



VTA Curtner TOD Access Study

Prepared for:
Santa Clara Valley Transportation Agency (VTA)

July 2023

FEHR & PEERS

Table of Contents

Executive Summary of Recommendations	1
Introduction	6
Curtner Station & Proposed Project.....	6
Related Plans, Policies, and Projects.....	7
VTA.....	7
City of San José.....	8
Related Projects.....	14
Existing Conditions	17
Existing Roadway Facilities.....	17
Existing Multimodal Facilities.....	18
Collision History.....	31
Community Outreach	33
Outreach Objectives.....	33
Stakeholders and Partners.....	33
Outreach Activities.....	34
Input Themes.....	43
Access Improvements	44
Station Area Recommendations.....	44
Station Area Improvements.....	44
Project Prioritization.....	47
Cost Estimates.....	49
Summary of Station Area Recommendations.....	49
TOD Project Recommendations.....	51
Site Access Improvements.....	51
Project Prioritization.....	57
Cost Estimates.....	57
Summary of TOD Project Recommendations.....	57
Transportation Demand Management Strategies	60
Site-Design Related Strategies.....	60
Ongoing Management Strategies.....	61

Appendices

Appendix A: Outreach Comments

Appendix B: Cost Estimates

Appendix C: Recommended Access Improvements

Table of Figures

Figure 1: Curtner Station	6
Figure 2: Curtner Station Land Use Designations.....	10
Figure 3: Planned Development Projects near the Station.....	16
Figure 4: Pedestrian Facilities Approaching Curtner Station from Route 26 Bus Stop.....	20
Figure 5: Dirt Pedestrian Path in Curtner Avenue Sidewalk Gap East of Canoas Garden Avenue	20
Figure 6: Bicycle and Pedestrian Facilities Missing on Carol Drive between Canoas Garden Avenue and the Highway 87 Bikeway.....	21
Figure 7: Pedestrian Facilities near the Station.....	22
Figure 8: Bicycle Racks at Curtner Station	24
Figure 9: Class I Bicycle Path at Carol Drive and SR-87 (Does Not Meet Current Trail Standards)	24
Figure 10: Wayfinding Conditions near Carol Drive	25
Figure 11: A Fence on Caltrans Right-of-Way Restricting Access to a Potential Class I Bicycle Path at Mill Pond Drive.....	25
Figure 12: Planned Entrance for the Planned Bicycle Path Built through the Communications Hill Project (At Mill Pond Drive)	26
Figure 13: Curtner Avenue and SR-87 SB Off-Ramp Bicycling Conditions.....	26
Figure 14: Bicycle Facilities near the Station.....	27
Figure 15: Curtner Station Route 26 Bus Stop	29
Figure 16: Transit Facilities near the Station	30
Figure 17: Curtner Avenue Corridor Collision History, 2016 - 2020.....	32
Figure 18: VTA Tweets Promoting the Curtner Station Access Study	35
Figure 19: Mill Pond Stakeholder Meeting.....	36
Figure 20: Curtner Studios Stakeholder Meeting	36
Figure 21: Curtner Studios Stakeholder Event Feedback.....	37
Figure 22: UPA Stakeholder Meeting	38
Figure 23: Agenda for 'Meet the Developer' Community Meeting.....	38
Figure 24: Subway Shopping Plaza Pop-Up Event.....	39
Figure 25: Curtner Station Pop-Up Event	41
Figure 26: Initial Recommendations Web Map	42
Figure 27: Web Map Prioritization Votes on Curtner Improvements Votes	48
Figure 28: CBNA Site Plan Recommendations.....	52
Figure 29: Republic Site Plan Recommendations	53

Executive Summary of Recommendations

The Santa Clara Valley Transportation Authority (VTA) Curtner Transit-Oriented Development (TOD) Access Study (the "Study") analyzes multimodal access to the existing Curtner Light Rail Station ("Curtner Station," "Station") and to the proposed TOD site on the Station's surface parking area. This Study provides background information on plans, policies, and recent developments affecting the Curtner Station area, describes existing conditions at Curtner Station and on surrounding roadways, cites community outreach summaries regarding the TOD site, and recommends access improvements to the Curtner Station area itself and the proposed TOD Project.

Project recommendations were prioritized based upon a combination of community and stakeholder feedback, anticipated multimodal safety benefits, and consistency with the goals of the VTA TOD Policy. Planning level estimates of probable cost were developed for each identified improvement based on recent and historic unit costs from the San Francisco Bay Area.

The recommended access improvements include a range of pedestrian, bicyclist, transit, and multimodal or vehicular-focused improvements. Key Curtner Station area recommendations are listed in **Table ES 1** and key TOD Project recommendations are listed in **Table ES 2**.

Table ES 1: Curtner Station Recommendations

Improvement	Description	Priority	Estimated Construction Cost
<i>Pedestrian Improvements</i>			
High-visibility Crosswalk Installation	Add missing crosswalks at the following intersections:		
	Curtner Avenue / Almaden Expressway northbound ramp terminal (one leg)	High	\$120,000
	Curtner Avenue / SR-87 southbound ramp terminal (west leg)	High	\$180,000
	Canoas Garden Avenue / Mill Pond Drive (four legs)	High	\$45,000
	Canoas Garden Avenue / Carol Drive (three legs)	High	\$35,000
Sidewalk Improvements	Install new sidewalks where missing on:		
	Curtner Avenue between Canoas Garden Avenue and SR-87 southbound ramp terminal	High	\$50,000
	Carol Drive east of Canoas Garden Avenue	Medium	\$45,000
	Sands Drive west of Canoas Garden Avenue	Medium	\$120,000
Curb Ramp Improvements	Install or upgrade curb ramps at:		
	Canoas Garden Avenue / Mill Pond Drive	High	\$80,000
	Canoas Garden Avenue / Carol Drive	High	\$60,000
Pedestrian-Scale Lighting	Install pedestrian-scale lighting throughout the study area on Canoas Garden Avenue and on the south side of Curtner Avenue along the site frontage	High	\$1.63M
Advance Limit or Yield Lines	Add advance limit or yield lines at all crosswalk locations	High	\$5,000
Rectangular Rapid-Flashing Beacons (RRFBs)	Add RRFBs at the following locations:		
	Canoas Garden Avenue at Project Driveway	Medium	\$40,000
	Canoas Garden Avenue / Mill Pond Drive	Medium	\$40,000
Intersection Curb Extensions	Reduce corner radii and crossing distance with curb extensions at Canoas Garden Avenue / Mill Pond Drive	Medium	\$220,000
Slip Lane Removal	Close right-turn slip lanes at Curtner Avenue / Canoas Garden Avenue to tighten intersection and reduce turning speeds, modify traffic signal and add activated “no right-turn on red” (NRTOR) signs	Medium	\$1.0-\$1.5M
Wayfinding Signage	Add wayfinding signage to the light rail station and Route 26 stops on-site and along Curtner Avenue	Low	\$25,000

Median Adjustment	Adjust medians to improve crosswalk alignment across Curtner Avenue on east side of Canoas Garden Avenue	Low	\$5,000
-------------------	--	-----	---------

Bicyclist Improvements

Construct Missing Highway 87 Bikeway Segments	Construct missing segments of the Highway 87 Bikeway:		
	Curtner Avenue to Mill Pond Drive	High	\$0.25-\$0.5M
	Along Unified Way north of Curtner Avenue	High	\$0.3-\$0.6M
	Mill Pond Drive to Carol Drive	Medium	\$4.9-\$8.0M
Canoas Garden Avenue Bicycle Improvements	Provide a Class IV bikeway on both sides of Canoas Garden Avenue adjacent to TOD site	Medium	\$600,000

Transit Improvements

Improve Light Rail Access Points	Provide escalators or elevators at the Curtner Avenue platform access point under Highway 87 to facilitate connectivity and transfers	High	\$6.0-\$12.0M
Stop/Station Maintenance	Improve station maintenance, shelters, and trash pick-up to enhance passenger environment	High	N/A
Bus Shelter Installation	Install bus shelters at the future Curtner Avenue and/or Canoas Garden Avenue bus stops.	High	\$60,000
Bus Stop Consolidation	Consolidate bus stops on Curtner Avenue to minimize redundant stops	Medium	N/A
Bus Stop Relocation	Coordinate with VTA on corridor wide improvements of bus stops per VTA's Transit Passenger Environment Plan	Medium	N/A

Multimodal/Vehicular Access Improvements

Intersection Limit Lines	Add limit lines on all legs of residential street intersections	High	\$5,000
Lane Width Reduction	Reduce lane widths to 10 feet (11 feet for transit) where possible	Medium	Varies
Hardened Centerline	Add a hardened centerline on Unified Way to prevent drivers from traveling wrong-way around ramp meter queues during peak periods	Medium	\$40,000
Traffic Signal Coordination	Coordinate signals throughout the Curtner Avenue corridor to match desired travel speeds	Medium	\$100,000

Table ES 2: TOD Project Recommendations

Improvement	Description	Priority	Estimated Construction Cost
Multimodal/Vehicular Site Access			
Vehicle Access Points	Minimize vehicle access by providing only one primary vehicular access point on Canoas Garden Avenue between Curtner Avenue and Mill Pond Drive and not allowing direct driveway access to Curtner Avenue	High	N/A
Transit Circulation	Designate clear location of Route 26 bus stops with clear bus circulation routes	High	N/A
Wayfinding for Parking	Provide wayfinding to guide drivers to the correct parking fields while minimizing circuitous circulation	Medium	\$25,000
Bicycle and Pedestrian Circulation			
Direct Active Transportation Travel Paths	Provide a high-quality active transportation travel route on the east side of the site (along SR-87) to facilitate better access to the primary light rail entrance	High	\$250,000
Long-term Bicycle Parking	Provide protected bicycle parking near the primary entrance to the light rail platform and bus stops adjacent to the site; it is assumed that long-term bicycle parking for employees and residents will be provided separately within each building as part of the overall site development	High	\$100,000-\$200,000
Short-term Bicycle Parking	Provide short-term bicycle parking adjacent to entrances for all uses on the site	High	\$30,000
Internal Bicycle Circulation and Wayfinding	Designate specific internal bicycle circulation paths and provide wayfinding to reach bicycle parking	High	\$25,000
Wayfinding Signage for Transit	Provide wayfinding signage to light rail and Route 26 bus stops throughout the site	High	\$25,000
Minimized Mode Mixing	Minimize mixing between active modes and vehicles traveling to parking fields within the site	High	N/A
Enhanced Bikeways	Provide enhanced bikeways on roadways along site frontage and/or construct missing trail segments of the Highway 87 Bikeway	High	See Estimates in Table ES1
Bikeway Accommodation	Accommodate access to adjacent bikeways for bicyclists traveling in both directions, including crossings of Curtner Avenue and Canoas Garden Avenue	High	\$1.4-\$1.9M
High-Visibility Crosswalks	Provide high-visibility crosswalks on and across Canoas Garden Avenue to access the TOD site and on the four legs of the Canoas Garden Avenue and Mill Pond Drive intersection	High	See Estimates in Table ES1

Pedestrian-Scale Lighting	Provide pedestrian-scale lighting throughout and surrounding the TOD site	High	See Estimate in Table ES1
Curb Ramp Upgrades or Installations	Install or upgrade deficient curb ramps in the vicinity of the TOD site	High	See Estimate in Table ES1

Introduction

The Study summarizes existing conditions for multimodal access to the Curtner Light Rail Station (“Curtner Station”) and considerations for access enhancements as VTA considers a Transit-Oriented Development (TOD) on the station’s surface parking area.

Figure 1: Curtner Station



Curtner Station & Proposed Project

The Curtner Station is a roughly four-acre property located along SR-87 and Curtner Avenue in San José and serves as a park & ride lot for VTA light rail and bus passengers, with the light rail station located in the median of SR-87 south of Curtner Avenue. The Curtner Station is currently served by VTA’s Blue Line and Frequent Route 26 along Curtner Avenue. Buses stopping at Curtner Station divert into the park & ride lot via Canoas Garden Avenue and Mill Pond Drive. Pedestrian access to the light rail platform is provided by a stairway, escalator, and elevator located near the center of the primary park & ride lot as well as a stairway directly accessing the south side of Curtner Avenue between the two SR-87 overpasses.

Regional access to the surrounding area is primarily oriented in the east-west direction along Curtner Road. The orientation of SR-87 and Almaden Expressway to the north limit access opposite the site to a small number of retail sites, a storage facility, and approximately 20 acres of

residential uses. To the south, physical geography (including Canoas Creek) restricts access beyond portions of the Mill Pond community, the San José Scottish Rite Center, the San José Masonic Center, and the Church on the Hill. Though SR-87 and Almaden Expressway have limited crossing opportunities, Curtner Avenue connects Curtner Station to large retail and residential areas to the east and west.

The proposed TOD would bring affordable housing, senior living and care, office space, and retail to the study area. The site's development would produce additional multimodal trips, new travel patterns, and significant opportunities to re-envision the site and surrounding area for access, safety, and mobility.

Related Plans, Policies, and Projects

This section identifies past and ongoing planning efforts in the Curtner Station area and details how the relevant plans or projects will impact station access. Several existing efforts from the City of San José and VTA are detailed below.

VTA

VTA Station Access Policy

The Station Access Policy (2018) establishes a set of guiding principles for planning and implementing programs and projects in the VTA station areas that impact access to the stations. The guiding principles include increasing ridership, prioritizing sustainable access modes to reduce emission and vehicle miles traveled (VMT), building effective partnership with the local jurisdictions and communities, and promoting sustainable development in the station surrounding areas. In addition, the policy creates a station access hierarchy that prioritizes the modes of transportation as follows: walking, bicycling, public transit, pick-up and drop-off, and park and ride.

The proposed TOD at the Curtner Station supports the Station Access Policy as it abides by the policies guiding principles to increase ridership and promotes sustainable access modes by accommodating mixed-use housing, office space, and retail adjacent to the Curtner Light Rail Station.

VTA Transit-Oriented Communities Policy

The Transit-Oriented Communities Policy (TOD Policy, 2022) lays out the framework for planning and implementing TOD projects. The policy aims to increase transit ridership and reduce vehicle trips around transit stations, promote equity in the surrounding communities through affordable housing, and create employment and revenue opportunities. The policy includes elements of the 2018 TOD Parking Policy and the 2022 Affordable Housing Policy.

The proposed TOD supports the TOD Policy by creating housing, employment, and revenue opportunities at the site.

VTA Complete Streets Policy

VTA's 2016 Measure B requires that a Complete Street Policy be adopted by a jurisdiction to secure funding from Measure B, and Local Street and Road Projects must incorporate the Complete Street concepts. The Complete Streets Policy (2017) proposed by VTA defines the Complete Street concepts, lists the principles, and practices that guide the implementation of transportation projects and funding programs. The Complete Streets principles and practices include incorporating technologies and context

sensitive design in planning; and implementing transportation projects that support safety and accessibility for all users, and provide well-connected networks for pedestrians, bicyclist, and transit riders.

VTA 2016 Measure B Bicycle & Pedestrian Program

The Bicycle & Pedestrian Program uses funding from Measure B to implement capital projects that improve the current bicycle and pedestrian network, conduct planning studies to support the development of the capital projects, and create educational programs that promote bicycle and pedestrian travel. The funds prioritize projects that: connect to schools, transit, and employment centers; fill gaps in the existing bike and pedestrian networks; safely cross barriers to mobility; and make walking or biking a safer and more convenient means of transportation for all county residents and visitors. In the vicinity of the Curtner TOD site, projects may include closing gaps in the existing Highway 87 Bikeway.

VTA Transit Passenger Environment Plan

The *Transit Passenger Environment Plan* (2016) provides a set of guidelines for improving and designing bus stops to enhance the passenger environment. The plan describes the bus stop classification system developed by VTA based on ridership and the corresponding expected amenity levels and design guidelines for each bus stop type. It also presents a strategy for prioritizing amenity improvement based on a rider survey and introduces a new shelter design. Through the proposed TOD at Curtner Station, the existing line 26 bus stop can be redesigned through the guidelines provided in the Transit Passenger Environment Plan.

VTA SR-87 Technology Corridor Study

VTA, in partnership with the City of San José, conducted a study of SR-87 through the *SR-87 Technology Corridor Study*. The study addresses existing concerns for SR-87 in advance of anticipated growth and land-use in the area. VTA identifies technology-based improvements and innovative solutions to maximize use of existing infrastructure, focus on less capital-intensive operational applications, and rely on real time information to find “hidden” capacities along SR-87. The study recommends both bicycle and pedestrian improvement projects focused on closing bikeway gaps, increasing pedestrian and bicyclist access, and streetscape improvements.

The study recommends pedestrian access improvements within a half-mile walkshed of Curtner Station, improvements to the Highway 87 bikeway, bikeway gap closures, streetscape improvements, and intersection improvements.

City of San José

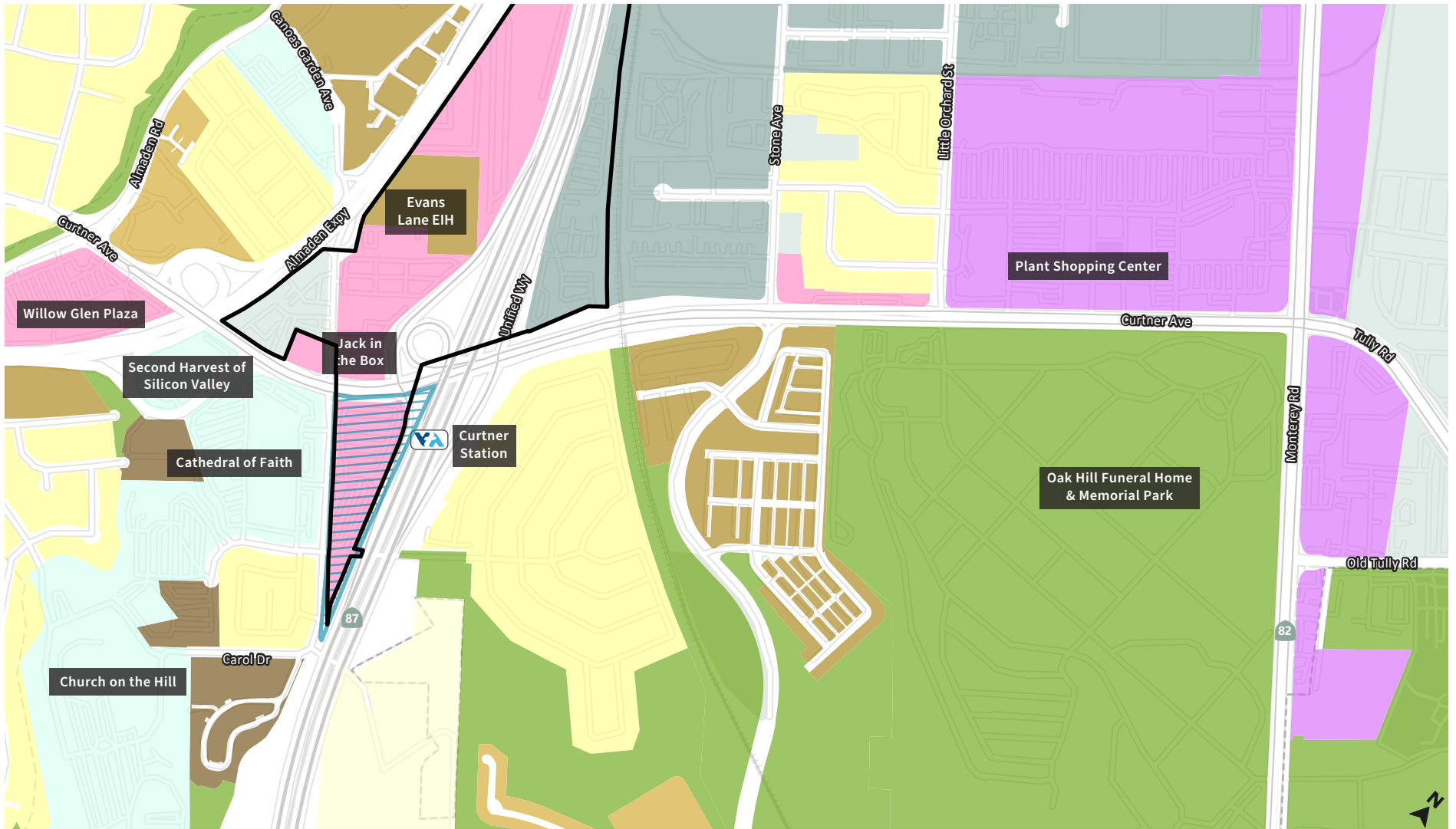
City of San José General Plan – Land Use, Transportation, and Urban Village Policies

The *Envision San José 2040 General Plan* contains a set of land use, transportation, and urban village policies to support a diverse and innovative economy, sustainable transportation modes, accessible and safe neighborhoods, and recreational opportunities to increase the quality of life in San José. The transportation policies in the General Plan integrate with the land use policies to reduce travel distances

and promote compact mixed-used development while enhancing facilities for walking, biking, or using transit. The policies in the General Plan involve prioritizing the improvement of pedestrian and bicycle facilities, supporting land use and developments that can increase public transit ridership, and promoting the use of effective operation and management strategies.

Curtner Station is located in an area that is designated by the General Plan as a Neighborhood / Community Commercial (NCC) area and is identified as an Urban Village growth area, as seen in **Figure 2**. The NCC designation supports a broad range of commercial activities that serve communities in the neighboring areas such as retail and office development. NCC uses should be designed to promote that connection with an appropriate urban form that supports walking, transit use and public interaction. The NCC designation also supports one hundred percent (100%) deed restricted affordable housing developments that are consistent with General Plan Policy H-2.9 and Policy IP-5.12. As an Urban Village growth area, the Curtner Station area can accommodate employment and housing growth while reducing environmental impacts and promoting transit use and walkability.

The proposed TOD at Curtner Station supports the NCC designation by providing affordable housing and community commercial amenities for residents and visitors. The proposed TOD project will also support transportation goals from the General Plan by providing access to multimodal transportation options.



Source: City of San Jose

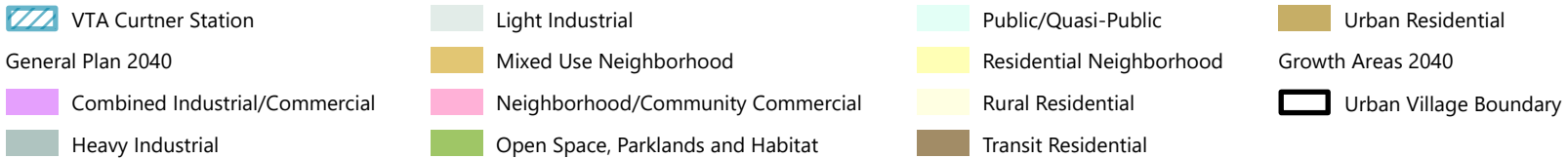


Figure 2
Curtner Station Land Use Designations

City of San José Communications Hill Specific Plan

The City of San José approved the *Communications Hill Specific Plan* (CHSP) in 2014 as a dense, highly urbanized pedestrian-oriented residential neighborhood with industrial park uses. The CHSP is consistent with the *Envision San José 2040 General Plan* and City of San José specific plan objectives. The CHSP plans to develop approximately 2,200 residential units, 67,500 square feet of commercial/retail uses, and 1.44 million square feet of industrial park uses, parks, open space, trails, and other supporting infrastructure. The plan supports the City's General Plan goals to maximize use of transit and create a balanced multimodal transportation system.

