Berryessa / North San José Station Access Study

Final Access Study

Prepared for Santa Clara Valley Transportation Authority (VTA) By Arcadis with Bluepoint Planning

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Valley Transportation Authority

ARCADIS

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1 Introduction

1.1 Study Background

The Santa Clara Valley Transportation Authority (VTA) Transit-Oriented Development (TOD) Program initiated an access planning study for Berryessa/North San José Station (hereafter Berryessa Station) in June 2023. The goal of this program is to make transit use easier and more convenient, in an effort to reduce driving and vehicle emissions and increase active transportation use. This will be achieved through public-private partnerships for mixed-use developments on VTA-owned sites that open opportunities for people of all incomes to live, work, and play nearby.

Berryessa Station has been identified for transit-oriented development, utilizing 3.3 acres of vacant land owned by VTA to accommodate a new affordable housing project in a cooperative partnership with Santa Clara County and future mixed-use, mixed market rate housing and office development. This study provides the basis that will ensure the proposed developments are well integrated into the transportation network and surrounding neighborhood, and pedestrians, bicyclists, and transit needs are fully considered and incorporated in subsequent stages.

1.2 Purpose of Report

The purpose of the TOD access study is to identify multimodal transportation improvements that will improve access to the stations for existing and future transit riders. The study analyzed existing and future conditions at the station, included an extensive community engagement process, and assessed needs to improve multimodal access. These findings were used to inform a suite of proposed access improvements and transportation demand management (TDM) recommendations to reduce single-occupancy trips to the station that are presented in Sections 7 and 8. Associated cost estimates and a prioritization and implementation plan are presented in Sections 9 and 10.

2 Station Area & Station Layout

The half-mile radius surrounding Berryessa Station will serve as the study area for the purpose of this study. Berryessa Station is located in the City of San José, just north of US 101. It is the southernmost BART station in Santa Clara County and serves as the terminus of the BART Green and Orange Lines. VTA bus service includes rapid service into Downtown San José and Diridon Station. The station is served by Routes 500, 61, 70, and 77.

The station is generally bound by Berryessa Road to the northwest, King Road to the southeast, Mabury Road to the southeast, and Coyote Creek to the southwest. The study area surrounding Berryessa Station is primarily residential, with some commercial uses scattered throughout. A surface parking lot managed by VTA is located east of Berryessa Station Way, directly across the street from the station entrance. The lot provides 287 parking spaces, of which eight are accessible, and 32 marked as reserved. A larger parking structure is located just to the south of the station entrance, with 1,527 parking spaces, of which 24 are charging stations. From the surface parking lot, pedestrians may cross Berryessa Station Way to get to the main station entrance.

Figure 2.1
Berryessa Station Study Area

Figure 2.2
Main BART station entrance – view from surface parking lot

On the station side of Berryessa Station Way, buses enter the VTA bus transit center via a bus-only loop from Berryessa Station Way to reach the four bus bays at the northern portion of the station. A sign outside of the northern station area points passengers arriving to the station via BART to this VTA bus transit center, the pick-up/drop-off zone located on Berryessa Station Way, bicycle storage that includes a bike parking cage and lockers, and the Upper Penitencia Creek Trail entrance on Berryessa Station Way.

Figure 2.3
Wayfinding signage outside of the BART station entrance

Figure 2.4
VTA Bus Transit Center

Figure 2.5
Bike parking cage located next to bus transit center

Figure 2.6
Bike lockers located outside of the northern station entrance

Figure 2.7
Entrance to the Upper Penitencia Creek Trail from Berryessa Station

The main station entrance for pedestrians and bicyclists is located just south of this area directly across the street of the surface parking lot. Seating for waiting passengers is available outside of the station entrance on all sides of the station.

Figure 2.8
Passenger seating outside of the main station entrance

3 Existing Conditions

This section provides a review of existing planning documents and initiatives from the City of San José and VTA, as well as a review of existing data relevant to the study area. Existing data reviewed for this task included information about population and employment density, median household income, and communities of color in the station area. This section also provides an on-the-ground analysis of conditions based on a walk audit conducted in the station area with community members as a part of outreach process for the study.

3.1 Planning Document Review

Planning documents were reviewed to gather a comprehensive understanding of current planning initiatives and projects relevant to Berryessa Station including a discussion of how the plans or projects will impact and/or improve station access.

City of San José Planning Documents and Programs

A total of six documents were reviewed from the City of San José discussing relevant current planning initiatives and projects pertaining to land use and transportation planning in the general station area.

Berryessa BART Urban Village Plan

The Berryessa BART Urban Village (BBUV) Plan is an extension of the San José 2040 General Plan, which set forth a vision and comprehensive road map to guide growth in the city. Higher-density, mixed-use "urban villages" are a key mechanism to implement that growth, and the Berryessa Urban Village is one of its primary locations. The plan's Circulation and Streetscape chapter and Parking chapter are core components for planning access improvements to Berryessa Station and will be used as the foundation for recommendations included in this study. The plan includes recommendations for street typologies in the urban village (as shown in the figure below), potential design configurations for those streets, and potential new connections to support circulation.

Figure 3.1
Berryessa Urban Village Plan

The Circulation and Streetscape chapter includes a set of goals and policies for complete streets, private streets, walking, biking, transit, and technology, as well as specific streetscape design guidelines for the area.

The parking chapter builds upon the goals of the BBUV District Parking Study (covered in the next section) and identifies goals and policies related to parking and transportation demand management (TDM).

Key Takeaway:

- The BBUV Plan Circulation and Streetscape chapter and Parking chapter will form the foundation of the initial recommendations considered for Berryessa Station access. This study will look to build upon and refine them based on the station's specific needs and challenges.

Berryessa BART Urban Village District Parking Study – Parking and TDM Plan (2021)

The BBUV District Parking Study was developed to define the parameters of parking and transportation demand management (TDM) for the 270 acres at the Berryessa BART Urban Village. The plan's goals and TDM benefits include:

- Incentivize multimodal trips and reduce congestion
- Right-size parking supply, demand, and costs
- Attract and retain tenants
- Meet the goals of the BBUV District
- Be a good neighbor and minimize local impacts

The plan builds upon the City of San José's General Plan guidelines for circulation and parking, as well as the other parking and TDM provisions in the City's zoning code, and identifies parking goals based on the expected land use and development assumptions at the development's various sites. The overarching goal of the plan is to reduce single-occupancy trips to 35% and increase the number of trips by carpool/shared mobility, transit, bicycle/scooter, and walking to 65%.

Parking management recommendations from the plan include:

- Pricing parking – to help ensure that parking is not over-supplied, that availability is well-managed, and to provide financial support for shared mobility options
- Eliminate parking minimums, without establishing a parking maximum – to disincentivize development over the parking targets and support affordability goals
- Unbundling residential parking – to further support housing affordability and ensure that parking is paid for just by those who need it
- Implement shared parking – to further right-size parking by spreading the demand from non-competing land uses across available supply

TDM recommendations from the plan include:

- Mandatory TDM measures including establishment of a Transportation Management Association to support TDM in the district, subsidized transit passes to encourage transit ridership, and education and marketing initiatives to help people make informed travel choices
- A range of additional TDM measures that developers will need to choose from in order to meet a points-based quota. These measures include on-site daycares, shared parking, end of trip bike facilities, flexible work schedules, and vanpool subsidies

Taken together, these measures can help ensure that the BBUV supports safe and efficient travel throughout the greater San José region.

Key Takeaways:

- The Parking and TDM provisions in this plan set some of the core transportation-related foundations of development in the BBUV.
- The additional TDM measures in the plan provide numerous ways for VTA and developers to work together to ensure that development is economically-productive, vibrant, and transit-supportive.

Better Bike Plan 2025

Released in 2020, San José's bike plan was designed to provide an update to the city's 2009 plan, report out on infrastructure implemented since that time, and outline a strategy to continue making San José a safer and more accessible place for cyclists. The Better Bike Plan 2025 identifies several key goals:

- Build a 550-mile low-stress, connected network
- Upgrades of existing Class II bike lanes on Lundy Avenue/King Road to Class IV protected bikeways
- Achieve a 15% citywide bike mode share by 2040 and a 20% bike mode share by 2050
- Eliminate all roadway fatalities and major injuries, in line with the City's Vision Zero plan
- Expand the availability of sidewalk bike parking, secure bike parking, and end-of-trip facilities at transit stops
- Achieve Gold status according to ratings of city bicycle friendliness
- Expand shared micromobility (bike and scooter share)

The plan analyzed existing and planned bicycle infrastructure, locations where pedestrians and bicyclists have been injured or killed, potential areas of unrealized cycling demand, and equity metrics to guide recommendations. The plan concludes with an implementation and prioritization strategy to guide the immediate improvements. Proposed improvements and recommendations that are most relevant to Berryessa Station include:

- Upgrades of Class II basic and buffered bike lanes to Class IV protected bikeways on Capitol Avenue from Berryessa Road to Alum Rock Avenue are listed as part of the priority network
- Upgrades to existing Class II basic and buffered bike lanes on Berryessa Road to Class IV protected bikeways
- Upgrades to existing Class II basic bike lanes on Sierra Boulevard to Class IV protected bikeways, as well as creation of a new bicycle route to travel west under Interstate 680
- Additional upgrades to other nearby bicycle facilities within the station catchment area

These proposed bikeways are presented in Section 4.2.

Key Takeaway:

- Better Bike Plan 2025 sets ambitious goals for increasing bicycle mode share in the city. Its recommendations to improve connectivity in the areas surrounding Berryessa Station will be used as a baseline for consideration as part of this project and may be modified or supplemented based on additional analysis and community input.

US 101 Mabury-Berryessa-Oakland Corridor Project

The US 101 Mabury-Berryessa-Oakland corridors has been studied by Caltrans and the City of San José for over 30 years, and in 2022 began the process of environmental review that will be required to make improvements to the area. The project will construct a new interchange at Berryessa Road to provide new access to US 101 and Berryessa Station, modify or remove the Oakland Road interchange, and provide multimodal improvements along Oakland Road and Mabury Road. The project study area is located approximately a half mile southwest of Berryessa Station and is illustrated in the figure below.

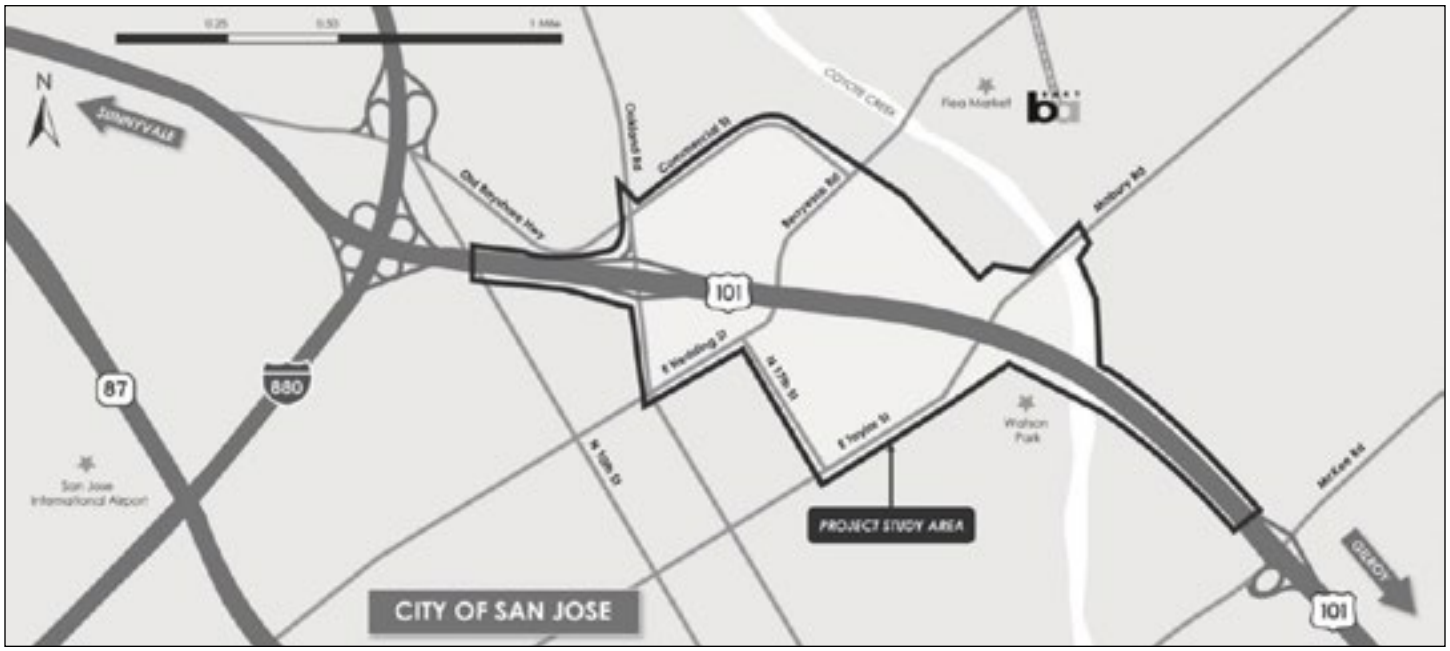


Figure 3.2
US 101 Mabury-Berryessa-Oakland Corridor Project Study Area

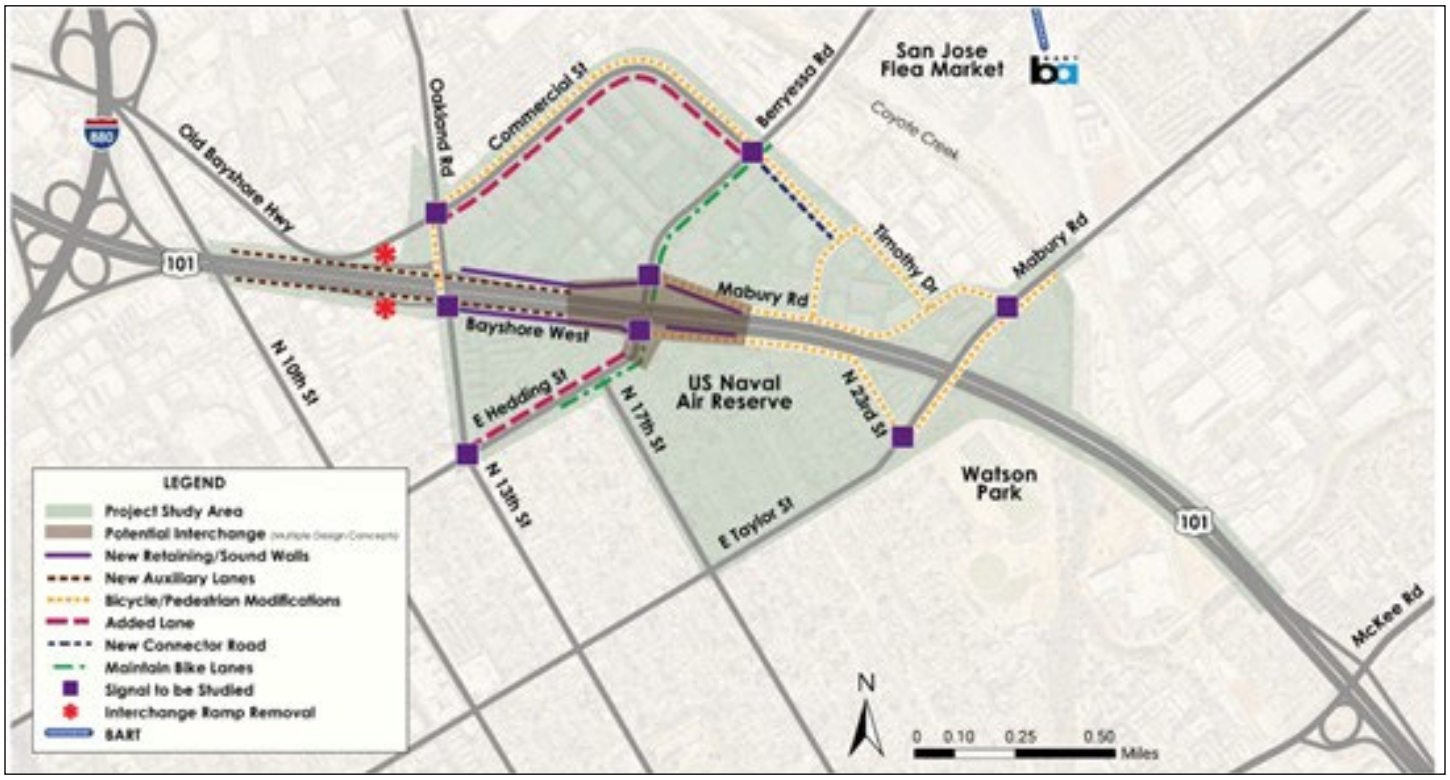


Figure 3.3
US 101 Mabury-Berryessa-Oakland Corridor Project Improvement Map

The project's scoping documents identified a number of indirect routes and incomplete or missing bike and pedestrian infrastructure in the project study area, as well as some preliminary design concepts. A map of potential improvements is illustrated in the figure above.

Potential improvements include new sidewalks, crosswalks, and curb ramps where gaps currently exist, closing an existing bicycle lane gap on Oakland Road, improving an existing bicycle facility on Mabury Road, and making improvements consistent with the VTA Central Bikeway Study. The project is expected to receive final environmental approval in 2025, complete final design by 2026, and finish construction and open to the public between fall 2026 and winter 2028.

Key Takeaways:

- Pedestrian and bicycle improvements for the US 101 Mabury-Berryessa-Oakland Corridor project should be coordinated with those recommended for Berryessa Station.
- Particular attention should be paid to reducing conflict between cars and non-automotive travelers and closing gaps in the planned pedestrian and bicycle network.

Vision Zero Corridors

San José is a Vision Zero city—one that seeks to reduce and eventually eliminate all traffic-related deaths and serious injuries. The City aims to accomplish this goal through data analytics (i.e., analyzing where death and serious injuries occur most frequently), convening a Vision Zero task force of people and agencies who can improve safety outcomes, strategizing traffic enforcement activities, increasing community engagement, implementing low-cost "quick-build" safety improvements, and targeting long-term/permanent improvements with equity in mind.

Berryessa Station does not connect directly to any Vision Zero priority corridors—those where the highest proportion of fatalities and severe injuries occur—but three are located within approximately one mile of the station:

- King Road between McKee Road and Capitol Expressway
- McKee Road between US 101 and Toyon Avenue
- Jackson Avenue between Berryessa Road and Story Road

City of San Jose staff also provided an update on the program in May 2023 that identified the Jackson Avenue project as one in which a quick build project for improvements will be implemented. The anticipated construction date is summer 2024.

Key takeaways:

- Although Berryessa Station does not connect directly to a Vision Zero priority corridors, improvements to its connecting infrastructure can support Vision Zero goals of making San José a safer place to travel.
- The King Road corridor is under consideration for improvements and is covered in greater detail in the following section.

King Road Complete Street Plan

The City of San Jose is currently developing a Complete Streets plan for King Road to make it a safer and more inviting place to walk, bike, and take public transit. The plan is considering a six-mile stretch of the road from Berryessa Road to East Capitol Expressway, and is currently in the conceptual design phase. A map of the project study area is shown in the figure below.

Figure 3.4
King Road Complete Street Project Area

Key Takeaway:

- The King Road Complete Streets corridor (between Berryessa Rd and East Capitol Expressway) will be considered for implementation of a quick-build program followed by a permanent street upgrade. The northern portion of the King Road study corridor is within the Berryessa study area. Recommendations from the King Road study is referenced and/or incorporated as part of the access recommendations.
- In-progress recommendations at the time of this study include:
  - Improved existing sidewalks on King Road between Berryessa Road and McKee Road
  - Improved existing crosswalks and existing signals on King Road between Berryessa Road and Mabury Road
  - Improved existing transit stops on Mabury Road at King Road

VTA Planning Documents and Programs

Seven VTA documents and policies were reviewed pertaining to complete streets, station accessibility, transit-oriented development, and active transportation.

VTA Complete Streets Policy

In 2017, VTA published the most recent Board Memorandum on Complete Streets. The policy specifies the responsibilities that VTA will follow to ensure that Complete Streets best practices are used during the planning, design, funding, and construction of all transportation capital projects and funding programs administered by VTA, and applies to VTA employees, contractors, and consultants performing work for VTA. The document defines principles and practices that must be considered for the current access study to Berryessa Station, which include: serving all users, using context sensitive design, maintaining of

enhancing networks, incorporating technology, consistency with adopted plans, maintaining transportation infrastructure, seeking and responding to public input, building complete streets infrastructure, and using latest best practice design standards and guides.

Key Takeaway:

- The Berryessa Station Access Study is consistent with the Complete Streets Policy's goals and is designed to be an implementation action from that policy.

VTA Station Access Policy

The 2018 VTA Station Access Policy establishes VTA's access priorities to guide planning and investment decisions regarding station access for all modes of transportation. The guiding principles of this policy are to increase ridership, prioritize sustainable travel behavior, build effective partnerships, support sustainable development partners, and promote cost effectiveness. Additionally, the policy establishes a hierarchy for station access systemwide providing priority access to modes that can produce the highest ridership and revenue benefits for VTA at the least cost. This study incorporates the guidelines defined in the VTA Station Access Policy, to ensure these goals are met.

Key Takeaway:

- The Berryessa Station Access Study is consistent with the Station Access Policy's principles and is designed to be an implementation action from that policy.

VTA Transit-Oriented Communities Policy

Originally published in 2016 as the agency's Transit-Oriented Development (TOD) Policy, this policy was reviewed and renamed in 2022 to VTA's Transit-Oriented Communities Policy. This policy seeks to create mixed-use and mixed-income equitable Transit-Oriented Communities (TOC), through public-private and public-public partnerships on VTA-owned sites that will generate revenues, increase ridership, and create Transit-Oriented Communities. The access study for Berryessa Station supports the implementation of this policy.

The document includes two appendices. Appendix B's purpose is to guarantee the optimal level of parking at VTA stations while encouraging alternatives to automobile to access the stations. Appendix C defines the strategies to increase affordable housing in VTA TOD projects.

VTA has identified Berryessa Station as an Active Development site for Transit-Oriented Development, along with other sites in Santa Clara County.

VTA Pedestrian Access to Transit Plan

The VTA's Pedestrian Access to Transit Plan reviews the current state of pedestrian conditions within Santa Clara County. Through local observations within the county, the Pedestrian Access Plan seeks to improve the safety, comfort, and convenience of pedestrian VTA customers. While the Plan does not address Berryessa Station directly as part of its focus areas (where both transit ridership and the need for pedestrian improvements are highest), it does evaluate the existing conditions for pedestrians in the county.

Pedestrian volumes average between 41 to 100 in a two-hour period for this area, which is the second lowest range for the studied intersections in San José. In terms of road safety and vehicle-pedestrian collisions the Berryessa Station area does not stand out as less safe than other intersections with similar pedestrian volumes. The plan did, however, identify the King Road Corridor as one of its focus areas for improvements. This corridor is covered in greater detail in Section 3.1 earlier in this document.

Key Takeaways:

- Although Berryessa Station was not specifically selected as a focus area for the Pedestrian Access to Transit Plan, this study will be broadly consistent with its goals of improving safe and convenient connections to transit.
- The King Road Corridor focus area connects to Berryessa Station via the Upper Penitencia Creek Trail. It is within the catchment area for active transportation and is considered in subsequent stages of this study.

VTA Countywide Bicycle Plan

The Countywide Bicycle Plan's goals and policies support national, state, and regional plans and policies that view bicycling as a safe, convenient, healthy, and environmentally friendly transportation option. Additionally, nearly all local jurisdictions have adopted and updated bicycle master plans in recent years. Ideally, local plans should consider four key elements of bicycle planning: engineering, encouragement, education, and enforcement. The San José Better Bike Plan 2025 addresses these four elements.

The VTA Countywide Bicycle Plan identifies both priority cross county bicycle corridors and a bicycle superhighway network. Priority cross county bicycle corridors most relevant to Berryessa Station include:

- King Road
- Berryessa Road
- Lundy Avenue
- Mabury Road

The current Coyote Creek Trail is one superhighway that is potentially relevant to Berryessa Station, but its northern terminus at Tully Road is approximately 4.5 miles from the station.

Key Takeaways:

- Priority cross country bicycle corridors and superhighways that connect to Berryessa Station is considered for inclusion in the recommendations for this study.

2016 Measure B Bicycle & Pedestrian Program

Santa Clara County voters approved Measure B, a 30-year, half-cent countywide sales tax to enhance transit, highways, expressways, and active transportation (bicycles, pedestrians and complete streets) in 2016.

The Bicycle & Pedestrian Program, revised in August 2022, allocated 3.97% of the program tax revenues. VTA is yet to release a 2022 Annual Report. The 2021 report highlights five project agreements with Member Agencies for the FY 2020 – FY 2021 funding cycle, four for Final design and one for construction. It also mentions the first call-for-projects in February 2021, where eleven applications were submitted, and five projects were approved for funding by the Board. It also funded education and encouragement.

By November 2022, the 2016 Measure B had released FY22 - FY23 planning studies Call-for-Projects. It was also finalizing San José's Five Wounds Trail funding agreement. The allocation through FY23 is $56.4M, and the expenditure through November 2022 had been $3.1M.

Key Takeaway:

- Measure B revenue may be a potential source of funding for bicycle and pedestrian improvements to Berryessa Station.

Central Bikeway Study

VTA's Central Bikeway Study was completed in 2022 and is an outcome of the agency's vision to create a network of cross county bicycle corridors. The feasibility study and alternatives analysis identified a ten-mile long route through Santa Clara and San Jose that travels primarily on El Camino Real, Hedding Street, Taylor Street, and Mabury Road. The proposed route also connects three VTA stations: Santa Clara Station, College Park Station, and Berryessa Station.

A map of the proposed route is shown in the figure below.

Figure 3.5
Central Bikeway Project Map

VTA is currently pursuing funding to complete design and environmental review for the project.

Key Takeaway:

- The Central Bikeway is likely to move forward into the next stages of development in the relative near term, and its vision and conceptual design is considered in the planning and recommendations for this study.

3.2 Existing Data Review

This section provides a review of existing data and infrastructure within the station half mile radius. Demographic data discussed in this section include population density, employment density, median household income, and information about communities of color. Existing infrastructure described in this section include the existing transit network, bicycle and pedestrian network, bicycle and pedestrian collisions, and vehicle volumes.

3.2.1 Demographics

This section provides an overview of existing demographics within a half mile radius of Berryessa Station. Demographics discussed within the study area include population density, employment density, median household income, communities of color, and linguistic isolation.

3.2.1.1 Population Density

The total population living within the half-mile study area surrounding Berryessa Station is 6,275 people. The figure below represents population density at the census block group level surrounding Berryessa Station. The densest block group is located northwest of Berryessa Road and contains between 15,000 and 22,000 people per square mile. The majority of the study area has a population density of less than 2,500 people. It should also be noted that population density is low in the southwest area, as this area is primarily composed of industrial land uses, with no housing available. This trend also explains why there is limited socio-demographic data available for this area in the subsequent maps.

Figure 3.6
Berryessa Station Existing Population Density

3.2.1.2 Employment Density

The figure below represents employment density at the block group level within a half mile radius of Berryessa Station. More specifically, employment density refers to the total employed population per square miles. The area with the highest employment density is located on the northwestern and southeastern portions of the study area. The area north of Berryessa Road and the area southeast of Marbury Road and King Road have between 9,000 and 12,000 employees. The lowest employment density is located south of the Creek, south of Marbury Road, and south of Berryessa Road. In these block groups, employment was between 1,500 and 3,000 employees per square mile.

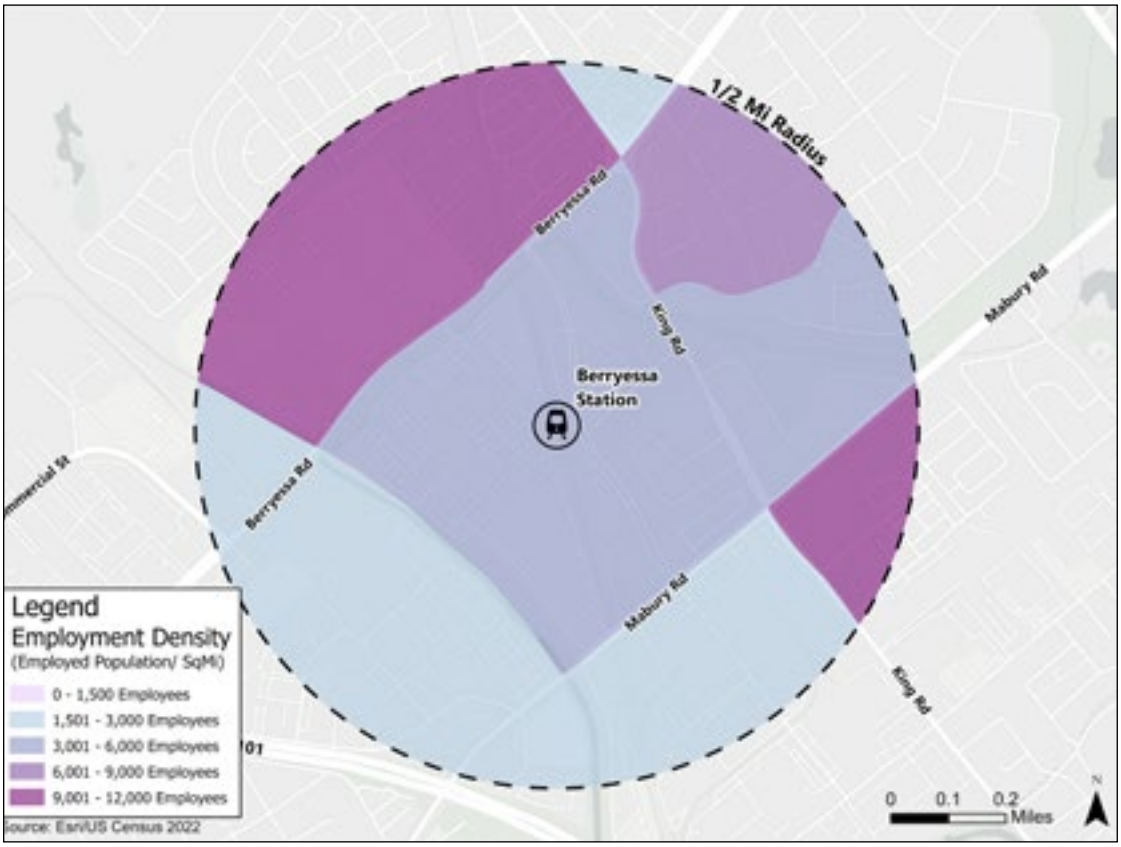


Figure 3.7
Berryessa Station
Employment Density

3.2.1.3 Median Household Income

The figure below reflects the median household income for households within a half mile of Berryessa Station. The majority of households within the study area are living above the federally recognized poverty line of $35,000 per year. However, there is a significant number of households located in the southern portion of the study area that are identified as living in poverty by this standard. Efficient connections to Berryessa Station have a higher importance for these households, as low-income households have less reliable access to a vehicle. This can negatively impact their access to jobs, healthcare, and essential services. Therefore, efficient connections to a transportation hub, like Berryessa Station, can have a strong positive effect on ensuring there is equitable access to opportunity for all community members. In contrast, the majority of households earn an annual income of over $100,000, with a significant portion of households earning more than $150,000 per year.

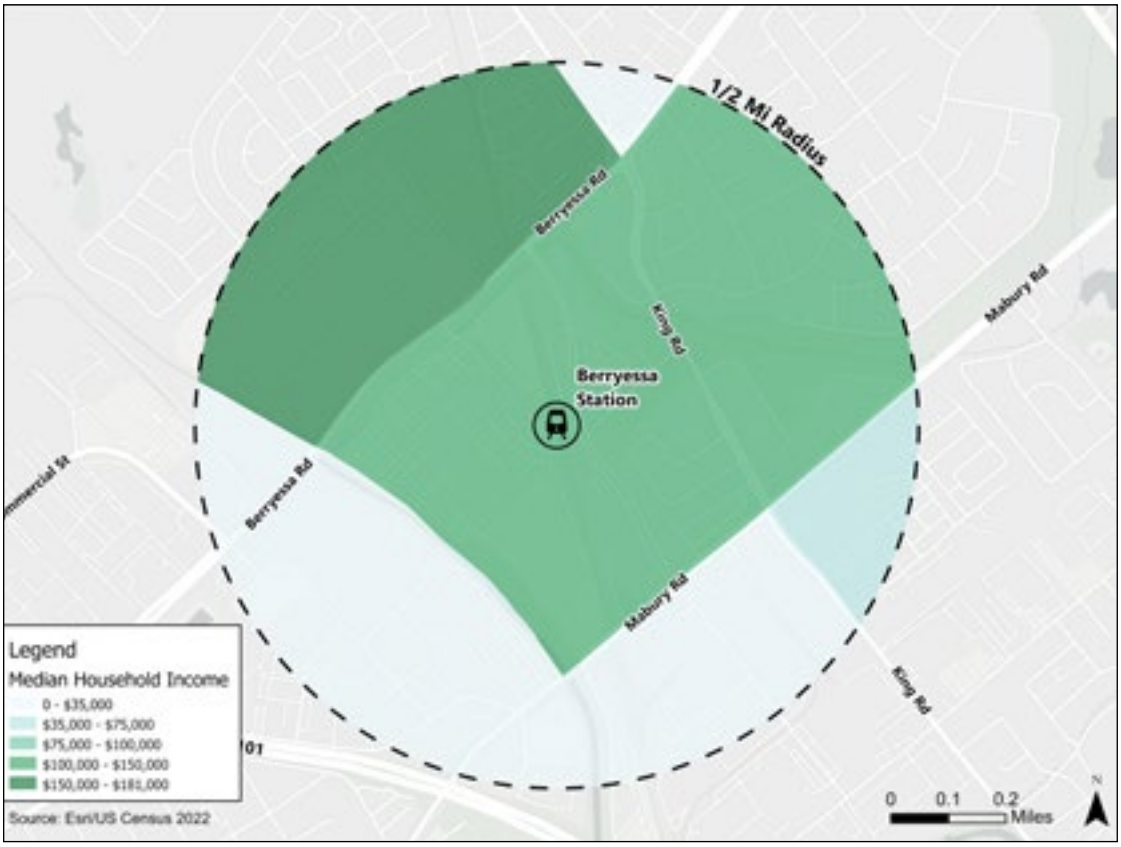


Figure 3.8
Berryessa Station Median Household Income

3.2.1.4 Communities of Color

The figure below reflects communities of color living within a half-mile of Berryessa Station. Communities of color are reflected as the percentage of non-white residents living within the study area. Communities of color are strongly represented within the study area, with non-white populations composing more than 75 percent of most block groups' population.

Figure 3.9
Berryessa Station Non-White Population

3.2.2 Existing Transportation Network

This section provides an overview of the existing transportation network within a half-mile radius of Berryessa Station. Transportation infrastructure described in this section includes the transit network and bicycle and pedestrian network. Additionally, this section discusses bicyclist and pedestrian collisions and vehicular traffic volumes.

3.2.2.1 Transit Network

There are four VTA bus routes operating within the half mile study area surrounding Berryessa Station. In addition, Berryessa Station is served by two Bay Area Rapid Transit (BART) Routes: the Orange Line and the Green Line. The figure below reflects the existing transit network.

