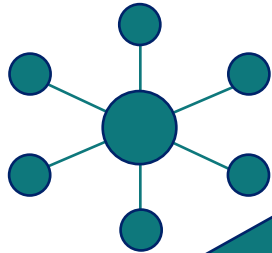


draft VISION STUDY



# Stevens Creek Boulevard



*Corridor*

# V I S I O N





# TABLE OF CONTENTS

<b>Corridor Vision</b> .....	1
Vision Statement .....	2
Values and Guiding Principles.....	3
<b>Implementation Planning Process</b> .....	4
Engagement.....	4
<b>Implementation Plan</b> .....	5
1. Corridor Identity and Maintenance .....	6
2. Bus Transit Speed, Reliability, and Experience .....	8
3. Corridor Walking and Biking Infrastructure .....	10
4. Walking and Biking Network Connections.....	12
5. Intersections and Crossings .....	13
6. Separated, High-Capacity Transit.....	16
<b>Tables</b>	
Table 1: Current and Planned Corridor Area Bicycle Facilities (in Miles).....	12
<b>Figures</b>	
Figure 1: The Stevens Creek Boulevard Corridor Vision Study Area.....	1
Figure 2: Rendering of Example High-Capacity, Separated Transit in the Corridor .....	2
Figure 3: An Aerial View of the Corridor Looking West.....	3
Figure 4: Incremental Actions to Reach the Corridor Vision .....	5
Figure 5: Historic Signs in the Corridor .....	6
Figure 6: Wayfinding Signage at Meridian .....	7
Figure 7: Corridor Maintenance and Identity Programs .....	7
Figure 8: Rapid 523 Stop Enhancements at De Anza Boulevard .....	8
Figure 9: Traffic Signals in the Corridor by Operating Agency.....	9
Figure 10: Bicycle Lane Protection Options .....	10
Figure 11: Concept of Protected Bicycle Lanes, Shade Trees and Bus Island on Corridor.....	11
Figure 12: Corridor Areas with Right-of-Way Constraints for Sidewalk and Bicycle Lane Implementation .....	11
Figure 13 Existing Bicycle Network in the Corridor Area .....	12
Figure 14: Planned Bicycle Network in the Corridor Area.....	12
Figure 15: Protected Crossing on McClellan Road in Cupertino.....	14
Figure 16: Crossing Stevens Creek Boulevard Between Valley Fair and Santana Row .....	15
Figure 17: Conceptual High-Capacity, Separated Transit Alignment and Stations in the Corridor .....	16
Figure 18: Conceptual Graphic of Before and After Implementation of Elevated High-Capacity Transit System, West of I-280.....	17
Figure 19: Conceptual Graphic of Before and After Implementation of Elevated High-Capacity Transit System, West of Winchester Boulevard.....	18



## CORRIDOR VISION

The Stevens Creek Boulevard/West San Carlos Street corridor (Corridor) from Foothill Boulevard to Diridon Station is vital to Santa Clara Valley. The Corridor currently serves 100,000 residents and 80,000 jobs within ½ mile of the roadway. By 2040, these populations are expected to increase to 120,000 residents and 100,000 jobs.

- One-third of corridor residents are under 18 years old, forecast to rise to over 40 percent by 2040
- Almost 20 percent of corridor residents have an annual household income under \$50,000.
- 65 percent of households speak languages other than English and over 30 percent have low English proficiency.
- 7.5 percent have a disability
- 5.5 percent live in households without an automobile

The Cities of Cupertino, Santa Clara, and San José, Santa Clara County, and the Santa Clara Valley Transportation Authority (VTA)—the local government agencies responsible for transportation in the Stevens Creek Boulevard Corridor—are committed to continuous investment for pedestrians, cyclists, transit users, and drivers. We recognize that to unlock the corridor's full potential, it is essential to have a shared vision for long-term transportation goals.

Figure 1: The Stevens Creek Boulevard Corridor Vision Study Area





Recognizing the need for a unified approach, the Cities, County, and VTA partnered to develop this Vision Statement. This Vision will guide the future of the corridor, ensuring cohesive planning and the coordinated management of transportation improvements.

A Steering Committee of elected officials from the participating agencies, a community advisory group, residents, businesses, and community groups provided the necessary leadership in a cooperative planning process to create a strong and sustainable Vision to guide corridor transportation investments for the next 50 years.

## Vision Statement

The Stevens Creek Boulevard Corridor transportation infrastructure changed little in the past 50 years while the area it serves grew into a worldwide hub of innovation. Therefore, we envision the transportation corridor our community deserves to support continued residential and commercial vibrancy: **safe and enjoyable travel for people of every age, ability, and chosen mode.**

Residents, businesses, and visitors would be served by:

- A high-capacity transit system supported by station access enhancements to connect the Cities of Cupertino, Santa Clara, and San José from Diridon Station and Downtown San José to De Anza College within twenty minutes, with connection to Foothill Boulevard, for reliable travel to local and regional destinations. Station areas would be well-maintained and inviting community assets.
- A stress-free and enjoyable walking and bicycling environment. High-quality pedestrian and bicycle infrastructure would be prioritized to connect neighborhoods to the corridor within a 20-minute walk of transit stops.

- Safe and efficient vehicle travel would be accommodated for connections to neighborhoods, businesses, and expressways and freeways.

This Vision would be implemented by a continuous, open, and inclusive evaluation process to promote equitable access and use.

**Figure 2: Rendering of Example High-Capacity, Separated Transit in the Corridor**



## Values and Guiding Principles

The Corridor Vision would be implemented in steps. The committed shared purpose, vision, and values of the Cities of Cupertino, San José, and Santa Clara, Santa Clara County, and the Santa Clara Valley Transportation Authority (VTA) will guide the Vision implementation process:

### Ongoing Collaboration

- Continually engage and collaborate with corridor users and decision-makers.
- Incrementally improve access, comfort, speed, and reliability of transit.
- Embrace technological innovations.