The CHSP to Curtner Station explicitly states the following relevant guidelines and improvement recommendations:

- Widening Curtner Avenue between Communications Hill Boulevard and SR-87 to three lanes in the westbound direction
- Intersection improvements at Curtner Avenue and Communications Hill Boulevard
- Adding new Class I bike paths and restriping Class II bike lanes adjacent to SR-87
- Improving the on-off ramps at SR-87 and Curtner Avenue

The transportation improvements are divided into four phases and, per the CHSP, would be built out with approximately 25% of the total amount of residential units assumed for each phase. These implementation phases are tied to residential unit counts and were planned to be used as triggers to ensure infrastructure improvements are designed and implemented in a timely manner.

While the CHSP identifies the improvements referenced above, the vehicle capacity improvements have not been pursued to date. Focus has generally shifted toward prioritizing improvements that benefit multimodal users and transportation safety in the time since the CHSP was completed, and it is uncertain if or when additional vehicle capacity improvements will be constructed. The TOD project at Curtner Station would benefit from formally adopting this change in priorities.

City of San José Better Bike Plan 2025

The *Better Bike Plan 2025* provides recommendations and implementation strategies based on the assessment of existing biking conditions in San José and community feedback. The plan's key goals are to improve safety by reducing bicycle crashes, increase bike mode share, and enhance equity through prioritizing projects in communities that have previously lacked investments. The plan recommends establishing a low-stress bicycle network throughout the city to make biking comfortable and accommodating to most people.

The plan recommends bikeway improvements adjacent to the Curtner Station shown in **Figure 14**.

City of San José Pedestrian Master Plan

The *2008 Pedestrian Master Plan* examines the existing pedestrian standards, policies, procedures, and practices (SPPP) and provides recommendations for future improvements. The recommendations include optimizing pedestrian environment and facilities, securing funding for pedestrian programs, and promoting projects and policies through community outreach programs. While no specific recommended improvements are made for the Curtner Station area, the plan details pedestrian design standards and urban design standards to make walking safe and accessible.

City of San José Trail Program Strategic Plan

The City of San José Trail Program established the goals of building 100 miles interconnected trail network by 2022 in the San José Green Vision in 2007. Based on the rate of construction in the next nine years, the 100 miles network would not be completed until 2035. As a result, the *Trail Program Strategic Plan* (2016) was adopted to identify the existing conditions of the San José trail network and examine proposed strategies for optimizing the available resources and overcoming financial, program logistics, and organization challenges to accelerate the construction of trails.

Planned trail improvements within the Curtner Station include:

- The missing portion of the Highway 87 Trail from Curtner Avenue to Carol Drive
- The Communications Hill Phase III Trail south of Mill Pond Drive
- The Guadalupe River Trail from Willow Glen Way to Chynoweth Avenue
- The Canoas Creek Trail from Almaden Road to Narvaez Drive
- The Three Creeks Trail connecting to the Silver Creek Trail and Yerba Buena Creek Trail

Vision Zero San José

In 2015, San José became the fourth U.S. city to adopt Vision Zero, with a goal of eliminating traffic-related deaths and serious injuries. The *Vision Zero Action Plan* (2020) was developed in support of this goal, and annual updates are provided. The Action Plan includes a data analytics tool, a Vision Zero Task Force, data-driven enforcement, community outreach and engagement, quick build safety improvements, and a focus on equity. While Curtner Avenue and other nearby streets were not listed as priority corridors in the plan, additional safety audits were conducted on Curtner Avenue in 2021 aligning with the City's Vision Zero action of greater community outreach and engagement.

In 2021, the City of San José conducted walking audits in eight areas throughout seven council districts that represent areawide safety concerns. Concerns on Curtner Avenue identified through this effort included:

- High pedestrian crossing demand across Curtner Avenue near the Almaden Expressway northbound ramp terminal

- Lack of supportive safe infrastructure for bicyclists and pedestrians along Curtner Avenue near the Station
- Confusing infrastructure for bicyclists traveling along the Highway 87 Trail in the vicinity of Curtner Avenue
- Conflict areas with bicycle lanes and vehicle merging/transition points
- Difficulty seeing pedestrians crossing at right turns onto/from Curtner Avenue, particularly at intersection with channelized right turns
- General concerns for driver behavior, speeding, and congestion

Transit First Policy

In 2022, the City of San José adopted a “Transit First Policy” resolution to prioritize transit operations and access in plans and operational decision-making. City staff will be directed to prioritize transit vehicles and the access and experience of people riding transit. This may include the re-design and re-allocation of travel lanes, curbside lanes, and signals to support transit operation and riders. This will lead to a better experience for transit riders and increased transit ridership, helping the City attain its climate and equity goals.

Complete Streets Guidelines

The Complete Streets Design Standards & Guidelines were developed as a comprehensive set of street design standards and guidelines to guide how the City of San José builds and retrofits streets. Its purpose is to serve as a manual of design options to achieve the City’s *Envision 2040 General Plan* vision of being a “walking and bicycling first” city. Complete Streets principles identified in the document provide standards and guidelines for the design and implementation of streets that are comfortable and welcoming for all modes of travel. This includes design in accordance with Vision Zero.

City of San José Safe Routes to School Projects

Safe Route to School (SRTS) program aims to improve the health and well-being of communities by making walking and bicycling to school safer and more convenient for children. As a provider of the SRTS program, the City of San José Walk N’ Roll program promotes walking and bicycling to school through strategies including partnering with local school and communities, integrating safety into the design of streets, educating children on how to stay safe while walking and biking, and organizing activities that encourage students to walk and bike to school. The proposed TOD development can work with the City’s Walk N’ Roll program to promote walking and biking to nearby schools such as Canoas Elementary School, Willow Glen Middle School, and Willow Glen High School.

City of San José’s Transportation Demand Management (TDM) Ordinance

Currently, the City of San José is undergoing a process of updating the Transportation Demand Management (TDM) standards to align with the goals in the *Envision San José 2040 General Plan* and *Climate Smart San José*. The proposed updates aim to reduce vehicle miles traveled (VMT), parking demands, and congestion through enhancing the accessibility of alternative transportation in the city,

incorporating new mobility options such as shared micro mobility, and providing incentives for selecting more sustainable travel options. With the revised TDM standards new developments, including the proposed TOD at Curtner Station, will have TDM standards and parking minimums removed. The proposed TOD at Curtner Station will have to consider multimodal access to the site to abide by the ordinance.

Related Projects

Several other projects are proposed near the Station including both development projects and city improvements. These planned projects will help build over 2,500 new housing units and repave or upgrade city streets.

Planned and Recently Completed Development Projects

Planned development projects near the Station are shown on **Figure 3**. These projects include affordable housing sites, senior living facilities, and a recently constructed development to provide bridge housing for people experiencing homelessness.

Communications Hill Phases 3 & 4

As previously mentioned, Communications Hill is a development located in central San José between SR-87 and Monterey Road. The land use designation for this area is a mix of residential, commercial, retail industrial park, and other supporting uses. Early phases of development of the Communications Hill have been completed, with Phases 3 and 4 to be completed in future years. The entire development will provide approximately 2,200 residential units.

The planned development will provide about five new miles of trails and extend the trail system from Communications Hill to the Highway 87 Bikeway and Curtner Station. A portion of the Communication Hills Trail south of Curtner Station has already been constructed. Completion of the Trail will benefit current and future residents of this neighborhood in creating a well-connected alternative mode for residents to access the Curtner Station or the Highway 87 Bikeway.

Housing Development at Scottish Rite Center

Preliminary proposals have been discussed for the conversion of the existing parking lot at the Scottish Rite Center to a housing development. While plans have not been formalized or construction pursued, the site is believed to have potential to house as many as 400 residential units. The development would be anticipated to include an undetermined number of affordable units. If pursued, the construction of additional housing which displaces surface parking would support the growth of walking, bicycling, and transit ridership in the vicinity of the Curtner Station TOD.

Affordable & Senior Housing Development at Cathedral of Faith

Cathedral of Faith has partnered with a developer to propose the creation of 237 units of affordable housing on the western portion of its site adjacent to the Almaden Expressway interchange with Curtner Avenue. All units are proposed to serve low-income residents, with 78 units proposed as senior housing

and 159 units as family housing, including ongoing supportive services. The developers have proposed to utilize the processes set up by Senate Bill 35, a streamlining bill for affordable housing, but entitlement and construction timelines are not yet finalized. The development is expected to support use of alternate transportation modes for residents.

Evans Lane Emergency Interim Housing Site

The City of San José has pursued the establishment of Bridge Housing Communities (BHCs) providing sleeping cabins and communal spaces for residents at locations around the city in responses to the homelessness crisis. The City also developed Emergency Interim Housing (EIH) sites that are similar to BHC sites and have been used to serve medically vulnerable people experiencing homelessness during the COVID-19 pandemic. The Evans Lane EIH site includes 49 units and is located less than one-quarter mile north of Curtner Station. Connections to pedestrian infrastructure and transit service are typically of particular importance to residents of these sites.

Public Infrastructure Projects

The City of San José Department of Transportation (DOT) and Department of Public Works (DPW) oversee extensive programs that address various public infrastructure, capital improvement, and maintenance projects.

City Pavement Maintenance Program

In recent years, the City of San José has included quick-build projects into their Pavement Maintenance Program, allowing roadway reconfigurations to be completed utilizing changes to pavement markings and other easily constructed materials. Curtner Avenue was included in the 2022 program, facilitating the implementation of enhanced bicycle lanes, adjustments to turn radii at intersections, high-visibility crosswalks, and addition of bus-only lanes east of Communications Hill Boulevard by reducing the number of general-purpose lanes from six to four to reduce speeding and calm traffic.

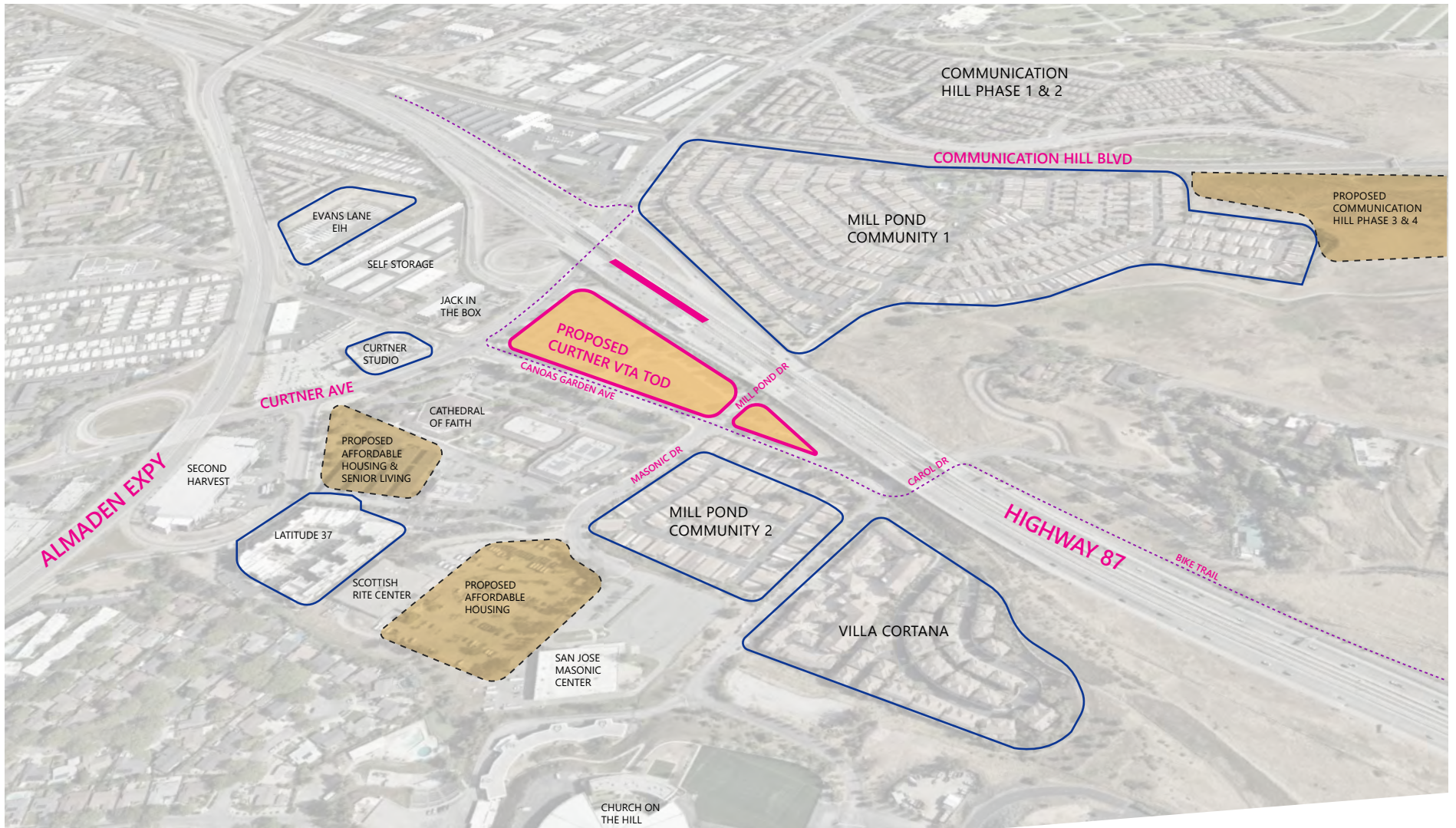


Figure 3
 Planned Development Projects
 in the Study Area



Existing Conditions

This section presents an overview of existing roadway and multimodal facilities to provide context for the operational conditions near the Curtner Station area. This section is divided into a description of existing roadway facilities and a description of existing multimodal facilities.

Existing Roadway Facilities

The Curtner Station is a roughly 4-acre property located along SR-87 and Curtner Avenue in San José and serves as a park & ride lot for light rail and bus passengers. The Curtner Station is currently served by VTA's Blue Line and frequent bus route 26. Curtner Station has a total parking capacity to accommodate 474 vehicles and 12 bicycle lockers for bicycle parking. Motorists and bicyclists can reach Curtner Station heading south on Canoas Garden Avenue from Curtner Avenue and making a left into Curtner Station or by heading north on Canoas Garden Avenue from Mill Pond Drive.

Roadway Configuration

The three main roadways motorists can use to access Curtner Station include Curtner Avenue, Canoas Garden Avenue, and Mill Pond Drive.

- **Curtner Avenue** extends from the city limits with Campbell to the west to the Monterey Highway to the east. Curtner Avenue is a designated City Connector Street in the General Plan. City connector streets prioritize automobiles, bicycles, pedestrians, transit, and trucks equally and accommodate moderate to high traffic volumes. The portion of Curtner Avenue between Almaden Road and Communications Hill Boulevard has a posted speed limit of 40 miles per hour (mph) and transitions from three vehicular lanes to two lanes in each direction at Communications Hill Boulevard.
- **Canoas Garden Avenue** extends north to Almaden Road and south to Sands Drive. Canoas Garden Avenue is designated as a Local Connector Street prioritizing automobiles, bicycles, pedestrians, transit, and trucks equally and accommodating low to moderate traffic volumes. Local Connectors accommodate pedestrians with sidewalks. The portion of Canoas Garden Avenue between Curtner Avenue and Sands Drive has a posted speed limit of 35 mph and transitions from two vehicular lanes in each direction at Curtner Avenue to one lane in each direction.
- **Mill Pond Drive** becomes Masonic Drive west of Canoas Garden Avenue and extends to Communications Hill on the east. Mill Pond Drive is a designated Local Connector while Masonic Drive is a Residential Street. Mill Pond Drive and Masonic Drive are both one lane in each direction with a posted speed limit of 25 mph. Masonic Drive has on-street parking, while Mill Pond Drive does not.

Existing Multimodal Facilities

Pedestrians, bicyclists, and transit vehicles can access the Curtner Station area using the same roadways as motorists listed above. Pedestrians and bicyclists can also use additional walking/biking paths or stairs to access Curtner Station. **Figure 7**, **Figure 14**, and **Figure 16** show the existing multimodal facilities near the Station.

Pedestrian Facilities

Pedestrians can access the Curtner Light Rail Station through three main access points. Pedestrians can use a staircase located on Curtner Avenue under the SR-87 underpass, the main Curtner Station entrance facing the park and ride lot, or through a sidewalk located along the eastern edge of the parking lot. Issues with these three access points include:

- Unclear and lack of wayfinding for pedestrians to find the staircase entrance
- A narrow, uneven asphalt path connecting to the eastern sidewalk making for an undesirable walking experience
- Pedestrians cutting through the parking lot to enter Curtner Station directly since pedestrian access points are on the edges of the park and ride lot.

Pedestrians accessing Curtner Station from roadway facilities encounter a variety of sidewalk gaps, high levels of exposure, and lack of pedestrian infrastructure. Key field observations noted include:

- Curtner Avenue
 - A missing north side sidewalk from Stone Avenue/Communications Hill Boulevard to Canoas Garden Avenue, and between Canoas Garden Avenue and Unified Way.
 - A missing crosswalk across Curtner Avenue at the SR-87 southbound ramp intersection.
 - Free-flow traffic from westbound Curtner Avenue onto the Almaden Expressway southbound ramp creates an uncomfortable pedestrian crossing for people walking on the north side of Curtner Avenue.
 - Two legs of the Canoas Garden Avenue / Curtner Avenue intersection have pork-chop islands which facilitate high-speed right turns, while the intersection with the Almaden Expressway northbound ramp does not provide crosswalks across Curtner Avenue.
 - Pedestrians using Curtner Avenue must traverse pork-chop islands which facilitate high-speed right turns on all four corners at Communications Hill Boulevard/Stone Avenue, crossing two SR-87 ramps, and potentially crossing Curtner Avenue simultaneous to parallel traffic exiting the SR-87 freeway.
 - Pedestrians walking west of Curtner Station on Curtner Avenue can utilize sidewalks on either side of the street west of Canoas Garden Avenue.
- Canoas Garden Avenue
 - Generally narrow sidewalks with fire hydrants, utility poles, sign posts, and luminaires hindering the accessible path in some locations.
 - No signs or crosswalk markings are provided across Canoas Garden Avenue.

- Pedestrians walking on Canoas Garden Avenue can walk on either side of the street sidewalks to reach Curtner Station.
- The intersection of Canoas Garden Avenue / Curtner Avenue features a pork-chop island that divides the standard crosswalk on the southeast and northwest legs of the intersection.
- Pedestrians walking on Canoas Garden Avenue can walk on either side of the street sidewalks to reach the Station. There is a high-visibility crosswalk on the north leg of the Canoas Garden Avenue / Mill Pond Drive intersection, a standard crosswalk on the east leg, and two missing crosswalks on the east and south legs. The intersection does have curb ramps at all four corners, but they are missing truncated domes and are not ADA compliant.
- There is a standard crosswalk across the parking lot entrance on Canoas Garden Avenue, though it is faded and is difficult to see. A crosswalk across Canoas Garden Avenue itself is not provided at this location.
- Mill Pond Drive
 - A missing south side crosswalk on Mill Pond Drive from Canoas Garden Avenue to the Curtner Station.
 - Missing crosswalk markings on two of the four intersection legs at Mill Pond Drive and Canoas Garden Avenue.
 - Mill Pond Drive southeast of the Station and Masonic Drive from Babb Court to Canoas Garden Avenue have sidewalks on both sides of the street for pedestrians to use. Both sides of the Mill Pond Drive and Masonic Drive streets are dead ends, which lead to low vehicle volumes.
- Carol Drive
 - Carol Drive has no sidewalks as you cross underneath Highway 87 between Canoas Garden Avenue and its connection to the Highway 87 Bikeway trail.

With the exception of the areas within the Curtner Station park & ride lot, no pedestrian-scale lighting is provided in the area. Additionally, many locations have missing or deficient curb ramps, though City of San José has recently upgraded curb ramps along Curtner Avenue.

Pedestrian facilities located near Curtner Station are shown in **Figure 4** through **Figure 6** and mapped in **Figure 7**.

