharge basins and levees. Alta Planning + Design (Alta) worked with a wide array of agencies and municipalities to design and build this project. Two segments are relevant to Montclair:

- » In Riverside County, Alta worked with the Coachella Valley Association of Governments (CVAG) to develop interagency agreements between both Riverside County Flood Control (the agency that maintains the basins) and Coachella Valley Water District.
- » In Palm Desert there is a segment adjacent to a recharge basin project that the Coachella Valley Water District (CVWD) is leading. These basins are planned to have standing water and the path will use one of their sugar dykes that is designed to fail in a larger flood event (5 year). The interagency agreement between CVWD and CVAG has CVWD pay for the maintenance along CV Link because CV Link could reduce their operations burden.

CV Link is also in the process of getting a 408 permit from the Army Corps of Engineers and use part of the path to get a Federal Emergency Management Agency (FEMA) Letter of Map Revision (LOMR) for a segment of levee in Palm Springs - which modifies an existing Flood Insurance Rate Map or Flood Boundary Map.

SANTA ANA RIVER TRAIL - ANAHEIM COVES TRAIL SEGMENT

Location: Anaheim, CA

Description: The Santa Ana River Trail is a 50-mile trail that follows its namesake river through Orange, San Bernardino, and Riverside Counties. The segment that runs through Anaheim in Orange County includes a segment around the Burris Groundwater Recharge Basin known as the Anaheim Coves Trail. The basin is controlled by Orange County Water District and the trail is operated and maintained by the City of Anaheim.

SAN ANTONIO CREEK CHANNEL

Location: Upland, CA

Description: Just over half a mile north of Montclair, the City of Upland has constructed a segment of the San Antonio Creek Trail between Foothill Boulevard and 11th Street. The trail is very similar to the vision for the Montclair portion of the trail, with bands of planting along either side.

SAN ANTONIO CREEK TRAIL





03. Public Outreach

Engagement Summary

Throughout the course of this study, stakeholder and community feedback was gathered to help form the trail recommendations. The goal of this process was to reach a representative cross section of constituents to document needs and wants for a future San Antonio Creek Trail.

In Spring of 2020, the COVID-19 pandemic resulted in the declaration of a state of emergency. With this, the State of California and many local jurisdictions implemented executive orders per Center for Disease Control guidelines to limit gatherings, practice social distancing, and even issued a stay at home mandate during this project's outreach schedule. Although the COVID-19 pandemic presented challenges, innovative responses were utilized to uphold a robust public engagement process through a variety of virtual and socially distant in-person events as described in this chapter.

COMMUNITY FEEDBACK:

Pop-up Events (Two Events):

In-person events occurred on October 30, 2021 as part of the City's annual Halloween festival, and on December 2, 2021 at the City's Holly Jolly Holiday event. Both were held at Alma Hofman Park. Engagement included flyer hand-outs encouraging people to take the online survey, and interactive boards set up at a booth. The topics covered on the boards, which correspond to themes in the virtual survey, included:



- » Project description and project timeline (informational)
- » Goals (voting)
- » Opportunities and challenges (write in comments)
- » Design themes (voting)
- » Amenities and activities (voting)

Via flyer hand-outs and engagement with the boards, the October event directly reached approximately 130 people and the December event reached approximately 275 people.

Virtual Engagement Activities (Two Events):

A project survey was open for feedback between October and December 2021. The survey was promoted via social media and on City and school district email listservs in the days leading up to the two pop-up events to encourage participation in the pop-ups as well as the survey. A total of 105 responses were received and are included in Appendix E. Feedback trends are captured in this chapter.

Virtual Draft Plan Feedback Event (One Event):

On March 16, 2022 the project team held an online virtual event attended by members of the Montclair community. The purpose of the meeting was to present the overall San Antonio Creek Trail Feasibility Study Draft, the conceptual design of the trail, the timeline for constructing the trail, and to answer any questions from community members. 14 people attended and underscored the opportunity this project presents to reconnect Montclair with nature. Residents were excited about the trail and discussed an interest in removing the concrete from the San Antonio Creek Channel to restore the waterway, utilizing space around the percolation basins as part of the trail and reinforcing connections to Montclair's parks.

COMMUNITY SURVEY FEEDBACK THEMES:

- » 76% live in Montclair
- » 12% work in Montclair
- » 25% use the PE Trail

“Any development to improve access and use is welcome. Please consider global weather changes and provide shade & water!”

- Survey respondent

“This new trailhead can achieve something fresh and wonderful for all ages, as well and provide a important passage for middle schoolers to get home without taking Monte Vista like many of us did.”

- Survey respondent

- » 18% live in another community but visit Montclair often

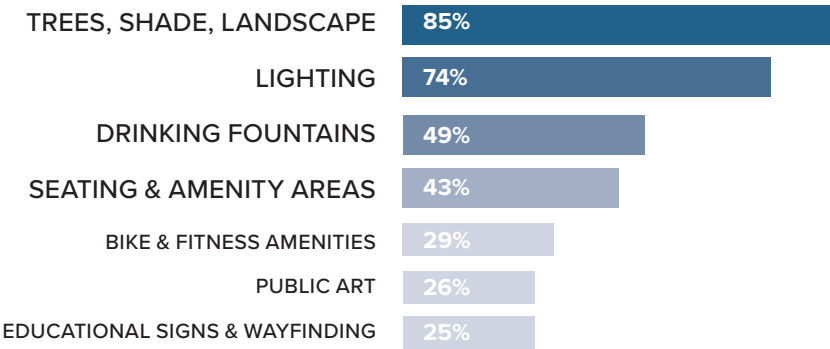
Most respondents were familiar with the San Antonio Creek Channel (72%), while 28% have not noticed the channel before - an indication that education and publicity will be needed to spread the word about this project and planned new community asset.

When asked how often people walk, bike/roll, and take transit in Montclair, most indicated that they walk (65%), some bike or skateboard (30%), and fewer take public transit (8%). Top destinations to walk or bike to include the Waterwise Community Center Park & Gardens (37%) directly adjacent to the channel, and Alma Hofman Park (27%) within a mile of the channel. Parks that few people walk, bike or roll to include Sunset Park (14%) and Moreno Vista Park (16%).

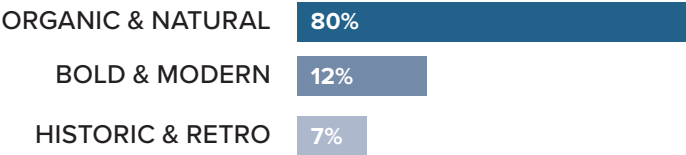
Respondents noted lack of comfortable bikeways or sidewalks (66%) as the top barrier to using active modes of travel more frequently - meaning with the opening of a San Antonio Creek Trail,

SURVEY RESPONSES

What amenities do you want to see prioritized along the trail?



What design theme do you think is the best fit for the San Antonio Creek Trail?



What destinations would you want to reach from the trail?
(Larger text sizes reflect more popular survey responses)



there is great potential to expand active transportation trips to access Montclair's parks. Other top barriers noted to using active more frequently included:

- » Traffic safety concerns (53%)
- » Personal safety concerns (50%)
- » Insufficient lighting on bikeways and sidewalks (44%)

People are enthusiastic about using the future San Antonio Creek Trail! 81% of respondents said they would use the trail for health or exercise (79% walking, 70% biking); 51% for walking their dog; 22% to access different destinations; 20% to connect to transit; and 15% to commute to work or school.

91% of respondents said they would walk more and exercise more, 87% would access recreation more; 79% would bike more; and 72% would walk their dog more.

STAKEHOLDER FEEDBACK:

Stakeholder Meetings (Three Meetings):

The project team engaged with critical stakeholders to delve deeper into coordination issues that were identified through the existing conditions and conceptual alignment development processes. The themes of these stakeholder meetings were organized around the following topics:

PRIVATE DEVELOPMENT COORDINATION

The project team met with Trammel Crow Real Estate (TCR), who is developing the parcel between the PE Trail and the northern rail line on the west side of the channel into a new residential community. The goal of this meeting was to confirm that development plans would not interfere with a future trail, to learn about pedestrian and vehicular circulation changes to the site, and to understand what aspects of the trail TCR might be able to help realize through this project. TCR is very supportive of the project and agreed to:

- » Dedicate a triangular portion of the site to the City as a new park
- » Install decorative fencing at the boundary of the future trail and the property
- » Landscape the area designated for use as a future trail while the City seeks funding for trail construction, including tree planting at the fence line

A coordination item that will need to be resolved in future design phases of the trail was identified at the extension of Richton street via a new bridge over the San Antonio Creek Channel - the bridge has not been designed yet, but it is possible that the grade of the bridge may not be flush with the existing grade at the channel edge where the preferred trail alignment is located. This may require the trail to cross Richton street further west. See Figure 19 on page 52 for additional details.

METRO GOLD LINE EXTENSION CROSSING OPPORTUNITIES

The project team met with the rail agencies who have service in Montclair along the northern rail line that crosses the trail corridor. Representatives from the San Bernardino County Transit Authority (SBCTA), Metrolink, and the Gold Line Construction Authority (GLCA) attended the stakeholder meeting to share information regarding the current plans and construction timeline for the future Gold Line Extension through Montclair.

The GLCA expressed that the agency is currently in the process of obtaining state funding to extend the project from Pomona to Montclair, and it is expected that funding or a commitment of funding will be obtained by June 2022. Design for this phase of the Gold Line Extension will begin no sooner than 2023, and

construction in the area around the San Antonio Creek Channel will begin no sooner than 2024.

Representatives from Metrolink stated they do not have a preference if the proposed San Antonio Creek Trail uses an overcrossing or undercrossing to cross the rail corridor, so long as the design of the facility follows vertical clearance requirements. To ensure that the design of the future trail will meet minimum design requirements, the Gold Line Construction Authority (GLCA), Metro, and Metrolink will need to review the 30% and 60% construction plans.

The stakeholder agencies stated that they would manage the construction of the proposed overcrossing or undercrossing if the City secures funding for the project.

I-10 UNDERCROSSING COORDINATION

One of the major barriers the San Antonio Creek Trail must negotiate beneath is the I-10 Freeway. The goal of discussions with Caltrans was to better understand the future coordination needs around this crossing on the west side of the channel, where the grade of the existing walkway will need to be lowered to meet minimum vertical clearance requirements for a trail. A water pipe will also need to be relocated to provide suitable trail width and clearance. The City coordinated with Monte Vista Water District to confirm their openness to discussions regarding pipe relocation, and the project team met with Caltrans to understand permitting and design coordination needs for excavation.

Caltrans has designed and is currently doing construction to widen the I-10 Freeway in the area of the San Antonio Creek Channel. Caltrans expressed that the channel will not be impacted as a result of the widening project. Caltrans suggested that since the floor height of the underpass will need to drop in elevation, the existing water pipe could potentially be relocated underneath the proposed trail. Further coordination is necessary with the Monte Vista Water District to accommodate the trail in this location.

In addition, Caltrans shared information regarding the permitting process to construct a trail underneath the I-10 Freeway which is discussed in further detail in the implementation chapter of this document.



04. Alignment Alternatives

Alignment Alternatives

WHERE SHOULD THE TRAIL GO?

There is space on both the east and west bank of the San Antonio Creek Channel to build a trail. However, as we've learned through the existing conditions/opportunities and constraints analysis, the amount of space available and surrounding context varies from one side to another and from one block to another. Additionally, when the channel crosses a major barrier, like rail lines or the I-10 Freeway, there are multiple options that can be considered to cross those barriers.

To determine the most feasible alignment for the San Antonio Creek Trail, the project team:

- » Established qualitative and quantitative criteria to evaluate each alignment alternative's relationship to the project goals and objectives, summarized in Table 02
- » Identified all possible alignments drawing each alternative route (29 in total) on a map, as shown in Figure 06
- » Applied the evaluation criteria to each alignment alternative to determine which alignments best support the project goals and objectives, leading to a preferred alignment

EVALUATION CRITERIA

The evaluation criteria corresponds to the project goals that have guided this project. Community members ranked the project goals in order of importance, as noted here:

- » **Safety & User Experience:** Does the alignment provide separation from vehicles, and does it provide great views and overall experience?
- » **Access & Equity:** How does the alignment provide connections to parks, schools, community destinations, and the channel itself?
- » **Sustainability & Water Conservation:** Are there opportunities for planting, stormwater capture, and educational opportunities?
- » **Implementation:** How complex will this alternative be to build in terms of establishing easements, coordinating permitting, and magnitude of cost?

Each alternative was assigned a score of high, medium, or low corresponding to each criteria. Alignments within each segment were then ranked against each other with the highest scoring alignments receiving the highest rank. The preferred alignment presented in this chapter links together the highest scoring alternatives within each segment.

Table 02 details the criteria and scoring categories used to determine the preferred alignment.

Table 02. Evaluation Criteria



Evaluation Criteria	Highest Performing	Medium Performing	Lowest Performing
Implementation			
Within City right-of-way (ROW) or existing water district easement	No additional rights required	Minimal ROW rights required	Significant ROW rights required
Feasibility	\$ + Minimal coordination	\$\$ + Moderate coordination	\$\$\$ + High level of coordination



Access + Equity			
Provides direct access to destinations	Immediate adjacency	Within a 5 min. walk (<1/4 mi.)	No connection within 5-10 min. walk (1/4-1+ mi.)
Connects to existing and planned transportation projects	Direct connection to existing active transportation facility	Direct connection to planned active transportation facility	No connection to existing/planned active transportation facility
Alignment directness along the channel	Entire alignment directly along channel	Partial alignment directly along channel	No direct alignment along channel



Safety + User Experience			
Provides separation from vehicles	Exclusive Class I corridor	Class I adjacent to road	On-road facility
Perceived safety from crime	At-grade crossing	Over crossing	Under crossing
Crossing separation	Optimal separation from vehicles (under/over crossing)	N/A	Limited/no separation from vehicles (at-grade)
Views	Views continuous throughout	Some view opportunities	No view opportunities
Access to existing shade	> 60% of path is shaded	30%-59% of path is shaded	<29% of path is shaded



Sustainability + Water Conservation			
Shared use of trail and maintenance path	Separated maintenance path next to trail	N/A	Shared trail/maintenance path
Maximizes areas for planting and stormwater capture/infiltration	> 5 ft. available next to trail	2-5 ft. available next to trail	< 2 ft. available next to trail
Educational tie-in opportunities	Immediate adjacency to school or basin	Connection to school or basin < 1/4 mi.	Connection to school or basin > 1/4 mi.

ALIGNMENT ALTERNATIVES

The channel corridor was split into five segments, which break at the locations of major barriers (Metrolink Railway, I-10 Freeway, and UPRR) or based on logical construction phases that will allow connection to existing or planned active transportation facilities or community destinations. Figure O6 details the locations of each alignment alternative.

Segment 1: Pacific Electric Trail to Arrow Highway

The northern extents of the city and project corridor are bordered by the PE Trail. As the channel moves south through Segment 1, it crosses the existing Metrolink rail corridor, and there are several alignment alternatives to navigate this barrier. The segment ends at the first major road crossing at Arrow Highway. Segment 1 has 12 alternatives, the most of any segment, because there is no existing maintenance path to use for the trail, and multiple connections were considered to the PE Trail and around the rail corridor:

- » Alternative 1-1: Features a path along the west bank of the channel with an overcrossing at the Metrolink railway and continues along the west bank to Arrow Highway.
- » Alternative 1-2: Features a path along the west bank of the channel with an undercrossing at the Metrolink railway and continues along the west bank to Arrow Highway.
- » Alternative 1-3: Features a path along the west bank of the channel with a diagonal overcrossing at the Metrolink railway and continues along the east bank to Arrow Highway along the police department property.
- » Alternative 1-4: Features a path along the west bank of the channel with an at-grade crossing at the existing bridge north of the Metrolink railway and an overcrossing at the Metrolink railway, then continues along the east bank to Arrow Highway along the police department property.
- » Alternative 1-5: Features a path along the west bank of the channel with an at-grade crossing at the existing bridge north of the Metrolink railway and an undercrossing at the Metrolink railway, then continues along the east bank to Arrow Highway along the police department property.
- » Alternative 1-6: Features a path along the east bank of the channel with an overcrossing at the Metrolink railway and continues along the east bank to Arrow Highway along the police department property.
- » Alternative 1-7: Features a path along the east bank of the channel with an undercrossing at the Metrolink railway and continues along the east bank to Arrow Highway along the police department property.
- » Alternative 1-8: Features a path along the sidewalk on the west side on Monte Vista Avenue and travels under the existing Metrolink railway bridge. The path then turns west, entering and traveling along the edge of the police

department parking lot to the channel, continuing south to Arrow Highway.

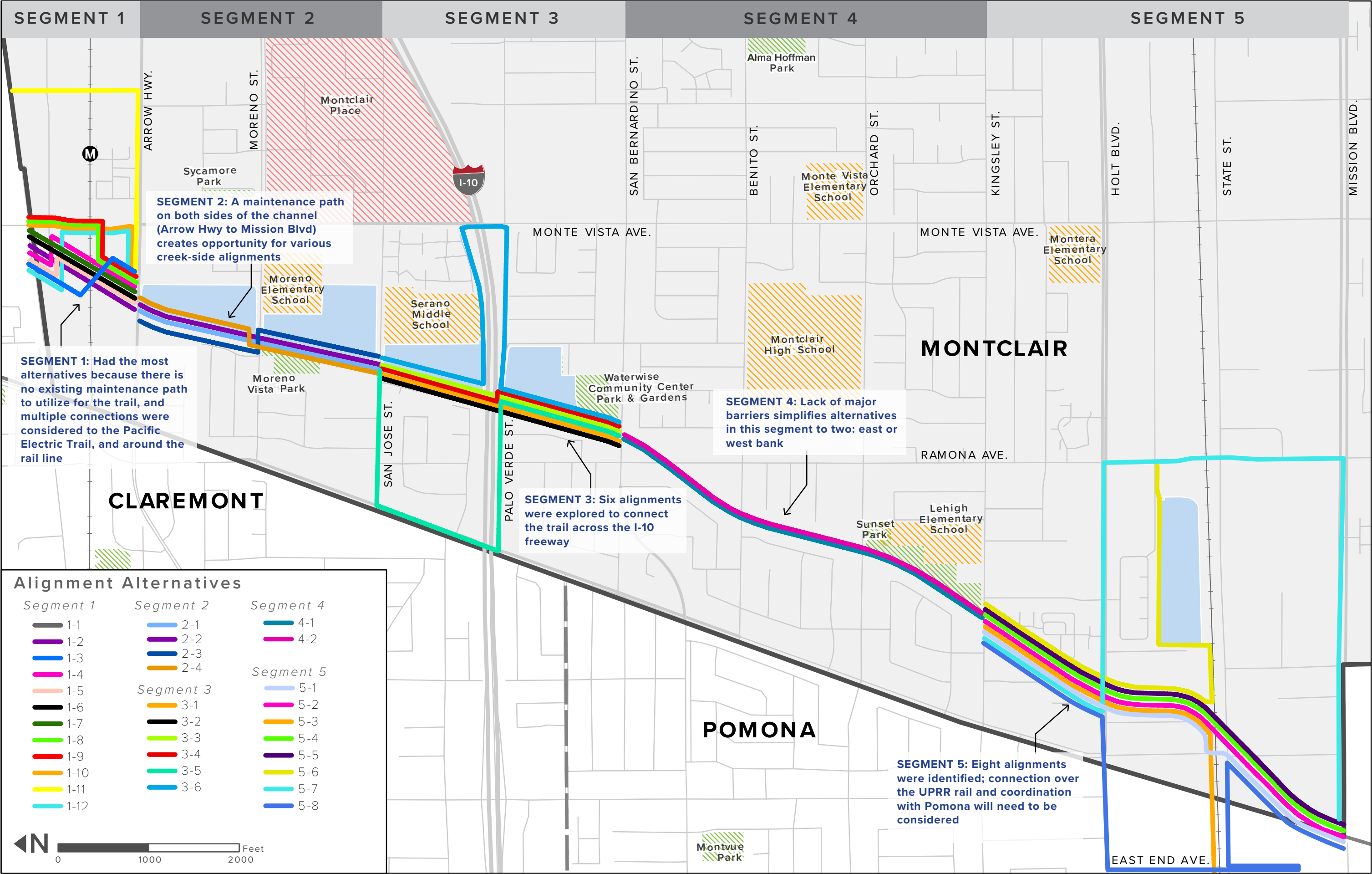
- » Alternative 1-9: Features a path along the sidewalk on the west side on Monte Vista Avenue and travels under the existing Metrolink railway bridge. The path then turns west, entering and traveling along the edge of the rail property to the channel, continuing south to Arrow Highway.
- » Alternative 1-10: Features a path along the sidewalk on the west side on Monte Vista Avenue and travels under the existing Metrolink railway bridge. The path continues south to Arrow Highway and turns west to meet up with the channel.
- » Alternative 1-11: Features a path located about a quarter mile east of the channel that travels south along the edge of the Montclair Transcenter parking lot before crossing the railway at-grade and continuing to Arrow Highway where the path travels west to meet up with the channel.
- » Alternative 1-12: Features an off-street path that connects to the PE Trail several hundred feet west of the channel and crosses the future bridge that will connect Richton Street to Huntington Drive. At Monte Vista Avenue, the path will use and widen the existing sidewalk on the west side of the street to pass beneath the Metrolink railway bridge. At Arrow Highway, the path will connect back to the San Antonio Creek Channel via a one-way separated bikeway.

Segment 2: Arrow Highway to San Jose Street

As the channel moves south through the city, it passes along the west edge of four large percolation basins operated by the CBWCD. The alignments in this segment are either positioned on the east side of the channel and on CBWCD property, or are located on the west side of the channel in the existing channel maintenance path, or switch between both sides of the channel. Segment 2 contains alignments along Basins 1 and 2.

- » Alternative 2-1: Features a path along the west bank of the channel.
- » Alternative 2-2: Features a path along the east bank of the channel within the CBWCD property at Basins 1 and 2.
- » Alternative 2-3: Features a path along the west bank of the channel between Arrow Highway and Moreno Street where it transitions to the east bank of the channel along CBWCD property at Basin 2.
- » Alternative 2-4: Features a path along the east bank of the channel along CBWCD property at Basin 1 between Arrow Highway and Moreno Street where it transitions to the west bank of the channel.

Figure o6. Alignment Alternatives



Segment 3: San Jose Street to San Bernardino Street

In Segment 3, the channel corridor passes along Basins 3 and 4 and crosses the I-10 Freeway, which is a major barrier. Alignment alternatives in this segment pass under, go over, or travel around the freeway. Similar to Segment 2, the alignments also consider their positioning in relation to the CBWCD percolation basins. Segment 3 ends at San Bernardino Street adjacent to the CBWCD Waterwise Community Center Park & Gardens, which serves as a major point of interest along the channel corridor.

- » Alternative 3-1: Features a path along the west bank of the channel with an overcrossing at the I-10 Freeway and continues along the west bank to San Bernardino Street.
- » Alternative 3-2: Features a path along the west bank of the channel with an undercrossing at the I-10 Freeway and continues along the west bank to San Bernardino Street.
- » Alternative 3-3: Features a path along the east bank of the channel along Basin 3 with an overcrossing at the I-10 Freeway and continues along the east bank within Basin 4 to San Bernardino Street.
- » Alternative 3-4: Features a path along the east bank of the channel along Basin 3 with an undercrossing at the I-10 Freeway and continues along the east bank at Basin 4 to San Bernardino Street.

- » Alternative 3-5: Features an on-street connection from San Jose Street to Mills Avenue and continues south to Palo Verde Street, where it connects to the channel and continues along the west bank to San Bernardino Street.
- » Alternative 3-6: Features a path along the east bank of the channel along Basin 3. The path then travels east, adjacent to the I-10 Freeway, to Monte Vista Avenue. The alignment continues on-street from Monte Vista Avenue to Palo Verde Street, where the path meets the channel. The path then continues along the east bank along Basin 4 to San Bernardino Street.

Segment 4: San Bernardino Street to Holt Boulevard

Segment 4 does not cross any major barriers until it reaches Holt Boulevard, and the surrounding context is mainly residential. The alignment alternatives include both an east and west side channel alignment that crosses Benito Street and Orchard Street. The segment terminates at the southern end of Sunset Park on Kingsley Street.

- » Alternative 4-1: Features a path along the west side of the channel.
- » Alternative 4-2: Features a path along the east side of the channel.

Segment 5: Holt Boulevard to Mission Boulevard

The final segment of the corridor must cross two major barriers, Holt Boulevard and the UPRR corridor. Due to the major constraints surrounding

the UPRR crossing and largely industrial surrounding land use south of Holt Boulevard, Phase A of the trail construction should terminate at Holt Boulevard. The future Phase B of the trail's development can extend the trail south from Holt Boulevard to Mission Boulevard. This extension will require further funding and coordination with UPRR.

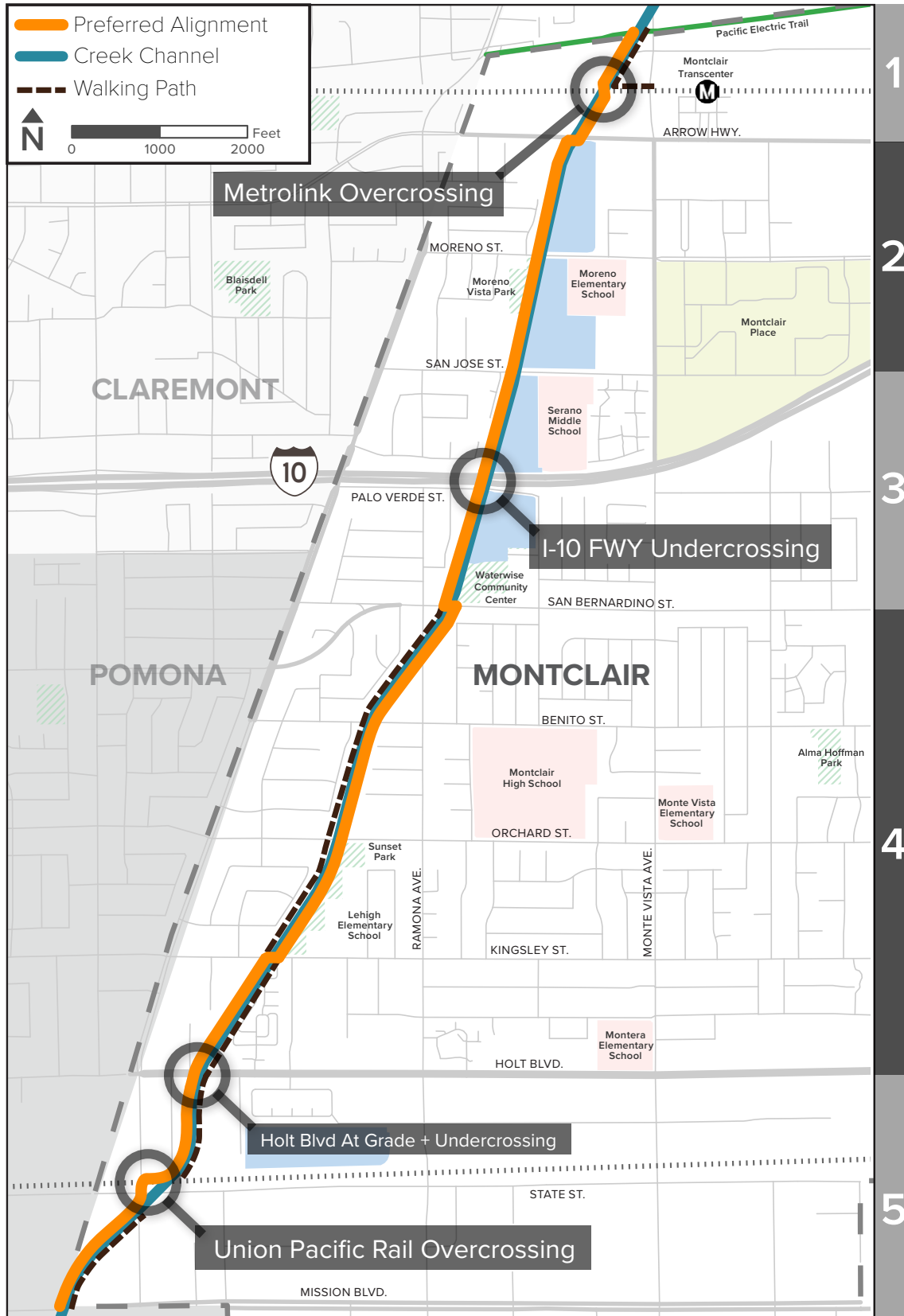
- » Alternative 5-1: Features a path along the west bank of the channel with an at-grade crossing at Holt Boulevard and an overcrossing at the UPRR, and continues along the west bank to Mission Boulevard and city limits.
- » Alternative 5-2: Features a path along the west bank of the channel with an undercrossing at Holt Boulevard and an undercrossing at the UPRR, and continues along the west bank to Mission Boulevard and city limits.
- » Alternative 5-3: Features a path along the west bank of the channel with an at-grade crossing at Holt Boulevard. Before reaching the UPRR, the path turns west and travels adjacent to the rail/private property to South East End Avenue.
- » Alternative 5-4: Features a path along the east bank of the channel with an at-grade crossing at Holt Boulevard and an overcrossing at the UPRR, and continues along the east bank to Mission Boulevard and city limits.
- » Alternative 5-5: Features a path along the east bank of the channel with an undercrossing at Holt Boulevard

and an undercrossing at the UPRR, and continues along the east bank to Mission Boulevard and City limits.

- » Alternative 5-6: Features a path along the east bank of the channel with an at-grade crossing at Holt Boulevard. Before reaching the UPRR, the path turns east and travels adjacent to the rail and around the north edge of Basin 5 before reaching Ramona Avenue.
- » Alternative 5-7: Features a path along the west bank of the channel before reaching Holt Boulevard. On-street bicycle facilities travel down Holt Boulevard to Ramona Avenue and use the existing bridge to cross over the UPRR. Lane reconfiguration is necessary on Ramona Avenue to accommodate separated bike facilities. The bike facilities turn down Mission Boulevard to rejoin the channel at city limits.
- » Alternative 5-8: Features a path along the west bank of the channel before reaching Holt Boulevard. On-street bicycle facilities travel down Holt Boulevard to East End Avenue and use the existing road to travel under the UPRR. South of the railway there are existing ramps that can connect trail users up to State Street to connect back with the channel. This segment is largely in the City of Pomona and would require coordination.

SAN ANTONIO CREEK TRAIL

Figure 07. Preferred Alignment for Multi-Use Path



PREFERRED GRADE-SEPARATED ALIGNMENT FOR MULTI-USE PATH

The preferred alignment as determined through the evaluation process is a grade-separated alignment as shown in Figure 07. Because the San Antonio Creek Channel has two existing maintenance paths, one on each bank, the City can make use of both spaces for the trail. There is one primary alignment envisioned as a multi-use trail for people walking and biking, and where feasible, a walking path may be located on the opposite bank from the primary trail alignment. The preferred alignment for the multi-use trail is described below by segment.

Segment 1 - Alternative 1-3: West bank alignment with diagonal rail overcrossing to east bank

There are fewer challenges when it comes to right-of-way acquisition with this segment. The rail overcrossing is feasible so long as it is designed to meet required clearances, and is less expensive than an undercrossing in this location due to the physical complexities of an undercrossing. An undercrossing would require the construction of a new bridge capable of supporting the future Gold Line above the trail, which would be a significant and more expensive undertaking. The section north of the rail can be implemented as part of the future development parcel, and the trail to the south of the rail can use the existing wide parkway area along the police department property.

Segment 2 - Alternative 2-1: West bank

The west bank alignment in Segment 2 maximizes the area for additional landscape planting with some areas close to 25 feet wide. There are opportunities

along the west bank for trailheads and a connection to Moreno Vista Park. The west bank does not fall within the CBWCD basins and therefore does not conflict with basin or power line operations and maintenance.

Segment 3 - Alternative 3-4: West bank alignment with I-10 Freeway undercrossing to east bank along percolation basin

This alignment avoids conflicts with the basin north of the I-10 Freeway and uses a west bank undercrossing, which is more feasible than a I-10 Freeway overcrossing in this location. South of the I-10 Freeway, the alignment continues on the west side of the channel to avoid conflicts with the CBWCD basin.