### Safety of All Corridor Users

- Eliminate transportation-related fatalities and severe injuries.
- Allow safe passage for vulnerable road users along and crossing the corridor.
- Reduce the level of stress and increase the accessibility of walking and biking,

### Create a Sustainable Environment to Prioritize People

- Design for all ages, abilities, and incomes of users,
- Maintain the corridor as a clean and inviting place.
- Provide green space and shade, and support native wildlife and plants.
- Foster enjoyable public space.
- Support reduction in greenhouse gas emissions from transportation.

### A Transit Corridor

- Increase transit frequency and speed.
- Favor transit travel time over auto travel time in roadway

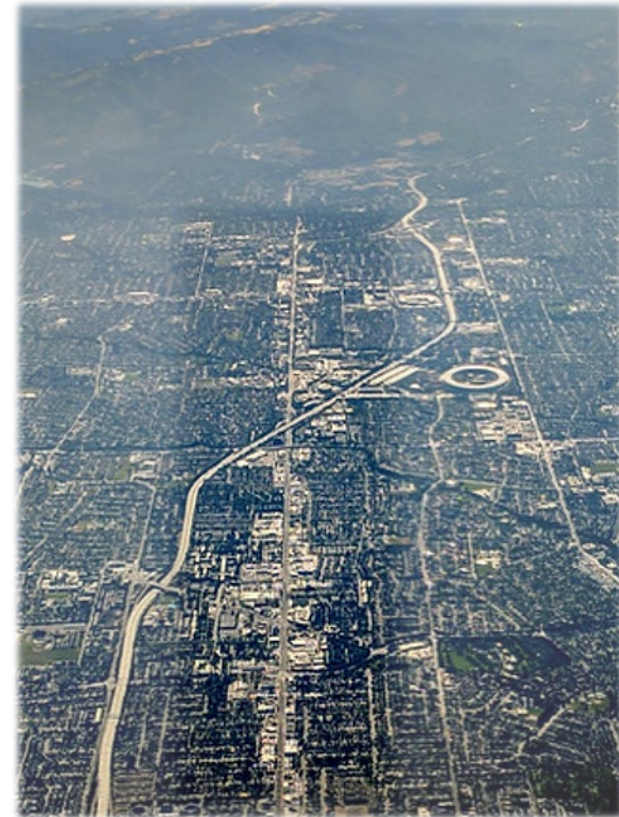
operations.

- Improve access and comfort of waiting for transit.
- Implement a high-capacity, separated transit service in the corridor.

### Convenience and Connectivity

- Improve the convenience of travel for people.
- Ensure access and connectivity for all travelers through investment to meet resident and business needs.
- Enhance neighborhood and business access.

**Figure 3: An Aerial View of the Corridor Looking West**







## IMPLEMENTATION PLANNING PROCESS

The Vision Implementation Plan serves as a framework for actions to achieve a shared Vision for the Corridor. Implementation will occur incrementally on separate project development timelines, involving distinct processes and leadership. Some items will be addressed through routine maintenance or administrative actions at the agency level, while others necessitate months or years of design and development, requiring newly identified funding sources and multijurisdictional cooperation.

Regardless of the specific implementation approach, each component of the Corridor Vision contributes to the overarching goal of safe and enjoyable travel for people of all ages, abilities, and chosen modes. The implementation planning process aligns with the Vision Statement, assessing various options. Strategies and improvements are drawn from the VTA Community Design and Transportation Manual, refined to match local City and County specifications and standards, ensuring alignment with the area's unique character.

### Engagement

The Vision Statement for the Corridor was developed through extensive community input. Key community needs identified included addressing excessive vehicle speeds, improving safety, enhancing walkability, and achieving a better balance of transportation modes. To realize this vision, the community prioritized improved transit service, complete streets, better integration with the local community, and enhanced connections within the Corridor. Implementation efforts focus on key priorities such as upgraded bicycle lanes, improved streetscape design (including shade trees), transit infrastructure and service investments, and safer pedestrian crossings.

# IMPLEMENTATION PLAN

*The Vision would be implemented by a continuous, open, and inclusive evaluation process to promote equitable access and use.*

The Vision for the Stevens Creek Boulevard/West San Carlos Street Corridor will be implemented cooperatively among Corridor jurisdictions, transportation agencies, and the Corridor residential and business communities.

Investment in improving the multimodal transportation conditions in the Corridor should not wait for separated high-capacity transit, near-term actions can start to improve conditions for today’s users while creating an environment that better leverages future long-term investments. The six (6) recommended implementation components provide a structure to deliver near-term and long-term benefits of the Corridor Vision are:

**Near Term (actions with about a 5-year development period) –**

These actions can be implemented in short timeframes with near-term benefits.

1. Implement corridor identity and maintenance program(s) to support Corridor businesses and neighborhoods.
2. Improve bus transit speed, reliability, and experience.
3. Implement walking and bicycling infrastructure on the Stevens Creek Boulevard/West San Carlos Street Corridor with an emphasis on protected bicycle lanes which provide physical separation of bicyclists from vehicles while maintaining access to driveways.
4. Build out and enhance pedestrian and bicycle network parallel, across and connecting to the Corridor.

The near-term actions would also include the initiating of project development and funding for the high-capacity, separated transit service.

**Medium Term (actions with about a 10-year development period) –** These actions require more development time due to their complexity and cost. Actions within the next five years will initiate priority projects.

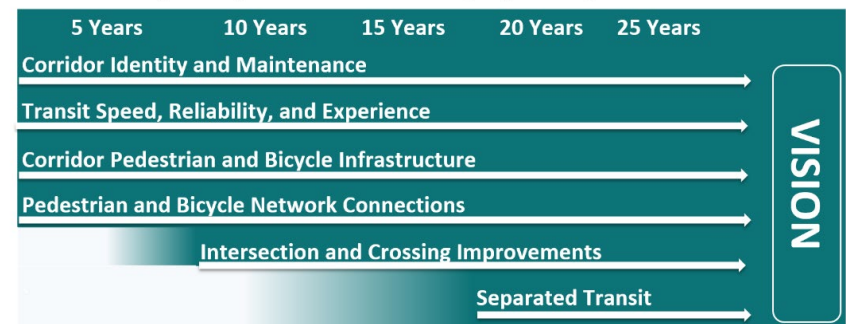
5. Improve intersections and crossings to minimize inconvenience and maximize safety for all users.