Figure 4: Pedestrian Facilities Approaching Curtner Station from Route 26 Bus Stop

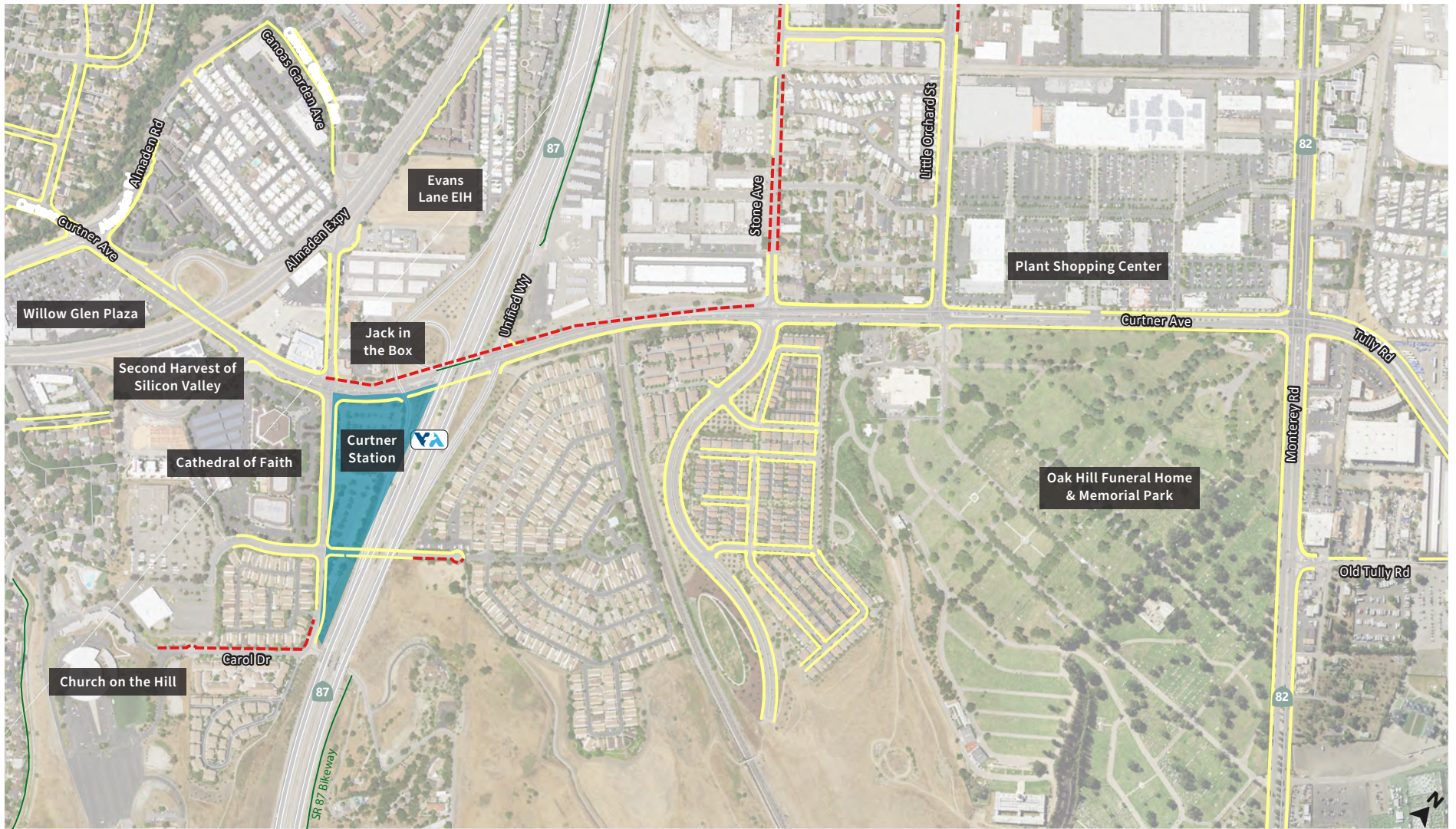


Figure 5: Dirt Pedestrian Path in Curtner Avenue Sidewalk Gap East of Canoas Garden Avenue



Figure 6: Bicycle and Pedestrian Facilities Missing on Carol Drive between Canoas Garden Avenue and the Highway 87 Bikeway





- VTA Curtner Station Area
- Existing Sidewalk Gap
- Existing Sidewalk
- Trails
- Curtner Light Rail Station



Figure 7
Curtner Station Pedestrian Facilities

Bicycle Facilities

Bicycle access to the Curtner Light Rail Station is generally accommodated through two primary access points. Bicyclists can access the Curtner Station platform entryway through the park-and-ride lot or directly through Curtner Avenue. The park-and-ride lot access point provides an escalator and elevator to reach the Station platform. This entrance has access to bicycle racks and lockers located adjacent to the on-site bus stop. An alternative access point is directly on Curtner Avenue but provides less accessibility than the access point through the park-and-ride lot. The Curtner Avenue access point would require cyclists to carry their bicycles up/down the stairs as bicycle racks are not provided and there is not an escalator or elevator in this location.

Bicyclists accessing Curtner Station from east or west roadway facilities can utilize bicycle facilities on Curtner Avenue or the Highway 87 Bikeway. Generally, the bicycle path-of-travel near the Station includes conflict points for bicyclists with merges or crossing maneuvers at highway on/off ramps, difficult to read wayfinding signage, and blocked entrances to the bicycle paths. Key field observations noted include:

- Bicyclists can use enhanced bicycle lanes on Curtner Avenue although there is no direct access to Curtner Station.
- Bicyclists traveling from the north or south can traverse the Highway 87 Bikeway before diverting onto surface streets with no bicycle facilities on Carol Drive or Unified Way.
- The existing gap in the Highway 87 Bikeway from Carol Drive to north of Curtner Avenue, combined with a lack of access to the east side of SR-87 from the Station, necessitates that bicyclists either utilize vehicular turn lanes to travel on-street down Canoas Garden Avenue or exit the roadway and use pedestrian paths to access Curtner Station.
- Bicycle travel paths are not marked within the Curtner Station park & ride lot, and wayfinding is not provided to indicate a preferred path of travel.
- While most bicyclists who enter the site via existing pedestrian or vehicular paths are likely to encounter the bicycle parking locations, utility could be enhanced with signage and markings.
- Additional bicycle lane routes are available from all directions, but few protected or separated bikeways are near the Station.

Figure 8 through **Figure 13** document these conditions while existing and planned shared use bicycle facilities are shown in **Figure 14**. Ultimately a low-stress bicycle network is envisioned to serve the Curtner Station.

Figure 8: Bicycle Racks at Curtner Station



Figure 9: Class I Bicycle Path at Carol Drive and SR-87 (Does Not Meet Current Trail Standards)



Figure 10: Wayfinding Conditions near Carol Drive



Figure 11: A Fence on Caltrans Right-of-Way Restricting Access to a Potential Class I Bicycle Path at Mill Pond Drive



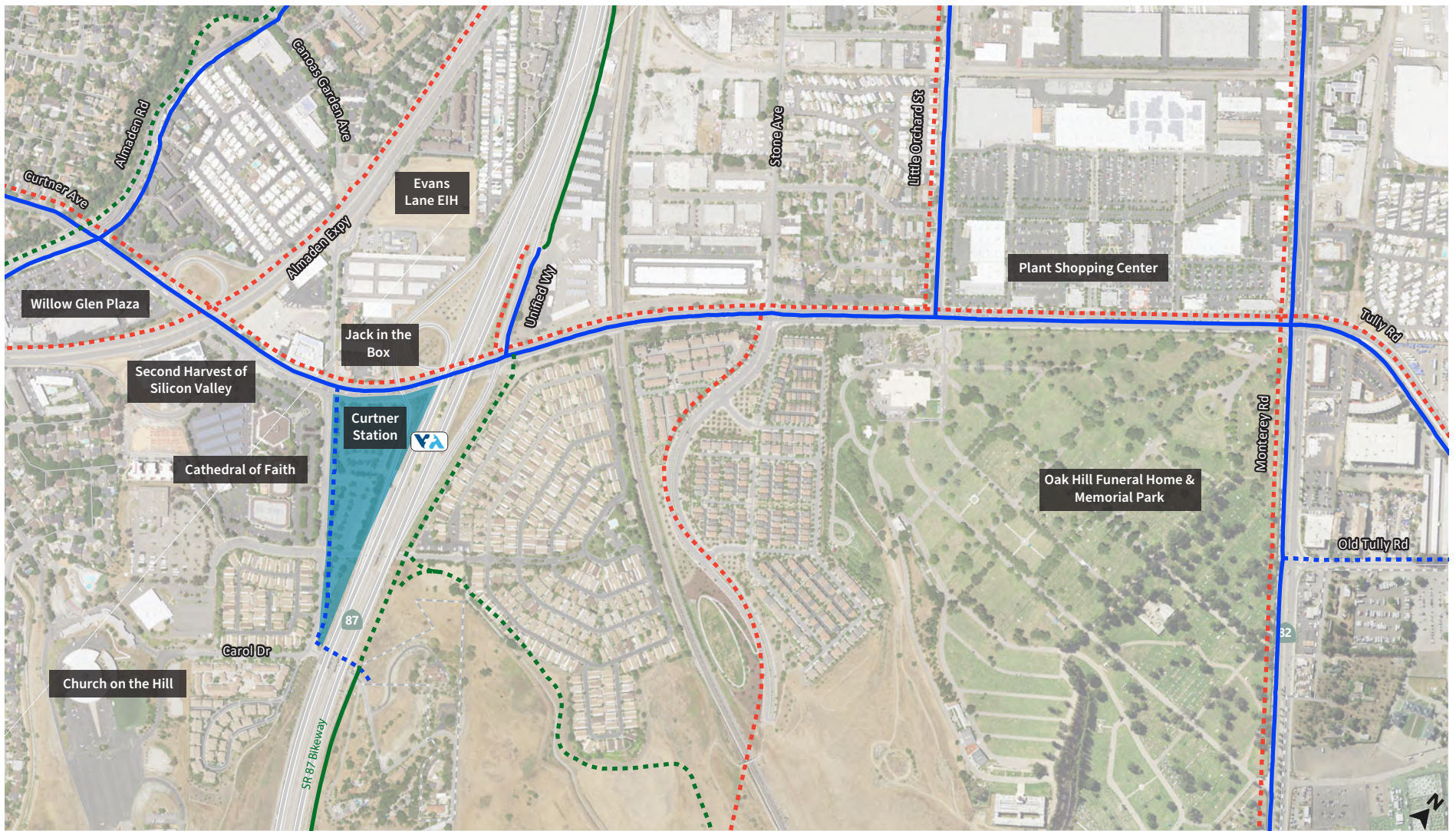
Figure 12: Planned Entrance for the Planned Bicycle Path Built through the Communications Hill Project (At Mill Pond Drive)









Figure 13: Curtner Avenue and SR-87 SB Off-Ramp Bicycling Conditions



Notes: **Figure 13** shows bicyclists riding contra-flow on the sidewalk against traffic since there is no sidewalk on the north side of Curtner Avenue.



- | | | |
|---|--|---|
| Existing Bicycle Facilities | Planned Bicycle Facilities |  VTA Curtner Station |
|  Class I Shared Use Path |  Class I Shared Use Path | |
|  Class II Bike Lane |  Class II Bike Lane | |
| |  Class IV Protected Bike Lane | |



Source: San José Better Bike Plan 2025

N:\Projects_SJ21_Projects\SJ21_2107_VTA_Curtner_TOD_Access_Study\Graphics\ADOBE\Report_Figures\Fig14_Existing and Planned Bicycle Facilities near the Station Area.ai

Figure 14
Existing and Planned Bicycle Facilities near Curtner Station

Transit Facilities

Transit routes serving the Curtner Light Rail Station include the VTA Blue Line and VTA Route 26. The Blue Line serves 26 stations in a north-south direction between the Baypointe and Santa Teresa stations in San José. Route 26 travels east-west between West Valley College to the west and Eastridge to the east, connecting a large portion of central Santa Clara County between Saratoga and East San José. **Table 1** shows transit services at Curtner Station.

Table 1: Transit Lines Serving Curtner Station

Route	Hours of Operation	Headways	Ridership ¹	Connection Points	Key Destinations
Blue Line Light Rail	Weekday 4:30 AM – 1:00 AM	Weekday 15-30 min	Weekday 775 daily	VTA Orange Line at Baypointe Station; VTA Green Line in in downtown San José; Caltrain at Tamien Station	Downtown San José, San José State University, and a bus connection to the San José International Airport
	Weekend 5:00 AM – 1:00 AM	Weekend 30 min	Weekend 185 daily		
26	Weekday 5:30 AM – 11:00 PM	Weekday 15 min (60 min late)	Weekday 180 daily	VTA Lines 26, 37, 51, and 57 at West Valley College Transit Center and Lines 22, 26, 31, 39, 70, 71, 77, 103, and 522 at Eastridge Transit Center	West Valley College, Westgate Shopping Center, Downtown Campbell, Santa Clara County Fairgrounds, and Eastridge Shopping Center
	Weekend 6:30 AM – 10:30 PM	Weekend 30 min (60 min early/late)	Weekend 85 daily		

Notes:

1. Ridership numbers represent approximate average boarding and alighting data collected in February 2020.

Pedestrian access is provided to the light rail platform and route 26 bus stop within the Curtner Station park & ride lot, although wayfinding is limited. Pedestrian access to the light rail platform is provided by a stairway, escalator, and elevator located near the center of the primary park & ride lot as well as a stairway directly accessing the south side of Curtner Avenue between the two SR-87 overpasses. Buses stopping at Curtner Station divert into the park & ride lot via Canoas Garden Avenue and Mill Pond Drive, stopping along the east side of site approximately 200 feet south of the light rail entrance. Small, sheltered spaces provide some protection from the elements at both the light rail platform and bus stop.

Wayfinding is generally minimal and subtle at Curtner Station, making access to and egress from the platform more difficult to understand for infrequent users. Key field observations include:

- Some signs are additionally obscured by weathering or graffiti.

- Transfers from light rail to buses traveling in both directions are facilitated by walking south along the light rail platform, descending to ground level, exiting west toward the park & ride lot, and then walking south toward the bus stop.
- A lack of clear, visible wayfinding can cause unfamiliar riders to instead walk north along the light rail platform, then descend the stairs directly toward Curtner Avenue – a path that does not provide clear direction on how to reach a bus stop for Route 26.
- Pedestrians sometimes cross Curtner Avenue at unmarked locations and walk in locations without sidewalks in attempt to reach bus stops or nearby land uses for which another path is not more obvious.
- Lighting is generally provided throughout the Curtner Station site, but aging and weathering of equipment has affected its brightness in some areas.
- The general design of the light rail station entrances, which both require traversing a tunnel-like entryway to ascend to the platform can constrain sight lines.

Figure 15 shows the existing conditions of the Route 26 bus stop located inside the Curtner Station parking lot while **Figure 16** shows transit facilities near Curtner Station.

Figure 15: Curtner Station Route 26 Bus Stop



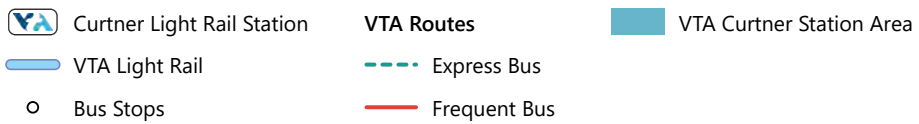
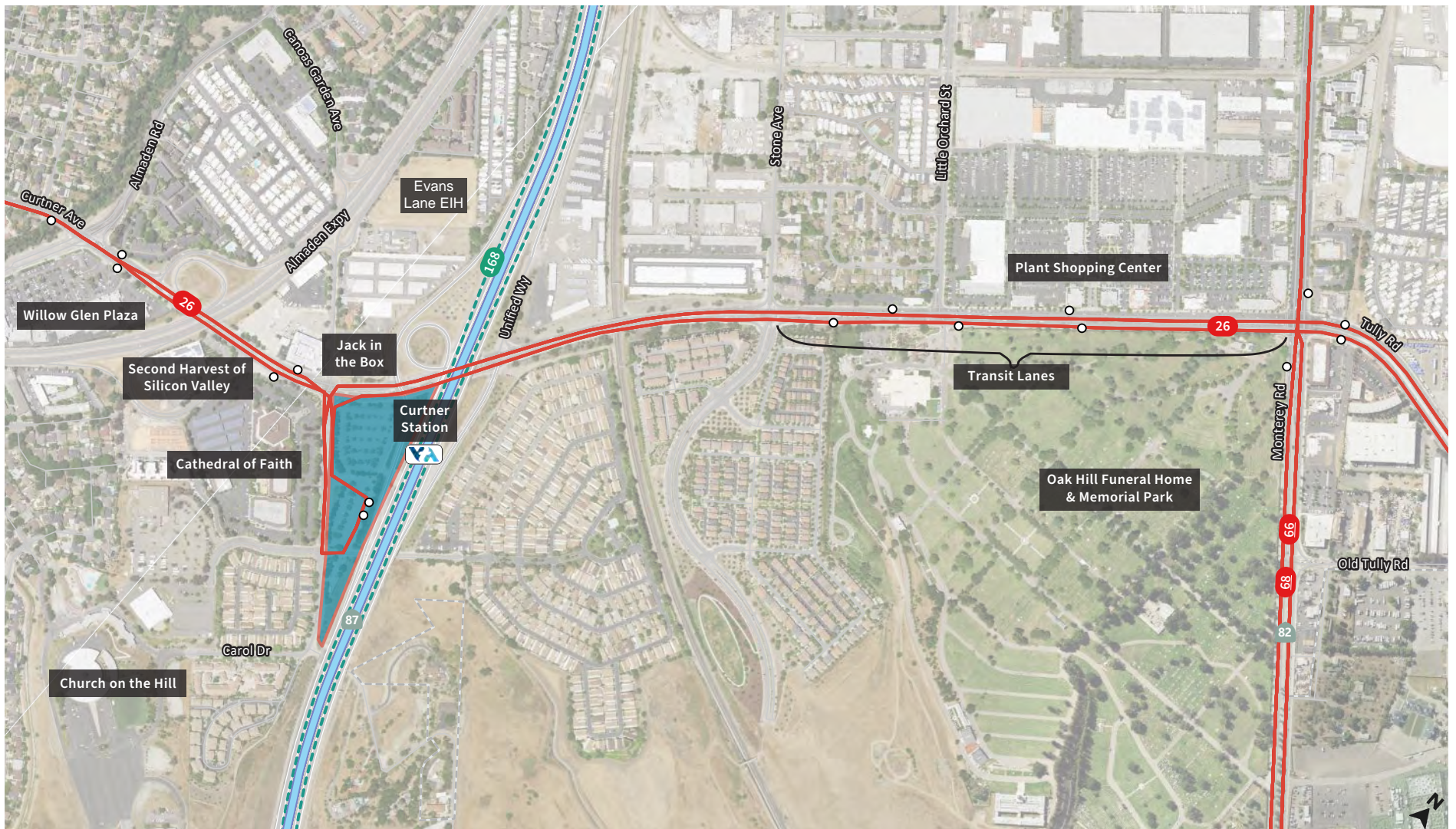


Figure 16
Transit Facilities near the Station Area

Collision History

As part of the Vision Zero San José walk audits completed in 2021, a five-year period of collisions (2016 – 2020) on the Curtner Avenue corridor between Almaden Road and Monterey Road was analyzed. As shown in **Figure 17**, during that time, 256 collisions occurred along this section of the corridor. Speeding was identified as a primary collision factor for these collisions, though closely spaced intersections and peak period congestion between Almaden Expressway and SR-87 may result in a larger proportion of collisions which do not involve speeding in that segment.

Six fatal collisions occurred on Curtner Avenue including four involving pedestrians. Two of these six collisions occurred between pedestrians and drivers on private property adjacent to Curtner Avenue. In 2021, two pedestrian fatalities occurred at Monterey Road and Curtner Avenue. Through various outreach efforts by VTA and the City of San José, community members have expressed that they find Curtner Avenue to be a priority safety concern.

Attendees at the Vision Zero San José walk audits included representatives from San José City Council District Offices, staff from City of San José DOT and VTA, members of the City's consultant team, advocates for safety and bicycle transportation, and members of the general public – primarily people living or working along Curtner Avenue.

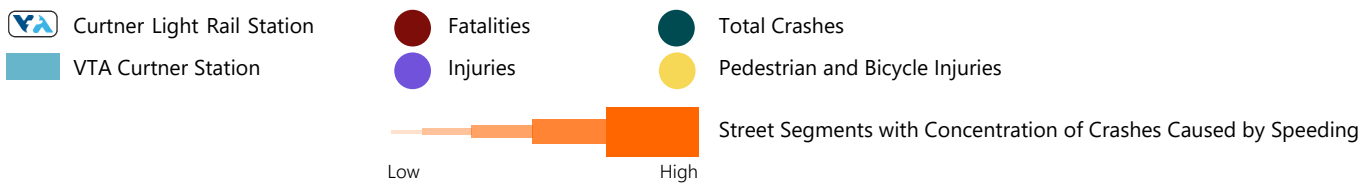
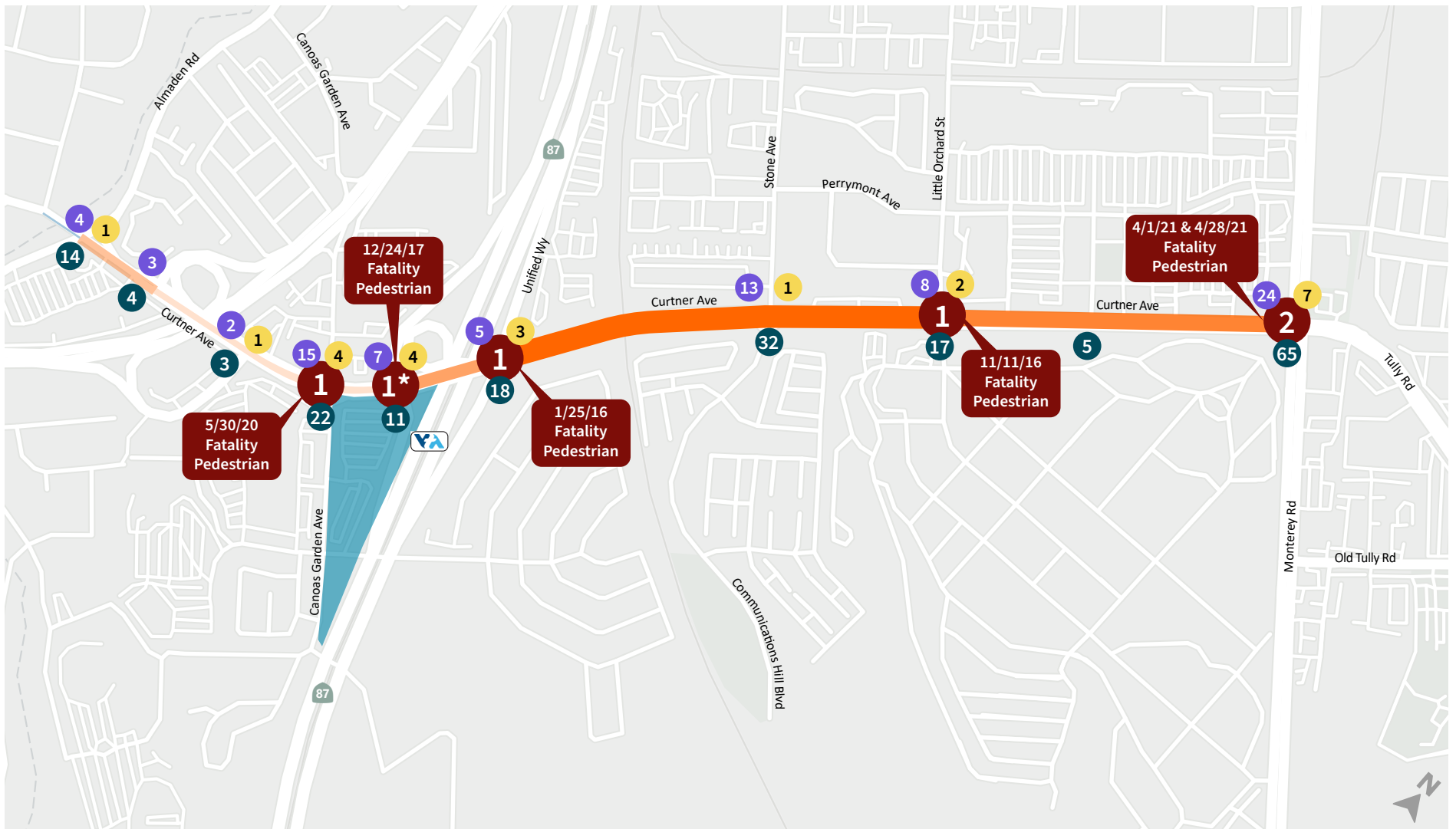


Figure 17

Curtner Avenue Corridor Collision History, 2016-2020

Source: City of San José Department of Transportation

W:\San Jose N Drive\Projects\SJ21_Projects\SJ21_2107_VTA_Curtner_TOD_Access_Study\Graphics\ADOBE\Report_Figures\Fig17_Curtner Avenue Corridor Collision History, 2016 - 2020.ai



Community Outreach

A series of community outreach events expanded on the data-driven existing conditions analysis to depict key issues holistically and proactively in the Curtner Station. This section provides an overview of the outreach activities and feedback received through the engagement process.