Segment 4 - Alternative 4-2: East bank

The east bank alignment in Segment 4 provides an opportunity for the direct connection to Sunset Park. A direct connection to Lehigh Elementary School also provides educational opportunities.

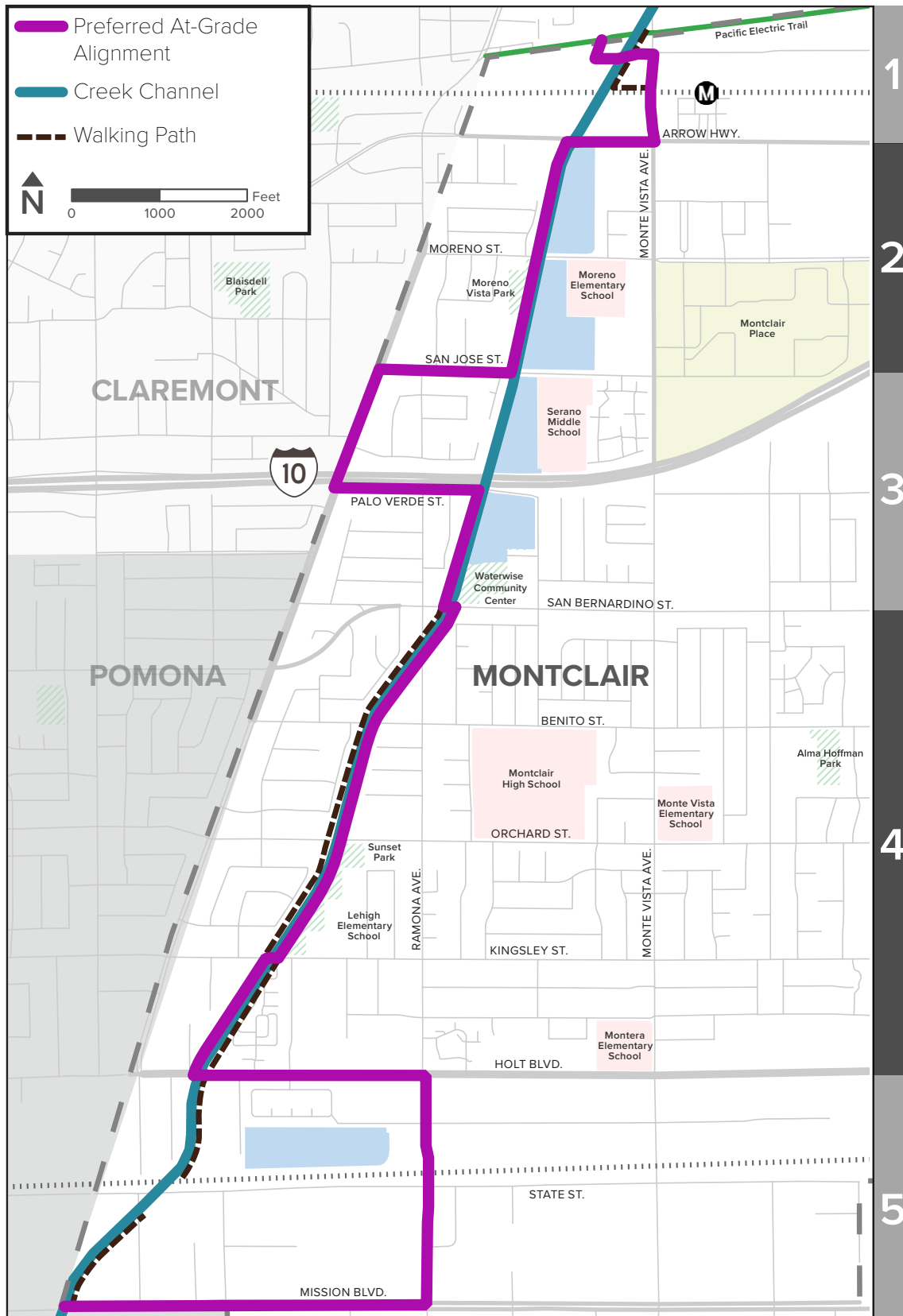
Segment 5 - Alternative 5-1: West bank with at-grade crossing at Holt Boulevard and overcrossing at UPRR corridor

This alignment provides more space for a path to ramp up and cross the UPRR corridor, which makes it the most feasible alignment that follows along the channel.

Chapter 05 provides additional detail on the preferred grade-separated alignment for a multi-use path.

SAN ANTONIO CREEK TRAIL

Figure 08. Preferred At-Grade Alignment for Multi-Use Path



PREFERRED AT-GRADE ALIGNMENT FOR MULTI-USE TRAIL

The preferred at-grade alignment uses the same channel-adjacent alignments as determined through the evaluation process, but replaces major barrier grade-separated crossings with alignments that navigate around the existing barriers, as shown in Figure 08.

Segment 1 - Alternative 1-12: At-grade alignment on Monte Vista Avenue to on-street alignment on Arrow Highway

This at-grade alignment branches off the PE Trail and allows the trail to navigate around the Metrolink rail corridor without the use of an overcrossing or undercrossing. The alignment will use the future bridge connecting Huntington Drive to Richton Street to cross over the channel and access Monte Vista Avenue. A Class I facility along Monte Vista Avenue connects to an on-street segment along Arrow Highway, which connects back to the channel.

Segment 2 - Alternative 2-1: West bank

The west bank alignment in Segment 2 maximizes the area for additional landscape planting with some areas close to 25 feet wide. There are opportunities along the west bank for trailheads and a connection to Moreno Vista Park. The west bank does not fall within the CBWCD basins and therefore does not conflict with basin or power line operations and maintenance.

Segment 3 - Alternative 3-5: On-street alignment along San Jose Street, Mills Avenue, and Palo Verde Street to west bank

This alignment avoids conflicts with the basin north of the I-10 Freeway and uses on-street alignments along San Jose Street, Mills Avenue, and Palo Verde Street to navigate around the I-10 Freeway barrier. South of the I-10 Freeway, the alignment continues on the west side of the channel to avoid conflicts with the CBWCD basin.

Segment 4 - Alternative 4-2: East bank

The east bank alignment in Segment 4 provides an opportunity for the direct connection to Sunset Park. A direct connection to Lehigh Elementary School also provides educational opportunities.

Segment 5 - Alternative 5-7: West bank with an on-street connection along Holt Boulevard, Ramona Avenue, and Mission Boulevard

This alignment allows the trail to navigate around the UPRR corridor with on-street segments along Holt Boulevard, Ramona Avenue, and Mission Boulevard. The alignment uses the existing bridge on Ramona Avenue to cross over the UPRR corridor.

Chapter 05 provides additional detail on the preferred at-grade alignment for a multi-use trail.



05. Design Recommendations

Conceptual Design

Once completed, the San Antonio Creek Trail will be a valuable recreational and transportation asset for Montclair, adding nearly three miles of new greenway space. The trail will have two path types: a multi-use path along the full length of the San Antonio Creek Channel, and wherever there is space on the opposite bank, a neighborhood walking path is envisioned. The multi-use path is sometimes on the west bank, and sometimes on the east. The San Antonio Creek Trail will connect to the PE Trail and reinforce connections to three schools, three parks, shopping destinations like Montclair Place, and transit destinations like the Montclair Transcenter. Residents of Montclair will have a place to walk their dogs, go for a stroll, ride to a nearby park, or commute to school. Wide sections of paved trail

planted with trees and native plants will provide habitat for local wildlife and shaded seating areas for trail users to rest. Trailheads located along the corridor will act as small pocket parks easily accessed by surrounding neighborhoods.

The San Antonio Creek Trail can create even larger regional connections in the future. Extending to the north into Upland, there is an opportunity to connect to a previously constructed segment of the trail. To the south, the trail has the potential to extend through the cities of Pomona and Chino. The San Antonio Creek Trail provides an exciting opportunity to create a vibrant and beautiful regional connection.

The following chapter includes details and graphics to convey the vision of the future trail.



The Coves trail, a segment of the Santa Ana River Trail, is great inspiration for the San Antonio Creek Trail. It provides separate walking and biking paths around a dam, screened from users by decorative fencing and native plantings.

Typical Cross Sections

Many areas along the trail corridor have room for additional amenities such as trees, seating, and signage. These graphics describe the varying conditions along the trail and envision what is possible.

The accompanying map in Figure 11 is color coded to match with the cross section graphics detailed in Figures 09, 12, 13, 14, 15, 16, 17, and 18.

Greenway trail conditions occur at locations along the San Antonio Creek Channel with ample room to implement additional trail amenities. In certain locations along the channel, some amount of additional trail amenities may be feasible, but the user experience may be different than a greenway condition where there is optimal space for a wider array

of amenities. This distinction is made through the use of two different tones of green in Figure 11.

As detailed in Figure 10, the San Antonio Creek Trail will feature a paved multi-use path and a separated decomposed granite walking path on the opposite bank in many locations along the corridor.

Figure 10. Complete Trail Cross Section

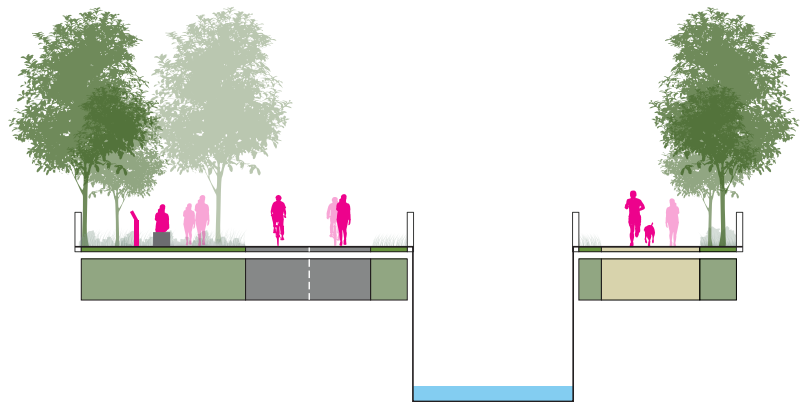
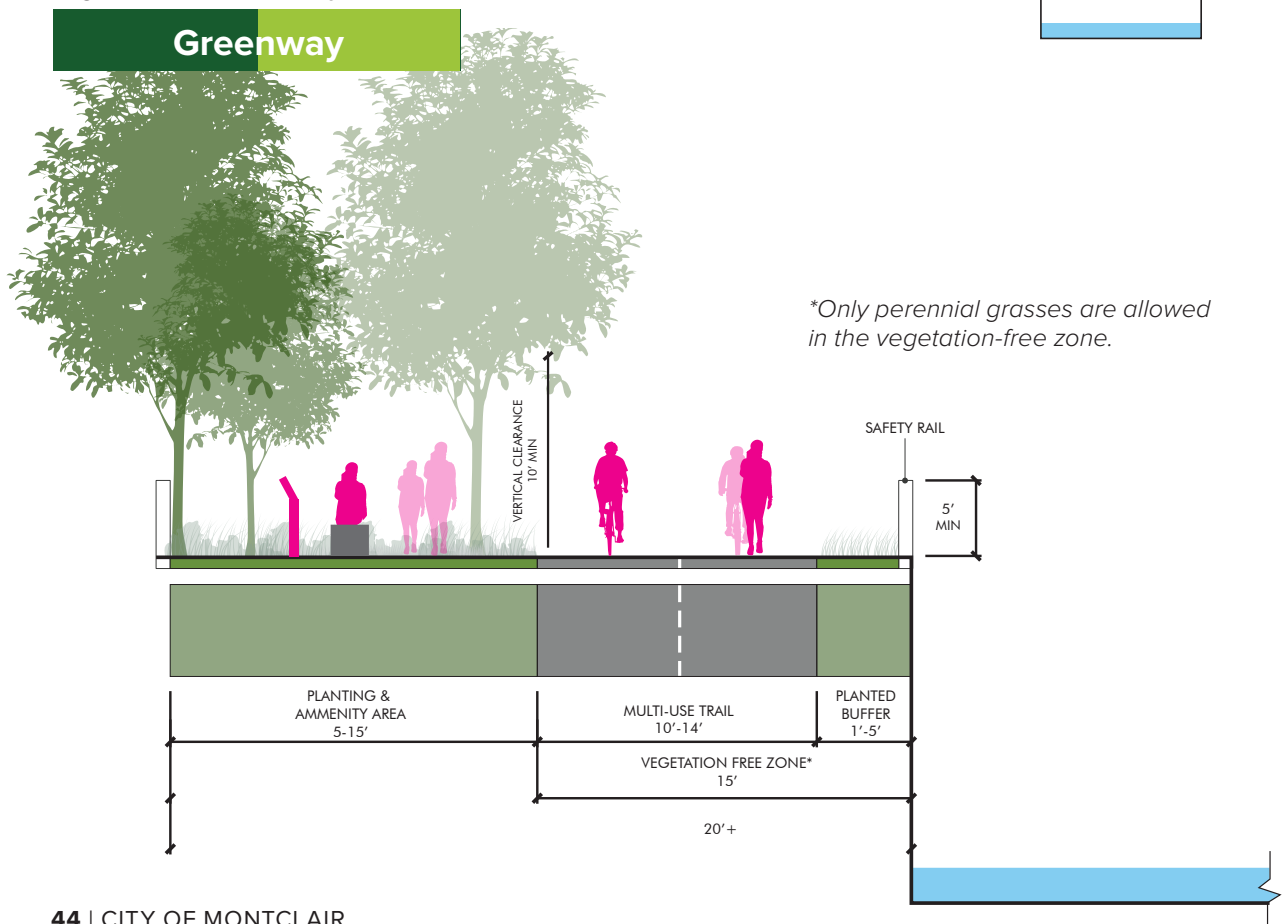


Figure 09. Greenway Cross Section



SAN ANTONIO CREEK TRAIL

Figure 11. Section + Segment Key

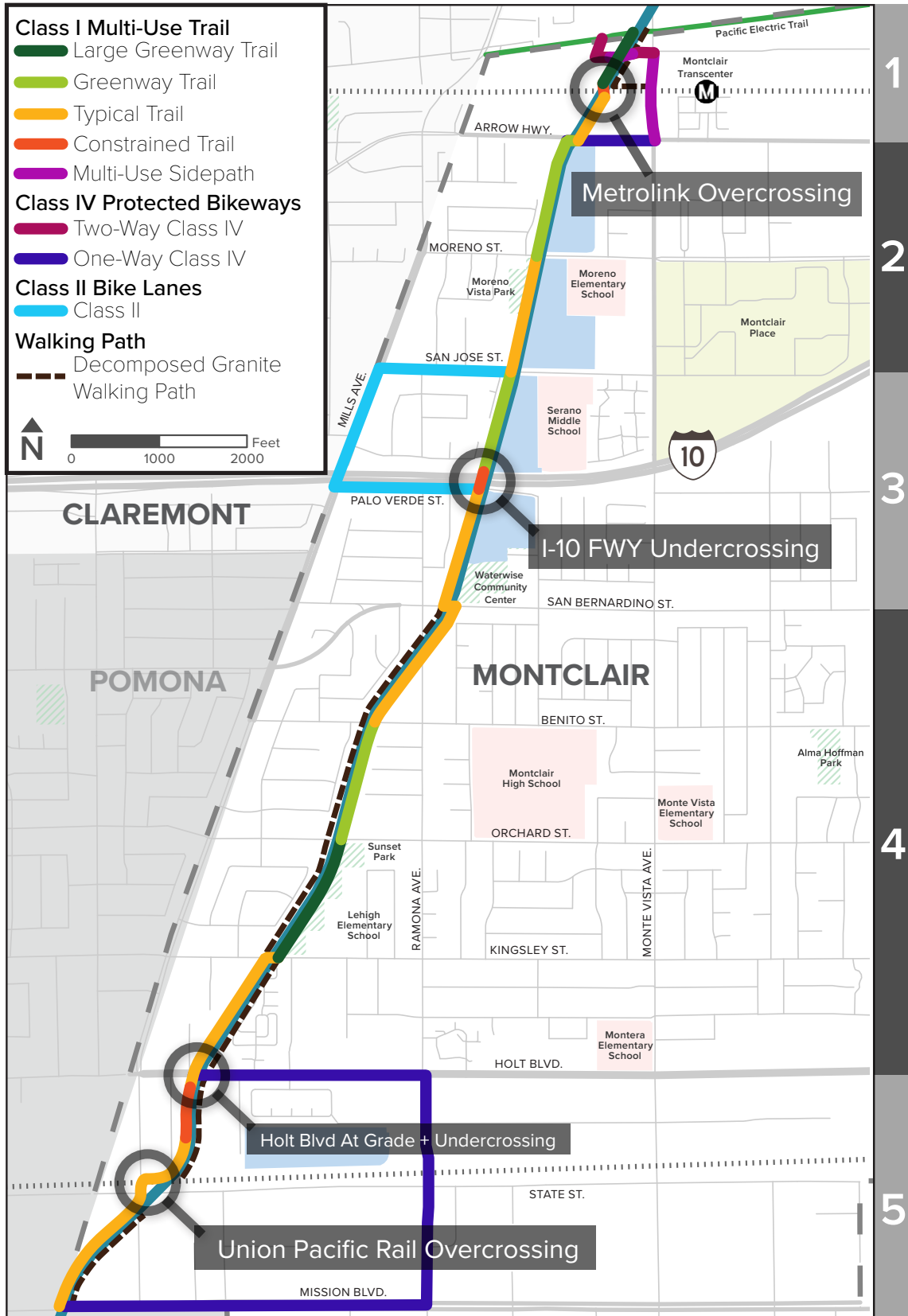
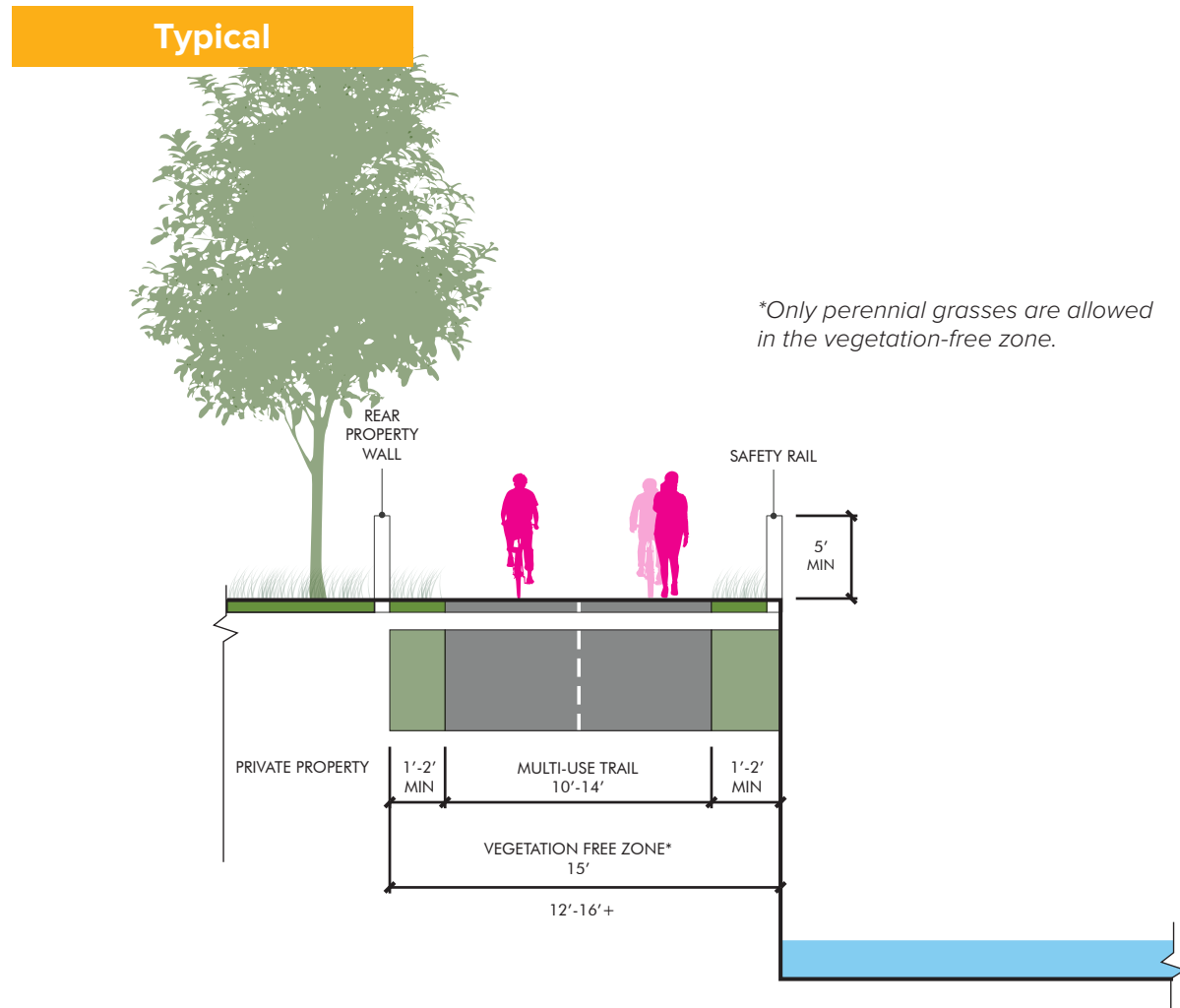


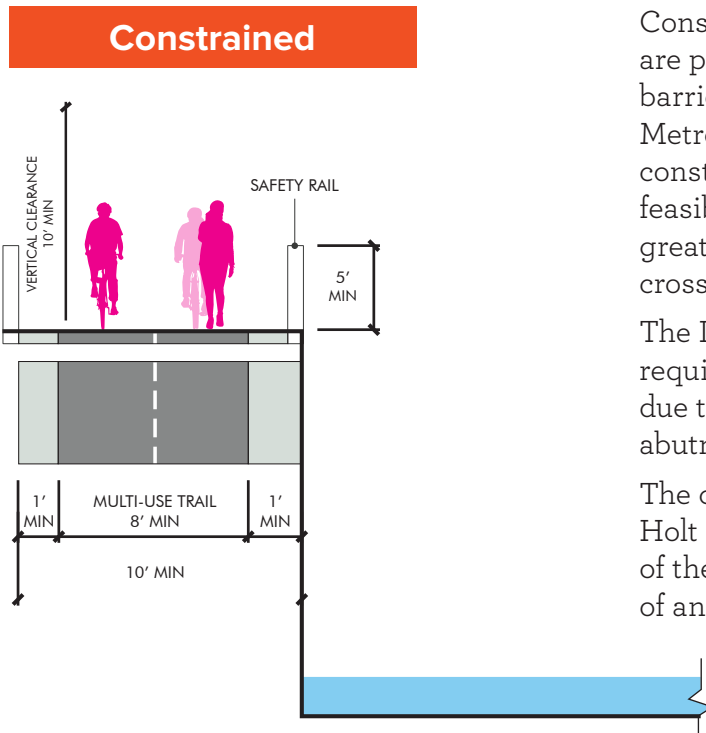
Figure 12. Typical Cross Section



The typical trail cross section detailed here shows the proposed improvements along the majority of the channel corridor. The available trail widths in the typical trail section locations do not provide enough additional space to add trees or other amenities. The trail in these locations will consist of a multi-use path and small buffers planted with low-lying

perennial grasses that provide some additional separation between trail users and adjacent property walls and channel safety rails. In certain locations, it may be possible to plant some additional small- to medium-sized landscape plants on the side of the trail opposite the channel as long as they lie outside of the 15-foot-wide vegetation-free zone.

Figure 13. Constrained Cross Section

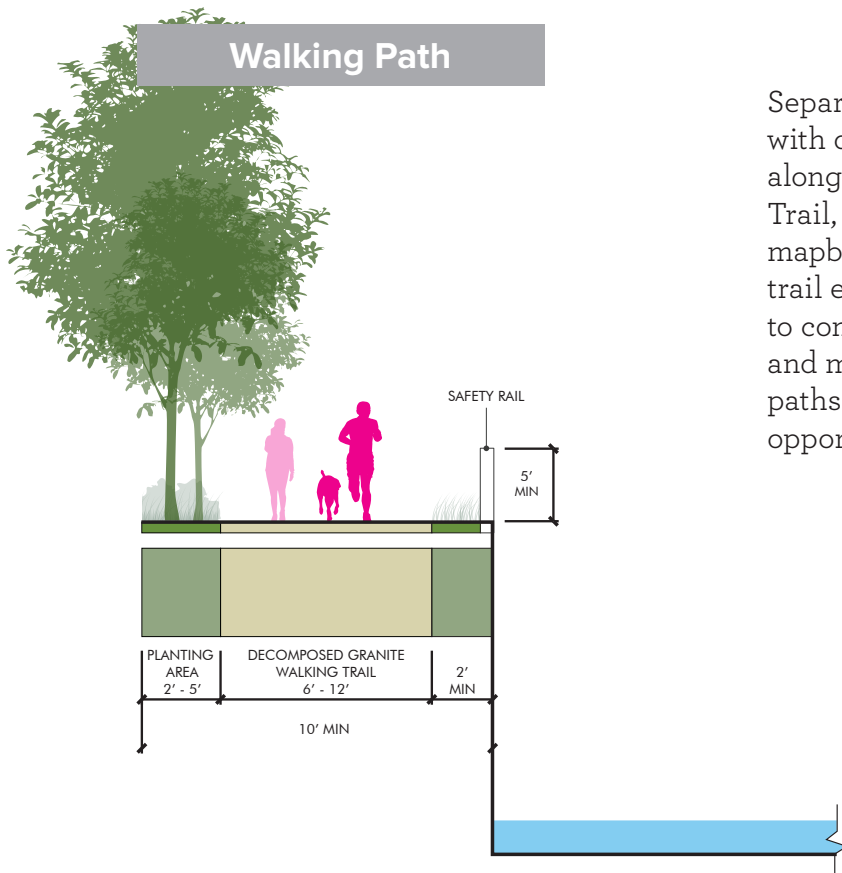


Constrained trail cross-section conditions are primarily found at major crossing barriers. As seen in Figure 11, the Metrolink overcrossing is shown as a constrained condition. The cost and feasibility of the Metrolink overcrossing is greatly impacted by the width of the trail cross section.

The I-10 Freeway undercrossing also requires a constrained configuration due to the location of the freeway bridge abutments in relation to the channel wall.

The constrained condition noted south of Holt Boulevard is a result of a tightening of the space available due to the location of an adjacent private property wall.

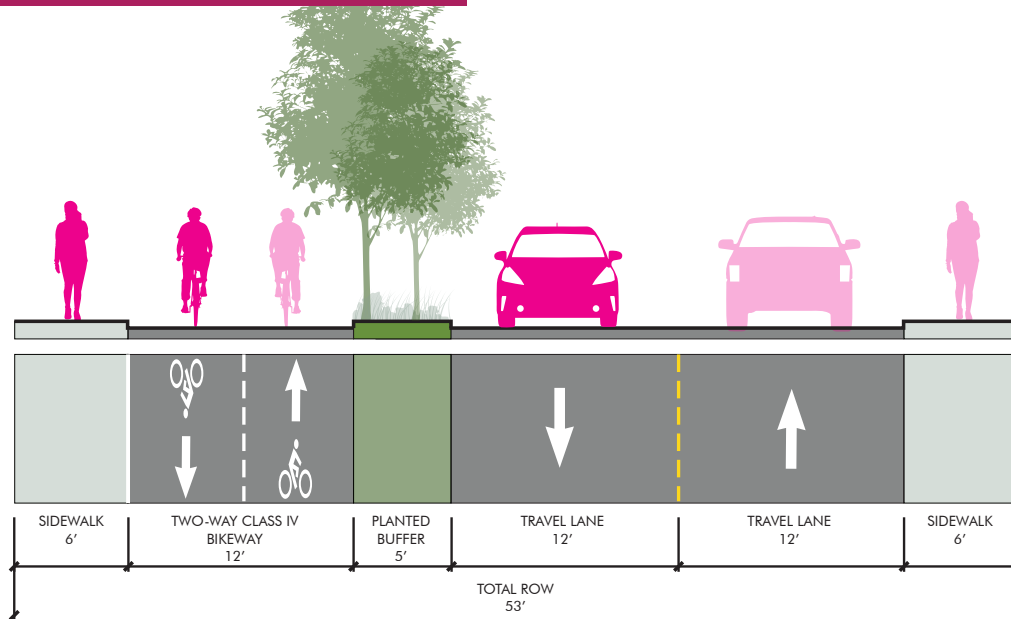
Figure 14. Walking Path Cross Section



Separated walking paths constructed with decomposed granite are proposed along sections of the San Antonio Creek Trail, as detailed in the conceptual design mapbook (Figure 19). A separated use trail enables users of all ages and abilities to comfortably travel along the trail and minimizes user conflicts. Walking paths can provide further educational opportunities and interpretive signage.

Figure 15. Two-Way Class IV Bikeway Cross Section

Two-Way Class IV Bikeway

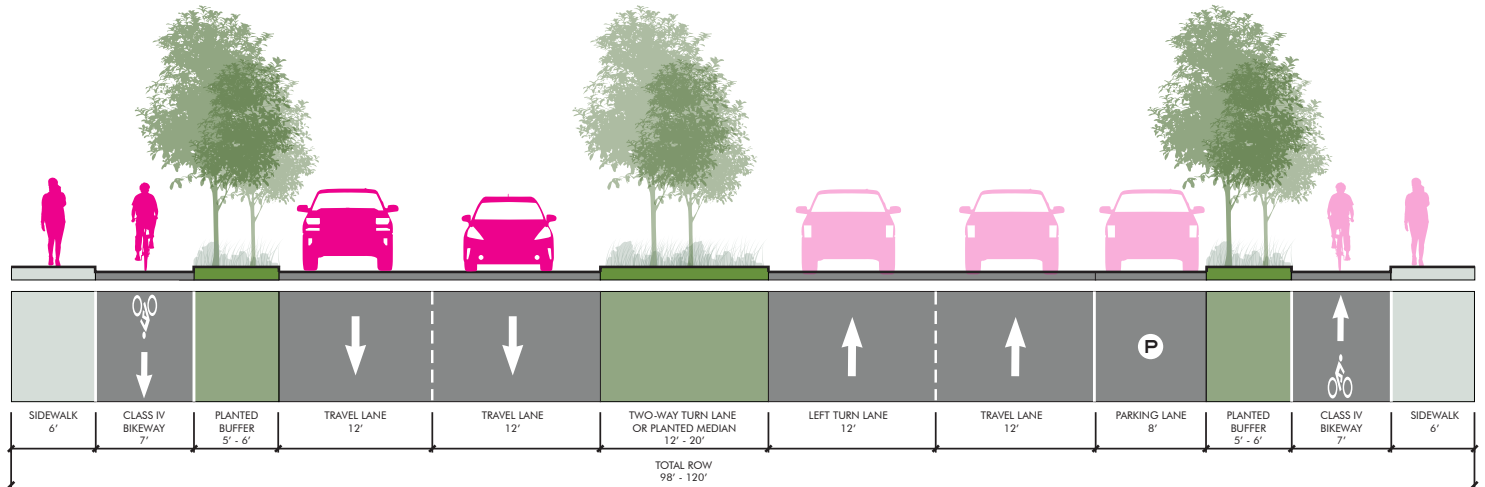


The two-way class IV protected bikeway cross section detailed here shows what typical improvements would look like for this typology along a portion of the at-grade alternative alignment in Segment 1. A bridge is proposed that will connect Huntington Drive to Richton Street and will require the roadway to narrow. The trail will transition from a multi-use sidepath to a two-way class IV bikeway over the bridge. Over the bridge,

the buffer between people biking and people driving may be flex posts instead of plantings. Two-way class IV bikeways allow for an on-street user experience that is most similar to the segments of trail directly adjacent to the channel. If a quick build option is desired, a painted buffer and flex posts may be used to separate the bikeway from travel lanes in place of a planted buffer.

