

COLMA EL CAMINO REAL BICYCLE AND PEDESTRIAN IMPROVEMENT PLAN



prepared by

FEHR & PEERS

February 2021





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ACKNOWLEDGEMENTS

Developing the Colma Bicycle and Pedestrian Improvement Plan has been a collaborative effort. It would not be as robust or reflective of community needs without the participation of a wide range of stakeholders and community members. Thank you to the elected officials, Town staff, Technical Advisory Committee (TAC), and community members that provided input during this process. Your feedback helped align this Plan with local priorities and existing programs, and it made this a better plan.

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- Town of Colma
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The Bicycle and Pedestrian Improvement Plan was funded by a Sustainable Transportation Planning Grant – Sustainable Communities provided by the California Department of Transportation (Caltrans) with local fund contribution from Town of Colma. The contents of this report reflect the view of the authors, who are responsible for the facts and accuracy of the data presented herein.

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EXECUTIVE SUMMARY

Why Study El Camino Real in Colma?

Once the peninsula’s only highway, El Camino retains the auto-oriented character that first emerged in the 1920’s. Today, El Camino Real functions more like a local arterial than a state highway, but it struggles to become a destination corridor due to the vehicular focus of its land use profile and streetscape design. In Colma, the existing challenges include narrow and missing sidewalks, long and infrequent crosswalks, lack of bicycle facilities, and high vehicle speeds.

Colma’s current land uses along El Camino Real encourage pass-through trips and create an unwelcoming environment for walking and biking. However, land use changes are planned along the corridor, calling for changes in the transportation network to support more local trips.

Residential neighborhoods, largely located at the north and south ends of the Town, need connections to the jobs and commercial areas in the center of Town. Colma’s population and workforce, as well as the those of the neighboring communities, are quite diverse and include low-income communities and people with non-standard work shifts. These communities need high-quality, affordable, and reliable transportation options.



What are the Study Outcomes?

Colma’s El Camino Real Bicycle and Pedestrian Improvement Plan is critical for improving safety, mobility, access, and comfort for people of all ages and abilities. The Plan includes a re-design of El Camino Real with separated bicycle facilities, continuous sidewalks, additional bicycle and pedestrian safety features, new traffic signals, landscaping, and a reconfiguration of the Mission Road (“the Y”) intersection. Whether you are a resident of Colma, an employee working in Colma, a visitor to Colma, or simply passing through, the Plan presents a vision for you to travel safely and with comfort and ease, no matter your destination.

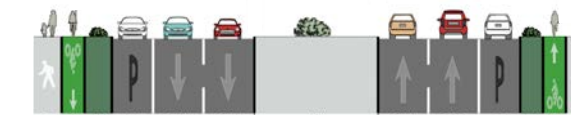
The Plan looks at two segments of El Camino Real in Colma, defined based on their distinct existing configurations: Segment A north of Mission Road currently has three lanes in each direction and a wide median; Segment

B south of Mission Road currently has two lanes in each direction and no median.

Given the current free-flow traffic conditions and excess capacity on Segment A, the Plan proposes repurposing a travel lane in each direction to provide a separated bikeway and continuous sidewalks to enhance bicyclist and pedestrian comfort, all with minimal impact to vehicle traffic flow. It also includes streetscape enhancements to improve the comfort and sustainability of the corridor.

For Segment B, the Plan maintains the existing two travel lanes in each direction. This is consistent with the number of travel lanes proposed for Segment A to the north and the existing number of travel lanes to the south. The proposed cross section adds bicycle and pedestrian facilities on both sides of the roadway by converting the existing landscape area to sidewalks and separated bikeways.

Explore the full concept design for the corridor in the Local Vision chapter.



Segment A Proposed Cross Section



Segment B Proposed Cross Section

What Informed the Design?

The Colma El Camino Real Bicycle and Pedestrian Plan is a collaborative planning effort to produce an actionable, community-based design. The project team employed a variety of tools, venues and platforms to facilitate education and information-sharing, gather input, and publicize the planning effort. Design treatments that address existing concerns on the corridor and align with the community’s vision were developed and refined through an iterative design process. Potential cross sections for each Segment were presented and discussed with Caltrans, stakeholders, and community members to define the final design.

Read more about the collaboration in the Community Engagement chapter.

Whether you are a resident of Colma, an employee working in Colma, a visitor to Colma, or simply passing through, this Plan presents a vision for you to travel safely and with comfort and ease, no matter your destination.



01

INTRODUCTION

Where and What is El Camino Real?

The El Camino Real or “King’s Highway” was originally a 600-mile road connecting the 21 Spanish missions in California. Today, a portion of it is known as a State Highway (State Highway 82) that extends from Daly City to San Jose. It bisects the Town of Colma and serves as the main travel corridor within and through the Town, connecting to Daly City to the north and South San Francisco to the south. It provides access to the Colma and South San Francisco BART stations and serves SamTrans buses with stops throughout the corridor. The segment of El Camino Real in Colma is a critical route for the diverse residents and employees of the Town, as well as for the neighboring communities.

Why Study El Camino Real in Colma?

Once the peninsula’s only highway, El Camino retains the auto-oriented character that first emerged in the 1920’s. Today, El Camino Real functions more like a local

arterial than a state highway, but it struggles to become a destination corridor due to the vehicular focus of its land use profile and streetscape design. The Grand Boulevard Initiative (GBI), a collaboration of 19 cities, counties, and local and regional agencies, has been working to transform El Camino Real into a “grand boulevard of meaningful destinations.” While not developed directly through GBI, this Plan aligns with GBI’s vision and goals for the corridor.

With a grant from the Caltrans Sustainable Communities Program, the Town of Colma developed the El Camino Real Bicycle and Pedestrian Improvement Plan, which aims to improve safety and mobility for people who walk and bike along El Camino Real and to increase access to public transportation. The Plan was developed to serve the needs of all users of the corridor, including those of disadvantaged communities. Extensive community and technical stakeholder engagement were undertaken to understand existing issues and opportunities, discuss potential improvements, and ultimately arrive at a preferred set of recommendations that reflect the long-term local vision of the Colma community.

The existing challenges on the El Camino Real corridor in Colma include narrow and missing sidewalks, long and infrequent crosswalks, discontinuous bicycle facilities,

and high travel speeds. The Plan proposes the following changes to improve the travel experience for all roadway users:

- A road diet for the northern segment, from Albert M Teglia Boulevard to Mission Road
- Separated bicycle facilities
- Continuous sidewalks
- Crosswalk enhancements, pedestrian refuges, and curb extensions
- Protected intersections
- New traffic signals
- Bus stop relocations
- Landscaping, trees, and green infrastructure
- Reconfiguration of the Mission Road intersection (“the Y intersection”)

The following sections of the Plan include an overview of project goals, an assessment of existing conditions on the corridor, a summary of community engagement activities, and a full corridor concept with planning-level cost estimates and funding and implementation strategies.

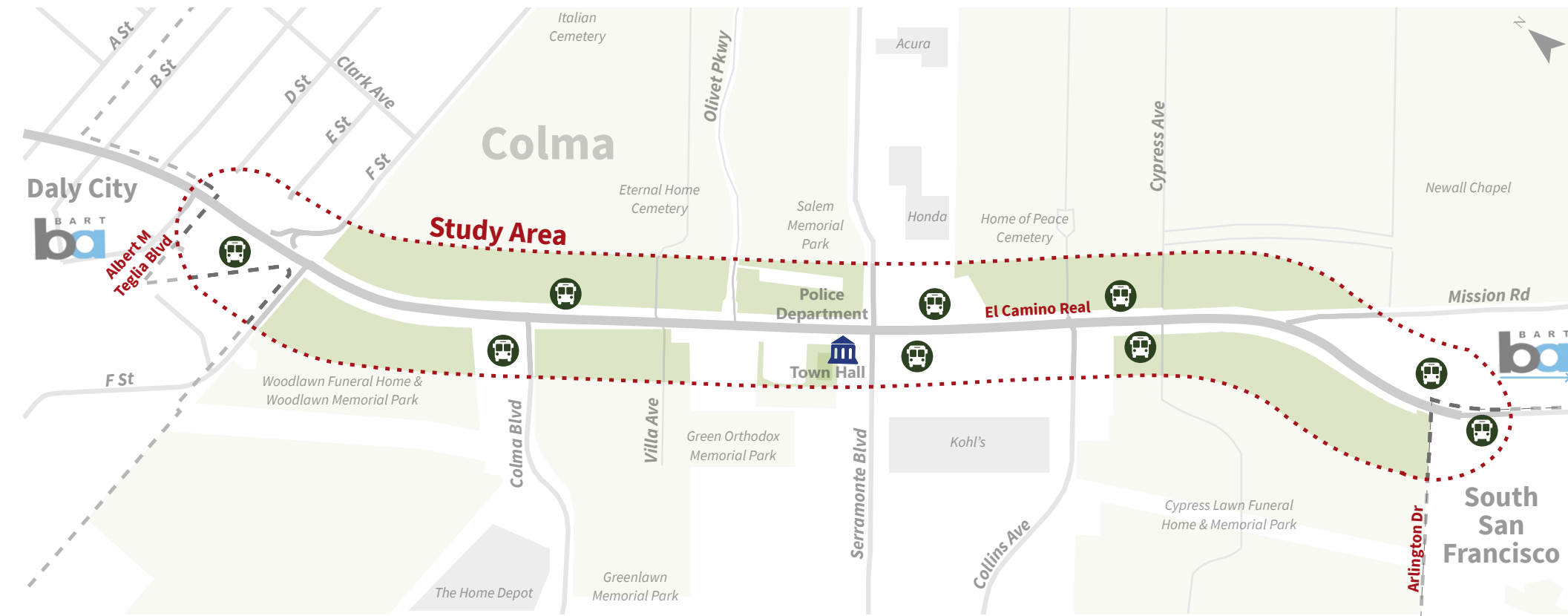


FIGURE 1-1
El Camino Real in the Town of Colma



02

PLANNING CONTEXT



The Colma El Camino Real Bicycle and Pedestrian Plan is a community-centered effort focused on developing a comprehensive study of bicycle and pedestrian improvements for El Camino Real between Albert M Teglia Boulevard and Arlington Drive. The Plan builds on the previous studies summarized in this section.

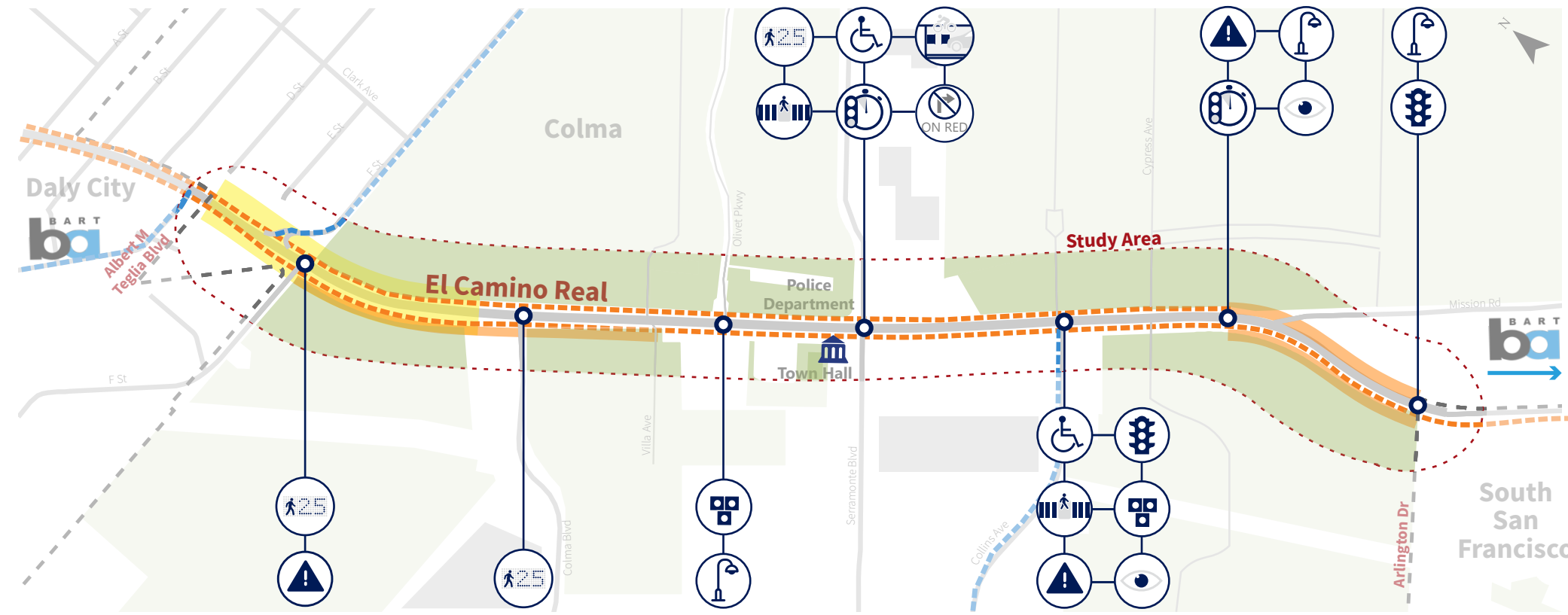
Previous Plans

The Town of Colma’s El Camino Real Bicycle and Pedestrian Improvement Plan builds on multiple planning documents and projects that provide context and serve as a foundation for this Plan. The relevant information and recommendations found in each of these documents is summarized below and in the graphic:

- *Caltrans District 4 Bike Plan* identifies barriers to bicycling in the San Francisco Bay Area and opportunities to enhance bicycle safety and mobility. It calls for Class IV Separated Bicycle Lanes on El Camino Real in Colma and Daly City (north of Collins Avenue).
- *San Mateo Countywide Comprehensive Bicycle and Pedestrian Plan (2012)* provides a policy framework to guide and evaluate implementation of the planning and design of bicycle and pedestrian projects of countywide significance. This plan is

currently in the process of being updated and will include an online map of county-wide bicycle and pedestrian infrastructure. The latest version (at the time of writing) calls for Class IV Separated Bicycle Lanes on the County portion of El Camino Real north of Colma.

- The Town’s *Circulation Element* identifies facilities for the safe, efficient, and environmentally responsible movement of people and goods through Colma, ensures these facilities reflect the land uses contemplated by the Land Use Element, and ensures a range of transportation options are available throughout the Town.
- *Colma’s Transportation Safety Action Plan – Systemic Safety Analysis Report (SSAR)* provides an initial step to identify primary safety concerns and proposed countermeasures on El Camino Real that need to be further evaluated and addressed in the Plan (e.g. high-risk intersections and segments).
- *Serramonte and Collins Master Plan* presents future improvements of Collins Avenue and Serramonte Boulevard, including a proposed road diet on Serramonte Boulevard between the Serra Center driveway and El Camino Real.
- *Mission Road Bicycle and Pedestrian Improvement Plan* incorporates enhanced bicycle and pedestrian facilities on Mission Road, which would directly connect with facilities on El Camino Real.