**Long Term (actions with at least a 20-year development period) –** The Vision of a separated, high-capacity transit service in the Corridor will require considerable time, effort and funding from each Corridor agency. The next steps in the project development process should be conducted in the next five years to ensure implementation of this major transit investment within 20-years.

6. Separate transit from other vehicle operations for high-capacity transit service.

While individual projects would have their own development process with rigorous public engagement, the Corridor agencies should continue their cooperation at the staff and elected official level to bring the Corridor Vision to reality as shown in Figure 4.

**Figure 4: Incremental Actions to Reach the Corridor Vision**



## 1. Corridor Identity and Maintenance

*The Corridor businesses, neighborhoods, civic groups and government agencies will define a Corridor brand identity(ies) as a premier regional destination to live, work, and shop. These groups will also collaborate to maintain the historic resources, condition of infrastructure and cleanliness of the Corridor.*

Transportation infrastructure that complements the community supports environmental, economic, and social considerations to create value to the people who live, work, and shop in the Corridor. Maintenance of an attractive and clean environment to leverage the unique corridor identity for the enjoyment of residents, workers, and shoppers requires organization and resources.

### Corridor Plans

The City of Cupertino Heart of the City and Monte Vista Specific Plans, City of Santa Clara Stevens Creek Boulevard Focus area and City of San José Stevens Creek, Valley Fair/Santana Row, and West San Carlos Urban Villages each envision as streetscape that accommodates more walking, biking, rolling and transit activity. The plans will be implemented through a variety of physical infrastructure and placemaking development actions consistent with the character of a multimodal commercial street. VTA's Community Design and Transportation Manual further details the relationship of transportation and public life that inform the recommendations of the Corridor Vision Implementation.

### Historic Preservation of Signs

The Stevens Creek Boulevard and West San Carlos Street Corridor is home to several vintage and historic signs—predominately in the googie, mid-century style. Current historic signs in the Corridor such as the Safeway (former Futurerama Bowl) Sign, Western Appliance Sign, and the Y Not Sign continue to define a future-looking aesthetic.



Figure 5: Historic Signs in the Corridor

### District Management and Maintenance Organizations

Management of public space is usually conducted by municipalities or adjacent landowners, however in some parts of the Corridor, business districts and chambers of commerce were formed to provide business development, clean and maintain public space, provide beautification, create a civic forum, and sponsor events and promotions. These organizations include:

- West San Carlos Street Neighborhood Business District Association
- Winchester Neighborhood Business District
- Cupertino Chamber of Commerce

### Joint Advertising

While the Corridor may not need a single business district, the primary business entities such as Valley Fair, Santana Row, the auto dealerships, shopping centers, and small businesses could organize aspects of business improvement districts such as advertising for the Corridor. A strong commercial corridor identity can also provide location prestige for the residential neighborhoods of the Corridor while enhancing adjacent amenities.



**Transportation Service Signage**

The identity of the transportation services and connections of the Corridor have limited visibility. Transit identity can take a larger role in the Corridor’s identity through wayfinding signage, real-time transit information, and better identified transit stops which allow for better awareness and utilization of the Corridor transportation assets. Wayfinding signage can be used to direct travelers from the Corridor to routes which provide connections across barriers such as the Cypress Avenue Bridge over I-280.



**Figure 6: Wayfinding Signage at Meridian**

**Vehicle Speed Reduction Enforcement**



Enforcement of speed limits and traffic safety education can improve safety and comfort for residents, workers and visitors to the Corridor. The physical character of the roadway gives the impression of a higher-than-posted speed limit of 35 miles per hour (40 miles per hour from Lawrence Expressway to Harold Avenue). Speeding is the largest primary traffic collision factor in the Stevens Creek Boulevard Corridor (30% of collisions), followed by related driver factors of failure to heed traffic signals or signs (19%), improper turning (19%), and violations of vehicle right-of-way (12%). Deployment of periodic speed enforcement and vision zero education campaigns complement physical infrastructure countermeasures to reduce vehicle speeds.

**Implementation Actions to Consider**

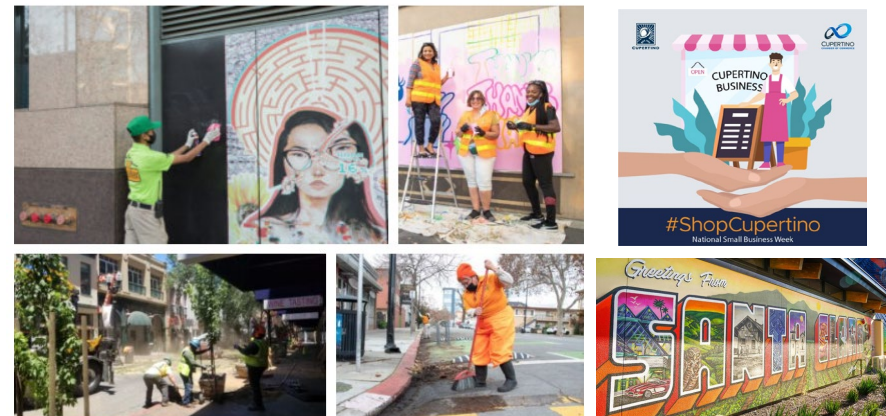
- Branding, marketing and special events

- Place-making and beautification
- Public safety and hospitality
- Street cleaning and maintenance
- Painting and graffiti removal
- Sidewalk and vegetation maintenance
- Small business grants/loans for building improvements
- Vehicle speed enforcement
- Traffic safety education