Figure 16. One-Way Class IV Bikeway Cross Section

One-Way Class IV Bikeway

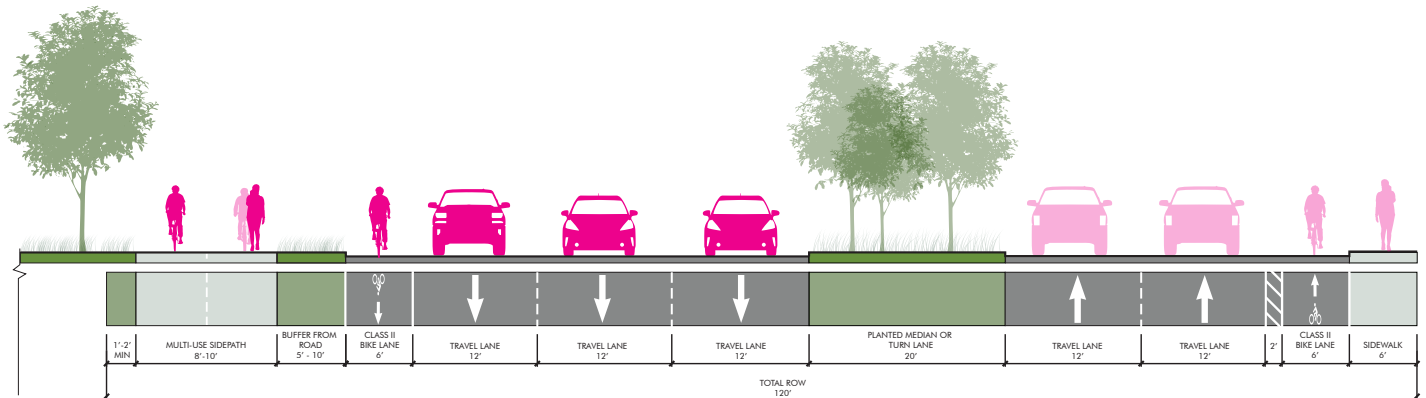


The one-way class IV cross section detailed here shows the proposed improvements along typical on-street portions of the alternative alignments where space allows for separated facilities on either side of the street.

One-way class IV facilities are feasible on several streets within the study area and may require reconfiguration of travel and parking lanes. Where space allows, planted buffers may be used to separate the on-street facility from adjacent travel lanes. If a quick build option is desired, a painted buffer and flex posts may be used to separate the bikeway from travel lanes in place of a planted buffer.

Figure 17. Multi-Use Sidepath Cross Section

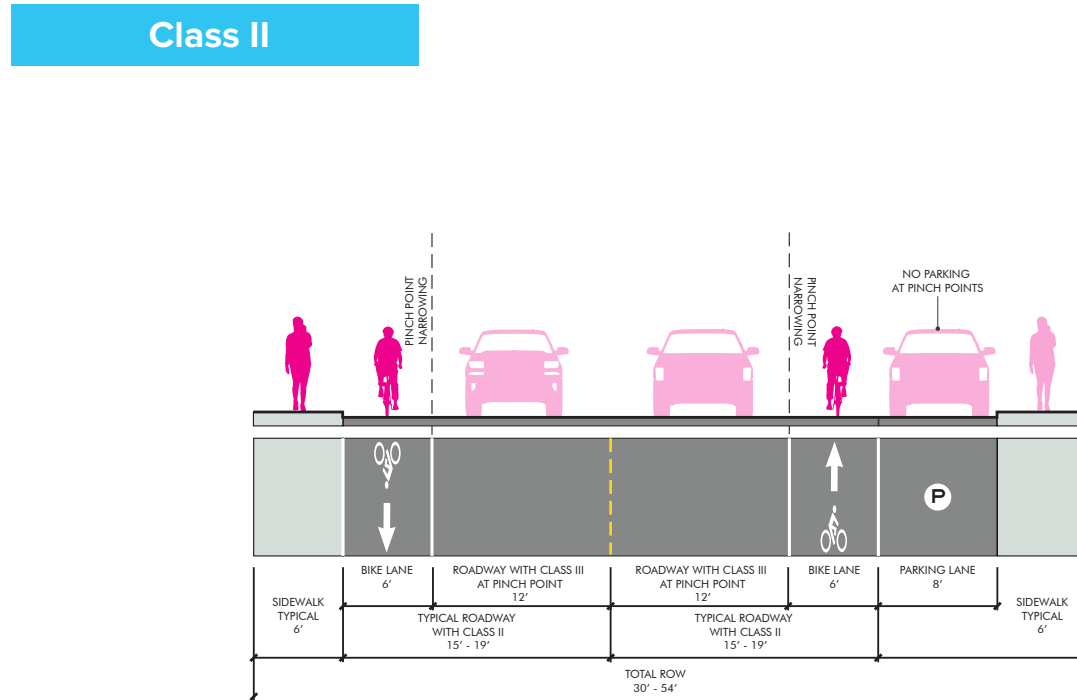
Multi-Use Sidepath



The multi-use sidepath detailed in this cross section is feasible in locations where the trail branches away from the channel. Instead of continuing its alignment as an on-street facility, sidewalk widening allows the trail to continue along the

roadway as an off-street facility. This section type is shown along Monte Vista Avenue between Richton Street and Arrow Highway.

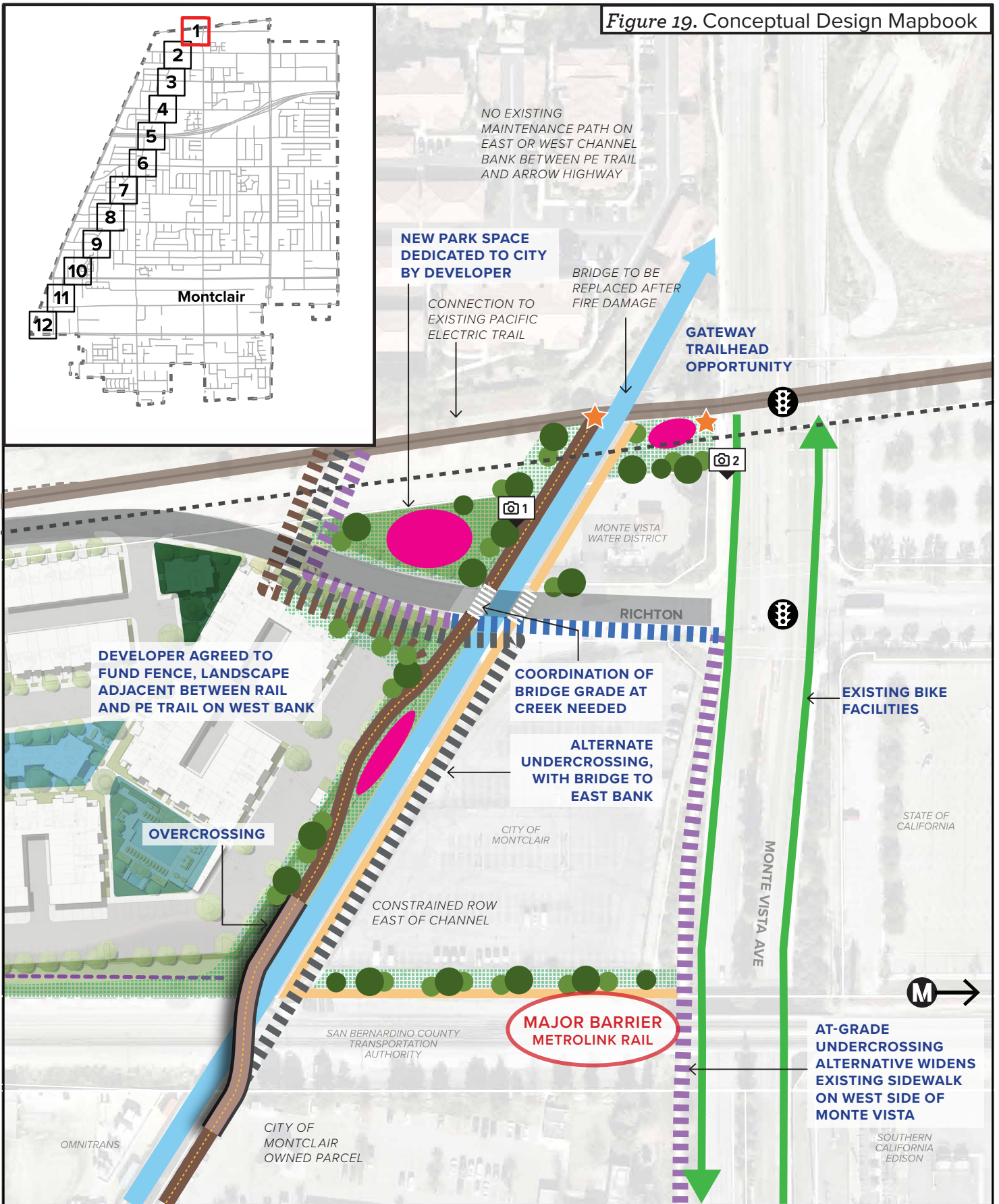
Figure 18. Class II Cross Section



For certain on-street alternatives, existing right-of-ways may not be large enough to accommodate separated Class IV or Class I facilities. Class II bike facilities may be implemented where space does

not permit separated facilities. Class II facilities are feasible along Palo Verde Street and San Jose Street between Mills Avenue and the San Antonio Creek Channel.

Figure 19. Conceptual Design Mapbook



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail
Preferred Alignment: Pacific Electric Trail to Metrolink Rail Corridor

San Antonio Creek Trail Preferred
Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail
- Multi-Use Overcrossing
- Class I Multi-Use Trail Alternatives
- Overcrossing
- Undercrossing

San Antonio Creek Trail Preferred
At-Grade Trail Alignment

- Class IV Bikeway
- Multi-Use Sidepath

San Antonio Creek Trail
Walking Path

- Decomposed Granite Walking Path

Traffic Control

- Existing Traffic Signal

Proposed Traffic Control

- New Signal or HAWK
- New RRFB
- Crosswalk

Proposed Landscape &
Placemaking

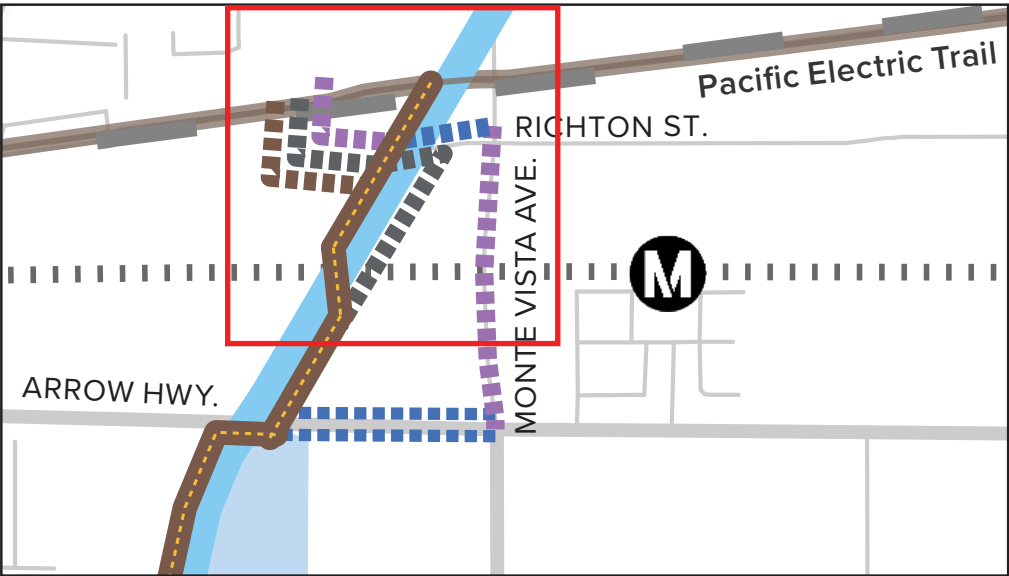
- Trees & Shrubs
- Trees & Shrubs-Private
- Groundcover Planting
- Amenities/Programming
- Gateway/Signage

Features

- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes



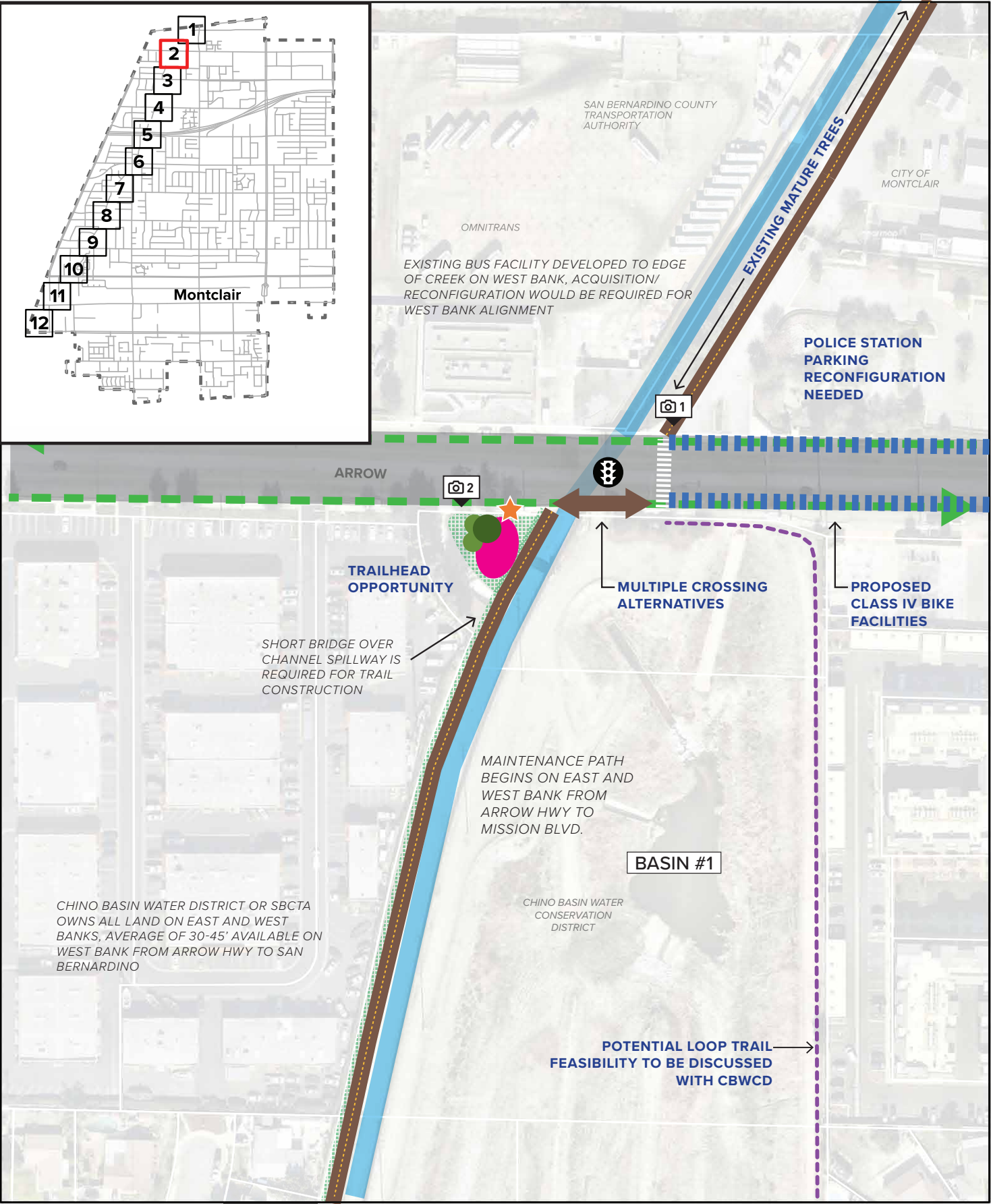
Alternative Alignment Context Map



This Segment includes an alternative for a grade-separated trail, as well as an alternative for an at-grade trail, as described in Chapter 04.



SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail

Preferred Alignment: Arrow Highway to CBWCD Basin #1

San Antonio Creek Trail Preferred Grade-Separated Alignment

Class I Multi-Use Trail

Multi-Use Trail

Multi-Use Overcrossing

Class I Multi-Use Trail Alternatives

Overcrossing

Undercrossing

San Antonio Creek Trail Preferred At-Grade Trail Alignment

Class IV Bikeway

Multi-Use Sidepath

San Antonio Creek Trail Walking Path

Loop Trail Opportunity

Traffic Control

Existing Traffic Signal

Proposed Traffic Control

New Signal or HAWK

New RRFB

Crosswalk

Proposed Landscape & Placemaking

Trees & Shrubs

Trees & Shrubs-Private

Groundcover Planting

Amenities/Programming

Gateway/Signage

Features

City Boundary

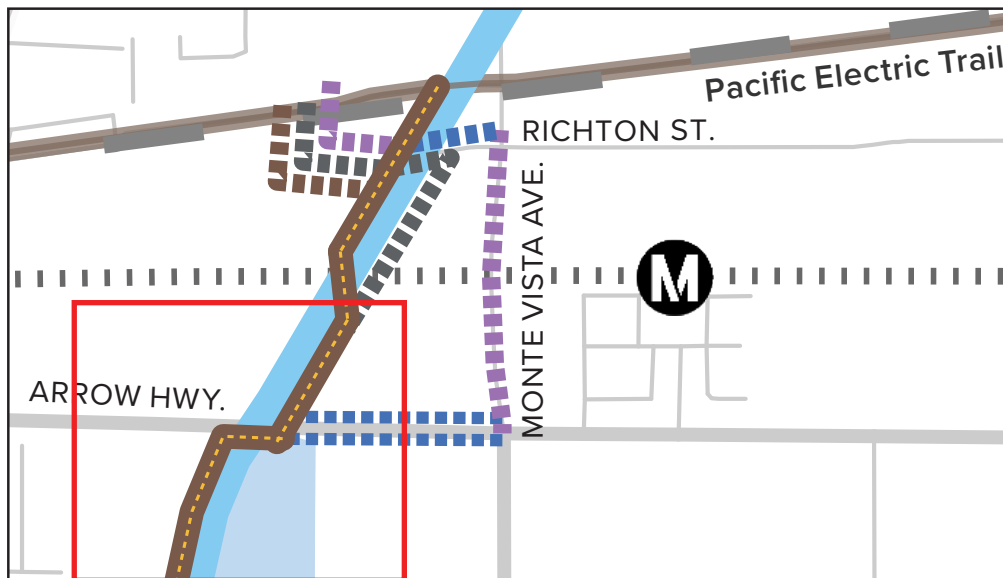
San Antonio Creek Channel

Proposed Class III, Class II or IV Bikeway

Existing Class II Bike Lanes



Alternative Alignment Context Map

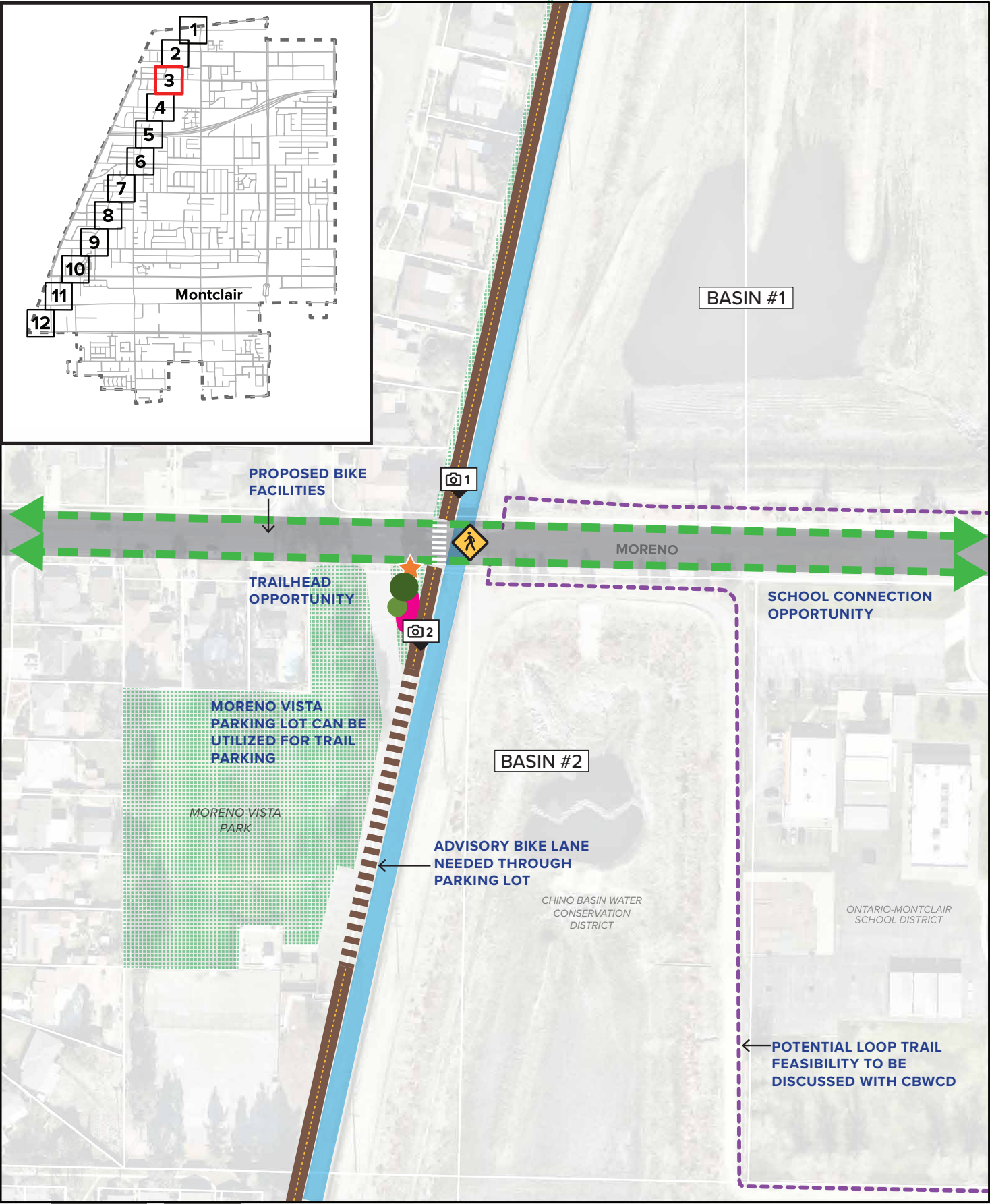


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2

MAP 2 OF 12

SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail

Preferred Alignment: CBWCD Basin #1 and #2 to Moreno Vista Park

San Antonio Creek Trail Preferred Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail

San Antonio Creek Trail Walking Path

- Loop Trail Opportunity

Traffic Control

- Existing Traffic Signal

Proposed Traffic Control

- New Signal or HAWK
- New RRFB
- Crosswalk

Proposed Landscape & Placemaking

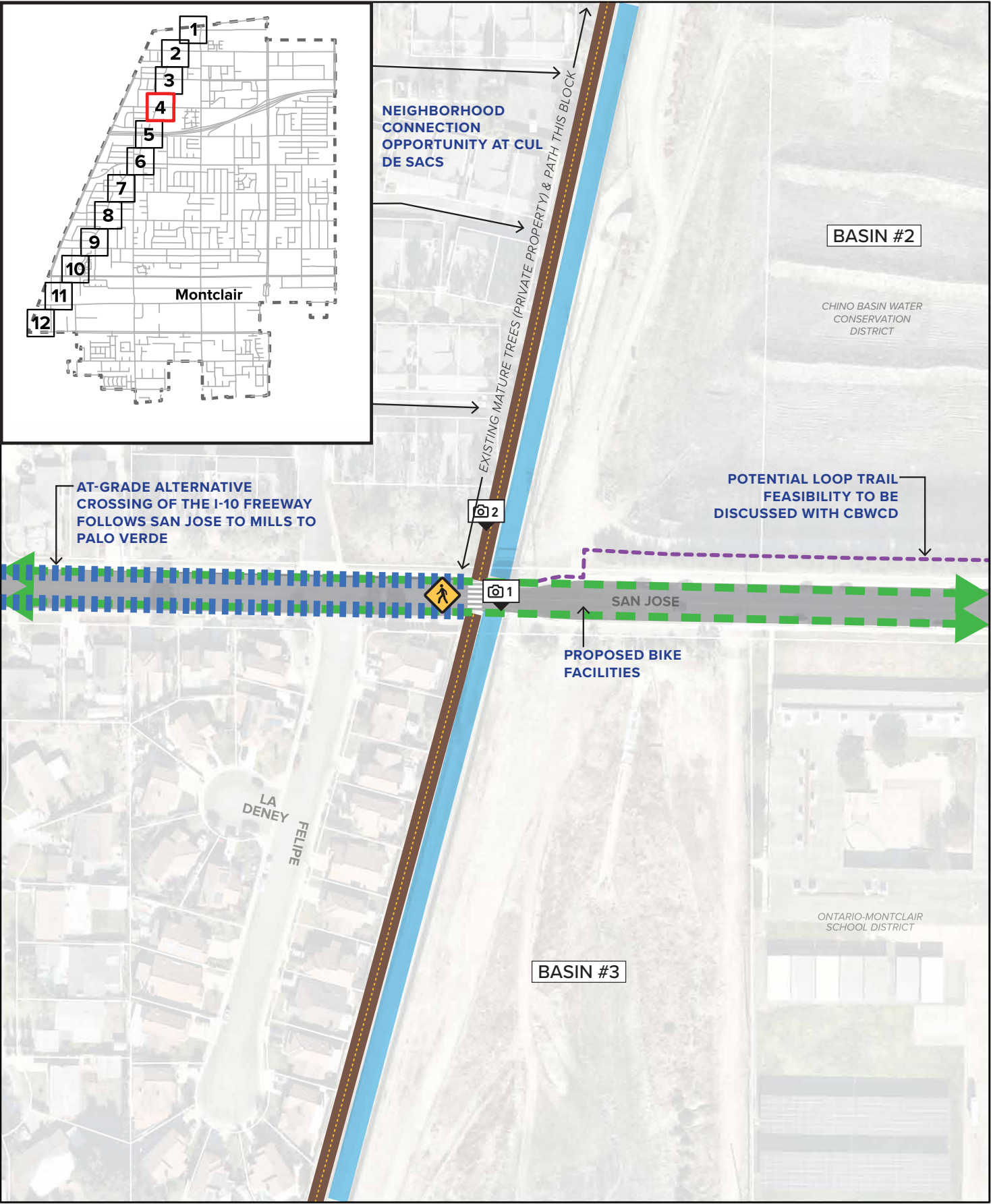
- Trees & Shrubs
- Trees & Shrubs-Private
- Groundcover Planting
- Amenities/Programming
- Gateway/Signage

Features

- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes



SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail
Preferred Alignment: Moreno Vista Park to CBWCD Basin #3

San Antonio Creek Trail Preferred
Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail

San Antonio Creek Trail Preferred
At-Grade Trail Alignment

- At-Grade Bikeway

San Antonio Creek Trail
Walking Path

- Loop Trail Opportunity

Traffic Control

- Existing Traffic Signal

Proposed Traffic Control

- New Signal or HAWK
- New RRFB
- Crosswalk

Proposed Landscape &
Placemaking

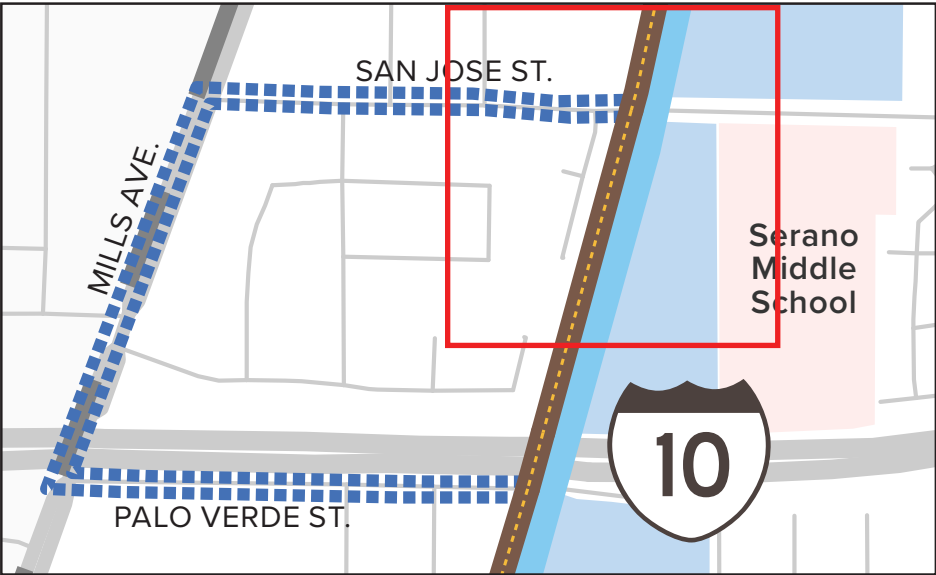
- Trees & Shrubs
- Trees & Shrubs-Private
- Groundcover Planting
- Amenities/Programming
- Gateway/Signage

Features

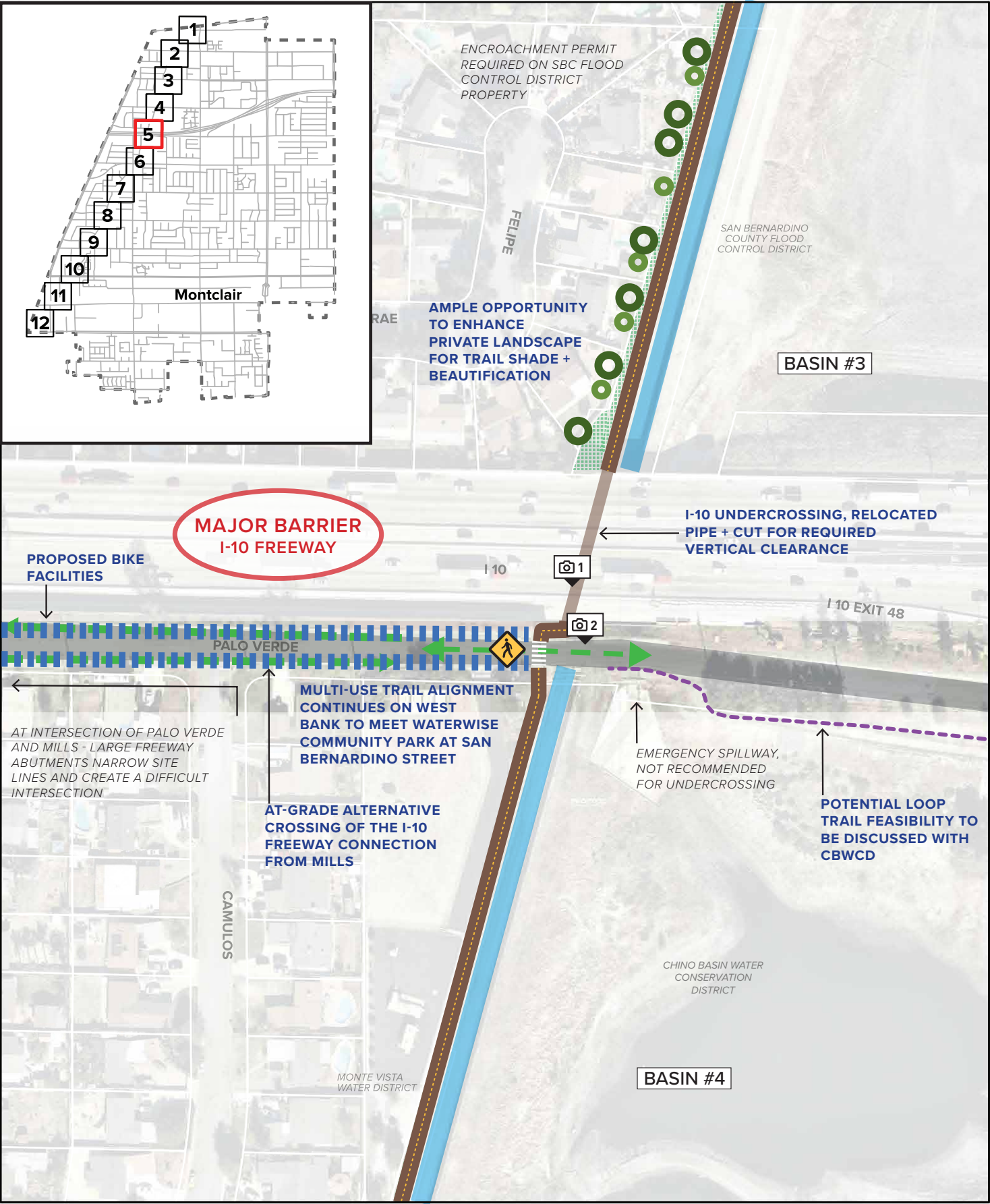
- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes



Alternative Alignment Context Map



SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail
Preferred Alignment: CBWCD Basin #3 to Palo Verde Street

San Antonio Creek Trail Preferred
Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail

San Antonio Creek Trail Preferred
At-Grade Trail Alignment

- At-Grade Bikeway

San Antonio Creek Trail
Walking Path

- Loop Trail Opportunity

Traffic Control



Proposed Traffic Control



Proposed Landscape &
Placemaking

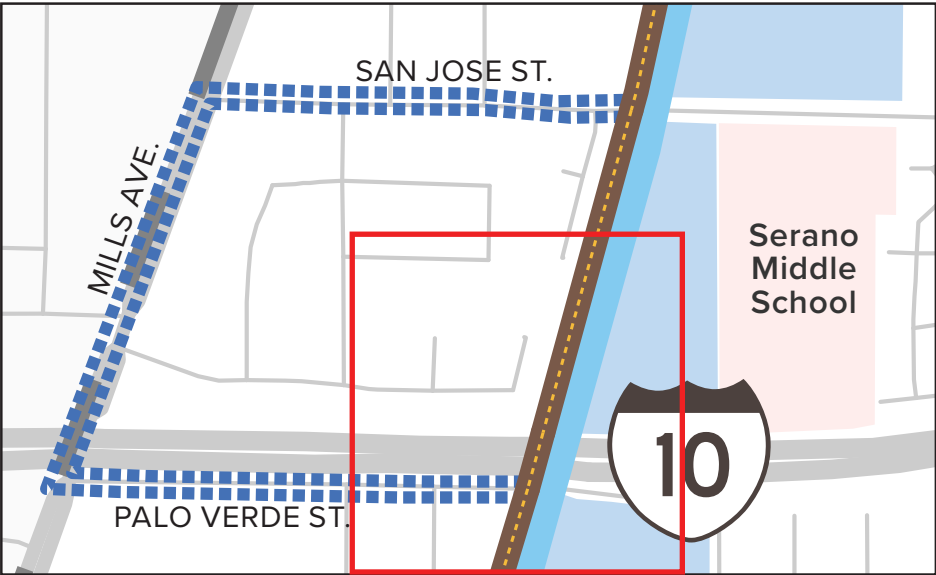


Features

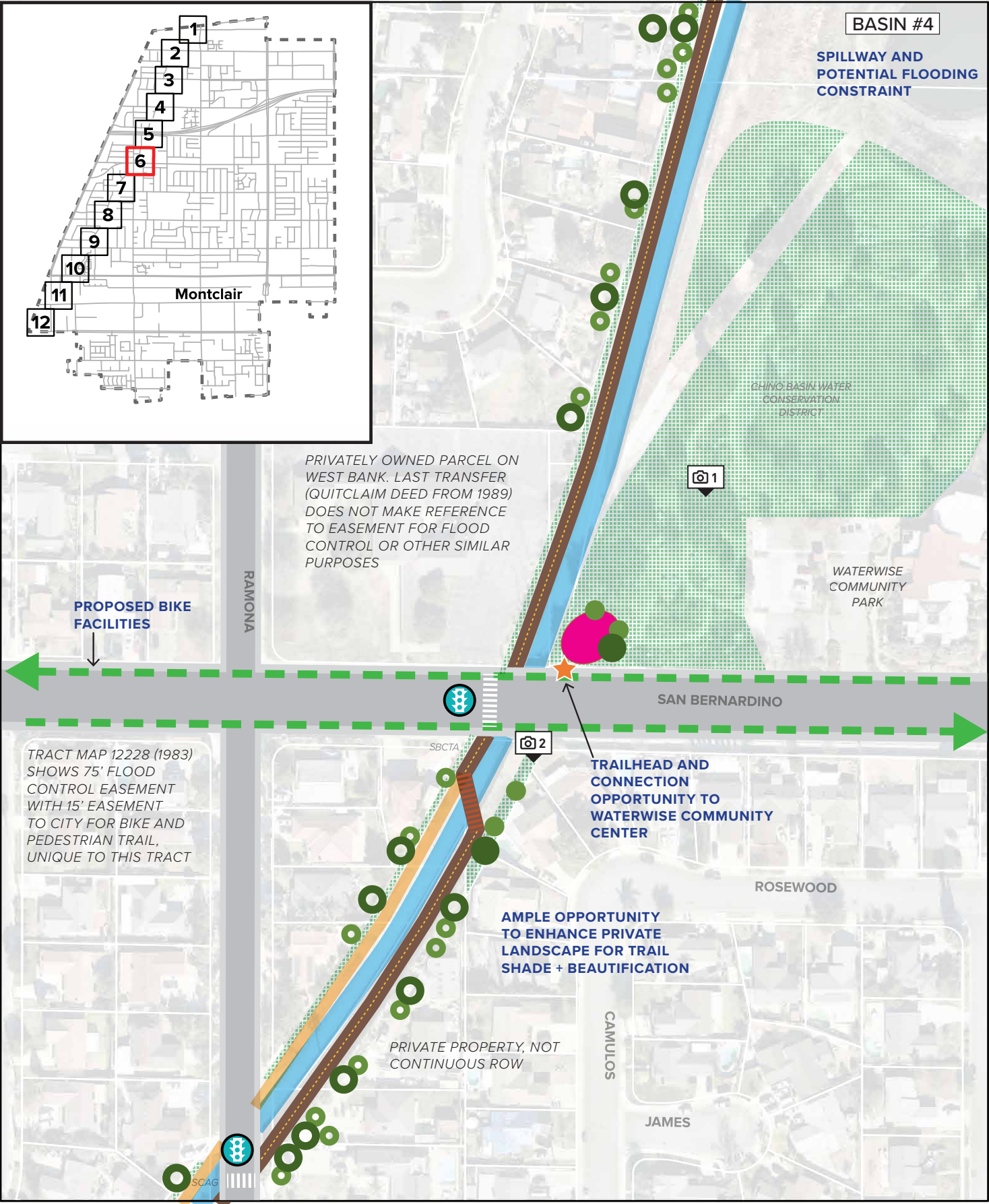
- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes



Alternative Alignment Context Map



SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail
Preferred Alignment: CBWCD Basin #4 to San Bernardino Street

San Antonio Creek Trail Preferred
Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail
- Pre-fab Bridge Crossing

San Antonio Creek Trail
Walking Path

- Decomposed Granite Walking Path

Traffic Control

- Existing Traffic Signal

Proposed Traffic Control

- New Signal or HAWK
- New RRFB
- Crosswalk

Proposed Landscape &
Placemaking

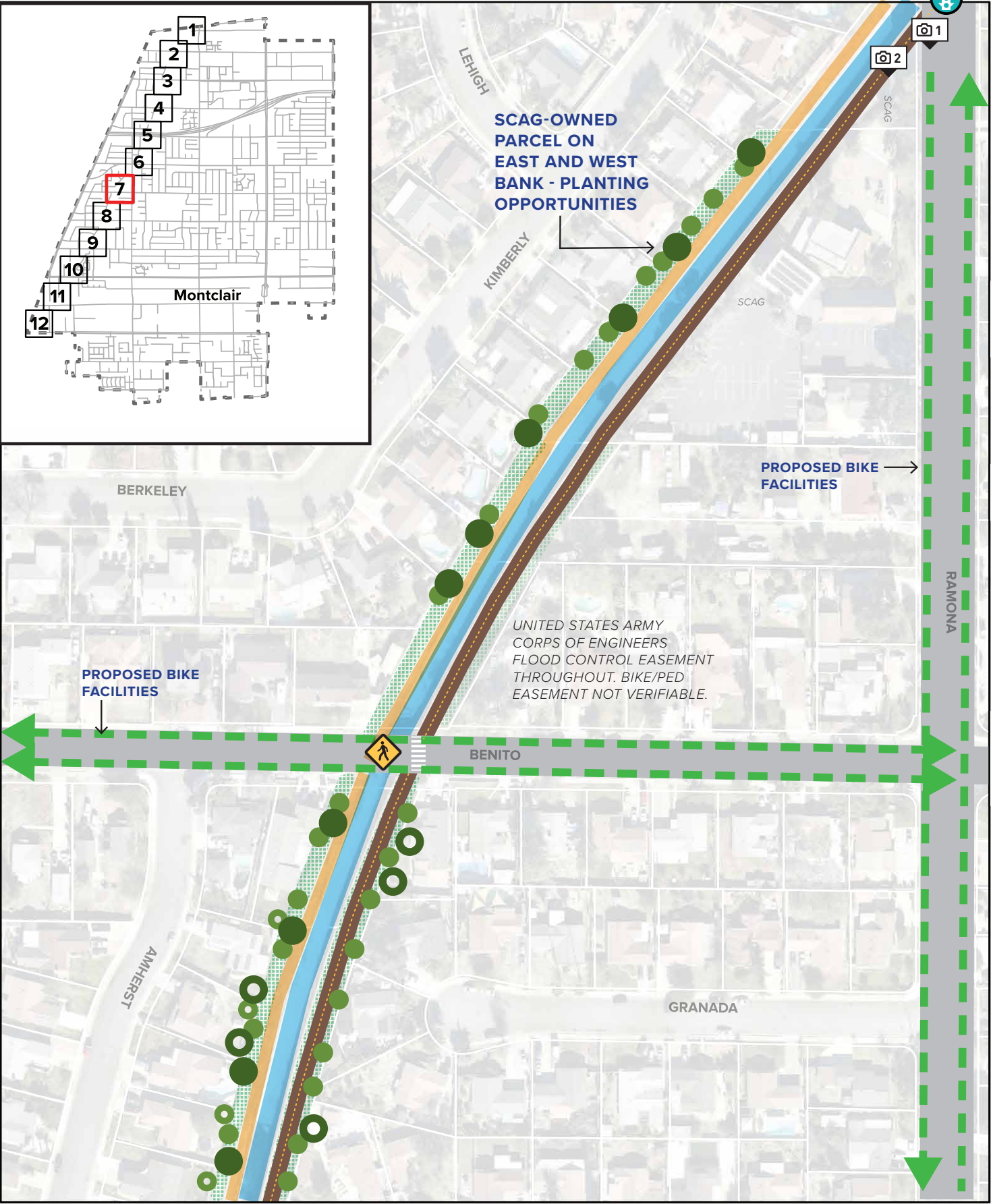
- Trees & Shrubs
- Trees & Shrubs-Private
- Groundcover Planting
- Amenities/Programming
- Gateway/Signage

Features

- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes



SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail
Preferred Alignment: San Bernardino Street to Benito Street

San Antonio Creek Trail Preferred
Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail
- Pre-fab Bridge Crossing

San Antonio Creek Trail
Walking Path

- Decomposed Granite Walking Path

Traffic Control

- Existing Traffic Signal

Proposed Traffic Control

- New Signal or HAWK
- New RRFB
- Crosswalk

Proposed Landscape &
Placemaking

- Trees & Shrubs
- Trees & Shrubs-Private
- Groundcover Planting
- Amenities/Programming
- Gateway/Signage

Features

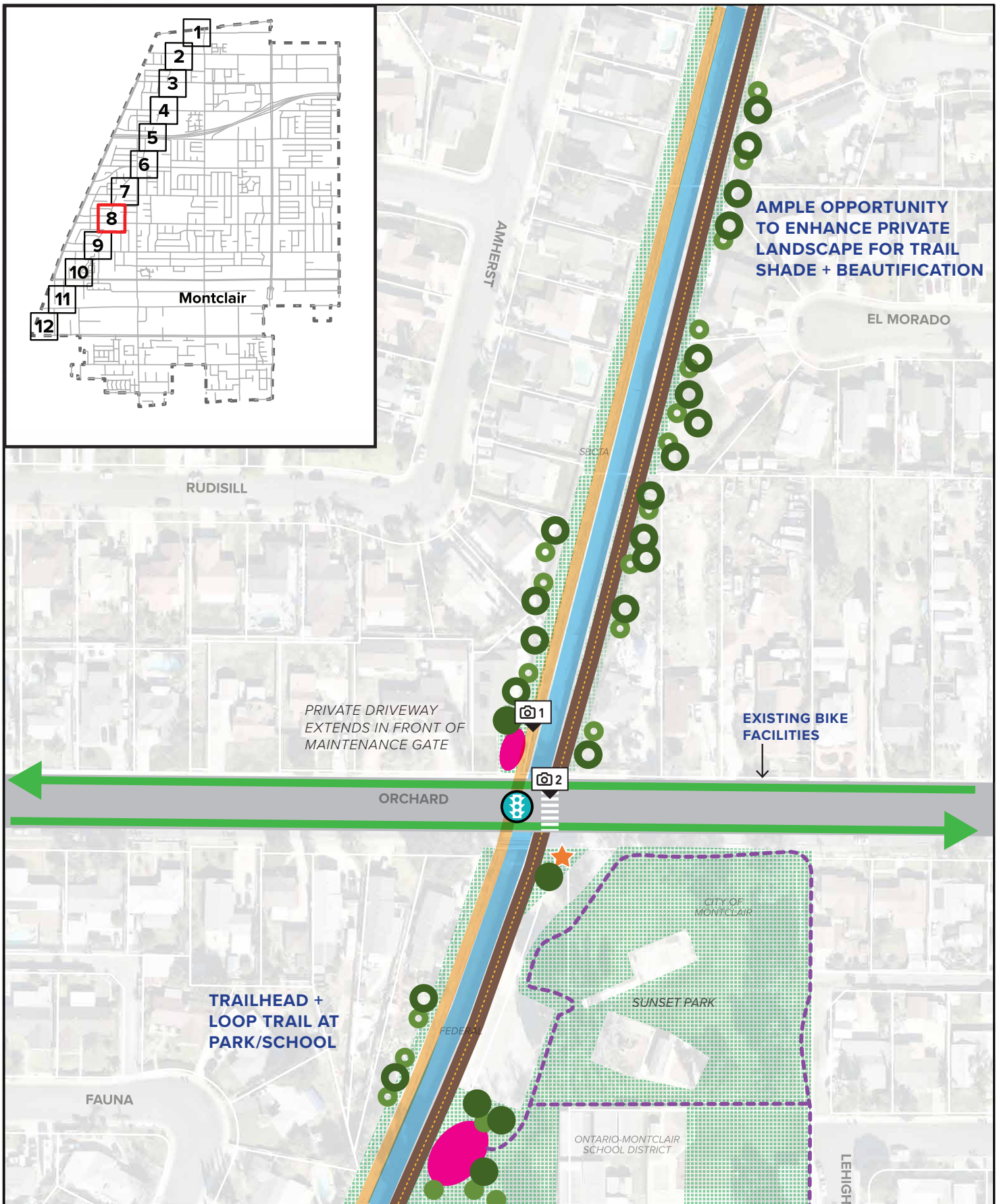
- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes



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SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail
Preferred Alignment: Benito Street to Sunset Park

San Antonio Creek Trail Preferred
Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail
- Pre-fab Bridge Crossing

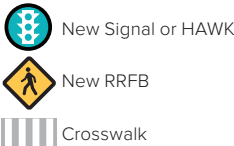
San Antonio Creek Trail
Walking Path

- Decomposed Granite Walking Path
- Loop Trail Opportunity

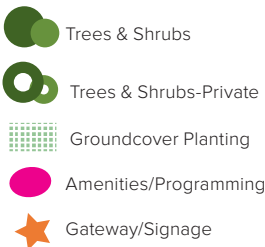
Traffic Control



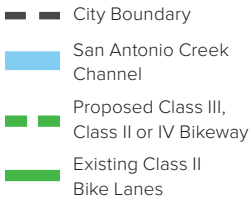
Proposed Traffic Control



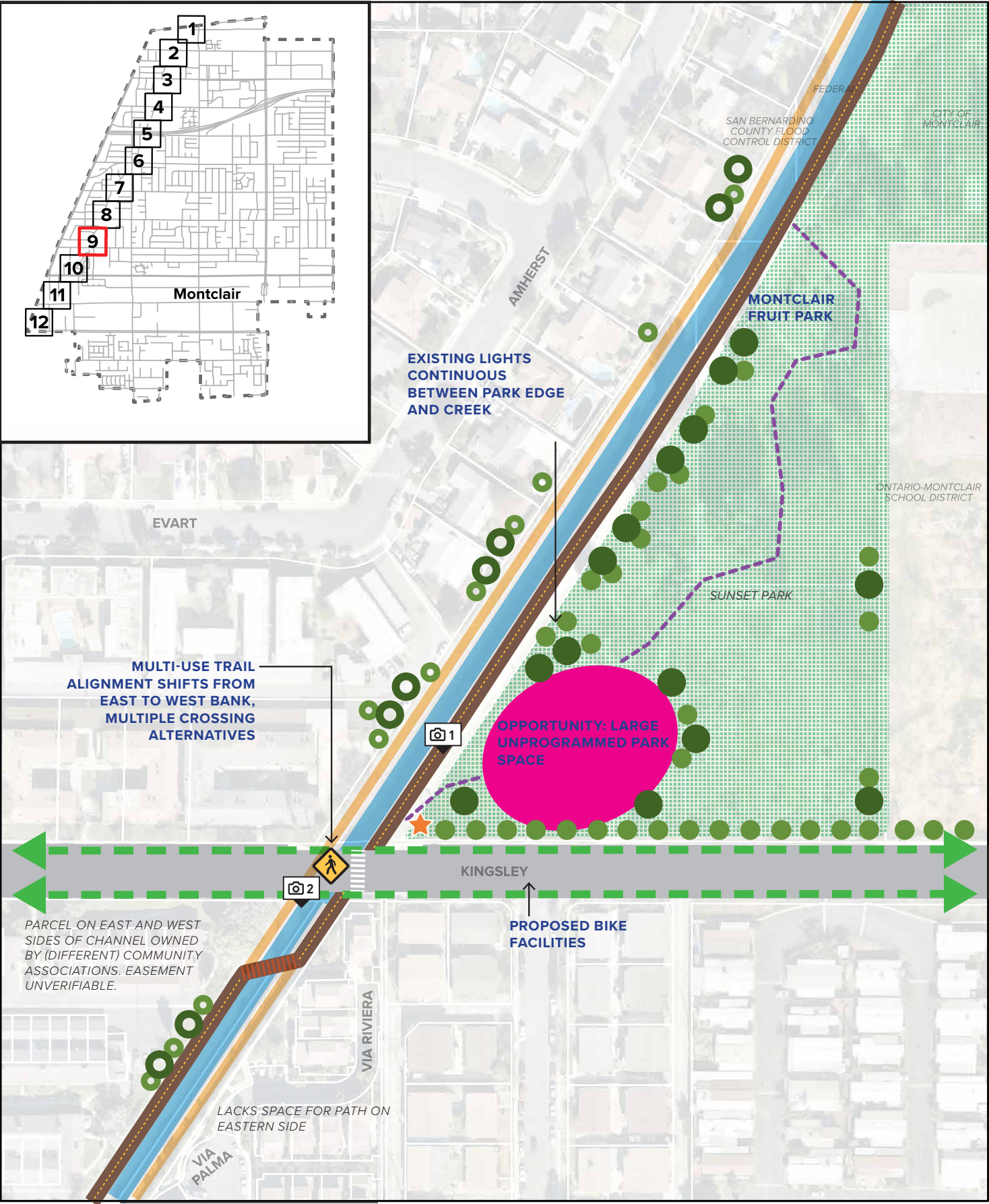
Proposed Landscape &
Placemaking



Features



SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail
Preferred Alignment: Sunset Park to Kingsley Street

San Antonio Creek Trail Preferred
Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail
- Pre-fab Bridge Crossing

San Antonio Creek Trail
Walking Path

- Decomposed Granite Walking Path
- Loop Trail Opportunity

Traffic Control



Proposed Traffic Control



Proposed Landscape &
Placemaking

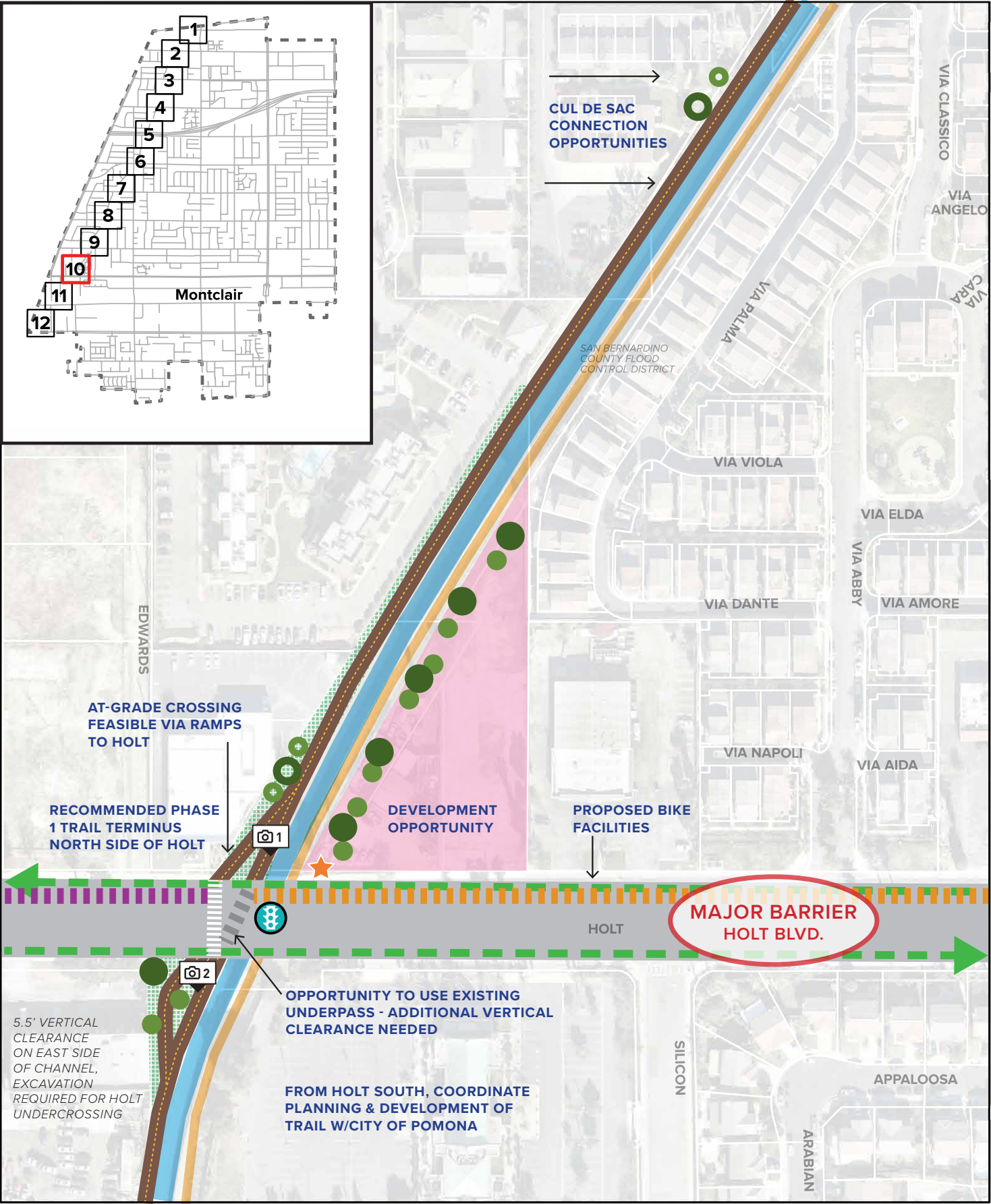
- Trees & Shrubs
- Trees & Shrubs-Private
- Groundcover Planting
- Amenities/Programming
- Gateway/Signage

Features

- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes



SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail

Preferred Alignment: Kingsley Street to Holt Boulevard

San Antonio Creek Trail Preferred Grade-Separated Alignment

Class I Multi-Use Trail
Multi-Use Trail

Class I Multi-Use Trail Alternatives
Undercrossing

San Antonio Creek Trail Preferred At-Grade Trail Alignment

At-Grade Bikeway (A)
At-Grade Bikeway (B)

San Antonio Creek Trail Walking Path

Decomposed Granite Walking Path

Traffic Control



Existing Traffic Signal

Proposed Traffic Control



New Signal or HAWK



New RRFB



Crosswalk

Proposed Landscape & Placemaking



Trees & Shrubs



Trees & Shrubs-Private



Groundcover Planting



Amenities/Programming



Gateway/Signage

Features

City Boundary

San Antonio Creek Channel

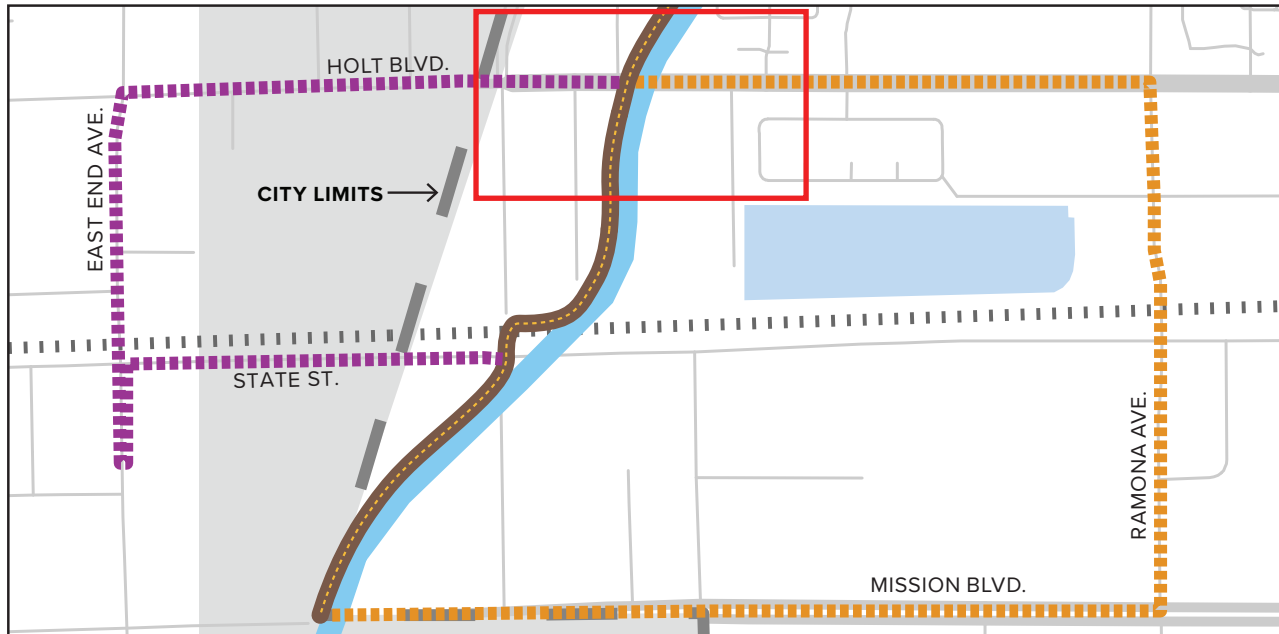
Proposed Class III, Class II or IV Bikeway

Existing Class II Bike Lanes

Development Opportunity



Alternative Alignment Context Map

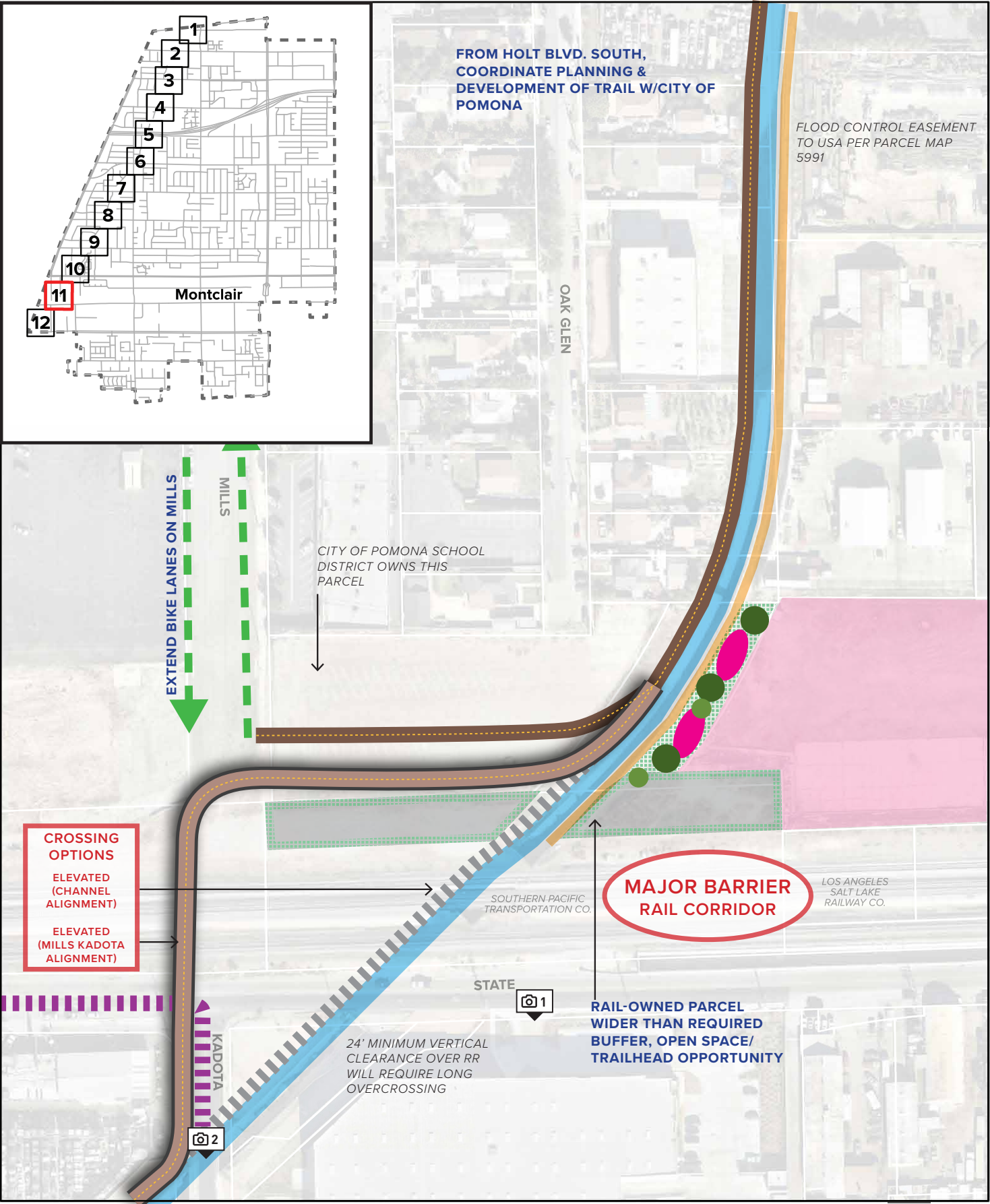


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10

MAP 10 OF 12

SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail
Preferred Alignment: Holt Boulevard to State Street

San Antonio Creek Trail Preferred
Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail
- Multi-Use Overcrossing
- Class I Multi-Use Trail Alternatives
- Overcrossing

San Antonio Creek Trail Preferred
At-Grade Trail Alignment

- At-Grade Bikeway (A)
- At-Grade Bikeway (B)

San Antonio Creek Trail Walking Path

- Decomposed Granite Walking Path

Traffic Control

- Existing Traffic Signal
- Proposed Traffic Control
- New Signal or HAWK
- New RRFB
- Crosswalk