Legend

- Study Area
- - - Town of Colma Limits
- High Risk Corridor (as defined in SSAR)
- Missing Sidewalk

Proposed Bike Facilities

- Planned Class III Bike Route
- Planned Class IV Separated Bicycle Lane

*Caltrans D4 Bike Plan plans for Class IV on El Camino Real north of Collins Avenue (as shown on this graphic), while San Mateo County Comprehensive Bicycle and Pedestrian Plan shows a proposed Class II or Class III on El Camino Real between Mission Road and F Street.

Recommendations

- Improve High Risk Intersection (as defined in SSAR)
- Consider Leading Pedestrian Intervals
- Improve Street Lighting
- Install Pedestrian Hybrid Beacon
- Consider Pedestrian Refuge
- Update Signal Timing
- Review ADA Compliance
- Consider Green Pavement Markings for Bike - Vehicle Conflicts
- Prohibit Right Turn On Red
- Evaluate Intersection Control
- Improve Sight Distance

FIGURE 2-1
Recommendations Identified in Previous Studies and Planning Documents

The Plan addresses the following primary safety and accessibility concerns on El Camino Real:

- Missing or narrow sidewalks and limited safe crossings
- Missing bicycle facilities and connection to the Mission Road bicycle lanes
- Missing safe crossings at El Camino Real/Mission Road “Y” intersection
- High vehicle speeds

Existing Conditions

The study began with an assessment of existing conditions and engagement with the community to determine key needs, issues, and opportunities for the corridor. The existing conditions findings, along with community visioning, were used as the basis for developing design alternatives for the corridor. This chapter provides a snapshot of current conditions for walking, biking, driving, and riding transit on El Camino Real, as well as the land use context and the

characteristics of those who live, work, and travel in Colma. It summarizes the overarching constraints and opportunities that will affect the development of pedestrian and bicycle facilities and the overall network. More details can be found in the Existing Conditions Report in Appendix A.

LAND USE CONTEXT

Land use types and key destinations along El Camino Real provide important context to understand travel patterns and mode choice for those who use the corridor. The infrastructure related to the land uses (for example, driveways) are important considerations when identifying potential improvements.

The Town of Colma is the smallest town in San Mateo County. It is popularly known as the “City of Souls,” since its primary non-residential land use is cemeteries. The cemeteries line El Camino Real, along with some commercial uses and public institutions near the intersection with Serramonte Boulevard. Residential neighborhoods largely are located at the north and south ends of the Town, including affordable housing near the Colma BART station.

The Town’s land use patterns pose challenges to its transportation network. The cemeteries

attract brief visits made mostly by vehicle, and the automobile dealerships near Serramonte Boulevard and other commercial uses that front El Camino Real tend to use much of their land for parking or vehicle storage, creating an unwelcoming environment for walking and biking. As a result, the corridor is generally used for passing through rather than as a destination.

The Town has identified a limited number of sites adjacent to El Camino Real that may be underutilized, and it commissioned an “Urban Design Study” to review these sites for contextual development opportunities. These sites include the current Kohl’s property and parking lot, a site south of Albert M Teglia Boulevard and sites at the intersection of El Camino Real with Mission Road. In addition, there currently exists several schools a few blocks north in Daly City, El Camino High School near the South San Francisco BART station, a new Veteran’s housing development near the Mission Road intersection, and a planned development on El Camino Real just south of Mission Road. It is critical to provide transportation options that support these land use changes.

The existing and planned land uses in Colma have informed the recommendations of the Plan to create a positive experience for all users of the corridor.

DEMOGRAPHICS AND DISADVANTAGED COMMUNITIES

The Town of Colma aims to design its streets to accommodate everyone, regardless of age, ability, economic situation, race, ethnicity, and interests. Before proposing any improvements for El Camino Real, it is important to understand the unique demographic characteristics of the Town and those who use the corridor.

Disadvantaged Communities

Three areas neighboring the Town of Colma are designated “Communities of Concern” by the Metropolitan Transportation Commission (MTC): two in Daly City and one in South San Francisco. While the Town of Colma does not itself contain a Community of Concern, certain segments of its population would be considered disadvantaged or vulnerable based on characteristics that align with the factors considered by MTC. There is also affordable housing around the Colma BART station. The Plan identifies infrastructure improvements that will help better connect these disadvantaged communities to Colma and the neighboring cities.

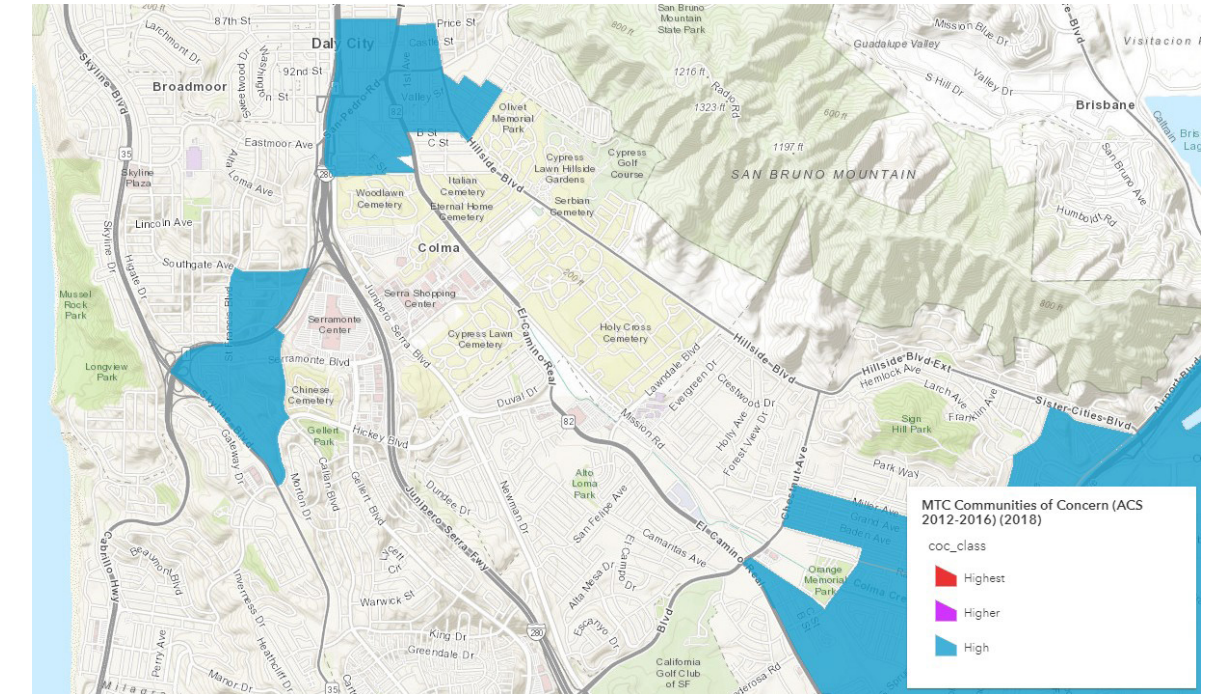


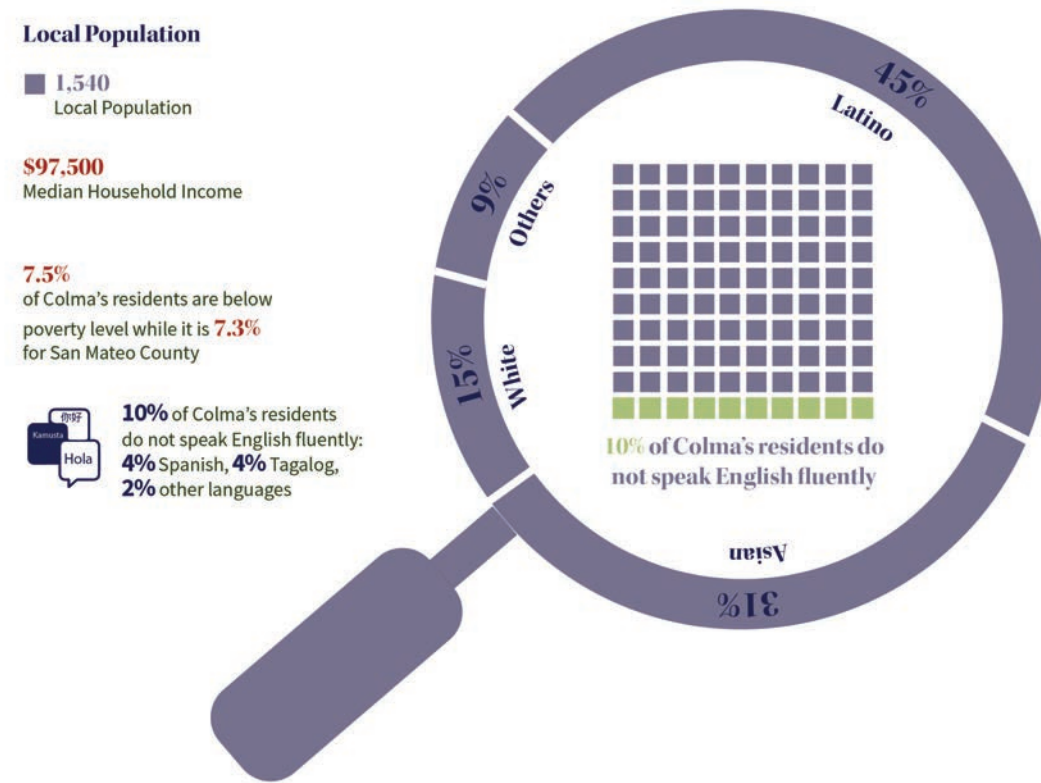
FIGURE 2-2
Disadvantaged Communities Neighboring Colma
Source: MTC; Retrieved on April 30, 2019 at <http://opendata.mtc.ca.gov/datasets/mtc-communities-of-concern-in-2018-acs-2012-2016?geometry=-122.557%2C37.664%2C-122.394%2C37.687>

The sections below present key characteristics of Colma’s population and employees, identifying traits that make these specific communities vulnerable.

Who Lives in Colma?

Colma’s population of around 1,500 residents is quite diverse, with people from a range of ethnic, racial, and linguistic backgrounds. Forty-five percent of Colma’s population is Latino and 31 percent is Asian. Ten percent of Colma residents do not speak English fluently.

Seven and a half percent of residents are below the federal poverty level, slightly more than the percentage for the overall population of San Mateo County. The Town of Colma and a portion of Daly City just north of Colma are identified as low-income communities per AB 1550, with income levels 45 to 80 percent below the County’s median income. This population, in particular, needs high-quality, affordable and reliable transportation options.



Source: Population: Healthy Cities San Mateo County, U.S. Census Bureau, 2012-2016 American Community Survey 5-year Estimates
Income: U.S. Census Bureau, 2013-2018 American Community Survey 5-year Estimates

Who Works in Colma?

Consistent with the Town’s commercially-focused land use patterns, more people work in Colma than live in Colma, and only one percent of Colma employees live in the Town. Fifty-seven percent of Colma employees are in the retail trade industry, which consists of jobs that often pay low wages and have shifts that start and end outside typical weekday commute hours when high-frequency transit service is provided. Other major employers in Colma include cemeteries, cemetery support uses (such as flower and monument sales) and auto sales and service. The predominant employment type on Mission Road relates to auto repair and service, along with other light-industrial uses. The Town’s largest employer is Lucky Chances Casino, located east of El Camino Real on Hillside Boulevard, which is open 24/7 with full and part-time employees working in shifts. Given that most employees commute from outside of Colma, employees in low wage retail jobs may have limited commute options and flexibility. Providing good transportation connections for employees from neighboring communities can help the Town’s economic vitality.



Source: Employment: Longitudinal Employer-Household Dynamics (LEHD) 2015

How Do People Commute

to Work in Colma?

The lack of sidewalks, bikeways and other accommodations for non-driving modes gives people limited commute options. Seventy-one percent of employees drive alone or carpool to work; nineteen percent of employees take transit; and ten percent

choose to walk, bicycle, take a taxi, use a transportation network company (e.g. Uber, Lyft), or use other means of transportation. Improvements to El Camino Real would remove important accessibility barriers on the corridor.



71%
drive to work



19%
take transit



10%
use other modes

TRANSPORTATION CONTEXT

In the Town of Colma, El Camino Real has two distinct configurations: three lanes in each direction with a wide median north of Mission Road, and two lanes in each direction south of Mission Road. The Plan looks separately at the two segments of El Camino Real in Colma, dividing the 1.2-mile corridor into Segment A from Albert M Teglia Boulevard to Mission Road (0.85 miles) and Segment B from Mission Road to Arlington Drive (0.35 miles).

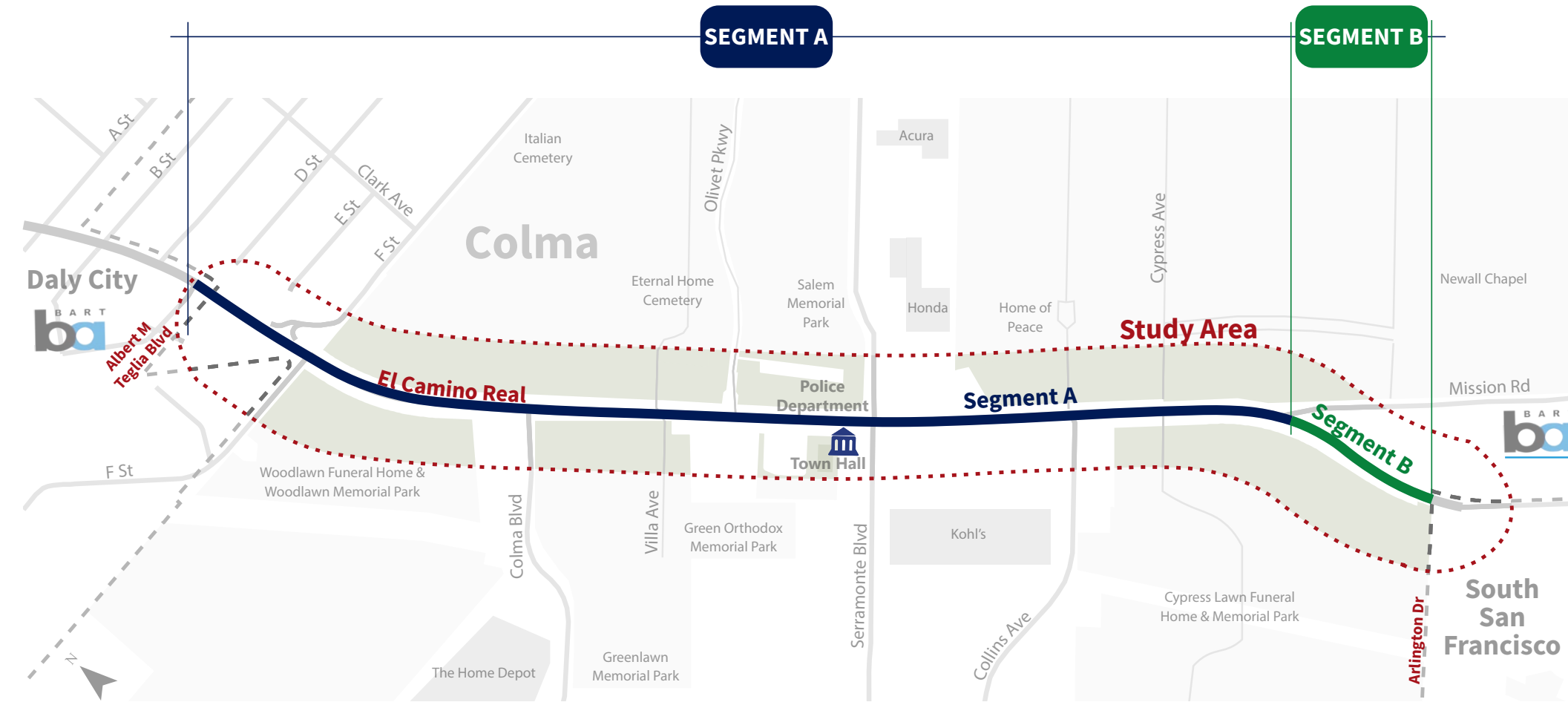


FIGURE 2-3
Colma El Camino Real Segments

The existing cross section of **Segment A** generally has three vehicle travel lanes in each direction, discontinuous parking and sidewalks on both sides of the street, and a wide median with a concrete box culvert underneath. Some sections of Segment A do not have a sidewalk or parking on the west side, where there is instead an open culvert. Where present, the sidewalk is six to eight feet with landscaping along the side.