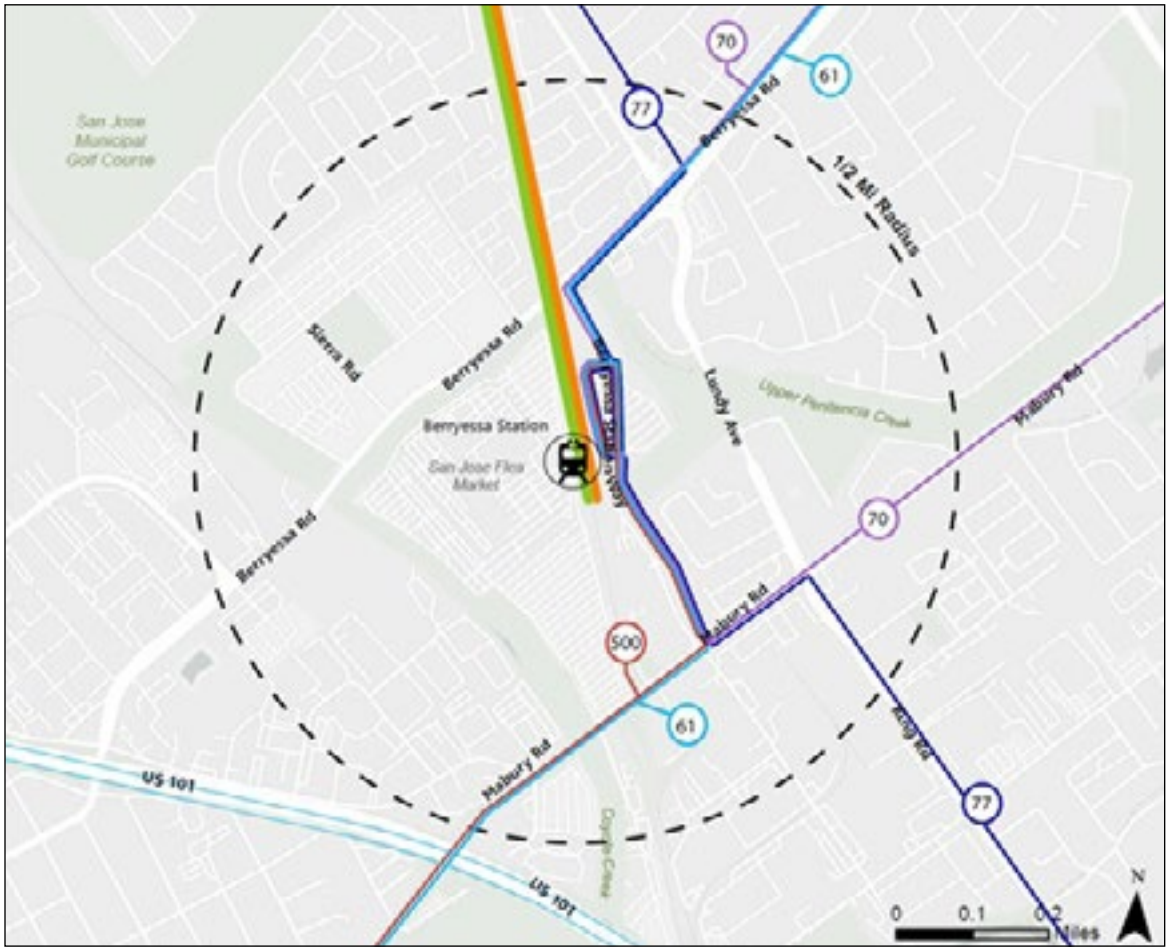


Figure 3.10
Existing Transit Network

Transit Service

The table below reflects weekday transit ridership at stations within a half-mile radius of Berryessa Station. Transit stations are listed in descending order according to the number of boardings at each station. Berryessa Station facilitates the bus bay with the highest number of boardings, with 456 boardings occurring at Bay 1 per day. It should also be noted that highest number of alightings for one stop also occurs at a bus bay at Berryessa Station, with 546 alightings occurring at Bay 2 on a weekday. These both serve rapid Route 500.

Table 4.1: Transit Ridership at Transit Stops Within a Half-Mile Radius of Berryessa Station

Berryessa BART (Bay 1)	456	4	500 SB
Berryessa BART (Bay 2)	0	546	500 NB
Berryessa BART (Bay 3)	155	28	SB 70
Berryessa BART (Bay 4)	79	31	SB 77
Berryessa BART (Bay 5)	147	38	SB 61
Berryessa BART (Bay 6)	50	140	61 NB
Berryessa BART (Bay 7)	47	174	70 NB
Berryessa BART (Bay 8)	51	78	NB 77
King & Mabury	35	9	77
Mabury & King	22	5	70
Berryessa & King	20	22	61, 70
Lundy & Berryessa	20	11	77
Lundy & Berryessa	17	14	77
Mabury & King	12	46	70, 77
Berryessa & Lundy	12	12	61, 70
Mabury & Creekland	4	4	70

Source: VTA (October 2022)

The figure below reflects the geographic location of transit stations within a half mile of Berryessa Station. Weekday transit ridership is also indicated at each transit stop. Most bus stops within the study area receive less than 25 boardings during weekdays, with the exception of Berryessa Station which facilitates over 450 boardings and 500 alightings, as indicated in the table above.

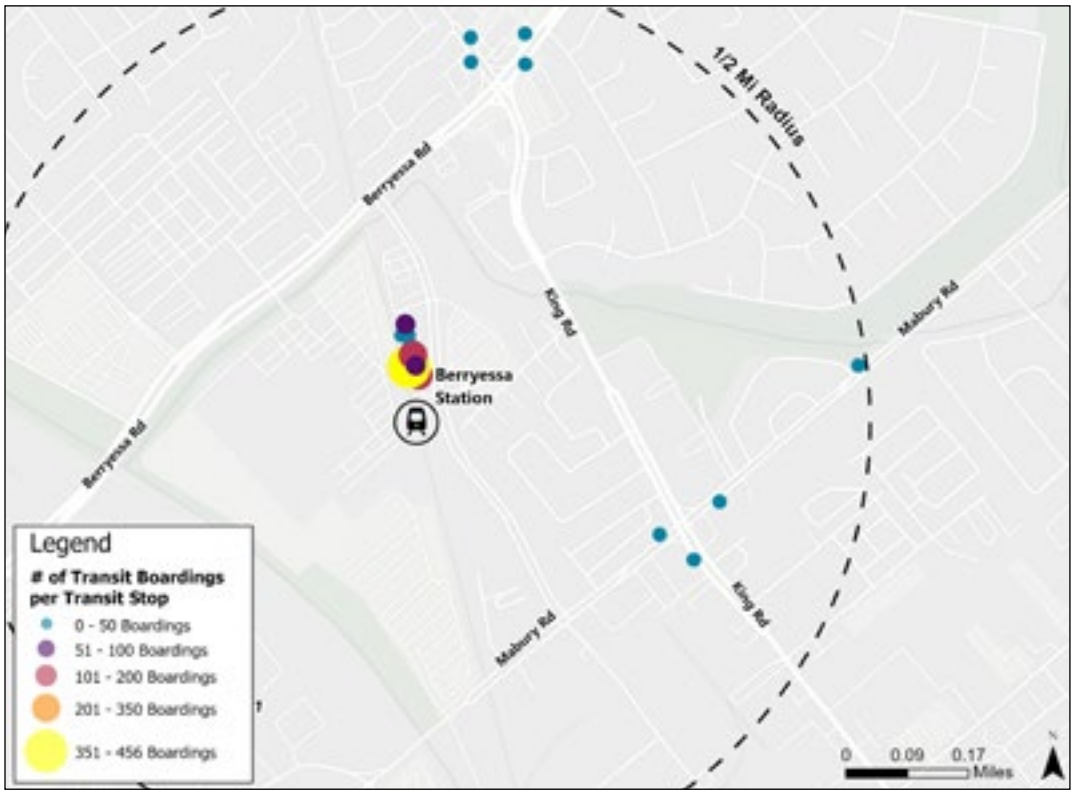


Figure 3.11
Transit Ridership Within a Half Mile of Berryessa Station

3.2.2.2 Bus Stop Amenities

In addition to the eight bus bays at Berryessa Station, eight VTA bus stops are located in the station area. VTA's Transit Passenger Environment Plan (TPEP, 2016) classifies bus stops within the VTA service area into the four following categories: basic, core, major, or community destination. Bus stop classification is determined based upon the number of weekday daily boardings at each station. Basic bus stops receive fewer than 40 weekday boardings, core stops receive between 40 and 199 boardings, major stops receive over 200 weekday boardings, and community destinations are defined as major stops within a unique location within the community context. The TPEP then assigns a typical set of amenities that should be available to passengers according to the bus stop category.

All of the bus stops outside of the station are classified as basic bus stops, while the stops at Berryessa Station is classified as a major stop. The bus stops are generally in compliance with the TPEP. A review of the existing conditions for each location is detailed in the following table. Cells in gray are amenities that are noted by the plan as "may be" provided but not required, or not required at all. Note that trees are not mentioned as an amenity in the TPEP but were included as a part of this study's analysis to determine if stops have shaded areas available.

Amenities Required by TPEP	BASIC								MAJOR
	Lundy/Berryessa N	Lundy/Berryessa S	Berryessa/Lundy	Berryessa/King	Mabury/King W	Mabury/King E	King/Mabury	Mabury/Creekland	Berryessa Sation
Standard bus stop sign	X	X	X	X	X	X	X	X	X
Real-time information decal on standard bus stop sign	X	X	X	X	X	X	X	X	X
One "U-rack" if along bicycle facility									X
Seating	X			X	X	X	X		X
Shelter system									X
Scheduled stop display/system map if shelter provided									X
Trash can if needed	X			X					X
In-shelter lighting, or pedestrian-activated lighting									X
Trees[1]	X			X			X		

All bus stops have a standard bus stop sign and real-time information decal. None of the basic bus stops have a U-rack despite the presence of bikeways on Berryessa Road, King Road, and Mabury Road. Five of the basic bus stops have a bench, and two include trash receptacles, although these amenities are not required. Most of the basic bus stops lack shade and only three are next to trees that can provide shade. The Berryessa Station bus bays are well designed and include shelter systems, transit information, and all of the amenities required for a major stop.

[1] Not an amenity required by the Transit Passenger Environment Plan.

Figure 3.12
Bus stop at Berryessa Road and Lundy Avenue with a standard bus stop sign

Figure 3.13
Bus stop at King Road and Mabury Road with seating set back from the sidewalk and shade from nearby trees

Figure 3.14
Berryessa Station bus bays

3.2.2.3 Bicycle and Pedestrian Network

To take a closer look at each street surrounding Berryessa Station, this section will provide an overview of existing conditions around the station area in terms of access points for pedestrians and bicycles. Berryessa Station is positioned along several high traffic volume corridors including Berryessa Road, Mabury Road, King Road, and Lundy Avenue. The station is also well positioned along nearby Coyote Creek, where a multi-use path is proposed to run along. There is substantial bicycle and pedestrian infrastructure already surrounding the station. However, there are also opportunities to close gaps in the sidewalk network and to create more protected bike connections.

Pedestrian Access Conditions

The following figures show the area around both stations at a ½ mile radius from each station. One concern is the lack of sidewalks.

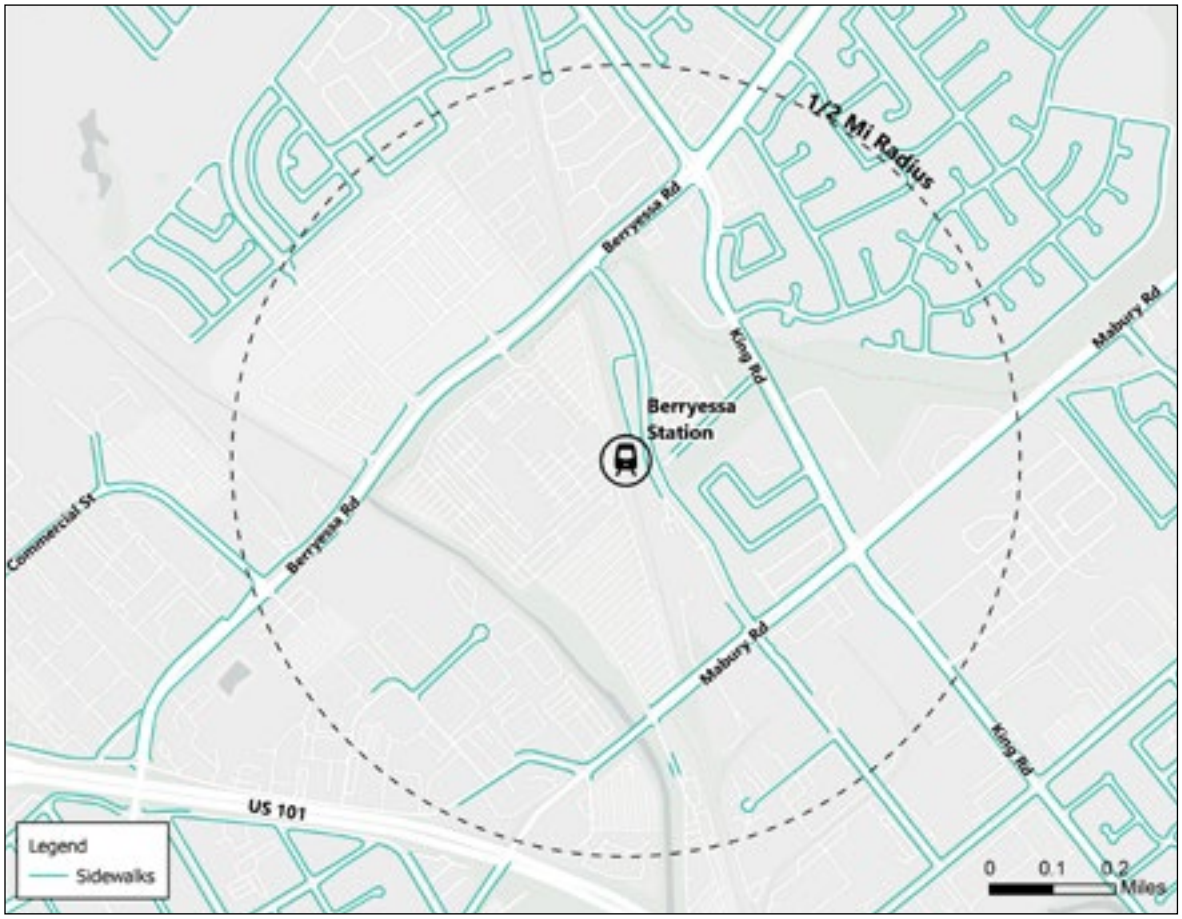


Figure 3.15
Berryessa Station Existing Sidewalk Network

The figure below reflects the 10-minute walkshed surrounding the station. The 10-minute walkshed indicates the distance that a pedestrian could travel in any direction if they left from the station within 10 minutes. The walkshed is approximately a half-mile radius surrounding the station, with the exception of not traveling far westward, as pedestrian travel is inhibited by Coyote Creek. Additional barriers in the pedestrian network included narrow sidewalks and a lack of wayfinding signage. These barriers are discussed in further detail in the walk audit results found in Section 5.

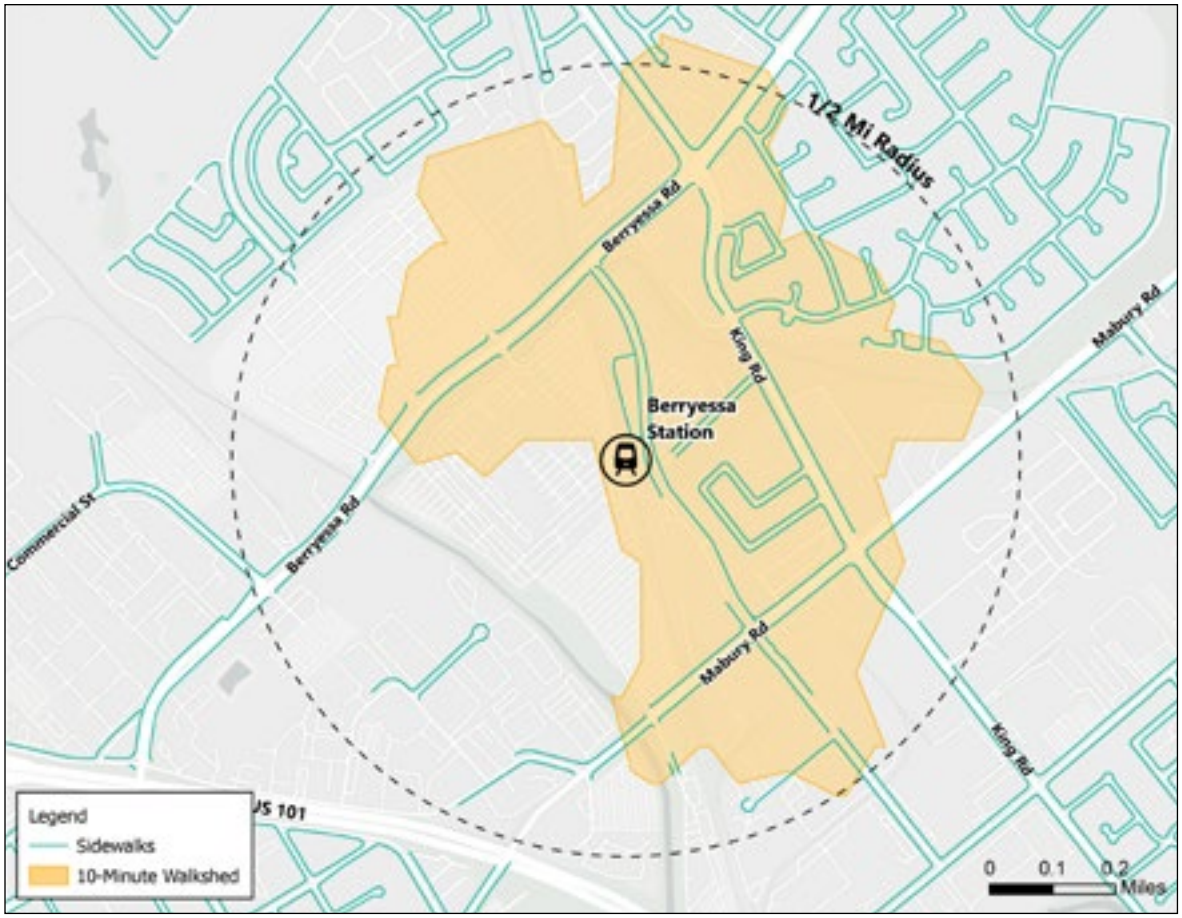


Figure 3.16
Berryessa Station Existing Sidewalk Network

Bicycle Access Conditions

The figure below reflects the existing and proposed bicycle network surrounding Berryessa Station. Currently, Class II bike lanes provide most of the existing connections for bicyclists closest to the station. Class II bike lanes exist along Berryessa Road, Mabury Road, and Lundy Avenue. However, a Class I multi-use path exists along the Upper Penitencia Creek and provides a protected bike and pedestrian connection from outside the half-mile radius. Multi-use paths are also located along Berryessa Station Way, as well as through the southern half of the site to the station from Mabury Road.

In addition to these existing connections, several more protected options are proposed as part of the San Jose Better Bike Plan. Bikeways proposed as part of this plan include Class IV protected bikeways along high traffic volume corridors including along Berryessa Road, Mabury Road, Berryessa Station Way, and Sierra Road. The Central Bikeway also proposes an enhanced bicycle superhighway along Mabury Road building upon the existing Class IV.

There are several Class I multi-use paths proposed as well, including along Coyote Creek, which will stem into another Class I path that will feed directly into the station. Lastly, Class III bike routes are proposed in the residential areas surrounding Berryessa Station to provide safer bicyclist connections along lower traffic speed streets.

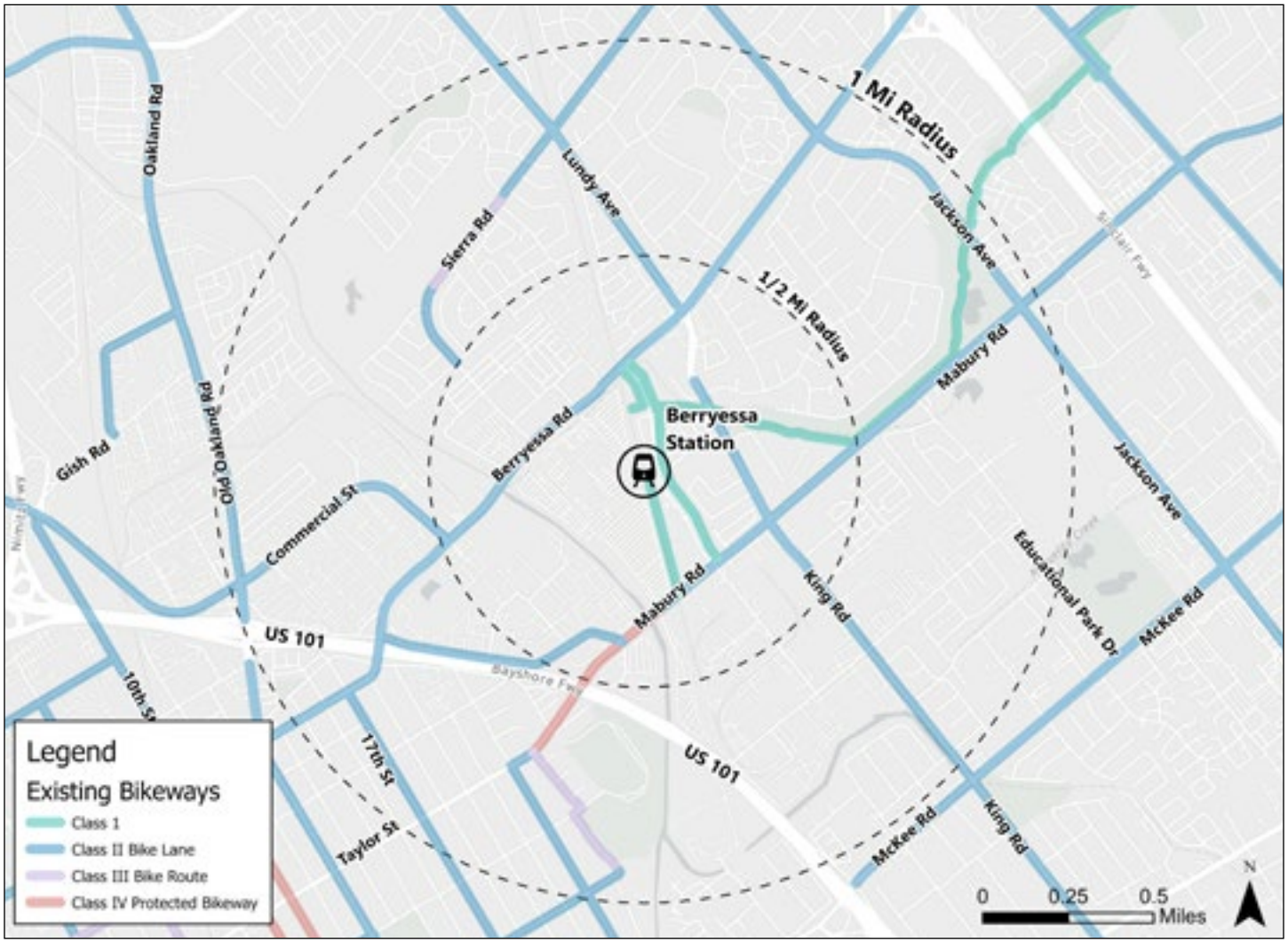


Figure 3.17
Berryessa Station Existing Bikeway Network

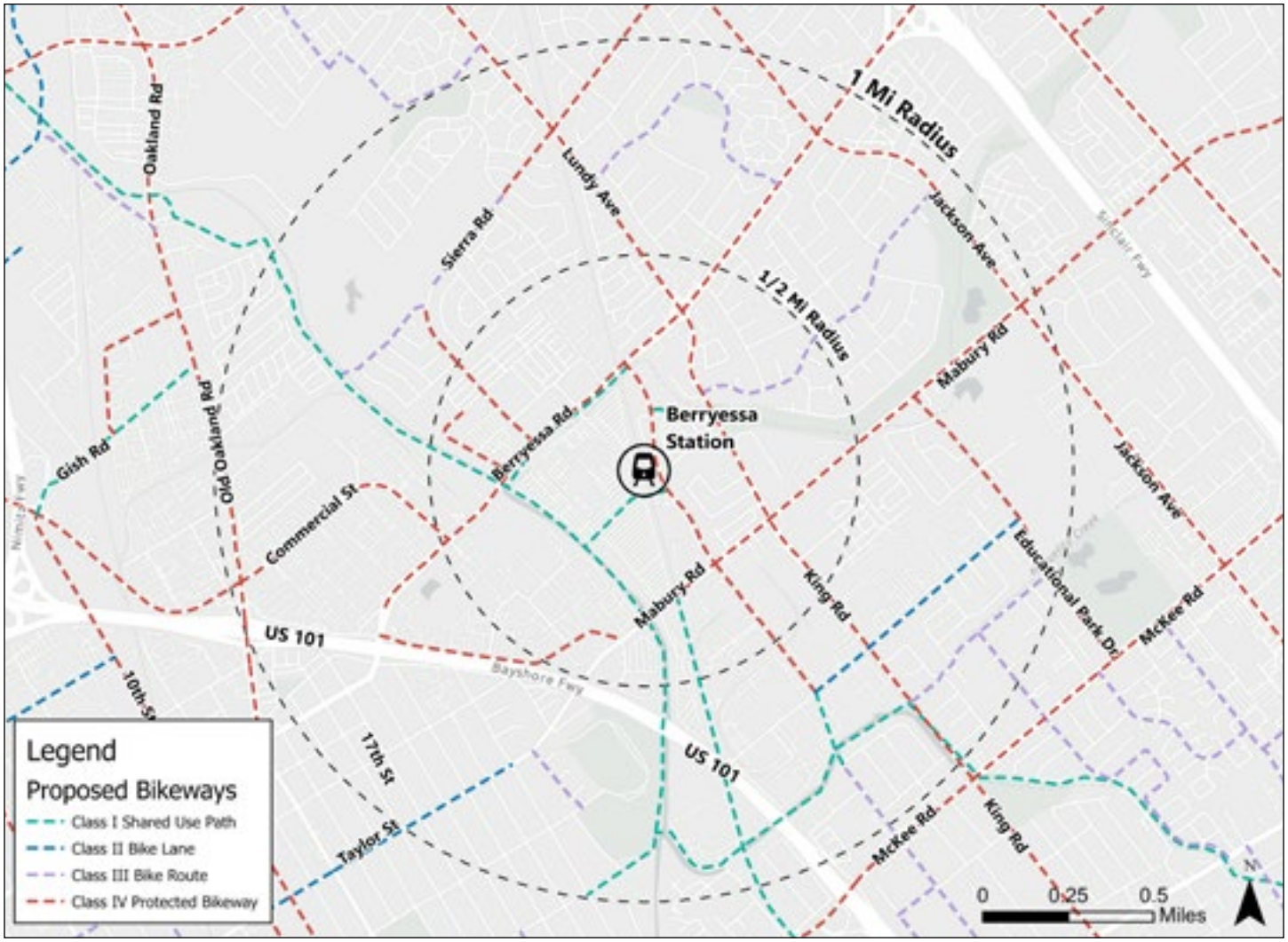


Figure 3.18
Berryessa Station Proposed Bikeway Network

The figure below indicates 10-minute bikeshed surrounding the station. The 10-minute bikeshed indicates the distance that a bicyclist could travel in any direction if they left from the station within 10 minutes. The bikeshed is approximately a three-mile radius and is supported by an extensive bicycle network surrounding the station. Impedances to bicycle travel indicated in the bikeshed may include gaps in the bicycle network, street connectivity, and steeper topography making it harder for bicyclists to travel further.

Figure 3.19
10-Minute Bikeshed

Bicycle and Pedestrian Collisions

The figures below reflect instances of pedestrian and bicyclist collisions and severity within a half mile of Berryessa Station between 2017 and 2021. Figure 4-13 below indicates that a total of seven pedestrian collisions occurred within a half-mile radius of Berryessa Station, with most collisions resulting in moderate injury or death. Collisions mostly occurred along King Road and the southern portion of Mabury Road, with a couple along Berryessa Road.

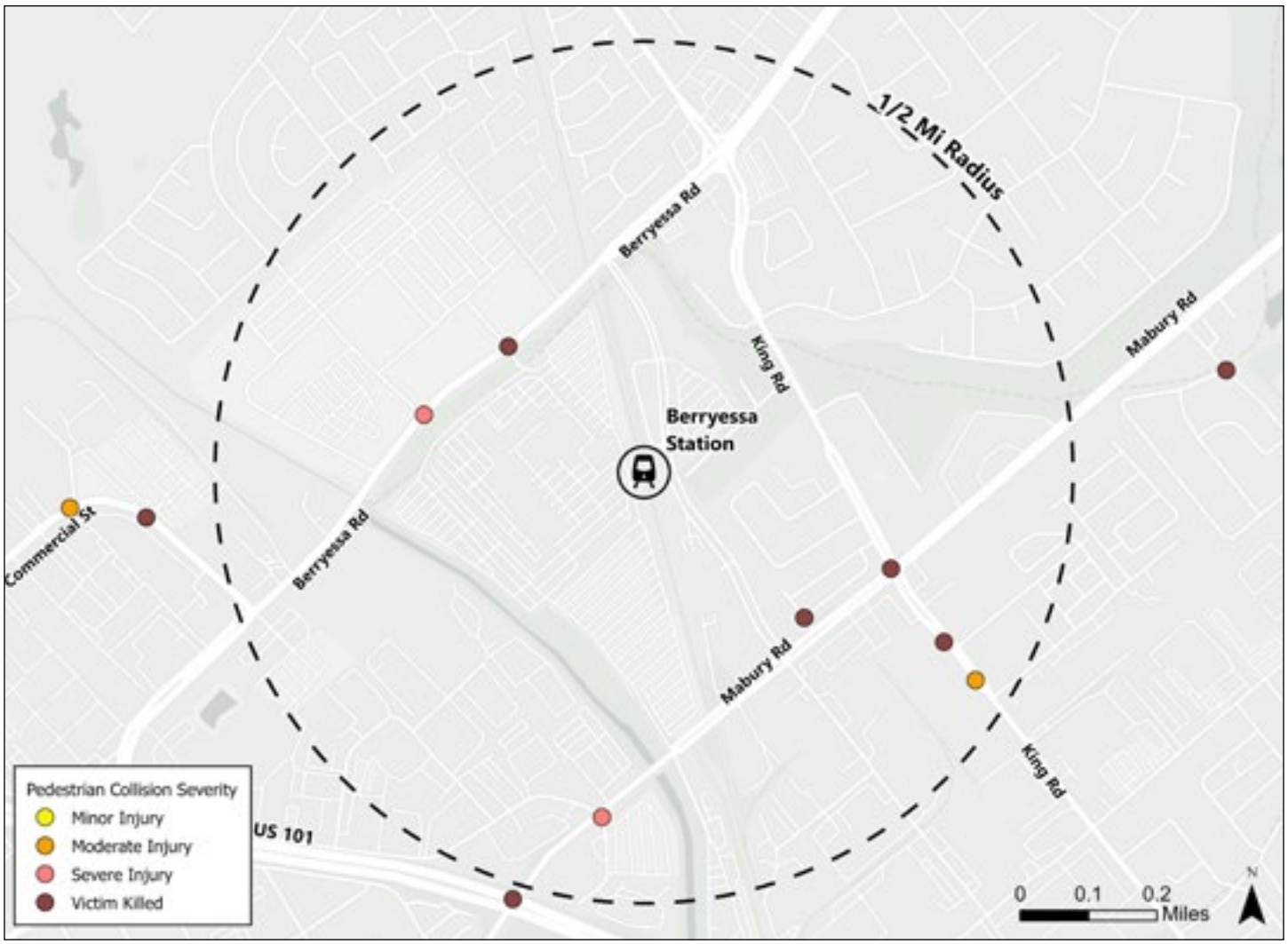


Figure 3.20
Pedestrian Collision Severity (2017 – 2021)

The figure below indicates that a total of three bicyclist collisions occurred within a half-mile radius of Berryessa Station, with two collisions resulting in death and one in minor injury. Collisions mostly occurred along Mabury Road and at the intersection of Berryessa Road and King Road. Class II bike lanes are present along these corridors. Additionally, these locations are corridors with high vehicular travel speeds and volumes.

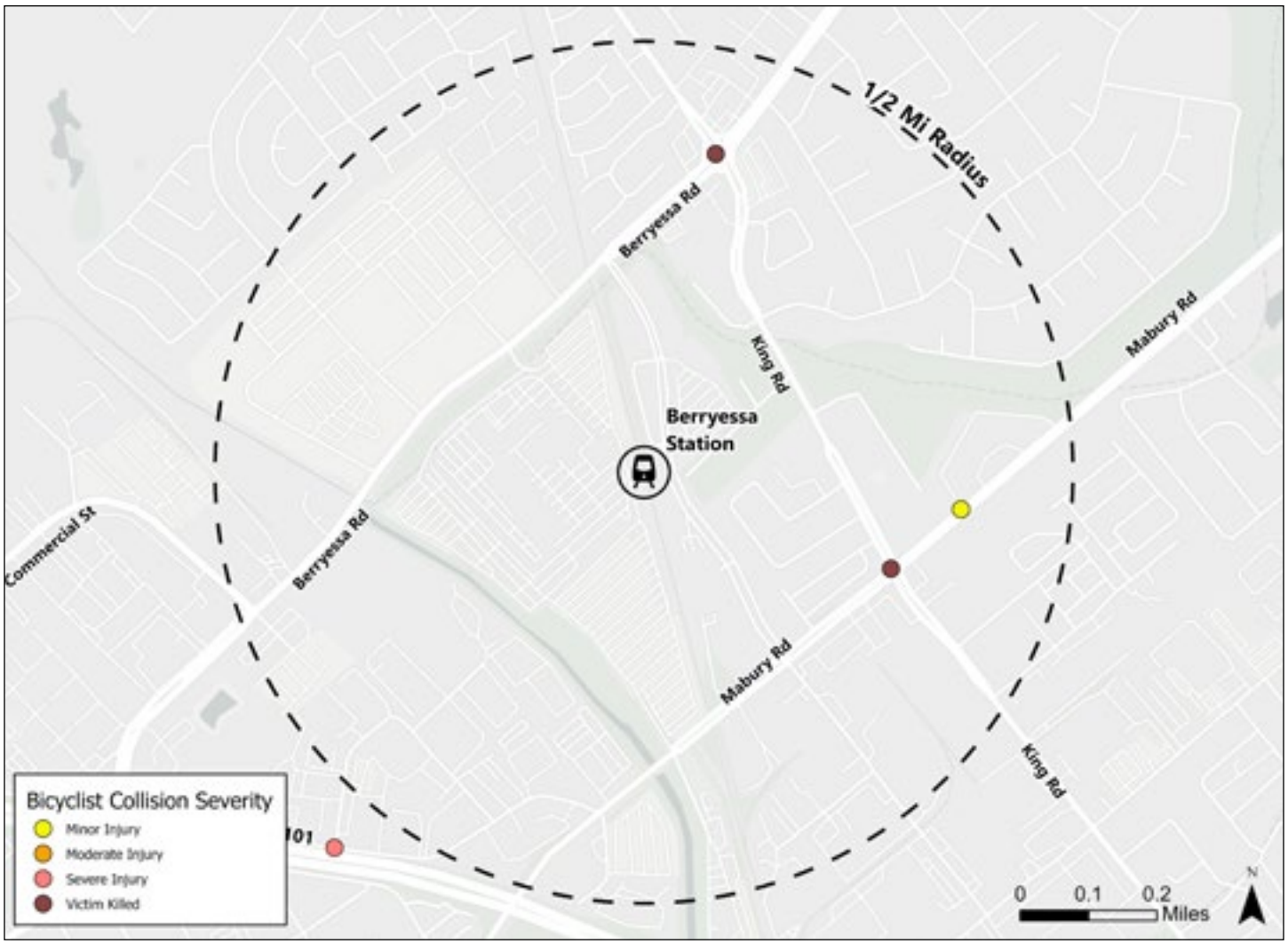


Figure 3.21
Bicyclist Collision Severity (2017 – 2021)

3.2.3 Vehicle Volumes

The figure below reflects the average daily vehicular traffic (ADT) at key intersections within a half-mile radius of Berryessa Station. Most intersections within the study area receive between 11,656 and 23,310 vehicles per day. Intersections receiving the highest ADT include:

- King Road & Salamoni Court
- Commercial Street & Berryessa Road
- Berryessa Road & Sierra Road

Figure 3.22
ADT Within a Half Mile Radius of Berryessa Station

3.3 Walk Audit Results

To further assess on-the-ground conditions for bicyclists and pedestrians, a walk audit was conducted on September 18, 2023. Community groups and stakeholders around the station areas were invited to participate in the walk audit for this study. The walk audit was conducted with 14 participants, including VTA staff and the consultant team. The station area was divided into quadrants with a designated walking route for each, for a total of four designated walking routes.