Proposed Landscape &
Placemaking

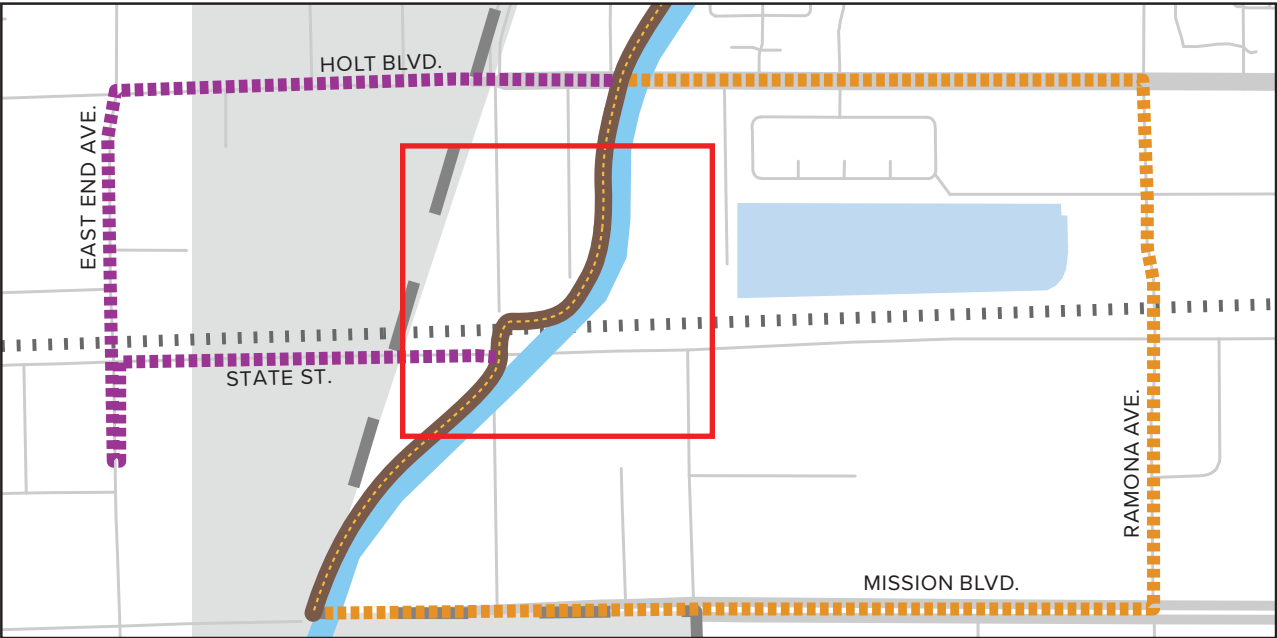
- Trees & Shrubs
- Trees & Shrubs-Private
- Groundcover Planting
- Amenities/Programming
- Gateway/Signage

Features

- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes
- Development Opportunity



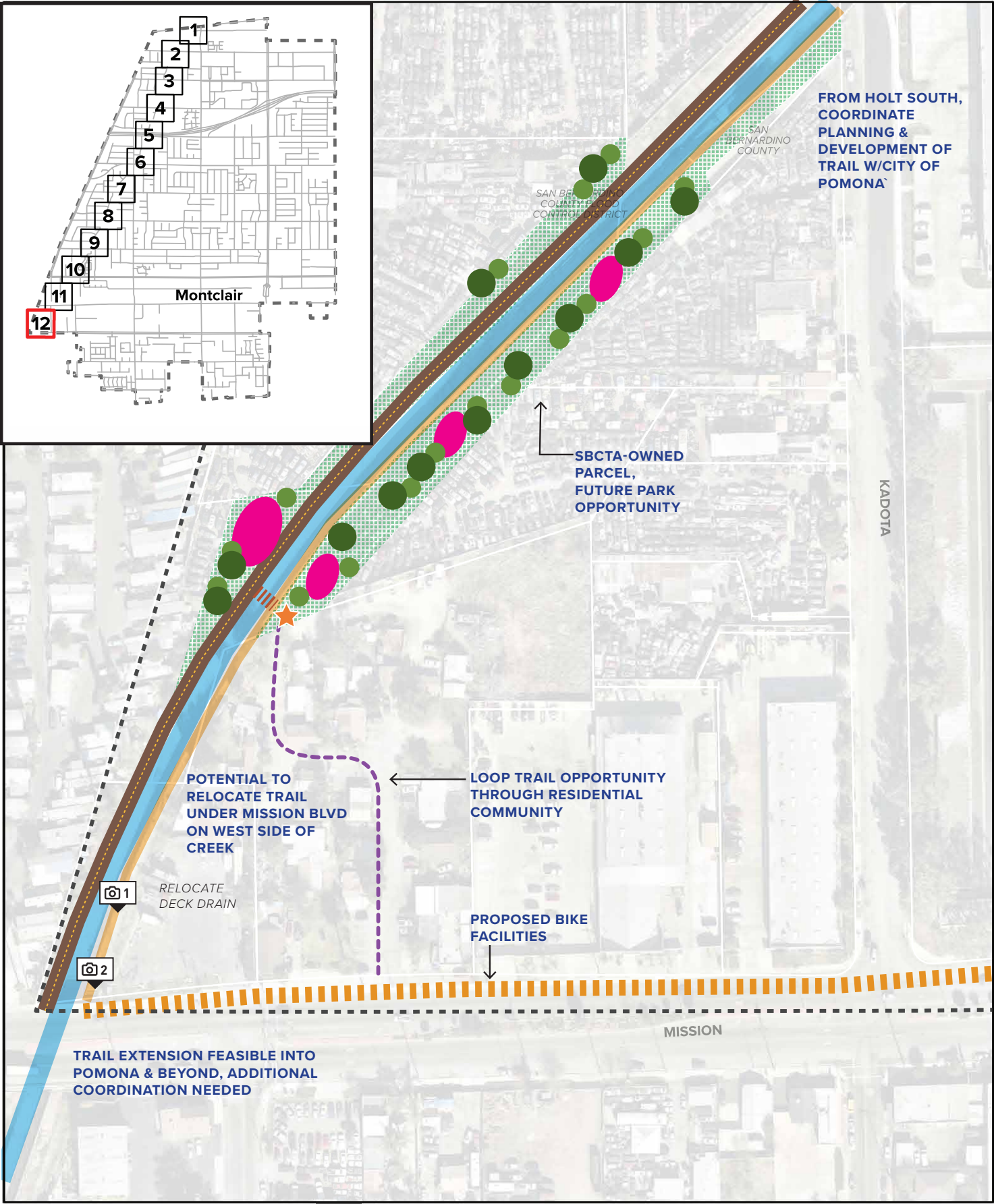
Alternative Alignment Context Map



11

MAP 11 OF 12

SAN ANTONIO CREEK TRAIL



SAN ANTONIO CREEK TRAIL

San Antonio Creek Trail

Preferred Alignment: State Street to Mission Boulevard

San Antonio Creek Trail Preferred Grade-Separated Alignment

- Class I Multi-Use Trail
- Multi-Use Trail

San Antonio Creek Trail Preferred At-Grade Trail Alignment

- At-Grade Bikeway (A)
- At-Grade Bikeway (B)

San Antonio Creek Trail Walking Path

- Decomposed Granite Walking Path
- Loop Trail Opportunity

Traffic Control



Existing Traffic Signal

Proposed Traffic Control



New Signal or HAWK



New RRFB



Crosswalk

Proposed Landscape & Placemaking



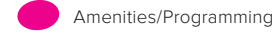
Trees & Shrubs



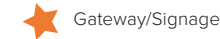
Trees & Shrubs-Private



Groundcover Planting



Amenities/Programming



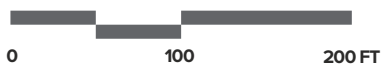
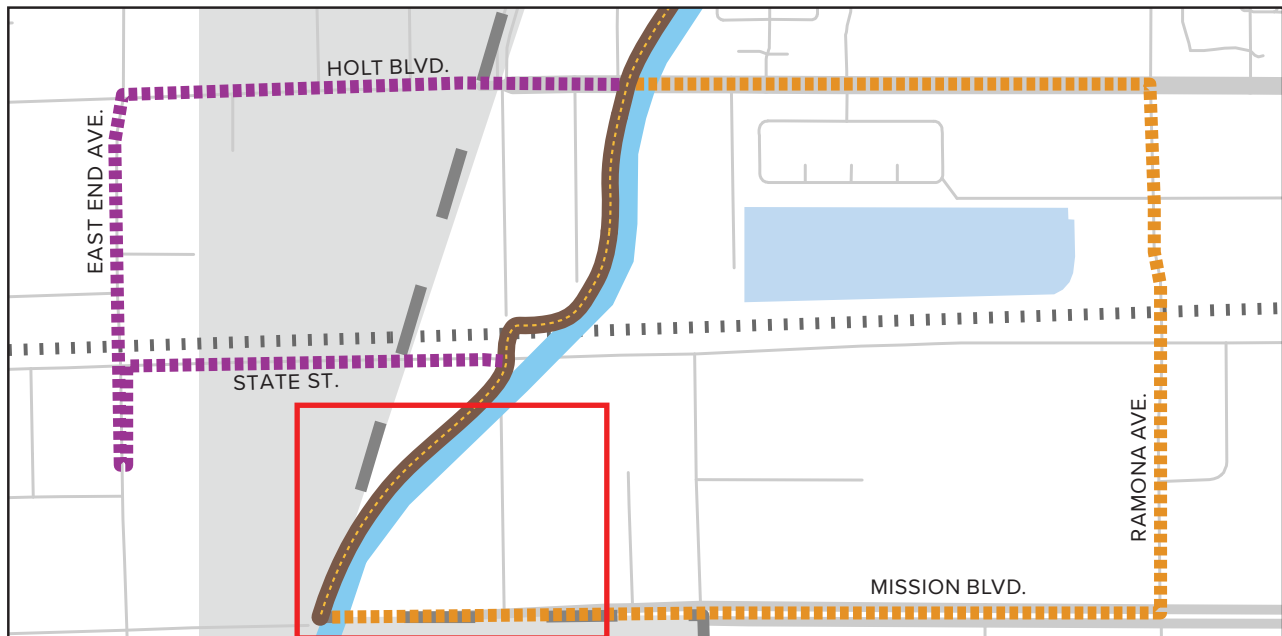
Gateway/Signage

Features

- City Boundary
- San Antonio Creek Channel
- Proposed Class III, Class II or IV Bikeway
- Existing Class II Bike Lanes



Alternative Alignment Context Map



12

MAP 12 OF 12

Crossings

The San Antonio Creek Trail intersects with roads and on-street bike lanes. As the trail approaches these areas, design tools such as mixing zones, optical speed bars, and changes in pavement materials and lighting can warn trail users to slow down and expect a crossing.

AT-GRADE CROSSINGS

There are 11 at-grade crossings along the trail. While the design of each intersection will vary based upon the particular context and right-of-way configuration, specific design treatments should optimize visibility, improve sight lines, and enhance user experience. Below are recommendations to improve the continuity and safety of crossings along the San Antonio Creek Trail corridor:

- » Optical speedbars and standardized mixing zone design at each road crossing approach (see page 83)
- » Improve sight lines
- » Discourage motor vehicle access to the trail
- » Enhanced lighting and high-visibility crosswalks

Physical Barriers

Bollards are physical barriers designed to restrict motor vehicle access to a multi-use trail. Unfortunately, physical barriers are often ineffective at preventing access, and create obstacles to legitimate trail users. Alternative design strategies use signage and landscaping and curb cut design to reduce the likelihood of motor vehicle access.

Crosswalk with Flashing Beacons

Flashing beacons like Rectangular Rapid Flashing Beacons (RRFBs) and High-Intensity Activated Crosswalk (HAWK) beacons improve the visibility of marked crosswalks. Flashing lights and signage alert drivers of the upcoming crosswalk and provide greater visibility for pedestrians.



Typical trail crossing of a local neighborhood street, pictured here at San Jose Street near Moreno Vista Park

Passive Detection + Signal Activation

Passive detection along the trail can help to shorten wait times for trail users when they approach a signalized crossing. Accessible push buttons offer trail users the opportunity to activate a signal to stop traffic thereby facilitating a safer crossing.

High-Visibility Markings

High-visibility pavement markings improve driver awareness of crosswalk areas and the presence of trail users, making crossings safer.

Pedestrian Refuge Island

Pedestrian refuge islands reduce the crossing distance of crosswalks by providing a dedicated space for pedestrians in the center of the roadway.

Curb Extension

Curb extensions can be implemented at intersections to make crossings safer. Curb extensions visually and physically narrow the street, and can give trail users a better chance to see and be seen before crossing.



EXAMPLE APPLICATIONS BASED ON ROAD CLASSIFICATION

The road classification system—local, collector, and arterial roadways—offers a convenient format for organizing potential improvements that take into consideration the differing roadway widths, travel speeds, and vehicular travel utilization that often distinguishes the various road types.

Arterial Intersections

Arterial streets in Montclair are generally wide, four- to six-lane roads with posted speed limits up to 45 MPH. The San Antonio Creek Trail has potential for at-grade crossings at three arterial streets:

- » Arrow Highway
- » Holt Boulevard
- » Mission Boulevard

An intersection between an arterial street and the trail can benefit from an expanded number of design interventions to ensure that vehicles and trail users alike understand how to safely proceed through the intersection.

Potential Arterial improvements include:	<ul style="list-style-type: none"> » Crosswalk beacon » Flashing beacon » Trail signal detection (passive and active) » Pedestrian median island » Curb extension » High visibility crosswalk » Enhanced lighting
--	--



Collector Intersections

Collector streets in Montclair consist of wide two-lane streets with a median or center turn lane, and four-lane roads with posted speed limits up to 40 MPH. The San Antonio Creek Trail has potential for at-grade crossings at two collector streets:

- » San Bernardino Street
- » Orchard Street

The intersection of a collector street with the trail offers the opportunity for an enhanced collection of indicators that assist users in safely navigating through the intersection.

Potential Collector improvements include:	<ul style="list-style-type: none"> » Crosswalk beacon » Flashing beacon » Trail signal detection (passive and active) » Pedestrian median island » Curb extension » High visibility crosswalk » Enhanced lighting
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Local Intersections

Local streets in Montclair are generally small two-lane roads through residential areas of the city. These streets typically have posted speed limits up to 35 MPH. The San Antonio Creek Trail crosses five local streets:

- » Huntington Drive
- » Moreno Street
- » San Jose Street
- » Palo Verde Street
- » Benito Street
- » Kingsley Street

Intersections between the trail and local streets can include design improvements that enhance the comfort and safety for all users.

Potential
Local
improvements
include:

- » Flashing beacons
- » Raised crossing
- » Median dividers
- » Chicanes
- » High visibility crosswalk
- » Enhanced lighting



GRADE SEPARATED CROSSINGS

Grade separated crossings provide trail users with an enhanced safety and convenience experience by physically separating the trail from conflicting roadway traffic.

Overcrossings

Bicycle/pedestrian bridges allow for trail continuity and access areas separated by major barriers:

- » Metrolink rail corridor
- » UPRR corridor

Average slope, elevation change, and wind level all impact user comfort while ascending to connect to the bridge. The average slope of a ramp impacts user comfort significantly more than ramp length. Therefore, providing slopes that are lower than 3% will provide a better user experience for all ages and abilities along the core route of the San Antonio Creek Trail.

Bridges offer an opportunity to create a focal point that enhances the trail experience and supports community identity. Modular design and innovative materials such as lightweight composites should be considered for overcrossings.

METROLINK RAIL CORRIDOR

At the north end of the trail, the Metrolink overpass crossing will require a minimum 22'6" clearance from the top of rail to the bottom of the crossing structure. The maximum slope of access ramps built in new construction is limited to a 1 foot rise in 12 horizontal feet (1:12 or 8.3%). Generally, any path of travel is considered

a "ramp" if its slope is greater than 1 foot rise in 20 feet (1:20 or 5%) of horizontal run. To provide the vertical clearance over the Metrolink rail, while respecting the mild Americans with Disabilities Act (ADA) compliant slopes, the trail will need long approach ramps (300 to 500 feet long on either side of the rail corridor). These ramps can be supported by embankments (sometimes retained by walls) or elevated causeways.

UNION PACIFIC RAILROAD CORRIDOR

Toward the south end of the trail, crossing the UPRR corridor will require the same vertical clearances and standard of practice as Metrolink. While the rail crossing in this location is approximately 200 feet long, there is potential to shorten the total crossing length by ramping up adjacent to the UPRR property, creating a more perpendicular crossing.

Undercrossings

Undercrossings, like overcrossings, allow for a continuous trail experience and are necessary where certain barriers intersect the trail:

- » Metrolink rail corridor
- » I-10 Freeway
- » Holt Boulevard
- » Mission Boulevard

Undercrossings should meet the following design objectives:

- » **User feels invited to pass through.**
Undercrossing should maximize available natural light and supplement with artificial lighting that is



integrated into the overall design. Undercrossing should be well-maintained and clear of trash and other debris.

- » **Undercrossing must avoid hiding places**, and discourage lingering and loitering. Implementing sound or other sensory elements to reduce user anxieties should be considered.
- » **User is protected from harm.** Railing should be integrated into design and should be transparent to maximize visibility.

METROLINK RAIL CORRIDOR

The Metrolink rail corridor at the north end of the trail has potential to implement an undercrossing in place of an overcrossing, but there are caveats that will require further study. Metrolink underpass crossings require a minimum 16'6" clearance from the top of rail to the bottom of the crossing structure as well as ADA compliant slopes. The caveats related to the feasibility of the Metrolink undercrossing are as follows:

- » Construction of the undercrossing would cause disruption in rail operations.
- » There are many unknowns not consistent with Federal Rail Association protocol.
- » The path would be lower in elevation than the channel at certain points, which would cause drainage issues.
- » The construction of the undercrossing would likely require portions of the channel to be reconstructed, causing agency coordination conflicts with the Army Corps of Engineers and San Bernardino County Flood Control District.

I-10 FREEWAY

Along the channel underneath the freeway, there is existing width to fit the proposed trail. While the overhead clearance is enough to allow a pedestrian to walk comfortably, cyclists may be obstructed. The floor of the trail should be lowered through the undercrossing to allow for a minimum overhead clearance of 10'. A 30" water line through



the undercrossing path will need to be relocated to make room for the future trail.

HOLT/MISSION BOULEVARD

Both Holt Boulevard and Mission Boulevard feature similar bridge construction where they cross over the San Antonio Creek Channel. There is potential to build the trail below the existing bridges to allow for continuous travel by trail users.

TRANSITIONS + MIXING ZONES

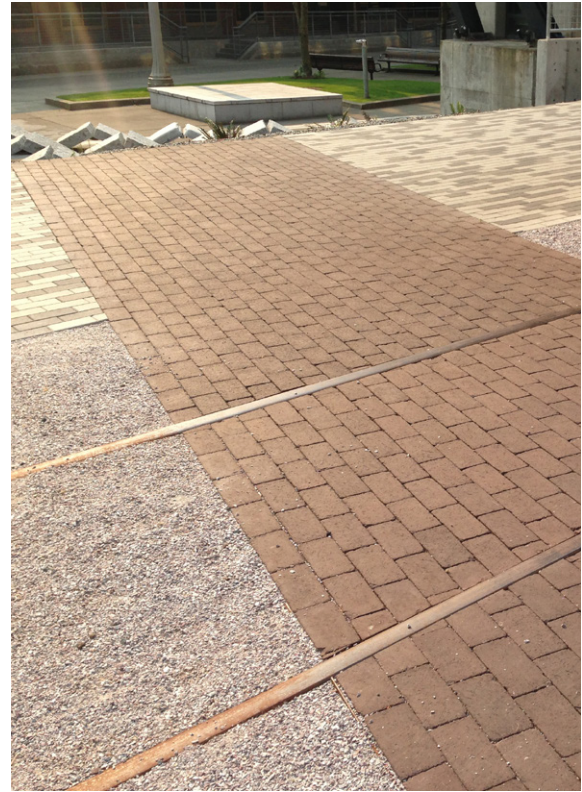
Throughout the corridor, there are locations that demand special attention and consideration. These include locations where the trail transitions to a narrow condition at overcrossings, undercrossings, and road crossings. In these locations, additional design features

may be needed to create a safe and continuous trail.

Mixing Zones

At over/undercrossings where the San Antonio Creek Trail must narrow, it is important to provide trail users with advance warning of the changing conditions and guidance on how to move through the mixing zone. Mixing zones are locations where users will be required to interact cautiously through the space. The transition between the trail and the mixing zone where the advance warning is located may be between 50 and 100 feet long.

The design of mixing zones should clearly communicate yield priority, user positioning, and safe speeds. Interactions between users should be clearly managed



with yield markings and materials to indicate the degree of yielding or mixing expected of trail users.

Optical Speed Bars

Optical speed bars are pavement markings used to increase user awareness of an upcoming change to the physical environment and caution the user to decrease their speed. The speed bars are a series of white or colored rectangular pavement markings, 2 feet wide, placed inside both edges of the trail travel area. The markings are progressively spaced more closely together to visually narrow the lane and increase awareness of an upcoming change.

Materials

Path materials may be used to indicate a change in operating conditions. Crossing areas, mixing zones, and tactile paving have all been used for this purpose. Thermoplastic rumble strips may be used in advance of transition areas or crosswalks. A change in paving materials, such as transitioning from asphalt to brick, can also warn users of an upcoming change. The use of different or contrasting materials can also differentiate use, such as constructing a soft surface pedestrian path and an asphalt bike path.

Pavement markings may include bicycle lane markings, high-visibility crosswalks, and colored concrete crosswalks. Other options include inlays or paving surface changes to signal critical areas.

Trailheads + Amenities

Beautifully designed trailheads create an inviting space to draw in trail users and members of the community. Strategically placed near destinations such as parks, schools, and housing developments, trailheads provide their surrounding neighborhoods with valuable amenities and programming opportunities.

Amenities such as art, seating, wayfinding, and shade make the trail more desirable and accessible to a broader range of users. Programming, trail-oriented development, and mobility hubs help to activate the trail and improve synergy with new technologies and land uses.

TRAILHEADS BY CONTEXT

Trailhead improvements can make the trail more inviting to users by improving connections to the existing network and providing amenities. These improvements may vary depending on land use context. For example, amenities appropriate for a trailhead in a commercial or industrial area may differ from those recommended



for a residential street. However, the design tools available to make improvements are consistent throughout.

Design tools that may be used to improve trailheads include amenities such as new wayfinding signage, seating, lighting, shade, landscaping, and public art. Some

or all of these tools can be combined to create gathering spaces for community members, as well as spaces for events or other activities.



imagine what the trail might look like in Sunset Park.

Trailheads in Residential Areas

Trailheads in residential areas along the San Antonio Creek Trail present small-scale opportunities to serve the surrounding neighborhood. There is potential for residential trailheads at:

- » Orchard Street

Trailheads at Open Space Areas

Opportunities for new or improved access are located in areas with minimally constrained rights-of-way or adjacent to parks. There are several park-adjacent trailhead opportunities along the trail:

- » Moreno Vista Park
- » Waterwise Community Center Park & Gardens
- » Sunset Park

Trailheads at Future Commercial + High-Density Residential Areas

Commercial and high-density residential areas provide great opportunities to engage trail users. In the future, as more development occurs, there will be an increased need for high quality amenities and trailheads throughout the corridor.

- » PE Trail/Huntington Drive
- » Arrow Highway
- » North of the UPRR crossing
- » Between Kadota Avenue and Mission Boulevard

Residential trailhead improvements include:	<ul style="list-style-type: none"> » Increasing the number of neighborhood access points » Removing both visual and physical barriers trailheads » Accommodating different user types and speeds » Providing amenities such as: wayfinding, lighting, and seating
Open space trailhead improvements include:	<ul style="list-style-type: none"> » New passive uses such as: art, community gardens, and seating » New active recreational opportunities such as: fitness equipment, mountain bike pump track, bocce, etc. » Upgrades to existing park landscape » Provide amenities such as: restrooms, water, and shade
Commercial/ high-density trailhead improvements include:	<ul style="list-style-type: none"> » Flex space for temporary programming such as: food trucks, farmers markets, and concerts » Reorient existing businesses and services to the trail (restaurants, bike shops, cafes) » Support future trail oriented development » Provide amenities such as: secure bike parking, tables & chairs, and bike share



COORDINATION WITH ADJACENT LANDOWNERS

New trailhead improvements made at private property must be done in collaboration with adjacent landowners to ensure they best support existing land uses.

Trailheads at Private Developments

When developing trailheads adjacent to or along private development sites, the property owner and tenants will need to be engaged to develop mutually beneficial solutions.

AMENITIES

Public Art

Public art installations and murals contribute to and enhance a community's identity and character, creating a strong "sense of place" branding. Public art

provides visual cues that the facility is "owned" and cared for by the community. Art installations also can encourage play, function as interpretive aids, or serve as a trail's primary attraction. Long-term public art installations such as public pianos or other features can also attract users to the trail. From a Crime Prevention Through Environmental Design (CPTED) perspective, the use of public art in the landscape is an effective "target hardening" strategy. Public art has the potential to deter graffiti vandalism, define path edges, improve the appearance of the community, and discourage unwanted behaviors.

Survey respondents suggested ideas for public art, like:

"Murals that change theme every 3 months."

Interpretive Elements

Interpretive elements can enrich the trail with a “sense of place” and enrich the experience of the trail for locals and visitors to the area. Historical and ecological inspiration is abundant, and a creative educational approach that is tied into site amenities and placemaking will highlight the beauty, ecology, and rich history of the area. Potential themes for exploration include history of San Antonio Creek Channel and neighboring percolation basins, native wildlife and plant communities, and health benefits of active transportation.

Site Furnishings

Site furniture helps to ensure comfort along the trail, providing places for people to pause and rest, and for activity and shared experiences.

SEATING

Public seating contributes to the user experience by making walkways and open space an enjoyable place to rest, congregate, or contemplate. Seating opportunities along the trail provide a short relief and also promote an added enjoyment of the scenic environment. Tables and chairs could be provided at trailheads adjacent to commercial activities.

DRINKING FOUNTAINS

Drinking fountains along the trail enable a greater diversity of users to use the trail for longer durations without risking dehydration. Fountains should be spaced at regular intervals that correspond with

Survey respondents suggested ideas for interpretive sign themes like:

“Creek history, Santa Ana watershed information... the importance of the Chino Groundwater Basin [and] water conservation, including using native and waterwise landscaping plants, cultural history including the Tongva as the first stewards of the area.”

key gateways and landmarks. Locating fountains with multiple heights will help accommodate a range of user ages and physical abilities, as well as pets.

TRASH + RECYCLING

Providing places to dispose of trash and recycling may help to encourage stewardship both of the trail and the open space corridor.

BICYCLE TOOLS + PARKING

Clearly delineated and secure places to lock bicycles should be placed at access points that provide connections to community destinations. Bicycle fix-it stations typically provide tools for minor repairs.

ELECTRIC CHARGING STATIONS

Charging stations for privately owned e-scooters and e-bikes can provide micromobility users with an additional amenity along the trail.



Landscape at Trailheads

Landscape design can be used at trailheads to highlight gateways to the communities and neighborhoods along the San Antonio Creek Trail, and to create a sense of place. Based on the scale and context of the trailhead, the landscape design should be grounded in native and drought-tolerant plants and may range from minimal accent and buffer plantings to larger plantings with sizable canopy trees. The landscape may be used to provide shade, provide green infrastructure, provide local habitat, reduce urban heat island effect, and enhance aesthetics.

Green Stormwater Infrastructure + Shade Trees

Green infrastructure treats and slows runoff from impervious surface areas such as roadways, sidewalks, and buildings. Sustainable stormwater strategies may include bioretention swales, rain gardens,

tree box filters, and pervious pavements (pervious concrete, asphalt, and pavers).

Bioswales are natural landscape elements that manage water runoff from a paved surface, reducing the risks of erosion or flooding of local streams and channels, which can threaten natural habitats. Plants in the swale trap pollutants and silt from entering a river system.

Trees can be used to provide shade, manage runoff, reduce greenhouse gases, aid in carbon sequestration, and increase urban habitat.

Lighting

Trail lighting that is properly designed can improve visibility and natural surveillance, increase trail access and use, provide a sense of safety and security, and extend operating hours during shorter days. In addition, properly lit trails reduce bicycle and pedestrian collisions during night time hours.

Lighting along the San Antonio Creek Trail should be analyzed per segment context with full consideration for safety needs, wildlife habitat, trail function, cost benefit, and maintenance commitments. Street lighting can improve visibility of roadways at crossings and trails. Lighting may also be necessary for day-time use in underpasses.

Lighting can either be wired or solar. Wired lighting is recommended in areas except for those where utility connection is infeasible or when alternative energy sources are desired.

Any decisions about lighting along the trail should be made in coordination with local agencies and community input.

LIGHTING GUIDELINES

- » Lighting should be at pedestrian scale. Placement, spacing, and other finish specifications depend on the fixture and optical needs/conditions.
- » Lighting fixture types include bollard lights, pole mounted lights and integrated lighting (i.e. within architectural or wayfinding elements, planting beds, handrails, etc.).
- » Lighting should minimize energy usage, operating costs, light trespass, light pollution and glare.
- » Consider timers, sensors, and remote-control technology which can enhance the sense of security and conserve energy.
- » Illuminate only the intended targeted areas and use cut-off fixtures that aim lights down instead of above or

behind the fixture, which causes light pollution and trespass.

- » Lighting should avoid trees and be placed outside of canopy edge.
- » Consider Crime Prevention Through Environmental Design (CPTED) principles whenever lighting is introduced, such as color rendering, areas of concealment, and abstracted illumination.
- » Use energy efficient lamps that comply with environmental guidelines, and that provide supreme color rendering, such as white lights.
- » Solar powered lighting should be considered only where utility connection is not feasible or when alternative energy sources are desired. Daylight hours should be analyzed per season prior to specifying solar lighting.
- » Avoid light fixtures at eye level that could cause glare and impair visibility.

Solar vs. Conventional Lighting Fixtures

BENEFITS OF SOLAR LIGHTING

- » No electrical grid connection cost
- » Avoid trenching costs
- » Reduce site disruption and restoration
- » Faster installation
- » No power outages
- » Sustainable light

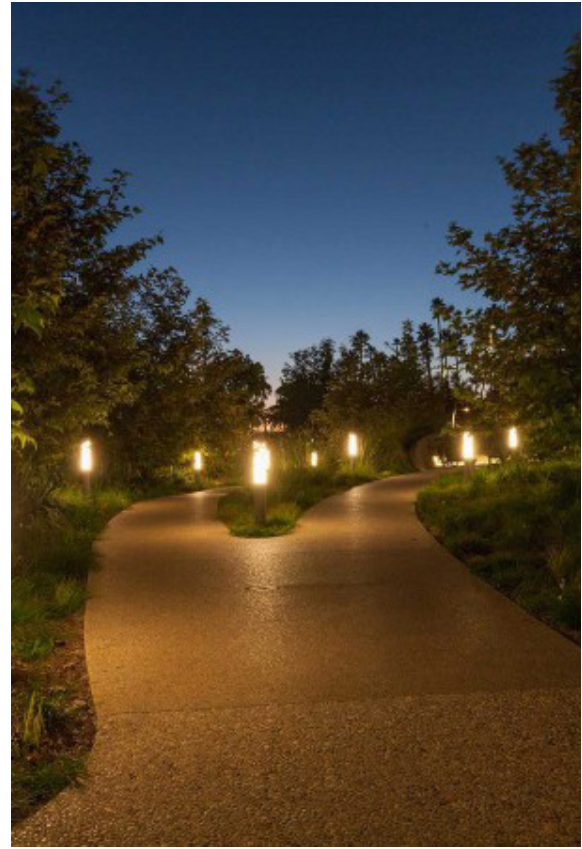


CONSTRAINTS OF SOLAR LIGHTING

- » Higher upfront investment
- » Solar battery lifespan, need periodic replacement
- » Indirect or variable sunlight conditions
- » Limited aesthetic

BENEFITS OF CONVENTIONAL LIGHTING

- » Higher level of dependability for safety lighting
- » Market availability/competitiveness; lower fixture cost
- » Wider range of fixture styles and finishes
- » Flexibility in color temperature
- » Lower maintenance cost



CONSTRAINTS OF CONVENTIONAL LIGHTING

- » Trenching requirement
- » Availability of power source
- » Operating cost

Security

Safety call boxes could be implemented throughout the channel corridor to provide users with a sense of a security and a way to report emergencies along the trail. Conduit could be added along the corridor in conjunction with trail improvements to provide future expansion of closed-circuit television (CCTV), fiber optics, or other utilities. These additional security measures are not accounted for in the cost estimates provided later in this plan.