Outreach Objectives

The following objectives were identified with VTA to help effectively engage with residents and develop community-driven improvements for the VTA Curtner Station TOD project:

- **Listen and Learn** – Engage stakeholders and residents in identifying challenges, needs, and opportunities that reflect the diversity of travel modes and demographics throughout the corridor.
- **Education and Information Sharing** – Educate stakeholders and residents about existing safety issues and opportunities for walking, bicycling, transit, and innovative solutions that work for users of all ages and abilities.
- **Momentum** – Build excitement and momentum for the project and proposed improvements by engaging the community in identifying problems and developing access improvement recommendations. Draw in people who do not typically participate in the public outreach process to help ensure ideas and solutions pull from across the spectrum of corridor demographics.
- **Building Toward Access Recommendations** – Identify new on-site and off-site improvements-based input received from the outreach process.

Stakeholders and Partners

The outreach for this study focused on the following stakeholder groups and partners:

Stakeholder Groups

- **General Public.** The opportunities for participation were broadly publicized with emphasis targeted to residents, businesses, visitors, organizations, and institutions on and near the Curtner Station. Project materials and key advertising for outreach included Spanish, Vietnamese, Chinese, and Tagalog translations. Community meetings were also conducted with a Spanish interpreter.
- **Institutions and Businesses.** The Curtner Station is near several religious and educational institutions, such as the Cathedral of Faith, San José Scottish Rite Center, Family Life Center, and University Preparatory Academy (UPA). Public stakeholder groups, including surrounding business were invited to participate in the community meeting or online survey opportunities.
- **Neighborhood Associations.** The project is located near the Mill Pond community, a senior community with approximately 360 residents. Outreach activities prioritized receiving input and incorporating solutions to concerns Mill Pond residents may have around potential access and

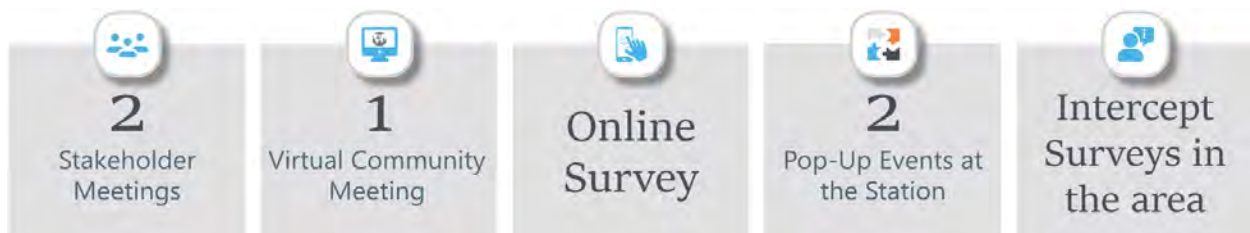
circulation changes from the project. Curtner Studios is also located nearby the VTA Curtner Station TOD project, and targeted outreach occurred there as well.

Partners

- **Agencies.** Agencies, such as City of San José and Santa Clara County, were key partners in advertising materials and events and providing input.
- **City Council District Offices.** The San José Council District Offices play a vital role in reaching residents and showing general support for VTA's efforts. The project partnered with the offices to advertise through existing channels.
- **CBNA & Bayview Development Group.** The two developer groups were important partners as the project team coordinated closely on outreach and presentations.

Outreach Activities

VTA staff, Fehr & Peers, and the developer team worked in close coordination to develop outreach materials, advertise outreach events, and present at neighborhood-focused events. Outreach materials were made available with multiple language options, including English, Spanish, Vietnamese, Chinese, and Tagalog.



The TOD Access Study reached out to residents and stakeholders through the following platforms and events:

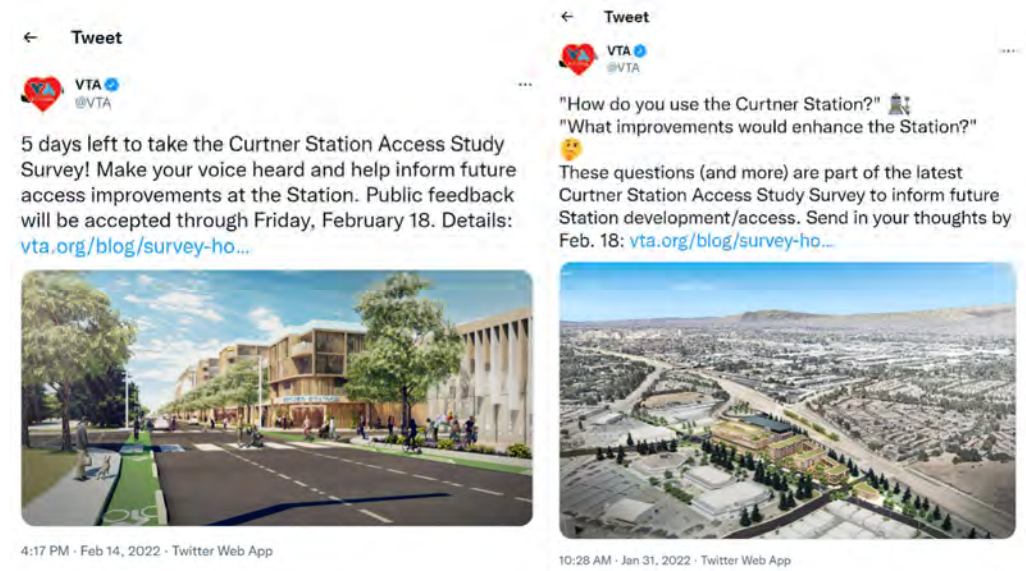
VTA Project Website

VTA maintains a project website for the Curtner Station TOD Project accessible by this [link](#). The project website has a side banner of related public documents that include past progress reports, community meeting notices and presentations, and fact sheets about the project translated into a variety of languages. Past study surveys and outreach documentation are linked in the summary. Additional information can be found in the bottom half of the page through an interactive timeline tool that details the project's progress.

Social Media

VTA used Twitter to notify residents and other stakeholders regarding key project updates. Along with the official VTA Twitter account, the Metropolitan Transportation Commission (MTC) and public representatives promoted the public engagement efforts and shared content about the events related to the project, as illustrated in **Figure 18**.

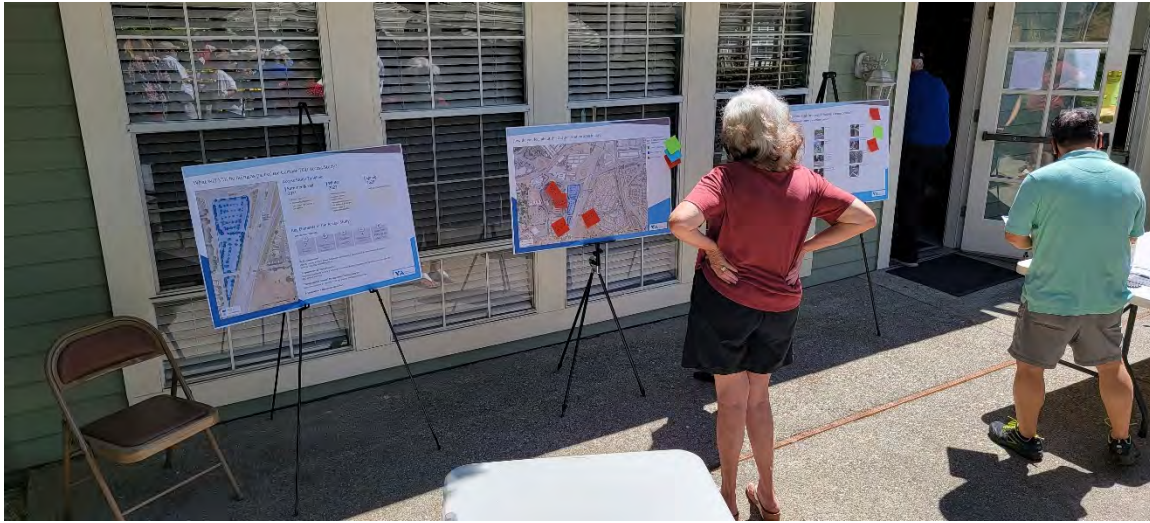
Figure 18: VTA Tweets Promoting the Curtner Station Access Study



Stakeholder Meetings

- **The Mill Pond Stakeholder Meeting** took place on August 31, 2021. Mill Pond is a retirement community located east of the VTA Curtner Station TOD site on Mill Pond Drive. During this meeting, three poster boards were presented to the public. One had a description and timeline of the project, and the two others were open to public comments via post it notes asking for feedback on what improvements would help accessibility and how the community currently feels about the area. Mill Pond residents were mainly concerned with potential changes in access to and from the community. The only access point into and out of the community is at the Canoas Garden Avenue and Mill Pond Drive intersection. With residents being older in age and concerns around heightened fire risks, many people rely on this one access point for emergency vehicle access. Traffic congestion in the area was also brought up as an issue for the residents. Some residents walk in the area and public safety concerns also came up during the meeting.

Figure 19: Mill Pond Stakeholder Meeting

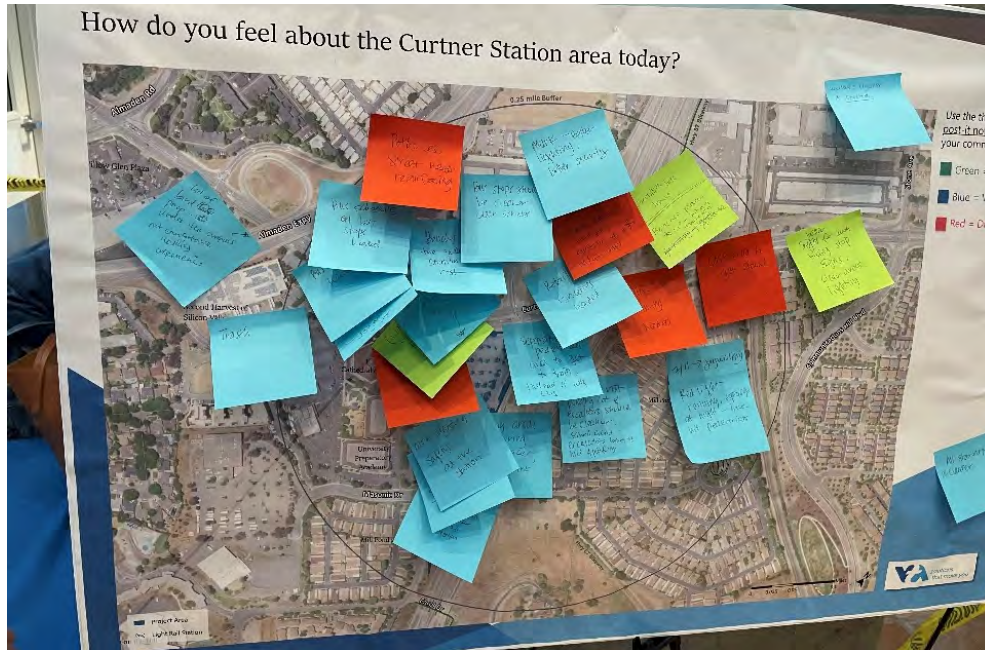


- **The Curtner Studios Stakeholder Meeting** took place on October 22, 2021. Curtner Studios is an apartment complex located at 701 Curtner Avenue. This apartment complex is a supportive housing community with 170 affordable housing units and provides on-site community services. Many of the residents that the project team spoke with either walk or take transit. Some of the main concerns that the residents expressed were wanting to see improvements in public safety, lighting, cleanliness, places to rest along the way when walking, transit shelters, and lighting.

Figure 20: Curtner Studios Stakeholder Meeting



Figure 21: Curtner Studios Stakeholder Event Feedback



- **The University Preparatory Academy (UPA) Stakeholder Meeting** took place on November 10, 2021. UPA is a school that serves 7th to 12th grade students and is located right across from the future VTA Curtner Station TOD site on Canoas Garden Avenue. The UPA event provided an opportunity to speak to students. Many students are currently driven to school. Some students walk to nearby coffee shops after school and some students were taking VTA light rail prior to the COVID-19 pandemic. At the time of the stakeholder meeting, VTA's transit service was running a limited schedule due to the pandemic and therefore almost all students were being driven to school by their parents or caretakers. Some feedback that the students provided included wanting to see improvements in public safety in the area, traffic congestion on Canoas Garden Avenue makes pick-up/drop-off difficult, wanting to see the area cleaner, and wanting a clear pedestrian crossing across Canoas Garden Avenue to Curtner Station.

Figure 22: UPA Stakeholder Meeting



Virtual Community Meeting

- **The ‘Meet the Developer’ Community Meeting** took place virtually on September 9, 2021 via Zoom and YouTube livestreaming conducted by VTA. The event utilized breakout rooms and was conducted simultaneously in English and Spanish by VTA, Fehr & Peers, and representatives of the developer team. A brief presentation was provided to introduce the VTA TOD program and other project examples, give attendees an orientation to the Curtner Station site and surrounding transportation infrastructure, and introduce the developer’s vision, goals, and proposal for the Curtner TOD. The nearly 50 attendees were then asked to share feedback on the development proposal and transportation needs, which included concerns about parking supply, traffic volumes and roadway safety; desire for direct, comfortable, and safe pedestrian paths; and interest in details pertaining to coordination with other planned development in the area.

Figure 23: Agenda for ‘Meet the Developer’ Community Meeting

Meeting Agenda	Agenda de la reunión
• Introductions	• <i>Presentaciones</i>
• Land Acknowledgement	• <i>Reconocimiento de las tierras</i>
• VTA 101	• <i>VTA 101</i>
• Meet our Developer Partner	• <i>Presentación del desarrollador</i>
• Station Access Study	• <i>Estudio de Acceso a la Estación</i>
• Breakout Rooms	• <i>Seminarios</i>
• Report Back & Closing	• <i>Comentarios finales y próximos pasos</i>



Pop-Up Events

- **The Subway Shopping Plaza Pop-Up Event** took place on November 5, 2021. The Subway Shopping Plaza is in the retail space between the Almaden Expressway and Guadalupe Parkway entrance/exit ramps. This plaza is surrounded by various land uses including places of religion, neighborhoods, storage facilities, businesses, and parking lots. Vehicular access to the plaza is through an entrance on Curtner Avenue and Canoas Garden Avenue. Pedestrian access is through sidewalks and crossing from the intersection of Curtner Avenue and Canoas Garden Avenue and sidewalk access continues along one side of Curtner Avenue to connect with the light rail station under the parkway. Additionally, the Curtner Light Rail Station passengers exit into the parking lot which connects to the plaza across the street. Transit access is through VTA bus route 26 which serves the light rail station as well. Some feedback provided from this event included requests for better signage, clearer wayfinding, functional water fountains, additional transit information outside of the light rail station for connections to public transit, public safety improvements like lighting, and more retail amenities.

Figure 24: Subway Shopping Plaza Pop-Up Event

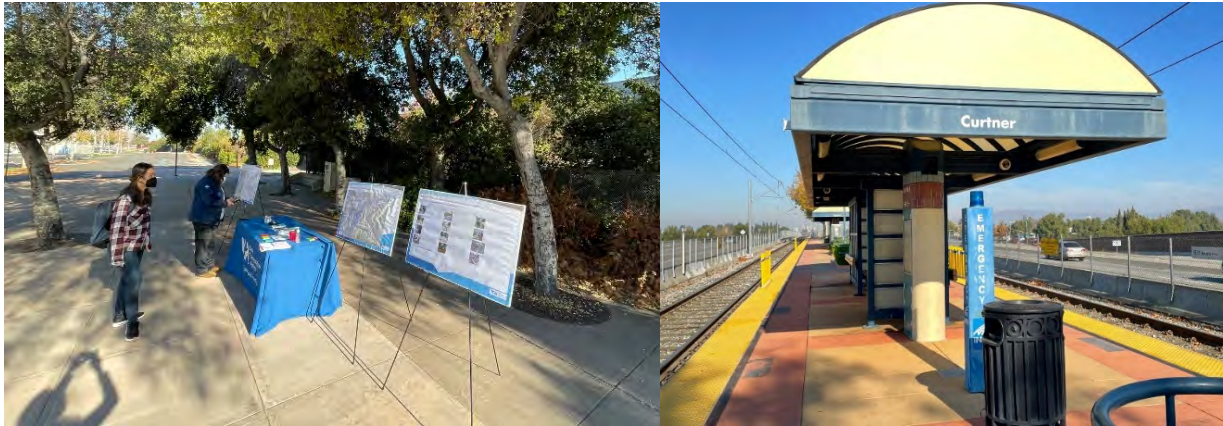


- **The Curtner Station Pop-Up Event** took place on November 30, 2021. As a result of the Covid-19 pandemic, transit ridership was depressed at this time, leading to reductions in transit service levels and overall use of Curtner Station. This limited the volume of feedback collected, but provided useful insights into the first-hand experiences of people traveling through and around Curtner Station.

The Curtner Station Pop-Up event occurred outside the entrance to the light rail station at a location directly available to all passersby who are using any of the transit options available, including VTA buses or bike paths. The outreach event collected comments from the surrounding communities and neighborhoods in the immediate vicinity of this station as well as the

commuters or travelers who park in the parking lots to use the light rail. Some of the feedback generated at this event include accessibility concerns addressing elevator maintenance for users with mobility limitations, installing bathrooms and other public services, concerns on cleanliness of the facilities and light rail cars, requests for more information about public transit connections, requests for increased lighting and public safety improvements, and concerns about frequency of service or stops being cut.

Figure 25: Curtner Station Pop-Up Event



Web Map

After receiving initial input from the community of concerns or ideas for future improvements, VTA and Fehr & Peers compiled a comprehensive set of recommendations for the TOD project area. These were then displayed on an interactive web map for community members and stakeholders to review and provide input. The web map, now closed for comment, is shown on **Figure 26**.

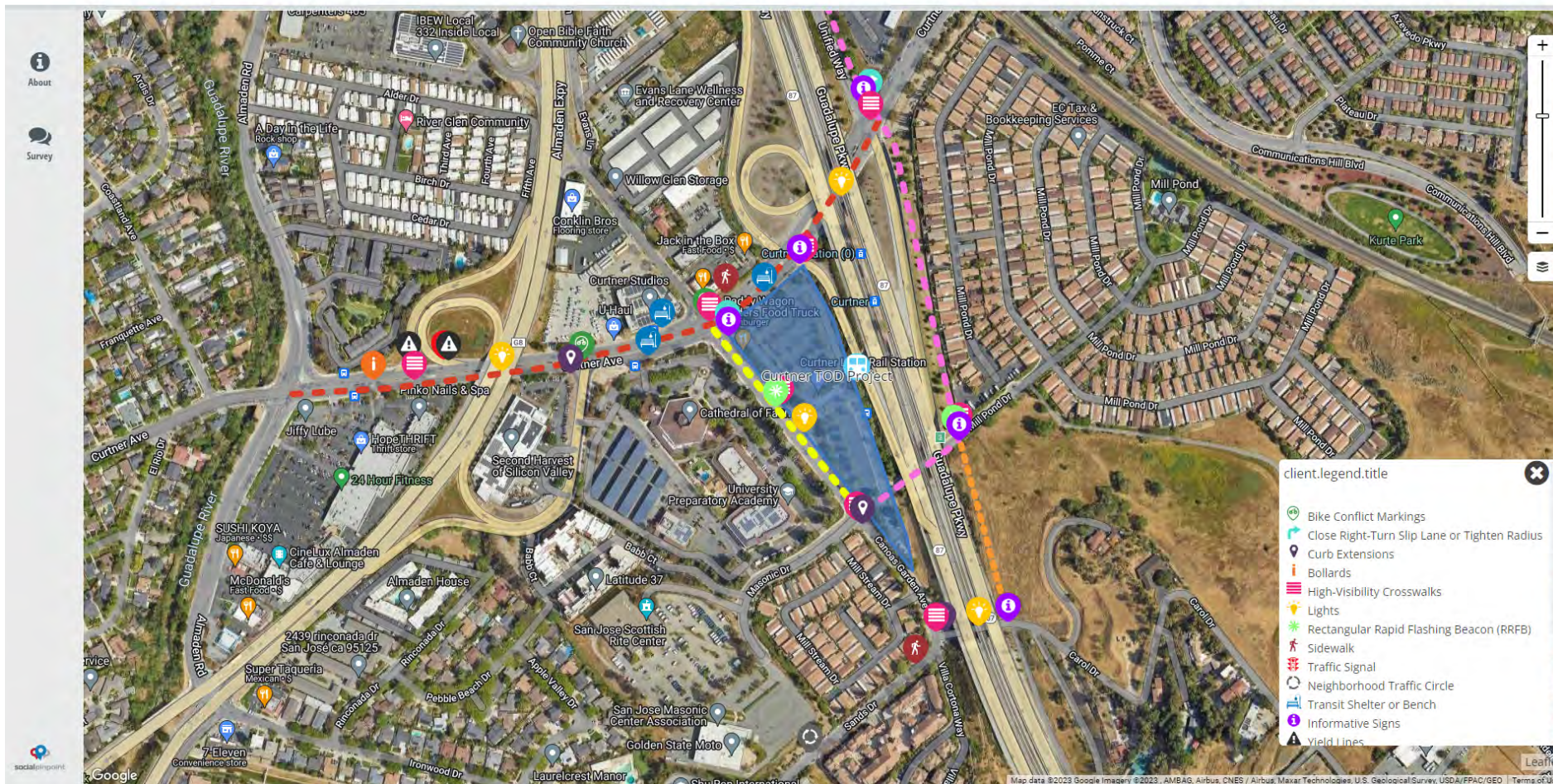


Figure 26
Initial Recommendations Web Map

Input Themes

As noted, through the engagement process, VTA collected a wide range of input from the community. See **Appendix A** for more details on the input received. Key themes across the outreach events and surveys are presented in this section.

Speeding and Congestion

Throughout the outreach events, several community members spoke about the speeding along Curtner Avenue. They noted high vehicular speeds along the corridor sometimes make crossing the street challenging and Curtner Avenue uncomfortable to walk along. Congestion was noted as a concern mainly along Canoas Garden Avenue. Several uses along Canoas Garden Avenue create congestion during peak periods, including the University Preparatory Academy, the Cathedral of Faith, San José Scottish Rite Center, Amazon distribution center, Mill Pond, Church on the Hill, and Second Harvest of Silicon Valley uses the UPA parking lot for food distribution during the pandemic. Input included a general desire for more traffic calming measures along the corridor especially near the 7/11, between the UPA school and Canoas, and Curtner intersections.