Participants noted barriers, strengths, and observations on a map. The locations of barriers, strengths, and observations are included on the map below.

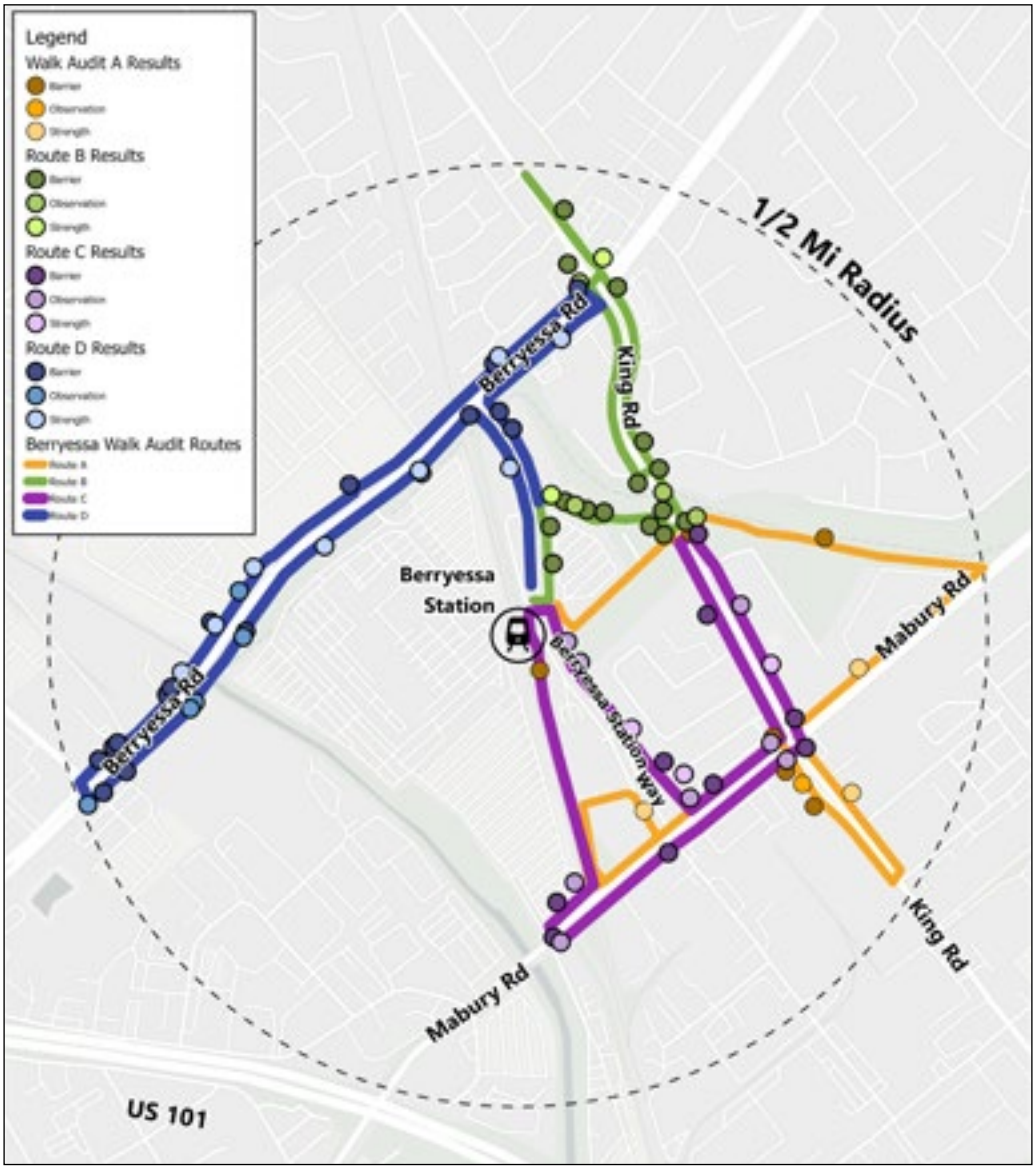


Figure 3.23
Walk Audit Results

3.3.1 Walk Audit Key Findings

The most common themes emerging from the walk audit results are summarized as follows:

Barriers:

- There are several sidewalk gaps and narrow and or cracked sidewalks.
- There is a need for additional wayfinding signage leading to and from the station.
- There is a lack of a safe bike lane near the station on Berryessa Road.
- Vehicular speeds on Mabury Road are high.
- There is a need for additional trash clean up surrounding the station area.
- There are several blind driveways, making it hard for truck drivers to see pedestrians traveling on the sidewalk.
- Short timers for long crossing distances make safely crossing intersections challenging, particularly for seniors.
- Vehicles parked in the bike lane along Berryessa Road interrupt bicycle travel.

Strengths:

- There is good tree canopy and shade present on some pedestrian paths.
- There are wide sidewalks in some areas with pleasant walking conditions.

Opportunities:

- There is an opportunity to create a future multi-use next to the BART alignment and connecting to the Upper Penitencia Creek.
- There is an opportunity to implement a high visibility crosswalk at Mabury Road and King Road.
- Additional bus shelters with seating can be implemented at bus stops in the station area.

Figure 3.24
Loading occurring in bike lane on Berryessa Road

3.3.2 Walk Audit Survey Summary

Participants also filled out a post-walk survey to rate various elements of their experience walking in the station area from 1-5 in four categories: safety, aesthetics, accessibility, and transfers.

The safety category of the survey included nine metrics related to lighting, pedestrian and bicyclist infrastructure, security, eyes on the street, and general perception of safety. Participants gave most metrics a score above 3.0. Station lighting scored highest in the 'safety' category, followed by adequate safety buffers for pedestrians on walkways. Walk audit participants noted that they felt safe in the station area, however, gave the 'eyes on the street' metric the lowest score. Limited eyes on the street from limited station area activity can make station visitors feel isolated and reduce perceptions of safety.

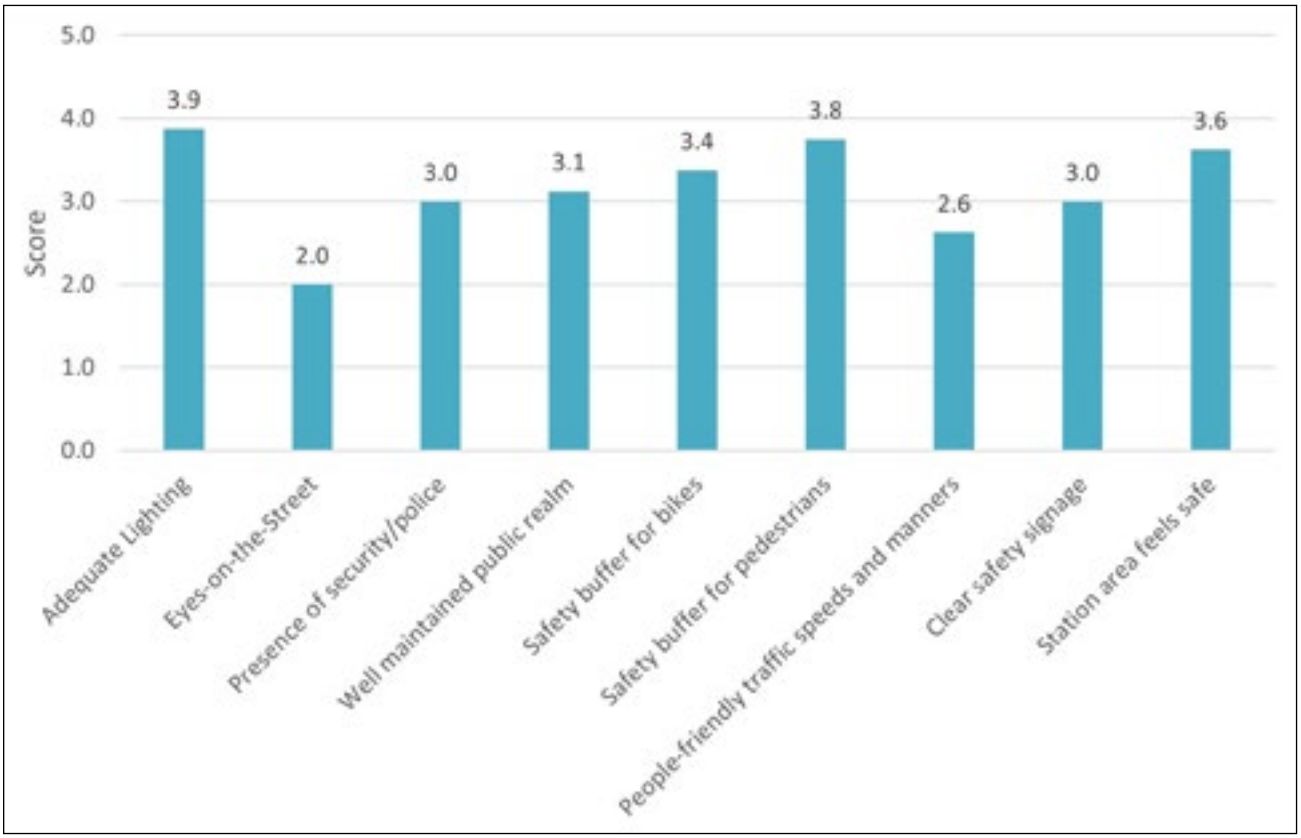


Figure 3.25
Safety Scores

The 'aesthetics' category included five metrics related to sense of place, landscaping, the placement of pedestrian amenities, and an overall pleasant station area experience. Scores in this category varied, with the highest score being given to pleasant landscaping, followed by an overall pleasant experience. In contrast, walk audit participants noted that pedestrian amenities were not placed strategically throughout the station area and that there were a few elements that were not friendly to pedestrians.

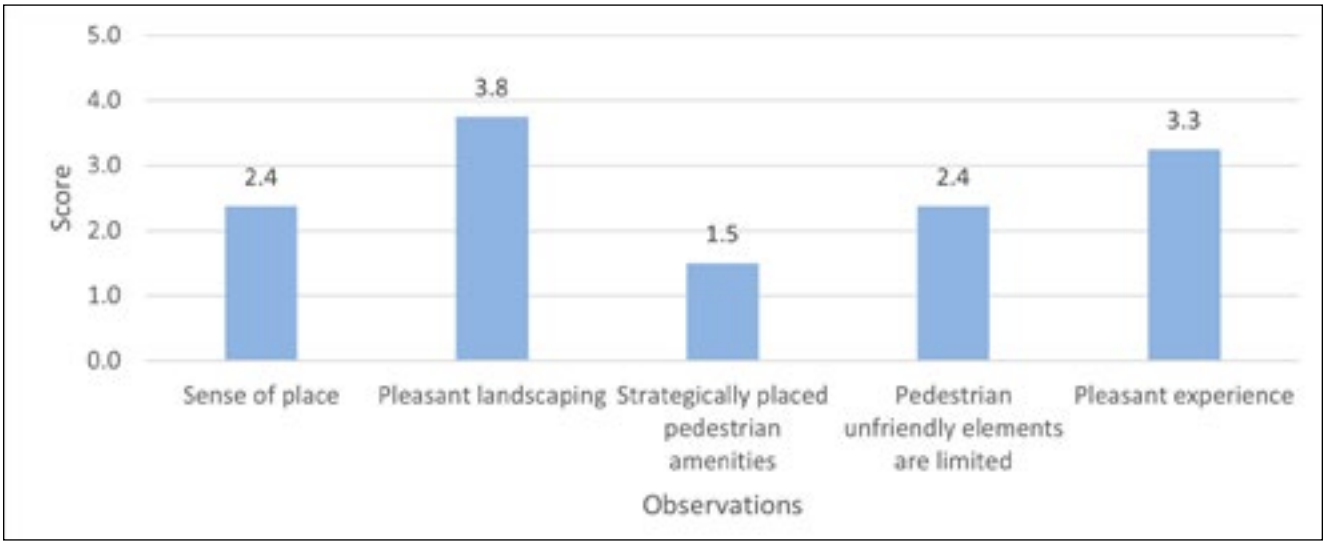


Figure 3.26
Aesthetic Scores

The 'accessibility' category included seven metrics related to sidewalks, pedestrian crossings, bicycle infrastructure, signage, curb ramps, and pick up-drop off activity. The overall accessibility of the Berryessa Station area was scored highly. Metrics scored highest included sufficient curbs and curb ramps, streamlined pick up-drop off activity, and high-quality sidewalks. The lowest scoring metric was 'clear-safe pedestrian crossings. Participants also noted that station accessibility would benefit from additional wayfinding signage, as this would make navigating the public realm more intuitive.

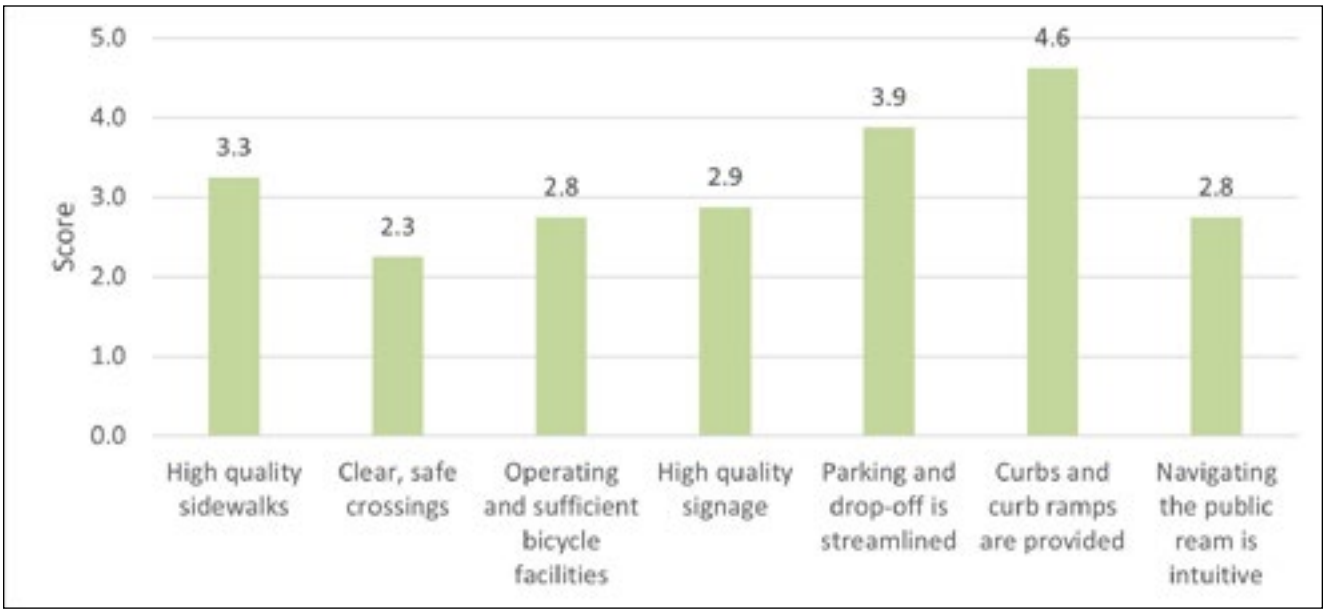


Figure 3.27
Accessibility Scores

The 'transfer' category included five metrics related to clear transit transfer signage, real-time information, shared seating and waiting areas, reduced distances for transfers, and seamless transfers between transit modes. The 'reduced distances for transfers' metric scored highest, indicating that travelers did not have to travel far to reach their next connection and creating a more seamless transfer experience. In contrast, participants noted that the transfer experience could be improved if real-time information and additional signage was more available.

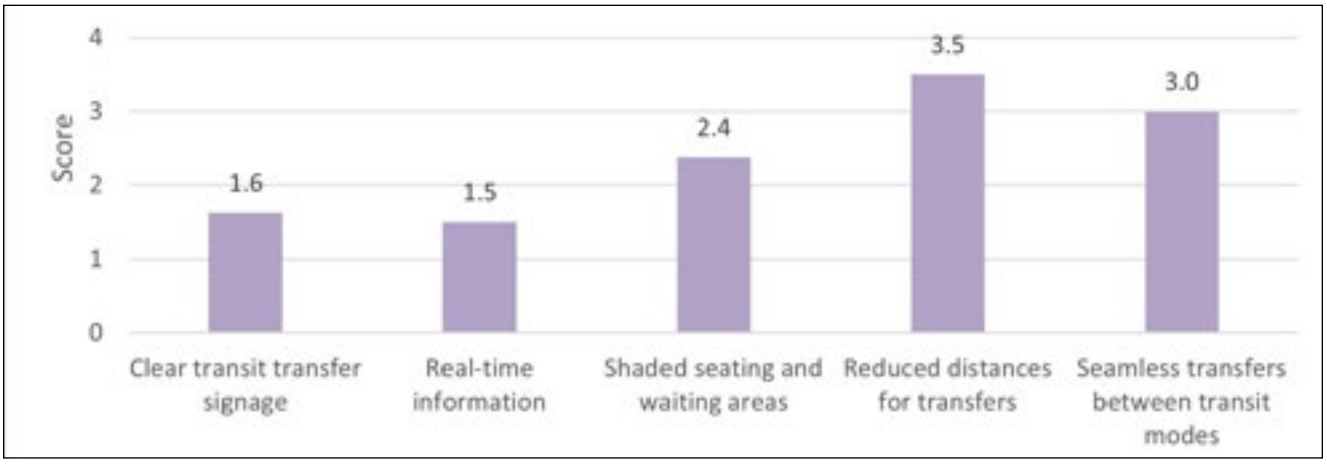


Figure 3.28
Transfer Scores

The figure below reflects the average score for each of the four categories measured on the walk audit survey. The 'transfer' category was scored highest, followed by station accessibility. In contrast, station aesthetics were scored lowest and offer an opportunity for improvements to be recommended in later tasks of the study.

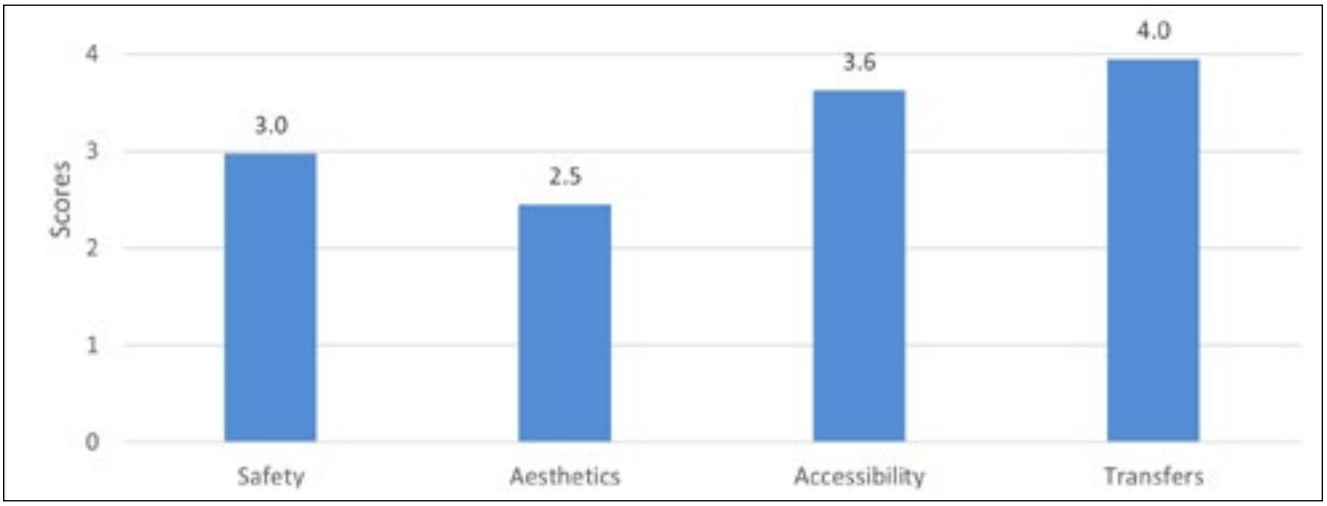


Figure 3.29
Average Scores

3.4 Summary Analysis of Access Patterns and Issues

This section highlights the access patterns and issues present in the Berryessa Station study area based on the review of existing conditions detailed in this report. These access patterns and issues reflect conditions that will be further explored in the Needs Assessment for development of proposed access improvements.

Generally Pleasant Pedestrian Infrastructure and Passenger Amenities

The neighborhood surrounding the station area is relatively new and provides generally pleasant walking conditions for pedestrians. Tree wells exist along most sidewalks and provide a buffer between pedestrians and the roadway and the station area is relatively clean.

At the station, there are various amenities for pedestrians such as shelter, seating, wayfinding, bike lockers, and transit information. The pick-up/drop-off area along Berryessa Station Way was observed to be working well. A crosswalk is present from the parking lot on Berryessa Station Way to the station, which provides convenient access to the station.

Lack of Shade

The station area lacks shade. Many of the trees in the area are newer and do not yet provide much shade along sidewalks and pedestrian pathways. Most of the bus stops in the study area also lack shade and weather protection for passengers waiting for their bus.

Safety Concerns for Bicyclists and Pedestrians

As the station is located near US 101 and along busy corridors, there is a concern over high vehicular speeds and wide roadways that contribute to a low level of comfort for bicyclists. In particular, corridors such as Berryessa Road, Mabury Road, and King Road feel unsafe for pedestrians and bicyclists. About 10 collisions occurred in this half-mile radius over a five-year period, with most resulting in moderate or severe injury or death. Accordingly, the City recognizes King Road as a Vision Zero corridor.

The Penitencia Creek Trail offers a convenient connection for pedestrians and bicyclists. However, walk audit participants expressed concern over safety, especially at night, as homeless encampments are located along the trail and litter is found at entrances and throughout.

Need for More Convenient Bicycle Facilities at Berryessa Station

Bike lockers are located on the north side of the station. A walk audit participant mentioned that it would be helpful to have bike lockers on the south side as well, as the station is large and they were not aware of the bike lockers on the north side as they always enter from the south side.

A bike share station currently exists at Mabury Road and Berryessa Station Way. This is far from the station and is likely to go unnoticed by those who arrive at the station and need another last-mile connection option.

Underutilized Parking

Most people arriving at the station seem to be parking in the station lot across Berryessa Station Way. The parking structure at the station is largely underutilized. The mode of access counts conducted for this study included driveway entrance and exit counts at the parking lot and parking structure, and the results are discussed in Section 6.1 of this report.

4 Future Conditions

The following section provides an analysis of future anticipated conditions for the Berryessa/ North San José Station site (hereafter Berryessa Station). This includes preliminary TOD site plans and proposed recommendations from other projects and plans for the study areas.

4.1 Berryessa Station Preliminary Site Plan

The Berryessa BART Urban Village Plan is the first regional transit urban village plan to be developed in San José and is intended to provide access to major transit facilities of regional significance. The 270-acre area illustrated in the figure below currently consists of single-family homes, townhouses, apartments, small retail plazas, industrial uses, Berryessa Station, and the San José Flea Market. It is planned to grow by 22,100 jobs and approximately 4,800 dwelling units and promote a live, work, play environment that supports healthy living and less time in cars. The Plan also discusses the proposed design improvements at and around Berryessa Station, as part of the vision for VTA-owned land to become a place for people to live and work near public transit services. Urban villages are defined as areas that include residential and jobs-based developments; have access to transit; and are walkable and bicycle-friendly. Additionally, the urban village strategy fosters:

- Engagement of local residents in planning the urban village;
- A mix of housing and employment to reduce traffic;
- Revitalizing underutilized properties;
- Densities that support transit use, bicycling, and walking; and
- High-quality urban design

Figure 4.1
Berryessa Urban Village

More specifically, the TOD site will accommodate an affordable housing project on one acre of the site with mixed-use, market rate housing and office development in future phases. The proposed developments are reflected in the figures below.

Figure 4.2
Future Berryessa Station Layout

The first phase of development consists of a housing development on the northeast portion of the site. As of December 2023, specific station layout modifications that will be made include 49 units of affordable housing and 195 units of market rate housing, eight parking spaces on-site for residents, and 194 bicycle parking spaces. Parking for residents will also be available in the existing VTA parking structure, which is currently underutilized. Circulation impacting the key surrounding corridors of Berryessa Station Way, Mabury Road, and Berryessa Road, is discussed in the next section. Other amenities that will improve the station visitor experience at Berryessa Station will include public art, upgraded landscaping and lighting, and a central pedestrian plaza. These improvements are reflected in the figure below.

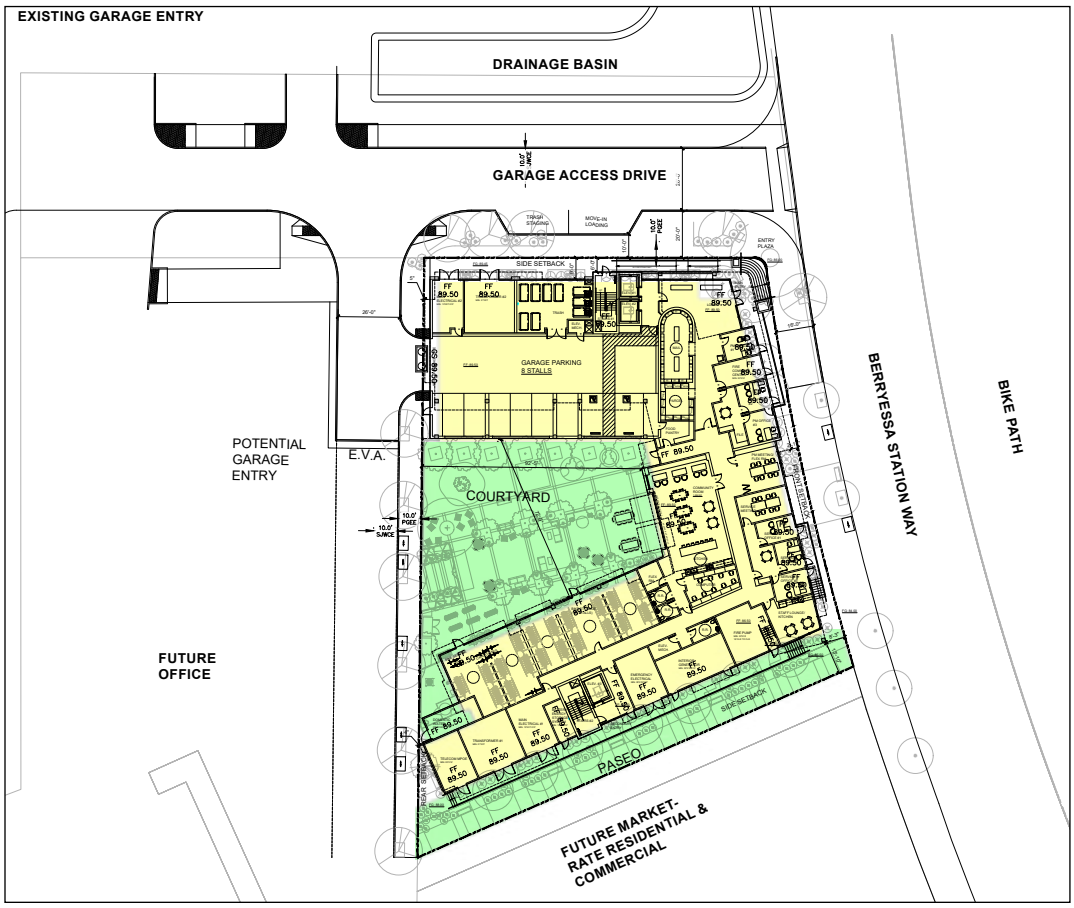


Figure 4.3
Berryessa Station TOD Site Plan (Phase 1)

4.2 Circulation Plan

The proposed site plan must facilitate efficient access for multimodal travelers. The figure below shows how for vehicles, buses, bikes, and pedestrians will enter and exit the site. Specific access routes are also described by mode below:

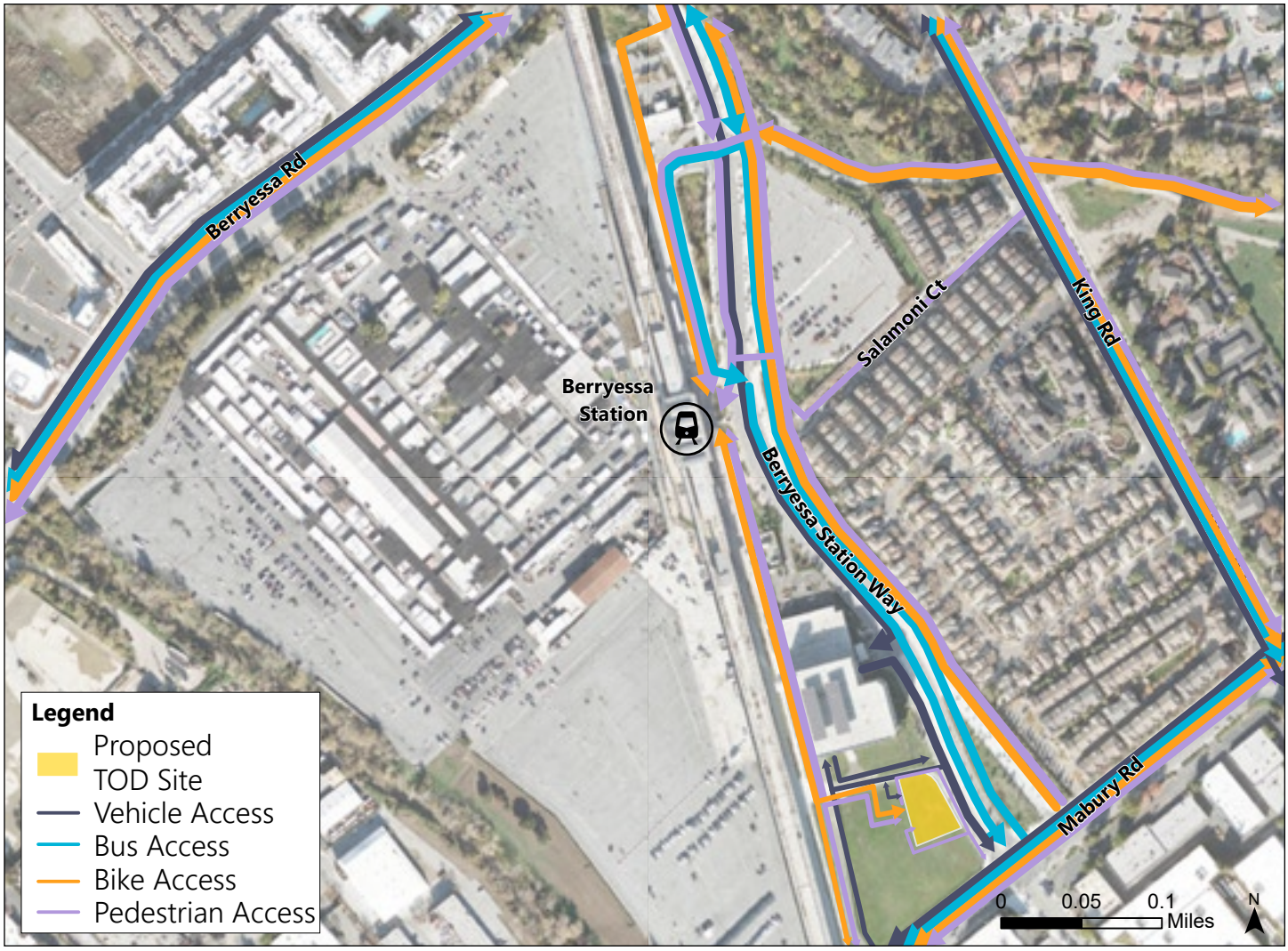


Figure 4.4
Berryessa Station Multimodal Circulation

Vehicle Access: Vehicles can arrive at the station from Berryessa Road and Mabury Road via Berryessa Station Way. There are two parking lots available at the site. Vehicles can turn right off of Berryessa Station Way to enter the surface lot if they're arriving via Mabury Road or turn left off of Berryessa Station Way if they're arriving via Berryessa Road. Vehicles can also park in the parking structure adjacent to the proposed TOD site. Vehicles can turn right if they're arriving via Berryessa Station Way. In contrast, drivers traveling along Mabury Road must turn right onto the service entrance located on Mabury Road to enter the southern entrance to the structure. There is also a "right in-right out" entrance/exit planned on the southern exterior of the parking garage.

Bus Access: Buses can arrive at the station from Berryessa Road and Mabury Road via Berryessa Station Way. Buses arriving at the station from Berryessa Road will turn onto Berryessa Station Way via a mixed travel lane and turn right into the one-way bus bay at Berryessa Station. In contrast, buses arriving via Mabury Road will turn right into a bus only travel lane on Berryessa Station Way. Buses will then turn left into the one-way bus bay at the station.

- **Bike Access:** Bikes can access the station from Berryessa Road, Mabury Road, and the Upper Penitencia Creek Trail. Bicyclists can turn right onto a separated bikeway on Berryessa Station Way from Berryessa Road. This separated bikeway provides a direct connection to bike parking at the station. Similarly, bicyclists coming from westbound Mabury Road can turn right onto a separated bikeway on Berryessa Station Way that provides a direct connection to the station. Bicyclists coming from eastbound Mabury Road can turn left onto a separated bikeway running behind the station that will provide a direct connection to bike parking. Bicyclists can also arrive to the station via the Upper Penitencia Creek Trail, which provides a direct connection to the station and to bike parking. Lastly, bicyclists leaving from the proposed TOD site can utilize the separated bikeway running behind the station to arrive directly to the station.
- **Pedestrian Access:** Pedestrians can access the station from Berryessa Road, Mabury Road, and the Upper Penitencia Creek Trail. Sidewalks are located along both sides of Berryessa Road, Mabury Road, and Berryessa Station Way. Additionally, there is a separated path for pedestrians along the eastern side of Berryessa Station Way. There is a crosswalk for pedestrians to access the station directly from the Upper Penitencia Creek Trail to the north and south of the Station's surface parking lot via Salamoni Court. Additionally, pedestrians can enter and exit the proposed TOD site via the protected pedestrian "paseo" along the southern edge of the site. Lastly, pedestrians can also utilize the separated path running behind the station if traveling from Mabury Road or the TOD site.