TRAIL-ORIENTED DEVELOPMENT

Trail-oriented development presents an opportunity for economic development and growth along the corridor. With the trail serving as an active mobility spine for the City and region, adjacent land uses could be designated for new housing and commercial centers that would not significantly increase the number of car trips in the area. Revenue generated by the new development could be invested back into the community or used for trail enhancements, operations, and maintenance.

At the northern end of the City, a parcel adjacent to the trail is slated for development. The developer, Trammel Crow, has constructed multiple housing units in Montclair. The proposed design of the trail adjacent to the property allots space for a future trailhead and allows residents to easily access the trail. Towards the southern end of the City, current industrial land-uses can be converted to allow for lively trail-oriented development in the future.

MOBILITY HUBS

Mobility hubs are a collection of transportation-oriented elements that make it easier to access the shared and active mobility network. The key elements can be mixed and matched to create a mobility hub that is customized for each trailhead. Mobility hubs are places where different modes, such as walking, bicycling, transit, and shared mobility services such as bike share, scooter share, car share, and transportation network companies, come together to provide a suite of transportation options for people.

Some access points may provide an appropriate location for mobility hubs as places where the San Antonio Creek Trail provides a connection to community needs. Providing additional mobility services at strategic trailheads will increase the connectivity and mobility options of trail users, who may combine transit, active modes, and shared mobility options found at the mobility hubs to create seamless transportation connections throughout the City and region.

Mobility hubs support first-last mile solutions by providing multimodal transportation services and activities around transit stations to maximize connectivity and access for transit riders.



E-bike charging station in Basalt (Turpin 2021)

Along the San Antonio Creek Trail, there are strategic locations where mobility hubs would provide important connections to the surrounding network and destinations. By providing a robust set of transportation options at mobility hubs, the unique and complex mobility needs of trail users can be met, increasing the connectivity of the system and the destinations that can be reached by non single occupancy vehicles.

Amenities that may be found at a mobility hub include, but are not limited to:

- » Adequate bus stop and layover zones
- » Transit shelters with real-time arrival information
- » Bicycle and e-bike share stations
- » Scooter-share or other micromobility options
- » Car share facilities

- » Taxi or ride hailing waiting/call areas
- » Wi-fi service
- » Bicycle storage & repair facilities
- » E-bike charging stations

By providing a robust array of options at mobility hubs, a variety of different needs can be accommodated, greatly increasing the number of destinations reachable by transit.

WAYFINDING FOR ACTIVE MOBILITY

The results of the public outreach survey conducted for the project found that 28% of respondents (more than 1 in 4 people!) were not aware of the San Antonio Creek Channel's existence in Montclair. Wayfinding will act as an important element to draw more people to use the San Antonio Creek Trail and participate in active transportation.

Well-crafted wayfinding systems foster a sense of place and encourage people walking and bicycling to go that extra mile and explore new areas.

Places that are arranged intuitively so users can see obvious destinations from a distance, determine pathways, and recognize areas of different character are more legible. The “legibility” of a place describes how easy it is to understand.

Legible wayfinding systems enable individuals to:

- » Easily and successfully find their destination
- » Understand where they are with respect to other key locations
- » Orient themselves in an appropriate direction with little misunderstanding or stress
- » Discover new places and services
- » Feel safe (enhance the sense of safety)

The following six core principles aim to guide the placement and design of a wayfinding system in order to create a clear wayfinding experience and achieve a more navigable trail.



1. Connect Places

Effective wayfinding information should enable local residents as well as visitors to travel between destinations and discover new destinations and services. Wayfinding should help improve local economic well-being by encouraging people to utilize services along the San Antonio Creek Trail. Wayfinding should enhance connections within the region and to neighboring communities and expand the active transportation network.



2. Promote Active Travel

Wayfinding should encourage increased walking and rolling by revealing a clear and attractive system that is easy to understand and navigate. The presence of wayfinding signs should validate walking and rolling as transportation options, as well as reduce fear amongst those interested in making more trips by walking or rolling. Wayfinding should expand the awareness and use of active transportation facilities.



3. Maintain Motion

Walking and rolling require physical effort, and frequent stopping and starting to check directions may lead to frustration and discouragement. Consistent, clear, and visible wayfinding elements allow people walking and rolling to navigate while maintaining their state of motion. To help users maintain motion, wayfinding information also needs to be presented so that it can be quickly read and easily comprehended.



5. Keep Information Simple

For a wayfinding network to be effective, information needs to be presented clearly and logically. It is important to provide information in manageable amounts. Too much information can be difficult to understand; too little and decision-making becomes difficult.

The placement of signs and the information provided at each placement are also critical. Information should be provided in advance of where major changes in direction occur and confirmed when the maneuver is complete.



4. Be Predictable

Effective wayfinding systems are predictable. When information is predictable, patterns emerge, and users of the network will be able to rely on the system to provide information when they expect it. Predictability also helps users to understand new situations quickly, whether it be navigating a new intersection or traveling to a destination for the first time.

Predictability should relate to all aspects of wayfinding placement and design (i.e., sign materials, dimensions, colors, forms, and placement). Similarly, maps should employ consistent symbology, fonts, colors, and style. The system should be designed in accordance with local, state, and federal guidelines.



6. Make it Accessible

Wayfinding signage should be accessible and be designed to be comprehensible by a wide range of users, including people of all ages and ability levels. As wayfinding systems often relate to accessible routes or pedestrian circulation, it is important to consider technical guidance from the Americans with Disabilities Act (ADA) to implement wayfinding signs and other elements that do not impede travel or create unsafe situations for pedestrians, bicyclists, and/or those with disabilities.

WAYFINDING ELEMENTS

The goal of any wayfinding system is to simplify navigation. This section describes the spectrum of elements that may be used in the San Antonio Creek Trail Wayfinding Signage Plan.

Access elements

GATEWAY MONUMENT

Define the entry into a distinct neighborhood, or mark trailheads, access points, and landmarks. Opportunity for community-directed placemaking and integrated artwork.

INFORMATION KIOSK

Provide system map and navigational information; most effective when placed in plazas, rest areas, or other locations where users may congregate, rest, or enter a trail or path.

SECONDARY ACCESS SIGNAGE

Mark entry to trails or paths at locations where limited user traffic may not necessitate as much information as information kiosks.

Fundamental navigational elements

DECISION

Clarify route options where two or more routes converge, or at complex intersections.

CONFIRMATION

Placed after a turn or intersection to reassure path users that they are on the correct route.

TURN

Placed before a turn or intersection to help users stay on the designated path.

Enhanced navigational elements

PAVEMENT MARKING

Reinforce route direction, bicyclist positioning, intermodal cooperation, and/or system branding.

MILE MARKER

Reinforce system branding and orient users along off-street trails or paths.

STREET/TRAIL INTERSECTION

Orient off-street trail users at street crossings and inform vehicular traffic of trail crossing.

FINGERBOARD

Clarify route options where two or more routes converge, or at complex intersections.

SAN ANTONIO CREEK TRAIL



Park to Playa Trail Gateway



CV Link



El Monte Arceo Walk



Santa Clara Trails



o6. Implementation

How Do We Build It?

Taking the San Antonio Creek Trail from concept to built reality will involve many different steps and coordination.

To implement the recommended improvements for the San Antonio Creek Trail, the projects will first need to proceed into design and engineering phases, environmental permitting and review, easement acquisition, and construction. Each of these project phases will have costs associated with their implementation.

This chapter presents planning-level cost estimates for the proposed improvements, operations and maintenance considerations for the trail; summarizes next steps for permitting; and includes potential funding sources for capital improvements, operations, and maintenance.



Cost Estimating

Planning-level cost estimates were developed for this project. Table 03 provides a typical unit cost for the Montclair San Antonio Creek Trail, and the various features associated with each design element.

Each design element has a typical linear foot or linear mile cost (trail configuration and trail amenities) or per unit cost (intersection and access point types) associated with it. The unique combination of design elements and associated unit costs are summed for each project Segment to produce a planning-level cost estimate.

Unit costs were developed by calculating the hard costs and soft costs for each design element. Hard costs include material, equipment, and labor. Soft costs include design contracts, project administration, and construction management. Both hard and soft costs are informed by typical costs for the region and similar project types.

EASEMENT + RIGHT-OF-WAY ACQUISITION STRATEGY

The City will need to ensure it has sufficient rights for the proposed trail. This includes rights to construct the new facility as well as rights for the selected operator to access the facility for maintenance purposes. In some cases, this may include purchasing the necessary property for a portion of the path in fee. However, in most cases, it is assumed that the City will obtain sufficient perpetual easement rights to construct, operate, and maintain the trail facility, but will not purchase the underlying fee interest.

The type of acquisition required from each affected property will be based on the current use, existing ownership or rights, future configuration, and future access or maintenance needs.

Throughout the alignment, the path crosses over or under public infrastructure (such as roads and freeways), utility facilities, and railroads. The City will need to obtain the necessary permissions and permits from these entities in addition to acquiring property or easements from private owners.

Table 03. Unit Costs

Item <i>w/soft costs + contingency @ 20%</i>	Unit	Unit Cost	Assumptions
Trail Corridor			
16' Asphalt Trail (Greenway)	LF	\$262	16'-wide asphalt trail, base materials, and shoulders; 5" thickness
14' Asphalt Trail (Typical)	LF	\$230	14'-wide asphalt trail, base materials, and shoulders; 5" thickness
8' Asphalt Trail (Constrained)	LF	\$148	8'-wide asphalt trail, base materials, and shoulders; 5" thickness
DG Walking Path	LF	\$38	8' wide walking path, base materials, and shoulders. Assumes depth of 4" with headers
Fencing	LF	\$48	Fencing along the channel edge will be replaced where the trail or walking path are located. In some areas, new fencing will also be required between the trail and private property that abuts the trail.
At-Grade Bicycle Facilities			
Two-Way Class IV-striping & posts	LF	\$20	Two-way bike facility on one side of the street, 12' wide with 5' buffer delineated with striping and flex posts every 15 feet
Two-Way Class IV-planted buffer	LF	\$38	Two-way bike facility on one side of the street, 12' wide with 5' planted buffer
One-Way Class IV-striping & posts	LF	\$22	One-way bike facility on either side of the street, 7' wide facility with 3-6' buffer delineated with striping and flex posts spaced every 15 feet.
One-Way Class IV-planted buffer	LF	\$60	One-way bike facility on either side of the street, 7' wide facility with 6' planted buffer
Class II Bikeway	LF	\$12	Assumes 6' wide facility on either side of the street delineated with striping
Convert existing sidewalk to Class I Multi-use path	LF	\$170	Assumes 8-10' wide shared use concrete path + retaining wall to resolve grade change along Monte Vista
Over & Undercrossings			
Pre-fab bike/ped bridge across channel, 26' span	EA	\$400,000	Assumed 26 feet length, 16 feet wide, steel prefabricated bridge, simple foundation, no utility conflicts, no channel wall retrofit, construction costs only for bridge and supporting elements
Pre-fab bike/ped bridge across channel, 36' span	EA	\$480,000	Assumed 36 feet length, 16 feet wide, steel prefabricated bridge, simple foundation, no utility conflicts, no channel wall retrofit, construction costs only for bridge and supporting elements
Pre-fab bike/ped bridge across channel, 54' span	EA	\$630,000	Assumed 54 feet length, 16 feet wide, steel prefabricated bridge with, simple foundation, no utility conflicts, no channel wall retrofit, construction costs only for bridge and supporting elements
Gold Line Crossing option B - Undercrossing	EA	\$18,000,000	Tunnel beneath rail tracks; Assume ADA compliant path with 12' vertical clearance, 7' structure depth + railroad cross section. Span of 140' horizontal clear below tracks. Partial reconstruction of channel wall may be required. Assume no utility conflicts. Approach length of 380' with slopes @ 1:20.
Gold Line Crossing option A - Overcrossing	EA	\$14,145,000	Overcrossing - Assume ADA compliant path. Concrete structures raising to the RR crossing supported on pier/bent cap (50 feet O.C) accommodating meandering path. Concrete deck is not post tensioned. Straight steel structure across railroad. 23' vertical clearance, 4' structural depth. Span of 180-200'. Assume no utility conflicts. Approach length of 540 with slopes @ 1:20.
Undercrossing - Retrofit (I-10)	EA	\$4,500,000	Assume cost of ramping down from street level + cost of excavation to meet minimum vertical clearance of 10' (+5' cut). Assumes existing water pipe is relocated by tunneled below I-10 Freeway and reconnected to existing. Assume no channel wall retrofit and minimum trail width; span of 185'. Approach length of 50'.
Undercrossing - Retrofit (Holt Boulevard)	EA	\$1,200,000	Need to excavate to meet minimum vertical clearance,

Table 04. Unit Costs, continued

Over & Undercrossings, Continued			
UPRR Rail Crossing Option B - Bend	EA	\$18,000,000	Assume two span steel bridge (300 feet) skewed across UPRR with a bend (out of RR ROW). Trail meets ADA compliance. Concrete structures raising to the RR crossing height supported on pier/bent cap (50 feet O.C) accommodating meandering/curvilinear path. Structure will be required to span over Kadota (Not enough room to land). Electrical OH conflict not included. Because of lack of touch down we assume a tower building to bring users back to grade. Note:RR may challenge crossing at a skew. 24' vertical clearance with 4' structural depth. Approach length 560' with slopes @ 1:20.
UPRR Rail Crossing option A - Straight	EA	\$18,000,000	Assume free span steel bridge (160 feet) perpendicular across UPRR. Assume ADA compliant path with concrete structures raising to the RR crossing height supported on pier/bent cap (50 feet O.C) accommodating meandering/curvilinear path. Electrical OH conflict not included. Because of lack of touch down we assume a tower building to bring users back to grade. 24' vertical clearance with 4' structural depth. Approach length 560' with slopes @ 1:20.
Trail Amenities			
Wayfinding	LF	\$4	Typical cost for wayfinding design and implementation along trail, access points. Includes gateway signs & mapboard kiosks. Cost assumes wayfinding applied to the primary path and walking path where applicable.
Lighting	LF	\$52	80' spaced overhead solar light fixtures.
Shade Trees	EA	\$610	40' O.C. average spacing wherever tree planting is feasible, assumed to have closer spacing near amenity areas. Assumes 15 gal. trees typical, with larger trees at key trailheads and nodes. Cost includes and associated soil, site prep, and irrigation.
Private Landscape Enhancements	EA	\$200	Assumes cost per tree and associated understory planting, soil planted on private properties immediately adjacent to the creek.
Green Infrastructure	LF	\$345	10'-wide bioswale or rain garden
Trailhead/Amenity Zone	EA	\$138,000	Assumes a trailhead size of approximately 2,500 - 5,000 ft ² . Includes clearing and grubbing, landscaping, and amenities (e.g. shade structures, seating, fitness equipment)
Linear Park	LF	\$4,000	30'-wide linear park, includes clearing and grubbing, seating, landscaping, hydration station, shade structures, and flexible lawn space. Cost includes any irrigation associated w/planting
Native Plantings	SF	\$15	Assumes clearing & degrubbing, planting in all areas where planting is feasible between trail and private property/adjacent land use.
Irrigation	SF	\$15	Assumes drip irrigation for native planting areas. Does not include tree irrigation.
Emergency Call Boxes	EA	\$15,000	Recommended spacing every 800-900 feet or in segments of the trail that are visually isolated (e.g. away from trailheads, seating areas, roadways)
Intersections			
Local Intersection	EA	\$115,000	Clearing and grubbing to open up sightlines, trail approach improvement to replace bollard with raised median and planting, pavement widening, ADA ramps, and potential for crossing beacon.
Collector Intersection	EA	\$172,500	Clearing and grubbing to open up sightlines, trail approach improvement to replace bollard with raised median and planting, pavement widening, ADA ramps, and potential for crossing beacon.
Arterial Intersection	EA	\$414,000	Clearing and grubbing to open up sightlines, trail approach improvement to replace bollard with raised median and planting, pavement widening, ADA ramps, and existing signal modifications.
Access Points			
New Residential/Open Space Access	EA	\$27,600	Clearing and grubbing, boulder seating, asphalt paving, landscape, irrigation, and decorative fence
New Commercial/Business Park Access	EA	\$132,250	Clearing and grubbing, benches, plaza paving, landscape, irrigation, and bike racks
New School Access	EA	\$103,500	Clearing and grubbing, benches, plaza paving, landscape, irrigation, school garden, and decorative fence and gate

PROJECT PHASING + COSTS

This vision of the San Antonio Creek Trail is a major investment for the City and the region and can be assumed that any improvements made will be high quality and designed to a minimum 20 year lifespan.

The trail will be a truly multibenefit project that will dramatically increase access to recreation and open space, provide cooling opportunities and expand urban habitat, and provide a safe-off road walking and biking route that will benefit Montclair residents and visitors.

Where do we begin?

The trail has to start somewhere. Some segments of the trail will be easier to implement than others, and some portions of the trail, such as over or undercrossings, will require more time and coordination to complete. For this reason, short-term at-grade alternatives were costed as well as the long-term grade-separated treatments to give the City of Montclair a range of implementation options. While the grade-separated alignments are more costly than at-grade alignments, they provide the greatest safety and user experience benefits.



In addition to separating costs into at-grade and grade-separated, the trail corridor has been divided into five segments that break at the location logical construction phases that connect to planned active transportation facilities or key community destinations, or where major barriers occur.

These segments can be designed and constructed independently or together depending on available funds. They are divided into two different Phases, as shown in Figure 20.*

Phase A

Trail Segments 1, 2, 3, and 4 are desired phase A improvements, as they will provide immediate regional connectivity to the PE Trail and to most neighborhoods in the northern part of Montclair. Building these segments will also eliminate mobility barriers for walking and biking created by the I-10 Freeway and Metrolink Rail.

Phase B

Segment 5 of the trail is recommended for phase B improvements as it runs through complex industrial land uses and job centers. Constructing this trail Segment may be phased in coordination with the City of Pomona, whose collaboration will be needed to cross the UPRR corridor.

Cost Estimates By Segment

The tables that follow summarize construction costs by Segment, as shown in Figure 20.

Each Segment includes a subtotal for construction costs, as well as for design costs.

Segments 1, 3, and 5 include both at-grade and grade-separated cost tables.

*See pages 72 and 73 for additional detail.

SAN ANTONIO CREEK TRAIL

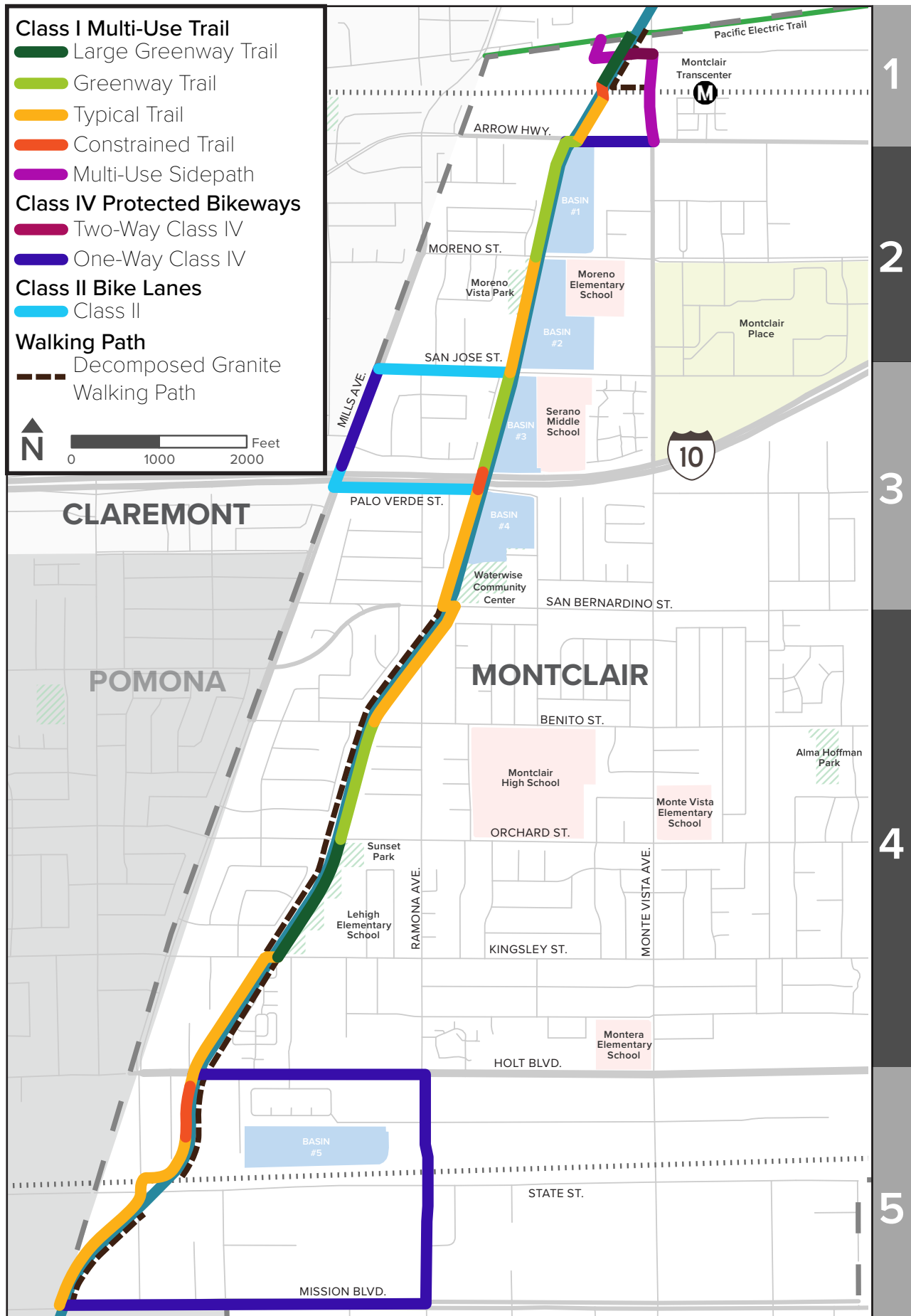


Figure 20. Segments and Phasing

Table 05. Segment 1 Long-Term Costs: Grade Separated

Segment 1: PE Trail to Arrow Highway (with soft costs & contingency)				
Trail Corridor	QTY	Units	Unit cost	Segment Cost
16' Asphalt Trail (Greenway)	715	LF	\$262	\$187,330
14' Asphalt Trail (Typical)	531	LF	\$230	\$122,130
8' Asphalt Trail (Constrained)	0	LF	\$148	\$0
Fencing	1,246	LF	\$48	\$59,808
			Subtotal Trail Corridor	\$369,268
DG Walking Path & Amenities				
DG Walking Path	1,159	LF	\$38	\$44,042
DG Walking Path - Fencing	2,318	LF	\$48	\$111,264
DG Walking Path - Lighting	1,159	LF	\$52	\$60,365
DG Walking Path - Native Planting	5,795	SF	\$15	\$86,925
DG Walking Path - Irrigation	5,795	SF	\$15	\$86,925
DG Walking Path - Shade Trees	28	EA	\$610	\$17,080
DG Walking Path - Easements	1	LS	\$4,891	\$4,891
DG Walking Path - Emergency Call Boxes	1	EA	\$15,000	\$15,000
		Subtotal DG Walking Path & Amenities		\$426,492
Over & Undercrossings				
Pre-fab bike/ped bridge across channel, 26' span	1.00	EA	\$400,000	\$400,000
Gold Line Crossing Option A - Overcrossing	1.00	EA	\$14,145,000	\$14,145,000
Gold Line Crossing Option B - Undercrossing	1.00	EA	\$18,000,000	\$18,000,000
		Subtotal Overcrossing - Option A		\$14,145,000
		Subtotal Undercrossing - Option B		\$18,400,000
Trail Amenities				
Wayfinding	1,246	LF	\$4	\$5,428
Lighting	1,246	LF	\$52	\$64,896
Shade Trees	31	EA	\$610	\$18,910
Green Infrastructure	715	LF	\$345	\$246,675
Trailhead/Amenity Zone	2	EA	\$138,000	\$276,000
Native Plantings	7,150	SF	\$15	\$107,250
Irrigation	7,150	SF	\$15	\$107,250
Emergency Call Boxes	1	EA	\$15,000	\$15,000
		Subtotal Trail Amenities		\$841,408
Intersections				
Local Intersection	1.00	EA	\$115,000	\$115,000
Arterial Intersection	1.00	EA	\$414,000	\$414,000
		Subtotal Trail Amenities		\$529,000
Access Points				
New Commercial/Business Park Access	1.00	EA	\$132,250	\$132,250
		Subtotal Trail Access Points		\$132,250
Easements				
Trail - Option A-Overcrossing	1.00	LS	\$140,540	\$140,540
Trail - Option B-Undercrossing	1.00	LS	\$160,774	\$160,774
Design Cost @ 15% - OPTION A				\$2,487,594
Design Cost @ 15% - OPTION B				\$3,128,879
SEGMENT 1 CONSTRUCTION + DESIGN TOTAL - OVERCROSSING OPTION A				\$19,071,552
SEGMENT 1 CONSTRUCTION + DESIGN TOTAL - UNDERCROSSING OPTION B				\$23,988,071

Long-Term Vision: Grade-Separated Trail

The long-term vision for Segment 1 includes a wide greenway trail segment on the west bank of the San Antonio Creek Channel that originates at the PE Trail and moves south to an overcrossing of the Metrolink Rail line, which transitions the trail alignment over to the east bank where a typical trail width is feasible. A DG Walking path is feasible around the city-owned parcel on the east bank of the channel between the PE Trail and the Metrolink rail line. An undercrossing of

the rail line is also feasible (however is more expensive) and is costed here as an alternative.

Refer to Chapter 5 for applicable cross sections and conceptual plan drawings. If the City secures funding for this overcrossing, there is potential for it to be constructed as part of a future Metro Gold Line extension.

This cost estimate assumes Segment 2 has not been constructed and includes 2 intersection improvements: the Creek at Arrow Highway, as well as the Creek Channel at Richton Street.

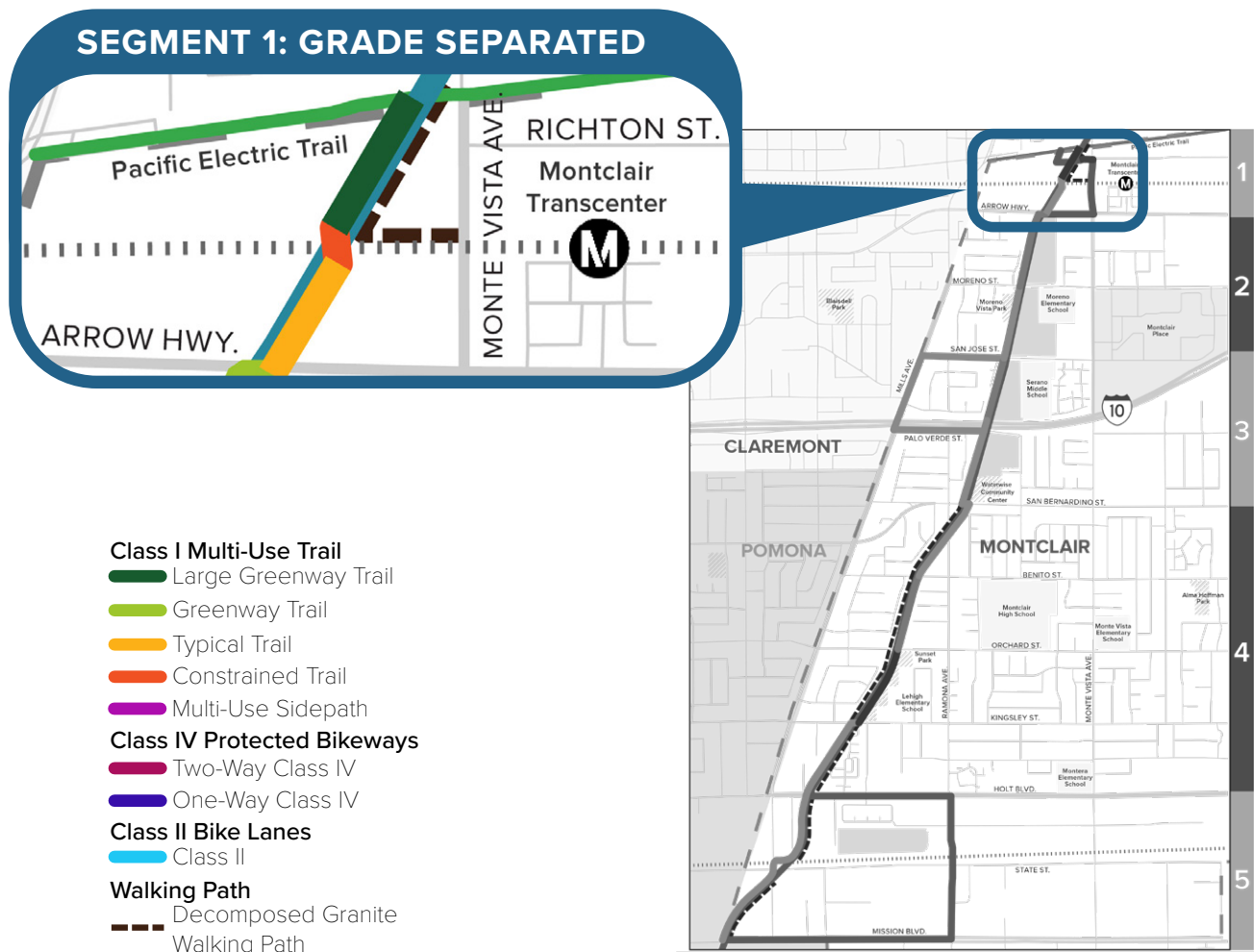


Figure 21. Segment 1: Long-Term Grade Separated Alignment

SAN ANTONIO CREEK TRAIL

Table 06. Segment 1 Short-Term Costs: At-Grade

Segment 1: PE Trail to Arrow Highway (with soft costs & contingency)				
Trail Corridor	QTY	Units	Unit cost	Segment Cost
14' Asphalt Trail (Typical)	405	LF	\$230	\$93,150
			Subtotal Trail Corridor	\$93,150
DG Walking Path & Amenities				
DG Walking Path	1,159	LF	\$38	\$44,042
DG Walking Path - Fencing	2,318	LF	\$48	\$111,264
DG Walking Path - Lighting	1,159	LF	\$52	\$60,365
DG Walking Path - Native Planting	5,795	SF	\$15	\$86,925
DG Walking Path - Irrigation	5,795	SF	\$15	\$86,925
DG Walking Path - Shade Trees	28	EA	\$610	\$17,080
DG Walking Path - Easements	1	LS	\$4,891	\$4,891
DG Walking Path - Emergency Call Boxes	1	EA	\$15,000	\$15,000
			Subtotal DG Walking Path & Amenities	\$426,492
At-Grade Bicycle Facilities				
Two-Way Class IV-planted buffer	285	LF	\$38	\$10,795
One-Way Class IV-planted buffer	1,615	LF	\$60	\$96,900
Convert existing sidewalk to Class I Multi-use path	950	LF	\$170	\$162,000
			Subtotal At-Grade Bicycle Facilities	\$269,695
Trail Amenities				
Wayfinding	1,355	LF	\$4	\$5,904
Lighting	1,355	LF	\$52	\$70,594
Shade Trees	51	EA	\$610	\$30,805
Trailhead/Amenity Zone	1	EA	\$138,000	\$138,000
			Subtotal Trail Amenities	\$245,303
Intersections				
Local Intersection	1.00	EA	\$115,000	\$115,000
Arterial Intersection	2.00	EA	\$414,000	\$828,000
			Subtotal Trail Amenities	\$943,000
Easements				
At-Grade ROW	1.00	LS	\$198,168	\$198,168
Design Cost @ 15%				\$326,371
SEGMENT 1 AT-GRADE CONSTRUCTION + DESIGN TOTAL				\$2,502,179

SEGMENT 1: PACIFIC ELECTRIC TRAIL TO ARROW HIGHWAY

Short-Term Vision, At-Grade Trail

The short-term vision for Segment 1 includes a typical trail segment on the west bank of the San Antonio Creek Channel that originates at the PE Trail and crosses Richton Street to parallel that road. At the Richton Street bridge, the trail transitions to a one-way Class IV bikeway. At Monte Vista Avenue, the trail turns south along Monte Vista Avenue, using a widened existing sidewalk. At Monte Vista Avenue and Arrow Highway, a two-way Class IV bikeway transitions riders back to the creek.