Pedestrian Safety

Pedestrian safety is another issue mentioned during the engagement process. Many pedestrians do not feel safe crossing the street along Curtner Avenue and on Canoas Garden Avenue, especially at night when lighting is less prevalent. Although many people drive in the area, many people also take transit and walk. Community members who walk and take transit expressed a desire for greater lighting, transit shelter and transit amenities, benches to rest along the way, and sidewalk gaps to be fixed. They also expressed need for separated pedestrian areas, sidewalk repaving and elevator maintenance for accessibility issues, additional wayfinding signs, and additional pedestrian crossings between the UPA school and Curtner Station, Curtner intersections, and local neighborhoods.

Public Safety & Cleanliness

Public safety and cleanliness in the area and at Curtner Station was an issue noted at every engagement event. Community members in the area feel that public safety needs to be improved. Many people do not feel safe walking, especially at night. Some UPA students do not feel safe walking alone without their parents and caregivers. Teachers at UPA also discourage students from walking to nearby commercial or retail shopping centers due to negative past experiences. Many people would also like to see Curtner Station to be cleaner and would like to see a greater presence of cameras, security, and better lighting to improve public safety. Public comments also include a desire to have more trash cans, restrooms, and working water fountains.

Access Improvements

Based on the existing conditions, stakeholder and community input, and a field review of Curtner Station, this section presents suggest enhancements for access and mobility at and near the proposed Curtner Station TOD project. This section provides station specific recommendations, TOD project recommendations, and suggested transportation demand management (TDM) strategies for the TOD Project.

Station Area Recommendations

This Study relied upon reported historical collision data, multiple field visits, meetings with stakeholders, planned improvements identified in other agency plans, and established professional safety evaluation practices to develop recommendations that address one or more specific safety concerns. The work may be influenced by the nature of the data that is available and is limited to the scope of work agreed upon. Conditions may exist that were not observed and may not be compatible with recommendations in this report. As part of further refining the design to a level of detail sufficient for construction, staff should conduct a more detailed site-specific review to confirm feasibility, appropriateness, and necessary additional design detail and refinements to the recommendations, as appropriate.

Station Area Improvements

The following section presents draft recommendations for Curtner Station and its surrounding vicinity to enhance conditions for and encourage multimodal transportation to, from, and within the Curtner Station TOD. These access recommendations are categorized by mode: pedestrian, bicycle, transit, and vehicular. Global recommendations throughout access corridors are also noted. Figures detailing the proposed recommendations are located in **Appendix C**.

Pedestrian Access Improvements

Pedestrian access improvements are recommended throughout the Curtner Avenue corridor from Almaden Road to the Communications Hill Boulevard and along the Canoas Garden Avenue Project Area frontage. Key pedestrian improvements include:

- Adding rectangular rapid-flashing beacons (RRFBs) on Canoas Garden Avenue at a potential new midblock crossing adjacent to the site as well as at Mill Pond Drive
- Adding high-visibility crosswalks throughout the study area
- Adjusting medians to facilitate straight crosswalks across Curtner Avenue
- Adding a crosswalk across Curtner Avenue at the intersection of Curtner Avenue / Almaden Expressway northbound ramp terminal
- Adding a crosswalk across Curtner Avenue at the intersection Curtner Avenue / SR-87 southbound ramp terminal

- Adding missing crosswalks at the intersection of Canoas Garden Avenue / Mill Pond Drive
- Installing new sidewalks where missing on Curtner Avenue, Carol Drive, and Sands Drive
- Installing new curb ramps or reconstructing existing curb ramps to meet current standards
- Install pedestrian-scale lighting throughout the study area
- Adding advance limit or yield lines at all crosswalk locations
- Providing street furniture and amenities, particularly along the Station frontage on Curtner Avenue and Canoas Garden Avenue
- Reducing corner radii and crossing distance with bulb outs at intersections
- Adding wayfinding signage to the light-rail station and Route 26 stops on-site and along Curtner Avenue
- Closing right-turn slip lanes at Curtner Avenue / Canoas Garden Avenue to tighten intersection and reduce turning speeds, including modifying the traffic signal to provide activated “no right-turn on red” (NRTOR) signs

In general, the Curtner Station area would benefit from enhanced wayfinding and lighting throughout to improve navigability and safety. Improved station maintenance, shelters, and trash pick-up would also enhance desirability.

Bicycle Access Improvements

Bicycle access improvements are recommended throughout the Curtner Avenue corridor from Almaden Road to Communications Hill Boulevard and along the Canoas Garden Avenue Project Area frontage. Key bicycle improvements include:

- Providing a Class II or Class IV bikeway along Canoas Garden Avenue as recommended by the *Better Bike Plan* and community feedback
- Constructing the missing trail segments of the Highway 87 Bikeway, prioritized as follows:
 - Curtner Avenue to Mill Pond Drive with a cross-bike at Curtner Avenue, which would allow bicyclists to avoid the busiest on-street segments of Curtner Avenue and Canoas Garden Drive; if possible, also construct a new entrance connection to the light rail station entrance under the SR-87 northbound lanes from the bikeway
 - Along Unified Way north of Curtner Avenue, which would be challenging to construct but create a contiguous trail connection between Curtner Avenue and Willow Street to the north
 - Mill Pond Drive to Carol Drive, which would create a contiguous trail connection between Curtner Avenue and Narvaez Avenue to the south

Additional enhancements to benefit bicycling are reflected as part of the TOD project recommendations, including wayfinding signage to on-site bicycle parking.

Transit Access Improvements

Transit access improvements are recommended throughout the Curtner Avenue corridor from Almaden Road to Communications Hill Boulevard. Enhancing access to the light rail station would enhance the desirability of riding the Blue Line and may include providing escalators and elevators at both access points.

As part of the planned TOD, the Station on-site bus turnaround and stop is proposed to be relocated to on-street stops on Curtner Avenue. While this change is expected to reduce overall delay for buses accessing Curtner Station, the existing turnaround enabled easier pedestrian access to the bus stop from some surrounding neighborhoods, including for many seniors, and helped to facilitate bus-to-rail transfers. Ensuring and enhancing an accessible and direct pedestrian pathway through the project site from surrounding neighborhoods to the new bus stop will be important if the bus stop relocation is pursued.

Overall transit access improvements in the vicinity of the Project corridor include:

- Providing escalators or elevators at both access points of Curtner Station, including at Curtner Avenue, to facilitate connectivity and transfers
- Consolidating and/or relocating bus stops on Curtner Avenue to minimize redundant stops with the addition of new stops east of Canoas Garden Avenue
 - A proposed addition of an eastbound Route 26 stop adjacent to the site would potentially allow removal of the existing stop west of Canoas Garden Avenue
 - Similarly, addition of a westbound Route 26 stop east of Canoas Garden Avenue would allow removal of the existing stop west of Canoas Garden Avenue
 - Further to the east, some Route 26 stops are located as little as 700 feet apart while generally serving the same locations – it may be feasible to consolidate stops to reduce travel time and enhance transit service reliability
- Installing bus shelters at the future Curtner Avenue and Canoas Garden Avenue bus stops
- Providing wayfinding signage to light-rail and Route 26 bus stops throughout the Curtner Station, particularly to facilitate transfer through the TOD site
- Generally improving station maintenance, shelters, and trash pick-up to enhance the passenger environment

Multimodal/Vehicular Access Improvements

Vehicular access improvements are recommended throughout the Curtner Station focused on safety and driver behavior. These recommendations include:

- Adding intersection limit lines on all legs of residential street intersections
- Reducing lane widths on to 10 feet (11 feet for transit) where possible
- Coordinating signals throughout the Curtner Avenue corridor to match desired travel speeds

- Squaring up the turn movements onto the SR-87 southbound ramps to reduce speeds of turning vehicles and improve interactions with active modes (this is addressed through pedestrian improvements such as intersection curb extensions and slip lane removal)
- Adding a hardened centerline on Unified Way to prevent drivers from traveling wrong-way around ramp meter queues during peak periods

Project Prioritization

During community outreach, community members and stakeholders were asked for feedback on draft recommendations mentioned in the Access Improvements section and through an interactive webmap. The interactive webmap provided an opportunity for input on project prioritization. As VTA moves to implementation of access and mobility enhancements in the Curtner Station area, survey respondents request a focus on high visibility crosswalks, bicycle lanes on Curtner Avenue, the Highway 87 Trail extension, and improved lighting, as shown in **Figure 27**.

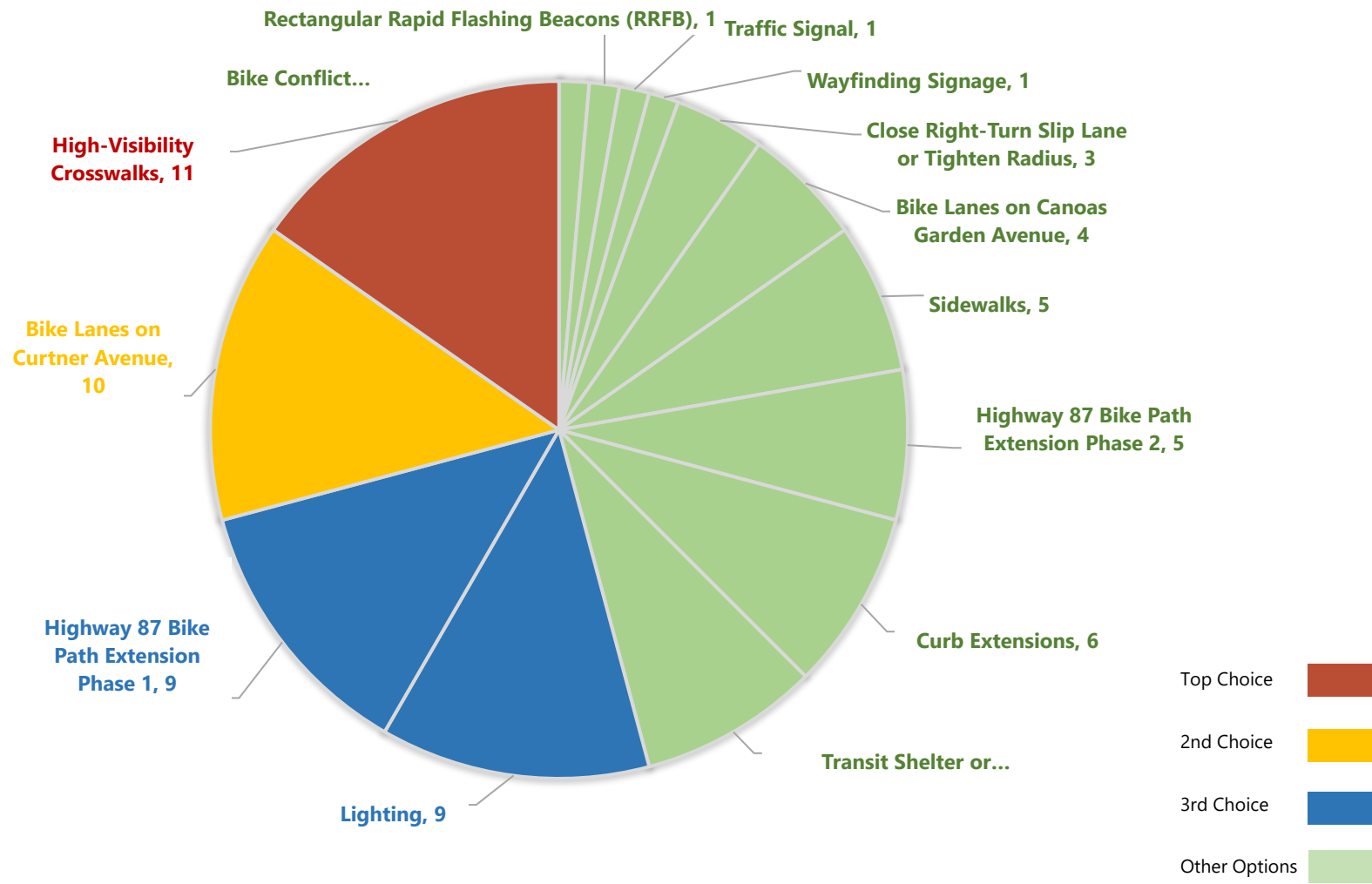
Off-site improvements were generally prioritized based on the feedback provided through the community engagement webmap and survey. Voting results from the survey were binned into three general prioritization categories based on the number of votes received, as shown below in **Table 2**.

Table 2: Station Area Improvement Prioritization

Improvement in Survey	Number of Votes	Prioritization
High-Visibility Crosswalk	11	High
Bike Lanes on Curtner Avenue (Constructed Since Survey)	10	
Lighting	9	
Hwy 87 Bike Path Extension Phase 1 (North of Mill Pond Drive)	9	
Curb Extensions	6	Medium
Transit Shelter or Benches	6	
Sidewalks	5	
Hwy 87 Bike Path Extension Phase 2 (South of Mill Pond Drive)	5	
Bike Lanes on Canoas Garden Avenue	4	
Close Right-Turn Slip Lane or Tighten Radius	3	
Bike Conflict Markings	1	Low
Traffic Signal	1	
Wayfinding Signage	1	
Rectangular Rapid Flashing Beacons (RRFB)	1	

VTA CURTNER TOD SURVEY

After reviewing the proposed transportation improvements, what would you choose as the three most important to you. Choose up to three improvements from the list below. (Note: participants had a map containing the location of improvements while viewing the online survey).



Numeric values represent the number of votes received for each improvement type. A total of 25 participants submitted votes.



Figure 27

Web Map Prioritization Input

Some improvements which are anticipated to play a critical role in facilitating safe movement for bicyclists, pedestrians, and transit riders were given higher priority than reflected in the survey results. For example, though RRFBs received only a single vote, they were ultimately included as “medium” prioritization given the anticipated importance new RRFB installations would have in ensuring safe pedestrian access.

Cost Estimates

Planning level estimates of probable cost were developed for each identified improvement based on recent and historic unit costs from the San Francisco Bay Area. For some projects, a range of potential costs is provided to account for uncertainty in the description and scope of the project, especially where coordination or access agreements between multiple public agencies may be required. The planning level cost estimates for each recommended project are included in **Appendix B**.

Summary of Station Area Recommendations

Table 3 shows the recommended projects along with their priority and estimated construction cost based on 2023 dollars. Note that construction cost estimates do not reflect soft costs associated with project development or property acquisition.

Table 3: Summary of Station Area Recommendations

Improvement	Description	Priority	Estimated Construction Cost
<i>Pedestrian Improvements</i>			
High-visibility Crosswalk Installation	Add missing crosswalks at the following intersections:		
	Curtner Avenue / Almaden Expressway northbound ramp terminal (one leg)	High	\$120,000
	Curtner Avenue / SR-87 southbound ramp terminal (west leg)	High	\$180,000
	Canoas Garden Avenue / Mill Pond Drive (four legs)	High	\$45,000
	Canoas Garden Avenue / Carol Drive (three legs)	High	\$35,000
Sidewalk Improvements	Install new sidewalks where missing on:		
	Curtner Avenue between Canoas Garden Avenue and SR-87 southbound ramp terminal	High	\$50,000
	Carol Drive east of Canoas Garden Avenue	Medium	\$45,000
	Sands Drive west of Canoas Garden Avenue	Medium	\$120,000
Curb Ramp Improvements	Install or upgrade curb ramps at:		
	Canoas Garden Avenue / Mill Pond Drive	High	\$80,000
	Canoas Garden Avenue / Carol Drive	High	\$60,000

Pedestrian-Scale Lighting	Install pedestrian-scale lighting throughout the study area on Canoas Garden Avenue and on the south side of Curtner Avenue along the site frontage	High	\$1.63M
Advance Limit or Yield Lines	Add advance limit or yield lines at all crosswalk locations	High	\$5,000
Rectangular Rapid-Flashing Beacons (RRFBs)	Add RRFBs at the following locations:		
	Canoas Garden Avenue at Project Driveway	Medium	\$40,000
	Canoas Garden Avenue / Mill Pond Drive	Medium	\$40,000
Intersection Curb Extensions	Reduce corner radii and crossing distance with curb extensions at Canoas Garden Avenue / Mill Pond Drive	Medium	\$220,000
Slip Lane Removal	Close right-turn slip lanes at Curtner Avenue / Canoas Garden Avenue to tighten intersection and reduce turning speeds, modify traffic signal and add activated "no right-turn on red" (NRTOR) signs	Medium	\$1.0-\$1.5M
Wayfinding Signage	Add wayfinding signage to the light rail station and Route 26 stops on-site and along Curtner Avenue	Low	\$25,000
Median Adjustment	Adjust medians to improve crosswalk alignment across Curtner Avenue on east side of Canoas Garden Avenue	Low	\$5,000

Bicyclist Improvements

Construct Missing Highway 87 Bikeway Segments	Construct missing segments of the Highway 87 Bikeway:		
	Curtner Avenue to Mill Pond Drive	High	\$0.25-\$0.5M
	Along Unified Way north of Curtner Avenue	High	\$0.3-\$0.6M
	Mill Pond Drive to Carol Drive	Medium	\$4.9-\$8.0M
Canoas Garden Avenue Bicycle Improvements	Provide a Class IV bikeway on both sides of Canoas Garden Avenue adjacent to TOD site	Medium	\$600,000

Transit Improvements

Improve Light Rail Access Points	Provide escalators or elevators at the Curtner Avenue platform access point under Highway 87 to facilitate connectivity and transfers	High	\$6.0-\$12.0M
Stop/Station Maintenance	Improve station maintenance, shelters, and trash pick-up to enhance passenger environment	High	N/A
Bus Shelter Installation	Install bus shelters at the future Curtner Avenue and/or Canoas Garden Avenue bus stops.	High	\$60,000
Bus Stop Consolidation	Consolidate bus stops on Curtner Avenue to minimize redundant stops	Medium	N/A

Bus Stop Relocation	Coordinate with VTA on corridor wide improvements of bus stops per VTA's Transit Passenger Environment Plan	Medium	N/A
---------------------	---	--------	-----

Multimodal/Vehicular Improvements

Intersection Limit Lines	Add limit lines on all legs of residential street intersections	High	\$5,000
Lane Width Reduction	Reduce lane widths to 10 feet (11 feet for transit) where possible	Medium	Varies
Hardened Centerline	Add a hardened centerline on Unified Way to prevent drivers from traveling wrong-way around ramp meter queues during peak periods	Medium	\$40,000
Traffic Signal Coordination	Coordinate signals throughout the Curtner Avenue corridor to match desired travel speeds	Medium	\$100,000

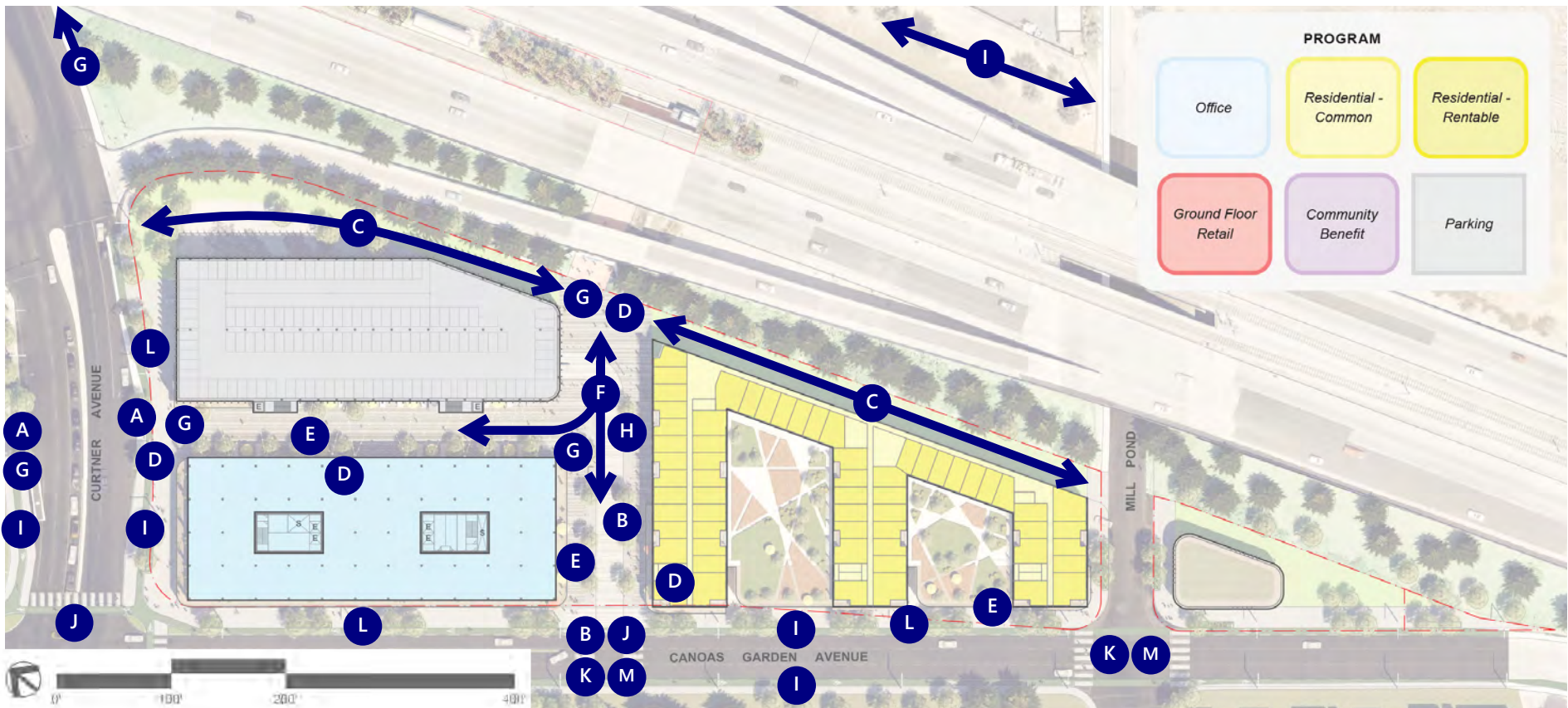
TOD Project Recommendations

In addition to recommendations for the access routes to and from the Curtner Station TOD site, both the CBNA site plan and the Republic site plan were reviewed for key access and multimodal mobility considerations. This section presents suggested improvements to both the site plans, as well as transportation demand management strategies that could be implemented with the development to reduce single occupant vehicle trips and vehicle miles traveled associated with the planned land uses. Cost estimates for project recommendations are listed in **Appendix B**.

Site Access Improvements

This section evaluates site access and internal circulation for vehicles, pedestrians, and bicycles and consistency with the City of San José’s mobility policies, standards, and guidelines based on the CBNA site plan and the Republic site plan both dated May 18, 2020. Specific recommendations and proposed TOD Project improvements pertaining to the CBNA and Republic site plans are additionally reflected in **Figures 28 and 29**, respectively.

The CBNA Site Plan includes approximately 240,000 square feet of office space, 118 housing units for multi-generational families and senior living, and 62 affordable below market rate (BMR) units, along with a supporting mobility hub, neighborhood retail, health center, and childcare center. The site will include approximately 1,000 parking spaces, including 100 public park-and-ride spaces that will be consolidated in the mobility hub and a two level above-grade parking podium for residential use. The mobility hub will provide spaces for carpool and car-share vehicles.