Circulation Considerations

The proposed TOD will incorporate new elements that will impact multimodal access. For example, the proposed site plan will add a new parking garage for resident access, which will require additional vehicle access from Berryessa Station Way. This may cause vehicle traffic to queue up along southbound Berryessa Station Way. Additionally, there is not a direct entrance to the parking garage for visitors traveling from Mabury Road onto northbound Berryessa Station Way. Visitors coming from this direction must enter through a southern entrance along Mabury Road. Additional wayfinding could make finding this entrance easier. Specific pedestrian and bicycle, transit, and vehicular access needs will be further described in Section 6.

4.3 Proposed Projects

In addition to the anticipated development described in the previous section, this access study includes consideration of roadway or access improvements that have already been proposed by other local or regional plans, as reviewed in Section 3 of this plan. This section further summarizes key projects proposed within these plans to be incorporated into this access study's recommendations.

4.3.1 San José Better Bike Plan 2025

The Better Bike Plan 2025 proposes the addition of several bikeways that will enhance access to the station, including a Class IV protected bikeway on Capitol Avenue, Berryessa Road, Sierra Boulevard, Mabury Road, and King Road.

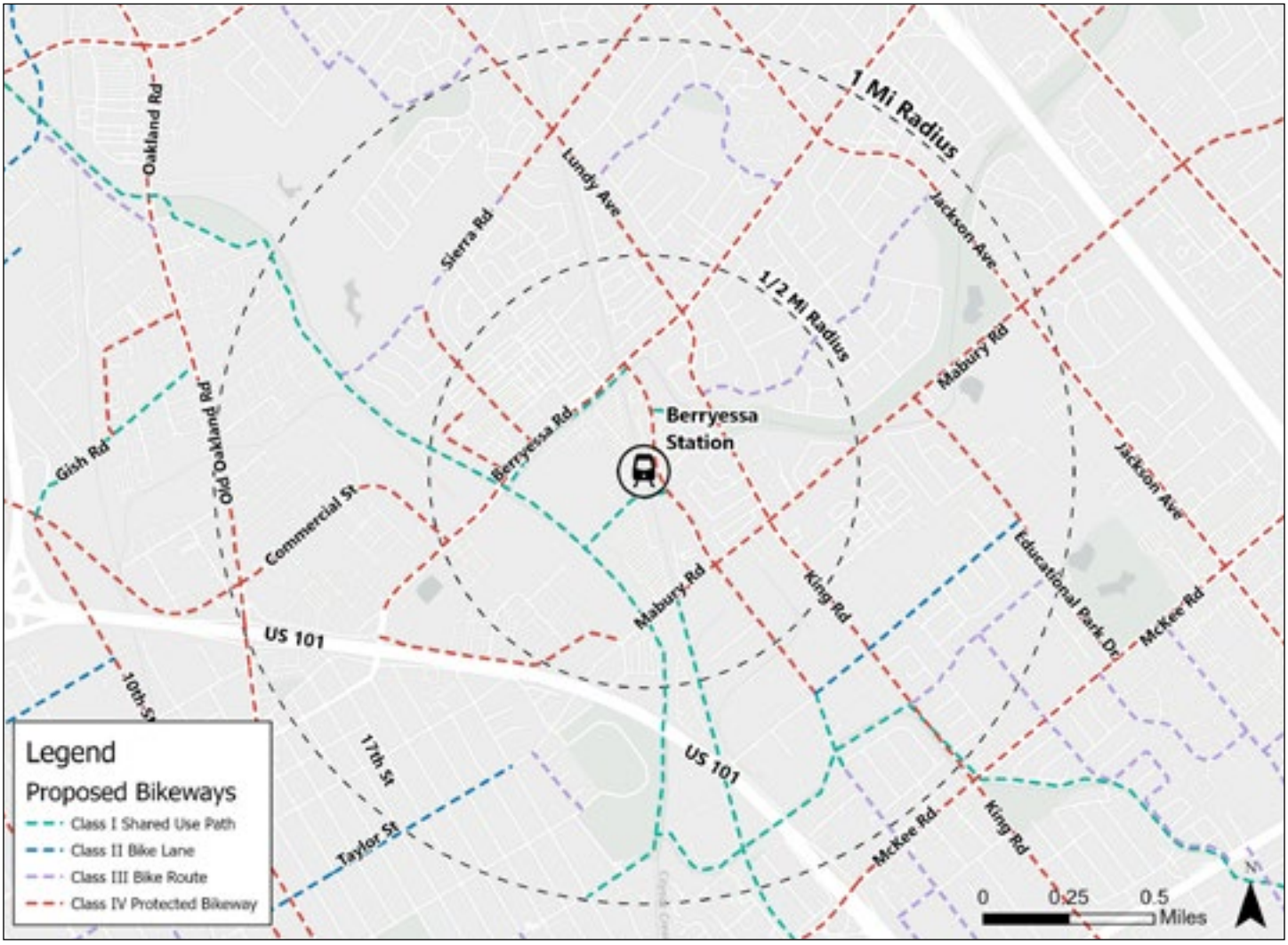


Figure 4.5
Proposed Bikeways

4.3.2 US 101 Mabury-Berryessa-Oakland Corridor Project

This is supported by the US 101 Mabury-Berryessa-Oakland Corridor Project, which proposes bicycle and pedestrian improvements to support interchange improvements proposed on US 101 at Berryessa Station. Other improvements will include a new soundwall at the interchange. The Central Bikeway, being designed by VTA, will also provide a streamlined bicycle connection to the station along Mabury Road.

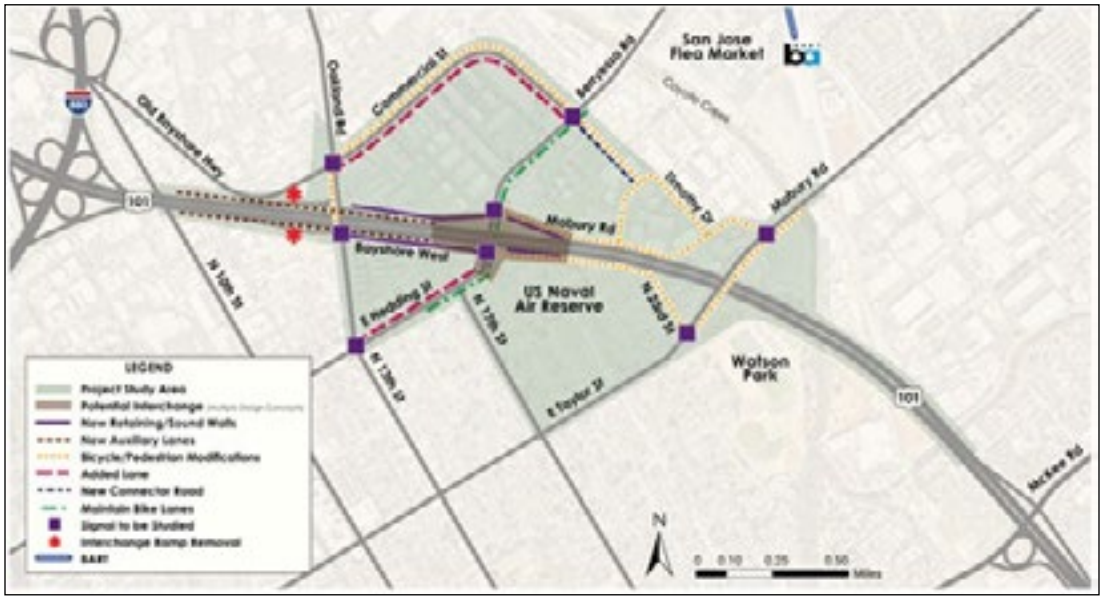


Figure 4.6
US 101 Mabury-Berryessa Interchange

4.3.3 Central Bikeway Study

The Central Bikeway will be a Class IV bikeway that connects Santa Clara Station, College Park Station, and Berryessa Station via Mabury Road. The Central Bikeway alignment is reflected below in Figure 4.7.

Figure 4.7
Central Bikeway Project Map

5 Community Engagement

VTA conducted engagement regarding the development of the site prior to the initiation of this study to understand the needs of travelers and residents living near Berryessa Station. In addition, a public "Meet the Developer" meeting was held to introduce the developer working on the future TOD site to the community and share some initial concepts for the site. The findings from these previous rounds of outreach were taken into consideration when developing outreach materials and access improvements for this study. Key findings from these meetings related to station access are summarized below:

- Most participants were homeowners that lived near the station
- 86% of participants noted that driving is there primary mode for travel, followed by 36% of travelers using transit and 14% percent walking
- A strong interest in adding more sustainable travel options at the station and more vibrant public spaces that may include additional shopping or dining
- Participants highlighted that they would like to see affordable housing incorporated at the VTA site
- Participants noted a strong interest in additional green space (43%), a central plaza with public seating (19%), and a grocery store or market (14%) at the TOD

Community engagement for this access study included two rounds of both in-person and online outreach. The first round was intended to gather information about on-the-ground conditions at the station and challenges regarding access to the station. The second round was intended to obtain feedback from stakeholders, the community, and agency staff regarding the first draft of access improvements for the station area. Outreach events consisted of the following:

Round 1:

- Walk audit with community members
- Pop-up events near the station
- Online survey, available in English, Spanish, Vietnamese, Chinese, Korean, and Tagalog
- Technical Advisory Committee meeting #1

Round 2:

- Pop-up events near the station
- Online survey, available in English, Spanish, Vietnamese, Chinese, Korean, and Tagalog
- Technical Advisory Committee meeting #2

5.1 Walk Audit

Walk audits are conducted to assess on-the-ground conditions for pedestrians and bicyclists. Community-based organizations, local residents, City staff, and VTA staff areas were invited to participate in the walk audit for this study on September 18, 2023. The results of the walk audits are discussed in Section 3.3 and were incorporated into the needs assessment for this study.

Figure 5.1
Walk audit orientation

5.2 Pop-Up Events

Pop-up events were held during both rounds of engagement. During the first round of engagement, five pop-up events were held at locations around Berryessa Station between August 1 – August 9, 2023 to capture local residents and station users in the area. The pop-ups aimed to identify current barriers to station access and engaged over 270 community members.

The second round consisted of 6 pop-up events (one virtual) around the station between November 13 – November 18, 2023 and engaged 552 community members. Boards displaying the draft improvement recommendations were presented on boards and allowed participants to vote on which improvements they would like to prioritize or suggest other improvements. Results from these pop-up events were incorporated into the needs assessment and proposed improvements for this study and are presented in Appendix A.

Figure 5.2
Residents providing input at El Rancho Verde Apartments during the second round of engagement

5.3 Online Survey

Online surveys were deployed during both rounds of engagement using the Survey Monkey platform. The surveys coincided with the timing of in-person pop-ups and the content mirrored the in-person pop-up materials. The surveys were available in English, Spanish, Vietnamese, Chinese, Korean, and Tagalog. QR codes to the survey were also distributed during in-person engagement so that community members could provide their feedback at their convenience. The first round's survey was deployed between August 1, 2023 and August 31, 2023 and received 150 respondents. The second survey was deployed between November 6, 2023 and December 3, 2023, and received 58 respondents. Detailed results from these surveys are in Appendix A.

5.4 Technical Advisory Committee Meetings

A Technical Advisory Committee (TAC) was organized for this study, consisting of VTA staff, City of San Jose Department of Transportation staff, and the TOD developer team. Two TAC meetings were held during the course of the study to provide study updates and gather feedback from TAC members.

The first meeting was held on October 4, 2023 and provided an overview of the access study, the existing conditions reviewed by the consultant team, and a summary of the first round of engagement. The second meeting was held on December 5, 2023 and provided a summary of the needs assessment and future conditions analysis conducted by the consultant team, proposed access recommendations, and a summary of the second round of engagement.

Both meetings included an opportunity for TAC members to provide their input on the consultant team's findings and recommendations, as well as provide updates on VTA or City projects that may impact the access study's recommendations or implementation strategies. Feedback was incorporated into the needs assessment and overall recommendations of the study.

5.5 Summary of Key Findings

After both rounds of community engagement both in person and online, several key themes emerged. These are summarized below:

- Most users take the bus to Berryessa Station, and many also drive. The most common routes to the station are through Berryessa Station Way and Mabury Road.
- Wide, busy street crossings near the station are a major concern for station access. Many users also wait too long to cross intersections near the station.
- Effort should be made to improve the safety and comfort of the station itself. This includes increasing lighting at the station as well as sun and weather protection.
- Users expressed concern over unreliable transportation to the station and wanted to see improvements in bus and transit connections.
- Users wanted to see new connections and pathways to the station.

These findings have been incorporated into the improvements recommended in Section 7 of this report.

6 Needs Assessment

The existing and future conditions analysis summarized access patterns and issues gleaned from a background literature review, summary of ongoing projects, and data collection analysis. These findings, along with feedback gained from the first round of community engagement and walk audit results, paint a picture of access needs at the stations. The needs summarized in this section were integrated into the proposed access improvements presented in Section 7.

6.1 Mode of Access Results

Mode of access counts were performed within three zones at Berryessa Station. Zone one surrounds the station entrance and platform, zone two surrounds the surface parking lot, and zone three surrounds the parking structure. These zones are highlighted in the figure below. Additionally, the figure below includes the location of the five driveways where vehicle counts were performed. Vehicle counts were performed to identify the number of vehicles arriving, as well as the number of vehicles departing.

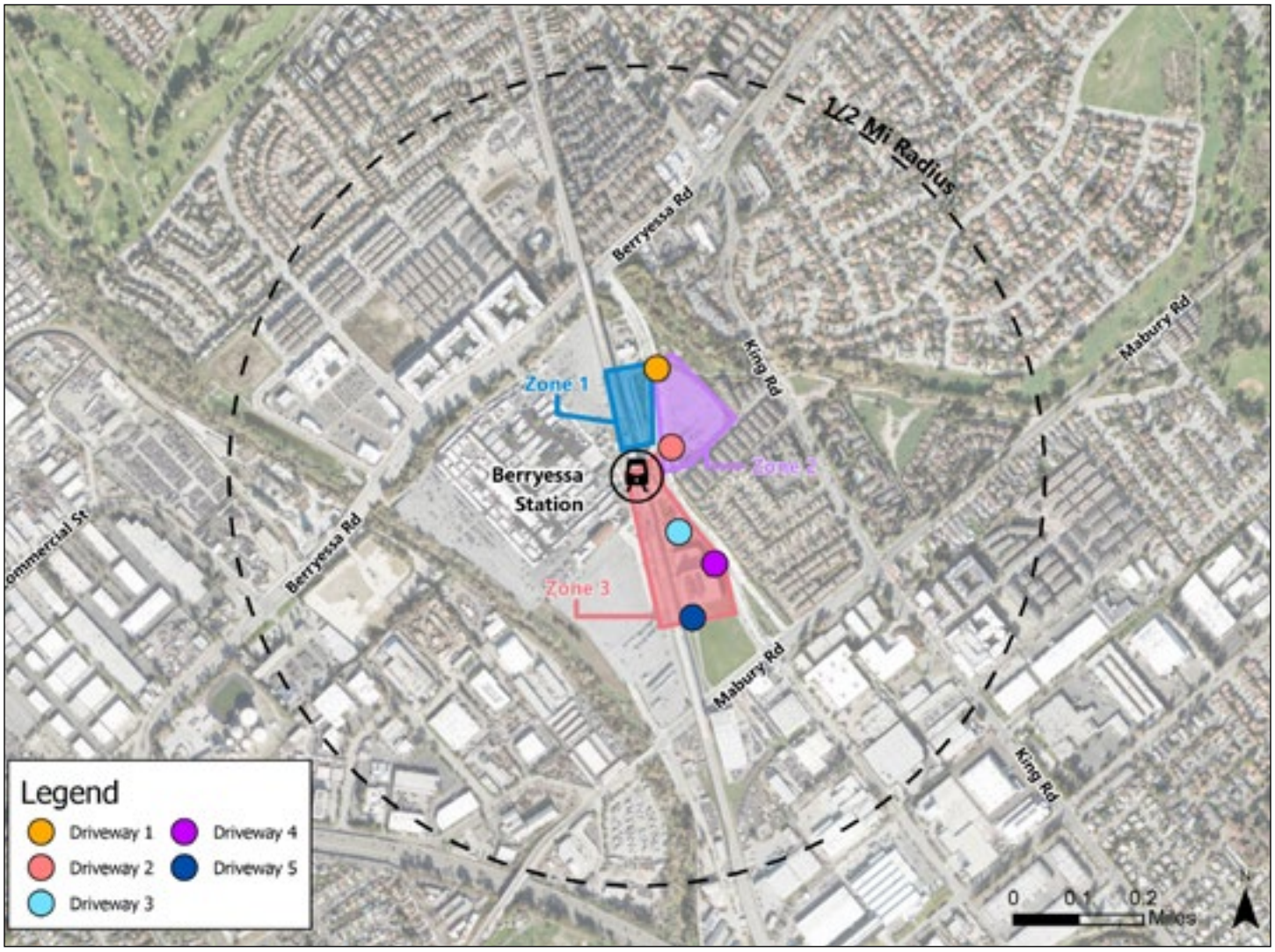


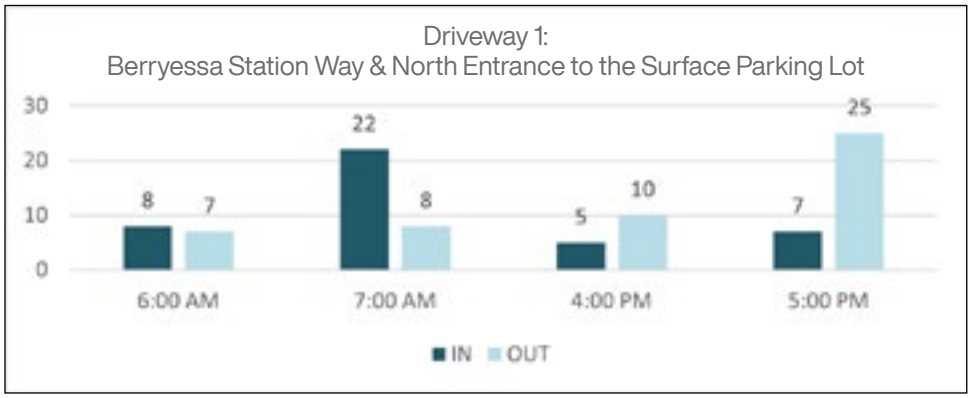
Figure 6.1
Access Count Zones

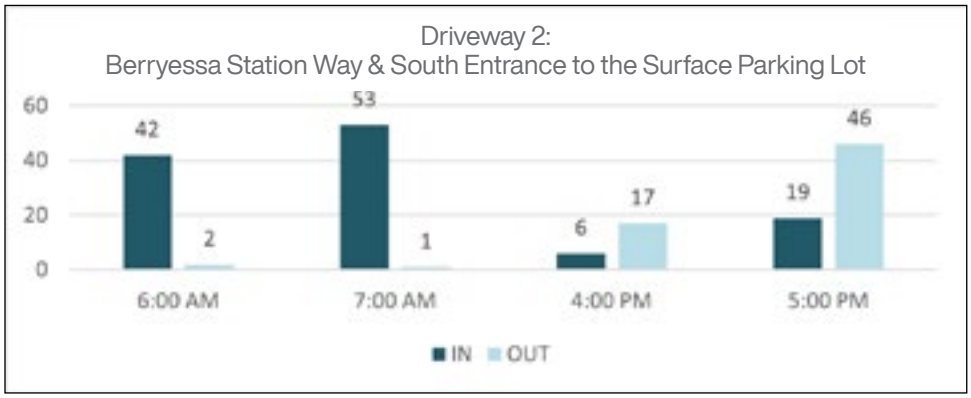
6.1.1 Access Counts Summary

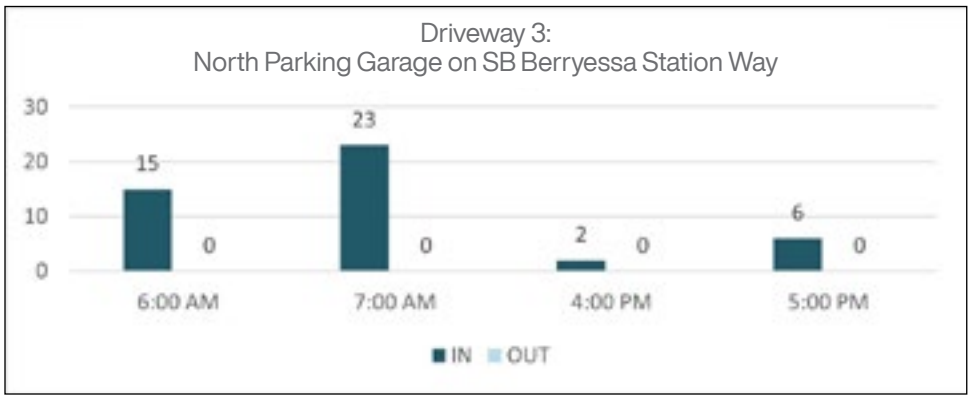
The vehicle access counts were conducted on Tuesday, September 12, 2023 including driveway in/out movements. This day was selected for counts to represent a typical weekday for people accessing the station. Observation was conducted within the AM peak hours (6-8 am) and PM peak hours (4-6 pm).

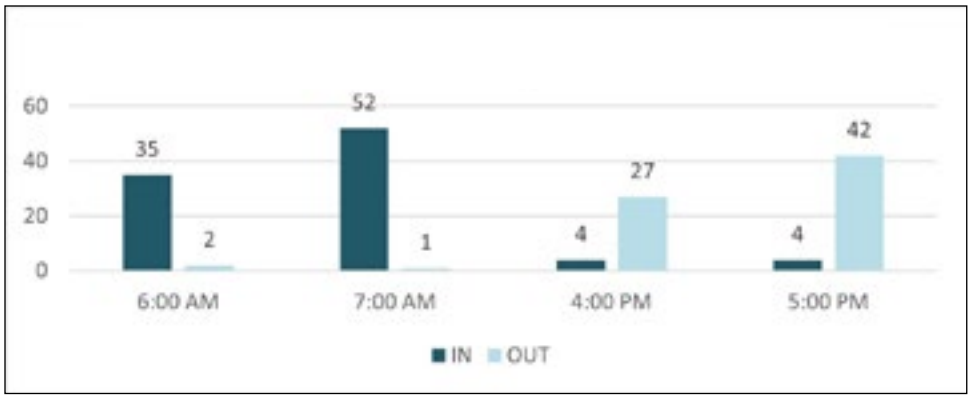
Results indicated that generally, more vehicles arrived at the station in the morning, with most vehicles departing from the station in the evening hours.

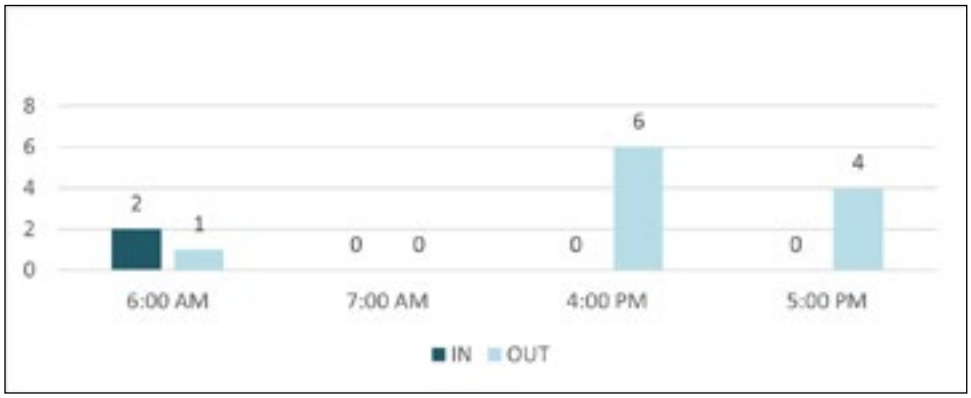
Driveways two and four received the most ins, with 7:00 AM being the peak hour for arrivals. This was followed by driveways one and three, with driveway five at the southern entrance of the parking structure receiving no arrivals at this time. This trend was repeated for the number of outs per driveway. There were a considerable number of arrivals at 6:00 AM one through four, however, less arrivals than at 7:00 PM. Driveways two and four saw the highest number of outs, followed by driveways one and five at 5:00 PM. Driveway three had no outs at this time. Some exits occurred at driveways one, two, four, and five at 4:00 PM, however, not as many occurred as at 5:00 PM. Most drivers parked on the surface lot and crossed Berryessa Station Way to get to the station entrance.











6.1.2 Mode of Access

On the same day, different modes of access were counted at station entrances in Zones 1, 2, and 3, as depicted in Figure 6.1, including:

- Walking
- Bicycle
- Car
- Pick-up/drop-off (PUDO)
- VTA Bus
- Motorcycle
- Scooter
- Skateboard

The most common mode of arrival was the 56% of users who arrived by car. This is followed by the 30% of riders that accessed the station by bus. These findings are consistent with self-reported mode of access via the online survey conducted for this study. It is also notable that the same survey indicated that around 21% of users access the station 5 or more times a week, while 25% access the station occassionally (1-2 times a month). Other transportation modes used to access the station are walking, biking, and scootering. There were no arrivals by motorcycle or skateboard. Around 47% of the ridership happened during the morning peak hours and 52% during the afternoon peak hours.

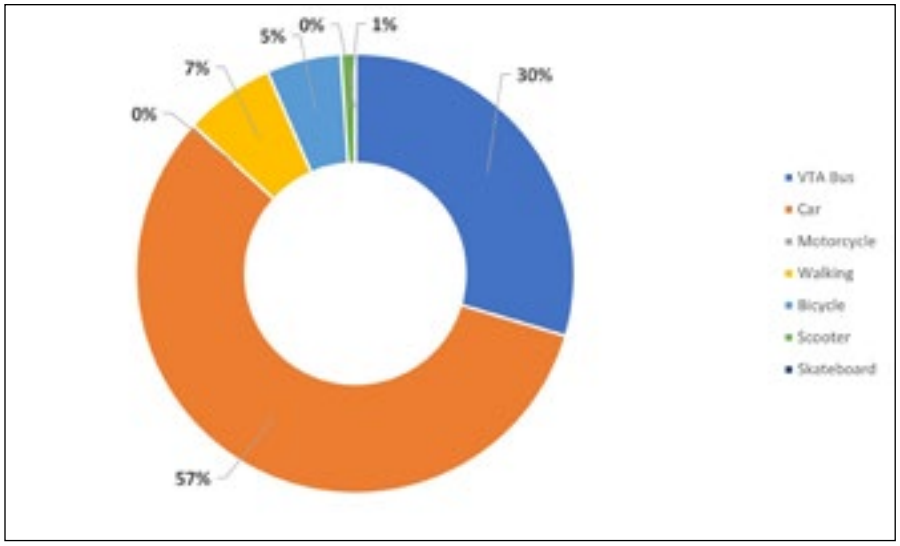


Figure 6.2
Percent of Mode Arriving at Berryessa Station

VTA Bus	226	30%
Car	437	57%
Motorcycle	0	0%
Walking	0	7%
Bicycle	42	5%
Scooter	8	1%
Skateboard	0	0%

Figure 6.3
Mode of Arrival by the Numbers

Most people arriving at the station seem to be parking in the station lot across from Berryessa Station Way (driveways two and four). The parking structure at the station is largely underutilized. The mode of access counts conducted for this study included counts at each parking lot. There was no activity through motorcycle or skateboard.

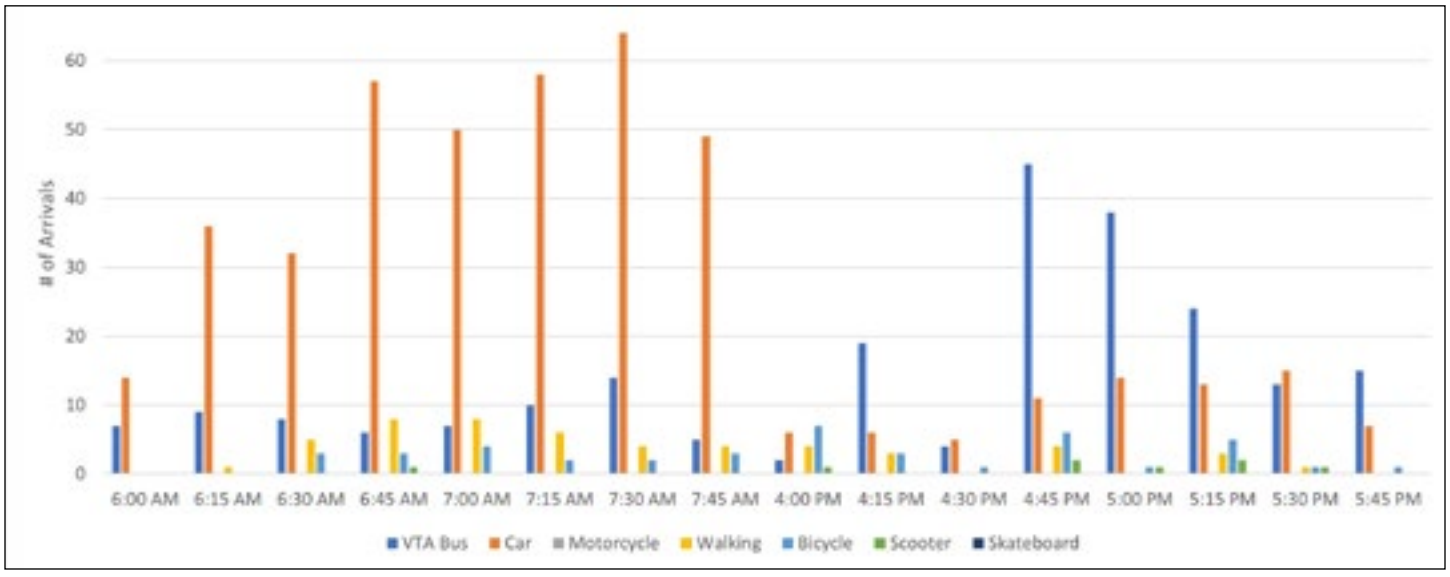


Figure 6.4
Modes of Arrival by Time

6.2 Pedestrian and Bicycle Access Needs

Pedestrian and bicycle access needs were identified through a review of existing conditions and walk audits at the station and within the station area. The needs identified through these analyses shared a common theme that there was a need for improved safety, accessibility, and streetscape conditions. Needs are further detailed below:

- More protected bikeway infrastructure, particularly along corridors with high vehicular speeds and volumes
- Bikeway re-striping to improve their visibility
- More active streetscape to add more “eyes on the street”
- Additional lighting on the Upper Penitencia Creek Trail
- Safer and for more high-visibility pedestrian crossings
- Wider sidewalks
- Cohesive bicyclist and pedestrian scale wayfinding signage
- Additional shade on pedestrian pathways
- Longer crossing times for pedestrians using the crosswalk across the intersection
- Remove porkchops to improve pedestrian safety when crossing intersections
- Charging stations for personal e-bikes and e-scooters at the station

Figure 6.5
Narrow sidewalk on Berryessa Road

Figure 6.6
Entrance to Penitencia Creek Trail from Mabury Road

Figure 6.7
Class II bike lane & adjacent traffic on King Road

6.3 Transit Access Needs

A review of existing transit access identified that transit is generally accessible in the station area. Most transit needs were related to the transfer experience and to wayfinding. Feedback from online surveys indicated that the number of users who access the station is generally evenly split between daily and occasional users, with the latter likely needing more wayfinding and signage to guide access at the station and in the study area. Transit access needs are further highlighted below:

- Real-time transit arrival information at Berryessa Station and surrounding bus stations
- "U-rack" at bus stations along bike facilities
- Bus shelters at bus stops within the study area
- Trash cans at bus stops
- Trees or additional shade at bus stops

Figure 6.8
Lack of passenger amenities at Berryessa/Lundy bus stop

Figure 6.9
Lack of shelter and shade at Mabury/King bus stop

6.4 Vehicular Access Needs

Vehicular access is expected to change significantly with the proposed TOD developments.

- A need for efficient vehicle circulation at Berryessa Station. The parking structure located directly south of the station will be utilized by both visitors to the station and TOD residents. This will induce demand for vehicle access along Berryessa Station Way South.
- The US 101 Interchange Study recommends to move the current interchange located at Oakland Road to Berryessa Road. This will shift vehicular traffic onto Berryessa Road and require roadway improvements to streamline their access and mitigate queuing.
- The City is interested in forming a Transportation Management Association to support TDM in the district, subsidized transit passes to encourage transit ridership, and education and marketing initiatives to help people make informed travel choices. VTA will need to consider a wide range of additional TDM measures that developers will need to choose from in order to meet a points-based quota. These measures include on-site daycares, shared parking, end of trip bike facilities, flexible work schedules, and vanpool subsidies.
- The Berryessa Urban Village Plan recommends a range of improvements to the street network to improve circulation to and from Berryessa Station and within the station area. Improvements include new local streets, green streets, main streets, connector streets, and pedestrian/cyclist/emergency vehicle access (EVA) streets in the parcel adjacent to the station. This study should help inform how VTA should think about these future changes, such as impacts to Berryessa Road. The proposed road network is reflected in the figure below.

Figure 6.10
Berryessa Urban Village Plan

7 Proposed Access Improvements

The following section discusses access improvements for the surrounding station area and on-site improvements. The proposed TOD project is expected to increase traffic at the station and within the station area and multimodal access improvements will help to prevent traffic congestion from growing and maximize safety and visibility and safety for active transportation users traveling within the station area.

7.1 Station Area Improvements

Pedestrian and bicycle access improvements will facilitate access for travelers trying to access the station from within and outside of the study area. Access improvements are focused on making the pedestrian and bicycle experience safer, more comfortable, and more efficient.

7.1.1 Pedestrian Access Improvements

Pedestrian access improvements are reflected in the figure below. Pedestrian access improvements aim to improve accessibility, safety, and connectivity to Berryessa Station within the half mile station radius. Pedestrian improvements recommended to the station area include:

- Widened sidewalks
- Trees, plantings, or landscaping maintenance
- Improved lighting
- Bus shelters
- Repaving or adding new sidewalks
- Landscaped medians
- Accessible curbs
- Directions and signage
- Pedestrian pathway
- Removing porkchops
- Safer crosswalks

Figure 7.1 Pedestrian Access Improvements Map

ID	IMPROVEMENT	LOCATION	JUSTIFICATION
1	Widen Sidewalk	Berryessa Rd - east side	▪ Walk audit findings noted narrow usable sidewalks along Berryessa Road.
2	Improve Landscaping	Berryessa Rd - west side	▪ Walk audit findings noted a need for improved landscaping along Berryessa Station Way to improve comfort for pedestrians.
3	Add pedestrian refuge island	Berryessa Rd & Commercial St	▪ Existing conditions review noted a need for improved pedestrian infrastructure on Berryessa Road. ▪ Walk audit participants noted discomfort walking along Berryessa Road and a need for safer infrastructure. ▪ Online survey participants noted that the biggest challenge for access was wide, busy streets around the station.
4	Remove Pork chop	Berryessa Rd & Commercial St	▪ DOT identified removing this “pork chop” island to improve safety for pedestrians and bicyclists.
5	High Visibility Crosswalk	Berryessa Rd & Berryessa Station Way	▪ Existing conditions review noted a need for high visibility crosswalks at key intersections.
6	Wayfinding Signage	Berryessa Rd & Berryessa Station Way	▪ Walk audit findings and feedback during pop-up events noted a need for additional signage directing multimodal travelers to the station.
7	High Visibility Crosswalk	Berryessa Rd & King Rd	▪ Existing conditions review noted a need for high visibility crosswalks at key intersections.
8	Wayfinding Signage	Berryessa Rd & King Rd	▪ Walk audit findings and feedback during pop-up events noted a need for additional signage directing multimodal travelers to the station.
9	Remove Porkchop	Berryessa Rd & King Rd	▪ King Road was highlighted in San Jose’s Vision Zero plan as a key corridor for safety improvements. ▪ City DOT staff mentioned that the porkchops in the area should be removed to improve safety for pedestrians and bicyclists.
10	Add Bus Shelter & Improve lighting	Berryessa Rd & King Rd	▪ A review of existing conditions and feedback from community members indicated a need for improved transit passenger amenities at bus stops in the station area.
11	Add Bus Shelter	Berryessa Rd & King Rd	▪ A review of existing conditions and feedback from community members indicated a lack of shade, seating, and visibility of the bus stop.
12	Widen Sidewalk	East Side of Lundy Ave: Salamoni Ct - Commodore Dr	▪ Walk audit findings indicated a narrow sidewalk along this segment.
13	High Visibility Crosswalk	King Rd & Penitencia Creek Trail	▪ Walk audit findings indicated a need for clear connections from the trail to the station.
14	High Visibility Crosswalk	King Rd & Mabury Rd	▪ Walk audit findings indicated a need for safer pedestrian connections along King Road.
15	Wayfinding Signage	King Rd & Mabury Rd	▪ Walk audit findings and feedback during pop-up events indicated a need for additional wayfinding signage to direct multimodal travelers to the station.
16	Widen Sidewalk	Mabury Rd & Berryessa Station Way	▪ Walk audit participants noted a narrow usable sidewalk along this segment.