A DG Walking path is feasible around the city-owned parcel on the east bank of the channel between the PE Trail and the Metrolink Rail line. Refer to Chapter 5 for applicable cross sections and conceptual plan drawings.

This cost estimate assumes Segment 2 has not been constructed and includes 3 intersection improvements: the Creek at Richton Street, Arrow Highway and Monte Vista, as well as the Creek at Arrow Highway.

See pages 52 and 55 for additional detail.

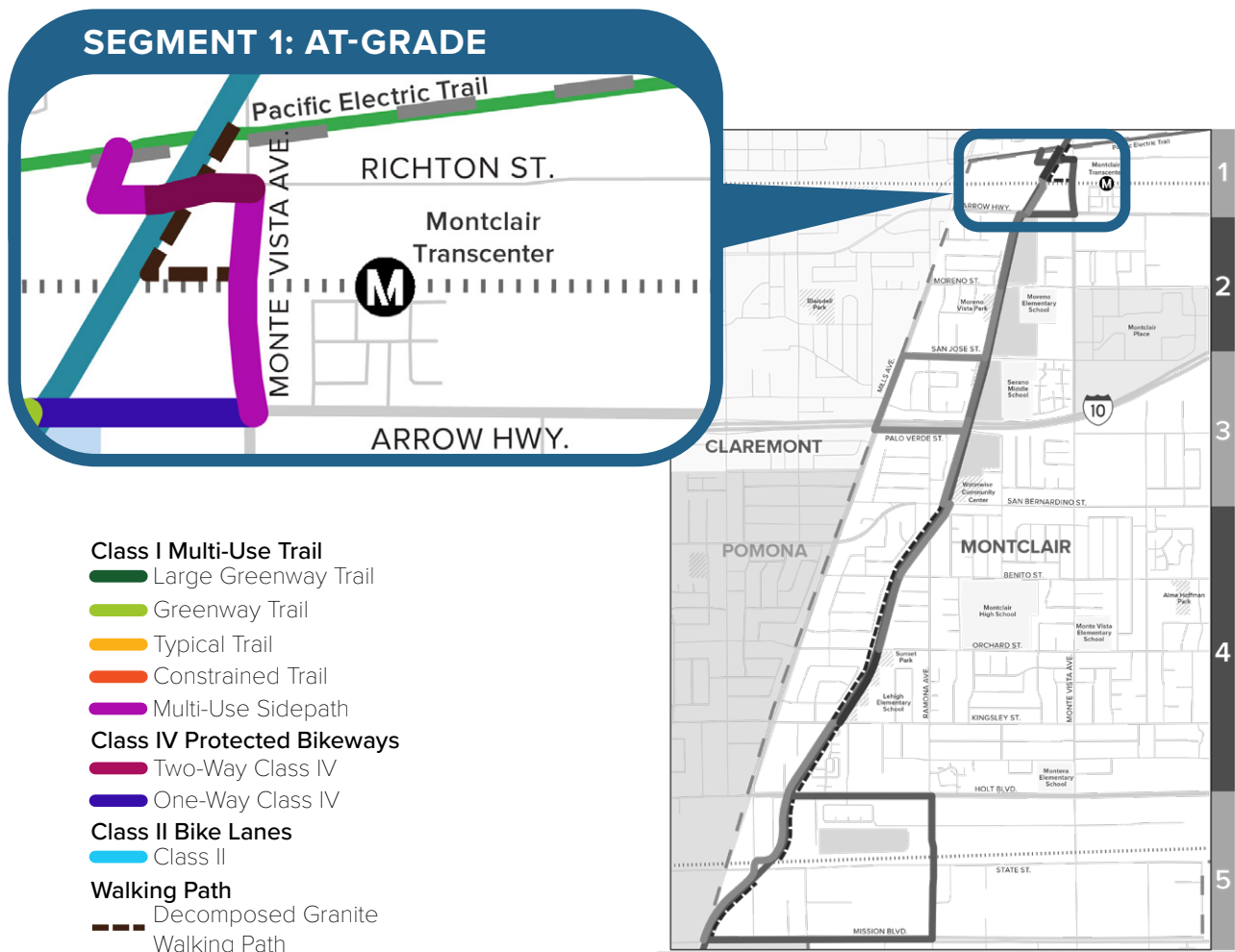


Figure 22. Segment 1: Short-Term At-Grade Alignment

Table 07. Segment 2 Costs

Segment 2: Arrow Highway to San Jose Street (with soft costs & contingency)				
Trail Corridor	QTY	Units	Unit cost	Segment Cost
16' Asphalt Trail (Greenway)	1,367	LF	\$262	\$358,154
14' Asphalt Trail (Typical)	1,363	LF	\$230	\$313,490
Fencing	5,460	LF	\$48	\$262,080
		Subtotal Trail Corridor		\$933,724
Trail Amenities				
Wayfinding	2,730	LF	\$4	\$11,892
Lighting	2,730	LF	\$52	\$142,188
Shade Trees	68	EA	\$610	\$41,480
Trailhead/Amenity Zone	2	EA	\$138,000	\$276,000
Native Plantings	13,670	SF	\$15	\$205,050
Irrigation	13,670	SF	\$15	\$205,050
Emergency Call Boxes	3	EA	\$15,000	\$45,000
		Subtotal Trail Amenities		\$926,660
Intersections				
Local Intersection	2.0	EA	\$115,000	\$230,000
		Subtotal Intersections		\$230,000
Access Points				
New Residential/Open Space Access	2.0	EA	\$27,600	\$55,200
		Subtotal Access Points		\$55,200
Easements				
Trail	1.00	LS	\$180,016	\$180,016
			Subtotal ROW	\$180,016
Design Cost @ 15%				\$348,840
SEGMENT 2 DESIGN + CONSTRUCTION TOTAL				\$2,674,439

The entirety of Segment 2 is feasible at-grade and is located on the west bank of the channel. Refer to Chapter 5 for applicable cross sections and conceptual plan drawings.

improvements to Arrow Highway at the Creek). Segment 2's cost estimate includes 2 intersection improvements: the Creek at Moreno Street and the Creek at San Jose Street.

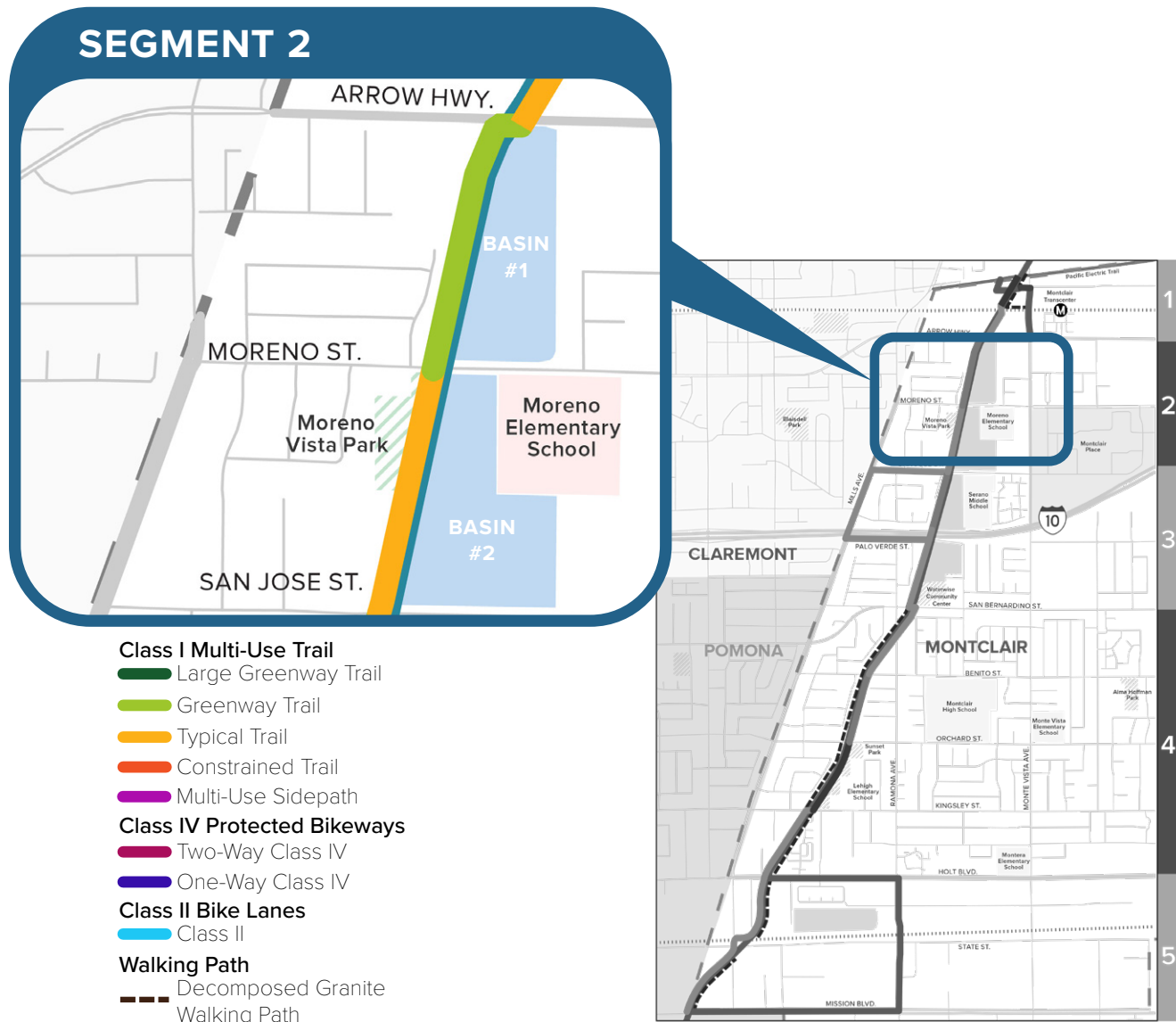


Figure 23. Segment 2 Alignment

SAN ANTONIO CREEK TRAIL

Table 08. Segment 3 Long-Term Costs: Grade Separated

Segment 3: San Jose St. to San Bernardino St. Grade Separated (with soft costs & contingency)				
Trail Corridor	QTY	Units	Unit cost	Segment Cost
16' Asphalt Trail (Greenway)	1,155	LF	\$262	\$302,610
14' Asphalt Trail (Typical)	1,335	LF	\$230	\$307,050
Fencing	4,980	LF	\$48	\$239,040
		Subtotal Trail Corridor		\$848,700
Over & Undercrossings				
Pre-fab bike/ped bridge across channel, 36' span	1.00	EA	\$480,000	\$480,000
Pre-fab bike/ped bridge across channel, 54' span	1.00	EA	\$630,000	\$630,000
Undercrossing - Retrofit (I-10)	1.00	EA	\$4,500,000	\$4,500,000
		Subtotal Over & Undercrossings		\$5,610,000
Trail Amenities				
Wayfinding	2,490	LF	\$4	\$10,847
Lighting	2,490	LF	\$52	\$129,688
Shade Trees	63	EA	\$610	\$38,430
Private Landscape Enhancements	25	EA	\$200	\$5,000
Trailhead/Amenity Zone	1	EA	\$138,000	\$138,000
Native Plantings	11,550	SF	\$15	\$173,250
Irrigation	11,550	SF	\$15	\$173,250
Emergency Call Boxes	2	EA	\$15,000	\$30,000
		Subtotal Trail Amenities		\$698,464
Intersections				
Local Intersection	1.00	EA	\$115,000	\$115,000
Collector Intersection	1.00	EA	\$172,500	\$172,500
		Subtotal Intersections		\$287,500
Access Points				
New Residential/Open Space Access	1.0	EA	\$27,600	\$27,600
		Subtotal Access Points		\$27,600
Easements				
Trail	1.00	LS	\$136,571	\$136,571
Design Cost @ 15%				\$1,141,325
SEGMENT 3 GRADE-SEPARATED CONSTRUCTION + DESIGN TOTAL				\$8,750,160

SEGMENT 3: SAN JOSE STREET TO SAN BERNARDINO STREET

Long-Term Vision, Grade-Separated Trail

The long-term vision for Segment 3 includes a typical greenway trail on the west bank of the channel between San Jose Street and the I-10 Freeway, an undercrossing of the I-10 Freeway, and a typical trail segment between Palo Verde Street and San Bernardino Street.

Refer to Chapter 5 for applicable cross sections and conceptual plan drawings.

This cost estimate assumes Segment 2 has been constructed (including intersection improvements to San Jose Street and the Creek). Segment 3's cost estimate includes 2 intersection improvements: the Creek at Palo Verde Street and the Creek at San Bernardino Street.

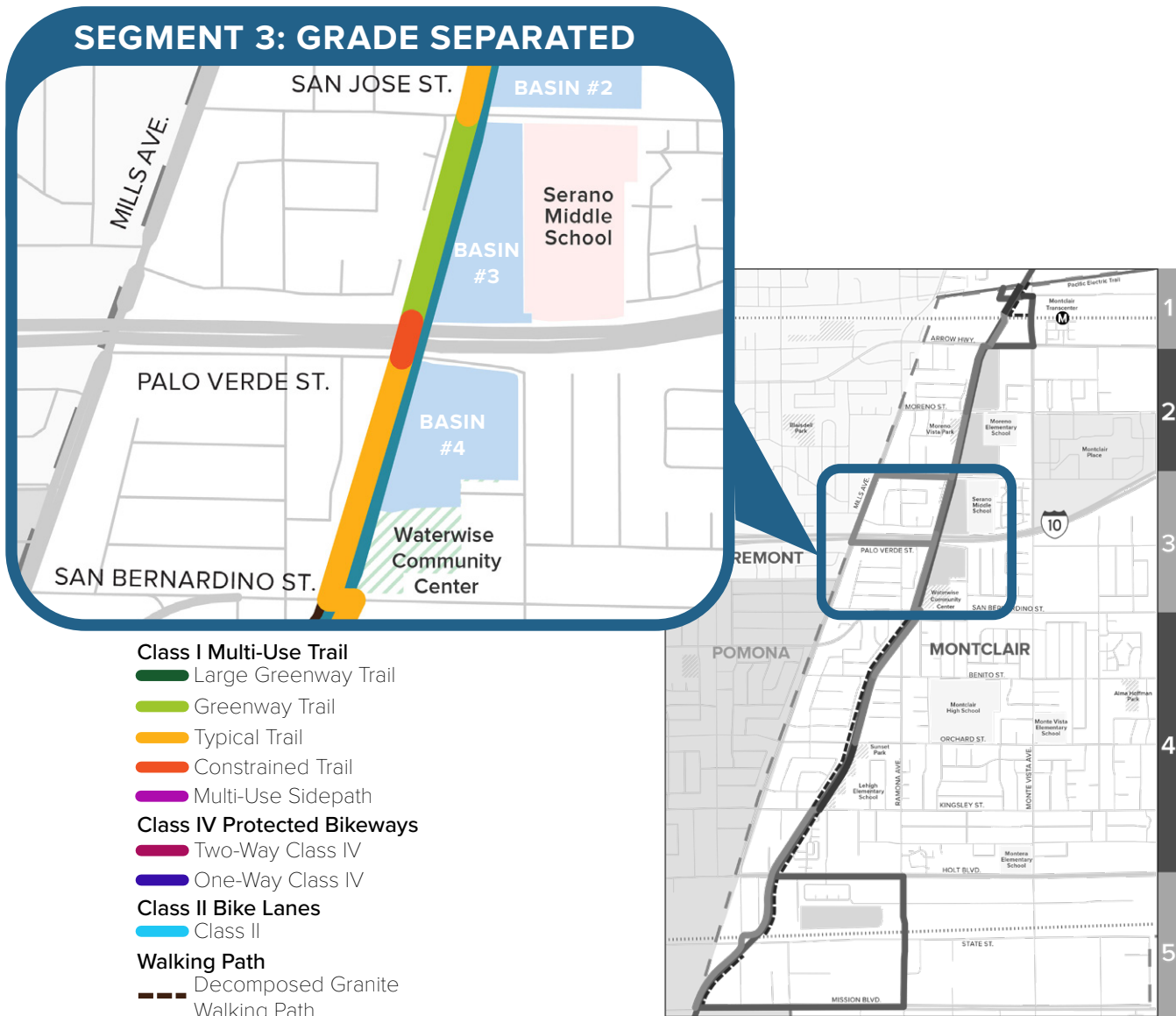


Figure 24. Segment 3: Long-Term, Grade-Separated Alignment

Table 09. Segment 3 Short-Term Costs: At-Grade

Segment 3: San Jose St. to San Bernardino St. Grade Separated (with soft costs & contingency)				
Trail Corridor	QTY	Units	Unit cost	Segment Cost
14' Asphalt Trail (Typical)	1,335	LF	\$230	\$307,050
Fencing	2,670	LF	\$48	\$128,160
			Subtotal Trail Corridor	\$435,210
DG Walking Path & Amenities				
DG Walking Path	1,155	LF	\$38	\$43,890
DG Walking Path - Fencing	2,310	LF	\$48	\$110,880
DG Walking Path - Lighting	1,155	LF	\$52	\$60,156
DG Walking Path - Native Planting	5,775	SF	\$15	\$86,625
DG Walking Path - Irrigation	5,775	SF	\$15	\$86,925
DG Walking Path - Shade Trees	28	EA	\$610	\$17,080
DG Walking Path - Emergency Call Boxes	1	EA	\$15,000	\$15,000
			Subtotal DG Walking Path & Amenities	\$420,556
At-Grade Bicycle Facilities				
One-Way Class IV-striping & posts	2,284	LF	\$22	\$50,248
Class II Bikeway	3,425	LF	\$12	\$41,100
			Subtotal At-Grade Bicycle Facilities	\$511,904
Trail Amenities				
Wayfinding	1,335	LF	\$4	\$5,815
Lighting	1,335	LF	\$52	\$69,531
Shade Trees	34	EA	\$610	\$20,740
Private Landscape Enhancements	25	EA	\$200	\$5,000
Trailhead/Amenity Zone	1	EA	\$138,000	\$138,000
Emergency Call Boxes	1	EA	\$15,000	\$15,000
			Subtotal Trail Amenities	\$254,087
Intersections				
Local Intersection	1.00	EA	\$115,000	\$115,000
Collector Intersection	1.00	EA	\$172,500	\$172,500
			Subtotal Intersections	\$287,500
Access Points				
New Residential/Open Space Access	1.0	EA	\$27,600	\$27,600
			Subtotal Access Points	\$27,600
Easements				
Trail	1.00	LS	\$136,571	\$136,571
Design Cost @ 15%				\$311,014
SEGMENT 3 AT-GRADE CONSTRUCTION + DESIGN TOTAL				\$2,384,442

SEGMENT 3: SAN JOSE STREET TO SAN BERNARDINO STREET, SHORT-TERM VISION, AT-GRADE

The short-term vision for Segment 3 uses on-street bike facilities to navigate around the I-10 Freeway. Class II Bikeways are feasible on San Jose Street and Palo Verde Street. The existing Class II Bikeways on Mills Avenue can be upgraded to Class IV Separated Bikeways, with the exception of the existing underpass on Mills where

the roadway width narrows back to the existing Class II facility. Refer to Chapter 5 for applicable cross sections and conceptual plan drawings.

This cost estimate assumes Segment 2 has been constructed (including intersection improvements to San Jose Street and the Creek). Segment 3's cost estimate includes 3 intersection improvements: the Creek at Mills Avenue and San Jose Street, Mills Avenue and Palo Verde Street, and Palo Verde Street at the Creek.

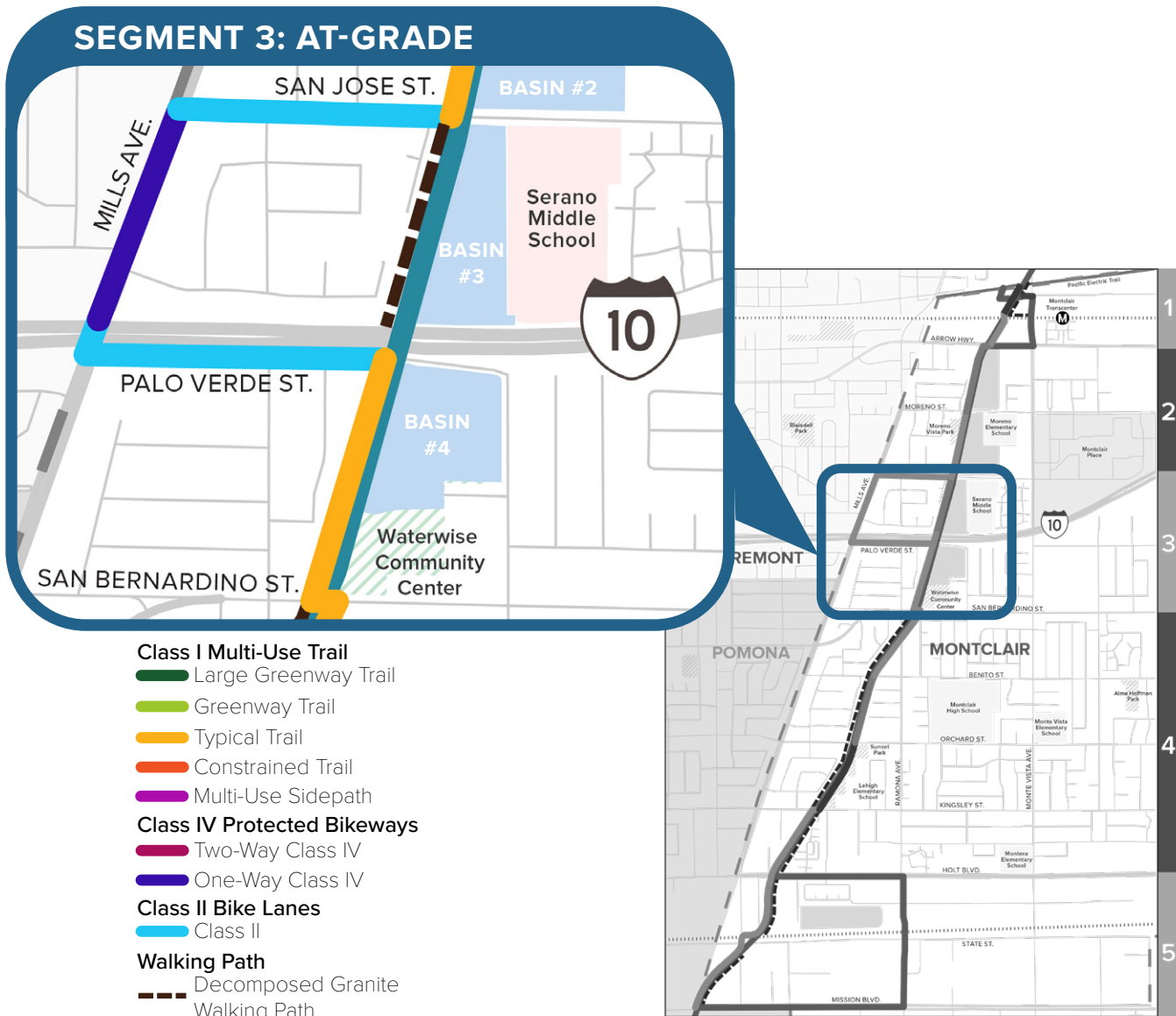
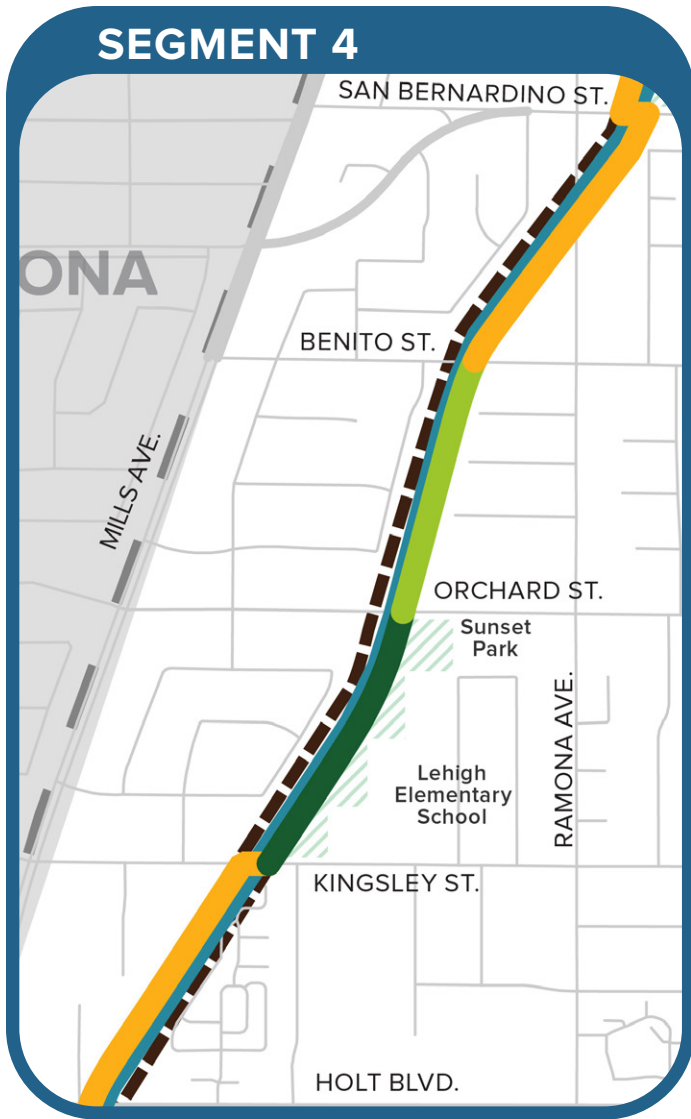


Figure 25. Segment 3: Short-Term, At-Grade Alignment

Table 10. Segment 4 Costs

Segment 4: San Bernardino Street to Holt Boulevard (with soft costs & contingency)				
Trail Corridor	QTY	Units	Unit cost	Segment Cost
16' Asphalt Trail (Greenway)	2,892	LF	\$262	\$757,704
14' Asphalt Trail (Typical)	3,146	LF	\$230	\$723,580
Fencing	12,076	LF	\$48	\$579,648
Fencing	2.29	MI	\$250,000	\$571,780
		Subtotal Trail Corridor		\$2,060,932
DG Walking Path & Amenities				
DG Walking Path	5,746	LF	\$38	\$218,348
DG Walking Path - Fencing	11,492	LF	\$48	\$551,616
DG Walking Path - Lighting	5,746	LF	\$52	\$299,271
DG Walking Path - Native Planting	28,730	SF	\$15	\$430,950
DG Walking Path - Irrigation	28,730	SF	\$15	\$86,925
DG Walking Path - Shade Trees	143	EA	\$610	\$87,230
DG Walking Path - Emergency Call Boxes	6	EA	\$15,000	\$90,000
	Subtotal DG Walking Path & Amenities			\$1,764,340
Over & Undercrossings				
Pre-fab bike/ped bridge across channel, 36' span	1.00	EA	\$480,000	\$480,000
Undercrossing - Retrofit (Holt Boulevard)	1.00	EA	\$1,200,000	\$1,200,000
	Subtotal Over & Undercrossings			\$1,680,000
Trail Amenities				
Wayfinding	6,038	LF	\$4	\$26,302
Lighting	6,038	LF	\$52	\$314,479
Shade Trees	150	EA	\$610	\$91,500
Private Landscape Enhancements	106	EA	\$200	\$21,200
Green Infrastructure	1,476	LF	\$345	\$509,220
Trailhead/Amenity Zone	2	EA	\$138,000	\$276,000
Native Plantings	28,920	SF	\$15	\$433,800
Irrigation	28,920	SF	\$15	\$433,800
Emergency Call Boxes	6	EA	\$15,000	\$90,000
	Subtotal Trail Amenities			\$2,196,301
Intersections				
Local Intersection	3.00	EA	\$115,000	\$345,000
Collector Intersection	1.00	EA	\$172,500	\$172,500
Arterial Intersection	1.00	EA	\$414,000	\$414,000
		Subtotal Intersections		\$931,500
Access Points				
New Residential/Open Space Access	1.0	EA	\$27,600	\$27,600
New School Access	1.00	EA		\$103,500
		Subtotal Access Points		\$131,100
Easements				
Trail	1.00	LS	\$136,571	\$136,571
Walking Path	1.00	LS	\$273,534	\$273,534
Design Cost @ 15%				\$1,452,722
SEGMENT 4 CONSTRUCTION + DESIGN TOTAL				\$11,137,535



- Class I Multi-Use Trail**
 - Large Greenway Trail
 - Greenway Trail
 - Typical Trail
 - Constrained Trail
 - Multi-Use Sidepath
- Class IV Protected Bikeways**
 - Two-Way Class IV
 - One-Way Class IV
- Class II Bike Lanes**
 - Class II
- Walking Path**
 - Decomposed Granite Walking Path

SEGMENT 4: SAN BERNARDINO STREET TO HOLT BOULEVARD

The entirety of Segment 4 is feasible at-grade and is located on the east bank of the channel. A DG Walking Path is feasible along the west bank. Segment 4 is the southern terminus of Phase A of the trail. Refer to Chapter 5 for applicable cross sections and conceptual plan drawings.

This cost estimate assumes Segment 3 has been constructed (including intersection improvements to San Bernardino at the Creek). Segment 4's cost estimate includes 5 intersection improvements: Ramona Boulevard and the Creek, Benito Street and the Creek, Orchard Street and the Creek, Kingsley Street and the Creek, and Holt Boulevard and the Creek.