**Recommended Implementation**

- The Corridor Agencies should convene businesses and business groups to explore joint advertising and branding opportunities. (Cities of Cupertino, Santa Clara, and San José, and the County of Santa Clara)
- Coordinate street cleaning and maintenance (Cities of Cupertino, Santa Clara, and San José, and the County of Santa Clara)
- Communicate business resources to Corridor businesses (Cities of Cupertino, Santa Clara, and San José, and the County of Santa Clara)

**Figure 7: Corridor Maintenance and Identity Programs**



Source: San Jose Business Improvement District, Discover Santa Clara, Cupertino Chamber of Commerce

## 2. Bus Transit Speed, Reliability, and Experience

*The Corridor Cities and the County will work with VTA to implement bus speed, reliability and experience improvements in the Corridor.*

Buses provide the primary transit mode along the Stevens Creek Boulevard Corridor. The improvement of service speed, reliability, and experience is the responsibility of VTA and the Cities and County that own and operate the infrastructure utilized by the bus system. Since busses in the corridor share the roadway infrastructure with other vehicles, designing and operating the roadway with transit vehicles and riders at the forefront can bring better service, encourage more transit riders, and support affordable and environmentally friendly transportation.

The City of San José General Plan designated the Corridor a Grand Boulevard where the needs of transit vehicles and riders are given priority over other modes of travel. In 2022, the City of San José passed a “Transit First Policy” which further motivates San José to improve transit operations and access on Grand Boulevards.

The Cities of Cupertino and Santa Clara, as well as San José, partnered with VTA to implement new shelters, seating, lighting and associated improvements at VTA Rapid 523 bus stops in 2018. The Rapid 523 service operates approximately 22 percent faster than the Local Route 23 service due to stop consolidation, all-door boarding, and limited signal priority operations. In addition, through VTA’s Bus Stop Balancing program six eastbound and four westbound low ridership or redundant stops were removed.

There are 89 intersections and 74 bus stops (both directions) along the Corridor. Efficiency through the intersections and access to and quality of the bus stops are the focus of bus speed, reliability, and

user experience improvements.

**Figure 8: Rapid 523 Stop Enhancements at De Anza Boulevard**



### Recommended Implementation

- Transit Signal Priority** to adjust signal green time based on transit vehicle proximity has limited implementation in the corridor, despite corridor-wide infrastructure and technology in place. An administrative policy for the four agencies operating signals in the Corridor (the Cities of Cupertino, Santa Clara, and San José and the County of San José) to cooperate with VTA to implement a corridor-wide transit signal priority through a centralized system would be expected to reduce VTA Rapid 523 travel time by 14% and VTA Local 23/51 service by 12%, saving 5.5 minutes and 5.9 minutes for end to end trips respectively. (Cities of Cupertino, Santa Clara, and San José with VTA)
- Queue Jump** treatment provides waiting areas for buses at the front of an intersection along with leading bus-only green time. This would be a treatment specifically for the San Tomas Expressway intersection since the intersection is synchronized north/south to the expressway and would not be able to be a

part of the east/west Corridor transit signal priority. This queue jump treatment would be expected to save up to 12 seconds per bus trip through the intersection running east/west or a 0.5% travel time savings for Corridor end-to-end trips. (County of Santa Clara with VTA)

**Figure 9: Traffic Signals in the Corridor by Operating Agency**



Agency	Signals Operated
City of Cupertino	18
City of Santa Clara	7
County of Santa Clara	1
City of San José	21

- Bus Bulbs/Islands** extend the sidewalk on the street side to allow in-lane boarding and remove bus stops from bicycle lanes. Implementation of bus bulbs/islands could reduce the time of buses turning in and out of the travel lane, move bus loading out of bicycle lanes, and speed the loading and unloading of buses. Full implementation in the Corridor is expected to reduce VTA Rapid 523 travel time by 2.1% and VTA Local 23/51 service by 6.1%, saving 50 seconds and 3.1 minutes for end-to-end trips respectively. The higher travel time savings for local service is due to the higher number of stops in the Corridor. (Cities of Cupertino, Santa Clara, and San José, and the County of Santa Clara)
- Real-Time Information**  
 VTA currently provides real-time arrival and service alert information through a mobile app called Transit and at stop digital signage at light rail and bus rapid transit stations. Provision of this information on digital signs at stops in the Corridor would be a major improvement to rider comfort and

understanding of vehicle arrival time.

**Transit Experience Improvements**

VTA and the Corridor municipalities recently made investments in transit user experience in the corridor through improved shelters, lighting, seating, accessibility, and bicycle racks on busses. Corridor municipalities continue to address fixing cracked sidewalks, tripping hazards, and adding concrete bus pads where asphalt has been impacted by frequent stopping. There will need to be periodic, ongoing capital maintenance activities to maintain the stop areas in a state of good repair. (Cities of Cupertino, Santa Clara, and San José, and the County of Santa Clara with VTA)

**Options Considered but not Recommended at This Time**

Options considered but not recommended include transit lanes which would allow buses to travel in their own lane. There were concerns voiced during public engagement over the potential for conversion of general-purpose lanes and impacts on parking and vehicle operations. At the Vision stage, these issues could not be fully vetted, therefore these issues would be addressed as implementation items move through their own development processes. Based on an initial assessment, there could be a travel time benefit of 5% to 6% for side-running transit lanes and 14% for center-running transit lanes. A reduction of general-purpose lanes by one in each direction was forecast to slow Corridor travel time for general traffic by 9.5%.