ID	IMPROVEMENT	LOCATION	JUSTIFICATION
17	High Visibility Crosswalk	Mabury Rd & Berryessa Station Way	▪ A review of existing conditions indicated a missing crosswalk at this intersection.
18	Wayfinding Signage	Mabury Rd & Berryessa Station Way	▪ Walk audit participants and feedback during pop-up events noted a need for additional wayfinding signage to the station.
19	Add Bus Shelter	King Rd & Mabury Rd	▪ An assessment of existing conditions within the study area and feedback from community members indicated a need for improved transit waiting facilities within the study area. This bus stop lacks shade.
20	Add Bus Shelter	King Rd & Mabury Rd	▪ An assessment of existing conditions within the study area and feedback from community members indicated a need for improved transit waiting facilities within the study area. This bus stop lacks shade.
21	Add Bus Shelter	Mabury Rd & Penitencia Creek Trail	▪ An assessment of existing conditions within the study area and feedback from community members indicated a need for improved transit waiting facilities within the study area.
22	Add Bus Shelter	Mabury Rd & Penitencia Creek Trail	▪ An assessment of existing conditions within the study area and feedback from community members indicated a need for improved transit waiting facilities within the study area. This bus stop lacks shade and visibility.
23	Improve Lighting	Penitencia Creek Trail	▪ Walk audit participants noted safety concerns about using the trail at dusk or in the evening. ▪ Community members expressed a desire for better lighting.
24	Improve Landscaping	Penitencia Creek Trail	▪ Community members expressed a desire for better maintained landscaping and trash maintenance along the trail.
25	Wayfinding Signage	Mabury Rd & Penitencia Creek Trail	▪ A review of existing conditions indicated a need for improved identification signage at the entrance to the trail.
26	Improve Landscaping	Berryessa Station Way	▪ Walk audit findings noted overgrown tree roots and trees blocking the shared use path.
27	Wayfinding Signage	Berryessa Station Way & entrance to Penitencia Creek Trail segment behind police building	▪ A review of existing conditions indicated a need for improved, well-branded wayfinding signage for this segment of the trail leading to the station.
28	Wayfinding Signage	Penitencia Creek Trail & Berryessa Station Way	▪ A review of existing conditions indicated a need for improved, well-branded wayfinding signage to the station for trail users.
29	Improve Lighting	Berryessa Rd: Mabury Rd - Weldon Ln	▪ Walk audit participants noted a need for improved lighting along this segment to improve pedestrian comfort after dusk
30	Add sidewalk	West side of Lundy Ave: Salamoni Ct - Commodore Dr	▪ This improvement is recommended to close a gap in the sidewalk network. ▪ Walk audit participants noted a need for a new sidewalk along this segment for a more direct connection to Salamoni Court and the station.

7.1.2 Bike Access Improvements

Bike access improvements are reflected in the figure and table below. Bike access improvements aim to improve accessibility, safety, and connectivity to Berryessa Station within the half mile station radius. Bike improvements recommended to the station area include:

Class I Shared Use Path

Provides a completely separate right of way bike facility for the exclusive use of bicyclists and pedestrians.

Class II Bike Lane

Provides a striped bike lane for one-way bike travel on a street or highway.

Class III Bike Route

Provides a signed, shared roadway that allows for shared use between bicyclists and pedestrians or motorists. Typically, bike routes are placed on lower volume roadways. The City of San José's Better Bike Plan 2025 calls for Class III Bike Routes to include traffic calming elements, making them Bike Boulevards.

Class IV Protected Bikeway

A bikeway that is vertically physically separated from vehicle traffic. Protection and separation from traffic can be provided through grade separation, flexible posts, inflexible barriers, or on street parking.

Two stage left turns

Two stage left turns offer bicyclists a safe way to make left turns at multi-lane signalized intersections from a right-side cycle track or bike lane, or right turns from a left side cycle track or bike lane.

Green bicycle transition lanes

Green transition lanes provide a clear demarcation of the bicyclist through movements across an intersection. This treatment provides improved visibility for bicyclists, leads to more predictable bicyclist and motorist travel movements, and alerts motorists to expect and yield to merging bicycle traffic.

Bike Box

Bike boxes are designated areas at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.

The improvements recommended are listed in the table below. If an improvement has already been recommended as part of a previous or ongoing plan, the plan is referenced in the last column of the table.

Figure 7.2
Bicycle Station Area Access Improvements Map

Table 2: Bike Access Improvements

ID	IMPROVEMENT	LOCATION	JUSTIFICATION	REFERENCE PLAN
1	Class IV Protected Bikeway	Berryessa Rd: Mabury Rd – Lundy Ave	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and will upgrade the existing Class II to provide a safer bikeway connection along a corridor with high traffic speeds and volumes. ▪ Community members expressed feeling unsafe on this corridor.	San José Better Bike Plan 2025
2	Two Stage Left Turn Bike Intersection	Berryessa Rd & Berryessa Station Way	▪ A review of existing conditions indicated that a bike box at this intersection would promote bicyclist visibility by giving them a head start before vehicular traffic begins flowing through the intersection. ▪ This sentiment was shared by walk audit participants and TAC members.	N/A
3	Two Stage Left Turn Bike Intersection	Berryessa Rd & Lundy Ave	▪ A review of existing conditions indicated a need for better guidance for bicyclists turning left through this intersection to connect to the station.	N/A
4	Class IV Protected Bikeway	King Rd: Sienna Rd – SR 130	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and will upgrade the existing Class II to provide a safer bikeway connection along a corridor with high traffic speeds and volumes. ▪ It provide continuity to improvements made to the south of the study area as a part of the King Road Complete Streets project. ▪ Community members expressed feeling unsafe on this corridor.	San José Better Bike Plan 2025
5	Green Bicycle Transition Lanes	King Rd & Mabury Rd	▪ A review of existing conditions indicated a need for better guidance for bicyclists through this intersection to connect to the station.	N/A
6	Two Stage Left Turn Bike Intersections	King Rd & Mabury Rd	▪ A review of existing conditions indicated a need for better guidance for bicyclists turning left through this intersection to connect to the station.	N/A

ID	IMPROVEMENT	LOCATION	JUSTIFICATION	REFERENCE PLAN
7	Class IV Protected Bikeway	Mabury Rd: Berryessa Rd – White Rd	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and will upgrade the existing Class II to provide a safer bikeway connection along a corridor with high traffic speeds and volumes. ▪ Upgrading from a Class II will provide continuity connecting to the existing Class IV on Mabury Rd.	San José Better Bike Plan 2025 and Central Bikeway Study
8	Class IV Protected Bikeway	Sierra Rd: Chessington Dr – Hazlett Way	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and will close gaps in the bikeway network connecting Berryessa Rd to Lundy Avenue through residential streets.	San José Better Bike Plan 2025
9	Class IV Protected Bikeway	Sierra Rd: Arujo St – Flickinger Ave	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and will close gaps in the bikeway network through residential areas north of the station.	San José Better Bike Plan 2025
10	Class III Bike Route	Hazlett Way: Coyote Creek Trail – Sierra Rd	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and will close a gap in the bikeway network to connect to the Coyote Creek Trail.	San José Better Bike Plan 2025
11	Class IV Protected Bikeway	Commercial St: SR 880 – Berryessa Rd	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and provides a critical connection to Berryessa Station via Berryessa Road. This corridor was selected for a protected bikeway because it will help to close a gap in the protected bikeway network.	San José Better Bike Plan 2025
12	Class IV Protected Bikeway	Old Oakland Rd: Fox Ln – Hedding St	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and will upgrade the existing Class II to a Class IV to provide safer infrastructure for bicyclists.	San José Better Bike Plan 2025
13	Class I Shared Use Path	Coyote Creek Trail: SR 880 – E Empire St	▪ This path was identified as a part of the San José Better Bike Plan 2025 to provide a multi-use path along the creek. It also connects to major roads that connect to the station.	San José Better Bike Plan 2025
14	Class I Shared Use Path	Rail Corridor: Mabury Rd – McKee Rd	▪ This path was proposed as part of the San José Better Bike Plan 2025.	San José Better Bike Plan 2025
15	Class I Shared Use Path	Silver Creek Trail: Coyote Creek Trail – SR 130	▪ This path was proposed as part of the San José Better Bike Plan 2025.	San José Better Bike Plan 2025

ID	IMPROVEMENT	LOCATION	JUSTIFICATION	REFERENCE PLAN
16	Class III Bike Route	Schute Dr: King Rd – Educational Park Dr	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and provides a critical connection to Berryessa Station. This corridor was selected for a Class III bike route because it will provide a safer bikeway connection and help to close a gap in the protected bikeway network through a residential street.	San José Better Bike Plan 2025
17	Class IV Protected Bikeway	Educational Park Dr: Mabury Rd – McKee Rd	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and provides a critical connection to Berryessa Station. This corridor was selected for a protected bikeway because it will help to close a gap in the protected bikeway network along a segment that includes a park and schools.	San José Better Bike Plan 2025
18	Class IV Protected Bikeway	N Jackson Ave: Sierra Rd – SR 130	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and provides a critical connection to Berryessa Station. This corridor was selected for a protected bikeway because it will help to close a gap in the protected bikeway network. ▪ Community members expressed a desire for safer bicyclist infrastructure along this corridor.	San José Better Bike Plan 2025
19	Class III Bike Route	Vinci Pkwy: Berryessa Rd – Lundy Ave	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and provides a critical connection to Berryessa Station. This corridor was selected for a Class III bike route because it will help to close a gap in the protected bikeway network through a residential area.	San José Better Bike Plan 2025
20	Class IV Protected Bikeway	Lenfest Rd: Mabury Rd – Las Plumas Ave	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and will provide continuity with the existing bikeway on Berryessa Station Way and connect to the planned Class IV on Mabury Rd. ▪ Community members expressed a desire for a safer connection at this intersection.	San José Better Bike Plan 2025

ID	IMPROVEMENT	LOCATION	JUSTIFICATION	REFERENCE PLAN
21	Class II Bike Lane	Las Plumas Ave: Lenfest Rd – Educational Park Dr	▪ This bikeway was proposed as part of the San José Better Bike Plan 2025 and provides a critical connection to Berryessa Station. This corridor was selected for a Class II bike lane because it will provide a safer bikeway connection and help to close a gap in the protected bikeway network.	San José Better Bike Plan 2025
22	Green Bicycle Transition Lanes	King Rd & Las Plumas Ave	▪ A review of existing conditions indicated a need for better guidance for bicyclists through this intersection to connect to the station.	N/A
23	Two Stage Left Turn	Berryessa Station Way & Mabury Rd	▪ A review of existing conditions indicated a need for better guidance for bicyclists through this intersection to connect to the station. ▪ Community members expressed a desire for a safer connection at this intersection.	N/A
24	Bike intersection signal	Berryessa Station Way & Mabury Rd	▪ A review of existing conditions indicated a need for better guidance for bicyclists through this intersection to connect to the station. ▪ Community members expressed a desire for a safer connection at this intersection.	N/A
25	Bike intersection signal	Berryessa Road & Berryessa Station Way	▪ A review of existing conditions indicated a need for better guidance for bicyclists through this intersection to connect to the station.	N/A

7.2 On-Site Improvements

On-site improvements focus on improving access for pedestrians, bicyclists, and drivers entering and exiting the station. The proposed TOD project is expected to increase multimodal traffic within the station area. The proposed access improvements will help to maximize visibility for pedestrians and bicyclists, as well as streamline access for residents accessing the TOD and travelers visiting the station.

Additionally, it will be important for VTA to consider placemaking improvements that complement the access improvements and further enhance and activate the station to make it attractive to existing and potential transit users. On-site infrastructure improvements are reflected in the figure and table below, followed by a discussion of placemaking considerations.

7.2.1 Infrastucture Improvements

Figure 7.3
Berryessa Station On-Site Improvements

ID	IMPROVEMENT	LOCATION	JUSTIFICATION
10	Public restrooms	Outside of station platform for public access	▪ The TAC highlighted that currently there are no public restrooms for station visitors outside of the BART station platform. There is a need for public restrooms outside of the rail station platform for visitors waiting for a bus transit connection or to be picked up. This need was also reiterated by participants of the AARP community outreach meeting and by participants of the walk audit.
11	Stripe roadway to separate in/out traffic	Driveway connecting to parking garage off of Mabury Rd	▪ The implementation of the new TOD is expected to increase demand for vehicle access in and out of the parking garage. Currently, the driveway between the parking garage and Mabury Road is not striped. Striping and formalizing this driveway will help to designate road space for drivers traveling in or out of the parking garage.
12	Wayfinding signage	Parking garage driveway & Mabury Rd	▪ Currently the parking garage entrance/exit onto Mabury Road is not marked. As demand for parking is expected to increase with the new TOD, additional vehicle-scale wayfinding signage will help direct drivers to parking from Mabury Road.
13	Left turn into new TOD driveway	Berryessa Station Way	▪ Site plans for the TOD specify a "right in, right out" driveway between the TOD and existing parking garage at the station due to the existing median on Berryessa Station Way. Allowing a left turn into the driveway will improve vehicle circulation and reduce queueing on northbound Berryessa Station Way to make a u-turn for residents or transit users coming from Mabury Rd,

7.2.2 Placemaking Considerations

Transit stations have the potential to be the heart of the community and be the place where people meet or bump into people they know. They can be places that inspire and encourage public life. They are ideally located in a central location and are supported by nearby residential and commercial developments as well as onsite amenities. Berryessa Station is a regional transit center and serves local as well as regional transit users. While Berryessa is a busy station and is situated near a number of transit-oriented developments, both existing and future, it lacks a sense of place.

Placemaking strategies such as public art and activation would help create a sense of place for the station site. A public art program that attracts local artists, is interactive and is potentially evolving would bring life and interest to the station buildings and circulation routes. Public art could also be used a wayfinding tool along pedestrian routes. Activation of the plaza in front of the station through the addition of food trucks or other food service would increase safety, fill a need for onsite food service and add vibrancy to the plaza. The plaza is currently a place to go through rather than a place to be. Activation is needed to change this dynamic.

Based on the current TOD site plan for Phase 1 and on-site access improvements recommended above, specific location opportunities for improving placemaking and adding art to Berryessa Station include:

1. **The Multi-Use Path to Station Entrance from Mabury Road:** The triangular area between the multi-use path and driveway access would be suitable for a large art feature. This location is visible from the guideway, Mabury Road, the pedestrian path and the driveway. It would signal your arrival at the station area, highlight the multi-use path, and give credibility to the recommended formalized driveway. Ideally, the public art could be a series that starts at Mabury Road and continues along the path all the way from Mabury Road to the station entrance.

ID	IMPROVEMENT	LOCATION	JUSTIFICATION
10	Public restrooms	Outside of station platform for public access	▪ The TAC highlighted that currently there are no public restrooms for station visitors outside of the BART station platform. There is a need for public restrooms outside of the rail station platform for visitors waiting for a bus transit connection or to be picked up. This need was also reiterated by participants of the AARP community outreach meeting and by participants of the walk audit.
11	Stripe roadway to separate in/out traffic	Driveway connecting to parking garage off of Mabury Rd	▪ The implementation of the new TOD is expected to increase demand for vehicle access in and out of the parking garage. Currently, the driveway between the parking garage and Mabury Road is not striped. Striping and formalizing this driveway will help to designate road space for drivers traveling in or out of the parking garage.
12	Wayfinding signage	Parking garage driveway & Mabury Rd	▪ Currently the parking garage entrance/exit onto Mabury Road is not marked. As demand for parking is expected to increase with the new TOD, additional vehicle-scale wayfinding signage will help direct drivers to parking from Mabury Road.
13	Left turn into new TOD driveway	Berryessa Station Way	▪ Site plans for the TOD specify a "right in, right out" driveway between the TOD and existing parking garage at the station due to the existing median on Berryessa Station Way. Allowing a left turn into the driveway will improve vehicle circulation and reduce queueing on northbound Berryessa Station Way to make a u-turn for residents or transit users coming from Mabury Rd,

7.2.2 Placemaking Considerations

Transit stations have the potential to be the heart of the community and be the place where people meet or bump into people they know. They can be places that inspire and encourage public life. They are ideally located in a central location and are supported by nearby residential and commercial developments as well as onsite amenities. Berryessa Station is a regional transit center and serves local as well as regional transit users. While Berryessa is a busy station and is situated near a number of transit-oriented developments, both existing and future, it lacks a sense of place.

Placemaking strategies such as public art and activation would help create a sense of place for the station site. A public art program that attracts local artists, is interactive and is potentially evolving would bring life and interest to the station buildings and circulation routes. Public art could also be used a wayfinding tool along pedestrian routes. Activation of the plaza in front of the station through the addition of food trucks or other food service would increase safety, fill a need for onsite food service and add vibrancy to the plaza. The plaza is currently a place to go through rather than a place to be. Activation is needed to change this dynamic.

Based on the current TOD site plan for Phase 1 and on-site access improvements recommended above, specific location opportunities for improving placemaking and adding art to Berryessa Station include:

1. **The Multi-Use Path to Station Entrance from Mabury Road:** The triangular area between the multi-use path and driveway access would be suitable for a large art feature. This location is visible from the guideway, Mabury Road, the pedestrian path and the driveway. It would signal your arrival at the station area, highlight the multi-use path, and give credibility to the recommended formalized driveway. Ideally, the public art could be a series that starts at Mabury Road and continues along the path all the way from Mabury Road to the station entrance.

2. **Median on Berryessa Station Way:** The median is generally wide and runs from Berryessa Road to Mabury Road. A low continuous art form could animate the median and contribute to wayfinding and placemaking. A continuous form along the corridor with elevated expressions used to highlight entrances and other important features would provide intuitive wayfinding.

3. **Station Plaza at the Bus Loop:** The area in front of the station between the north doors and and the east doors likely sees the heaviest circulation for people moving to and from transit and it is also a popular waiting area for pick-up and drop-off. It is a logical location for an interactive art feature or one that can be applied to the building to animate the space. Care must be given to siting a proposed feature to ensure it doesn't not impede direct movement from the station to the bus loop.

Ultimately, placemaking is an integral part of activating public spaces. It is recommended that VTA explore these opportunities in tandem with the implementation of the infrastructure-based access improvements recommended as part of this study. Art opportunities may be implemented through partnerships with developers, the City, Community Based Organizations and/or other public agencies. Together with partners, VTA may put out a request for proposals by artists as funding allows.

Figure 7.4
Berryessa Station Placemaking

8 Transportation Demand Management (TDM) Recommendations

With development of TOD projects at Berryessa Station comes the potential for increased traffic demand at the existing station and surrounding areas. This section presents a summary of strategies to reduce single-occupancy trips and relieve traffic congestion and parking demand at the station sites. To reduce single-occupancy vehicle trips to the station, the following recommendations should be considered:

- Ensure the provision of additional bicycle parking. These should be provided close to the station entrance for transit riders and TOD residents.
- Consider implementing a bicycle share facility on site for station visitors. This can encourage trips by active transportation to and from the station. Bicycle and scooter share facilities can help fulfill first/last mile connections to and from transit for passengers.
- Provide free or reduced cost monthly VTA transit passes for residents of the TOD. The purpose of this is to introduce the new residents of the area to VTA services in their vicinity and encourage travel by transit and active transportation modes. This can facilitate increased use of VTA transit service not only at Berryessa Station, but throughout the VTA network.
- Promote transit through targeted marketing campaigns. These campaigns can be targeted particularly to residents of the TOD as a supplement to free or reduced cost VTA transit passes, in order to promote the benefits of using transit and further encourage multimodal travel to alleviate single-occupancy trip demand. Campaigns may also be extended to the surrounding neighborhoods and general VTA network.
- Promote the use of the curbside pick-up/drop-off (PUDO) location for both TNC, employer shuttles, and personal use.
- Consider implementing a discounted monthly parking pass as part of a carpool program.

9 Cost Estimates

Planning-level, rough order of magnitude cost estimates for on-site and off-site improvements were developed based on a combination of sources available, including unit cost information provided by VTA from the Story-Keyes Corridor Complete Streets Study completed in 2018 and utilized for the Capitol and Branham Station Access Studies completed in 2023. Unit cost sources are outlined in Appendix B, with a description of escalation factors applied to the original sources based on inflation. Cost estimates may vary, with increasing magnitudes, for future years and should be updated accordingly. It is advised that the escalation factor for future costs be developed in a similar manner to those presented in the Appendix – based on inflation between the base and target years. Similar to the proposed improvements presented in Section 7, cost estimates are presented by corridor.

Assumptions for all cost estimates are included in the cost estimate sheets presented in Appendix B. In general, cost estimates do not include construction inspection, engineering, geotechnical analysis, right-of-way acquisition, or utility costs unless noted.

10 Prioritization and Implementation

Implementation of the proposed access improvements requires a plan that can be carried out efficiently and with flexibility. To facilitate this, the improvements proposed can be separated into near-term, mid-term, and long-term phasing. Additionally, many of these improvements will need to be done in coordination with the City of San José or with the TOD developer.

The following section discusses these considerations, then provides a prioritized list of projects for pursuit of funding and implementation.

10.1 Phasing Considerations

Near-term improvements can be implemented relatively quickly (within a year), due to minimal materials, low cost, or more urgent safety needs because of project construction. Mid-term improvements may be implemented within 1-2 years and include improvements that can still be implemented rather quickly but may require more cost or materials. Longer term improvements may require two or more years for implementation and include improvements that may require larger infrastructural changes, more materials, higher cost, or further feasibility analysis. Phasing will also be affected by whether projects are already planned or funded as a part of another ongoing project, study, or the TODs at the site.

Near-term improvements can include:

- Station identification signage
- Wayfinding signage pointing bicyclists and pedestrians near the station

Mid-term improvements can include:

- Real-time transit information signage
- Improvements that require paint striping, including crosswalks or bike lanes
- Installation of rectangular rapid flashing beacons for mid-block high visibility crosswalks

Longer-term improvements can include:

- Installation of hardscape vertical separators for Class IV protected bike lanes
- Installation of larger traffic calming measures, such as roadway medians or widened sidewalks
- Installation of bike/e-scooter share facilities

10.2 Interagency Coordination Considerations

Because there are a number of roadway improvements that have been identified in other City projects, the implementation of projects should be coordinated with the City of San José Department of Transportation, County of Santa Clara, or Caltrans as needed. For example, the ongoing King Road Complete Streets project will recommend improvements to a portion of King Road that eventually connects to the portion of King Road in the station area. VTA should coordinate with the City to ensure continuity of bicycle or pedestrian infrastructure along the corridor. This coordination will also be particularly beneficial when attaining funding and right-of-way necessary for implementing roadway and bikeway projects.

Additionally, since the TOD projects are currently still in the planning stages, VTA may require that certain improvements are conditioned to the developer in accordance with approved construction plans. These improvements affect private and public access to the TOD and the transit station directly.

10.3 High Priority Projects

The recommended projects for this study listed in Table 3 are all intended to improve access Berryessa Station and benefit non-vehicular mobility within the overall station areas. To determine which projects are of the highest priority for implementation, the projects were evaluated further and scored based on the following:

Table 4: Project Evaluation Criteria

CRITERION	DESCRIPTION	SCORING
Improves Connectivity to Transit	High: The project has a high direct impact on connectivity to the station by closing a current critical gap in infrastructure. The project is essential to maintain pedestrian/bicycle access in light of potential new development at the station site. Medium: The project improves the general connectivity of infrastructure in the station area (i.e. introduces additional midblock crossings). Low: The project enhances or complements connectivity improvements in the station area (i.e. improves wayfinding or provides other amenities).	▪ High = 1 ▪ Medium = 0.6 ▪ Low = 0.3
Improves Accessibility	The project eliminates a barrier to ADA accessibility (i.e. by closing sidewalk gaps or providing ADA access ramps).	▪ Yes = 1 ▪ No = 0
Improves Safety	High: the project addresses an area with high collision activity. Medium: The project addresses a safety issue that was identified by public engagement or by field review. Low: The project generally improves safety issues.	▪ High = 1 ▪ Medium = 0.6 ▪ Low = 0.3
Coordination With Planned Projects	The project is planned or proposed by another project or agency, or the improvement is or can be incorporated into the TOD Plan.	▪ Yes = 1 ▪ No = 0

Based on the results of the scoring exercise, which are found in Appendix C, the top high-priority projects for the station are presented below.

Table 5: High Priority Projects for the Berryessa Station Area

TYPE OF IMPROVEMENT	ID	PROJECT	LOCATION
Pedestrian Access	1	Widen sidewalk	Berryessa Rd – east side
Pedestrian Access	17	High visibility crosswalk	Mabury Rd & Berryessa Station Way
Bicycle Access	1	Class IV protected bikeway	Berryessa Rd: Mabury Rd – Lundy Ave
Bicycle Access	4	Class IV protected bikeway	King Rd: Sienna Rd – SR 130
Bicycle Access	7	Class IV protected bikeway	Mabury Rd: Berryessa Rd – White Rd

TYPE OF IMPROVEMENT	ID	PROJECT	LOCATION
Bicycle Access	20	Class IV protected bikeway	Lenfest Rd: Mabury – Las Plumas Ave
Pedestrian Access	3	Pedestrian refuge island	Berryessa Rd & Commercial St
Pedestrian Access	16	Widen sidewalk	Mabury Rd & Berryessa Station Way
On-Site Access	13	Left turn into new TOD driveway	Berryessa Station Way

These are projects that will benefit access to the station and the station area overall, particularly on roads with high vehicle volumes and a need for safer, more accessible infrastructure. Many of these are bikeway and pedestrian improvements can be implemented in coordination with the City of San José as part of the Better Bike Plan, King Road Complete Street Plan, the Berryessa-US 101 Interchange project, and the Central Bikeway Study. While one on-site access improvement scored high enough to make this list, it is important to note that this improvement will benefit overall circulation of vehicles surrounding the immediate station area and thus, impact the circulation and safety of other modes at the station as well.

It is also important that VTA consider complementary improvements within the recommendations. This can include coordinating with the City of San José on a wayfinding signage program to provide a comprehensive system of wayfinding signage for the locations recommended by this access study. Similarly, further placemaking at the station plaza activates and enhances the utility of these various access improvements.

Appendix

Appendix A: Community Engagement

VTA Berryessa Station Access Study

Engagement Summary
Round 2

December 2023

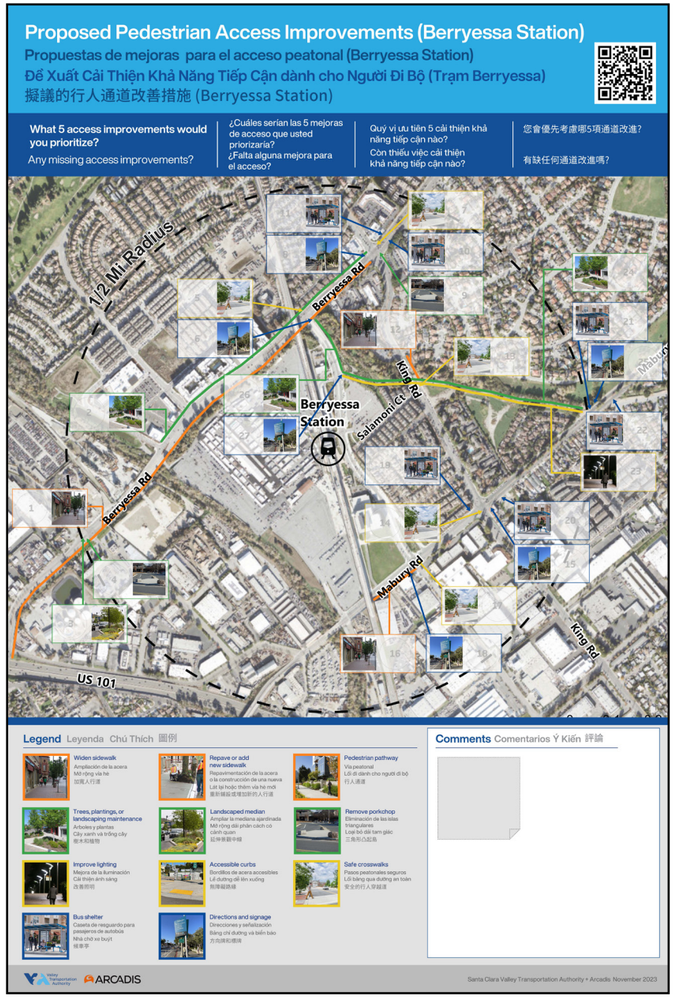
Valley Transportation Authority

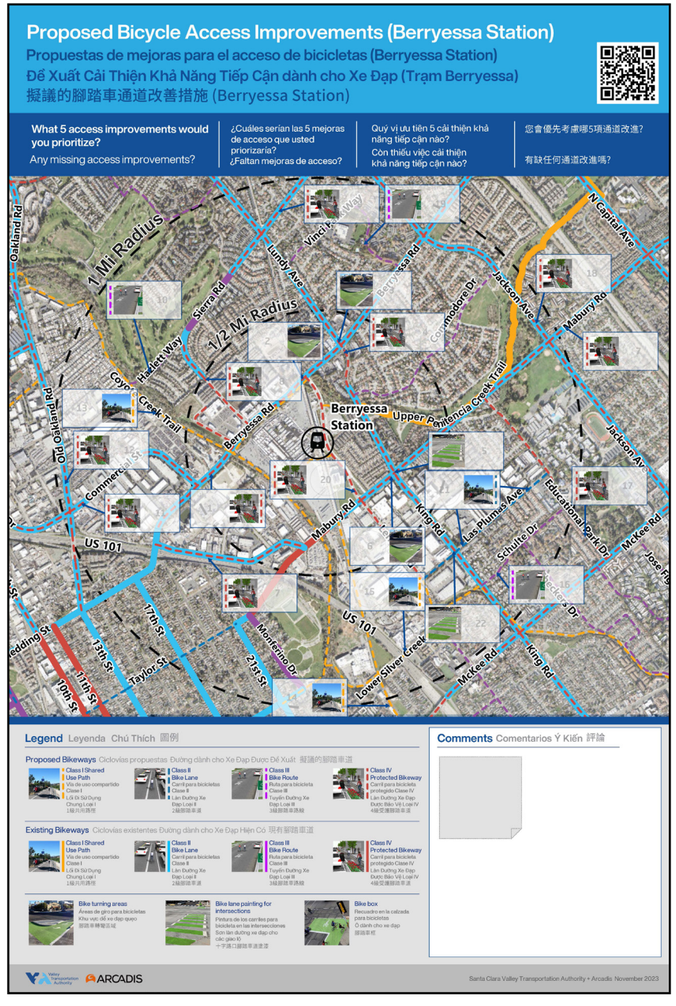
ARCADIS

Introduction

The Berryessa Station Access Study is focused on identifying recommendations and projects to make it easier to walk, bike, and take connecting transit to the transit station. These recommendations could include improvements to bicycle and pedestrian access or experience, lighting, bus waiting areas, and directional signs.

The purpose of this second round was to get feedback on a preliminary set of proposed access improvements. Participants were provided with a map of the station area, with recommended improvements listed out by location. For pedestrian improvements, the team considered a 0.5-mile radius from Berryessa Station and a 1-mile radius for bicycle improvements. Through in person and online engagement the team asked users to identify their top five preferred improvements, and identify through additional comments, any gaps in the preliminary proposed recommendations.



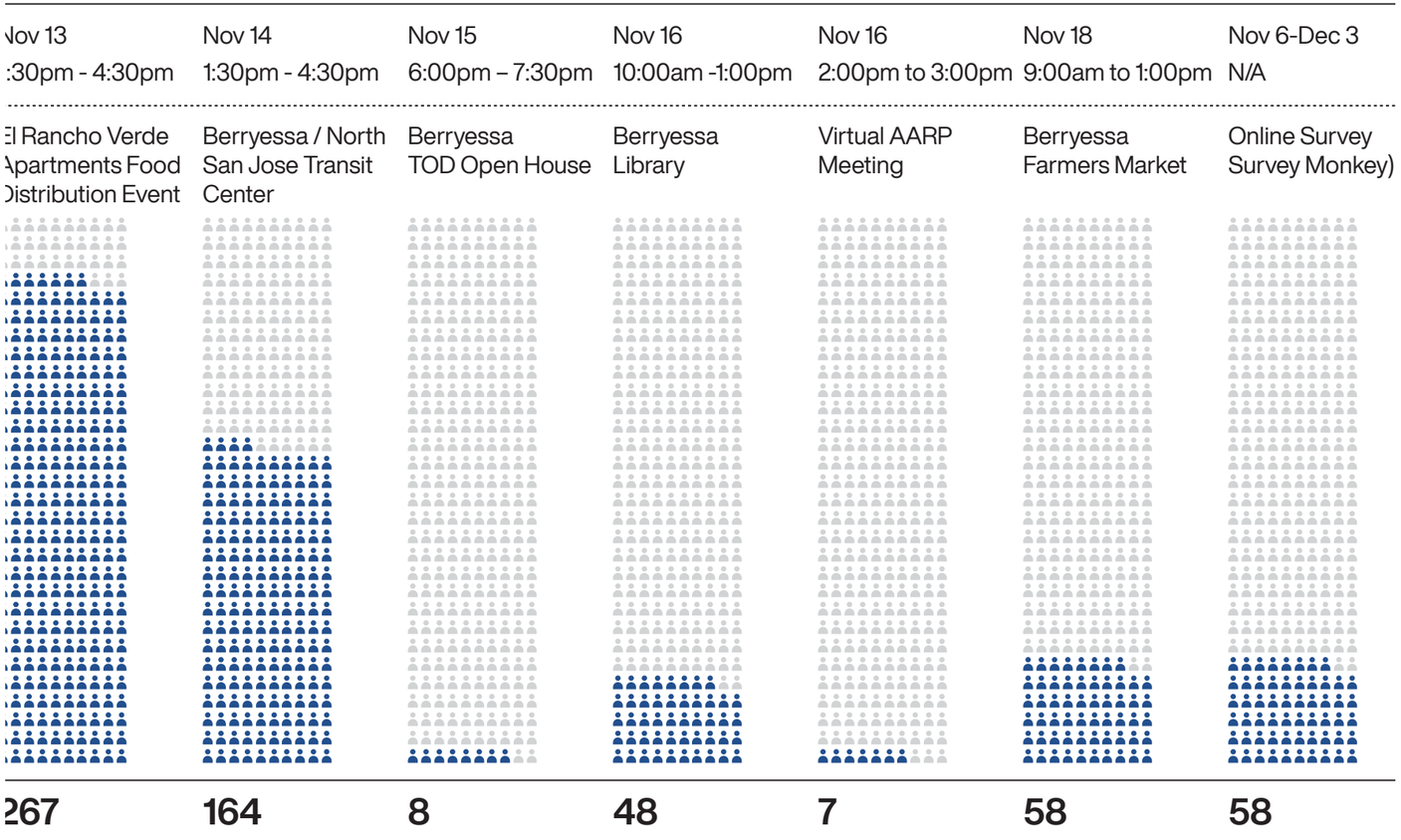


Engagement Events

Five locations for pop-ups were selected to reach a cross section of community members, both VTA riders and potential VTA riders. Locations were chosen to obtain input from a wide demographic of individuals from young people to seniors. Spanish speaking team members were available at each event to ensure community members could participate in English or Spanish, and Vietnamese interpretation was available at the El Rancho Verde event and the Berryessa TOD Open House. A total of 545 people were engaged in the pop-ups providing feedback through conversation and dot-voting. An additional small group of 7 people were given an online presentation and given the opportunity to provide comment and participate further by completing the online survey. The corresponding survey on Survey Monkey ran from November 6th to December 3rd and had 58 participants. The team reached out to community based organizations such as San Jose State, local schools and Catalyze SV to assist with distributing the survey. The survey included the same materials as the pop-up events and collected demographic information (optional). Demographic information was not collected from the in-person engagement.