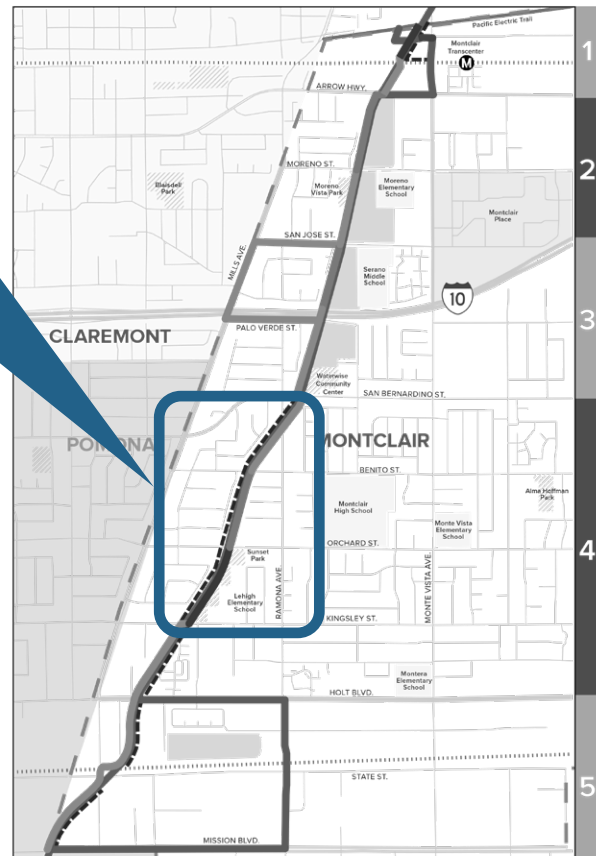


Figure 26. Segment 4 Alignment

Table 11. Segment 5 Long-Term Costs: Grade-Separated

Segment 5: Holt Boulevard to Mission Boulevard (with soft costs & contingency)				
Trail Corridor	QTY	Units	Unit cost	Segment Cost
14' Asphalt Trail (Typical)	1,600	LF	\$230	\$368,000
8' Asphalt Trail (Constrained)	760	LF	\$148	\$112,480
Fencing	4,720	LF	\$48	\$226,560
		Subtotal Trail Corridor		\$707,040
DG Walking Path & Amenities				
DG Walking Path	2,525	LF	\$48	\$121,200
DG Walking Path - Fencing	5,050	LF	\$48	\$242,400
DG Walking Path - Lighting	2,525	LF	\$52	\$131,510
DG Walking Path - Native Planting	12,625	SF	\$15	\$189,375
DG Walking Path - Irrigation	12,625	SF	\$15	\$189,375
DG Walking Path - Shade Trees	59	EA	\$610	\$35,990
DG Walking Path - Emergency Call Boxes	1	EA	\$15,000	\$15,000
	Subtotal DG Walking Path & Amenities			\$924,850
Over & Undercrossings				
Pre-fab bike/ped bridge across channel, 36' span	1.00	EA	\$480,000	\$480,000
UPRR Rail Crossing Option A or B (same cost)	1.00	EA	\$18,000,000	\$18,000,000
	Subtotal Over & Undercrossings A or B			\$18,480,000
Trail Amenities				
Wayfinding	2,360	LF	\$4	\$10,280
Lighting	2,360	LF	\$52	\$122,917
Shade Trees	59	EA	\$610	\$35,990
Trailhead/Amenity Zone	1	EA	\$138,000	\$138,000
Linear Park	570	LF	\$4,000	\$2,280,000
Emergency Call Boxes	2	EA	\$15,000	\$30,000
	Subtotal Trail Amenities			\$2,617,187
Intersections				
Arterial Intersection	1.00	EA	\$414,000	\$414,000
			Subtotal Intersections	\$414,000
Access Points				
New Residential/Open Space Access	1.0	EA	\$27,600	\$27,600
		Subtotal Access Points		\$27,600
Easements				
Trail Option A - Bend	1.00	LS	\$576,768	\$576,768
Trail Option B - Straight	1.00	LS	\$543,771	\$543,771
DG Walking Path	1.00	LS	\$216,942	\$216,942
			Design Cost-Option A @ 15%	\$3,594,658
	Design Cost Option B @ 15%			\$3,589,709
SEGMENT 5 GRADE-SEPARATED CONSTRUCTION + DESIGN TOTAL-OPTION A				\$27,559,045
SEGMENT 5 GRADE-SEPARATED CONSTRUCTION + DESIGN TOTAL-OPTION B				\$27,521,099

SEGMENT 5: HOLT BOULEVARD TO MISSION BOULEVARD, LONG-TERM, GRADE-SEPARATED

Segment 5 is envisioned as a Phase B project of the trail and development of this portion can be strengthened by coordinating efforts with the City of Pomona. The long-term vision for this Segment locates the trail on the west bank of the channel, which has slightly more space available than the east bank. At the north end of this Segment there is a

brief portion of constrained trail, and the remainder is the typical trail width. At the UPRR, an overcrossing is envisioned. Refer to Chapter 5 for applicable cross sections and conceptual plan drawings.

This cost estimate assumes Segment 4 has been constructed (including intersection improvements to Holt Boulevard and the Creek). Segment 5's cost estimate includes 1 intersection improvement: the Creek at Mission Boulevard.

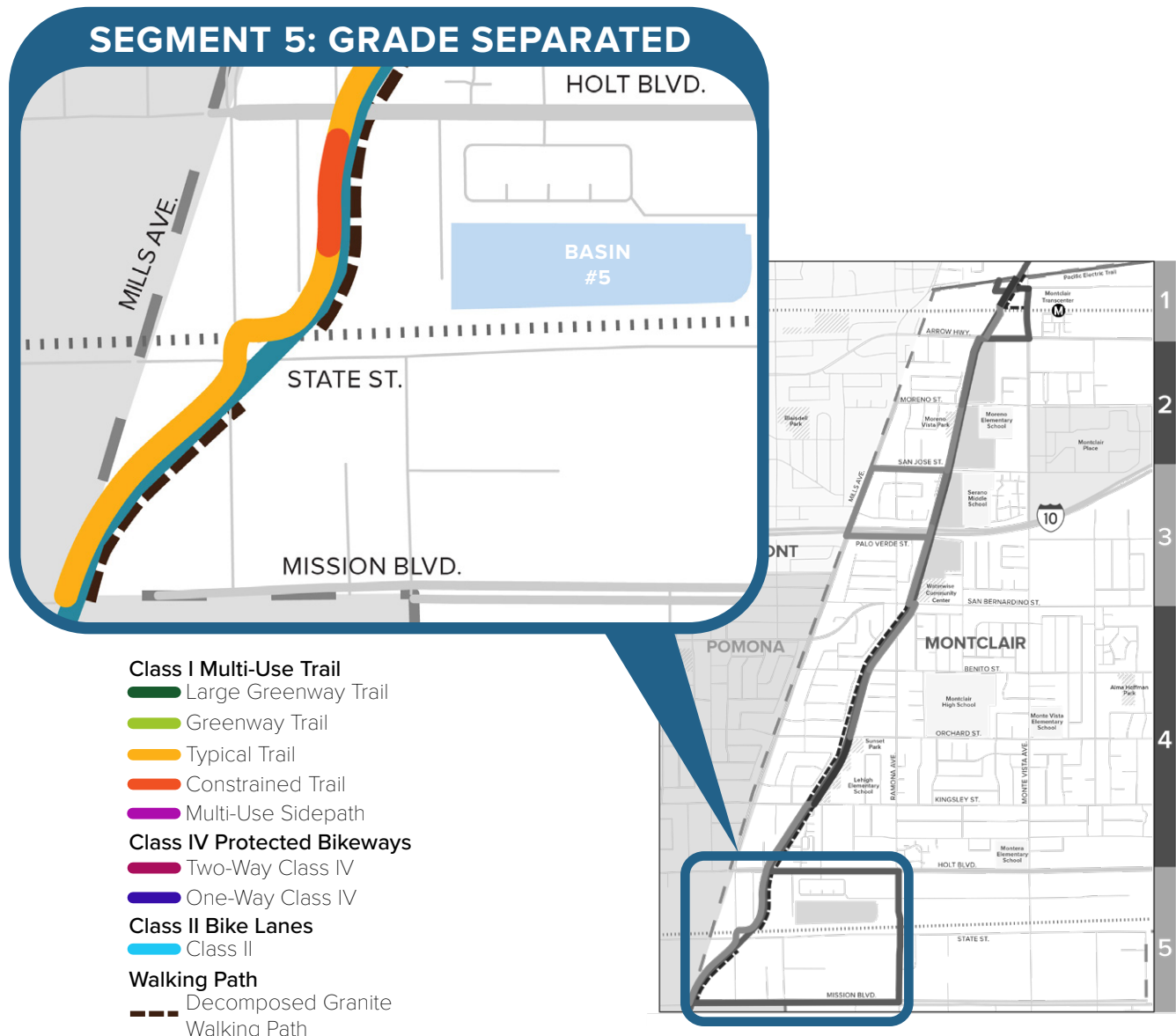


Figure 27. Segment 5, Long-Term Grade-Separated Alignment

Table 12. Segment 5 Short-Term Costs: At-Grade

Segment 5: Holt Boulevard to Mission Boulevard (with soft costs & contingency)				
At-Grade Bicycle Facilities				
One-Way Class IV-striping & posts	1,467.00	LF	\$22	\$32,274
One-Way Class IV-planted buffer	14,549.00	LF	\$60	\$872,940
			Subtotal Trail Corridor	\$905,214
DG Walking Path & Amenities				
DG Walking Path	2,525.00	LF	\$48	\$121,200
DG Walking Path - Fencing	5,050.00	LF	\$48	\$242,400
DG Walking Path - Lighting	2,525.00	LF	\$52	\$131,510
DG Walking Path - Native Planting	12,625.00	SF	\$15	\$189,375
DG Walking Path - Irrigation	12,625.00	SF	\$15	\$86,925
DG Walking Path - Shade Trees	63.00	EA	\$610	\$38,430
DG Walking Path - Emergency Call Boxes	2	EA	\$15,000	\$90,000
			Subtotal DG Walking Path & Amenities	\$899,840
Trail Amenities				
Wayfinding	2,525.00	LF	\$4	\$10,999
Trailhead/Amenity Zone	1.00	EA	\$138,000	\$138,000
Linear Park	570.00	LF	\$4,000	\$2,280,000
			Subtotal Trail Amenities	\$2,428,999
Intersections				
Arterial Intersection	3.00	EA	\$414,000	\$1,242,000
			Subtotal Intersections	\$1,242,000
Access Points				
\$27,600	1.0	EA	\$27,600	\$27,600
			Subtotal Access Points	\$27,600
Easements				
Trail	1.00	LS	\$123,555	\$123,555
Walking Path	1.00	LS	\$218,576	\$218,576
Design Cost-Option A @ 15%				\$876,868
SEGMENT 5 AT-GRADE CONSTRUCTION + DESIGN TOTAL				\$6,722,652

SEGMENT 5: HOLT BOULEVARD TO MISSION BOULEVARD, SHORT-TERM VISION, AT-GRADE

Segment 5 is envisioned as a Phase B project of the trail and development of this portion can be strengthened by coordinating efforts with the City of Pomona. The short-term vision for this Segment is entirely at-grade and includes one-way Class IV separated bikeways along Holt Boulevard, Ramona Boulevard, and Mission Boulevard. On these three corridors, there is enough space for a planted buffer for the bikeway, with the exception of the portion of Ramona

Boulevard that uses the existing bridge over the rail line - here the buffer for the bikeway is delineated with striping and posts. Refer to Chapter 5 for applicable cross sections and conceptual plan drawings.

This cost estimate assumes Segment 4 has been constructed (including intersection improvements to Holt Boulevard and the Creek). Segment 5's cost estimate includes 3 intersection improvements: Holt Boulevard and Ramona Boulevard, Ramona Boulevard and Mission Boulevard, and Mission Boulevard at the Creek.

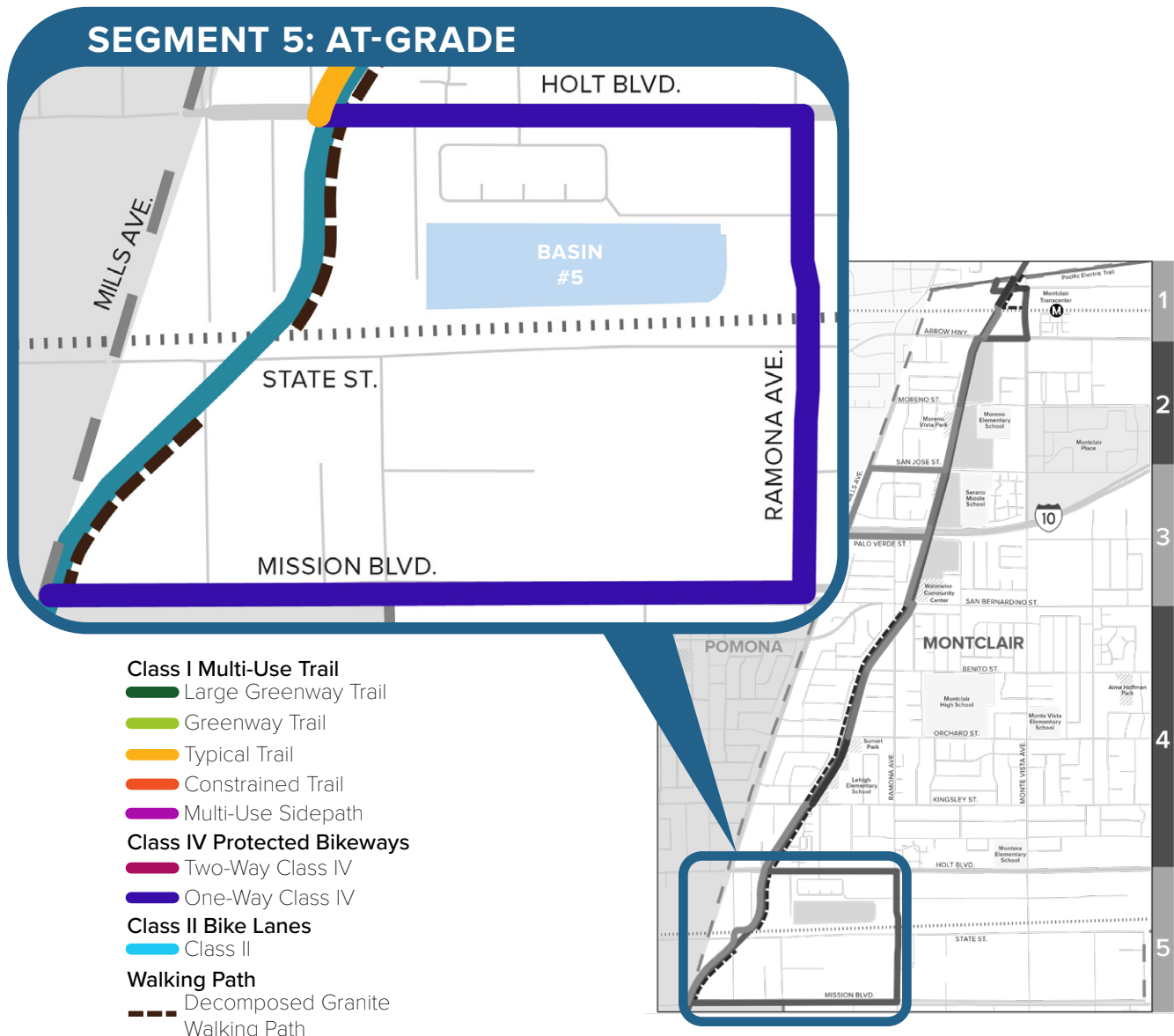


Figure 28. Segment 5, Short-Term At-Grade Alignment

Operations + Maintenance (O+M)

Once implemented, the San Antonio Creek Trail will require a long-term operations and maintenance plan to ensure the trail remains a safe and comfortable experience for trail users. Tasks that fall under operations are related to trail management, safety, and security; maintenance tasks are related to routine repairs, upkeep, and inspections of the physical elements of the trail, such as pavement, amenities, irrigation and landscaping.

TRAIL OPERATIONS

There are a number of operational considerations for the San Antonio Creek Trail including elements such as management, public safety and security.

Table 13. Operations Tasks

Operations Task	Skill/ Expertise	Suggested Frequency
Management/ coordination/ communication*	Public Works	Daily
Public Safety	Local Law Enforcement	Daily
Emergency response services	Police Department and Public Works	As needed

*The public should be encouraged to report maintenance concerns through City-specific applications, or a phone hotline.

Table 13 identifies potential operations tasks that may be required for the San Antonio Creek Trail.

Management / Coordination / Communication

The San Antonio Creek Trail will serve several types of users of all ages and abilities, including walkers, runners, wheelchair users, casual and new cyclists, and experienced cyclists using the corridor for utilitarian and recreational purposes. Certain micromobility devices such as e-scooters and e-bicycles may be allowed for users on the trail. These micromobility devices can offer an efficient commute mode for users, and can serve an important first-last mile trip function to and from transit stations. Active transportation corridors that serve as transportation facilities are open 24 hours per day.

Public Safety and Security

A holistic and sensitive approach to maintenance, public safety enforcement, and programming will help reduce the opportunity for crime and create a safe and welcoming atmosphere along the trail

Temporary Trail Closure & Detours

In the event of a temporary trail closure due to flooding or maintenance work, a formal detour route should be provided to allow trail users to safely navigate around the impasse.

corridor. The local police departments will be primarily responsible for enforcement. A safety and security plan should be developed and may include measures such as:

- » Coordination procedures and interagency coordination
- » Risk management and liability
- » Conflict resolution/reduction
- » Emergency access & response
- » Emergency procedures
- » Maintenance workers and employees should be provided with a flow chart and regular training on response procedures
- » Incident reporting system and analysis

Homelessness

Community members have raised concerns about potential encampments along the San Antonio Creek Trail. This project requires operations and maintenance (O+M) strategies to respond to the needs of all users, including people experiencing homelessness. While the corridor is a transportation facility and not intended to function as temporary housing, the reality of homelessness in the region requires a comprehensive strategy for engaging with homeless populations and providing critical services and amenities.

A strategic homeless services and response plan for the trail should include outreach strategies and emergency response and safety. Addressing

homelessness along the corridor will require coordination with the network of agencies and organizations already providing outreach and services for people experiencing homelessness. In addition to standard maintenance, specific protocols for encampment engagement and maintenance could be developed. Standard maintenance crews may require education to provide maintenance services around encampments. An approach may be to hire people experiencing homelessness to assist in maintenance.

MAINTENANCE

Required maintenance may be routine or remedial, and will vary depending on context, user demand, and the types of amenities present.

Routine

Routine maintenance refers to the day-to-day regimen of litter pick-up, trash and debris removal, weed and dust control, sweeping, vegetation trimming, and other regularly scheduled activities. Some routine maintenance may be conducted on a seasonal basis.

Remedial

Remedial maintenance refers to repairing, replacing, or restoring major components that have been destroyed, damaged, or significantly deteriorated from normal usage and old age. Some items (“minor repairs”) may occur on a five to ten-year cycle, such as repainting or replacing signage.

Inspections

Inspections are important for monitoring the maintenance needs of the bike and pedestrian ways and its associated amenities. Routine inspections such as monitoring surface conditions, signs, and lighting can be carried out by maintenance staff. A 311 System could serve as a way for the public to report necessary inspections and repairs.

Maintenance Tasks

Table 14 identifies typical maintenance tasks that can be expected for the San Antonio Creek Trail, along with the suggested frequency with which they should be completed.

The corridor should be maintained, free of debris and other obstacles, and designed to permit sweeping equipment to access sidewalks and separated bikeways. Pavement along trails should meet a pavement condition index (PCI) of 80 or higher, indicating adequate quality for bicycling. Contractors should be informed that all asphalt repairs must be carried out so that there are no noticeable edges or differences in level to the existing asphalt.

It is recommended that trails be swept systematically according to the existing street maintenance hierarchy or twice a month to once every two months. In addition, extra sweeping is necessary during fall. It is also recommended that dangerous objects and broken glass be removed immediately, outside from regularly scheduled cleaning.

Table 14. Maintenance Tasks + Timelines

Maintenance Task	Type	Suggested Frequency
Landscape irrigation	Routine	Weekly
Pavement sweeping*	Routine	Once per month
Wayfinding sign inspection	Inspection	Monthly; after rain events
Basic site furnishings repair/ replacement	Routine	As needed
Safety lighting repair	Routine	As needed
Sign repair/ replacement	Routine	1-3 years
Pavement markings repair/ replacement	Routine	1-3 years
Pavement resurfacing	Remedial	10-15 years
Plant trimming/ vegetation management	Remedial	Bi-annual
Art maintenance*	Routine	Yearly
DG replenishment	Remedial	Bi-annual with inspection after rain events

*May require special equipment

Some of the amenities under consideration for the San Antonio Creek Trail include, but are not limited to:

- » Pedestrian-scale lighting
- » Wayfinding signage
- » Shade trees
- » Green infrastructure
- » Hydration stations
- » Rest stops or mobility hubs
- » Short term bike parking
- » Bike fix it stations
- » Seating
- » Public art
- » Interpretive signage

Several of these amenities would have their own specific maintenance needs. For example, public art may require special maintenance expertise. When possible, art should be integrated into the infrastructure of the trail or rest stops to ensure it has similar maintenance considerations to other design features.

PERCOLATION BASINS

The CBWCD operates and maintains Montclair Basins 1 through 4, which are immediately adjacent to the trail, and the Brooks Basin just east of the trail between Mission Boulevard and Holt Boulevard. These basins are used to recharge groundwater. CBWCD coordinates regionally with the San Bernardino County Flood Control District to operate and maintain the basins.

Annual basin operations and maintenance activities include: infiltration days, and maintenance of the side slopes of the basin channels to remove vegetation and preserve flood storage capacity. These activities are typically performed every six months to one-year.

The preferred alignment for the San Antonio Creek Trail is not immediately adjacent to any of the Percolation Basins and will not interfere with basin operation and maintenance.

Permitting Process

The permitting process for the San Antonio Creek Trail will require a series of approvals from various federal, state, and regional agencies.

Sections of the trail must navigate major barriers such as the Metrolink

rail corridor, UPRR corridor, and the I-10 Freeway. The operating agencies involved will require the City to complete their permitting processes. A breakdown of the potential agency permits and approvals required is detailed in Table 15.

Table 15. Potential Permits + Approvals

Level of Government	Agency	Potential Permit or Approval
Federal	Federal Emergency Management Agency	100-year Floodplain Encroachment / 408 Permit
State	California State Water Resources Control Board	Water Quality Order 2012-0006-DWQ (General Construction Permit and SWPPP)
	Regional Water Quality Control Board	Section 401 Water Quality Certification Permit and Waste Discharge Requirement
	California Public Utilities Commission	Grade Crossing/Project Design Review
	Caltrans	Pre-Design Screening
Regional	Monte Vista Water District	Water Line Relocation Coordination
	San Bernardino County Flood Control District	Project Design Review
	Chino Basin Water Conservation District	Project Design Review
Other Agencies	San Bernardino County Transportation Authority	Project Design Review and License Agreement
	Southern California Regional Rail Authority	Maintenance Agreement
	Metro	Project Design Review
	Metrolink	Project Design Review

CALTRANS PERMITTING PROCESS

Caltrans coordination will be required for the I-10 undercrossing. The City should schedule a pre-design or pre-screen meeting with Caltrans to identify any larger issues that could impede the permitting process. Once the design drawings are complete and the permitting process begins, the Caltrans Department of Maintenance will review the plans and begin the project specific maintenance agreement with the City of Montclair.

Caltrans estimates that the agreement process for the San Antonio Creek Trail will take between six and nine months. The City will also need to obtain an encroachment permit prior to entering into a maintenance agreement with Caltrans since the trail will require excavation under the I-10 Freeway to lower the floor of the trail.

Additional amenities other than a paved trail will require additional agreements with Caltrans. Transportation art, including murals, can cause complications in setting up a maintenance agreement and could add several years to the process. Any modifications or architectural treatments under the I-10 Freeway overpass would require another agreement separate from transportation art. Any landscape along the trail within the Caltrans right-of-way would require an additional landscape maintenance agreement.

RAIL AGENCIES PERMITTING PROCESS

At the northern end of the City, the San Antonio Creek Trail must cross the Metrolink rail corridor where there is a planned extension of the Metro Gold Line. This will involve coordination with the San Bernardino County Transit Authority (SBCTA), Metrolink, Metro, and the Southern California Regional Rail Authority (SCRRA).

If the City secures funding for an over or undercrossing at this location, representatives from these rail agencies agreed that the construction may be managed as part of the Gold Line extension into Montclair if funding for that work is secured by the rail agencies.

SBCTA is the owner of the rail corridor right-of-way and has the ability to issue a license agreement for a trail overcrossing or undercrossing. However, SBCTA would not address the operations and maintenance (O+M) of the structure. A maintenance agreement with the SCRRA will be needed as they are the operator

of the SBCTA right-of-way. An additional agreement may also be needed with Metro. The City would need to have adequate insurance for the crossing structure under the licensing agreements. Lastly, the California Public Utilities Commission would require approval to ensure the trail facility has the proper clearances to not interfere with existing utility lines.

At the southern end of the site, the rail line is owned and operated by UPRR, which will also require a pre-design meeting and additional coordination for any overcrossing of the rail.

UNITED STATES ARMY CORPS OF ENGINEERS (USACE)

The San Antonio Creek Trail runs along a channel that is maintained by the USACE. The City will need Section 408 permissions in order to construct a trail along the channel. The permission decision process typically takes between eight and ten months. Proposals are evaluated for impacts of the proposed

alterations to flood conveyance, structural integrity, operation and maintenance, National Environmental Policy Act (NEPA) requirements, and flood fighting capabilities as well as meeting Corps policy and criteria.

Once permissions are granted, the permittee will be responsible for the construction oversight to ensure construction is in accordance to the plans approved by the USACE.

SENATE BILL 288

Effective January 1, 2021, Senate Bill (SB) 288 adds new California Environmental Quality Act (CEQA) provisions to add new and expanded statutory exemptions from CEQA for sustainable transportation projects. The benefit of seeking SB 288 exemption is similar to a categorical exemption, but it also prohibits legal challenges from project opponents and prevents potential schedule delays resulting from legal

challenges. The on-street alternatives described in this feasibility study are candidates for statutory exemption under SB 288. A checklist assessment of SB 288 requirements was conducted to determine if the San Antonio Creek Trail would qualify.

The San Antonio Creek Trail meets the eligible project types as a pedestrian and bicycle facility. The project also meets the criteria of a public agency carrying out the project, being located within an urbanized area, not adding physical infrastructure that increases new automobile capacity and not demolishing affordable housing units. The San Antonio Creek Trail should also meet the threshold of construction value, as the projected construction costs do not exceed \$100 million. Depending on the preferred alternative, SB 288 may be the most streamlined pathway for CEQA approval. If the project receives federal funding, then NEPA would be applicable regardless of SB 288 CEQA exemption. SB 288 is slated to sunset on January 1, 2030.

Funding Opportunities + Strategies

WHERE WILL THE MONEY COME FROM?

This section provides an overview of potential funding sources to make Montclair's San Antonio Creek Trail a built reality. Table 16 identifies federal, state, regional, and local funding sources to support the implementation and construction of the San Antonio Creek Trail, as well as its long-term maintenance. These include competitive grant programs, as well as local measures the City may consider to generate revenue that can be used to fund the trail.

"BEST FIT" FUNDING OPPORTUNITIES

The following are considered "best fit" funding sources for this trail. These include sources that have a large amount of available funding, a history of funding similar projects, and/or that include scoring criteria that are in particularly close alignment with the goals of this trail. A full list of candidate funding sources that includes additional funding programs can be found in Table 16, and descriptions of all funding sources from that table are included in the appendix of this document.

Active Transportation Program

California's Active Transportation Program (ATP) funds infrastructure and programmatic projects that support the program goals of shifting trips to walking and bicycling, reducing greenhouse gas (GHG) emissions, and improving public health. Competitive application cycles occur every one to two years, typically in the spring or early summer. Eligible

projects include design and construction of bicycling and walking facilities, new or expanded programmatic activities, or projects that include a combination of infrastructure and non- infrastructure components. Typically no local match is required, though extra points are awarded to applicants who do identify matching funds.

Funds are programmed by Caltrans and the California Transportation Commission (CTC).

Typical Funding Cycle: Annual (NOFO February; Deadline Summer)

<https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/active-transportation-program>

Urban Greening Program

Urban Greening Grants support the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Projects must include one of three criteria, most relevantly: 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. Eligible projects include green streets and alleyways and non-motorized urban trails.

Funds are programmed by the California Natural Resources Agency (CNRA).

Typical Funding Cycle: Annual (NOFO February; Deadline March)

<http://resources.ca.gov/grants/urban-greening/>

Clean California

This state-wide grant program will provide approximately \$296 million as part of a two-year effort (2022 and 2023 grant-making cycles) to beautify and improve streets and roads, tribal lands, parks, pathways, and transit centers to restore pride in public spaces. Eligible projects include: infrastructure projects related to litter abatement and beautification, such as community park spaces; as well as non-infrastructure projects (programs) related to litter abatement and education. Infrastructure projects must be completed by June 30 2024.

Funds are programmed by Caltrans and the California Transportation Commission (CTC).

<https://cleancalifornia.dot.ca.gov/local-grants>

Recreational Trails Program

The Recreational Trails Program helps provide recreational trails for both motorized and non-motorized trail use. Eligible projects include: trail maintenance and restoration, trailside and trailhead facilities, equipment for maintenance, new trail construction, and more.

Funds are programmed by the California Department of Parks and Recreation.

https://www.parks.ca.gov/?page_id=24324

BUILD Program

The BUILD grant, formerly known as Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants Program, allows sponsors at the state and local levels to obtain funding for multi-modal, multi-jurisdictional projects that are more difficult to support through traditional Department of Transportation (DOT) funding initiatives. Eligible projects include: recreational trails, road diets, separated bike lanes, shared use paths, sidewalks, signal improvements, signed pedestrian or bicycle routes, traffic calming, trailside and trailhead facilities, bicycle parking, racks, repair stations, storage, and bike share programs.

Funds are programmed by the U.S. Department of Transportation.

<https://www.transportation.gov/BUILDgrants>

Water Resources Development Act

The Water Resources Development Act (WRDA) authorizes the United States Army Corps of Engineers (USACE) to engage in activities such as flood control and ecosystem restoration. In recent years, the WRDA bill has included provisions to address green infrastructure, affordability, and integrated planning.

On the Horizon: Bipartisan Infrastructure Law

There are a number of different new funding opportunities being created by the recently passed Bipartisan Infrastructure Law. This includes the Transportation Alternatives Program, Safe Streets and Roads for All (\$6 Billion program), the Active Transportation Infrastructure Investment Program (\$1 Billion Program), and the Healthy Streets Program (\$500 million). Once funding application guidance for these programs are established, the City should review for applicability to the San Antonio Creek Trail.

COMPETITIVE GRANTS: STRATEGIES FOR SUCCESS

Competitive grant programs are just that - competitive! Typically grant makers select recipients based upon a detailed scoring rubric and points value for different aspects of the application. To make the City's application stand out, and to make sure the application scores the maximum points available, consider the following:

- » **Choose the right program:** funding programs typically issue detailed descriptions of eligible project types and expenses. For example, some funding opportunities will fund only projects related to transportation, others only recreation. Eligible expenses may include trees and green infrastructure for some programs, while others may only cover hardscape. Refer to Table 16 for a detailed breakdown.

The full vision for this trail extends beyond the City of Montclair and into neighboring communities. Joint funding applications with other municipalities should be considered; grant-making agencies often award additional points to projects that foster multi-jurisdictional collaboration and regional connectivity.

For example, the northernmost segment of the trail within Montclair can be connected to a built trail segment in Upland, and to the south the channel extends throughout the cities of Pomona and Chino.

- » **Demonstrate support and collaborate:** documenting community support and coordination with key stakeholders is critical. Often grant-makers will award additional points for multi-jurisdictional applications. Consider joint applications with neighboring cities interested in building their own segments of the trail.
- » **Leverage funds and coordinate timing:** multiple grants may be needed to fully realize the San Antonio Creek Trail. Understanding the submission deadlines, and deadlines for completion of work will allow the City to leverage multiple funding sources.
- » **Get Creative:** the San Antonio Creek Trail is a true multibenefit project - providing sustainable transportation, recreation, greening, and urban cooling opportunities. Paint a vivid picture of the benefits the project will provide to the community and region.

SAN ANTONIO CREEK TRAIL

	Planning & Design	Acquisition	Construction	Maintenance	Other
Federal + State					
Active Transportation Program	●		●		
BUILD Program	●		●		
Highway Safety Improvement Program	●	●	●		
Recreational Trails Program	●	●	●	●	
State Highway Operation and Protection Program (SHOPP)	●		●	●	
Affordable Housing and Sustainable Communities Program		●	●		
Urban Greening Program		●	●		
Local Partnership Program		●	●		
Road Maintenance and Rehabilitation Program				●	
Regional Surface Transportation Program			●		
Coastal Conservancy Proposition 1 Grants	●	●	●		
Wildlife Conservation Board Public Access Program	●		●		
Habitat Conservation Fund			●		
Rivers, Trails, and Conservation Assistance Program (RTCA)	●				
Environmental Enhancement and Mitigation (EEM) Grant Program	●	●	●		
Grants for Arts Projects					●

Table 16. Funding Sources and Eligible Project Expenses

SAN ANTONIO CREEK TRAIL

	Planning & Design	Acquisition	Construction	Maintenance	Other
Federal + state, cont.					
Our Town					●
Creative California Communities (CCC)					●
Nonprofits, Foundations, Loans & Donations					
The Trust for Public Land Acquisition Support		●			
The National Fish and Wildlife Foundation		●	●		
Doppelt Family Trail Development Fund	●		●	●	
California Infrastructure State Revolving Fund (Loan)	●	●	●	●	
Kaiser Permanente's San Bernardino County Area Grants	●	●	●	●	
Corporate Donations	●	●	●	●	
Local Measures					
Developer Impact Fees					●
Concession Fees	●	●	●	●	
Fundraising Events	●	●	●	●	
Membership Dues	●	●	●	●	
Adopt-a-Mile or Adopt-a-Trail	●	●	●	●	
On-Trail Donation Stations	●	●	●	●	
Percent-for-Art Ordinance					●