The existing cross section of **Segment B** has two vehicle travel lanes in each direction with no parking, median or sidewalks. The area adjacent to the roadway includes uneven terrain with landscape, trees, and bushes.

Both Segment A and Segment B currently experience fairly low traffic volumes throughout the day (prior to the COVID-19 pandemic), meaning vehicles can travel freely along the corridor with a high level of comfort and at high speeds above the 35 to 40 miles-per-hour speed limit. These free-flow roadway conditions, combined with the corridor's missing sidewalks, infrequent pedestrian crossings, and lack of bicycle facilities, make El Camino Real a stressful roadway for pedestrians and bicyclists and provide an exciting opportunity to explore the reallocation of space on the corridor.

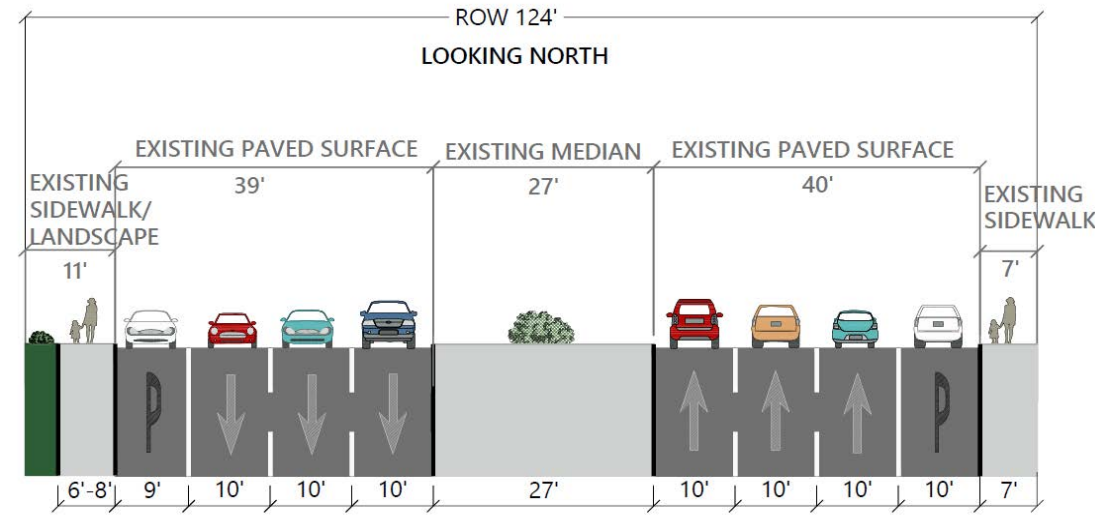


FIGURE 2-4
Segment A Existing Cross Section

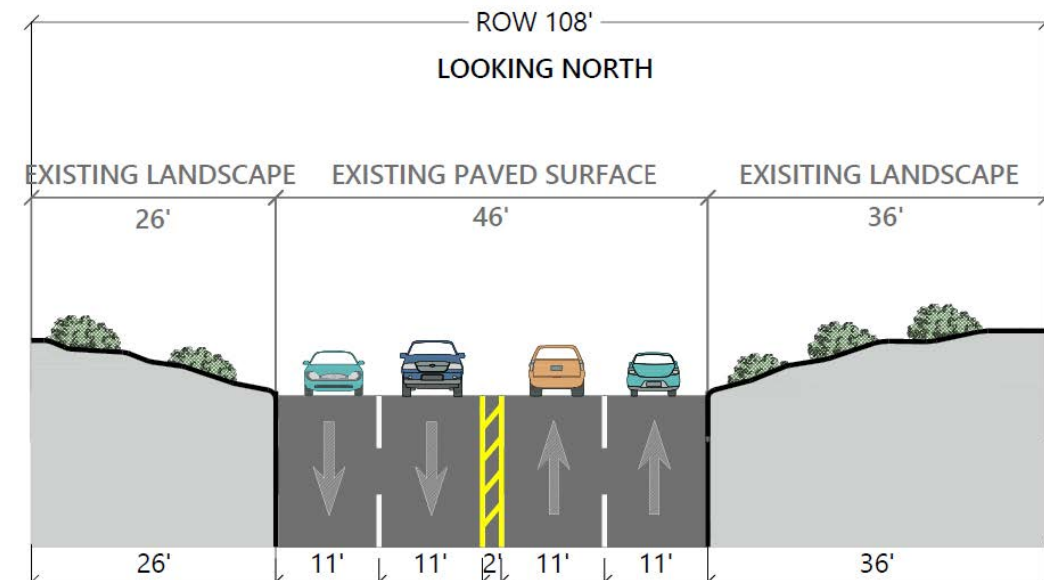


FIGURE 2-5
Segment B Existing Cross Section

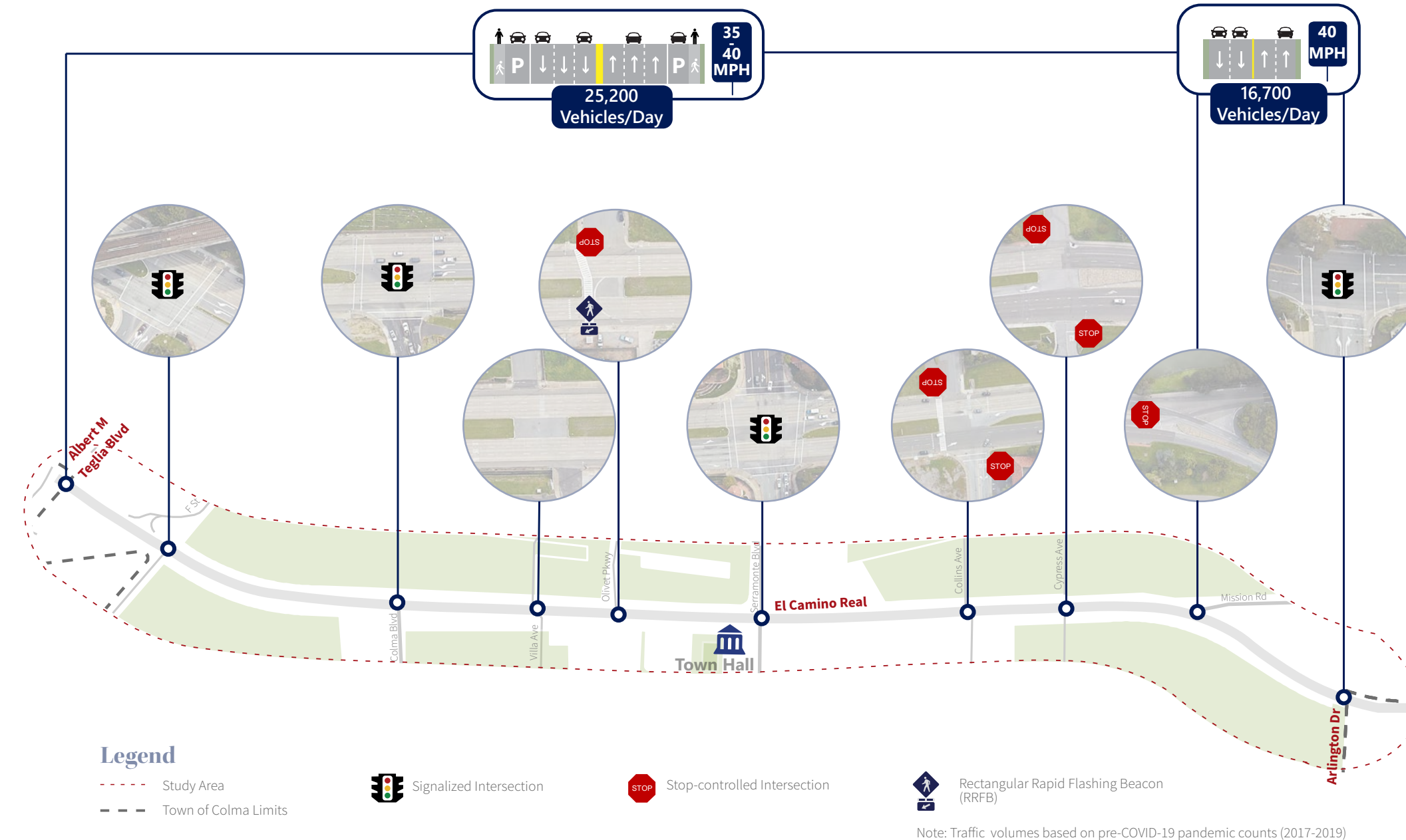


FIGURE 2-6
Existing Daily Volumes and Intersection Controls on El Camino Real

Note: Traffic volumes based on pre-COVID-19 pandemic counts (2017-2019)

Pedestrian Facilities

Walking is the oldest form of human transportation. It is accessible to everyone and friendly to the environment. In its current state, El Camino Real is unwelcoming to pedestrians. The corridor has no sidewalks on the west side from F Street to Villa Avenue (Greek Cemetery entrance) and no sidewalks on either side from Mission Road to Arlington Drive. When provided, sidewalks are generally narrow and lack ADA ramps, resting places, or shade. These conditions discourage people from traveling through the Town on foot and result in low pedestrian volumes on El Camino Real, despite the bus stops and businesses along the corridor. Improvements to make El Camino Real more pedestrian-friendly would improve quality of life for Colma residents and visitors, as well as provide health benefits and contribute to the economic development of the Town.

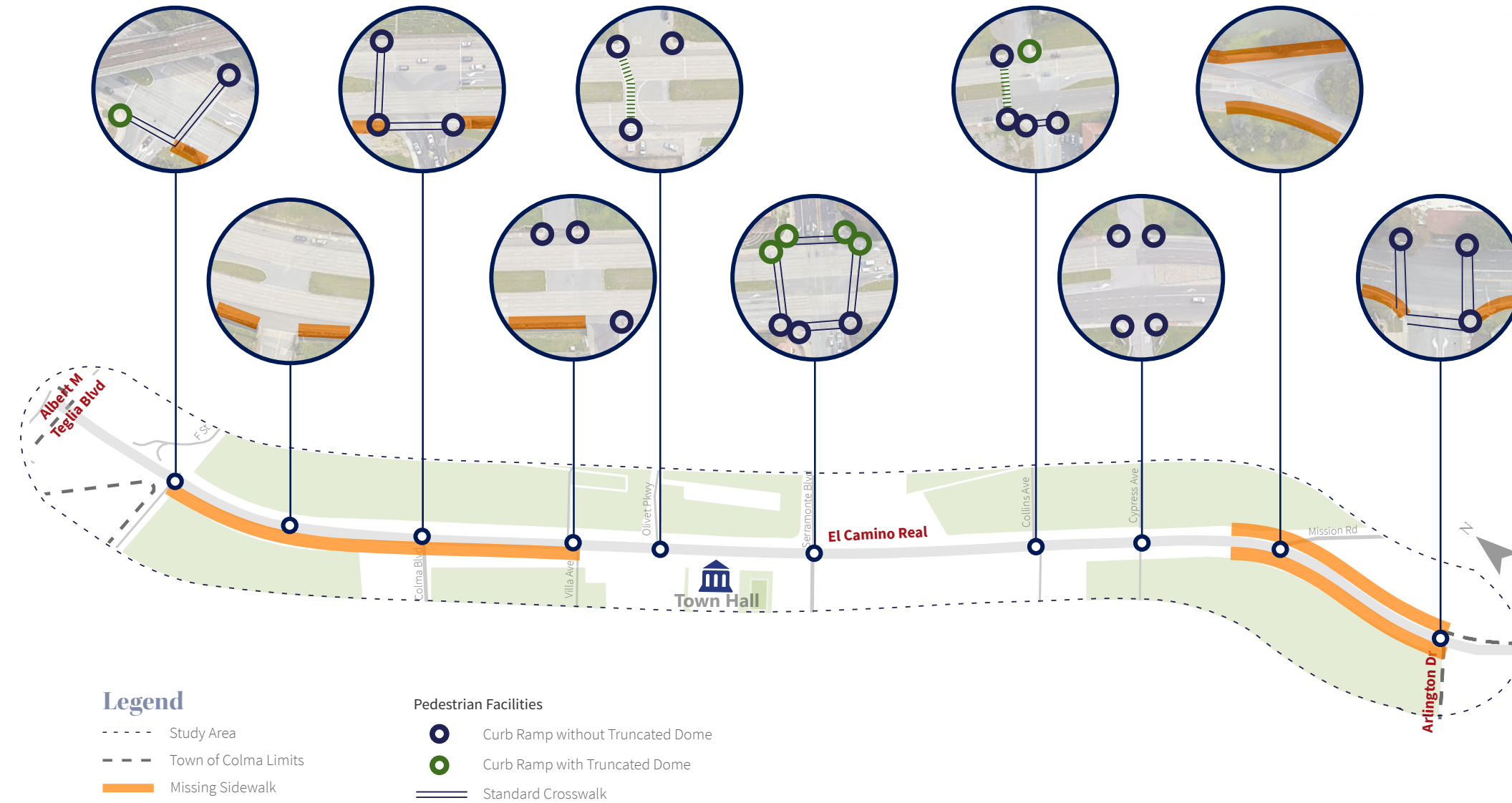


FIGURE 2-7
Existing Pedestrian Facilities on El Camino Real

Bicycle Facilities

Biking is another accessible and environmentally friendly form of transportation that helps promote a healthy lifestyle. Currently, there are no existing bicycle facilities on El Camino Real to support biking along the corridor, and existing bicycle volumes are very low. However, there is high potential for bicycle trips on El Camino Real. Colma employees come from nearby communities, with 20 percent of commute trips to Colma being less than two miles - a very bikeable distance. Similarly, eight percent of trips traveling through Colma on El Camino Real are two miles or less. With the implementation of bicycle facilities on El Camino Real, the Town could help make it more feasible and attractive to take these short trips by bicycle.