Participants

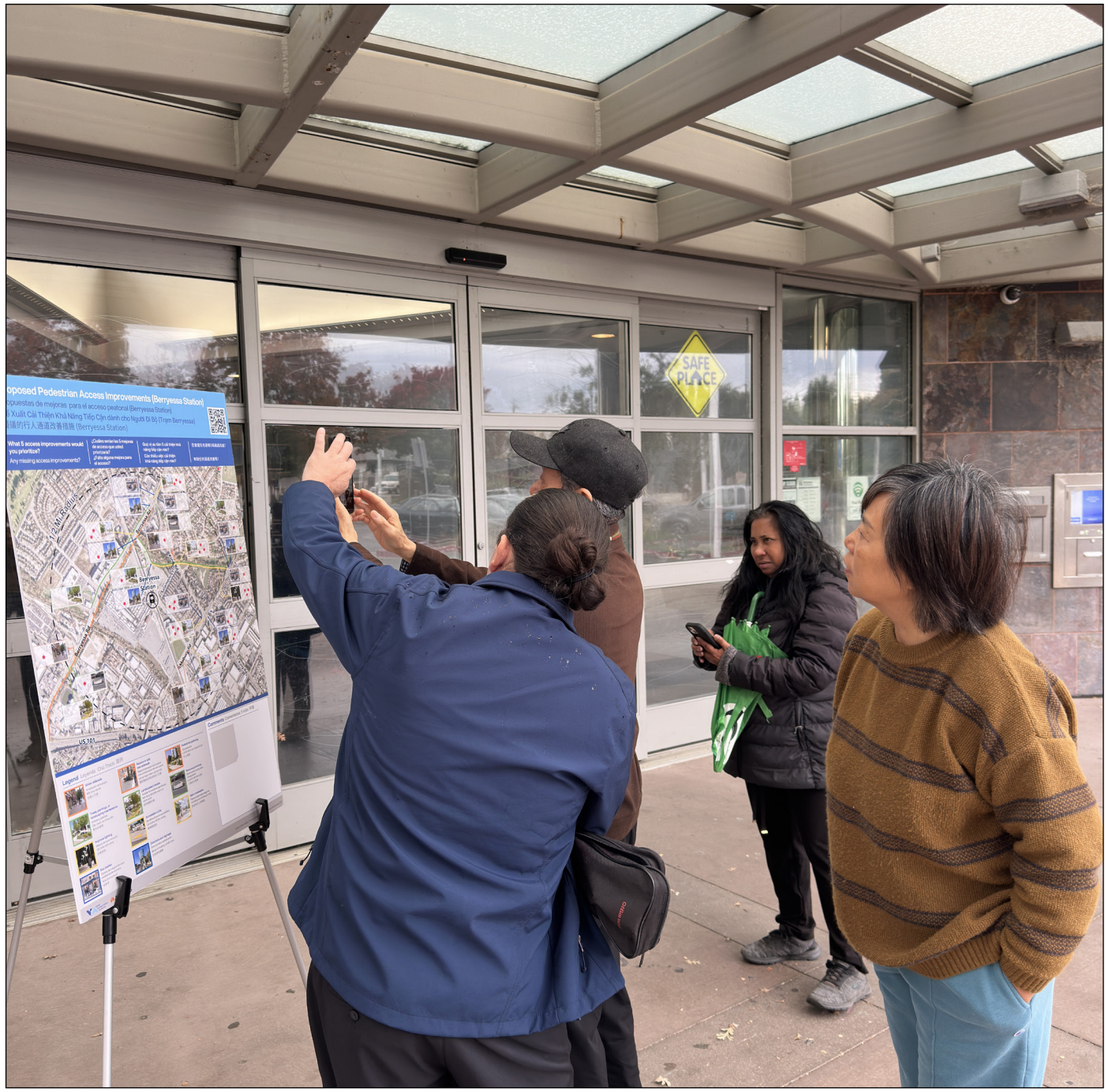
610+ total



El Rancho Verde Apartments

Berryessa Station

Berryessa TOD Open House

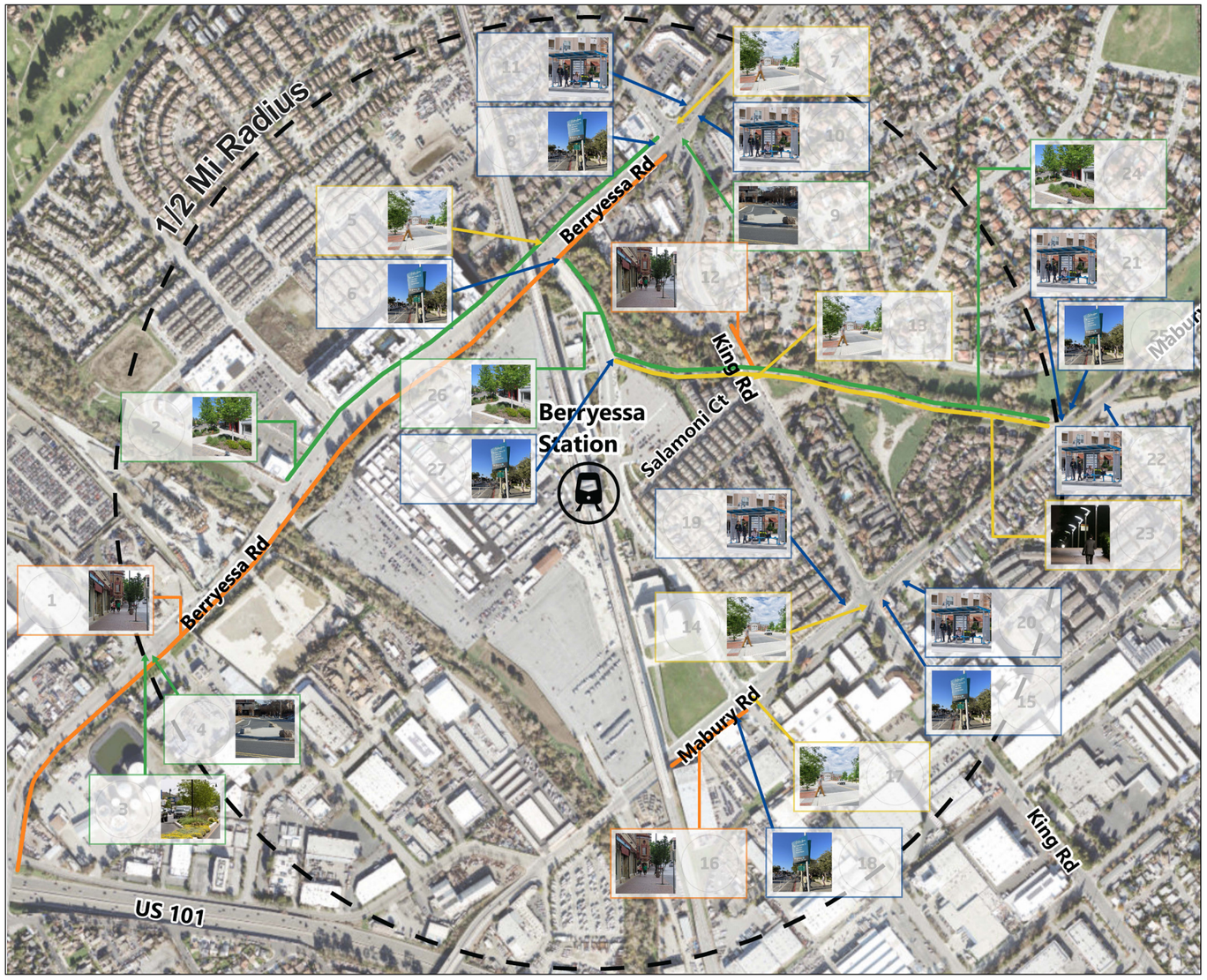


Berryessa Library

Berryessa Farmers Market

Priority Pedestrian Access Improvements

Overall, a high priority was placed on high visibility crosswalks by participants online and in person although the preferred locations varied. Improved lighting along the Penitencia Creek trail was a common high priority improvement for both online and in person participants.



Priority Pedestrian Access Improvements

The top five pedestrian access improvements in the Berryessa Station Study Area based on in-person pop-ups were:

Improvement	Votes	% of Votes
Improve lighting along Penitencia Creek Trail.	**29**	**8.1%**
Add a high visibility crosswalk at Berryessa Road and King Road.	16	4.5%
Add a high visibility crosswalk at King Road and Mabury Road.	15	4.2%
Add a high visibility crosswalk at Mabury Road and Berryessa Station Way	15	4.2%
Add wayfinding signage at King Road and Mabury Road.*	14	3.9%
Widen the sidewalk along Mabury Road at Berryessa Station Way.*	14	3.9%

The top five pedestrian access improvements in the Berryessa Station Study Area based on the online survey were:

Improvement	Votes	% of Votes
Widen the sidewalk along east side of Berryessa.	25	5.5%
Add a high visibility crosswalk on Berryessa Road at Berryessa Station Way.	23	5.0%
Improve lighting along Penitencia Creek Trail.	**20**	**4.4%**
Add a bus shelter at Berryessa Road & King Road.	16	3.5%
Improve the landscaping along west side of Berryessa.	16	3.5%

The top five pedestrian access improvements in the Berryessa Station Study Area combined from the in-person events and online survey were:

Improvement	Votes	% of Votes
Improve lighting along Penitencia Creek Trail.	**49**	**6.0%**
Widen the sidewalk along east side of Berryessa.	38	4.7%
Add a high visibility crosswalk on Berryessa Road at Berryessa Station Way.	33	4.1%
Add a high visibility crosswalk at Berryessa Road and King Road.	30	3.7%
Improve the landscaping along west side of Berryessa.	26	3.2%

Notes: The asterisk (*) indicates the two improvement that were tied for 3rd place for a total of six top improvements. The bolded improvements were common to both in-person and online. The % of votes represents a percentage of the overall total votes for all bicycle improvements.

A full list of all the votes online and in-person are provided in Appendix A.

Pedestrian Improvement Comment Summary

Detailed comments about pedestrian access were collected at the in-person events and online. These comments have been grouped by theme. An asterisk indicates that multiple people made the same comment.

Pedestrian Crossing Improvements

- Add raised crossings with high visibility markings.
- Add high visibility crosswalks throughout the station area.**
- Reduce pedestrian wait time on Mabury & Berryessa Station Way.
- Provide protected intersections at Mabury & Berryessa Station Way. That would reduce pedestrian crossing distance and provide more visibility of pedestrians to drivers.
- Crosswalks need longer lights for pedestrians.
- Add pedestrian islands.
- Remove porkchop / slip lanes.
- Add slow dots (example at De Anza College Ring Road).
- Provide traffic calming to slow down traffic on Toyon Ave between Penitencia Creek Park and McKee
- Widen bridge over Penitencia creek and add sidewalks on both sides.
- Berryessa Road is way too wide, which encourages speeding and makes it intimidating to cross, especially Berryessa Road at Sierra and Berryessa Road & Flea Market Place. Consider making Berryessa Road 4 lanes rather than 6, and using the space to narrow intersections and add ped & bike improvements.
- Add a crosswalk on the east leg of Mabury and Lenfest.

Improve User Experience on Buses

- Provide more lighting at bus stops.*
- Stop removing bus stops on all routes.
- Shelters and benches have been removed in many locations making it uncomfortable to wait.
- Provide more frequent bus service in general and include Route 70 on weekends.

General Pedestrian Safety

- Provide emergency phones at bus stops and at the trail.
- Reduce unhoused population around station area.
- Berryessa Road near Berryessa Community Center needs more lighting.
- Add more lights on Berryessa Road at corner near King Road.
- Remove curb cuts that allow cars to enter sidewalks.
- Provide better lighting at stations and at bus shelters.

Landscaping and Beautification

- Clean the street, cut trees, and remove debris and trash at Berryessa Road and King Road.
- Cut down tree and weeds on Piedmont and Mattos.
- Add mature trees with real shade on existing sidewalk and bike path on east side of Berryessa Station Way.
- More trees are always good!
- Add public art to make stops and stations more appealing.

Increase Transit Frequency

- Running the Rapid 500 bus every 10 minutes is a great change. Please try to improve the frequency of other frequent bus lines that pass through Berryessa Transit Center. Especially lines that currently only run once every 30 minutes on nights and weekends. It'd be great if the buses ran at least every 15 minutes on the weekends (nights would be nice too, but that's not as important as the weekend), and perhaps at least every 10 minutes during peak commute hours.

Station/ VTA/ BART improvements

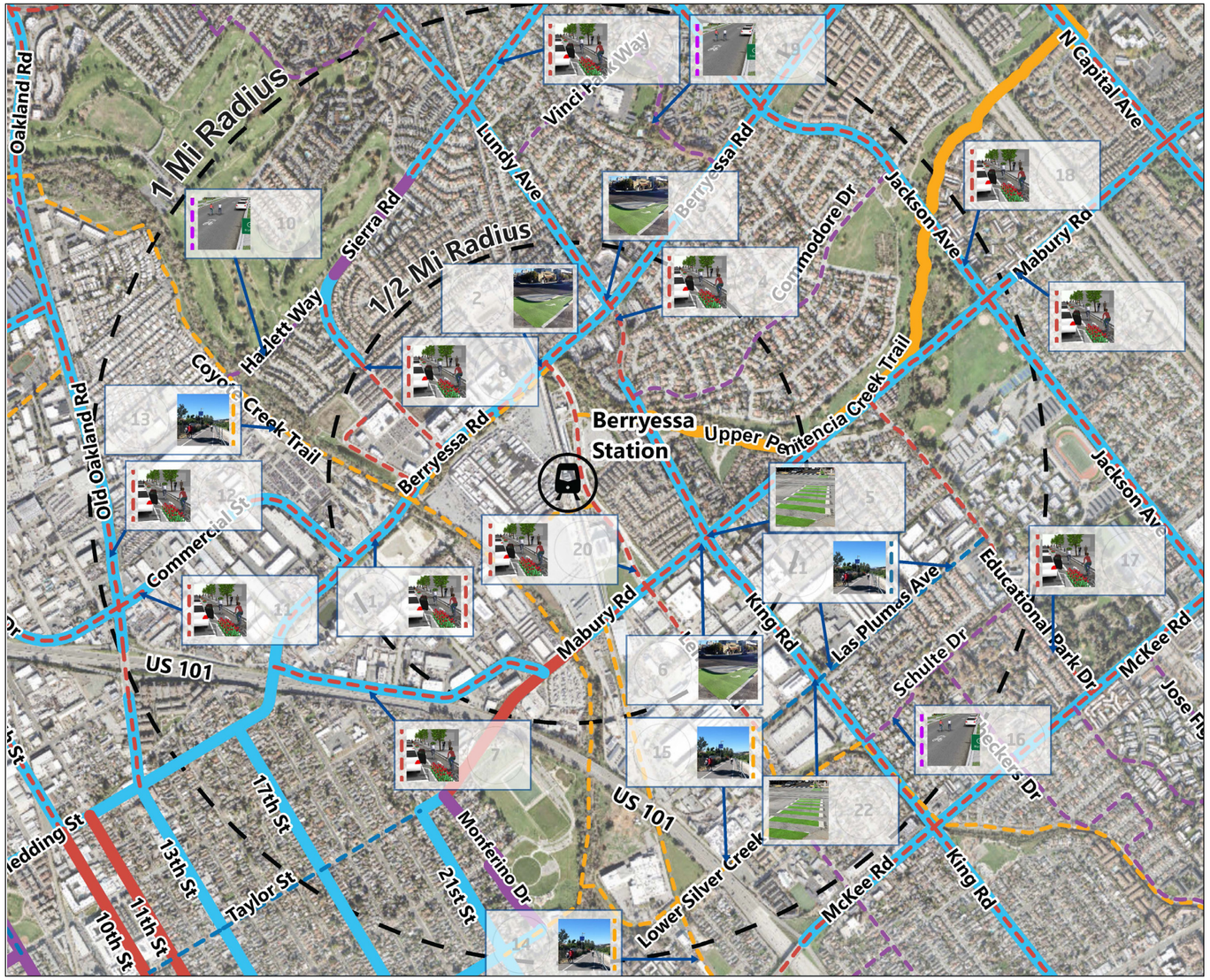
- Need better signage at station, it is confusing where VTA buses are vs BART.*
- Participants want free BART parking on weekends and after peak hours.**
- Available affordable parking and safe parking is critical to the success of the Berryessa VTA.
- There is a desire for bathrooms near the VTA buses, in an unpaid area.
- Users would like an easier way to pay for BART parking online. The website has multiple pages and personal information must be entered each time.*
- Users like the Wifi service on VTA.
- Add services such as coffee kiosks and food trucks.
- Update signage to read "Berryessa / North San Jose Transit Center instead of Berryessa BART.

Improve Connectivity to Station

- Station access is difficult, especially from the Mabury and Lenfest side.*
- Is there an arrangement for pedestrians to walk through from parking lot to other BART station exit on the Safeway side via the flea market even when flea market is not open?
- Add a sidewalk to the west side of Berryessa Station Way.
- Widen bridge over Penetencia Creek and add sidewalks in both directions.

Priority Bicycle Access Improvements

The priority bicycle improvements from the online survey and in-person pop-ups were very similar, with a consistently high priority on Class IV protected bikeways along key roads within the station area.



Legend Leyenda Chú Thích 圖例

Proposed Bikeways Ciclovías propuestas Đường dành cho Xe Đạp Được Đề Xuất 擬議的腳踏車道

- Class I Shared Use Path — Vía de uso compartido Clase I — Lối Đi Sử Dụng Chung Loại I — 1級共用路徑
- Class II Bike Lane — Carril para bicicletas Clase II — Làn Đường Xe Đạp Loại II — 2級腳踏車道
- Class III Bike Route — Ruta para bicicleta Clase III — Tuyến Đường Xe Đạp Loại III — 3級腳踏車路線
- Class IV Protected Bikeway — Carril para bicicleta protegido Clase IV — Làn Đường Xe Đạp Được Bảo Vệ Loại IV — 4級受護腳踏車道

Existing Bikeways Ciclovías existentes Đường dành cho Xe Đạp Hiện Có 現有腳踏車道

- Class I Shared Use Path — Vía de uso compartido Clase I — Lối Đi Sử Dụng Chung Loại I — 1級共用路徑
- Class II Bike Lane — Carril para bicicletas Clase II — Làn Đường Xe Đạp Loại II — 2級腳踏車道
- Class III Bike Route — Ruta para bicicleta Clase III — Tuyến Đường Xe Đạp Loại III — 3級腳踏車路線
- Class IV Protected Bikeway — Carril para bicicleta protegido Clase IV — Làn Đường Xe Đạp Được Bảo Vệ Loại IV — 4級受護腳踏車道

- Bike turning areas — Áreas de giro para bicicletas — Khu vực để xe đạp quẹo — 腳踏車轉彎區域
- Bike lane painting for intersections — Pintura de los carriles para bicicleta en las intersecciones — Sơn làn đường xe đạp cho các giao lộ — 十字路口腳踏車道塗漆
- Bike box — Recuadro en la calzada para bicicletas — Ô dành cho xe đạp — 腳踏車框

Priority Bicycle Access Improvements

The top six bicycle access improvements in the Berryessa Station Study Area based on in-person pop-ups were:

Improvement	Votes	% of Votes
Add Class IV protected bikeway on Jackson Avenue.	9	10.5%
Add Class IV protected bikeway on Mabury Road.	**9**	**10.5%**
Add a two-stage left turn at Berryessa Road and Lundy Avenue.	7	8.1%
Add Class IV protected bikeway on Lundy Avenue / King Road*	**6**	**7.0%**
Add Class IV protected bikeway on Education Park Drive*	6	7.0%
Add Class IV protected bikeway on Sierra Road between Hazlett Way & Berryessa Road.*	6	7.0%

The top five bicycle access improvements in the Berryessa Station Study Area based on the online survey were:

Improvement	Votes	% of Votes
Add Class IV protected bikeway on Berryessa Road.	34	15.8%
Add Class IV protected bikeway on Lundy Avenue / King Road.	**23**	**10.7%**
Add Class IV protected bikeway on Mabury Road.	**19**	**8.8%**
Add green bicycle transition lanes at Mabury Road & King Road	15	7.0%
Add Class IV protected bikeway on Berryessa Station Way/Lenfest Road.	15	7.0%

The top five pedestrian access improvements in the Berryessa Station Study Area combined from the in-person events and online survey were:

Improvement	Votes	% of Votes
Add Class IV protected bikeway on Berryessa Road.	34	15.8%
Add Class IV protected bikeway on Lundy Avenue / King Road.	23	10.7%
Add Class IV protected bikeway on Mabury Road.	19	8.8%
Add green bicycle transition lanes at Mabury Road & King Road	15	7.0%
Add Class IV protected bikeway on Berryessa Station Way/Lenfest Road.	15	7.0%

Notes: The asterisk (*) indicates the two improvement that were tied for 3rd place for a total of six top improvements. The bolded improvements were common to both in-person and online. The % of votes represents a percentage of the overall total votes for all bicycle improvements.

A full list of all the votes online and in-person are provided in Appendix A.

Bicycle Improvement Comment Summary

Detailed comments about bicycle access were collected at the in-person events and online. These comments have been grouped by theme. An asterisk indicates that multiple people made the same comment.

Class I & Class IV facilities are preferred over other types of facilities.

- Need protected bikeways in the station area.*
- Need protected bikeway on Berryessa Road, as trucks constantly blocking the eastbound bike lane.
- Reduce/eliminate sharrow use.
- Add bicycle infrastructure along Berryessa Way to 101 Overpass to avoid crossing the street.
- Taylor street bridge should have protected bike lanes; currently bikers from east to west have to cross the road to get to protected section which is dangerous.
- Protected bike way (Class 4) would not only improve safety and access to BART stations, but also improve safety for all other cyclists passing through this area.
- Please focus more on protecting cyclists and pedestrians by creating more robust protection than paint and plastic bollards. If drivers feel anxious about driving at higher speeds near a concrete barrier, then that is a good thing. These type of protections slow motorists so that it is safer for all, not just a comfortable thoroughfare for cars. Our streets are for all and if we want to reduce deaths caused by cars, we need to force drivers to slow down and build protection.

Make it easier to park bikes at Berryessa Station

- Move Bay Wheel dock station in front of Station.*
- Provide free bike lockers at the BART station.
- Provide bike lockers closer to the station entrance.

Improve Coyote Creek Trail

- Make trail continuous from Tully to Brokaw and provide path from Safeway to Oakland Road through golf course.
- Provide more improvements to the Coyote Creek Trail such as bridges and paving the existing gravel, in addition to what's shown here.

Improve bike movements on roadways.

- Add more bike boxes.*
- Bike lane intersection marking is too bumpy.
- Provide two stage left turns.
- Improve signals around the station.

Maintain existing facilities.

- Berryessa Station Way cycle track is not maintained- there is a lot of debris.

Improve safety and security in station area.

- Improve the lighting and safety near the park.

Conclusions

Total Engagement

In Person

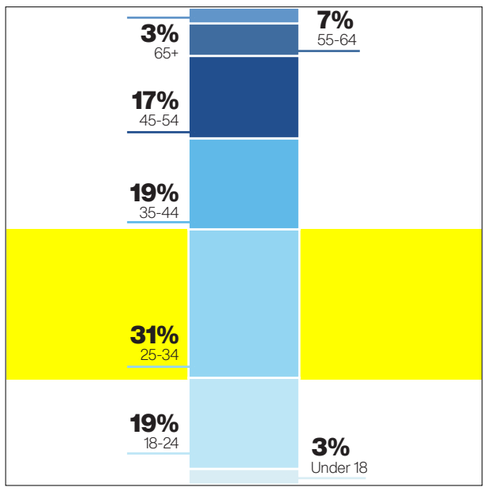
545+ attendees

Online

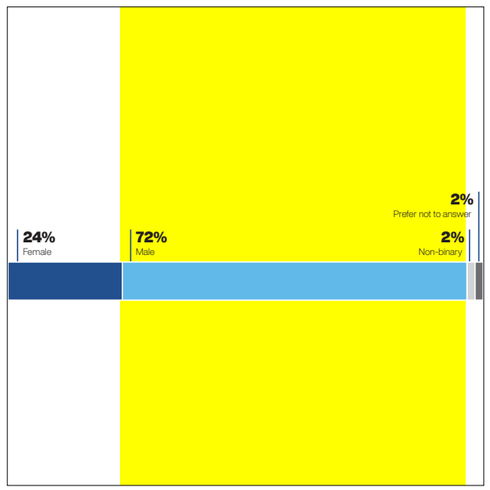
58 attendees

Demographic Highlights (Online only)

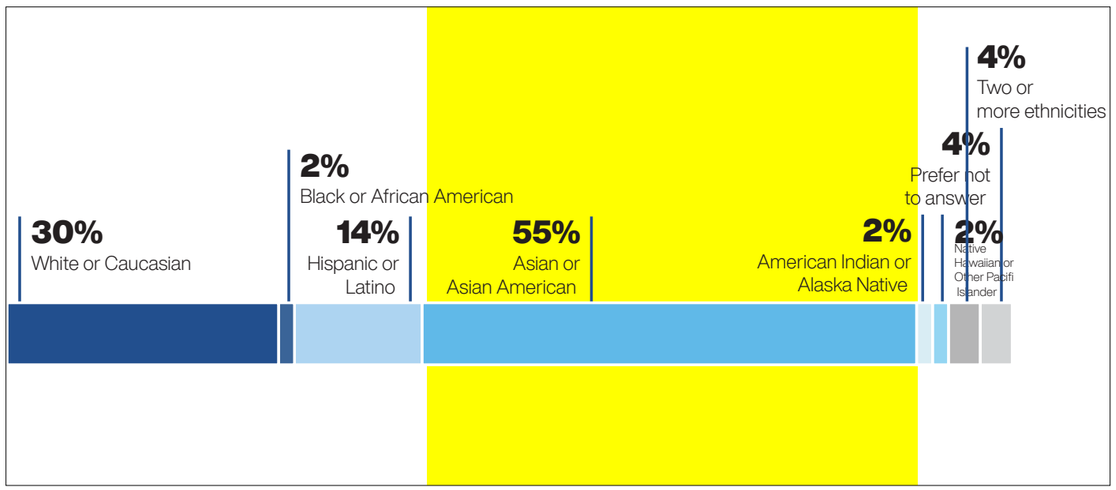
31% of respondents were between the ages of 25 and 34.



72% of respondents were male.



55% of respondents were Asian or Asian American.



Proposed Improvements

High Level Themes

The following were identified as high-level themes for access from discussions during the pop-ups and survey comments:

- Improve lighting along the creek trail, at bus stops and in station areas.
- Prioritize Class I and Class IV bike lanes over Class II and Class III.
- Improve pedestrian crossings by allowing more time to cross and including high visibility crosswalks in combination with other traffic calming measures such as protected intersections, raised crossings and/or pork chop removal.
- Improve connectivity in the station area by closing gaps in the sidewalk and bike lane network, adding lane markings, and adjusting signals to make it more comfortable for cyclists and pedestrians.
- Maintain existing bike and pedestrian facilities by removing trash and maintaining landscaping.

Top Improvements (Combined)

Improvement	Votes
Improve lighting along Penitencia Creek Trail.	49
Widen the sidewalk along east side of Berryessa.	38
Add Class IV protected bikeway on Berryessa Road.	35
Add a high visibility crosswalk on Berryessa Road at Berryessa Station Way.	33
Add a high visibility crosswalk at Berryessa Road and King Road.	30
Add Class IV protected bikeway on Lundy Avenue / King Road.	29

Priorities

By Location

- Berryessa Farmers Market attendees had a variety of concerns, but several voted to prioritize improved lighting at the Penitencia Creek Trail, as well as upgraded bikeways and intersection improvements for bicyclists.

By Demographic

- Senior residents at El Rancho Verde apartments were especially interested in improved pedestrian infrastructure such as wider sidewalks, high visibility crosswalks, improved wayfinding, and sufficient lighting on pedestrian pathways.
- Transit users at the station expressed interest for adding bus shelters and improved connections to transit with high visibility crosswalks, improved lighting, and upgraded bikeways. They also expressed a desire for more frequent transit service.

Valley Transportation Authority

ARCADIS

Appendix – Full Engagement Results

In-Person Engagement Results

Proposed Pedestrian Access Improvements (Berryessa Station)

We asked participants to place stickers on the access improvement most important to them. The results below are color-coded, identifying the improvements with the greatest number of votes across all in-person pop-ups.

Improvement	Location	Votes	% of Votes
Widen the Sidewalk	Berryessa - east side	13	3.6%
Improve Landscaping	Berryessa - west side	10	2.8%
Extend the Landscape Median	Berryessa Road & Commercial Street	6	1.7%
Remove the Porkchop	Berryessa Road & Commercial Street	8	2.2%
Add High Visibility Crosswalk	Berryessa Road & Berryessa Station Way	10	2.8%
Add Wayfinding Signage	Berryessa Road & Berryessa Station Way	4	1.1%
Add High Visibility Crosswalk	Berryessa Road & King Road	16	4.5%
Add Wayfinding Signage	Berryessa Road & King Road	4	1.1%
Remove Porkchop	Berryessa Road & King Road	6	1.7%
Add Bus Shelter	Berryessa Road & King Road	6	1.7%
Add Bus Shelter	Berryessa Road & King Road	6	1.7%
Widen the Sidewalk	King Road & Salamoni Court	10	2.8%
Add High Visibility Crosswalk	King Road & Penitencia Creek Trail	7	2.0%
Add High Visibility Crosswalk	King Road & Mabury Road	15	4.2%
Add Wayfinding Signage	King Road & Mabury Road	14	3.9%
Widen the Sidewalk	Maybury Road & Berryessa Station Way	14	3.9%
Add High Visibility Crosswalk	Maybury Road & Berryessa Station Way	15	4.2%
Add Wayfinding Signage	Maybury Road & Berryessa Station Way	7	2.0%
Add Bus Shelter	King Road & Mabury Road	11	3.1%
Add Bus Shelter	King Road & Mabury Road	14	3.9%
Add Bus Shelter	Maybury Road & Penitencia Creek Trail	7	2.0%
Add Bus Shelter	Maybury Road & Penitencia Creek Trail	6	1.7%
Improve the Lighting	Penitencia Creek Trail	29	8.1%
Improve Landscaping	Penitencia Creek Trail	9	2.5%
Add Wayfinding Signage	Maybury Road & Penitencia Creek Trail	7	2.0%
Improve Landscaping	Berryessa Station Way	10	2.8%
Add Wayfinding Signage	Berryessa Station Way & Penitencia Creek Trail	7	2.0%

Most Votes 2nd Most Votes 3rd Most Votes

In-Person Engagement Results

Proposed Bicycle Access Improvements (Berryessa Station)

We asked participants to place stickers on the access improvement most important to them. The results below are color-coded, identifying the improvements with the greatest number of votes across all in-person pop-ups.

Improvement	Location	Votes	% of Votes
Class IV Protected Bikeway	Berryessa Road	1	1.2%
Two Stage Left Turn	Berryessa Road & Berryessa Station Way	4	4.7%
Two Stage Left Turn	Berryessa Road & Lundy Avenue	7	8.1%
Class IV Protected Bikeway	Lundy Avenue/King Road	6	7.0%
Green Bicycle Transition Lane	Mabury Road & King Road	1	1.2%
Two Stage Left Turn	Mabury Road & King Road	4	4.7%
Class IV Protected Bikeway	Mabury Road	9	10.5%
Class IV Protected Bikeway	Sierra Road between Hazlett Way & Berryessa Rd	6	7.0%
Class IV Protected Bikeway	Sierra Road	2	2.3%
Class III Bike Route	Hazlett Way	1	1.2%
Class IV Protected Bikeway	Commercial Street	5	5.8%
Class IV Protected Bikeway	Old Oakland Road	3	3.5%
Class I Shared Use Path	Coyote Creek Trail	2	2.3%
Class I Shared Use Path	Rail ROW south of Mabury Rd	1	1.2%
Class I Shared Use Path	Lower Silver Creek	3	3.5%
Class III Bike Route	Schulte Drive	2	2.3%
Class IV Protected Bikeway	Educational Park Drive	6	7.0%
Class IV Protected Bikeway	Jackson Avenue	9	10.5%
Class III Bike Route	Vinci Park Way	3	3.5%
Class IV Protected Bikeway	Berryessa Station Way/Lenfest Road	5	5.8%
Class I Shared Use Path	Las Plumas Ave	3	3.5%
Green Bicycle Transition Lane	King Road & Las Plumas Ave	3	3.5%

Most Votes 2nd Most Votes 3rd Most Votes

On-line Engagement Results

Proposed Pedestrian Access Improvements (Berryessa Station)

We asked participants to select the access improvement most important to them. The results below are color-coded, identifying the improvements with the greatest number of votes from the online survey.

Improvement	Location	Votes	% of Votes
Widen the Sidewalk	Berryessa - east side	25	5.5%
Improve Landscaping	Berryessa - west side	16	3.5%
Extend the Landscape Median	Berryessa Road & Commercial Street	11	2.4%
Remove the Porkchop	Berryessa Road & Commercial Street	7	1.5%
Add High Visibility Crosswalk	Berryessa Road & Berryessa Station Way	23	5.0%
Add Wayfinding Signage	Berryessa Road & Berryessa Station Way	7	1.5%
Add High Visibility Crosswalk	Berryessa Road & King Road	14	3.1%
Add Wayfinding Signage	Berryessa Road & King Road	4	0.9%
Remove Porkchop	Berryessa Road & King Road	6	1.3%
Add Bus Shelter	Berryessa Road & King Road	16	3.5%
Add Bus Shelter	Berryessa Road & King Road	10	2.2%
Widen the Sidewalk	King Road & Salamoni Court	9	2.0%
Add High Visibility Crosswalk	King Road & Penitencia Creek Trail	7	1.5%
Add High Visibility Crosswalk	King Road & Mabury Road	8	1.8%
Add Wayfinding Signage	King Road & Mabury Road	1	0.2%
Widen the Sidewalk	Maybury Road & Berryessa Station Way	5	1.1%
Add High Visibility Crosswalk	Maybury Road & Berryessa Station Way	9	2.0%
Add Wayfinding Signage	Maybury Road & Berryessa Station Way	1	0.2%
Add Bus Shelter	King Road & Mabury Road	7	1.5%
Add Bus Shelter	King Road & Mabury Road	5	1.1%
Add Bus Shelter	Maybury Road & Penitencia Creek Trail	8	1.8%
Add Bus Shelter	Maybury Road & Penitencia Creek Trail	4	0.9%
Improve the Lighting	Penitencia Creek Trail	20	4.4%
Improve Landscaping	Penitencia Creek Trail	4	0.9%
Add Wayfinding Signage	Maybury Road & Penitencia Creek Trail	2	0.4%
Improve Landscaping	Berryessa Station Way	7	1.5%
Add Wayfinding Signage	Berryessa Station Way & Penitencia Creek Trail	5	1.1%

Most Votes 2nd Most Votes 3rd Most Votes

On-line Engagement Results

Proposed Bicycle Access Improvements (Berryessa Station)

We asked participants to select the access improvement most important to them. The results below are color-coded, identifying the improvements with the greatest number of votes from the online survey.