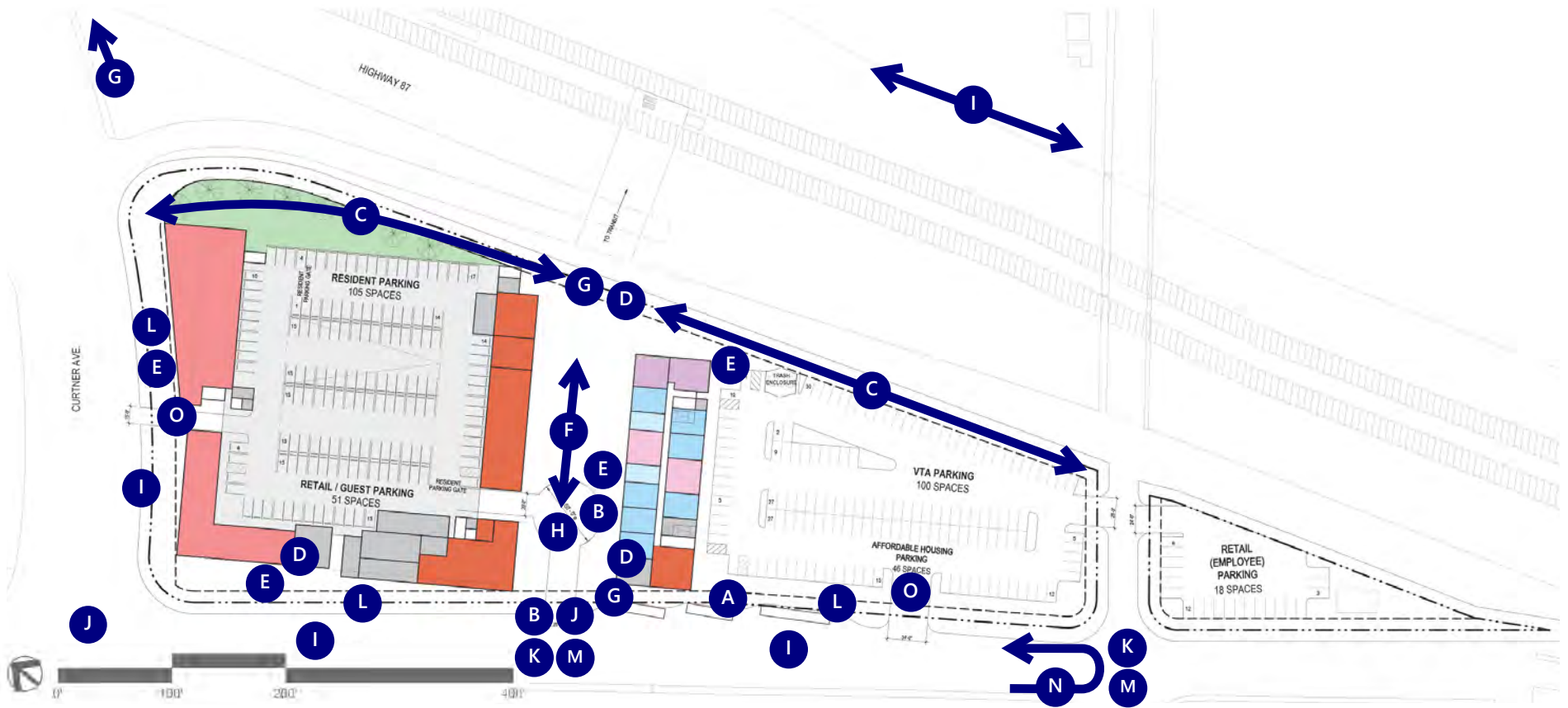


List of On-site Improvements

- | | | |
|--|--|--|
| A Bus Shelter Installation | F Internal Bicycle Circulation and Wayfinding | K High-visibility Crosswalks |
| B Wayfinding for Parking | G Wayfinding for Transit | L Pedestrian-scale Lighting |
| C Direct Active Transportation Travel Paths | H Minimized Mode Mixing | M Curb Ramp Upgrades or Installations |
| D Long-term Bicycle Parking | I Enhanced Bikeways | |
| E Short-term Bicycle Parking | J Bikeway Connection Accommodation | |



Figure 28
CBNA Site Plan Recommendations



List of On-site Improvements

- | | | |
|--|--|--|
| A Bus Shelter Installation | F Internal Bicycle Circulation and Wayfinding | K High-visibility Crosswalks |
| B Wayfinding for Parking | G Wayfinding for Transit | L Pedestrian-scale Lighting |
| C Direct Active Transportation Travel Paths | H Minimized Mode Mixing | M Curb Ramp Upgrades or Installations |
| D Long-term Bicycle Parking | I Enhanced Bikeways | N Transit Circulation |
| E Short-term Bicycle Parking | J Bikeway Connection Accommodation | O Vehicle Access Point Elimination |



Figure 29
 Republic Site Plan Recommendations

The Republic Site Plan reflects 244 market-rate housing units, 61 affordable housing units, and 17,000 square feet of retail space envisioned to include uses such as a daycare and quick-service retail. The plan also provides supporting public and transit amenities such as a transit plaza with enhanced bus stops, transit information, restrooms, secure bike parking, bike share program, enhanced lighting and wayfinding, public art, and seating areas. The development will include approximately 340-350 parking spaces serving residential and retail uses to be provided in a two-level structure integrated with the proposed land uses. An additional 100 public park-and-ride spaces would be provided on re-designed surface parking lots along Canoas Garden Avenue.

Site Access and Vehicular Circulation Recommendations

General Guidance

Overall, it is desirable to minimize vehicle access points and provide wayfinding to guide drivers to the correct parking fields to reduce conflicts with active modes while minimizing circuitous circulation. It is recommended that the TOD provide only one primary vehicular access point on Canoas Garden Avenue between Curtner Avenue and Mill Pond Drive, with active modes also well accommodated at that location. Additionally, the TOD can provide secondary access to the site from Mill Pond Drive as needed, with additional vehicular access to the parcel south of Mill Pond Drive if required.

Due to higher traffic volumes, closely spaced intersections, and greater potential for undesirable interactions between modes, it is recommended that direct vehicular driveway access to/from Curtner Avenue not be permitted.

Clear travel routes and accommodation for any proposed modifications to Route 26 bus service should be provided as part of the site plan. If proposed, new stop locations on Curtner Avenue and/or Canoas Garden Avenue should be designated with appropriate transit shelters.

CBNA Site Plan

The CBNA Site Plan proposes primary roadway access points from Canoas Garden Avenue near the existing driveway location as well as from Mill Pond Drive near the existing bus entrance. The roadway access points are intended to provide safe pedestrian and bicycle crossings while directing drivers to one dedicated parking structure in the northeast corner of the site and one parking field located beneath the residential uses. The Project would replace the existing bus stop at Curtner Station with on-street stops including shelters on Curtner Avenue east of Canoas Garden Avenue. The primary vehicular access point would be part of a broader pedestrian paseo that leads to the primary light rail station entrance.

The CBNA Site Plan proposes using information technology and a parking guidance system to direct vehicles to open parking spaces while reducing circulation. Additional information technology is proposed to provide wayfinding for transit riders, bicyclists, and pedestrians.

Overall, the CBNA Site Plan aligns with the general guidance identified above for site access and vehicular circulation described above and no specific modifications are recommended prior to further development. Specific recommendations pertaining to the CBNA Site Plan are shown in **Figure 28**.

Republic Site Plan

The Republic Site Plan proposes roadway access at two points on Canoas Garden Avenue between Curtner Avenue and Mill Pond Drive, on both sides of Mill Pond Drive near the existing bus entrance, and directly on Curtner Avenue between Canoas Garden Avenue and the SR-87 interchange. The two northernmost roadway access points provide access to the parking structure and are anticipated to use architectural treatments to reinforce pedestrian and bicycle priority extending into adjacent paseos that lead to the light rail station entrance. The remaining vehicle driveways are of more typical design and provide direct access to surface parking fields. The Project would replace the existing bus stop at Curtner Station with on-street stops including shelters on the east side of Canoas Garden Avenue between Mill Pond Drive and Curtner Avenue.

It is recommended that the Republic Site Plan be refined to generally reduce the number of vehicle access points, specifically by removing the proposed driveway on Curtner Avenue and at least one driveway proposed on Canoas Garden Avenue. While the Republic Site Plan does propose transit stops with shelters on Canoas Garden Avenue, it does not provide a clear path of travel for transit vehicles. Specifically, the Republic Site Plan does not indicate a route for buses to travel south from Curtner Avenue and then return to the north to reach the relocated bus stops, which would presumably require a U-turn maneuver at a point south of the project frontage. The design of the adjacent streets does not appear to directly accommodate this maneuver. Specific recommendations pertaining to the Republic Site Plan are shown in **Figure 29**.

Bicycle and Pedestrian Circulation Recommendations

General Guidance

It is recommended that high-quality active transportation travel routes be provided on all edges of the site, including on the east side of the site along SR-87 to facilitate better access to the primary light rail entrance. Specific internal bicycle circulation paths are to be designated and wayfinding provided to reach bicycle parking. Similarly, it is recommended that the TOD site provide a clear, direct path of travel between light rail entrances and proposed bus stops, and clear wayfinding throughout the site to identify the paths to these and other on-site destinations. Mixing between active modes and vehicles traveling to parking fields should be minimized.

Bicycle parking should be provided, at minimum, according to requirements outlined in Chapter 20.90 – Parking and Loading of the City of San José Municipal Code:

- Long-term bicycle parking should be provided within each building to facilitate parking for employees and residents, and additional protected bicycle parking should be provided near the primary entrance to the light rail platform and bus stops adjacent to the site
- Short-term bicycle parking should be provided adjacent to entrances for all uses on the site

The development should provide enhanced bikeways on Curtner Avenue and/or construct missing trail segments of the Highway 87 Bikeway, including cross-bikes and wayfinding signage where appropriate.

As part of this, access to adjacent bikeways must be accommodated for bicyclists traveling in all directions, including crossings of Curtner Avenue and Canoas Garden Avenue.

High-visibility crosswalks are recommended on and across Canoas Garden Avenue to access the TOD site and on the four legs of the Canoas Garden Avenue / Mill Pond Drive intersection. Crosswalk and intersection improvements will also include installing new or upgrading deficient curb ramps in the vicinity of the TOD site. Pedestrian-scale lighting is recommended throughout and surrounding the site.

CBNA Site Plan

The CBNA Project proposes a network of separated bikeways and improved walkways adjacent to the site facilitating active transportation connectivity, including a protected intersection enhancement at Curtner Avenue and Canoas Garden Avenue. The protected intersection would shorten pedestrian crossing distances and provide separated crossings for bicyclists. However, the CBNA Site Plan does not explicitly include a continuous path for active modes on the east side of the site along SR-87 to facilitate efficient access to the primary light rail entrance. It is recommended that this be added.

The Project also proposes a midblock crossing on Canoas Garden Avenue with high-visibility crosswalks to access the Curtner TOD site and mobility hub entrance along with high-visibility crosswalks across Canoas Garden Avenue at the Mill Pond intersection. The Project would create a protected paseo on-site connecting to the Curtner Station entrance. For bicyclist access, the Project would close the bikeway gap on Canoas Garden Avenue by adding bicycle facilities on both sides of the street from Curtner Avenue to Carol Drive.

The CBNA Site Plan provides a clear path of travel for transfers to/from eastbound buses but requires a longer and more circuitous path for westbound buses. A new crosswalk across Curtner Avenue at the SR-87 southbound ramps may be required to avoid undesirable pedestrian crossings at that location.

CBNA Site Plan generally accommodates bicycle access by providing full pedestrian accommodations at the proposed site driveway on Canoas Garden Avenue as well as proposing protected intersection improvements at Curtner Avenue / Canoas Garden Avenue. The Project includes high-visibility crosswalks, though additional crossings are required at Canoas Garden Avenue / Mill Pond Drive.

Details of exact bicycle circulation, wayfinding, and parking counts are not reflected in the CBNA Site Plan at the current stage of development. It is recommended that the general guidance for bicycle and pedestrian circulation identified above be implemented with further development of the Project. Specific recommendations pertaining to the CBNA Site Plan are shown in **Figure 28**.

Republic Site Plan

The Republic Project proposes a multi-use trail along the entire eastern edge of the property from Curtner Avenue to Carol Drive, providing direct access to the primary light rail station entrance and across Mill Pond Drive. This trail is intended to help fill the existing gap in the Highway 87 Bikeway but proposes transitioning active transportation users to on-street facilities on each end. The Republic Site Plan does

not reflect enhancements to existing on-street bicycle facilities along Curtner Avenue or Canoas Garden Avenue. It is recommended that further refinement of the Republic Project enhances bikeways on these adjacent streets and fully closes the existing gap in the Highway 87 Bikeway on the east side of SR-87.

Additionally, the Project should include enhanced crossings for active modes across Curtner Avenue and Canoas Garden Avenue, including crossing improvements at Curtner Avenue / Canoas Garden Avenue, Canoas Garden Avenue / Mill Pond Drive, and midblock on Canoas Garden Avenue near the proposed on-site paseo. Geometric enhancements are recommended at these locations, including removal of channelized right-turn movements that cause challenging interactions between modes. Pedestrian crossings should provide high-visibility markings.

The Republic Site Plan reflects a clear path of travel for transfers between light rail and buses utilizing an on-site paseo. Details of exact bicycle circulation, wayfinding, and parking counts are not reflected in the CBNA Site Plan at the current stage of development. It is recommended that the general guidance for bicycle and pedestrian circulation identified above be implemented with further development of the Project. Specific recommendations pertaining to the Republic Site Plan are shown in **Figure 29**.

Project Prioritization

Review of proposed site plans and development of on-site recommendations was completed after the community engagement process was concluded. As such, input provided as part of the community engagement webmap and survey did not directly consider TOD project recommendations.

Qualitative prioritization for TOD project recommendations was instead developed based on the potential for each project to support the goals of the VTA TOD Policy. Projects which reduce dependence on single-occupancy vehicle travel in favor of increasing transit ridership and enhancing transit-supportive transportation modes (i.e., walking and bicycling) are generally considered high priority, as are projects that improve overall multimodal safety.

Cost Estimates

Planning level estimates of probable cost were developed for each identified improvement based on recent and historic unit costs from the San Francisco Bay Area. For some projects, a range of potential costs is provided to account for uncertainty in the description and scope of the project. The planning level cost estimates for each recommended project are included in **Appendix B**.

Summary of TOD Project Recommendations

Table 4 shows the recommended project improvements along with their priority and estimated construction cost based on 2023 dollars. Note that construction cost estimates do not reflect soft costs associated with project development. Cost estimates are not provided for recommendations which do not have independent cost burden and/or are assumed to be included as part of the cost of the overall project.

Some improvements adjacent to site boundaries share a common description with one or more improvements reflected in the Station Area recommendations.

Table 4: Summary of TOD Project Recommendations

Improvement	Description	Priority	Estimated Construction Cost
Multimodal/Vehicular Site Access			
Vehicle Access Points	Minimize vehicle access by providing only one primary vehicular access point on Canoas Garden Avenue between Curtner Avenue and Mill Pond Drive and not allowing direct driveway access to Curtner Avenue	High	N/A
Transit Circulation	Designate clear location of Route 26 bus stops with clear bus circulation routes	High	N/A
Wayfinding for Parking	Provide wayfinding to guide drivers to the correct parking fields while minimizing circuitous circulation	Medium	\$25,000
Bicycle and Pedestrian Circulation			
Direct Active Transportation Travel Paths	Provide a high-quality active transportation travel route on the east side of the site (along SR-87) to facilitate better access to the primary light rail entrance	High	\$250,000
Long-term Bicycle Parking	Provide protected bicycle parking near the primary entrance to the light rail platform and bus stops adjacent to the site; it is assumed that long-term bicycle parking for employees and residents will be provided separately within each building as part of the overall site development	High	\$100,000-\$200,000
Short-term Bicycle Parking	Provide short-term bicycle parking adjacent to entrances for all uses on the site	High	\$30,000
Internal Bicycle Circulation and Wayfinding	Designate specific internal bicycle circulation paths and provide wayfinding to reach bicycle parking	High	\$25,000
Wayfinding Signage for Transit	Provide wayfinding signage to light rail and Route 26 bus stops throughout the site	High	\$25,000
Minimized Mode Mixing	Minimize mixing between active modes and vehicles traveling to parking fields within the site	High	N/A

Enhanced Bikeways	Provide enhanced bikeways on roadways along site frontage and/or construct missing trail segments of the Highway 87 Bikeway	High	See Estimates in Table 3
Bikeway Accommodation	Accommodate access to adjacent bikeways for bicyclists traveling in both directions, including crossings of Curtner Avenue and Canoas Garden Avenue	High	\$1.4-\$1.9M
High-Visibility Crosswalks	Provide high-visibility crosswalks on and across Canoas Garden Avenue to access the TOD site and on the four legs of the Canoas Garden Avenue and Mill Pond Drive intersection	High	See Estimates in Table 3
Pedestrian-Scale Lighting	Provide pedestrian-scale lighting throughout and surrounding the TOD site	High	See Estimate in Table 3
Curb Ramp Upgrades or Installations	Install or upgrade deficient curb ramps in the vicinity of the TOD site	High	See Estimate in Table 3

Transportation Demand Management Strategies

This section describes potential Transportation Demand Management (TDM) strategies for the Curtner Station TOD site.

The proposed TDM strategies are separated by site-design or ongoing management strategies. Those included in the proposed site plans are considered site-design related strategies which seek to influence user behavior through intentional physical design, while those that can be provided through ongoing operational decisions after the site is built are considered management strategies.

Site-Design Related Strategies

Several measures that have been demonstrated to encourage the use of transit, carpooling, walking, and bicycling as commute modes are built into the proposed Project's location and design in the CBNA and Republic Site Plans, respectively, as described below.

Location

The site is located adjacent to the Curtner light-rail station and the frequent VTA bus Route 26. VTA's light rail or bus route will be convenient commute options connecting transit riders to Downtown San José, East San José, and other areas throughout the region. The site is approximately 18 minutes to Downtown San José by light rail or 25 minutes by biking. The site's location near fast and reliable transit service connecting to regional destinations, combined with complementary building and street design to encourage walking and bicycling to transit will encourage commuters to use transit.

Pedestrian-Oriented Design

Buildings that are designed to be accessible to people arriving by transit or walking encourage the use of these modes. Typical elements include minimal or no setbacks, pedestrian-oriented entrances, and elements such as planters, wide sidewalks, benches, etc. The CBNA Site Plan proposes a protected intersection with pedestrian islands at the Curtner Avenue and Canoas Garden Avenue intersection, provides high-visibility crosswalks near the Project site, widens sidewalks along the Project frontage, and creates a protected paseo to the internal site and Curtner Station entrance. The Republic Site Plan similarly proposes a series of paseos and active transportation network enhancements to promote walking. Further refinement of either Project should be undertaken according to identified bicycle and pedestrian circulation recommendations to maximize the benefit of this strategy.

Bicycle Parking and Amenities

Providing convenient, protected bicycle parking is critical to promoting bicycling as a desirable alternative to driving for residents, employees, and transit riders who will use the TOD. Protected long-term bicycle

parking and bicycle maintenance amenities allow residents and employees to invest in bicycles as a primary mode of transportation. Well-distributed short-term parking is important near high-turnover, convenience uses on the site where secure bicycle parking is needed for quick stops.

The CBNA and Republic Site Plans both propose to develop safe bicycle infrastructure around the site to increase the level of comfort of bicyclists and encourage riders to commute by bicycle. Both Projects envision the development of secure bicycle parking and tune-up stations or repair facilities for bicyclists. For those who do not own a bicycle, the CBNA Project proposes a bikeshare system on-site while the Republic Project proposes accommodation of bicycle and e-scooter share at a defined space within its mobility hub. Ample bicycle parking and supporting amenities should be provided.

Limited Automobile Parking

Limiting available automobile parking discourages driving, especially driving alone, by constricting easy and convenient parking options. This strategy is particularly effective when implemented in transit-rich neighborhoods with priced and managed street parking, and alongside measures such as parking pricing and parking cash-out that make parking more expensive and that incentivize the use of non-drive-alone commute modes.

The CBNA Project includes incentives for shared trips via carshare or carpool. The CBNA Site Plan indicates reserved parking spaces for carshare vehicles, priority parking spaces and reduced parking fees for carpool or vanpool vehicles, and additional transportation services as vehicle alternatives. The Project plans to offer shuttles, ride-matching services, and ride-share loading spaces to reduce single-occupancy vehicle trips.

The Republic Project generally proposes reduced parking ratios, though reflects a 1:1 parking ratio for market rate residential units. The Project does not offer specificity pertaining to parking fees, designation of parking spaces for specific uses such as carshare, or other ride-share or shuttle services. The Republic Project proposes combined parking areas for most uses, which could be designated as separate transit and residential use if desired. Evening and weekend shared use of transit parking spaces is indicated as a potential option to increase the residential parking ratio.

Further refinement of either Project should be undertaken with the intent to ensure that automobile parking provision on the discourages driving and encourages shared trips and/or alternate modes to maximize the benefit of this strategy.

Ongoing Management Strategies

Ongoing management TDM strategies would need to be continually provided for building tenants/residents after the site is built. Potential options that can benefit building tenants/residents to shift to non-automobile modes are listed below by category.

Transit Incentives

Providing transit use incentive programs, such as subsidized transit passes using the regionwide Clipper Direct or VTA SmartPass programs, to building tenants or residents can encourage non-automobile travel aligned with TOD goals. Transit subsidies can be aggregated along with other non-SOV commute benefits, such as carshare and bikeshare subsidies, bicycling and walking perks, etc. into company-wide employee commute rewards programs. Many employers in Silicon Valley routinely provide these benefits to their employees, and it is anticipated that the provision of transit passes will be required for new VTA TOD sites pending Board policy approval.

Carpool/Vanpool Matching Program

Building management can provide a carpool/vanpool matching program to building tenants or residents and provide preferential parking spaces and rates for such vehicles.

TDM Information and Program Management

The property manager can provide TDM program information to tenants and employees through a variety of means to ensure that employees working at the building are aware of transit and alternative transportation options. In some cases, tenants may provide their own TDM programs and benefits and information to their employees directly.

To support the TDM program, the property management may appoint an on-site commute coordinator to manage and monitor commute-alternative programs. This role may include marketing the program to tenants and residents, evaluating success of the program, and making adjustments to the TDM offerings based on observed outcomes.

Guaranteed Ride Home Program

Property management could be required to provide a free ride or reimburse costs for employees who use alternative modes of transportation and need a ride home outside typical service hours. These programs may cover rides to an employee's home in the event of illness or crisis of the employee or immediate family member, if a carpool or vanpool ride is unavailable due to unexpected changes in the driver's schedule or vehicle breakdown, if the employee's bicycle is not usable (flat tire, mechanical failure, vandalism, theft), or if the employee is required to work late unexpectedly.