Town, County, and State transportation plans call for bicycle facilities on El Camino Real as a main active transportation connection through multiple jurisdictions. Bicycle facilities on El Camino Real would connect to the regional transit system at the two adjacent BART stations (Colma and South San Francisco), connect to the Mission Road bicycle lanes to the south, and connect to the Centennial Trail towards San Bruno.

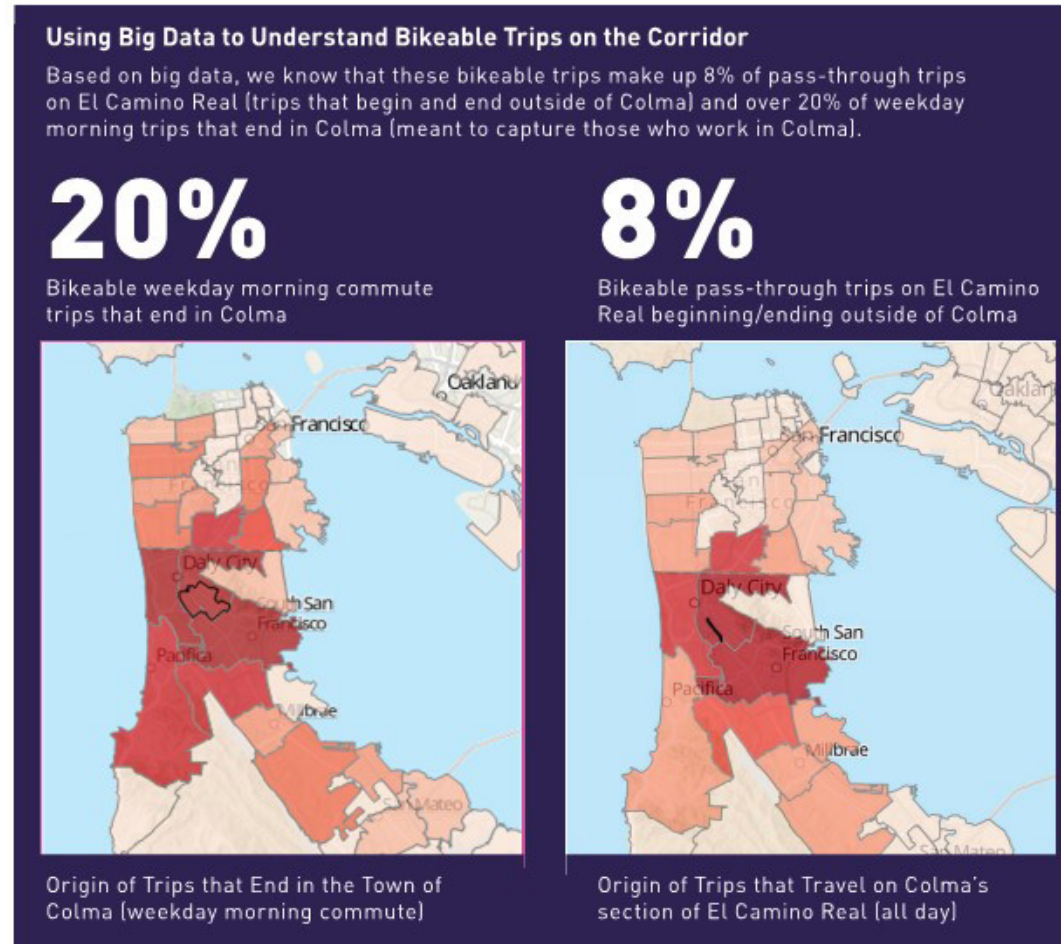


FIGURE 2-8
 Understanding Bikeable Trips on the Corridor

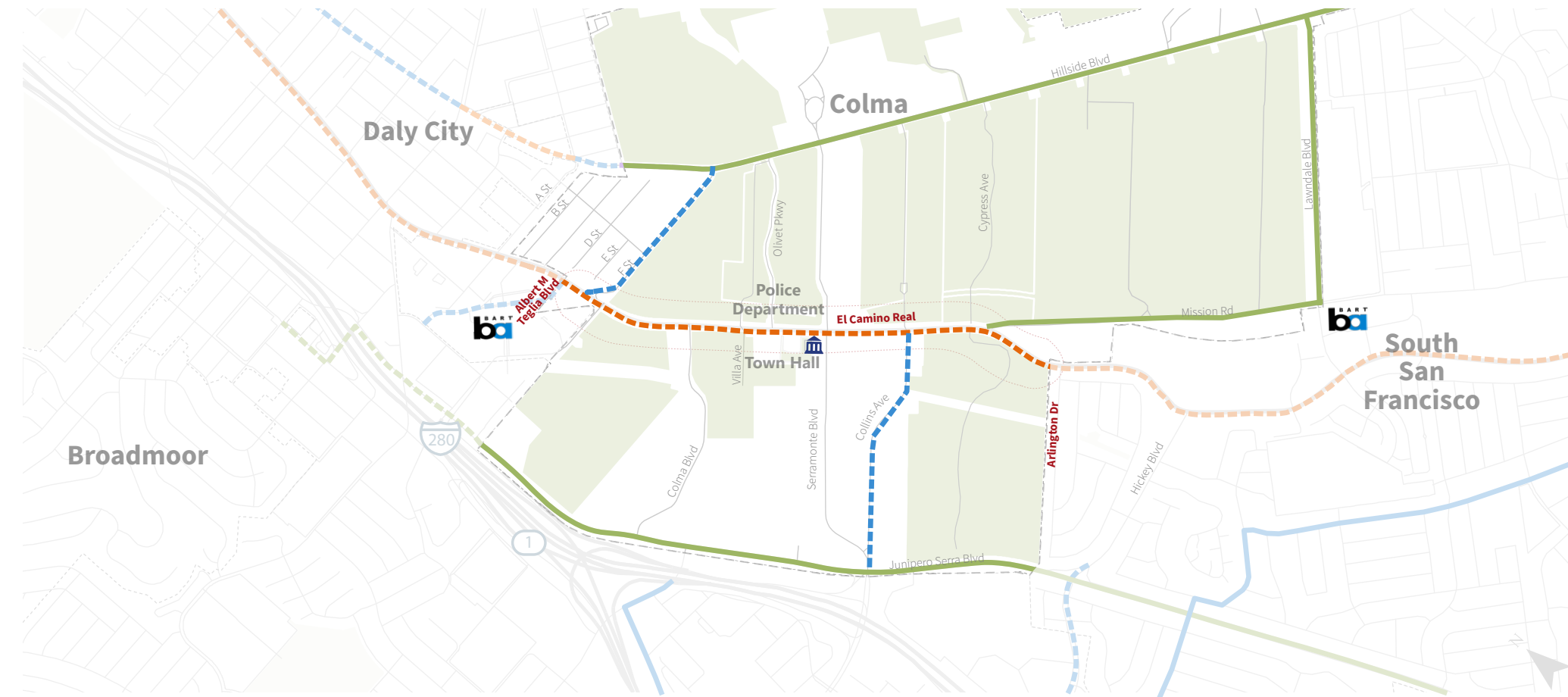


FIGURE 2-9
 Existing and Planned Bicycle Facilities on El Camino Real

Transit Facilities

Public transit plays a vital role in providing economic and social benefits, especially for disadvantaged communities. The Colma and South San Francisco BART stations at the north and south end of the Study Area serve as transfer locations between BART and local bus and shuttle routes. Five of the SamTrans multi-city bus lines stop at the Colma BART station, and three of these stop along El Camino Real as well (ECR, 120, 130). Route ECR is a particularly important route connecting riders across all of San Mateo County along El Camino Real, generally running every 20 minutes. Routes 120 and 130 connect riders between Daly City, South San Francisco, and San Francisco International Airport, and they run southbound on El Camino Real between Albert M Teglia Boulevard and F Street generally every 30 minutes. Buses along El Camino Real in Colma currently travel in the same lane as cars and pull into the parking lane to pick up passengers at curbside bus stops. The pedestrian and bicycle improvements recommended in the Plan provide important transit access improvements. A complementary study could be conducted with SamTrans to comprehensively address transit services and facilities along the corridor.



FIGURE 2-10
Existing Transit Facilities on El Camino Real

Parking

The design and management of parking supply affects the livability and walkability of Colma. Understanding parking supply and demand on the corridor provides insight into where parking is crucial and where the space may be repurposed, so the final design can be developed to meet the community needs.

On-street parking currently is permitted and free on both sides of El Camino Real in Colma, with the exception of a few locations where there is no parking lane: the west side from F Street to Colma Boulevard, the east side from Cypress Avenue to Mission Road, and both sides from Mission Road to Arlington Drive. On-street parking utilization on El Camino Real is generally low at all times of the day, except for north of F Street, near the Colma BART station, and extending north and south from Serramonte Boulevard, near the commercial area. Most parked vehicles concentrate on both sides of El Camino Real from Albert M Teglia Boulevard to F Street and from Serramonte Boulevard to Collins Avenue.

Current levels of on-street parking utilization support the Town’s *Land Use and Urban Design Strategy* to maintain on-street parking in commercial areas (“Pedestrian

Public Realm Focus” areas) and explore opportunities to enhance pedestrian and bicycle facilities in lower-utilized areas (“Boulevard” areas). This strategic replacement of parking would help the Town encourage people to walk and bike to work, shop, and connect to transit.

Safety

Collision data help us understand transportation safety patterns on El Camino Real. *The Colma Systemic Safety Analysis Report (SSAR)* provides insight into collision trends on the corridor from 2011 to 2016. According to the report, El Camino Real is the third highest collision corridor in the Town with 18 percent of total collisions. The most common collision types on the corridor are broadside and sideswipe. The most common travel violations on the corridor are improper turning (18%), failure to yield to another motorist who had the right of way (18%), unsafe speed (14%), and driving or bicycling under the influence of alcohol or drugs (14%). While no corridor-specific data are provided in the Colma SSAR about bicycle and pedestrian collisions, the report finds that seven percent of reported collisions Town-wide involved pedestrians or bicyclists.

All of the bicycle and pedestrian collisions resulted in some level of injury, with one fatal pedestrian collision reported.

The results of the *Colma SSAR* have been incorporated into the Plan to provide infrastructure improvements that enhance all users’ experience on the corridor.

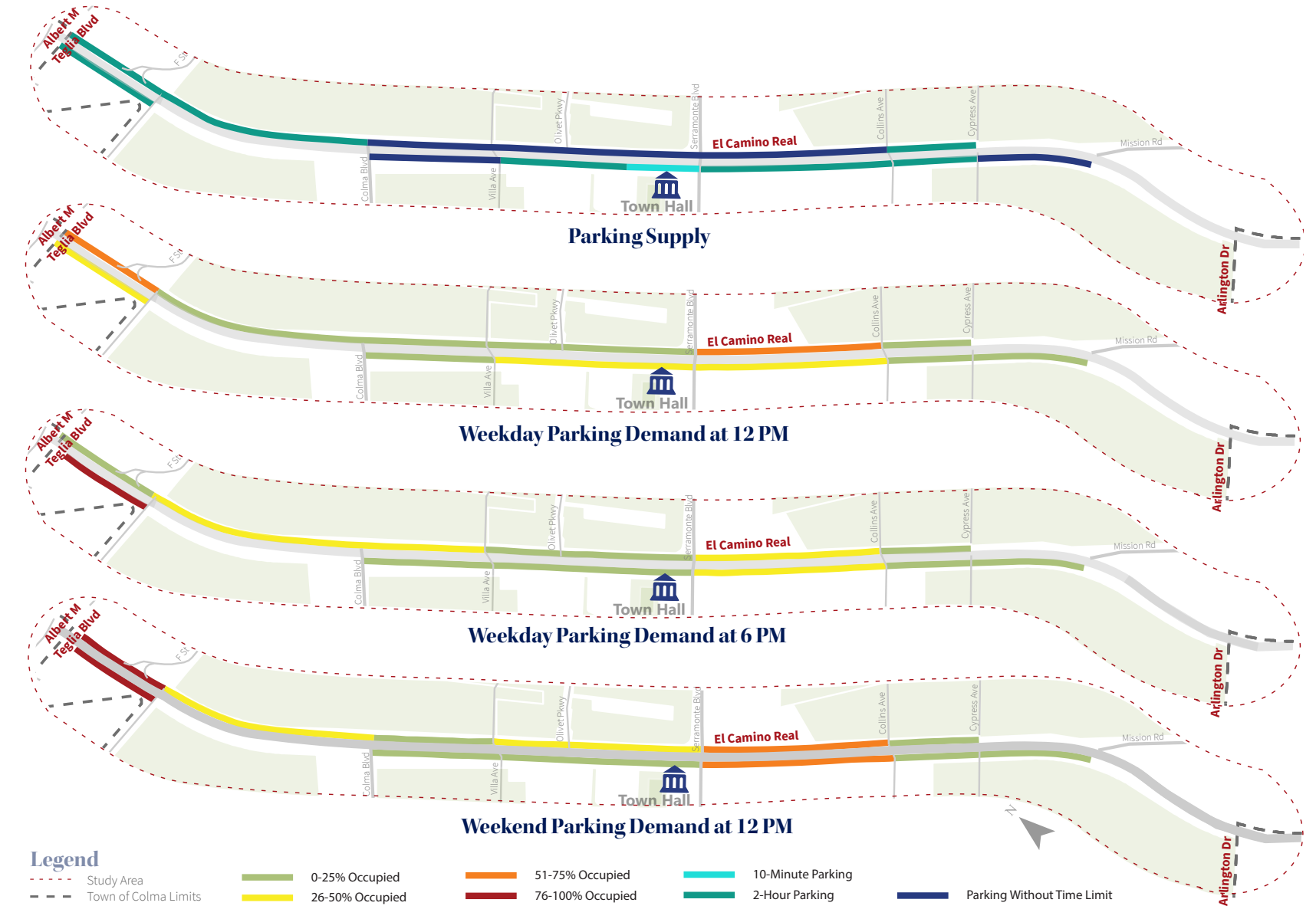


FIGURE 2-11
Existing Parking Demand on El Camino Real



03

COMMUNITY ENGAGEMENT



The Colma El Camino Real Bicycle and Pedestrian Plan is a collaborative planning effort to produce an actionable, community-based design. The goal is to create a corridor that welcomes and serves the people who live, work, and travel along it. The project team employed a variety of tools, venues and platforms to facilitate education and information-sharing, gather input, and publicize the planning effort throughout the study process.