Improvement	Location	Votes	% of Votes
Class IV Protected Bikeway	Berryessa Road	34	15.8%
Two Stage Left Turn	Berryessa Road & Berryessa Station Way	12	5.6%
Two Stage Left Turn	Berryessa Road & Lundy Avenue	12	5.6%
Class IV Protected Bikeway	Lundy Avenue/King Road	23	10.7%
Green Bicycle Transition Lane	Mabury Road & King Road	15	7.0%
Two Stage Left Turn	Mabury Road & King Road	8	3.7%
Class IV Protected Bikeway	Mabury Road	19	8.8%
Class IV Protected Bikeway	Sierra Road between Hazlett Way & Berryessa Rd	11	5.1%
Class IV Protected Bikeway	Sierra Road	7	3.3%
Class III Bike Route	Hazlett Way	4	1.9%
Class IV Protected Bikeway	Commercial Street	3	1.4%
Class IV Protected Bikeway	Old Oakland Road	6	2.8%
Class I Shared Use Path	Coyote Creek Trail	12	5.6%
Class I Shared Use Path	Rail ROW south of Mabury Rd	7	3.3%
Class I Shared Use Path	Lower Silver Creek	3	1.4%
Class III Bike Route	Schulte Drive	2	0.9%
Class IV Protected Bikeway	Educational Park Drive	3	1.4%
Class IV Protected Bikeway	Jackson Avenue	5	2.3%
Class III Bike Route	Vinci Park Way	1	0.5%
Class IV Protected Bikeway	Berryessa Station Way/Lenfest Road	15	7.0%
Class I Shared Use Path	Las Plumas Ave	6	2.8%
Green Bicycle Transition Lane	King Road & Las Plumas Ave	7	3.3%

Most Votes 2nd Most Votes 3rd Most Votes

Appendix B: Cost Estimates

Cost Estimates - Notes

Note	Description
1	The cost estimates are probable construction costs based on Arcadis' experience with the design of similar projects. The estimated are prepared as a guide only, and are subject to change based on further development of the design. These estimates were prepared based on general improvements identified in the VTA Tamien Station TOD Access Study.
2	The estimates are based on general assumptions for each of the segments. Assumptions for each segment are provided in the "Assumptions" section of their respective segment.
3	Right of Way and/or Easement costs were not assessed and included. Formal consultation with a Right of Way acquisition expert is advised and may change the costs presented herein.
4	Costs associated with special material imports, geotechnical costs, hazardous materials, or other special circumstances were not included.
5	Prices include an escalation factor as noted below. Costs were modified to be consistent with expected 2024 costs.

Cost Sources - Notes

Source	Date	Escalation Factor	Note
Arcadis roadway improvement project directory.	2020	1.06	An increase of 6% was applied to reflect inflation between 2020 and 2024.
Countermeasure Cost Report (UNC-Highway Safety Research Center 2013)	2013	1.165	An increase of 16.5% was applied to reflect inflation between 2013 and 2024.
Story-Keys Corridor Complete Streets Study	2018	1.09	An increase of 7.5% was applied to reflect inflation between 2018 and 2024.
Willow-Keyes Complete Streets Improvements	2018	1.09	An increase of 7.5% was applied to reflect inflation between 2018 and 2024.
https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/	2011	1.195	An increase of 19.5% was applied to reflect inflation between 2011 and 2024.

Cost Sources - Roadway

Proposed

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Curb (6") & Gutter (24")	LF	$50.00	$100,900.00	Story-Keys Corridor Complete Streets Study
	Curb (6")	LF	$20.00	$40,400.00	Arcadis Roadway Improvement Project Directory
	Curb (6") - Divider	LF	$30.00	$60,600.00	Arcadis Roadway Improvement Project Directory
	Curb Ramp - Corner	EA	$2,800.00	$5,656,000.00	Arcadis Roadway Improvement Project Directory
	Curb Ramp - Mid Block	EA	$2,500.00	$5,050,000.00	Arcadis Roadway Improvement Project Directory
	Curb Extension w/ ADA Ramp	EA	$13,000.00	$26,169,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Detectable Warning Tiles	SF	$62.00	$125,116.00	Willow-Keyes Complete Streets Improvements
	Traffic Circle	EA	$50,000.00	$100,650,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Roundabout	EA	$250,000	$503,250,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Retrofit 4-way Intersection w/ Curb Extensions	LS	$100,000.00	$201,300,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Traffic Diverter	EA	$20,000.00	$40,400,000.00	Arcadis Roadway Improvement Project Directory
	Median / Median Island	SF	$15.00	$30,270.00	Story-Keys Corridor Complete Streets Study
	Raised Crosswalk	EA	$8,200.00	$16,506,600.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Raised Intersection	EA	$51,000.00	$102,663,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Speed Hump	EA	$2,700.00	$5,435,100.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Speed Bump	EA	$1,625.00	$3,271,125.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Speed Table	EA	$2,000.00	$4,026,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Asphalt Driveway - Grind, Regrade and Overlay	SF	$3.00	$6,060.00	Arcadis Roadway Improvement Project Directory
	Asphalt Filler Strip (2' wide)	LF	$56.00	$113,120.00	Arcadis Roadway Improvement Project Directory
	Asphalt Paving (Grind & Replace)	SF	$15.00	$30,300.00	Arcadis Roadway Improvement Project Directory
	Asphalt Paving (3.5")	SF	$4.00	$8,080.00	Arcadis Roadway Improvement Project Directory
	Asphalt Paving (5")	SF	$5.00	$10,100.00	Arcadis Roadway Improvement Project Directory
	PCC - Concrete Roadway - 9" Depth	SF	$15.00	$30,300.00	Arcadis Roadway Improvement Project Directory
	PCC - Filler Strip (6" wide)	LF	$5.00	$10,090.00	Story-Keys Corridor Complete Streets Study
	PCC Sidewalk - 4" Depth / 2' Wide	LF	$20.00	$40,360.00	Story-Keys Corridor Complete Streets Study
	PCC Sidewalk - 4" Depth / 4' Wide	LF	$40.00	$80,720.00	Story-Keys Corridor Complete Streets Study
	PCC Sidewalk - 4" Depth / 6' Wide	LF	$60.00	$121,080.00	Story-Keys Corridor Complete Streets Study
	PCC Sidewalk - 4" Depth / 7' Wide	LF	$70.00	$141,260.00	Story-Keys Corridor Complete Streets Study
	PCC Sidewalk - 4" Depth / 8' Wide	LF	$80.00	$161,440.00	Story-Keys Corridor Complete Streets Study
	PCC Sidewalk - 4" Depth / 10' Wide	LF	$100.00	$201,800.00	Story-Keys Corridor Complete Streets Study
	PCC Sidewalk - 4" Depth / 12' Wide	LF	$120.00	$242,160.00	Story-Keys Corridor Complete Streets Study
	PCC Sidewalk - 4" Depth / 15' Wide	LF	$150.00	$302,700.00	Story-Keys Corridor Complete Streets Study
	PCC Driveway	SF	$14.00	$28,252.00	Story-Keys Corridor Complete Streets Study
	Stamped Concrete - 6" Depth	SF	$20.00	$40,400.00	Arcadis Roadway Improvement Project Directory
	Class II Aggregate Base (2", Sand Base)	CY	$0.50	$1,010.00	Arcadis Roadway Improvement Project Directory
	Cement Treated Base (12")	SF	$4.00	$8,080.00	Arcadis Roadway Improvement Project Directory
	Cement Treated Base (16")	SF	$5.00	$10,100.00	Arcadis Roadway Improvement Project Directory
	Slurry Seal + Crack Sealing	SF	$0.75	$1,515.00	Arcadis Roadway Improvement Project Directory
	Saw-cut of existing Concrete Pavement	LF	$4.00	$8,080.00	Arcadis Roadway Improvement Project Directory
	Saw-cut of existing Asphalt Pavement	LF	$3.00	$6,060.00	Arcadis Roadway Improvement Project Directory
	Install Fence	LF	$50.00	$101,000.00	Arcadis Roadway Improvement Project Directory
	Install Gate	EA	$1,000.00	$2,020,000.00	Arcadis Roadway Improvement Project Directory
	Reset Survey Markers	EA	$2,000.00	$4,040,000.00	Arcadis Roadway Improvement Project Directory
	Adjust Utility Boxes to Grade	EA	$300.00	$606,000.00	Arcadis Roadway Improvement Project Directory

Removals

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Roadway Excavation	CY	$20.00	$40,400.00	Arcadis Roadway Improvement Project Directory
	Remove existing asphalt pavement (driveway)	SF	$4.00	$8,080.00	Arcadis Roadway Improvement Project Directory
	Remove existing asphalt pavement (roadway)	SF	$10.00	$20,200.00	Arcadis Roadway Improvement Project Directory
	Remove existing concrete pavement (roadway)	SF	$10.00	$20,200.00	Arcadis Roadway Improvement Project Directory
	Remove existing Curb & Gutter	LF	$20.00	$40,400.00	Arcadis Roadway Improvement Project Directory
	Remove existing Fence	LF	$12.00	$24,240.00	Arcadis Roadway Improvement Project Directory
	Remove existing Tree	EA	$1,000.00	$2,020,000.00	Arcadis Roadway Improvement Project Directory
	Remove existing sidewalk, curb ramps & driveways	SF	$7.00	$14,140.00	Arcadis Roadway Improvement Project Directory
	Remove Existing Asphalt Sidewalk	SF	$2.50	$5,050.00	Arcadis Roadway Improvement Project Directory
	Remove Existing PCC Sidewalk	SF	$3.00	$6,060.00	Arcadis Roadway Improvement Project Directory

Cost Sources - Signing and Striping

Proposed

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Install Limit Line	LF	$8.50	$17,170.00	Arcadis Roadway Improvement Project Directory
	Install Centerline w/ Reflectors	LF	$3.00	$6,060.00	Arcadis Roadway Improvement Project Directory
	Install 4" Striping - Paint	LF	$0.50	$1,010.00	Arcadis Roadway Improvement Project Directory
	Install 4" Striping - Thermoplastic	LF	$5.00	$10,100.00	Arcadis Roadway Improvement Project Directory
	Install 4" Striping (Dashed) - Paint	LF	$0.25	$505.00	Arcadis Roadway Improvement Project Directory
	Install 4" Striping (Dashed) - Thermoplastic	LF	$2.50	$5,050.00	Arcadis Roadway Improvement Project Directory
	Install 8" Striping - Thermoplastic	LF	$10.00	$20,200.00	Arcadis Roadway Improvement Project Directory
	Install Double Yellow Line (4") - Thermoplastic	LF	$3.00	$6,060.00	Arcadis Roadway Improvement Project Directory
	Install Parking Stripes (stall)	EA	$10.00	$20,200.00	Arcadis Roadway Improvement Project Directory
	Install Roadside Sign	EA	$300.00	$606,000.00	Arcadis Roadway Improvement Project Directory
	Install Crosswalk - Thermoplastic (12')	LF	$40.00	$80,800.00	Arcadis Roadway Improvement Project Directory
	Install Continental Crosswalk - Thermoplastic (12')	LF	$80.00	$161,600.00	Arcadis Roadway Improvement Project Directory
	Instal Turn Arrow - Thermoplastic	EA	$500.00	$1,010,000.00	Arcadis Roadway Improvement Project Directory
	Install Crosshatching - Thermoplastic	LF	$12.00	$24,240.00	Arcadis Roadway Improvement Project Directory
	Install Stop Line - Thermoplastic	LF	$15.00	$30,195.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Install Text Pavement Marking - per word	EA	$400.00	$808,000.00	Arcadis Roadway Improvement Project Directory
	Bike Route Signing	MI	$1,650.00	$3,333,000.00	Arcadis Roadway Improvement Project Directory
	Bike Lane Marking - Paint	EA	$100.00	$202,000.00	Arcadis Roadway Improvement Project Directory
	Install Sharrow - Paint	EA	$120.00	$242,400.00	Arcadis Roadway Improvement Project Directory
	Install Bike Buffer (2' wide) - Thermoplastic	LF	$6.00	$12,120.00	Arcadis Roadway Improvement Project Directory
	Install Bike Buffer (4' wide) - Thermoplastic	LF	$12.00	$24,240.00	Arcadis Roadway Improvement Project Directory
	Install Curb Paint	LF	$3.00	$6,039.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Install Cycle Track Paint	SF	$6.00	$12,120.00	Arcadis Roadway Improvement Project Directory
	Install Bike Lane Marking - Thermoplastic	EA	$350.00	$707,000.00	Arcadis Roadway Improvement Project Directory
	Install Sharrow - Thermoplastic	EA	$500.00	$1,010,000.00	Arcadis Roadway Improvement Project Directory
	Install Greenback Sharrow - Thermoplastic	EA	$700.00	$1,414,000.00	Arcadis Roadway Improvement Project Directory
	Install Green Thermoplastic	SF	$10.00	$20,200.00	Arcadis Roadway Improvement Project Directory
	Install Sign on Existing Post	EA	$80.00	$161,600.00	Arcadis Roadway Improvement Project Directory
	Install Sign on New Post	EA	$360.00	$727,200.00	Arcadis Roadway Improvement Project Directory
	Install Green Bike Lane Conflict Marking - Thermop.	LF	$20.00	$40,400.00	Arcadis Roadway Improvement Project Directory

Removals

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Remove Delineation	LF	$1.00	$2,020.00	Arcadis Roadway Improvement Project Directory
	Remove Turn Arrow	EA	$75.00	$151,500.00	Arcadis Roadway Improvement Project Directory
	Remove Crosswalk	LF	$5.00	$10,100.00	Arcadis Roadway Improvement Project Directory
	Relocate Sign and Pole	EA	$400.00	$808,000.00	Arcadis Roadway Improvement Project Directory
	Remove Sign and Pole	EA	$175.00	$353,500.00	Arcadis Roadway Improvement Project Directory
	Remove "Stop" Text	EA	$100.00	$202,000.00	Arcadis Roadway Improvement Project Directory
	Remove Sign	EA	$150.00	$303,000.00	Arcadis Roadway Improvement Project Directory

Cost Sources - Traffic / Electrical

Proposed

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Modify Controller	EA	$7,500.00	$15,150,000.00	Arcadis Roadway Improvement Project Directory
	Modify Intersection traffic Signal System	LS	$550,000.00	$1,109,900,000.00	Willow-Keyes Complete Streets Improvements
	Vehicle Heads	EA	$1,200.00	$2,424,000.00	Arcadis Roadway Improvement Project Directory
	Ped Heads	EA	$1,530.00	$3,079,890.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Audible Ped Signal	EA	$800.00	$1,610,400.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Ped Countdown Timer	EA	$725.00	$1,459,425.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Loops	EA	$700.00	$1,414,000.00	Arcadis Roadway Improvement Project Directory
	Ped Buttons	EA	$360.00	$724,680.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Bike Button, Pole, and Sign	EA	$1,100.00	$2,222,000.00	Arcadis Roadway Improvement Project Directory
	EVP Sensor	EA	$3,000.00	$6,060,000.00	Arcadis Roadway Improvement Project Directory
	Parking Lot Light Fixture	EA	$4,000.00	$8,080,000.00	Arcadis Roadway Improvement Project Directory
	Type 17 Poles, Luminaires, and Foundation	EA	$18,000.00	$36,360,000.00	Arcadis Roadway Improvement Project Directory
	Type 26-3 Pole, Luminaires, and Foundation	EA	$22,000.00	$44,440,000.00	Arcadis Roadway Improvement Project Directory
	Type 61-5 Pole, Luminaires, and Foundation	EA	$24,000.00	$48,480,000.00	Arcadis Roadway Improvement Project Directory
	Pedestrian Push Botton Post	EA	$1,100.00	$2,222,000.00	Arcadis Roadway Improvement Project Directory
	Pullboxes	EA	$750.00	$1,515,000.00	Arcadis Roadway Improvement Project Directory
	2" Conduit	LF	$40.00	$80,800.00	Arcadis Roadway Improvement Project Directory
	3" Conduit	LF	$50.00	$101,000.00	Arcadis Roadway Improvement Project Directory
	Traffic Signal Wiring	LS	$15,000.00	$30,300,000.00	Arcadis Roadway Improvement Project Directory
	Bike Detector Loop	EA	$800.00	$1,616,000.00	Arcadis Roadway Improvement Project Directory
	Mast Arm Sign	EA	$400.00	$808,000.00	Arcadis Roadway Improvement Project Directory
	Street Light - Basic	EA	$7,500	$15,150,000.00	Arcadis Roadway Improvement Project Directory
	Street Light - Stone	EA	$15,000	$30,300,000.00	Arcadis Roadway Improvement Project Directory
	Pedestrian Scale Lighting	EA	$6,000	$12,108,000.00	Story-Keys Corridor Complete Streets Study
	Install Flashing Crosswalk (In-Road Lights + Solar Panel)	LS	$25,000.00	$50,500,000.00	Arcadis Roadway Improvement Project Directory
	Ped Barricade and R49 Sign	EA	$600.00	$1,212,000.00	Arcadis Roadway Improvement Project Directory
	Install HAWK Ped Signal	EA	$45,000.00	$90,900,000.00	Arcadis Roadway Improvement Project Directory
	Install Rapid Flashing Ped Beacon	EA	$22,350.00	$44,990,550.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Street Name Signs	EA	$1,500.00	$3,030,000.00	Arcadis Roadway Improvement Project Directory
	Install APS (including sign and button)	EA	$1,000.00	$2,020,000.00	Arcadis Roadway Improvement Project Directory

Removals

#	Description	Unit	Unit Price	2024 Escalated Price	Source

Cost Sources - Site Furnishings

Proposed

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Trash Receptacle	EA	$1,000.00	$2,020,000.00	Arcadis Roadway Improvement Project Directory
	Recycle Receptacle	EA	$1,000.00	$2,020,000.00	Arcadis Roadway Improvement Project Directory
	Pre-Fabricated Kiosk	EA	$2,600.00	$5,252,000.00	Arcadis Roadway Improvement Project Directory
	Benches - 6' length	EA	$1,200.00	$2,424,000.00	Arcadis Roadway Improvement Project Directory
	Bike Locker	EA	$2,000.00	$4,026,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Bike Rack	EA	$725.00	$1,459,425.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Bus Rack	EA	$1,000.00	$2,013,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Bike Station (per bike)	EA	$5,000	$10,055,000.00	https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/
	Bollard (Decorative Stone)	EA	$725.00	$1,459,425.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Bollard (Steel with Plastic Sleeve)	EA	$412.00	$412.00	Market research.
	Gateway Sign	EA	$360.00	$724,680.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Gateway Structure	EA	$22,800.00	$45,896,400.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Real Time Public Info Display	EA	$2,000.00	$4,040,000.00	Arcadis Roadway Improvement Project Directory
	Information Kiosk	EA	$160,000.00	$322,080,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Shade Shelter	EA	$30,000.00	$60,390,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Bike Access Ramp	LF	$50.00	$101,000.00	Arcadis Roadway Improvement Project Directory
	Tree Grates	EA	$1,450.00	$2,918,850.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Street Tree (includes irrigation)	EA	$2,000.00	$4,036,000.00	Story-Keys Corridor Complete Streets Study
	Bus Shelter	EA	$20,000.00	$40,360,000.00	Story-Keys Corridor Complete Streets Study
	Street Furnishing (includes wayfinding)	LF	$35.00	$70,630.00	Story-Keys Corridor Complete Streets Study
	Flexible Delineator	EA	$40.00	$80,800.00	Arcadis Roadway Improvement Project Directory
	Stair Railing	LF	$35.00	$35.00	https://porch.com/project-cost/cost-to-install-a-stairway-handrail
	Stair Construction	LS	$17,000.00	$17,000.00	https://www.homewyse.com/services/cost_to_install_stairway.html
	Concrete ADA Ramp (5ft. wide)	LF	$70.00	$141,260.00	Story-Keys Corridor Complete Streets Study
	Public Restroom Stall	EA	$100,000.00	$201,800,000.00	Story-Keys Corridor Complete Streets Study
	Real Time Transit	EA	$10,000.00	$20,180,000.00	Story-Keys Corridor Complete Streets Study

Removals

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Remove Bike Rack	EA	$1,000.00	$2,013,000.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Relocate Bike Rack	EA	$1,200.00	$2,415,600.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Remove Bench	EA	$900.00	$1,811,700.00	Countermeasure Cost Report (UNC-HSRC 2013)
	Remove Bus Shelter	EA	$3,700.00	$7,448,100.00	Countermeasure Cost Report (UNC-HSRC 2013)

Cost Sources - Landscaping

Proposed

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Proposed Landscaping / Irrigation	SF	$16.00	$32,288.00	Story-Keys Corridor Complete Streets Study

Removals

#	Description	Unit	Unit Price	2024 Escalated Price	Source
	Clearing and Grubbing	SF	$1.50	$3,030.00	Arcadis Roadway Improvement Project Directory
	Landscaping / Irrigation Removals	LS		$-	Arcadis Roadway Improvement Project Directory

Berryessa Station Area Pedestrian Improvements Summary

	Item	Amount
	Civil	$1,647,826,500.00
	Signing / Striping	$315,928,000.00
	Traffic / Electrical	$924,607,000.00
	Traffic / Electrical Labor (25% of T/E)	$231,151,750.00
	Furnishing	$242,160,000.00
	Landscaping / Irrigation	
	Traffic Control	
	Water Pollution Control	
	Maintain WPCP / Perform Filings	
	Project Construction Survey	
	Materials and Permits Subtotal	$3,361,673,250
	Mobilization (10% of Mat./Perm. Subtotal)	$336,167,325
	Construction Subtotal	$3,697,840,575
	Contingency (% of Constr. Subtotal)	
	Contingency Amount	
	Total Construction Cost	$3,697,840,575
	Eng./Design (10% of Constr. Total)	$369,784,058
	Administration (5% of Constr. Total)	$184,892,029
	Constr. Mgmt (7% of Constr. Total)	$258,848,840
	Total Project Cost	$4,511,365,502

	Assumptions	Cost
1	Widen Sidewalk (5755 ft)	$1,393,630,800.00
2	Improve Landscaping (On going maintenance cost, not included in estimate)	
3	Add pedestrian refuge island (2 10 ft x 50ft islands) (120 ft curb & gutter x2) (180 ft cont. crosswalk)	$73,484,000.00
4	Remove Porkchop (305 sqft) (170 ft cont. croswalk) (2900 sqft. Remove roadway) (283 ft. Remove curb & gutter)	$101,797,900.00
5	High Visibility Crosswalk (92 ft)	$14,867,200.00
6	Wayfinding Signage (2)	$1,454,400.00
7	High Visibility Crosswalk (435 ft)	$70,296,000.00
8	Wayfinding Signage (2)	$1,454,400.00
9	Remove Porkchop (390 sqft) (cont. crosswalk included in line item 7)	$5,514,600.00
10	Add Bus Shelter & Improve lighting (4 ped. lights)	$88,792,000.00
11	Add Bus Shelter	$40,360,000.00
12	Widen Sidewalk (150 ft)	$21,189,000.00
13	High Visibility Crosswalk (240 ft)	$38,784,000.00
14	High Visibility Crosswalk (415 ft)	$67,064,000.00
15	Wayfinding Signage (2)	$1,454,400.00
16	Widen Sidewalk (534 ft)	$75,432,840.00
17	High Visibility Crosswalk (360 ft)	$58,176,000.00
18	Wayfinding Signage (2)	$1,454,400.00
19	Add Bus Shelter	$40,360,000.00
20	Add Bus Shelter	$40,360,000.00
21	Add Bus Shelter	$40,360,000.00
22	Add Bus Shelter	$40,360,000.00
23	Improve Lighting (6230 ft)	$629,230,000.00
24	Improve Landscaping (Ongoing maintenance cost, not included in estimate)	
25	Wayfinding Signage (2)	$1,454,400.00
26	Improve Landscaping (Ongoing maintenance cost, not included in estimate)	
27	Wayfinding Signage (2)	$1,454,400.00
28	Wayfinding Signage (2)	$1,454,400.00
29	Improve Lighting (2445 ft)	$246,945,000.00
30	Add sidewalk (include utility relocation) (236ft)	$33,337,360.00

NOTE: DOES NOT INCLUDE CONSTRUCTION INSPECTION, ENGINEERING, RIGHT-OF-WAY, OR UTILITY COSTS EXCEPT AS NOTED.

Pedestrian Improvements - Roadway (Civil)

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Curb (6") & Gutter (24")	LF	$100,900.00	240	$24,216,000.00
	Curb (6")	LF	$40,400.00		
	Curb (6") - Divider	LF	$60,600.00		
	Curb Ramp - Corner	EA	$5,656,000.00		
	Curb Ramp - Mid Block	EA	$5,050,000.00		
	Curb Extension w/ ADA Ramp	EA	$26,169,000.00		
	Detectable Warning Tiles	SF	$125,116.00		
	Traffic Circle	EA	$100,650,000.00		
	Roundabout	EA	$503,250,000.00		
	Retrofit 4-way Intersection w/ Curb Extensions	LS	$201,300,000.00		
	Traffic Diverter	EA	$40,400,000.00		
	Median / Median Island	SF	$30,270.00		
	Raised Crosswalk	EA	$16,506,600.00		
	Raised Intersection	EA	$102,663,000.00		
	Speed Hump	EA	$5,435,100.00		
	Speed Bump	EA	$3,271,125.00		
	Speed Table	EA	$4,026,000.00		
	Asphalt Driveway - Grind, Regrade and Overlay	SF	$6,060.00		
	Asphalt Filler Strip (2' wide)	LF	$113,120.00		
	Asphalt Paving (Grind & Replace)	SF	$30,300.00		
	Asphalt Paving (3.5")	SF	$8,080.00		
	Asphalt Paving (5")	SF	$10,100.00		
	PCC - Concrete Roadway - 9" Depth	SF	$30,300.00		
	PCC - Filler Strip (6" wide)	LF	$10,090.00		
	PCC Sidewalk - 4" Depth / 2' Wide	LF	$40,360.00		
	PCC Sidewalk - 4" Depth / 4' Wide	LF	$80,720.00		
	PCC Sidewalk - 4" Depth / 6' Wide	LF	$121,080.00		
	PCC Sidewalk - 4" Depth / 7' Wide	LF	$141,260.00	920	$129,959,200.00
	PCC Sidewalk - 4" Depth / 8' Wide	LF	$161,440.00		
	PCC Sidewalk - 4" Depth / 10' Wide	LF	$201,800.00	100	$20,180,000.00
	PCC Sidewalk - 4" Depth / 12' Wide	LF	$242,160.00	5755	$1,393,630,800.00
	PCC Sidewalk - 4" Depth / 15' Wide	LF	$302,700.00		
	PCC Driveway	SF	$28,252.00		
	Stamped Concrete - 6" Depth	SF	$40,400.00		
	Class II Aggregate Base (2", Sand Base)	CY	$1,010.00		
	Cement Treated Base (12")	SF	$8,080.00		
	Cement Treated Base (16")	SF	$10,100.00		
	Slurry Seal + Crack Sealing	SF	$1,515.00		
	Saw-cut of existing Concrete Pavement	LF	$8,080.00		
	Saw-cut of existing Asphalt Pavement	LF	$6,060.00		
	Install Fence	LF	$101,000.00		
	Install Gate	EA	$2,020,000.00		
	Reset Survey Markers	EA	$4,040,000.00		
	Adjust Utility Boxes to Grade	EA	$606,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Roadway Excavation	CY	$40,400.00		
	Remove existing asphalt pavement (driveway)	SF	$8,080.00		
	Remove existing asphalt pavement (roadway)	SF	$20,200.00	2900	$58,580,000.00
	Remove existing concrete pavement (roadway)	SF	$20,200.00		
	Remove existing Curb & Gutter	LF	$40,400.00	283	$11,433,200.00
	Remove existing Fence	LF	$24,240.00		
	Remove existing Tree	EA	$2,020,000.00		
	Remove existing sidewalk, curb ramps & driveways	SF	$14,140.00	695	$9,827,300.00
	Remove Existing Asphalt Sidewalk	SF	$5,050.00		
	Remove Existing PCC Sidewalk	SF	$6,060.00		
				ROADWAY SUBTOTAL	$1,647,826,500.00

Pedestrian Improvements - Signing and Striping

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Install Limit Line	LF	$17,170.00		
	Install Centerline w/ Reflectors	LF	$6,060.00		
	Install 4" Striping - Paint	LF	$1,010.00		
	Install 4" Striping - Thermoplastic	LF	$10,100.00		
	Install 4" Striping (Dashed) - Paint	LF	$505.00		
	Install 4" Striping (Dashed) - Thermoplastic	LF	$5,050.00		
	Install 8" Striping - Thermoplastic	LF	$20,200.00		
	Install Double Yellow Line (4") - Thermoplastic	LF	$6,060.00		
	Install Parking Stripes (stall)	EA	$20,200.00		
	Install Roadside Sign	EA	$606,000.00		
	Install Crosswalk - Thermoplastic (12')	LF	$80,800.00		
	Install Continental Crosswalk - Thermoplastic (12')	LF	$161,600.00	1892	$305,747,200.00
	Instal Turn Arrow - Thermoplastic	EA	$1,010,000.00		
	Install Crosshatching - Thermoplastic	LF	$24,240.00		
	Install Stop Line - Thermoplastic	LF	$30,195.00		
	Install Text Pavement Marking - per word	EA	$808,000.00		
	Bike Route Signing	MI	$3,333,000.00		
	Bike Lane Marking - Paint	EA	$202,000.00		
	Install Sharrow - Paint	EA	$242,400.00		
	Install Bike Buffer (2' wide) - Thermoplastic	LF	$12,120.00		
	Install Bike Buffer (4' wide) - Thermoplastic	LF	$24,240.00		
	Install Curb Paint	LF	$6,039.00		
	Install Cycle Track Paint	SF	$12,120.00		
	Install Bike Lane Marking - Thermoplastic	EA	$707,000.00		
	Install Sharrow - Thermoplastic	EA	$1,010,000.00		
	Install Greenback Sharrow - Thermoplastic	EA	$1,414,000.00		
	Install Green Thermoplastic	SF	$20,200.00		
	Install Sign on Existing Post	EA	$161,600.00		
	Install Sign on New Post	EA	$727,200.00	14	$10,180,800.00
	Install Green Bike Lane Conflict Marking - Thermoplastic	LF	$40,400.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Remove Delineation	LF	$2,020.00		
	Remove Turn Arrow	EA	$151,500.00		
	Remove Crosswalk	LF	$10,100.00		
	Relocate Sign and Pole	EA	$808,000.00		
	Remove Sign and Pole	EA	$353,500.00		
	Remove "Stop" Text	EA	$202,000.00		
				SIGNING / STRIPING SUBTOTAL	$315,928,000.00

Pedestrian Improvements - Traffic and Electrical

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Modify Controller	EA	$15,150,000.00		
	Modify Intersection Traffic Signal System	LS	$1,109,900,000.00		
	Vehicle Heads	EA	$2,424,000.00		
	Ped Heads	EA	$3,079,890.00		
	Audible Ped Signal	EA	$1,610,400.00		
	Ped Countdown Timer	EA	$1,459,425.00		
	Loops	EA	$1,414,000.00		
	Ped Buttons	EA	$724,680.00		
	Bike Button, Pole, and Sign	EA	$2,222,000.00		
	EVP Sensor	EA	$6,060,000.00		
	Parking Lot Light Fixture	EA	$8,080,000.00		
	Type 17 Poles, Luminaires, and Foundation	EA	$36,360,000.00		
	Type 26-3 Pole, Luminaires, and Foundation	EA	$44,440,000.00		
	Type 61-5 Pole, Luminaires, and Foundation	EA	$48,480,000.00		
	Pedestrian Push Botton Post	EA	$2,222,000.00		
	Pullboxes	EA	$1,515,000.00		
	2" Conduit	LF	$80,800.00		
	3" Conduit	LF	$101,000.00		
	Traffic Signal Wiring	LS	$30,300,000.00		
	Bike Detector Loop	EA	$1,616,000.00		
	Mast Arm Sign	EA	$808,000.00		
	Street Light - Basic	EA	$15,150,000.00	58	$876,175,000.00
	Street Light - Stone	EA	$30,300,000.00		
	Pedestrian Scale Lighting	EA	$12,108,000.00	4	$48,432,000.00
	Install Flashing Crosswalk (In-Road Lights + Solar Panel)	LS	$50,500,000.00		
	Ped Barricade and R49 Sign	EA	$1,212,000.00		
	Install HAWK Ped Signal	EA	$90,900,000.00		
	Install Rapid Flashing Ped Beacon	EA	$44,990,550.00		
	Street Name Signs	EA	$3,030,000.00		
	Install APS (including sign and button)	EA	$2,020,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
				TRAFFIC / ELECTRICAL SUBTOTAL	$924,607,000.00

Pedestrian Improvements - Site Furnishings

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Trash Receptacle	EA	$2,020,000.00		
	Recycle Receptacle	EA	$2,020,000.00		
	Pre-Fabricated Kiosk	EA	$5,252,000.00		
	Benches - 6' length	EA	$2,424,000.00		
	Bike Locker	EA	$4,026,000.00		
	Bike Rack	EA	$1,459,425.00		
	Bus Rack	EA	$2,013,000.00		
	Bike Station (per bike)	EA	$10,055,000.00		
	Bollard (Decorative Stone)	EA	$1,459,425.00		
	Bollard (Steel with Plastic Sleeve)	EA	$412.00		
	Gateway Sign	EA	$724,680.00		
	Gateway Structure	EA	$45,896,400.00		
	Real Time Public Info Display	EA	$4,040,000.00		
	Information Kiosk	EA	$322,080,000.00		
	Shade Shelter	EA	$60,390,000.00		
	Bike Access Ramp	LF	$101,000.00		
	Tree Grates	EA	$2,918,850.00		
	Street Tree (includes irrigation)	EA	$4,036,000.00		
	Bus Shelter	EA	$40,360,000.00	6	$242,160,000.00
	Street Furnishing (includes wayfinding)	LF	$70,630.00		
	Flexible Delineator	EA	$80,800.00		
	Stair Railing	LF	$35.00		
	Stair Construction	LS	$17,000.00		
	Concrete ADA Ramp (5ft. wide)	LF	$141,260.00		
	Public Restroom Stall	EA	$201,800,000.00		
	Real Time Transit	EA	$20,180,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Remove Bike Rack	EA	$1,100.00		$-
	Relocate Bike Rack	EA	$1,300.00		$-
	Remove Bench	EA	$1,000.00		$-
	Remove Bus Shelter	EA	$4,100.00		$-

SITE FURNISHINGS SUBTOTAL $242,160,000.00

Pedestrian Improvements - Landscaping

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Proposed Landscaping / Irrigation	SF	$32,288.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Clearing and Grubbing	SF	$3,030.00		
	Landscaping / Irrigation Removals	LS			

LANDSCAPING SUBTOTAL

Berryessa Station Area Bicycle Improvements Summary

	Item	Amount
	Civil	
	Signing / Striping	$79,547,600.00
	Traffic / Electrical	$8,888,000.00
	Traffic / Electrical Labor (25% of T/E)	$2,222,000.00
	Furnishing	
	Landscaping / Irrigation	$889,111,080.00
	Traffic Control	
	Water Pollution Control	
	Maintain WPCP / Perform Filings	
	Project Construction Survey	
	Materials and Permits Subtotal	$979,768,680
	Mobilization (10% of Mat./Perm. Subtotal)	$97,976,868
	Construction Subtotal	$1,077,745,548
	Contingency (% of Constr. Subtotal)	
	Contingency Amount	
	Total Construction Cost	$1,077,745,548
	Eng./Design (10% of Constr. Total)	$107,774,555
	Administration (5% of Constr. Total)	$53,887,277
	Constr. Mgmt (7% of Constr. Total)	$75,442,188
	Total Project Cost	$1,314,849,568

	Assumptions	Cost
1	Class IV Protected Bikeway (1.96 mi)	$297,853,642.24
2	Two Stage Left Turn (95 ft x2)	$8,322,400.00
3	Two Stage Left Turn (100 ft x 2)	$8,726,400.00
4	Class IV Protected Bikeway (2.27 mi)	$344,963,146.88
5	Green Bicycle Transition Lane (110 ft x 4)	$17,776,000.00
6	Two Stage Left Turn (90 ft x 2)	$7,918,400.00
7	Class IV Protected Bikeway (2.94 mi)	$446,780,463.36
8	Class IV Protected Bikeway (802 ft)	$22,954,972.32
9	Class IV Protected Bikeway (0.657 mi)	$99,841,756.61
10	Class III Bike Route (0.256 mi)	$13,036,918.40
11	Class IV Protected Bikeway (1.21 mi)	$183,879,034.24
12	Class IV Protected Bikeway (2.11 mi)	$320,648,563.84
13	Class I Shared Use Path (2.88 mi)	$4,077,672,192.00
14	Class I Shared Use Path (0.825 mi)	$1,168,083,180.00
15	Class I Shared Use Path (1.66 mi)	$1,951,964,784.00
16	Class III Bike Route (0.422 mi)	$17,168,060.80
17	Class IV Protected Bikeway (0.762 mi)	$115,798,201.73
18	Class IV Protected Bikeway (2.53 mi)	$384,474,344.32
19	Class III Bike Route (0.671 mi)	$23,364,774.40
20	Class IV Protected Bikeway (0,366 mi)	$55,619,608.70
21	Class II Shared Use Path (0.617 mi)	$139,290,958.40
22	Green Bicycle Transition Lane (95 ft x2)	$7,676,000.00
23	Two Stage Left Turn (105 ft x 2)	$9,130,400.00
24	Bike intersection signal (2)	$4,444,000.00
25	Bike intersection signal (2)	$4,444,000.00

NOTE: DOES NOT INCLUDE CONSTRUCTION INSPECTION, ENGINEERING, RIGHT-OF-WAY, OR UTILITY COSTS EXCEPT AS NOTED.