### 3. Corridor Walking and Biking Infrastructure

*Residents, businesses, and visitors would be served by a stress-free and enjoyable walking and bicycling environment through the implementation of protected, buffered, or separated bicycle facilities the length of the Corridor including protection at intersections. Where sidewalks are not to current standard, they will be improved through dedications of new development.*

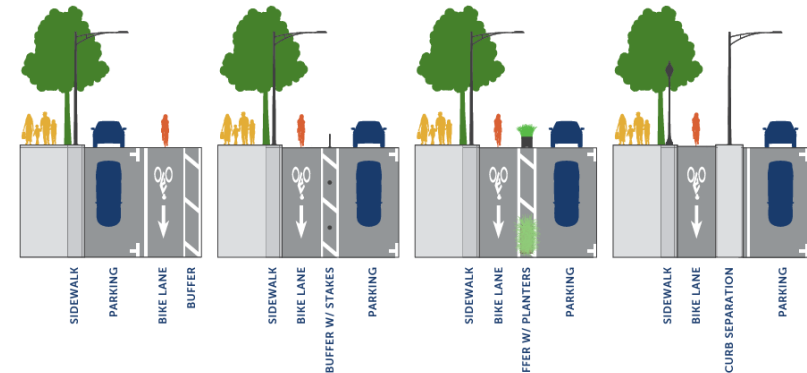
Balancing modes in the Corridor requires additional promotion of infrastructure for walking and biking. Investment in walking and bicycling infrastructure supports transit riders by providing easier and more pleasant stop access.

The streetscape of Stevens Creek Boulevard and West San Carlos Street is largely unchanged in the last 50 years, as the communities it serves grow and diversified. Providing protected/ separated/ buffered bicycle lanes, ensuring at least five feet of sidewalk clear space and bringing sidewalks to current standards, and the installation and maintenance of unobtrusive shade trees are important improvements modernize and transform the street into a community asset.

#### Protection for Bicyclists

According to the National Association of City Transportation Officials (NACTO), protected bicycle lanes should be installed when vehicles travel at speeds of more than 25 miles per hour on a consistent basis. Given the speed limit is predominately 35 miles per hour or higher in the Corridor, the protection of bicycle lanes is prudent for safety and comfort. The City of Cupertino is currently implementing protected bicycle lanes along Stevens Creek Boulevard, and the Cities of Santa Clara and San José plan to implement bicycle protection along the Corridor.

Figure 10: Bicycle Lane Protection Options



Source: San Jose Better Bike Plan, City of San Jose

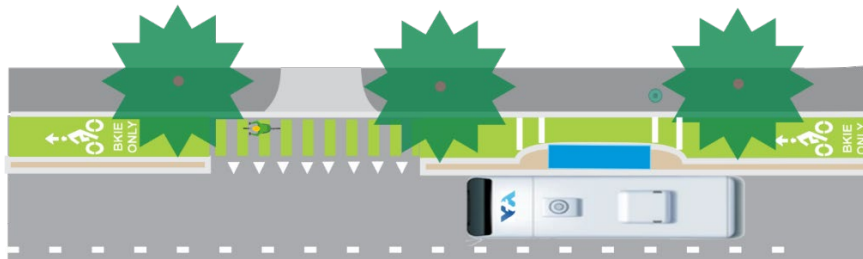
#### Buildout Sidewalk Width

While sidewalks are present the entire length of the Corridor, 85 percent of the sidewalks narrower than the standards within their respective City. Generally, the sidewalks in the Valley Fair/Santana Row area and parts of Cupertino are the widest in the Corridor. The Corridor has several legacy driveways which slope through the sidewalk area. Each of the Corridor Cities' current standards separate the sidewalk area from the driveway apron to provide for minimal sloping through the pedestrian walking space which should be implemented as adjacent buildings are developed.

#### Shade Trees

Shade trees are sparse in the Corridor. Only 45 percent of blocks have any trees present, and only 23 percent of blocks have trees on both sides of the roadway. Maintenance of a healthy urban forest and green infrastructure lowers the temperature at ground level, reduces glare, reduces stormwater run-off, and provides for native wildlife.

**Figure 11: Concept of Protected Bicycle Lanes, Shade Trees and Bus Island on Corridor**



**Implementation Recommendation**

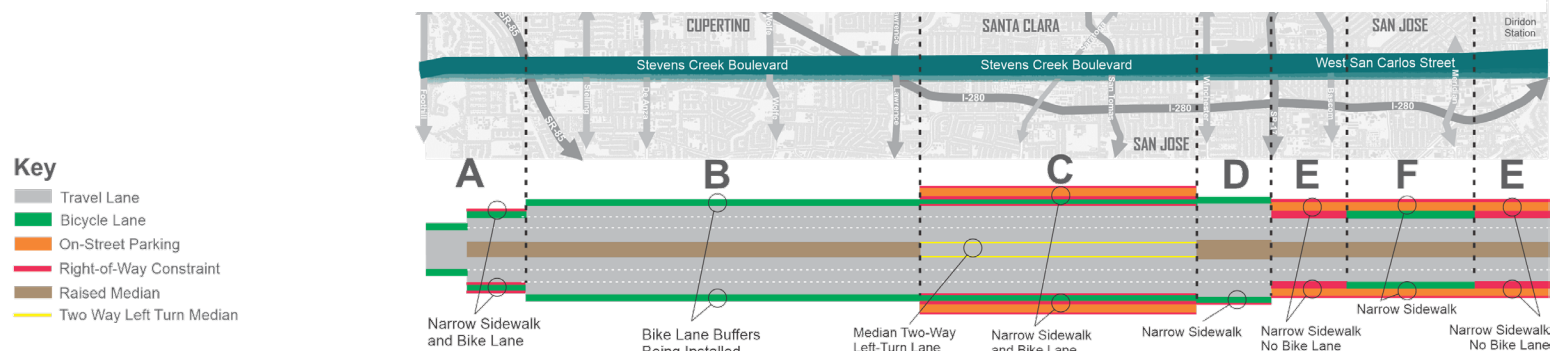
- Protected/separated/buffered bicycle lanes on Stevens Creek Boulevard and West San Carlos Street to provide physical separation of bicyclists from vehicle while maintaining access to driveways. This implementation would include clear space and clear sight lines for vehicle accessing driveways. It may also include additional safety treatment for vehicle egress/ingress at driveways. Through a review of access management in the Corridor, unused or underutilized driveways may be closed.
- Widen sidewalk widths consistent with City standards through dedications by new land use development.