Community Engagement Phases

Community engagement occurred in three phases, paralleling the development of the study. In Phase 1, large-format maps allowed participants to explore the study area, describe their experiences, and identify issues and possible solutions at a zoomed-in scale. In Phase 2, participants used storyboards to comment on and vote for alternative cross sections. In Phase 3, the community experienced the preferred alternative by navigating through a full-scale design of the corridor and 3D renderings on the project website ColmaElCaminoReal.Org

Phase 1 (August-September 2019): Introduce the project, gather input on relative importance of the project goals, and gather input on current constraints and opportunities along the corridor.

Phase 2 (February-March 2020): Present cross section alternatives, gather input on the design elements, and determine stakeholders' preferred alternative.

Phase 3 (October 2020): Present preferred alternative design concept, demonstrate key design features at full-scale, and collect feedback on the preferred alternative design.

Engagement Tools

The community engagement process was designed to achieve a community-driven vision for El Camino Real. For each phase, the project team engaged with the community through a series of resident-focused and business-focused activities, as well as through organized meetings with a Technical Advisory Committee (TAC), Caltrans and City Council. The project team combined traditional community meetings (e.g., Town Hall meetings and open houses) and non-traditional events (e.g., pop-ups at Colma BART station) to encourage broad participation from residents, employees, business owners, visitors, and others. Online tools (e.g. project website, email, Livewire, social media) were another important feature of the engagement strategy, and these proved especially effective under the shelter-in-place requirements of the COVID-19 pandemic.

The Effect of COVID-19 on Community Engagement

Unexpectedly, in March 2020, the spread of COVID-19 led to a shelter-in-place order that impacted the last two phases of community engagement. The project team adapted and found creative ways to continue engaging the community, despite the physical distancing requirements. The team focused on online engagement through the project website, changed to emailed outreach instead of flyers and pop-up events, and hosted online meetings to answer questions from the community. The project team built a stronger online presence with more interactive tools, including videos and 3D images, so that people could experience the space virtually.

How We Reached the Community and Stakeholders

- Community engagement events
 - Four community meetings
 - Two pop-up events
 - Online engagement
 - Three TAC meetings
 - One Caltrans meeting and continuous coordination
 - Three City Council meetings
-

During Outreach we...

received over **300** comments and reached an estimated **650** people based on views of the online engagement and people talked to in person.

660

Community Engagement Events

COMMUNITY MEETINGS

The project team hosted four community meetings, including two public meetings, one open house, and one virtual open house during the COVID-19 pandemic. The public meetings started with a presentation from the project team, followed by a discussion with the community to gather their thoughts and perspectives, and ended with an opportunity for the community to vote on preferred options and provide additional written comments. Open houses followed a looser structure, allowing community members to review project information at their own speed, while the project team served as a resource to answer questions. Similar to at the public meetings, community members could provide written feedback and vote on their preferred approach through the project website (ColmaElCaminoReal.Org).

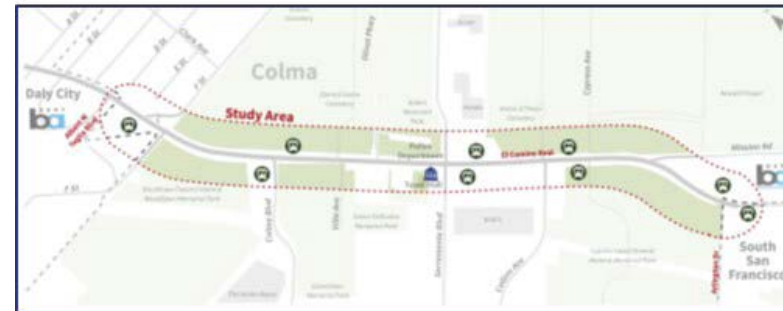
- September 12, 2019: Town Hall Public Meeting (midday)
- September 12, 2019: Town Hall Open House (evening)
- March 5, 2020: Town Hall Public Meeting
- October 6, 2020: Virtual Open House



The Town of Colma received a grant from the Caltrans Sustainable Communities Program to improve safety and mobility for people who walk and bike along El Camino Real, and to increase access to public transportation.

Improvements to the corridor will enhance safety, encourage the use of sustainable transportation, and provide better connectivity to BART stations and bus stops to improve overall quality of life.

The El Camino Real corridor we are studying extends within the Town of Colma, approximately between the Colma BART station and Arlington Drive.



We want to hear about your experience traveling in the Town of Colma.

- What's it like to walk and bike along El Camino Real?
- What improvements would you like to see?
- Are there barriers that prevent you from walking or biking on El Camino?

Visit our website to learn more and provide your input through an interactive map and survey:

ColmaElCamino.org

SCAN ME

FIGURE 3-1
Example Outreach Flyer

Map Your Feedback

Tell us about your experience traveling in the Town of Colma.

- What's it like to walk and bike along El Camino Real?
- What improvements would you like to see?
- Are there barriers that prevent you from walking or biking on El Camino?



FIGURE 3-2
Example Outreach Board

POP-UP EVENTS

The project team set up “pop-up” booths at the Colma BART station to raise awareness about the Plan and get additional feedback from people who may not attend traditional meetings or open houses. “Pop-up” events allowed the outreach team to meet community members at a place and time that was convenient and comfortable for them.

The fact that the conversations happened adjacent to the study corridor helped facilitate conversation and prompt ideas. At the “pop-up” events, participants identified issues and opportunity areas on maps, identified the types of improvements they wanted to see installed throughout the corridor, and shared their reactions to the draft design alternatives. Approximately 220 people were reached through the pop-up events.

September 12, 2019: Colma BART Pop-up
March 5, 2020: Colma BART Pop-up



FIGURE 3-3
Example Online Input

ONLINE ENGAGEMENT

The project website enabled communication between the community and the project team throughout the Plan development process. The website provided general information about the project, presented the latest information about the Plan, and included an open comment form to provide feedback and contact the team at any time. For each phase of community engagement, community members could go the website and access an online survey that mimicked the materials used for the in-person community meetings and pop-up events, bringing the in-person experience online. The online tools were particularly instrumental during Phase 3, when shelter-in-place restrictions precluded in-person engagement.

Overall, over **450** people visited the website and over **130** comments were collected through the website.

TAC Meetings

A Technical Advisory Committee (TAC) helped guide the planning process and provided feedback on key deliverables throughout the study.

The following agencies were represented on the TAC:

- BART
- Caltrans
- City of South San Francisco
- Colma Business Community
- Colma Police Department
- Daly City
- SamTrans
- San Mateo County
- Silicon Valley Bike Coalition
- Town Council Members
- Town of Colma

The TAC convened three times throughout the study, aligned with the three phases of community engagement.

TAC Meeting 1: September 20, 2019
TAC Meeting 2: February 20, 2020
TAC Meeting 3: October 6, 2020



Caltrans Coordination

As a state-owned facility, improvements on El Camino Real will require final approval from Caltrans. Caltrans was a critical partner throughout the Plan development process, attending every TAC meeting and providing input on the cross-section alternatives and final concept design. Caltrans hosted a design review meeting on August 11, 2020 with key reviewers from the agency to discuss the consistency of the corridor concept design with agency goals and general design guidelines, as well as necessary next steps prior to implementation.

City Council

City Council members played an important role in the Plan development process, serving as decision-makers representing the interests of the Colma community. The project team presented to the City Council three times throughout the project to update Council members on the Plan progress and community input, as well as to hear Council members' comments, concerns, and preferences so they could be incorporated.

City Council Meeting 1: October 23, 2019

City Council Meeting 2: April 22, 2020

City Council Meeting 3: January 27, 2021





04

LOCAL VISION

The vision for the Colma El Camino Real Bicycle and Pedestrian Improvement Plan is to help make the Town of Colma a place where bicycling and walking are safe, comfortable, and convenient forms of transportation and recreation for people of all ages and abilities. This vision reflects the priorities of the Colma community and stakeholders as identified through the community engagement process. The Town of Colma will use the Plan as a framework to improve the community’s health, mobility, livability, economy, and environment.

Goals and Values

At the onset of the Plan development process, goals and values were developed for the Plan to help set a vision for the El Camino Real corridor in Colma and guide the development of the Plan. These goals and values are informed by Town priorities and consistent with the Town’s grant funding application. They also are aligned with the Grand Boulevard Initiative’s (GBI) Guiding Principles and reflect street design best practices in California. Potential ways to accomplish each goal and how these align with GBI’s Guiding Principles are presented in Appendix A.

GOALS AND VALUES



SAFETY AND PUBLIC HEALTH

Creating safe conditions reduces the severity and frequency of collisions for all modes, as well as promotes physical activity by enhancing the experience of walking and biking.



SUSTAINABILITY

Reducing vehicle use by making walking, biking, and riding transit more accessible improves congestion and environmental impacts.



ECONOMIC DEVELOPMENT

Developing solutions that encourage economic growth and equitable economic opportunities for all neighborhoods and corridor users.



COST EFFICIENCY

Prioritizing cost-effective solutions that align with potential funding sources and minimize project complexity.



CONNECTIVITY AND ACCESS

Reducing gaps in the transportation network for all modes, including improving pedestrian sidewalks and crossings, bicycle paths, and transit access.



MOBILITY AND RELIABILITY

Reducing travel times along the corridor for all modes, including increasing transit reliability and public parking.



QUALITY OF EXPERIENCE

Creating an integrated environment for pedestrians and bicyclists with improved pathways, vibrant public spaces, and better landscaping.

Community Priorities

Colma community members and stakeholders voiced their preferences for the goals and values they wanted to prioritize for the Plan. They identified the following as the top four goals and values:

1. Safety and Public Health
2. Connectivity and Access
3. Mobility and Reliability
4. Quality of Experience

Community members and stakeholders also voted on their desired improvements for the corridor. The top three community-desired improvements – sidewalks, bicycle lanes, and improved pedestrian/ bicycle crossings – align with Safety and Public Health as the top goal for this Plan.

“El Camino Real makes up only 0.5-1% of the street network in San Mateo and Santa Clara Counties, yet 5-15% of collisions involving people walking and biking take place there. The street is a community hub of destinations including new homes and offices, shops, schools, and transit, yet it is a wide multilane road with fast-moving cars and lengthy crosswalks. I believe in the vision of the Grand Boulevard Initiative (GBI) for a people-friendly El Camino Real with a focus on increasing access to destinations and improving quality of life. Focusing on making the street safer for those walking and biking will help achieve this vision.”

-Community Member

What Improvements Do You Want On El Camino Real

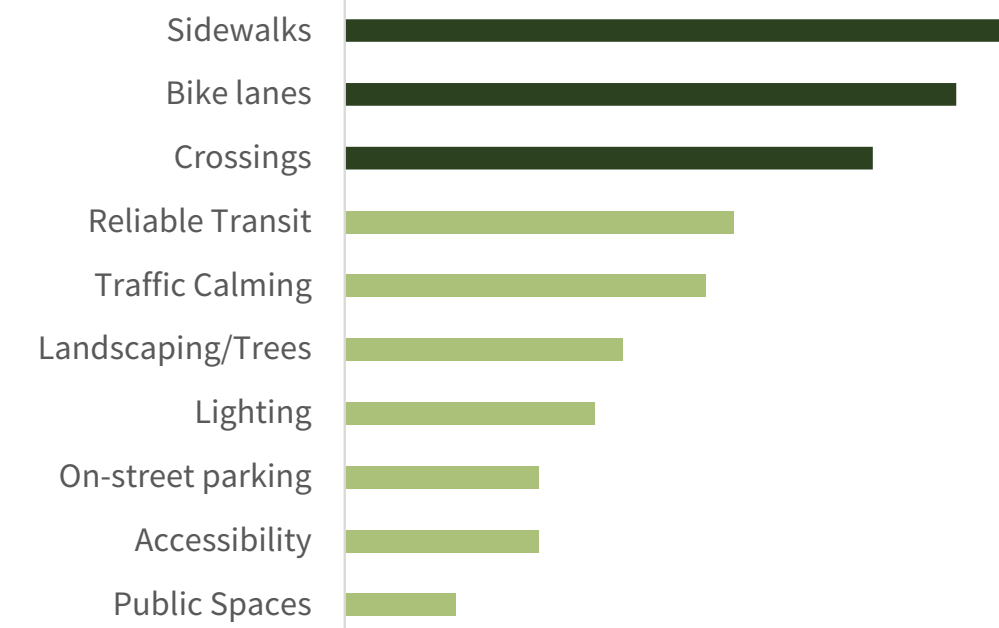


FIGURE 4-1
Community-Desired Improvements on El Camino Real

Issues and Potential Improvements

Input from the community and an analysis of existing conditions on the corridor produced a set of primary issues for the Plan to tackle. It also led to the identification of potential improvements to address those issues, aligned with best practices and the local context.

KEY ISSUES AND POTENTIAL IMPROVEMENTS:

- **Reduce vehicle speeds by implementing a road diet:** Most community members felt that people drive too fast on El Camino Real and voiced the need for a road diet and additional traffic signals at key intersections, such as Collins Avenue. A road diet reallocates street space to more equitably and more effectively serve all users. It improves the safety and comfort of pedestrians and bicyclists by reducing vehicle speeds, and it reduces the potential for collisions.
- **Add bicycle and pedestrian facilities:** Several community members indicated they have no choice but to use their cars

due to the lack of bicycle and pedestrian facilities on El Camino Real. There was consensus that the Plan should include sidewalks through the entire corridor, more frequent and safe crossing opportunities, more trees to provide greening and shade, and separated bicycle lanes.