Bicycle Improvements - Roadway (Civil)

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Curb (6") & Gutter (24")	LF	$100,900.00		
	Curb (6")	LF	$40,400.00		
	Curb (6") - Divider	LF	$60,600.00		
	Curb Ramp - Corner	EA	$5,656,000.00		
	Curb Ramp - Mid Block	EA	$5,050,000.00		
	Curb Extension w/ ADA Ramp	EA	$26,169,000.00		
	Detectable Warning Tiles	SF	$125,116.00		
	Traffic Circle	EA	$100,650,000.00		
	Roundabout	EA	$503,250,000.00		
	Retrofit 4-way Intersection w/ Curb Extensions	LS	$201,300,000.00		
	Traffic Diverter	EA	$40,400,000.00		
	Median / Median Island	SF	$30,270.00		
	Raised Crosswalk	EA	$16,506,600.00		
	Raised Intersection	EA	$102,663,000.00		
	Speed Hump	EA	$5,435,100.00		
	Speed Bump	EA	$3,271,125.00		
	Speed Table	EA	$4,026,000.00		
	Asphalt Driveway - Grind, Regrade and Overlay	SF	$6,060.00		
	Asphalt Filler Strip (2' wide)	LF	$113,120.00		
	Asphalt Paving (Grind & Replace)	SF	$30,300.00		
	Asphalt Paving (3.5")	SF	$8,080.00		
	Asphalt Paving (5")	SF	$10,100.00		
	PCC - Concrete Roadway - 9" Depth	SF	$30,300.00		
	PCC - Filler Strip (6" wide)	LF	$10,090.00		
	PCC Sidewalk - 4" Depth / 2' Wide	LF	$40,360.00		
	PCC Sidewalk - 4" Depth / 4' Wide	LF	$80,720.00		
	PCC Sidewalk - 4" Depth / 6' Wide	LF	$121,080.00		
	PCC Sidewalk - 4" Depth / 7' Wide	LF	$141,260.00		
	PCC Sidewalk - 4" Depth / 8' Wide	LF	$161,440.00		
	PCC Sidewalk - 4" Depth / 10' Wide	LF	$201,800.00		
	PCC Sidewalk - 4" Depth / 12' Wide	LF	$242,160.00		
	PCC Sidewalk - 4" Depth / 15' Wide	LF	$302,700.00		
	PCC Driveway	SF	$28,252.00		
	Stamped Concrete - 6" Depth	SF	$40,400.00		
	Class II Aggregate Base (2", Sand Base)	CY	$1,010.00		
	Cement Treated Base (12")	SF	$8,080.00		
	Cement Treated Base (16")	SF	$10,100.00		
	Slurry Seal + Crack Sealing	SF	$1,515.00		
	Saw-cut of existing Concrete Pavement	LF	$8,080.00		
	Saw-cut of existing Asphalt Pavement	LF	$6,060.00		
	Install Fence	LF	$101,000.00		
	Install Gate	EA	$2,020,000.00		
	Reset Survey Markers	EA	$4,040,000.00		
	Adjust Utility Boxes to Grade	EA	$606,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Roadway Excavation	CY	$40,400.00		
	Remove existing asphalt pavement (driveway)	SF	$8,080.00		
	Remove existing asphalt pavement (roadway)	SF	$20,200.00		
	Remove existing concrete pavement (roadway)	SF	$20,200.00		
	Remove existing Curb & Gutter	LF	$40,400.00		
	Remove existing Fence	LF	$24,240.00		
	Remove existing Tree	EA	$2,020,000.00		
	Remove existing sidewalk, curb ramps & driveways	SF	$14,140.00		
	Remove Existing Asphalt Sidewalk	SF	$5,050.00		
	Remove Existing PCC Sidewalk	SF	$6,060.00		
					ROADWAY SUBTOTAL

Bicycle Improvements - Signing and Striping

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Install Limit Line	LF	$17,170.00		
	Install Centerline w/ Reflectors	LF	$6,060.00		
	Install 4" Striping - Paint	LF	$1,010.00		
	Install 4" Striping - Thermoplastic	LF	$10,100.00		
	Install 4" Striping (Dashed) - Paint	LF	$505.00		
	Install 4" Striping (Dashed) - Thermoplastic	LF	$5,050.00		
	Install 8" Striping - Thermoplastic	LF	$20,200.00		
	Install Double Yellow Line (4") - Thermoplastic	LF	$6,060.00		
	Install Parking Stripes (stall)	EA	$20,200.00		
	Install Roadside Sign	EA	$606,000.00		
	Install Crosswalk - Thermoplastic (12')	LF	$80,800.00		
	Install Continental Crosswalk - Thermoplastic (12')	LF	$161,600.00		
	Instal Turn Arrow - Thermoplastic	EA	$1,010,000.00		
	Install Crosshatching - Thermoplastic	LF	$24,240.00		
	Install Stop Line - Thermoplastic	LF	$30,195.00		
	Install Text Pavement Marking - per word	EA	$808,000.00		
	Bike Route Signing	MI	$3,333,000.00	6	$19,998,000.00
	Bike Lane Marking - Paint	EA	$202,000.00		
	Install Sharrow - Paint	EA	$242,400.00		
	Install Bike Buffer (2' wide) - Thermoplastic	LF	$12,120.00		
	Install Bike Buffer (4' wide) - Thermoplastic	LF	$24,240.00		
	Install Curb Paint	LF	$6,039.00		
	Install Cycle Track Paint	SF	$12,120.00		
	Install Bike Lane Marking - Thermoplastic	EA	$707,000.00		
	Install Sharrow - Thermoplastic	EA	$1,010,000.00		
	Install Greenback Sharrow - Thermoplastic	EA	$1,414,000.00		
	Install Green Thermoplastic	SF	$20,200.00		
	Install Sign on Existing Post	EA	$161,600.00		
	Install Sign on New Post	EA	$727,200.00		
	Install Green Bike Lane Conflict Marking - Thermoplastic	LF	$40,400.00	1474	$59,549,600.00

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Remove Delineation	LF	$2,020.00		
	Remove Turn Arrow	EA	$151,500.00		
	Remove Crosswalk	LF	$10,100.00		
	Relocate Sign and Pole	EA	$808,000.00		
	Remove Sign and Pole	EA	$353,500.00		
	Remove "Stop" Text	EA	$202,000.00		
				SIGNING / STRIPING SUBTOTAL	$79,547,600.00

Bicycle Improvements - Traffic and Electrical

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Modify Controller	EA	$15,150,000.00		
	Modify Intersection Traffic Signal System	LS	$1,109,900,000.00		
	Vehicle Heads	EA	$2,424,000.00		
	Ped Heads	EA	$3,079,890.00		
	Audible Ped Signal	EA	$1,610,400.00		
	Ped Countdown Timer	EA	$1,459,425.00		
	Loops	EA	$1,414,000.00		
	Ped Buttons	EA	$724,680.00		
	Bike Button, Pole, and Sign	EA	$2,222,000.00	4	$8,888,000.00
	EVP Sensor	EA	$6,060,000.00		
	Parking Lot Light Fixture	EA	$8,080,000.00		
	Type 17 Poles, Luminaires, and Foundation	EA	$36,360,000.00		
	Type 26-3 Pole, Luminaires, and Foundation	EA	$44,440,000.00		
	Type 61-5 Pole, Luminaires, and Foundation	EA	$48,480,000.00		
	Pedestrian Push Botton Post	EA	$2,222,000.00		
	Pullboxes	EA	$1,515,000.00		
	2" Conduit	LF	$80,800.00		
	3" Conduit	LF	$101,000.00		
	Traffic Signal Wiring	LS	$30,300,000.00		
	Bike Detector Loop	EA	$1,616,000.00		
	Mast Arm Sign	EA	$808,000.00		
	Street Light - Basic	EA	$15,150,000.00		
	Street Light - Stone	EA	$30,300,000.00		
	Pedestrian Scale Lighting	EA	$12,108,000.00		
	Install Flashing Crosswalk (In-Road Lights + Solar Panel)	LS	$50,500,000.00		
	Ped Barricade and R49 Sign	EA	$1,212,000.00		
	Install HAWK Ped Signal	EA	$90,900,000.00		
	Install Rapid Flashing Ped Beacon	EA	$44,990,550.00		
	Street Name Signs	EA	$3,030,000.00		
	Install APS (including sign and button)	EA	$2,020,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
				TRAFFIC / ELECTRICAL SUBTOTAL	$8,888,000.00

Bicycle Improvements - Site Furnishings

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Trash Receptacle	EA	$2,020,000.00		
	Recycle Receptacle	EA	$2,020,000.00		
	Pre-Fabricated Kiosk	EA	$5,252,000.00		
	Benches - 6' length	EA	$2,424,000.00		
	Bike Locker	EA	$4,026,000.00		
	Bike Rack	EA	$1,459,425.00		
	Bus Rack	EA	$2,013,000.00		
	Bike Station (per bike)	EA	$10,055,000.00		
	Bollard (Decorative Stone)	EA	$1,459,425.00		
	Bollard (Steel with Plastic Sleeve)	EA	$412.00		
	Gateway Sign	EA	$724,680.00		
	Gateway Structure	EA	$45,896,400.00		
	Real Time Public Info Display	EA	$4,040,000.00		
	Information Kiosk	EA	$322,080,000.00		
	Shade Shelter	EA	$60,390,000.00		
	Bike Access Ramp	LF	$101,000.00		
	Tree Grates	EA	$2,918,850.00		
	Street Tree (includes irrigation)	EA	$4,036,000.00		
	Bus Shelter	EA	$40,360,000.00		
	Street Furnishing (includes wayfinding)	LF	$70,630.00		
	Flexible Delineator	EA	$80,800.00		
	Stair Railing	LF	$35.00		
	Stair Construction	LS	$17,000.00		
	Concrete ADA Ramp (5ft. wide)	LF	$141,260.00		
	Public Restroom Stall	EA	$201,800,000.00		
	Real Time Transit	EA	$20,180,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Remove Bike Rack	EA	$1,100.00		
	Relocate Bike Rack	EA	$1,300.00		
	Remove Bench	EA	$1,000.00		
	Remove Bus Shelter	EA	$4,100.00		
				SITE FURNISHINGS SUBTOTAL	

Bicycle Improvements - Landscaping

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Proposed Landscaping / Irrigation	SF	$32,288.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Clearing and Grubbing	SF	$3,030.00	293436	$889,111,080.00
	Landscaping / Irrigation Removals	LS			
				LANDSCAPING SUBTOTAL	$889,111,080.00

Berryessa Station On-Site Improvements Summary

	Item	Amount
	Civil	$29,088,000.00
	Signing / Striping	$114,369,875.00
	Traffic / Electrical	
	Traffic / Electrical Labor (25% of T/E)	
	Furnishing	$474,005,000.00
	Landscaping / Irrigation	
	Traffic Control	
	Water Pollution Control	
	Maintain WPCP / Perform Filings	
	Project Construction Survey	
	Materials and Permits Subtotal	$617,462,875
	Mobilization (10% of Mat./Perm. Subtotal)	$61,746,288
	Construction Subtotal	$679,209,163
	Contingency (% of Constr. Subtotal)	
	Contingency Amount	
	Total Construction Cost	$679,209,163
	Total Construction Cost	$679,209,163
	Eng./Design (10% of Constr. Total)	$67,920,916
	Administration (5% of Constr. Total)	$33,960,458
	Constr. Mgmt (7% of Constr. Total)	$47,544,641
	Total Project Cost	$828,635,178

	Assumptions	Cost
1	Wayfinding signage (2)	$1,454,400.00
2	Wayfinding signage (2)	$1,454,400.00
3	High visibility crosswalk (230 ft)	$37,168,000.00
4	Bike share (5 bikes)	$50,275,000.00
5	Additional bike lockers (5)	$20,130,000.00
6	Wayfinding signage (1)	$727,200.00
7	Add new wayfinding signage (1)	$727,200.00
8	High visibility crosswalk (250)	$40,400,000.00
9	High visibility crosswalk (190 ft)	$30,704,000.00
10	Public restrooms (2 Stalls)	$403,600,000.00
11	Stripe roadway to separate in/out traffic (555 ft)	$280,275.00
12	Wayfinding signage (2)	$1,454,400.00
13	Left turn into parking garage (remove center median 1200 sqft.)	$29,088,000.00

NOTE: DOES NOT INCLUDE CONSTRUCTION INSPECTION, ENGINEERING, RIGHT-OF-WAY, OR UTILITY COSTS EXCEPT AS NOTED.

On-Site Improvements - Roadway (Civil)

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Curb (6") & Gutter (24")	LF	$100,900.00		
	Curb (6")	LF	$40,400.00		
	Curb (6") - Divider	LF	$60,600.00		
	Curb Ramp - Corner	EA	$5,656,000.00		
	Curb Ramp - Mid Block	EA	$5,050,000.00		
	Curb Extension w/ ADA Ramp	EA	$26,169,000.00		
	Detectable Warning Tiles	SF	$125,116.00		
	Traffic Circle	EA	$100,650,000.00		
	Roundabout	EA	$503,250,000.00		
	Retrofit 4-way Intersection w/ Curb Extensions	LS	$201,300,000.00		
	Traffic Diverter	EA	$40,400,000.00		
	Median / Median Island	SF	$30,270.00		
	Raised Crosswalk	EA	$16,506,600.00		
	Raised Intersection	EA	$102,663,000.00		
	Speed Hump	EA	$5,435,100.00		
	Speed Bump	EA	$3,271,125.00		
	Speed Table	EA	$4,026,000.00		
	Asphalt Driveway - Grind, Regrade and Overlay	SF	$6,060.00		
	Asphalt Filler Strip (2' wide)	LF	$113,120.00		
	Asphalt Paving (Grind & Replace)	SF	$30,300.00		
	Asphalt Paving (3.5")	SF	$8,080.00		
	Asphalt Paving (5")	SF	$10,100.00	1200	$12,120,000.00
	PCC - Concrete Roadway - 9" Depth	SF	$30,300.00		
	PCC - Filler Strip (6" wide)	LF	$10,090.00		
	PCC Sidewalk - 4" Depth / 2' Wide	LF	$40,360.00		
	PCC Sidewalk - 4" Depth / 4' Wide	LF	$80,720.00		
	PCC Sidewalk - 4" Depth / 6' Wide	LF	$121,080.00		
	PCC Sidewalk - 4" Depth / 7' Wide	LF	$141,260.00		
	PCC Sidewalk - 4" Depth / 8' Wide	LF	$161,440.00		
	PCC Sidewalk - 4" Depth / 10' Wide	LF	$201,800.00		
	PCC Sidewalk - 4" Depth / 12' Wide	LF	$242,160.00		
	PCC Sidewalk - 4" Depth / 15' Wide	LF	$302,700.00		
	PCC Driveway	SF	$28,252.00		
	Stamped Concrete - 6" Depth	SF	$40,400.00		
	Class II Aggregate Base (2", Sand Base)	CY	$1,010.00		
	Cement Treated Base (12")	SF	$8,080.00		
	Cement Treated Base (16")	SF	$10,100.00		
	Slurry Seal + Crack Sealing	SF	$1,515.00		
	Saw-cut of existing Concrete Pavement	LF	$8,080.00		
	Saw-cut of existing Asphalt Pavement	LF	$6,060.00		
	Install Fence	LF	$101,000.00		
	Install Gate	EA	$2,020,000.00		
	Reset Survey Markers	EA	$4,040,000.00		
	Adjust Utility Boxes to Grade	EA	$606,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Roadway Excavation	CY	$40,400.00		
	Remove existing asphalt pavement (driveway)	SF	$8,080.00		
	Remove existing asphalt pavement (roadway)	SF	$20,200.00		
	Remove existing concrete pavement (roadway)	SF	$20,200.00		
	Remove existing Curb & Gutter	LF	$40,400.00		
	Remove existing Fence	LF	$24,240.00		
	Remove existing Tree	EA	$2,020,000.00		
	Remove existing sidewalk, curb ramps & driveways	SF	$14,140.00	1200	$16,968,000.00
	Remove Existing Asphalt Sidewalk	SF	$5,050.00		
	Remove Existing PCC Sidewalk	SF	$6,060.00		
				ROADWAY SUBTOTAL	$29,088,000.00

On-Site Improvements - Signing and Striping

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Install Limit Line	LF	$17,170.00		
	Install Centerline w/ Reflectors	LF	$6,060.00		
	Install 4" Striping - Paint	LF	$1,010.00		
	Install 4" Striping - Thermoplastic	LF	$10,100.00		
	Install 4" Striping (Dashed) - Paint	LF	$505.00	555	$280,275.00
	Install 4" Striping (Dashed) - Thermoplastic	LF	$5,050.00		
	Install 8" Striping - Thermoplastic	LF	$20,200.00		
	Install Double Yellow Line (4") - Thermoplastic	LF	$6,060.00		
	Install Parking Stripes (stall)	EA	$20,200.00		
	Install Roadside Sign	EA	$606,000.00		
	Install Crosswalk - Thermoplastic (12')	LF	$80,800.00		
	Install Continental Crosswalk - Thermoplastic (12')	LF	$161,600.00	670	$108,272,000.00
	Instal Turn Arrow - Thermoplastic	EA	$1,010,000.00		
	Install Crosshatching - Thermoplastic	LF	$24,240.00		
	Install Stop Line - Thermoplastic	LF	$30,195.00		
	Install Text Pavement Marking - per word	EA	$808,000.00		
	Bike Route Signing	MI	$3,333,000.00		
	Bike Lane Marking - Paint	EA	$202,000.00		
	Install Sharrow - Paint	EA	$242,400.00		
	Install Bike Buffer (2' wide) - Thermoplastic	LF	$12,120.00		
	Install Bike Buffer (4' wide) - Thermoplastic	LF	$24,240.00		
	Install Curb Paint	LF	$6,039.00		
	Install Cycle Track Paint	SF	$12,120.00		
	Install Bike Lane Marking - Thermoplastic	EA	$707,000.00		
	Install Sharrow - Thermoplastic	EA	$1,010,000.00		
	Install Greenback Sharrow - Thermoplastic	EA	$1,414,000.00		
	Install Green Thermoplastic	SF	$20,200.00		
	Install Sign on Existing Post	EA	$161,600.00		
	Install Sign on New Post	EA	$727,200.00	8	$5,817,600.00
	Install Green Bike Lane Conflict Marking - Thermoplastic	LF	$40,400.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Remove Delineation	LF	$2,020.00		
	Remove Turn Arrow	EA	$151,500.00		
	Remove Crosswalk	LF	$10,100.00		
	Relocate Sign and Pole	EA	$808,000.00		
	Remove Sign and Pole	EA	$353,500.00		
	Remove "Stop" Text	EA	$202,000.00		
				SIGNING / STRIPING SUBTOTAL	$114,369,875.00

On-Site Improvements - Traffic and Electrical

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Modify Controller	EA	$15,150,000.00		
	Modify Intersection Traffic Signal System	LS	$1,109,900,000.00		
	Vehicle Heads	EA	$2,424,000.00		
	Ped Heads	EA	$3,079,890.00		
	Audible Ped Signal	EA	$1,610,400.00		
	Ped Countdown Timer	EA	$1,459,425.00		
	Loops	EA	$1,414,000.00		
	Ped Buttons	EA	$724,680.00		
	Bike Button, Pole, and Sign	EA	$2,222,000.00		
	EVP Sensor	EA	$6,060,000.00		
	Parking Lot Light Fixture	EA	$8,080,000.00		
	Type 17 Poles, Luminaires, and Foundation	EA	$36,360,000.00		
	Type 26-3 Pole, Luminaires, and Foundation	EA	$44,440,000.00		
	Type 61-5 Pole, Luminaires, and Foundation	EA	$48,480,000.00		
	Pedestrian Push Botton Post	EA	$2,222,000.00		
	Pullboxes	EA	$1,515,000.00		
	2" Conduit	LF	$80,800.00		
	3" Conduit	LF	$101,000.00		
	Traffic Signal Wiring	LS	$30,300,000.00		
	Bike Detector Loop	EA	$1,616,000.00		
	Mast Arm Sign	EA	$808,000.00		
	Street Light - Basic	EA	$15,150,000.00		
	Street Light - Stone	EA	$30,300,000.00		
	Pedestrian Scale Lighting	EA	$12,108,000.00		
	Install Flashing Crosswalk (In-Road Lights + Solar Panel)	LS	$50,500,000.00		
	Ped Barricade and R49 Sign	EA	$1,212,000.00		
	Install HAWK Ped Signal	EA	$90,900,000.00		
	Install Rapid Flashing Ped Beacon	EA	$44,990,550.00		
	Street Name Signs	EA	$3,030,000.00		
	Install APS (including sign and button)	EA	$2,020,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
				TRAFFIC / ELECTRICAL SUBTOTAL	

On-Site Improvements - Site Furnishings

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Trash Receptacle	EA	$2,020,000.00		
	Recycle Receptacle	EA	$2,020,000.00		
	Pre-Fabricated Kiosk	EA	$5,252,000.00		
	Benches - 6' length	EA	$2,424,000.00		
	Bike Locker	EA	$4,026,000.00	5	$20,130,000.00
	Bike Rack	EA	$1,459,425.00		
	Bus Rack	EA	$2,013,000.00		
	Bike Station (per bike)	EA	$10,055,000.00	5	$50,275,000.00
	Bollard (Decorative Stone)	EA	$1,459,425.00		
	Bollard (Steel with Plastic Sleeve)	EA	$412.00		
	Gateway Sign	EA	$724,680.00		
	Gateway Structure	EA	$45,896,400.00		
	Real Time Public Info Display	EA	$4,040,000.00		
	Information Kiosk	EA	$322,080,000.00		
	Shade Shelter	EA	$60,390,000.00		
	Bike Access Ramp	LF	$101,000.00		
	Tree Grates	EA	$2,918,850.00		
	Street Tree (includes irrigation)	EA	$4,036,000.00		
	Bus Shelter	EA	$40,360,000.00		
	Street Furnishing (includes wayfinding)	LF	$70,630.00		
	Flexible Delineator	EA	$80,800.00		
	Stair Railing	LF	$35.00		
	Stair Construction	LS	$17,000.00		
	Concrete ADA Ramp (5ft. wide)	LF	$141,260.00		
	Public Restroom Stall	EA	$201,800,000.00	2	$403,600,000.00
	Real Time Transit	EA	$20,180,000.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Remove Bike Rack	EA	$1,100.00		
	Relocate Bike Rack	EA	$1,300.00		
	Remove Bench	EA	$1,000.00		
	Remove Bus Shelter	EA	$4,100.00		
				SITE FURNISHINGS SUBTOTAL	$474,005,000.00

On-Site Improvements - Landscaping

Proposed

#	Description	Unit	Unit Price	Quantity	Total
	Proposed Landscaping / Irrigation	SF	$32,288.00		

Removals

#	Description	Unit	Unit Price	Quantity	Total
	Clearing and Grubbing	SF	$3,030.00		
	Landscaping / Irrigation Removals	LS			
				LANDSCAPING SUBTOTAL	

Appendix C:

Project Prioritization Scoring

Berryessa Station Access Improvement Projects

Pedestrian Station Area Access Improvements

ID	Project	Location	Improves Connectivity to Transit	Improves Accessibility	Improves Safety	Coordination with Planned Projects	Total Score
1	Widen Sidewalk	Berryessa Rd - east side	0.6	1	1	1	3.6
2	Improve Landscaping	Berryessa Rd - west side	0.3	0	0.3	0	0.6
3	Add pedestrian refuge island	Berryessa Rd & Commercial St	0.6	0	1	1	2.6
4	Remove Porkchop	Berryessa Rd & Commercial St	0.6	0	0.6	1	2.2
5	High Visibility Crosswalk	Berryessa Rd & Berryessa Station Way	0.6	0	0.6	0	1.2
6	Wayfinding Signage	Berryessa Rd & Berryessa Station Way	0.3	0	0.3	0	0.6
7	High Visibility Crosswalk	Berryessa Rd & King Rd	0.6	0	0.6	0	1.2
8	Wayfinding Signage	Berryessa Rd & King Rd	0.6	0	0.3	0	0.9
9	Remove Porkchop	Berryessa Rd & King Rd	0.3	0	1	0	1.3
10	Add Bus Shelter & Improve lighting	Berryessa Rd & King Rd	0.3	0	0.3	0	0.6
11	Add Bus Shelter	Berryessa Rd & King Rd	0.3	0	0.3	0	0.6
12	Widen Sidewalk	East Side of Lundy Ave: Salamoni Ct - Commodore Dr	0.6	1	0.6	0	2.2
13	High Visibility Crosswalk	King Rd & Penitencia Creek Trail	0.6	0	0.6	0	1.2
14	High Visibility Crosswalk	King Rd & Mabury Rd	0.6	0	1	0	1.6
15	Wayfinding Signage	King Rd & Mabury Rd	0.3	0	0.3	0	0.6
16	Widen Sidewalk	Mabury Rd & Berryessa Station Way	0.6	1	1	0	2.6
17	High Visibility Crosswalk	Mabury Rd & Berryessa Station Way	1	1	1	0	3
18	Wayfinding Signage	Mabury Rd & Berryessa Station Way	0.3	0	0.3	0	0.6

Berryessa Station Access Improvement Projects

Pedestrian Station Area Access Improvements

ID	Project	Location	Improves Connectivity to Transit	Improves Accessibility	Improves Safety	Coordination with Planned Projects	Total Score
19	Add Bus Shelter	King Rd & Mabury Rd	0.3	0	0.3	0	0.6
20	Add Bus Shelter	King Rd & Mabury Rd	0.3	0	0.3	0	0.6
21	Add Bus Shelter	Mabury Rd & Penitencia Creek Trail	0.3	0	0.3	0	0.6
22	Add Bus Shelter	Mabury Rd & Penitencia Creek Trail	0.3	0	0.3	0	0.6
23	Improve Lighting	Penitencia Creek Trail	0.3	0	0.6	0	0.9
24	Improve Landscaping	Penitencia Creek Trail	0.3	0	0.3	0	0.6
25	Wayfinding Signage	Mabury Rd & Penitencia Creek Trail	0.3	0	0.3	0	0.6
26	Improve Landscaping	Berryessa Station Way	0.3	1	0.3	0	1.6
27	Wayfinding Signage	Berryessa Station Way & entrance to Penitencia Creek Trail segment behind police building	0.3	0	0.3	0	0.6
28	Wayfinding Signage	Penitencia Creek Trail & Berryessa Station Way	0.3	0	0.3	0	0.6
29	Improve Lighting	Berryessa Rd: Mabury Rd - Weldon Ln	0.3	0	0.6	0	0.9
30	Add sidewalk	West side of Lundy Ave: Salamoni Ct - Commodore Dr	0.6	1	0.6	0	2.2

Berryessa Station Access Improvement Projects

Bicycle Station Area Access Improvements

ID	Project	Location	Improves Connectivity to Transit	Improves Accessibility	Improves Safety	Coordination with Planned Projects	Total Score
1	Class IV Protected Bikeway	Berryessa Rd: Mabury Rd – Lundy Ave	0.6	0	1	1	2.6
2	Two Stage Left Turn Bike Intersection	Berryessa Rd & Berryessa Station Way	0.6	0	0.6	0	1.2
3	Two Stage Left Turn Bike Intersection	Berryessa Rd & Lundy Ave	0.6	0	0.6	0	1.2
4	Class IV Protected Bikeway	King Rd: Sienna Rd – SR 130	0.6	0	1	1	2.6
5	Green Bicycle Transition Lanes	King Rd & Mabury Rd	0.6	0	1	0	1.6
6	Two Stage Left Turn Bike Intersections	King Rd & Mabury Rd	0.6	0	1	0	1.6
7	Class IV Protected Bikeway	Mabury Rd: Berryessa Rd – White Rd	0.6	0	1	1	2.6
8	Class IV Protected Bikeway	Sierra Rd: Chessington Dr – Hazlett Way	0.6	0	0.6	1	2.2
9	Class IV Protected Bikeway	Sierra Rd: Arujo St – Flickinger Ave	0.6	0	0.6	1	2.2
10	Class III Bike Route	Hazlett Way: Coyote Creek Trail – Sierra Rd	0.6	0	0.6	1	2.2
11	Class IV Protected Bikeway	Commercial St: SR 880 – Berryessa Rd	0.6	0	0.6	1	2.2
12	Class IV Protected Bikeway	Old Oakland Rd: Fox Ln – Hedding St	0.6	0	0.6	1	2.2
13	Class I Shared Use Path	Coyote Creek Trail: SR 880 – E Empire St	0.6	0	0.6	1	2.2
14	Class I Shared Use Path	Rail Corridor: Mabury Rd – McKee Rd	0.6	0	0.6	1	2.2
15	Class I Shared Use Path	Silver Creek Trail: Coyote Creek Trail – SR 130	0.6	0	0.6	1	2.2

Berryessa Station Access Improvement Projects

Bicycle Station Area Access Improvements

ID	Project	Location	Improves Connectivity to Transit	Improves Accessibility	Improves Safety	Coordination with Planned Projects	Total Score
16	Class III Bike Route	Schute Dr: King Rd – Educational Park Dr	0.6	0	0.6	1	2.2
17	Class IV Protected Bikeway	Educational Park Dr: Mabury Rd – McKee Rd	0.6	0	0.6	1	2.2
18	Class IV Protected Bikeway	N Jackson Ave: Sierra Rd – SR 130	0.6	0	0.6	1	2.2
19	Class III Bike Route	Vinci Pkwy: Berryessa Rd – Lundy Ave	0.6	0	0.6	1	2.2
20	Class IV Protected Bikeway	Lenfest Rd: Mabury Rd – Las Plumas Ave	1	0	0.6	1	2.6
21	Class II Bike Lane	Las Plumas Ave: Lenfest Rd – Educational Park Dr	0.6	0	0.6	1	2.2
22	Green Bicycle Transition Lanes	King Rd & Las Plumas Ave	0.6	0	0.6	0	1.2
23	Two Stage Left Turn	Berryessa Station Way & Mabury Rd	0.6	0	0.6	0	1.2
24	Bike intersection signal	Berryessa Station Way & Mabury Rd	0.3	0	0.6	0	0.9
25	Bike intersection signal	Berryessa Road & Berryessa Station Way	0.3	0	0.6	0	0.9

Berryessa Station Access Improvement Projects

Pedestrian Station Area Access Improvements

ID	Project	Location	Improves Connectivity to Transit	Improves Accessibility	Improves Safety	Coordination with Planned Projects	Total Score
1	Widen Sidewalk	Berryessa Rd - east side	0.6	1	1	1	3.6
2	Improve Landscaping	Berryessa Rd - west side	0.3	0	0.3	0	0.6
3	Add pedestrian refuge island	Berryessa Rd & Commercial St	0.6	0	1	1	2.6
4	Remove Porkchop	Berryessa Rd & Commercial St	0.6	0	0.6	1	2.2
5	High Visibility Crosswalk	Berryessa Rd & Berryessa Station Way	0.6	0	0.6	0	1.2
6	Wayfinding Signage	Berryessa Rd & Berryessa Station Way	0.3	0	0.3	0	0.6
7	High Visibility Crosswalk	Berryessa Rd & King Rd	0.6	0	0.6	0	1.2
8	Wayfinding Signage	Berryessa Rd & King Rd	0.6	0	0.3	0	0.9
9	Remove Porkchop	Berryessa Rd & King Rd	0.3	0	1	0	1.3
10	Add Bus Shelter & Improve lighting	Berryessa Rd & King Rd	0.3	0	0.3	0	0.6
11	Add Bus Shelter	Berryessa Rd & King Rd	0.3	0	0.3	0	0.6
12	Widen Sidewalk	East Side of Lundy Ave: Salamoni Ct - Commodore Dr	0.6	1	0.6	0	2.2
13	High Visibility Crosswalk	King Rd & Penitencia Creek Trail	0.6	0	0.6	0	1.2
14	High Visibility Crosswalk	King Rd & Mabury Rd	0.6	0	1	0	1.6
15	Wayfinding Signage	King Rd & Mabury Rd	0.3	0	0.3	0	0.6
16	Widen Sidewalk	Mabury Rd & Berryessa Station Way	0.6	1	1	0	2.6
17	High Visibility Crosswalk	Mabury Rd & Berryessa Station Way	1	1	1	0	3
18	Wayfinding Signage	Mabury Rd & Berryessa Station Way	0.3	0	0.3	0	0.6

Valley Transportation Authority

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