- Plant shade trees on the sides of the Stevens Creek Boulevard and West San Carlos Street Corridor. This would be developed within an urban forestry framework with sustainable funding for tree maintenance.
- Review the potential for leading pedestrian intervals at signalized intersections (LPIs). LPIs allow pedestrians to cross at intersections before vehicles are given a green signal and gives pedestrians priority over turning-vehicles.
- Implement pedestrian-oriented lighting when street lighting is installed or replaced in the corridor.

**Priority Near-Term (5-Year) Implementation**

- West San Carlos Protected Bike Lanes (City of San José)
- West San Carlos Urban Village Streets Improvements (City of San José)
- Stevens Creek Boulevard Protected Bike Lanes Phases 2 and 3 (City of Cupertino)

**Figure 12: Corridor Areas with Right-of-Way Constraints for Sidewalk and Bicycle Lane Implementation**



## 4. Walking and Biking Network Connections

*Residents, businesses, and visitors would be served by high-quality pedestrian and bicycle infrastructure prioritized to connect neighborhoods to the corridor within a 20-minute walk of transit stops through the implementation of bicycle and pedestrian plans.*

The Vision of the Corridor as a multimodal roadway is to be supported by strong connections to walking and bicycling networks. This allows non-motorized travel for access to transit services and commercial and residential areas.

Each Corridor agency provide improvements to walking and bicycling infrastructure in the Corridor area (within ½ mile of the Corridor). The current and planned status of bicycle infrastructure based on each of the Corridor City’s bicycle plans is shown in **Table 1**. Overall, the bicycle network is planned to be expanded by 50 percent –from approximately 80 miles of facilities to 120 miles of facilities. This expansion includes a major investment in 68 miles of new or converted trails and protected, buffered, or separated bikeways. This would bring the proportion of the protected bikeway network from 11 percent to 63 percent in the Corridor area.

### Implementation Recommendation

- Design, fund, and construct projects to implement bicycle and pedestrian plans (e.g. Local Roadway Safety Plans, Safety Action Plans, Safe Routes to School, and Vision Zero Programs)
- Review of how to accommodate electric powered bicycle, scooters, and other micromobility should be conducted for non-motorized facilities to ensure emerging modes support, not conflict with walking and bicycling.

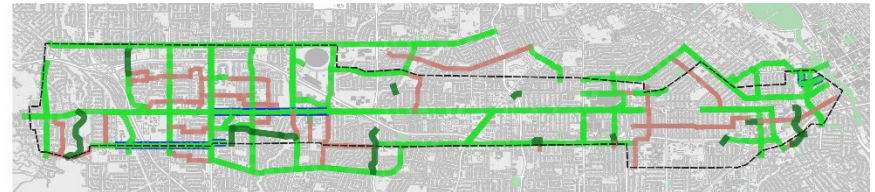
### Priority Near-Term (5-Year) Implementation

- Pruneridge Avenue Complete Streets Project (City of Santa Clara)
- Moorpark Avenue Traffic Safety Project (City of San José)
- De Anza Blvd Buffered Bike Lane (City of Cupertino)

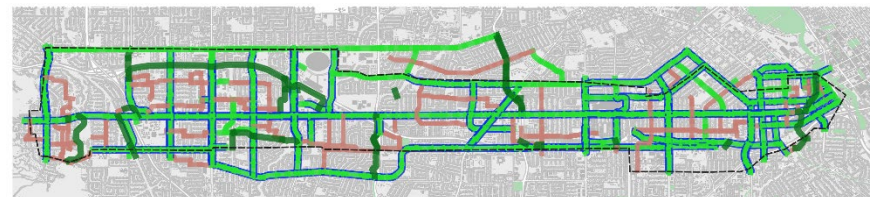
**Table 1: Current and Planned Corridor Area Bicycle Facilities (in Miles)**

Bicycle Facility Type	Current	Planned
Trail	4.5	12.6
Buffered/Separated Bikeway	4.6	64.5
Unbuffered Bike Lane	52.6	14.3
Bicycle Boulevard/Route	18.9	30.2
<b>Subtotal – Protected Network</b>	<b>9.0</b>	<b>77.0</b>
<b>Total</b>	<b>80.5</b>	<b>121.5</b>

**Figure 13 Existing Bicycle Network in the Corridor Area**



**Figure 14: Planned Bicycle Network in the Corridor Area**



- Legend
- Class I - Trail
  - Class II Buffered/Separated Bicycle Lane
  - Class II Bicycle Lane
  - Class III Route/Bike Boulevard



## 5. Intersections and Crossings

***Crossings in the Corridor Area will be upgraded for accessible, consistent infrastructure that protects vulnerable users, considers transit access, and ensures direct connections. Safe and efficient vehicle travel would also be accommodated for connections to neighborhoods, businesses, and expressways and freeways.***

Crossings of the Corridor whether at intersections, at midblock locations or across natural barriers, are important to maintain connectivity among neighborhoods, parks, commercial areas and access to corridor transit services.

From 2016 to 2022 there was an average of 188 collisions per year in the Corridor overall and 23 collisions per year involving bicycles or pedestrians—75 percent of which occurred within 250 feet of an intersection. Half of vehicle/vehicle collisions result in injuries, which 93 percent of bicycle-involved collisions result in an injury and 97 percent of pedestrian-involved collisions result in an injury. Collisions involving a bicycle or a pedestrian were also five times as likely to result in a serious injury or fatality. Therefore, special attention to the treatment of vulnerable road users at these crossings should be made to ensure conflicting movements do not become collisions.

The Corridor Cities and the County are conducting Local Roadway Safety Plans (LRSPs), Safety Action Plans and Vision Zero Plans with specific actions to address intersection and systemic safety. For example, three Corridor intersections for recommended improvements identified in the City of Cupertino's LRSP: Stevens Creek Boulevard at De Anza Boulevard, Bandle Drive and Blaney Avenue.

### **Enhanced Crossings for Pedestrians and Bicycles**

Marked and highly visible crosswalks help define where pedestrians can conveniently and predictably cross streets. While the California Vehicle Code requires drivers to yield to pedestrians in any crosswalk, whether marked or unmarked.