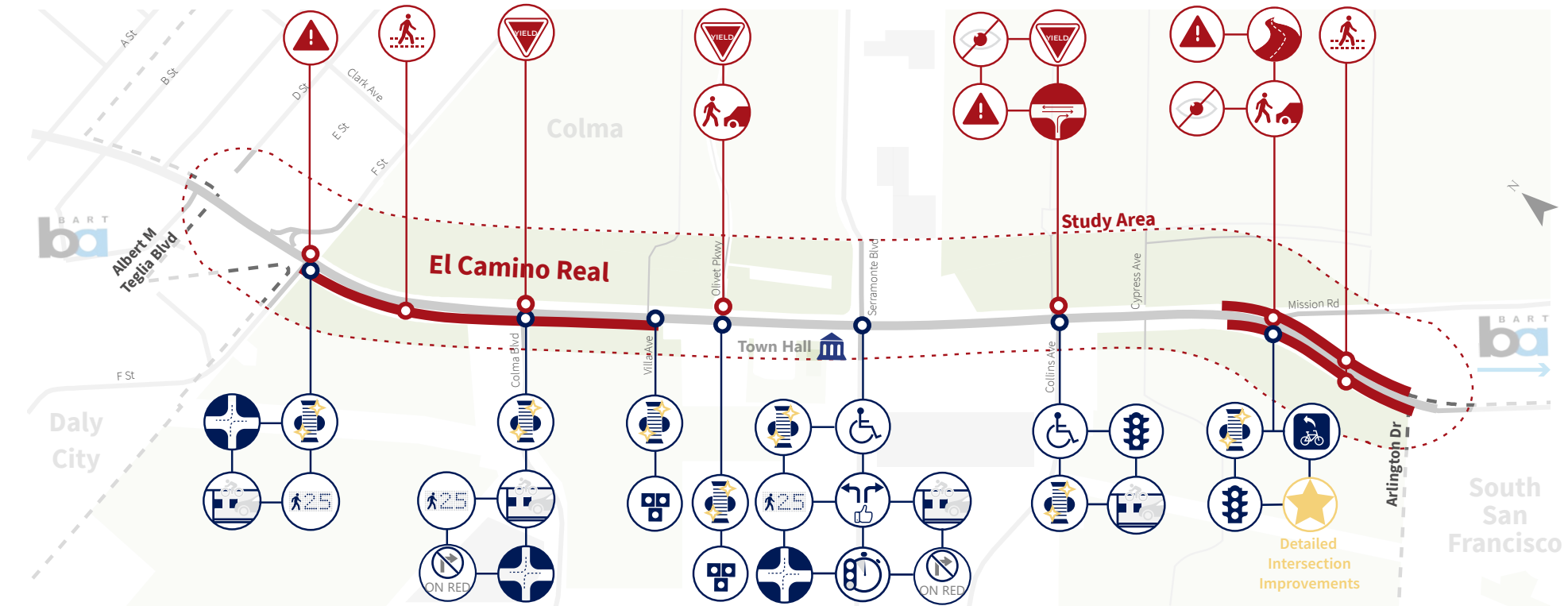
- **Provide pedestrian-scale lighting:** Some community members were concerned about visibility when walking, biking, or driving along El Camino Real. Providing pedestrian-scale lighting, especially at intersection and crosswalks, would enhance road users' visibility when dark.
- **Improve the Mission Road/El Camino Real intersection ("the Y intersection"):** Many shared that this intersection is particularly challenging for pedestrians and bicyclists, as there are no sidewalks, crosswalks, or bicycle facilities. There were also concerns about the difficulty of making left turns from El Camino Real onto Mission Road, particularly due to the high speeds of vehicles traveling along El Camino Real. By squaring up the Mission Road/El Camino Real intersection, it becomes a traditional T-intersection rather than the existing Y-intersection, making it

easier to navigate for all users. This design improves visibility, shortens crossing distances, and reduces speeds of turning vehicles. In addition, installing a traffic signal at the Mission Road/El Camino Real intersection would allow the addition of marked crosswalks on all sides of the intersection and allow vehicles to turn left both in and out of Mission Road.

Bicycle and Pedestrian Plan Vision

"El Camino Real will achieve its full potential for [people] to work, live, shop, and play, creating links between communities that promote walking and transit and an improved and meaningful quality of life."

- Community Member



Corridor Issues

- No Bicycle Facility
- Speeding

Intersection Issues

- High-Risk Intersection
- Failure to Yield to Pedestrians
- Wide Travel Lanes
- Poor Visibility
- Missing Sidewalk
- Conflict with Major Street
- Unsafe Crossing

Corridor Improvements

- Provide Bicycle Facilities
- Provide Trees
- Install Speed Feedback Signs
- Provide Sidewalks Where Missing & Increase Number of Pedestrian Crossings
- Implement Road Diet
- Provide Pedestrian-Scale Lighting
- Provide Public Space Around Bus Stops

Intersection Improvements






- Add Pavement Marking Delineation
- Green Pavement Markings for Bike-Vehicle Conflicts
- Install Pedestrian Hybrid Beacon
- Reduce Numbers of Left-Turn Lanes
- Prohibit Right Turn On Red
- Provide Protection for Bicycle Turning Movement
- Install Traffic Signal
- Implement Leading Pedestrian Interval
- Add/Enhance Crosswalk
- Update Signal Timing
- Review ADA Compliance

FIGURE 4-2
Issues and Potential Improvements on El Camino Real

Existing Conditions



Intersection Issues

-  Speeding
-  Poor visibility
-  Difficulty in making left turns from southbound El Camino Real to Mission Road
-  Missing sidewalk
-  No bicycle facility

Potential Improvements



-  Square-up intersection to improve sight lines and shorten crossing distance, reduce turning radii and speeds of turning vehicles.
-  Install traffic signal
-  Add high-visibility crosswalks
-  Allow left turn

FIGURE 4-3
Potential Improvements at Mission Road/El Camino Real Intersection



Concept Design

The community engagement process and existing conditions assessment produced a concept design for El Camino Real that incorporates the opportunities identified for the corridor and helps Colma realize its vision for an El Camino Real that is safe, comfortable, and convenient for all users. The concept design includes separated bikeways and continuous sidewalks throughout the corridor, as well as crosswalk enhancements at intersections and new pedestrian crossings. A lane reduction, or road diet, on Segment A addresses concerns about speeding, while the number of travel lanes is maintained on Segment B to provide continuity throughout the corridor with two lanes per direction. Parking is maintained where it currently exists on the corridor to support local business.

The concept designs presented in this report are conceptual in nature, and further work is required to finalize the improvements before they are implemented. For example, the design and location of bus stops will require additional coordination with Caltrans and SamTrans. Future studies that would be pursued prior to implementation are identified in the last section of the Plan.



SEGMENT A PREFERRED CROSS SECTION (FROM ALBERT M TEGLIA BOULEVARD TO MISSION ROAD)

Given the free-flow traffic conditions and excess capacity on El Camino Real north of Mission Road today, Segment A presents an opportunity to repurpose a travel lane in each direction to provide a separated bikeway and continuous sidewalk to enhance bicyclist and pedestrian comfort. It also presents an opportunity for streetscape enhancements, all with minimal impact to vehicle traffic flow.

- Six-lane cross section encourages speeding
- Missing sidewalks in some sections of the corridor
- No bicycle facilities
- Parking on both sides
- Wide median

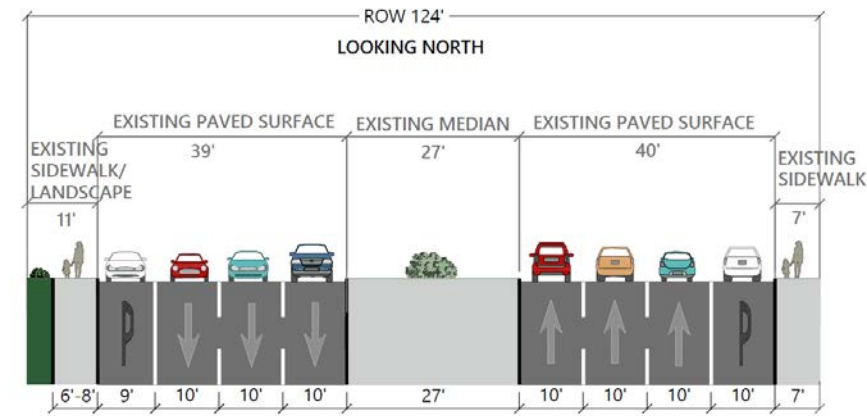


FIGURE 4-4
Segment A Existing Cross Section

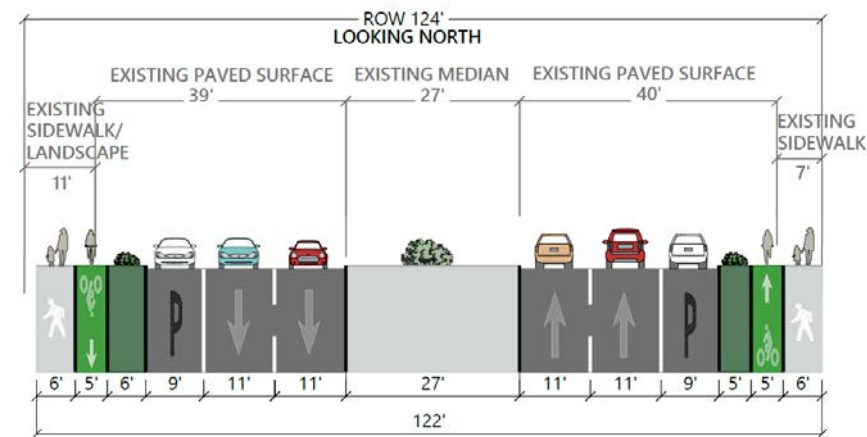


FIGURE 4-5
Segment A Preferred Cross Section

- Road diet to address speeding issues
- Continuous sidewalks for pedestrian safety and comfort
- Separated bicycle lanes for bicyclist safety and comfort
- Parking on both sides to support local businesses
- Preserved median to minimize costs



SEGMENT B PREFERRED CROSS SECTION (FROM MISSION ROAD TO ARLINGTON DRIVE)

The preferred cross section for Segment B maintains the existing two lanes per direction, consistent with the number of travel lane proposed for Segment A to the north and the existing number of travel lanes to the south. The cross section also adds bicycle and pedestrian facilities on both sides of the roadway by converting a portion of the existing landscape area to sidewalks and separated bikeways.

- Four-lane cross section
- No sidewalks
- No bicycle facilities
- Hardened centerline separates traffic in opposite directions
- Uneven terrain with landscape adjacent to roadway

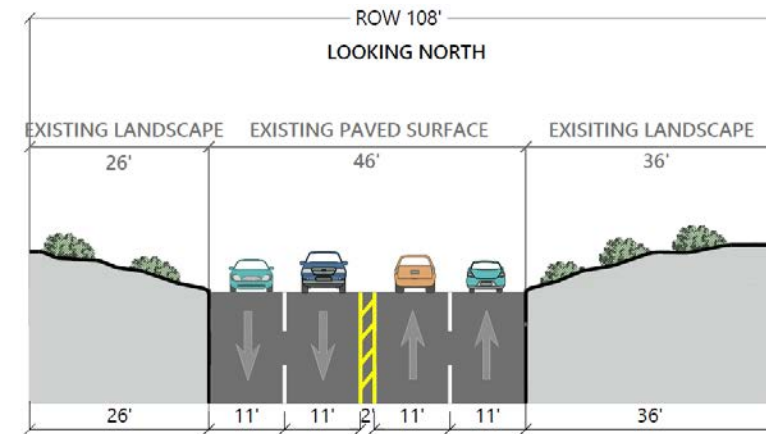


FIGURE 4-6
Segment B Existing Cross Section

- Four-lane cross section for consistency with proposed Segment A cross section and existing configuration south of Arlington Drive
- Continuous sidewalks for pedestrian safety and comfort
- Separated bikeways for bicyclist safety and comfort

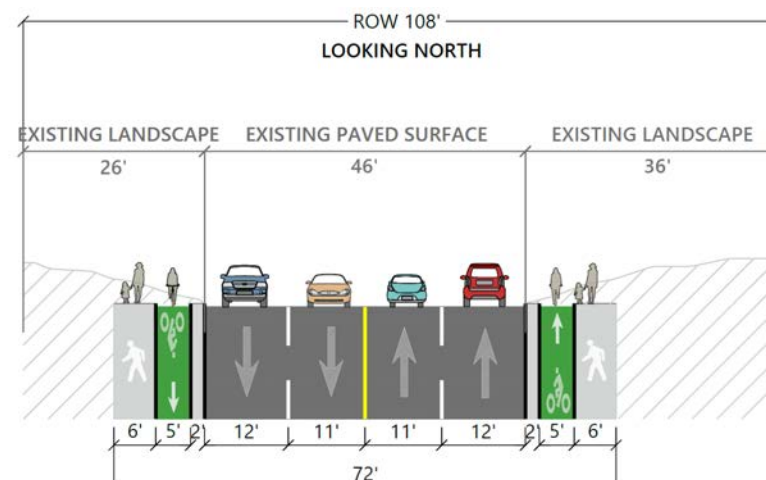


FIGURE 4-7
Segment B Preferred Cross Section

ALTERNATIVE DESIGNS












Several other design alternatives are feasible within the available curb-to-curb width of the corridor and could address the safety, connectivity and mobility challenges for those who walk and bike there. These alternatives (included in Appendix B) were presented at the community engagement events and to the City Council). Based on community input and design considerations, the alternatives were not pursued further during this study.

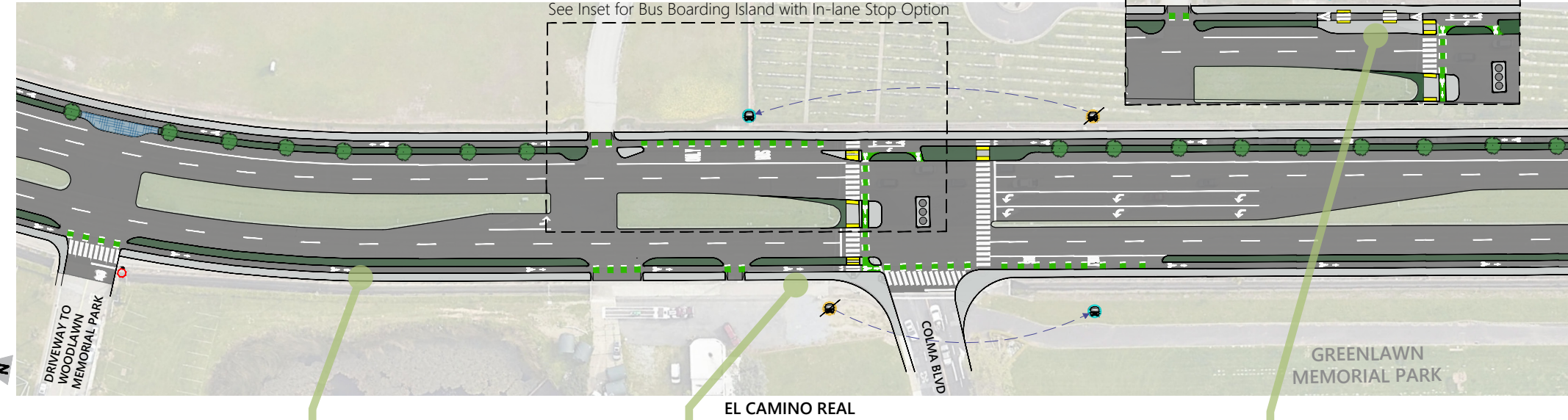
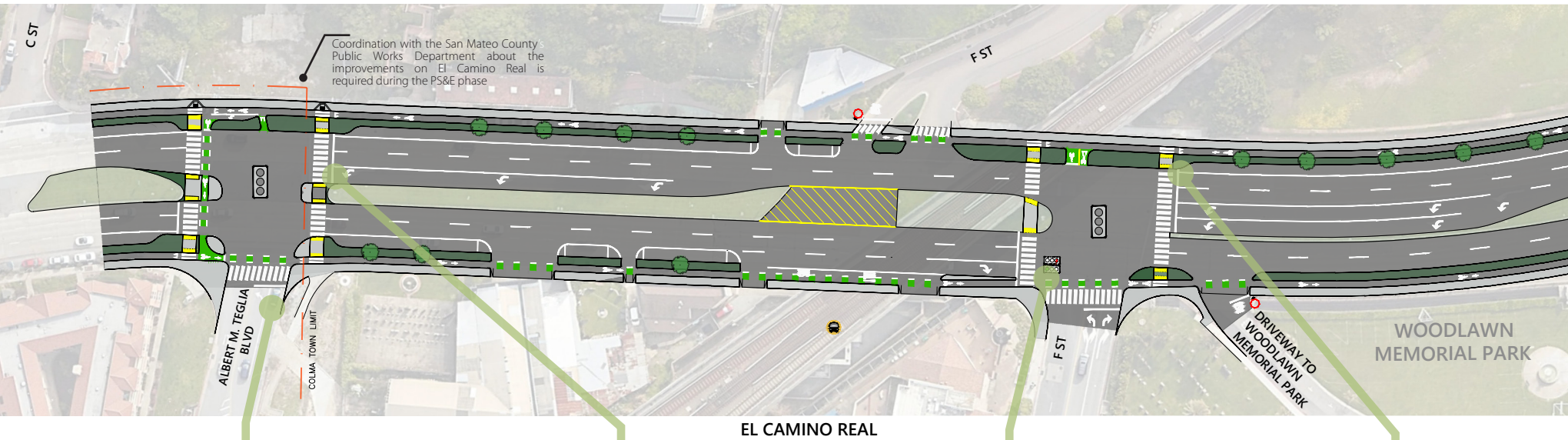


CORRIDOR CONCEPT DESIGN

A full corridor design for Segment A and Segment B was developed and refined based on the preferences shared by the stakeholders and community, including through the third and final phase of outreach. Call-out boxes help describe the key design elements.