Telecommuting / Flexible Work

Flexible work hours and telecommuting are standard arrangements for office workers in Silicon Valley. Tenants would be required to provide employees with flexible work options, including:

- Telecommuting: Telecommuting allows employees to work from home or from non-work locations and reduces trips made to the employer site.
- Flextime: Employees can set or modify their arrival and departure times to provide the flexibility they need to use alternative modes.

- Compressed work weeks: Employees work more hours in a single day, but fewer days of the week reduces trips made to the employer site.

Flexible work strategies have been found to be most effective at reducing overall vehicle miles traveled (VMT) when employees are able to work from two or more days per week and/or live far from their place of work. Additionally, reductions in parking provision driven by flexible work schedules are most effectively realized when a larger share of the workforce is typically present on site for fewer days each week.

Appendix A:

Outreach Comments

In a series of outreach events, residents from the immediate communities and beyond were tasked with giving feedback on the current conditions of Curtner Station and surrounding development. Residents were encouraged to learn about existing issues and possible improvements to the site and voice their opinion on what challenges or needs they had that pertained to the corridor. Characteristics of the participants include elderly residents around the Mill Pond area, apartment residents who frequently walk or take transit, students and parents of students at the University Preparatory Academy, and people who frequently use the Curtner Light Rail Station.

The online Social PinPoint survey had more detailed demographic questions which give a fuller picture of who was engaging with the web tool. This included 25 participants in total. All 25 participants live in Santa Clara County. Almost half are frequent public transit users with 44% of participants using VTA light rail 1-3 days a week. Of the respondents, 56% of participants are employed in some capacity, 20% are retired, and 24% are students. Over 50% of participants accessed the Curtner Station via bus service, driving, or light rail and the rest arrived via walking or biking (note that participants could choose multiple modes of transportation for this question). Twenty percent of participants lived below or at the \$25,000 income level, 60% of participants reported income at above \$75,000 and 20% of participants skipped the question. Over 75% of participants had both a Clipper card and driver's license and over 60% of participants have access to a working vehicle. About 70% of participants identified as male and 30% as female (with one participant choosing not to answer). Approximately 56% of participants identified as white or Caucasian, 24% as Asian (includes both east and south Asian ethnicities), and 8% as Hispanic or Latino (two participants skipped this question).

The following table presents the notes left on sticky notes at the community events. In the case of the virtual 'Meet the Developer' Community Meeting, the table presents a summary of key points noted from participants' verbal input or shared via chat functions in the facilitation platforms.

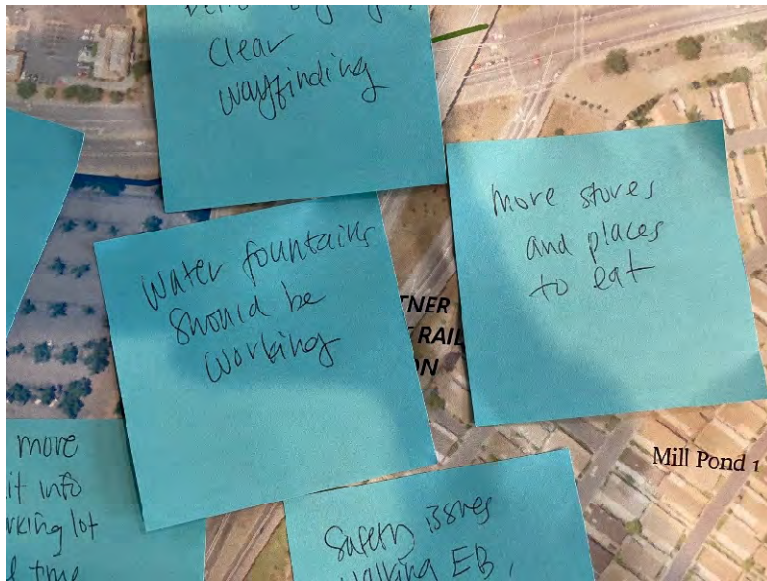
Mill Pond Stakeholder Meeting	
8/31/21	Safety concerns of people walking in community that do not live there
	Connection for peds out to north or east
	Caregivers come to Mill Pond by bus, need access
	Only one access to Mill Pond
	Masonic + Canoas > people from Masonic do not stop, need more signs or lights
	Thurs/Fri Food pickup 9:00 A – 12:00 P (+ others randomly)
	Hard to turn either way on Curtner due to signals
"Meet the Developer" Community Meeting (Virtual)	
9/9/21	Lot of bird poop under the overpass not comfortable walking experience

	Substation across Millpond 2 – proposed daycare. Both churches have a daycare. May not need another one. Concerns with adding a park. Parks may encourage homeless encampment
	Concern about eliminating parking requirements for these types of projects. Already have overflow parking issues on Sands and Masonic Drive
	People in the condos up the hill and at Millpond park their cars at VTA at night. Will parking garage allow for people to park there at night?
	Safety concerns at Millpond Rd and Canoas Garden for pedestrians crossing and traffic related to church and school activity. Will there be a traffic signal there? A lot of people jaywalk from VTA to church without using ped crossing
	Need improvements to lighting, crosswalk, personal safety
	When exiting Curtner Station and walking east towards the Plant, cars don't see you. 87 ramp is dangerous.
	Concern about traffic and speeding cars: Canoas, Millpond and Masonic intersection. Need signal here too.
	Concerns about future development that are also planned for the area. Cathedral of Faith also building housing – is VTA coordinating on this development?
	Flooding on Millpond Rd. when there is heavy rain
	Want to make sure project communicates with City Council about eliminating parking requirements.
	Currently the parking spaces are used by the church on the weekends. How is this going to be addressed if only 100 spots are available, and they are taken by the church attendees? We drive to the VTA on weekends.
	Where will #26 bus stop now?
	Concerned about the effect this is going to have on the property values in the surrounding neighborhood.
	Will there still be a walkway from Millpond Drive directly to the VTA station? Or will we have to go out to Canoas Garden to walk to the station
	The lighting at the Curtner station is horrible and unsafe at night.
	Won't one parking spot for 4 units push residents to park on street?
	I'd be happy with some development there...certainly better lighting, better crosswalks, etc. BUT it seems like an awful lot is being put into this small space.
	Walking to the station needs to be safe, especially crossing the highway
	What about disabled access, parking, etc. for both VTA and the building there?
Curtner Studios Pop-Up Event	
10/22/21	Lot of bird poop under the overpass not comfortable walking experience
	Potholes, street needs resurfacing
	Bus schedules at bus stops needed
	Bus stops should be cleaner, clear shrubs
	Benches on the way to station, needed at station for rest
	Mark – better lighting, better security
	Continue bike trails, benches places to sit when there is a distance
	Confusing to get around

	Better signs for when biking, stop signs, clear areas lighting
	7/11 = jaywalking, red light running, especially at night – have hit pedestrians
	Traffic calming needed
	Retail, groceries needed
	Separated pedestrian area to get to train instead of with cars
	VTA parking lot & escalators should be cleaner, smell good, escalators looking nice
	More lighting & safety at the station
	Bus shelter needed
	Crosswalk front of U-Haul – jaywalkers hit
	Sidewalk needs to be repaved
	(walking) hit by cars when crossing Curtner
	(takes) 2 cycles to go through intersection
	Turns are really sharp when pulling in and out of station
	Escalator on the other side of station
	(needed) gathering spaces, dog park,
Subway Shopping Plaza Pop-Up Event	
11/5/21	Need more shared parking, maybe with U-Haul lot
	Need better lighting at canoas between Curtner & Almaden Expressway
	More landscaping, public safety
	Better signage, clear wayfinding
	Water fountains should be working
	More stores and places to eat
	Safety issues, walking EB, got hit with NB off-ramp
	Need more transit info at parking lot – real time next bus arrived
University Preparatory Academy Stakeholder Event	
11/10/21	Have to wait at signal for a long time
	Public safety issue, one students arm was grabbed at Jack in the Box a few years ago
	Curtner/Canoas garden feels dangerous
	Takes transit does not feel safe
	Traffic congestion along Canoas
	Need clear ped crossing from station to school (maybe flashing lights too)
	Sometimes there are shady people in the elevator –maybe cameras or security
	Walk toward willow glen plaza is dodgy. Kids walk to Starbucks & Burger King after school – need more lighting, cleanliness
	Ped light near McDonalds takes a long time
	A lot of trash at the Curtner Station
	Curtner Station is really dirty
	I would like to ride but do not know how
	Add crosswalk between station and school
	School passes should be free
	LRT trains should be cleaner and provide safer environment for kids

	Can we fix onboard bike rack – really difficult
	My train always arrives late
Curtner Station Pop-Up Event	
11/30/21	The exit and on ramp to Almaden Expressway is dangerous
	Better lighting, bathrooms needed, camera by the buttons in elevator
	Wheelchair users must use the elevator
	Machines closer to rail
	Restrooms for passengers needed
	Homeless people behind the shelter, need housing Little Orchard shelter
	A lot of stops have been cut
	Light rail seats need to be cleaner
	More arrival signs
	Trash cans needed
	Church traffic on Canoas backs up north bound impossible to get out of station
VTA Curtner TOD Survey – Social Survey Download	
2/22/22	I know it would be a huge thing to take on, but the removal of highway 87 would be great
	An overpass for the freeway, the traffic is too much with too many traffic signals
	Better elevators from light rail platform to ground
	Widening sidewalks and adding a buffer of street trees and/or landscaping along busier roads like Curtner Avenue near the station
	We need some form of crossing of Almaden Expressway on Canoas Garden Ave, so that people living in the apartments on Almaden Road can walk to Curtner directly
	Protected intersection at Canoas Garden and Curtner. Removing all the high speed on/off ramps to Almaden Expressway and to Hwy 87. The missing sidewalk needs to be built along Curtner all the way under Hwy 87 to close the entire gap.
	Add lighting to bike path and add twice weekly debris removal service to trail.
	Protected bike lanes on Curtner. Use of concrete curb or planter separation.
	Make the crosswalks safer.
	Try to find a way to serve the buses in a way that they do not have to deviate

Images shown below are examples of the raw data collection process at public outreach events.



Appendix B: Cost Estimates

Cost Estimate for Curtner Station Recommendations

Survey Prioritization	Priority	Improvement	Location	Project Description	Design Element	Removals	Quantity	Unit	Unit Price	Future Elements to Build	Quantity	Unit	Unit Price	Cost Estimate	Other Notes
Pedestrian Improvements															
1	High	High-Visibility Crosswalk	Curtner Avenue/ Almaden Expwy Northbound Ramp Terminal	High-visibility crosswalk on one new leg	Signing and Striping	None				High-visibility Crosswalk	2200	SF	\$ 10.00	\$ 22,000.00	All elements required to construct new crosswalk across Curtner Avenue.
				ADA Curb Ramp	Civil	Existing sidewalk	80	SF	\$ 5.00	ADA Curb Ramp	1	EA	\$ 20,000.00	\$ 20,400.00	
				Modify Signal for Pedestrian Crossing	Electrical	None				Signal Modification	1	LS	\$ 75,000.00	\$ 75,000.00	
1	High	High-Visibility Crosswalk	Curtner Avenue/ SR-87 Southbound Ramp	High-visibility crosswalk on one new leg	Signing and Striping	None				High-visibility Crosswalk	3000	SF	\$ 10.00	\$ 30,000.00	All elements required to construct new crosswalk across Curtner Avenue.
				ADA Curb Ramp	Civil	Existing sidewalk	80	SF	\$ 5.00	ADA Curb Ramp	2	EA	\$ 20,000.00	\$ 40,400.00	
				Modify Signal for Pedestrian Crossing	Electrical	None				Signal Modification	1	LS	\$ 75,000.00	\$ 75,000.00	
				Adjust Median to Facilitate Crosswalk	Civil	Remove median	140	SF	\$ 200.00	New Pedestrian Path Through Median	140	SF	\$ 15.00	\$ 30,100.00	
1	High	High-Visibility Crosswalk	Canoas Garden Avenue/Mill Pond Drive	Yellow high-visibility crosswalk on four legs	Signing and Striping	None				High-visibility Crosswalk	4400	SF	\$ 10.00	\$ 44,000.00	Crosswalk treated as standalone improvement since ramps may be installed without high-visibility crosswalk.
1	High	High-Visibility Crosswalk	Canoas Garden Avenue/Carol Drive	High-visibility crosswalk on three legs	Signing and Striping	None				High-visibility Crosswalk	3300	SF	\$ 10.00	\$ 33,000.00	Crosswalk treated as standalone improvement since ramps may be installed without high-visibility crosswalk.
6	High	Sidewalk Installation	North side of Curtner Avenue from Canoas Garden Avenue to SR-87 Southbound Ramp	Add missing sidewalk	Civil	Clear and grub, basic grading	1700	SF	\$ 4.00	Concrete sidewalk and base	1700	SF	\$ 25.00	\$ 49,300.00	Improvement is critical for proposed transit stop locations, priority increased.
6	Medium	Sidewalk Installation	Both sides of Carol Drive between Canoas Garden Avenue and Highway 87 Trail	Add missing sidewalk	Civil	Clear and grub, basic grading	1400	SF	\$ 4.00	Concrete sidewalk and base	1400	SF	\$ 25.00	\$ 40,600.00	Proposed sidewalk is believed to be on existing City right-of-way along Carol Drive.
6	Medium	Sidewalk Installation	North side of Sands Drive west of Canoas Garden Avenue	Add missing sidewalk	Civil	Clear and grub, basic grading	4100	SF	\$ 4.00	Concrete sidewalk and base	4100	SF	\$ 25.00	\$ 118,900.00	Proposed sidewalk is believed to be on existing City right-of-way along Sands Drive.
N/A	High	ADA Curb Ramp	Canoas Garden Avenue/Mill Pond Drive	ADA Curb Ramp	Civil	None				ADA Curb Ramp	4	EA	\$ 20,000.00	\$ 80,000.00	
N/A	High	ADA Curb Ramp	Canoas Garden Avenue/Carol Drive	ADA Curb Ramp	Civil	None				ADA Curb Ramp	3	EA	\$ 20,000.00	\$ 60,000.00	
3	High	Pedestrian-scale Lighting	Both sides of Canoas Garden between Curtner Avenue and Millpond Drive	Pedestrian-scale lighting	Electrical	Existing electrical	1700	LF	\$ 20.00	Luminaire & Pull Box (assumed every 60 feet)	94	EA	\$ 12,000.00	\$ 1,162,000.00	Combined to reflect full scope of pedestrian-scale lighting. Luminaire & Pull Box item reflects placement of luminaire with pull box every 60 feet on each side of street, including distributed cost for new service enclosures. Conduit & Conductors reflect trenching, conduits, conduit terminations, and 3#8 conductors on each side of street.
									Conduit & Conductors	5600	LF	\$ 50.00	\$ 280,000.00		
			South side of Curtner Avenue between Canoas Garden Avenue and SR-87	Pedestrian-scale lighting	Electrical	Existing electrical	350	LF	\$ 20.00	Luminaire & Pull Box (assumed every 60 feet)	12	EA	\$ 12,000.00	\$ 151,000.00	
									Conduit & Conductors	700	LF	\$ 50.00	\$ 35,000.00		

Cost Estimate for Curtner Station Recommendations

N/A	High	Advance Limit or Yield Lines	All proposed crosswalk locations	Advance limit or yield lines at all crosswalk locations	Signing and Striping	None					Limit Line	500	SF	\$ 10.00	\$ 5,000.00	Estimated to cover approximately 40 total lanes of approach at intersections and crosswalks surrounding site.
9	Medium	Rectangular Rapid Flashing Beacon (RRFB) System	Canoas Garden Avenue at Project Driveway	RRFB	Electrical	None					RRFB	1	EA	\$ 40,000.00	\$ 40,000.00	Improvement has high safety benefit, priority increased.
9	Medium	Rectangular Rapid Flashing Beacon (RRFB) System	Canoas Garden Avenue at Mill Pond Drive	RRFB	Electrical	None					RRFB	1	EA	\$ 40,000.00	\$ 40,000.00	Improvement has high safety benefit, priority increased.
5	Medium	Curb Extensions	Canoas Garden Avenue/Mill Pond Drive	Curb extensions on four corners	Civil	Existing Pavement	4000	SF	\$ 4.00	Curb Extensions, Including Concrete Surface and Curb	4000	SF	\$ 50.00	\$ 216,000.00		
8	Medium	Slip Lane Removal	Curtner Avenue/ Canoas Garden Avenue	Remove Slip Lanes and Pork Chop Islands	Civil	Existing Pavement and Islands	5000	SF	\$ 4.00	Curb Extensions, Including Concrete Surface and Curb	5000	SF	\$ 50.00	\$ 270,000.00	All elements required to construct slip lane removal.	
				Modify Signal to Support Geometric Modifications, Add NRTOR	Electrical	None				Signal Modification	1	LS	\$ 750,000.00	\$ 750,000.00		
9	Low	Wayfinding Signs	Throughout Station Area	Wayfinding Signs directing people to Curtner Station and Hwy 87 Bike Path	Signing and Striping	None				Wayfinding Signage Installation	1	LS	\$ 25,000.00	\$ 25,000.00		
N/A	Low	Median Adjustment	Curtner Avenue/ Canoas Garden Avenue	Adjust Median Nose to Improve Crosswalk	Civil	Trim median	24	SF	\$ 200.00	Asphalt Pavement	24	SF	\$ 10.00	\$ 5,040.00		

Bicyclist Improvements

4	High	Construct Missing Highway 87 Bikeway Segments	East of SR-87, Curtner Avenue to Mill Pond Drive	Grade and Construct New 12' Trail	Civil	Clear and grub, basic grading	19200	SF	\$ 4.00	Asphalt Trail Pavement	14400	SF	\$ 8.00	\$ 192,000.00	Estimate based upon anticipated affected area for trail constructions and need for grading +paving. Additional grading beyond that included in clearing not anticipated due to alignment/grades. Does not include right-of-way/property agreements.
										Trail Base Treatment	14400	SF	\$ 3.00	\$ 43,200.00	
										Signing & Striping	3600	LF	\$ 2.00	\$ 7,200.00	
4	High	Construct Missing Highway 87 Bikeway Segments	East of SR-87 along Unified Way	Grade and Construct New 12' Trail	Civil	Clear and grub, basic grading	7600	SF	\$ 4.00	Asphalt Trail Pavement	5700	SF	\$ 8.00	\$ 76,000.00	Estimate based upon anticipated affected area for trail constructions and need for grading +paving. Additional grading anticipated due to existing slopes on east side of Unified Way. Does not include right-of-way/property agreements.
										Trail Base Treatment	5700	SF	\$ 3.00	\$ 17,100.00	
										Additional Grading	1	LS	\$ 175,000.00	\$ 175,000.00	
										Signing & Striping	1450	LF	\$ 2.00	\$ 2,900.00	
4	High	Construct Missing Highway 87 Bikeway Segments	East of SR-87, Mill Pond Drive to Carol Drive	Grade and Construct New 12' Trail	Civil	Clear and grub, basic grading	11600	SF	\$ 4.00	Asphalt Trail Pavement	8700	SF	\$ 8.00	\$ 116,000.00	Estimate based upon anticipated affected area for trail constructions and need for grading +paving. Additional grading and need for retaining structures anticipated due to hilly terrain. Proposed alignment is located on private property and is likely to require purchase; cost estimate does not include right-of-way/property agreements.
										Trail Base Treatment	8700	SF	\$ 3.00	\$ 26,100.00	
										Additional Grading	1	LS	\$ 750,000.00	\$ 750,000.00	
										Structural Improvements (Retaining Structure)	1	LS	\$ 4,000,000.00	\$ 4,000,000.00	
				Signing & Striping	2200	LF	\$ 2.00	\$ 4,400.00							
7	Medium	Class IV bikeways on both sides of Canoas Garden Avenue	Both sides of Canoas Garden between Curtner Avenue and Mill Pond Drive	Raised Class IV bikeway	Civil	None				Concrete sidewalk-level Class IV bikeway	11970	SF	\$ 50.00	\$ 598,500.00	Elements combined for overall cost estimate. Removals for raised Class IV bikeway assumed to be included as part of the site development.

Cost Estimate for Curtner Station Recommendations

Transit Improvements																
N/A	High	Improve Light Rail Access Points	Both Blue Line LRT platform access points	Provide escalators or elevators at the Curtner Avenue platform access point under Highway 87 to facilitate connectivity and transfers	Civil/Site	None					Construction of elevator and/or escalator improvements at Curtner Avenue entrance to Blue Line platform, improve existing accommodations at primary access point	1	LS (Lower)	\$ 6,000,000.00	\$ 6,000,000.00	Cost range based upon reported rates for escalator/elevator installation as part of station refurbishment projects in Los Angeles, New York, San Francisco, and Washington, DC. Removals assumed included in lump sum.
												1	LS (Upper)	\$ 12,000,000.00	\$ 12,000,000.00	
N/A	High	Stop/Station Maintenance	Blue LRT Station and Route 26 Stops	Improve station maintenance, shelters, and trash pick-up to enhance passenger environment	Maintenance	None					None				N/A	Ongoing maintenance activity, no construction cost anticipated.
3	High	Bus Shelters	Bus Stop Locations	Install bus shelters at bus stop locations	Civil	None					Bus Shelter	2	EA	\$ 30,000.00	\$ 60,000.00	Assumed to include two total shelters at Curtner Avenue and/or Canoas Garden Avenue bus stops.
N/A	Medium	Bus Stop Consolidation	Route 26 along Curtner Avenue	Consolidate bus stops on Curtner Avenue to minimize redundant stops	Operations	None					None				N/A	Ongoing operations adjustment, no construction costs anticipated assuming use of existing stops and/or those otherwise constructed by TOD Project.
N/A	Medium	Bus Stop Relocation	Route 26 along Curtner Avenue	Coordinate with VTA on corridor wide improvements of bus stops per VTA's Transit Passenger Environment Plan	Operations	None					None				N/A	Ongoing operations adjustment, no construction costs anticipated assuming use of existing stops and/or those otherwise constructed by TOD Project.
Multimodal/Vehicular Access Improvements																
N/A	High	Intersection Limit Lines	Residential intersections throughout study area	Limit lines at all intersections	Signing and Striping	None					Limit Line	500	SF	\$ 10.00	\$ 5,000.00	Estimated to cover up to 40 total lanes of approaches at residential street intersections. Some locations will already be covered by previous limit line estimate.
N/A	Medium	Lane Width Reductions	Marked roadways throughout study area (primarily Curtner Avenue and Canoas Garden Avenue)	Restripe roadway to reduce travel lane width to 10' (11' for transit) where feasible	Signing and Striping	None					None				Varies	Restriping of existing roadways without other change is approximately \$75,000 per lane mile, but would be funded in conjunction with other construction adjacent to site.
N/A	Medium	Hardened Centerline	Unified Way	Add hardened centerline treatment.	Civil	None					Bolt-down hardened centerline	475	LF	\$ 75.00	\$ 35,625.00	Assumed to include quick-build, bolt-down hardened centerline.
N/A	Medium	Traffic Signal Coordination	Curtner Avenue Corridor	Adjust Corridor Signal Timing	Electrical	None					Signal Timing Updates	1	LS	\$ 100,000.00	\$ 100,000.00	Assumed to include effort to develop and implement coordinated signal timing on corridor between Almaden Road and Monterey Highway.