Streetscape design should prioritize crosswalks as an essential element of the pedestrian environment, rather than interruptions to vehicles. Due to the low approach angle at which drivers view pavement markings, incorporating parallel stripes alongside or instead of standard perpendicular markings can greatly enhance the visibility of crosswalks for oncoming traffic. Therefore, to improve crosswalk visibility 'standard' crosswalks delineated by two lines perpendicular to the vehicle lanes should be replaced with 'continental' crosswalks with lines parallel to the roadway or 'ladder' crosswalks with both the standard perpendicular delineation lines and the parallel continental lines or 'zebra' crosswalks with diagonal lines.

Currently 79% of crosswalks across Stevens Creek Boulevard/West San Carlos Street are high-visibility continental or ladder crosswalks, while only 47% of crosswalks along (across side streets) are high visibility crosswalks.

Other enhancements for crossings include pedestrian-oriented lighting, audible cues announcing roadway location, tactile or colored waiting areas and crossings, automatic detection of pedestrians and bicyclists and adjusted crossing times that vary with the crosser.

### **Curb Extensions and Protected Intersections**

Intersections are primarily designed for processing vehicles and managing vehicle conflicts. Bicycle and pedestrian oriented intersection treatments narrow the crossing length and provide dedicated intersection space for vulnerable users.

- **Curb Extensions** (similar to bus bulbs) widen the sidewalk area into the intersection, narrowing the roadway, decreasing the speed of vehicle right-turns, and creating shorter crossings for pedestrians. They also improve the visibility of pedestrians to drivers.
- **Protected Intersections** for bicycles create additional space on the sides and through intersections for bicyclists and pedestrians. Buffers, generally raised curbs, separate bike lanes on the sides and corners of the intersection and bicycle lanes are striped next to crosswalks through the intersection. Similar to curb extensions, these treatments create waiting areas while making vulnerable users more visible to slower right-turning vehicles.

**Figure 15: Protected Crossing on McClellan Road in Cupertino**



Source: City of Cupertino

### Connections Across Barriers

The Stevens Creek Boulevard Corridor is the longest continuous east/west roadway in the study area: other than I-280, there is not a parallel roadway which makes the full connection from Cupertino to San José in the study area.

The physical barriers in the Corridor, both natural and man-made from west to east are:

- Stevens Creek
- Union Pacific Rail Tracks
- State Route 85
- Calabazas Creek
- Saratoga Creek
- Lawrence Expressway
- San Tomas Expressway
- I-880/State Route 17
- Los Gatos Creek
- VTA Green Line and Blue Line Light Rail Tracks

Stevens Creek Boulevard and West San Carlos Street cross over or under each of these physical barriers. Other facilities which cross barriers in the Study Area are:

- Saratoga Creek Pedestrian Bridge in Santa Clara
- Cypress I-280 Overcrossing in San José
- Tisch I-280 Overcrossing in San José
- Midtown-Fruitdale I-280 Crossing in San José
- Los Gatos Creek Trail I-280 Undercrossing in San José
- Parkway Park San Tomas Expressway Overcrossing in Santa Clara

Improved wayfinding and identifying signage of these important crossings can enhance their usage and access among Corridor area routes for bicyclists and pedestrians.

Planned crossings in the study area for pedestrians and bicycles are:

- SR-85 Overcrossing from Grand Ave to Mary Ave in Cupertino
- Saratoga Creek Trail Extension from Lawrence Expressway to Mitty in San José
- I-280 Overcrossing to Mitty Park in San José
- San Tomas Expressway Overcrossing (Greenlee Drive to Coakley Drive/Constance Drive) in San José
- Carmen Road Bridge in Cupertino

### Implementation Recommendation

- Implement enhanced, high-visibility crossings for pedestrians and bicyclists.
- Implement curb extensions and protected intersections.
- Prioritize crossings of barriers for pedestrians and bicycles
- Review key hot spots for crossing improvements such as Monroe Street and Stevens Creek Boulevard at I-880 for potential reconfiguration to accommodate clearer travel patterns for all modes.

### Priority Near-Term (5-Year) Implementation

- In Cupertino, implement safety improvements at the intersections of Stevens Creek Boulevard at De Anza Boulevard, Bandle Drive and Blaney Avenue. (City of Cupertino)
- In Cupertino, work with Caltrans to develop and fund a crossing of SR-85 from Grand Avenue to Mary Avenue (City of Cupertino)
- In San José, work the Caltrans and Santa Clara County to develop and fund the crossings of I-280 at Mitty Park and San

Tomas Expressway at Greenlee Drive/Coakley Drive/Constance Drive (City of San José)

- Develop the Saratoga Creek Trail north of Sterling-Barnhart Park and create a feasible pedestrian and bicycle connection design to Stevens Creek Boulevard under I-280 and adjacent to Lawrence Expressway. This would be a multijurisdictional project. (Cities of Cupertino, San José, Santa Clara, and the County of Santa Clara)

**Figure 16: Crossing Stevens Creek Boulevard Between Valley Fair and Santana Row**





## 6. Separated, High-Capacity Transit

*Residents, businesses, and visitors would be served by a high-capacity transit system supported by station access enhancements to connect the Cities of Cupertino, Santa Clara, and San José from Diridon Station and Downtown San José to De Anza College within twenty minutes, with connection to Foothill Boulevard, for reliable travel to local and regional destinations. Station areas would be well-maintained and inviting community assets.*

A high-capacity transit system separated from the roadway would allow for a 20-minute connection from De Anza College in Cupertino to Diridon Station and/or Downtown San José. Potential stations could be at Diridon Station or Downtown San José, Meridian, Bascom, Winchester, Saratoga, Lawrence, Wolfe, and De Anza College.

The key components of the system would be easy access to a system to carry large numbers of people quickly along the Corridor. While personal automobile travel is expected to continue its major role in the transportation system, it does not have the ability to address future transportation needs without increasing congestion, nor the ability to offer a high-quality service consistent with principles of human scale, universal access, support of activity centers and vibrancy of public space characteristic of a high-capacity, separated transit system.