LEGEND

 Sidewalk	 Opportunity Area (e.g. Green Infrastructure)	 Painted Truck Apron	 Existing Signal	 Proposed Bus Stop	 Existing Bus Stop to Remain
 Landscape		 Proposed Pedestrian Hybrid Beacon (PHB)	 Proposed New Signal	 Removed Bus Stop	 Existing Stop Sign



"Boarding islands are an extremely good idea! Please be sure to provide signs warning cyclists about potential mixing with pedestrians in these areas."

"I love the idea of bus boarding islands! they're really needed all along the ECR and I think it would be great if Colma set the bar for the rest of the county"

"Yes, please use the bus island design where ever possible! Seems like this would be better than mixing buses and people biking."

NO RIGHT TURN ON RED
No right turn on red prohibits drivers from making a right turn when they have a red light. This helps reduce conflicts between right-turning vehicles and bicyclists or pedestrians moving through the intersection. No right turn on red is recommended from side streets onto El Camino Real at every signalized intersection throughout the corridor.

HIGH-VISIBILITY CROSSWALK
High-visibility crosswalks are designed with longitudinal marking and use high-visibility material instead of regular paint. They are more visible to approaching drivers than standard crosswalks, improving safety for pedestrians crossing the street.

SEPARATE BICYCLE SIGNAL PHASE
Separate bicycle phases at a signalized intersection give people biking a green light while right-turning vehicles have a red arrow signal. By removing the conflict with right-turning vehicles, especially at locations with a high volume of right-turning vehicles, they make it safer for people to bicycle through an intersection.

CURB EXTENSION
Curb extensions widen the sidewalk or extend the landscaping at an intersection or mid-block crossing. They increase pedestrian safety by shortening the distance for pedestrians to cross the roadway, make pedestrians more visible to drivers, and reduce the speed of turning vehicles.

SEPARATED BIKEWAY
Separated bikeways physically separate bicyclists from vehicle traffic using grade separation, landscaping, physical barriers or flexible posts. They provide a safer and more comfortable bicycling experience.

CONTINUOUS SIDEWALK
Continuous sidewalks fill the gaps between existing sidewalks, increasing access and connectivity for people walking throughout the corridor.

BUS BOARDING ISLAND
Bus boarding islands are platforms where pedestrians wait for and board the bus. They allow for the bikeway to be separate from the bus path of travel requiring buses to stop in the travel lane to pick up and drop off passengers. Bus-boarding islands eliminate potential conflicts between bicycles and buses at stops and maintain the continuity of a separated bikeway. They can improve transit service reliability and increase vehicle delay.

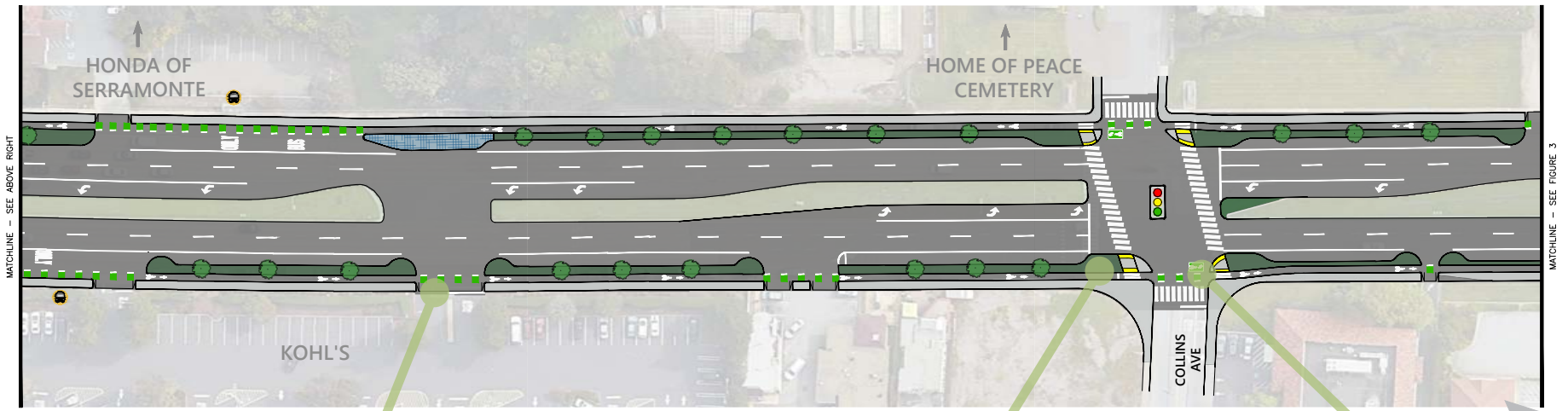
"Bike only signals make cyclists feel appreciated."

"Reducing pedestrian travel distance (aka narrowing the road) is life-saving and should be done everywhere possible."

"Hurrah!"

"Love the separated bike path. This will make it so much easier to ride between where I live in South City and the stores up at Serramonte."

"I like this curb extension to help people cross the street more easily and so drivers see the people when they want to cross."



PEDESTRIAN HYBRID BEACON
Pedestrian Hybrid Beacons are traffic control devices that notify oncoming vehicles to stop with a series of red and yellow lights when a pedestrian wants to cross the street. They are used at unsignalized crosswalks to help pedestrians safely cross the street, particularly on multi-lane or higher-speed roadways.

PARKING-SEPARATED BIKEWAY
Parking-separated bikeways physically separate bicyclists from vehicle traffic using on-street parking and a landscaping strip or flexible posts. People exiting parked vehicles can access the sidewalk through regular breaks in the landscaping strip. Parking-separated bikeways provide a safer and more comfortable bicycling experience.

PROTECTED INTERSECTION
Protected intersections clarify movements through an intersection using corner islands, curb extensions, and colored paint. They create dedicated space for drivers, pedestrians, and bicyclists, helping manage interactions. They tighten the turn for vehicles and square them up to the crosswalk, thereby reducing vehicle turn speeds and increasing visibility of pedestrians and bicyclists. Protected intersections also reduce pedestrian exposure and increase pedestrian safety by shortening the roadway distance pedestrians need to cross.

ADVANCE STOP BAR
Advance stop bars are located 5 to 10 feet before crosswalks to provide extra space between vehicles stopped at a crosswalk and pedestrians crossing the street. They make it easier for drivers to see pedestrians in the crosswalk and help drivers yield to them, thereby increasing pedestrian safety.

GREEN CONFLICT STRIPING
Green striping through conflict zones is dashed green paint that highlights a bicycle lane at locations where interactions may occur between drivers and bicyclists. Green striping increases bicyclist safety by increasing the visibility of bicyclists at conflict points like driveways or intersections.

CURB EXTENSION
Curb extensions widen the sidewalk or extend the landscaping at an intersection or mid-block crossing. They increase pedestrian safety by shortening the distance for pedestrians to cross the roadway, make pedestrians more visible to drivers, and reduce the speed of turning vehicles.

TWO-STAGE BICYCLE TURN BOX
Two-stage bicycle turn boxes are queuing areas designated for bicyclists waiting to turn left without utilizing the vehicular left-turn lane. They give bicyclists a safe and comfortable place to wait away from vehicular traffic and through bicyclists, facilitating their left turns across multiple traffic lanes at signalized intersections.

"Love that you can make a left on ECR without having to do a U turn in a median"

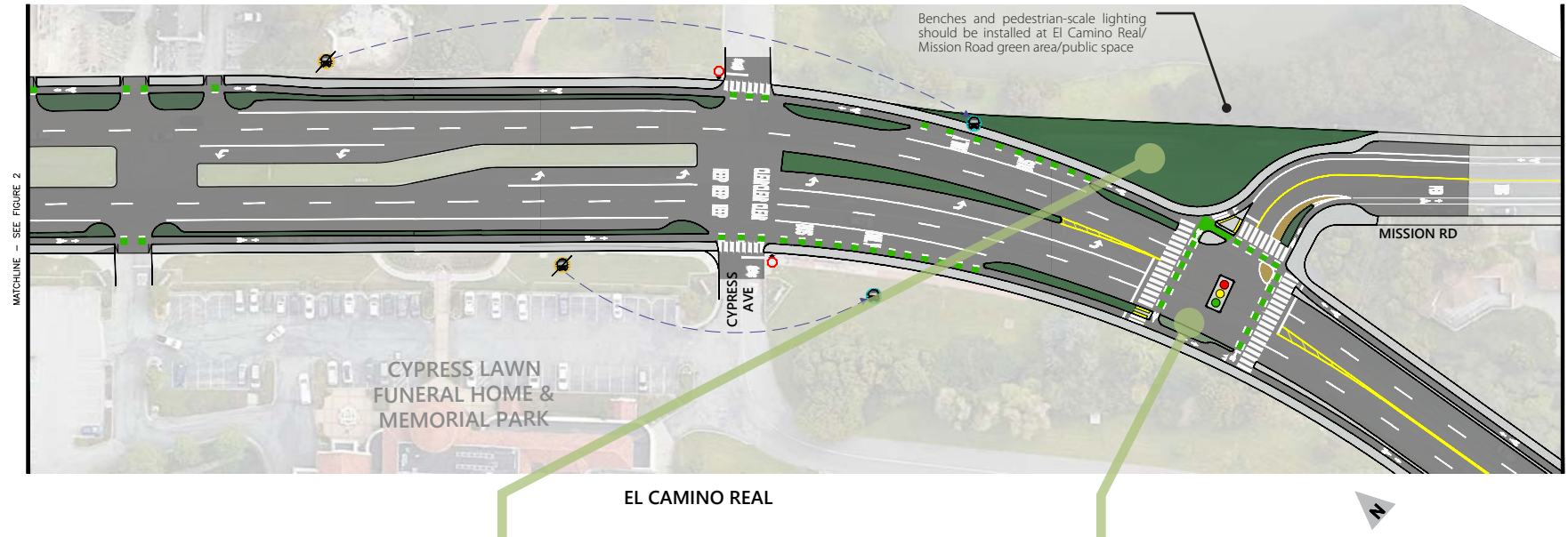
"This seems like a great improvement for everyone, especially for people who walk or bike in this area. Right now it is so dangerous at this intersection!"

"The crosswalks will finally allow access to Mission Road residents to the ECR southbound bus stop."

"This is greatly needed, important. It will make this intersection so much more safe."

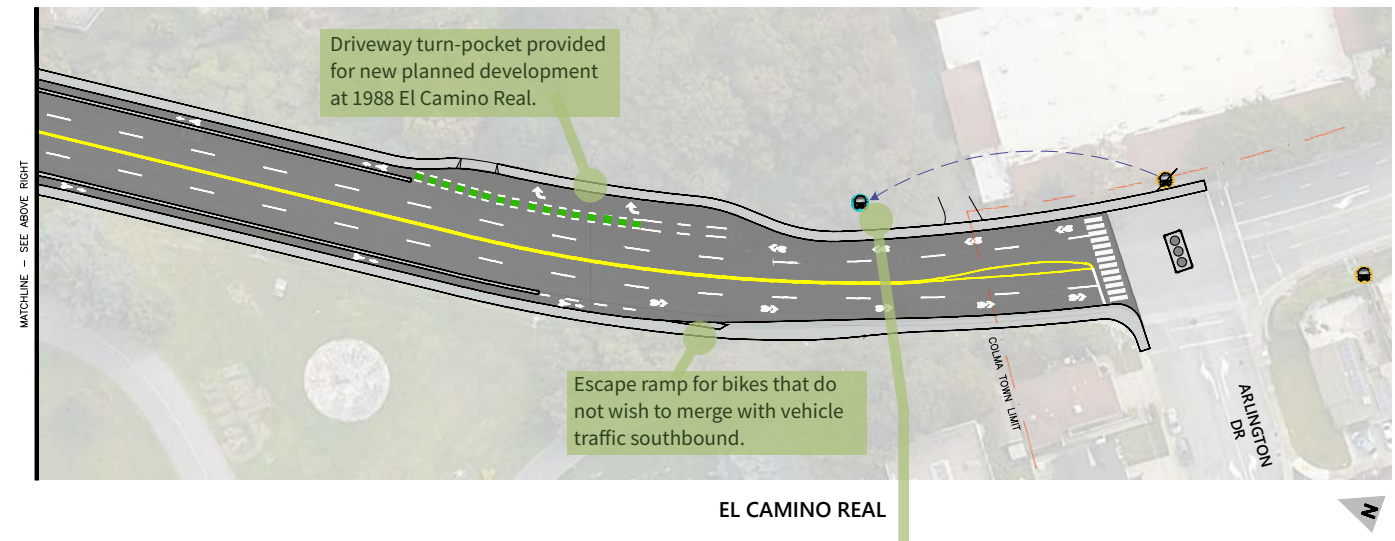
"Yes. Major barrier for me biking on El Camino is all of the car traffic."

"Great solution. I think sidewalk can be easily shared since pedestrian and bike activity will be light. Love that there will be a pedestrian and bike connection between Colma and this neighborhood."



PROTECTED CORNER
Protected corners physically separate bicycles from vehicles approaching the intersection and create a protected queuing area for bicycles waiting to turn. By tightening the turn for vehicles and squaring them up to the crosswalk, protected corners help reduce vehicle turn speeds and increase visibility of pedestrians and bicyclists moving through the intersection.