Cost Estimate for TOD Project Recommendations

Priority	Improvement	Location	Project Description	Design Element	Removals	Quantity	Unit	Unit Price	Future Elements to Build	Quantity	Unit	Unit Price	Cost Estimate	Other Notes
Multimodal/Vehicular Access Improvements														
High	Vehicle Access Points	TOD Site	Provide only one primary vehicular access point on Canoas Garden Avenue between Curtner Avenue and Mill Pond Drive, do not allow direct driveway access		None				None				N/A	General guidance for site development, cost assumed to be included as part of site construction.
High	Transit Circulation	TOD Site	Designate clear location of Route 26 bus stops with clear bus circulation routes		None				None				N/A	General guidance for site development, cost assumed to be included as part of site construction.
Medium	Wayfinding for Parking	Throughout Station Area	Wayfinding Signs directing drivers to parking	Signing and Striping	None				Wayfinding Signage Installation	1	LS	\$ 25,000.00	\$ 25,000.00	
Bicyclist and Pedestrian Circulation														
High	Direct Active Transportation Travel Paths	East side of TOD Site adjacent to SR-87	Provide a high-quality active transportation travel route to facilitate better access to the primary light rail entrance	Civil	None				Concrete sidewalk and base	9000	SF	\$ 25.00	\$ 225,000.00	Assumed to include a 10' wide concrete path across the eastern site frontage from Curtner Avenue to Mill Pond Drive.
High	Long-term Bicycle Parking	TOD Site	Provide protected bicycle parking near the primary entrance to the light rail platform and bus stops adjacent to the site		None				Bicycle Lockers	20	EA	\$ 6,000.00	\$ 120,000.00	Based on published cost information for new BikeLink locker installations in San Francisco Bay Area. Cost for installation of long-term tenant/resident bicycle parking inside buildings is assumed to be included as part of the site development.
High	Short-term Bicycle Parkin	TOD Site	Provide short-term bicycle parking adjacent to entrances for all uses on the site		None				Bicycle Rack	20	EA	\$ 1,500.00	\$ 30,000.00	Based on published cost estimates for purchase and installation of standard bicycle racks.
High	Internal Bicycle Circulation and Wayfinding	TOD Site	Designate specific internal bicycle circulation paths and provide wayfinding to reach bicycle parking		None				Wayfinding Signage Installation	1	LS	\$ 25,000.00	\$ 25,000.00	Designation of circulations routes assumed to be included as part of site development.
High	Wayfinding Signage for Transit	TOD Site	Provide wayfinding signage to light rail and Route 26 bus stops throughout the site		None				Wayfinding Signage Installation	1	LS	\$ 25,000.00	\$ 25,000.00	Assumed to include separate signage. May be feasible to combine different types of wayfinding signage into a single, more efficient installation.
High	Minimize Mode Mixing	TOD Site	Minimize mixing between active modes and vehicles traveling to parking fields within the site		None				None				N/A	General guidance for site development, cost assumed to be included as part of site construction.
High	Enhanced Bikeways	Site Frontage and/or Highway 87 Bikeway	Enhanced bikeways on roadways along site frontage and/or construct missing trail segments	Civil	None				None				See Station Area Estimates	Project description encompasses some combination of proposed Bicyclist Improvements reflected in Station Area Estimates.

Cost Estimate for TOD Project Recommendations

High	Bikeway Accommodation	Curtner Avenue/ Canoas Garden Avenue	Accommodate access to adjacent bikeways for bicyclists traveling in both directions, including crossings of Curtner Avenue and Canoas Garden Avenue		None				Additional Traffic Signal Modification	1	LS	\$ 300,000.00	\$ 1,360,000.00	Includes Station Area Estimates for "Rectangular Rapid Flashing Beacon (RRFB)" at Project Driveway and "System Slip Lane Removal" at Curtner Avenue/Canoas Garden Avenue with additional cost for signal modification to create protected intersection.
High	High-Visibility Crosswalk	Canoas Garden Avenue at Project Driveway and Mill Pond Drive	Yellow high-visibility crosswalk on four legs	Signing and Striping	None				High-visibility Crosswalk				See Station Area Estimates	Project description encompasses "High-Visibility Crosswalk" improvements reflected in Station Area Estimates.
High	Pedestrian-scale Lighting	TOD Site	Pedestrian-scale lighting throughout and surrounding the TOD site	Electrical	None				Pedestrian-scale Lighting				See Station Area Estimates	Project description encompasses "Pedestrian-scale Lighting" improvements reflected in Station Area Estimates.
High	Curb Ramp Upgrades or Installations	Intersections Adjacent to TOD Site	Install or upgrade deficient curb ramps in the vicinity of the TOD Site	Civil	None				ADA Curb Ramp				See Station Area Estimates	Project description encompasses "ADA Curb Ramp" improvements reflected in Station Area Estimates.

Appendix C: Recommended Access Improvements

GLOBAL RECOMMENDATIONS ALONG CORRIDOR

VEHICLE:

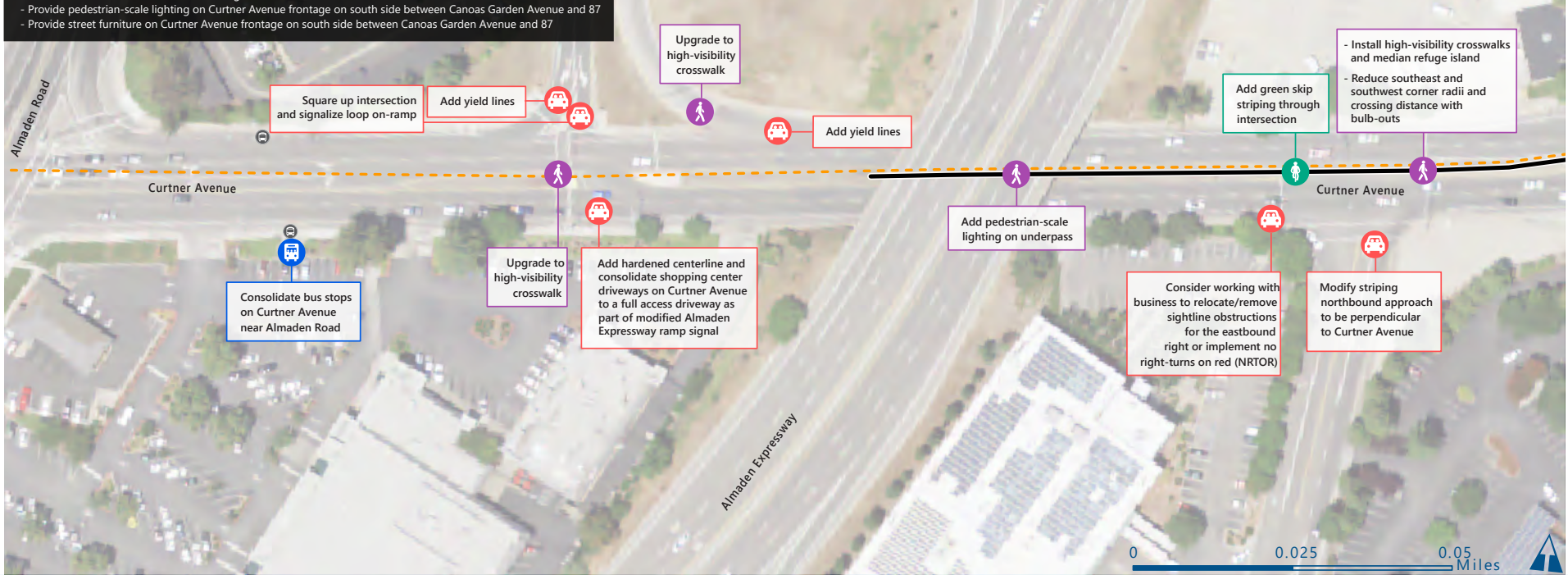
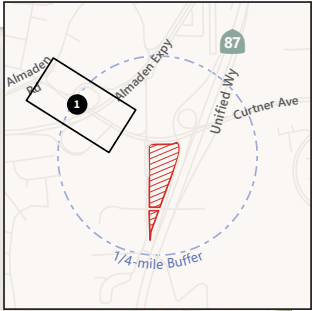
- Reduce lane widths to 10 or 11 feet
- Coordinate signals throughout corridor to match the speed limit
- Upgrade signal heads to 12" indications and add retro-reflective backplates

BIKE:

- Check bike detection throughout
- Install Class IV bikeway on each side

PED:

- Add Advance Limit Lines
- Install sidewalk on north side of Curtner Avenue from Canoas Garden Avenue to Stone Avenue
- Install pedestrian-scale lighting
- Widen sidewalk on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87
- Provide pedestrian-scale lighting on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87
- Provide street furniture on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87



-  Project Area
-  Bike Safety
-  Transit Issue
-  VTA Bus Stops
-  Pedestrian Safety
-  Class 2 Existing Bike Lane
-  Driver Safety
-  Global Recommendations along Corridor

Figure C1
 Recommendations for
 Almaden Road - Almaden Expressway NB Ramp



GLOBAL RECOMMENDATIONS ALONG CORRIDOR

VEHICLE:

- Reduce lane widths to 10 or 11 feet
- Coordinate signals throughout corridor to match the speed limit
- Upgrade signal heads to 12" indications and add retro-reflective backplates

BIKE:

- Check bike detection throughout
- Install Class IV bikeway on each side

PED:

- Add Advance Limit Lines
- Install sidewalk on north side of Curtner Avenue from Canoas Garden Avenue to Stone Avenue
- Install pedestrian-scale lighting
- Widen sidewalk on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87
- Provide pedestrian-scale lighting on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87
- Provide street furniture on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87

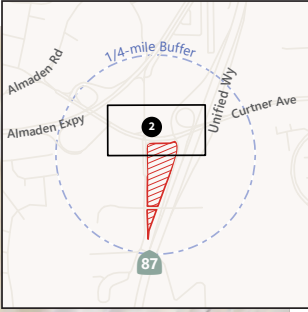


Figure C2
 Recommendations for
 Almaden Expressway NB Ramp



- GLOBAL RECOMMENDATIONS ALONG CORRIDOR**
- VEHICLE:**
- Reduce lane widths to 10 or 11 feet
 - Coordinate signals throughout corridor to match the speed limit
 - Upgrade signal heads to 12" indications and add retro-reflective backplates
- BIKE:**
- Check bike detection throughout
 - Install Class IV bikeway on each side
- PED:**
- Add Advance Limit Lines
 - Install sidewalk on north side of Curtner Avenue from Canoas Garden Avenue to Stone Avenue
 - Install pedestrian-scale lighting
 - Widen sidewalk on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87
 - Provide pedestrian-scale lighting on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87
 - Provide street furniture on Curtner Avenue frontage on south side between Canoas Garden Avenue and 87

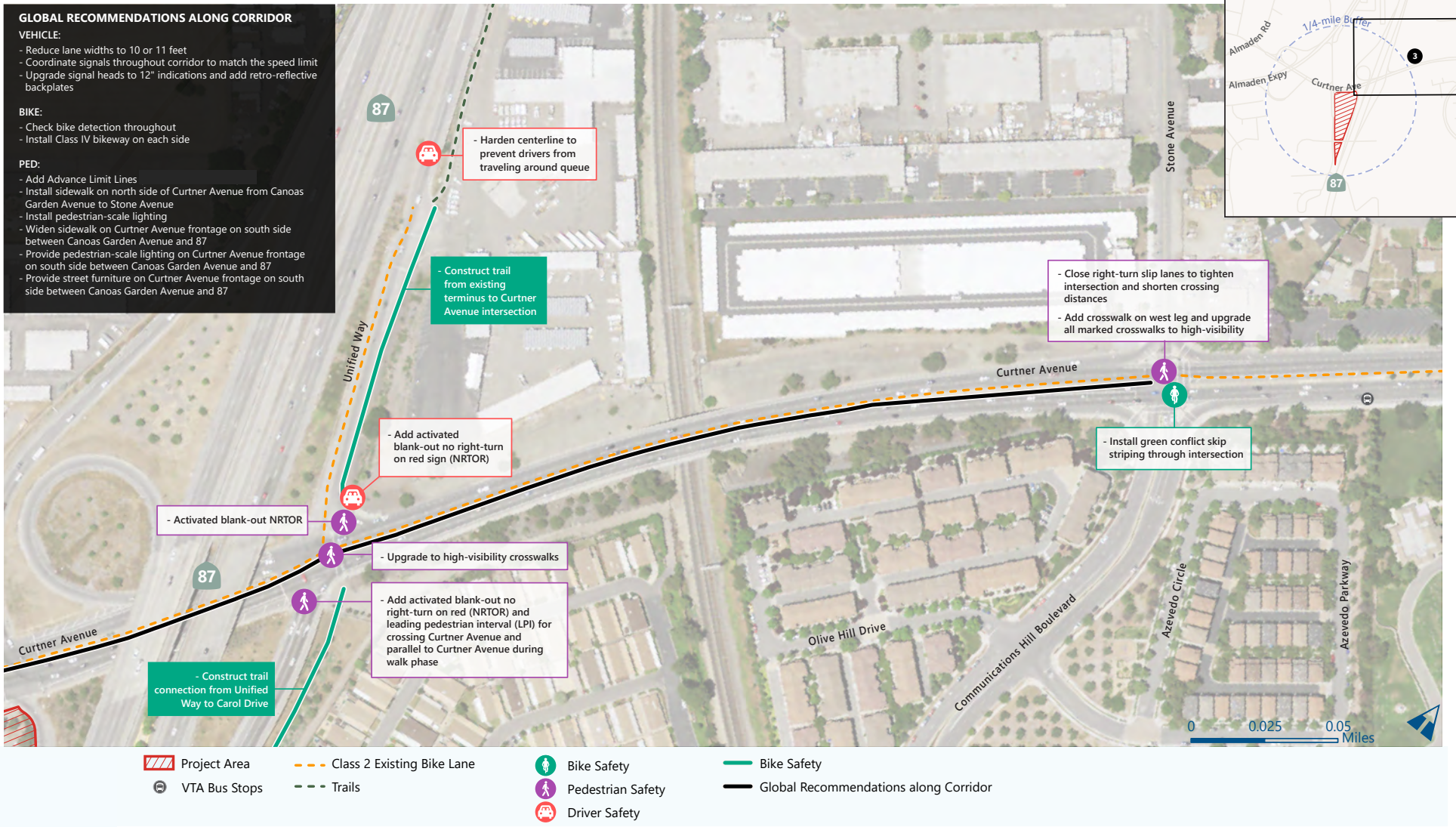


Figure C3
 Recommendations for
 CA 87 - Communications Hill Boulevard





Figure C4
 Recommendations for
 Communications Hill Boulevard - West Garden Center





Figure C5
 Recommendations for
 East Garden Center - Monterey Highway



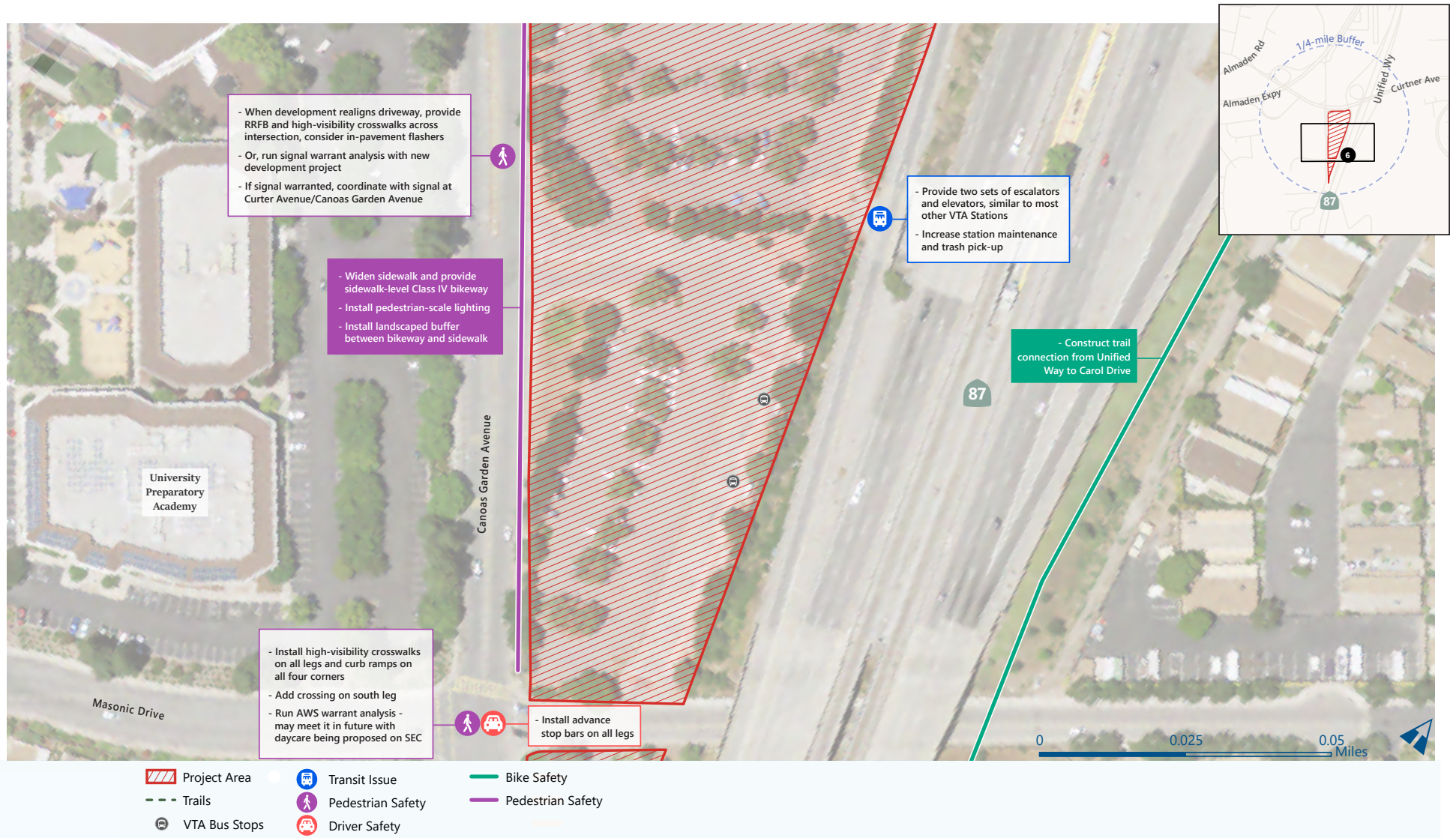


Figure C6
 Recommendations for
 Canoas Garden Avenue



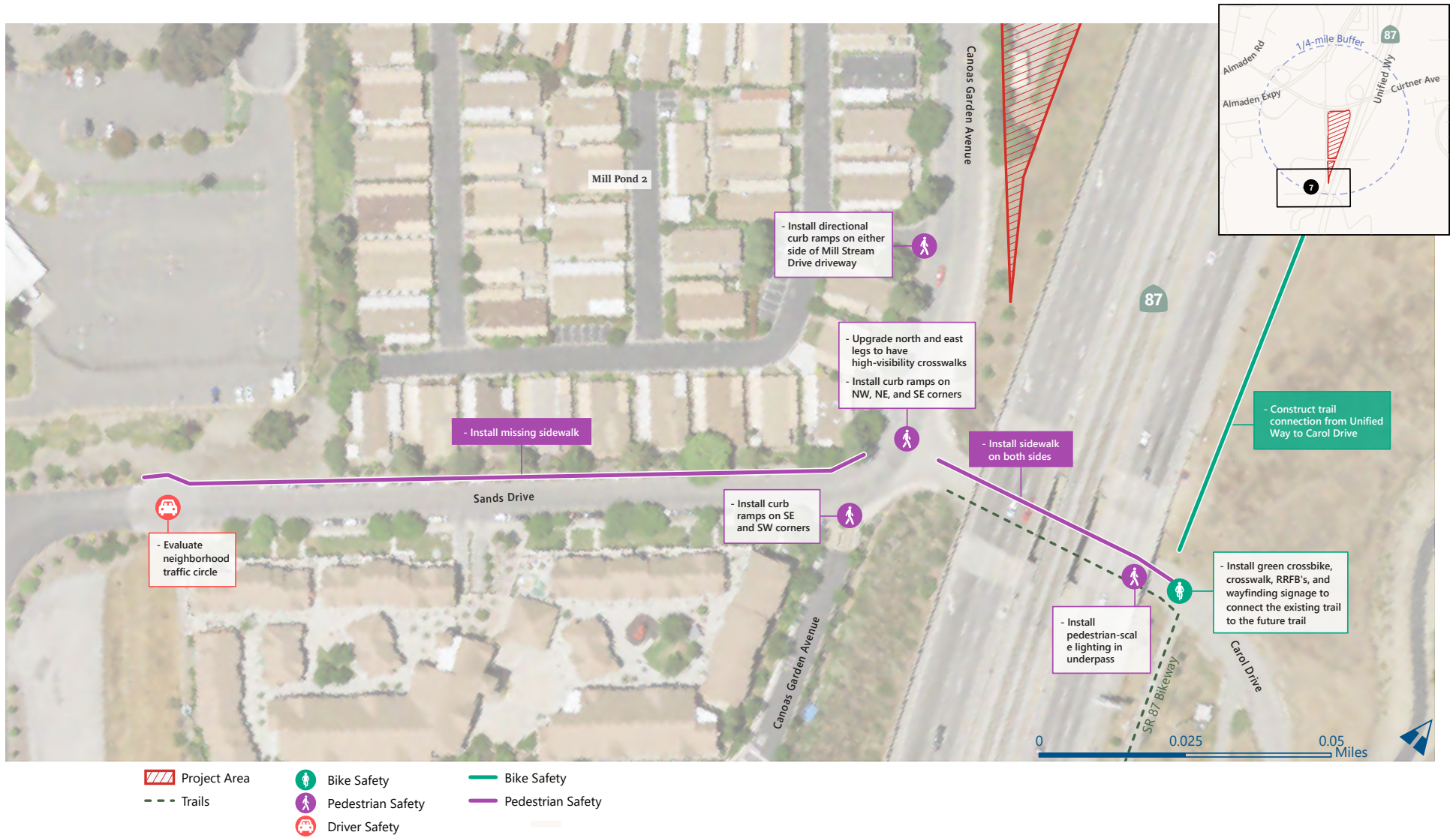


Figure C7
 Recommendations for
 Sands Drive