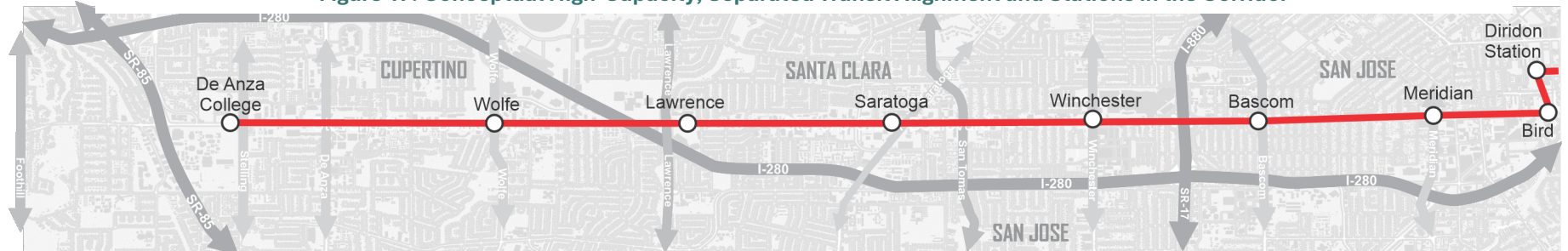
This system could provide reliable and safe connections among major connections in the South Valley with short travel times in an environmentally friendly way without adding to traffic congestion. The high initial capital cost is the primary barrier to implementation. However long-term cost savings to users and value to supporting neighborhoods and businesses with a sustainable, high-quality transportation service bring enduring benefits to the community.

Preliminary analysis indicates elevated transit in the Corridor would cost approximately \$1.4 billion while underground transit in the Corridor would cost about \$2.8 billion. Combined with bus speed, reliability, and experience improvements, the number of transit users in the Corridor would be expected to double over current conditions.

While the placement of guideway and type of vehicle used is not specified in this Vision Study, there was a clear preference of an elevated fixed-guideway transit service.

Implementing a new transit line is complicated and requires sustained effort by champions at the agency staff and elected official levels. As the County’s Transit Agency, VTA is best positioned to be the lead agency for the project. However, partnership with the Corridor municipalities is necessary for successful implementation.

**Figure 17: Conceptual High-Capacity, Separated Transit Alignment and Stations in the Corridor**



**Figure 18: Conceptual Graphic of Before and After Implementation of Elevated High-Capacity Transit System, West of I-280**



The project would likely be a part of the Federal Transit Administration (FTA)'s Capital Investment Grant/Expedited Project Delivery (CIG/EPD) Pilot program. Fortunately, VTA, the County of Santa Clara, San José and Santa Clara have experience with this program as the BART Silicon Valley Phase II Project was part of the CIG/EPD pipeline.

<sup>1</sup> <https://www.transit.dot.gov/regulations-and-guidance/key-factors-successful-project-implementation>

Paraphrasing FTA's key factors for successful project implementation<sup>1</sup> of a major transit capital program involves adequate project management and project control practices to manage:

- Input during planning, design and scoping phases
- Right-of-way acquisition
- Schedule
- Cost Estimating and budget
- Public engagement, information and communication
- Fair and comprehensive contracting documents
- Adequate underground investigation during preliminary engineering
- Successful coordination with public utilities
- Realistic and independently determined constraints and expectations.

Specific considerations for implementation of an elevated transit service in the Stevens Creek Boulevard/West San Carlos Street Corridor based on engagement are:

- Elevated transit stations could also provide crossings above Stevens Creek Boulevard for bicyclists and pedestrians.
- Spacing between pillars/footings should be adequate to maintain a two-way left turn lane in the shared Santa Clara/San José section of Stevens Creek Boulevard for the loading and unloading of car carriers serving car dealerships.
- Light rail as well as innovative vehicle and service models should be explored.
- Coordination with the SJC Airport Connector<sup>2</sup> project which could be expanded into the corridor.
- Review potential connections options to Diridon Station and Downtown San José

<sup>2</sup> <https://www.sanjoseca.gov/your-government/departments-offices/transportation/transit/airport-connector>

## Implementation Recommendation

The next phase of project development would consist of preliminary engineering and alternatives analysis, environmental review and the selection of a locally preferred alternative (LPA). This would be followed by the funding commitments to complete engineering and final design and then a full funding grant agreement from outside funding partners (generally FTA) for construction.

As a new project, securing funding for development and construction will be vital to implementation. The high-capacity, separated transit concept was included in Plan Bay Area 2050 (as a placeholder light rail service expansion) through the joint cooperation of Corridor agencies. It is currently being evaluated for inclusion in the upcoming Plan Bay Area 2050+. However, inclusion in these documents does not guarantee funding. Furthermore, Santa Clara County Measure A funds likely could not be used for further development of a separated transit option as the funds for transit are focused on bus speed and efficiency improvements.

Therefore, the best option is to secure new state or federal grant funds through programs such as: SB 1 programs of Solutions for Congested Corridors Program or Local Partnership Program administered by the California Transportation Commission or the Federal Transit Administration Pilot Program for Transit-Oriented Development Planning or Accelerating Innovative Mobility Program or US Department of Transportation Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Program.

It is recommended a cooperative grant funding strategy be pursued by the Corridor agencies to place the high-capacity, separated transit service project forward for multiple competitive grant funding programs.

<sup>3</sup> <https://www.vta.org/projects/eastridge-bart-regional-connector#accordion-environmental-documents>

## Example Project Development Timeline

A project development timeline was developed based on the Eastridge to BART Regional Connector<sup>3</sup> timeline:

- Preliminary Engineering of three years (2025-2028)
- Design and Engineering of two years (2029-2030)
- Environmental Clearance of five years (2031-2036)
- Utility Relocation of two years (2037 – 2039)
- Construction of five years (2040-2045)

**Figure 19: Conceptual Graphic of Before and After Implementation of Elevated High-Capacity Transit System, West of Winchester Boulevard**