MISSION ROAD INTERSECTION RECONFIGURATION
The Mission Road intersection reconfiguration includes realignment to a 90-degree angle, a new signal, and various pedestrian and bicycle enhancements. These changes help improve visibility, reduce speeds, and increase safety and connectivity for all users.



FAR-SIDE BUS STOP
Far-side bus stops are located immediately after an intersection, allowing the bus to pass through the intersection before stopping to pick up and drop off passengers. They can improve transit service reliability and increase pedestrian visibility and safety by encouraging existing pedestrians to pass behind the bus to cross the street.



05

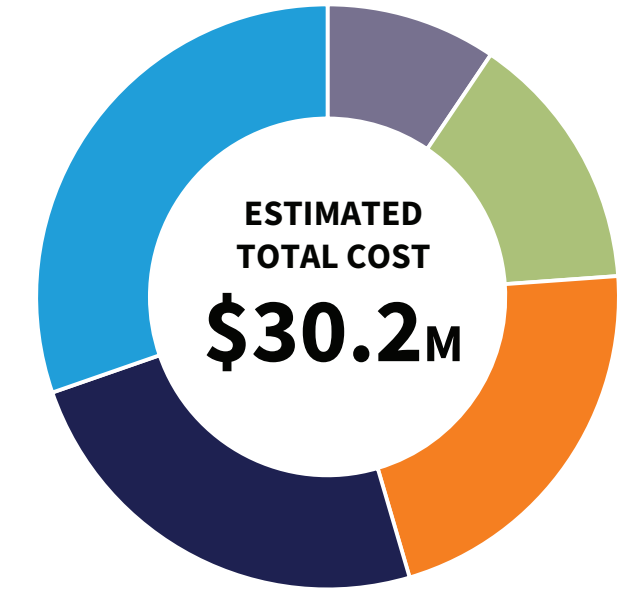
IMPLEMENTATION

The creation of the Colma El Camino Real Bicycle and Pedestrian Improvement Plan is an important first step in transforming the corridor. Additional steps will need to be taken before the vision can be fully realized, including conducting follow-on studies to support Caltrans approval and securing funding for construction. There are opportunities to continue the momentum of the project in the near-term as well, through the implementation of “quick-build” improvements, which have the added benefit of helping refine the designs before implementation of a full and permanent project.



Cost Estimates

The cost of the recommended improvements for El Camino Real through the Town of Colma are estimated to be approximately \$30,200,000. This includes the cost of demolishing elements of the existing roadway, installing drainage and utilities, installing new roadway features like sidewalks, installing new traffic features like bikeways and crosswalk striping, installing new signals and lighting, and installing new landscaping, stormwater swales, and, where feasible, trees. This estimate does not include costs related to modification of the culvert/bridge at the northern end of Segment B, which may be substantial; a full survey and additional structural studies will be required. Detailed cost estimates can be found in Appendix C.



\$2.8M MOBILIZATION/ TRAFFIC CONTROL

\$3.7M DEMOLITION

\$5.8M STREET IMPROVEMENTS

\$8.7M SIGNALS, LANDSCAPE & LIGHTING

\$9.2M SOFT COSTS (CONTINGENCY, ADDITIONAL STUDIES, DESIGN, CONSTRUCTION MANAGEMENT, PERMITTING)

Potential Funding Sources

Implementing the Town of Colma’s local vision for El Camino Real will require funding from various sources to support follow-on studies and construction. The funding sources listed below are the most relevant to the Plan and thus recommended for the Town to pursue. Additional funding sources can be found in Appendix D.

CALIFORNIA AND FEDERAL FUNDING PROGRAMS

Caltrans Active Transportation Program (ATP): ATP is a statewide and regional grant funding source for pedestrian and bicycle projects. It is notoriously competitive, although the El Camino Real corridor in Colma may be a strong contender for funding due to its overlapping goals of increasing travel by active modes, increasing safety and mobility for active modes, reducing GHG, and benefiting disadvantaged communities. The ATP application is open approximately every two years, with the last grant cycle in September 2020.

Caltrans Highway Safety Improvement Program (HSIP): HSIP provides funding to jurisdictions to help them address documented safety concerns through engineering projects. The primary metric for funding is a cost-benefit ratio that looks at the project’s injury prevention benefits and implementation costs. This grant is primarily used to fund specific safety countermeasures, so project definition requires documented safety benefits for given collision types. Thus, this grant may be a good fit for individual elements of this Plan, particularly those previously identified in the *Colma Systemic Safety Analysis Report (SSAR)*, such as the new traffic signal at Collins Avenue or the Pedestrian Hybrid Beacon (PHB) at Eternal Home Parkway. The HSIP application is open approximately every two years, with the last grant cycle in October 2020.

One Bay Area Grant (OBAG): The OBAG program is one of the primary mechanisms through which Metropolitan Transportation Commission (MTC) implements the vision laid out in Plan Bay Area 2040. As a part of OBAG funding, priority is given to projects either fully or partially within a MTC designated Priority Development Area (PDA) or providing access within 0.5 miles of a PDA.

PDAs are designated locations for strategic regional growth. The section of El Camino Real in Colma is within a designated PDA. The second round of OBAG funding was adopted in late 2015, funding projects through 2022. The program follows approximately a five-year cycle.

Urban Greening: The Urban Greening program supports the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Eligible projects must sequester and store carbon by planting trees or reduce commute vehicle miles traveled by constructing bicycle paths, bicycle lanes or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools. Urban Greening (round 2) called for projects in March 2018, and the latest Urban Greening (round 3) called for projects in March 2019. Urban Greening did not call for projects in 2020.

SAN MATEO COUNTY FUNDING PROGRAMS

City/County Association of Governments (C/CAG) of San Mateo County’s Transportation Development Act (TDA) Article 3: The goal of the TDA Article 3 Pedestrian and Bicycle Program is to fund projects that encourage and improve bicycling and walking conditions in San Mateo County. Bicycling and walking are sustainable forms of transportation and contribute to the overall goals of the TDA Article 3 to reduce commute corridor congestion, make regional connections, enhance safety, and meet local mobility needs. The program is funded every two to three years.

City/County Association of Governments (C/CAG) of San Mateo County’s Transportation Fund for Clean Air (TFCA): The TFCA provides funding for arterial traffic management utilizing advanced technology and traffic calming projects, including quick build bicycle and/or pedestrian improvement projects.

San Mateo County Transportation Authority’s Measure A Program: The goal of the Measure A Pedestrian and Bicycle Program is to fund projects that improve bicycling and walking accessibility and safety in San Mateo County, helping to encourage more residents to participate in active transportation. Historically, the call for projects has occurred biennially.



Implementation Process

CALTRANS AND LOCAL REQUIREMENTS

The ultimate design and implementation of improvements along El Camino Real will require approval from Caltrans through the oversight process, since El Camino Real is a state-owned roadway. Different types of proposed improvements will require different levels of documentation, additional study, and review to receive approval. The table below summarizes the additional studies that may be required for approval by Caltrans.

Study or Report	Specific Locations and Purpose
	Required by Caltrans
Network Traffic Analysis	Corridor-wide to evaluate impacts to overall delay of the roadway capacity changes, access modifications, and signal timing changes that are needed to support the recommended design changes. The analysis will include a scenario that considers future traffic volumes. Examples include: <ul style="list-style-type: none"> • Road diet between Albert M Teglia Boulevard and Mission Road • New signals at Collins Avenue and Mission Road • New Pedestrian Hybrid Beacon at Eternal Home Parkway • New signalized crosswalks and Leading Pedestrian Intervals • No Right Turn on Red restrictions • Bus-Boarding Island with In-Lane Stopping (may require simulation modeling if selected) • Separate Bicycle Signal Phasing (e.g. F Street)
Caltrans Design Standard Decision Document (DSDD)	Corridor-wide to document justification for design variances from the Highway Design Manual. Specific improvements include: <ul style="list-style-type: none"> • Lane Widths < 11' • Net reduction in shoulder width
Caltrans Intersection Control Evaluation (ICE)	For all study intersections where a major change to intersection configuration or traffic control is proposed. Locations include: <ul style="list-style-type: none"> • Signalization at Collins Avenue • Reconfiguration/signalization at Mission Road
Sight Distance Evaluation	Corridor-wide for Caltrans approval of parking prohibitions near driveways and intersections.
Crashes Prediction Study	Corridor-wide to evaluate the impacts of road diet.

Overall, a network traffic analysis is recommended as the most immediate next step to capture the effect of the full project build-out on traffic flow on El Camino Real and intersecting streets in Colma, as well as in the neighboring communities, South San Francisco and Daly City. The traffic analysis should be scoped in coordination with Caltrans to identify appropriate analysis scenarios, likely including evaluation of No Build and Project scenarios for both present day and a future horizon year. Caltrans also should provide input on suitable analysis techniques; while most improvements can be analyzed using macroscopic software such as Synchro, changes such as in-lane stopping for buses may require microsimulation modeling tools such as Vissim to more accurately identify effects.

Many of the improvements included in the Plan are consistent with the Caltrans Strategic Management Plan (2015-2020), which strives to fully integrate bicycles into all aspects of the California transportation system and are not subject to the Caltrans Design Standard Decision process.

Study or Report	Specific Locations and Purpose
	Additional Recommended Studies
Transit Corridor Study	Corridor-wide to assess the effects of the project on transit travel time and reliability. Analysis should consider: <ul style="list-style-type: none"> • Options for bus stop design (in-lane vs. pull-out) • Bus stop relocations proposed in this Plan • Transit signal priority options • Optimized traffic signal timing and progression • Other bus stop enhancements (e.g. provision of bus stop shelters and benches)
Bicycle Volume Projections	Corridor-wide for grant applications and to understand benefits of project to increase bicycle volumes
Parking and Access Management Study	Corridor-wide to work with impacted businesses along El Camino Real to identify strategies to address potential loss of on-street parking and access, especially for those that have limited off-street parking. Potential strategies include: <ul style="list-style-type: none"> • Inventory of off-street parking supply (public and private surface parking lots, parking structures, etc.) and daily utilization patterns to identify shared parking opportunities based on complementary use patterns • Off-site employee parking • Restriping for compact parking on side streets (angled parking) • Short-term limits for parking to encourage turnover • Residential permit parking • Designated loading/unloading zones at nearby locations (curbside management)

CONSIDERATIONS FOR NEXT STEPS IN THE DESIGN PROCESS

During the final stage of outreach for this Plan, we received comments from the community and stakeholders about the concept design. The following should be considered as the design is further refined.

Funeral processions: Funeral processions could at times slow traffic on El Camino Real and occupy a full travel lane. In addition, funeral processions can stack onto El Camino Real while being directed into the cemetery. A "typical design" call-out on the full concept design at the southbound approach to the Villa Avenue intersection shows a potential design modification that could be applied at cemetery entrances throughout the corridor.

Serramonte Boulevard intersection: Most large trucks would be able to navigate the intersection of El Camino Real and Serramonte Boulevard, based on initial analysis. However, some exceptionally large trucks could have trouble turning past the proposed corner islands and tighter corner radii. Additional truck turning studies should be conducted in a subsequent engineering stage of the design process.

Bikeway width: A wider bikeway than the 5-foot one proposed in the concept design would allow bicyclists to more easily pass one another. This could be achieved by reducing the landscape strip in Segment A during a subsequent design step.

Signal separation for bicycles: Signal separation for bicycles at all intersections along the corridor, particularly at major intersections with higher volumes of turning vehicles, would support bicyclist safety and convenience. This improvement could be studied in the context of overall traffic operations on the corridor.

Bus boarding islands: Bus-boarding islands are the preferred bus stop design along the corridor because they improve bus speeds and reliability, as well as improve bicycle safety by eliminating potential conflicts between bicycles and buses. Both bus boarding islands and in-lane bus stops are shown as options in the concept design.

Pedestrian crossings across the bikeway: Locations for pedestrians to cross the bikeway safely, reducing conflicts between the two roadway users, will be designated in subsequent design steps.

Hardened centerline: The existing “hardened centerline” on Segment B is not maintained in the proposed concept design. It could be added to align with community feedback that the hardened centerline makes drivers feel safer by discouraging head-on collisions.

Dual left-turn lanes: The removal of dual left-turn lanes would provide space for improved pedestrian crossings and a larger median. The opportunity to remove one or more of the dual left-turn lanes at intersections along the corridor could be evaluated as part of the traffic operations analysis.

Median landscape: The addition of trees and green infrastructure to the existing median in Segment A would help slow traffic and move the corridor closer to its sustainability goals. This could be evaluated during a subsequent design step.

Adjacent Jurisdiction Coordination: The Town should continue coordination with adjacent jurisdictions, including County of San Mateo, Daly City, and South San Francisco, to ensure network connectivity aligned with the Countywide Bicycle and Pedestrian Plan and connectivity to major destinations at both ends of the corridor (e.g., BART).

MAINTAINING MOMENTUM WITH EARLY PHASING STRATEGIES

There are many strategies the Town could use to maintain momentum from the efforts of this Plan. These include ‘early phasing’ strategies like coordination with development projects, coordination with Caltrans’ pavement rehabilitation projects, and implementation of quick-build and pilot projects.

Development Project Coordination

The Town could coordinate with new development projects that overlap with the study area to ensure that site plans consider installation or in-lieu payment of Plan elements. This strategy can help implement parts of the Plan while the Town develops a strategy for the full implementation.

Caltrans Coordination: Pavement Rehabilitation Project

The State Highway Operation and Protection Program (SHOPP) is a “fix-it-first” program that Caltrans uses to fund repair and preservation on State highways, with four key assets including pavement, bridges, culverts, and Transportation Management Systems (TMS). SHOPP projects provide opportunities to address other State priorities, such as the implementation of Complete Streets elements, including pedestrian and bicycle facilities identified by Caltrans or local jurisdictions through various planning efforts. For pavement projects, opportunities may include quick-build elements that are consistent with this study such as separated bikeways, crosswalk enhancements, and other low-cost measures. When SHOPP projects are scoped and developed, Caltrans coordinates with the local jurisdiction and stakeholders to identify opportunities for Complete Streets improvements.

Quick-Build and Pilot Projects

While full implementation of the Plan is considered a long-term vision, there are strategies that the Town can consider for putting projects in the ground sooner. Quick-build construction strategies, such as those that use a “paint and plastic” approach, can be a useful way to install temporary versions of improvements as part of a pilot program or a phased approach to construction. These would have the added benefit of allowing the Town to test portions of the design prior to full implementation.

Candidate quick build treatments include those with minimal construction barriers such as crosswalk enhancements or stretches of the separated bikeways where parking is already prohibited. Specific quick-build strategies are included in Appendix E, an excerpt from the Lessons Learned & Best Practices memo prepared for the *Grand Boulevard Initiative’s Creating Safe and Healthy Corridor Communities* project.

For additional information and to stay informed about ongoing efforts to improve El Camino Real in Colma, visit the Town’s project website at <https://www.colma.ca.gov/el-camino-real-bicycle-and-pedestrian-improvement-plan/>.

