October 2023

AGTIVE TRANSPORTATION

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GLOSSARY OF TERMS

Alameda County Transportation Commission (Alameda CTC):

Alameda CTC plans, funds, and delivers transportation programs and projects that expand access and improve mobility in Alameda County.

Active transportation: Active

transportation is any self-propelled, humanpowered mode of transportation, such as biking, walking, or rolling.¹ Rolling includes the use of electric scooters, rollerblades, wheelchairs, skateboards, and other wheeled devices.

Bike Boulevard: Bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Signs, pavement markings, and speed and volume management measures are used to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets. Bike

boulevards are classified as Class III bike facilities by Caltrans.



Bike Boulevard example image.

Bike Lane: Dedicated striped lane for bicycle travel adjacent to traffic. Caltrans classifies Bike Lanes as Class II bikeways. See also *Buffered Bike Lane*.



Bike Lane example image.

Bike Route: Signed bike routes on slow speed residential streets where bicyclists share the roadway with motor vehicles.

Caltrans classifies Bike Routes as Class III bikeways.



Bike Route example image.

Buffered Bike Lane: Dedicated lane for bicycle travel separated from traffic by a painted buffer. Caltrans classifies Buffered Bike Lanes as Class II bikeways. This Plan refers to Buffered Bike Lanes as Class IIB Bike Lanes.

Caltrans: Caltrans manages California's highway and freeway lanes and works with local agencies on transportation projects.

Federal Highway Administration

(FHWA): The FHWA is an agency within the U.S. Department of Transportation that supports local governments in design, construction, and maintenance of highway systems.

¹ Center for Disease Control: www.cdc.gov/healthyplaces/transportation/promote_strategy.htm#:~:text=Active%20 transportation%20is%20any%20self, conditions%20in%20the%20 United%20States.

Leading Pedestrian Intervals (LPI):

Pedestrian-only crossing signals that occur slightly before the green signal for parallel lanes of vehicle traffic, allowing pedestrians to get a head start in the crosswalk and



Leading Pedestrian Interval example image.

making them more visible to turning motorists.

Metropolitan Transportation
Commission (MTC): MTC is the
transportation planning, financing, and
coordinating agency for the nine-county
San Francisco Bay Area.

National Association of City Transportation Officials (NACTO):

NACTO is an association of cities and transit agencies formed to exchange transportation ideas, insights, and practices and cooperatively approach national transportation issues.

Pedestrian Hybrid Beacon (PHB): Useractivated traffic control devices that cycle through a flashing yellow, steady yellow, and then steady red light to stop vehicles and allow pedestrians to cross a road safely. These are sometimes referred to as a HAWK signal.



Pedestrian Hybrid Beacon example image.

Planning: When mentioned in the *Active Transportation Plan*, planning refers to the field or practice of urban planning, which focuses on transportation, development, land use, and other important topics that impact the physical environments of communities.

Rectangular Rapid Flashing Beacon

(RRFB): User-activated pedestrian signals that use flashing yellow lights to alert motorists to the presence of people walking in the crosswalk. They can be installed in midblock locations or at intersections where a full traffic signal is not warranted. In residential areas, alternative flashing signs may be considered that illuminate the perimeter of the sign.



Rectangular Rapid Flashing Beacon example image

Safe Routes to School: Safe Routes to School is a nationwide program aimed to make it safer for students to walk and bike to school and encourage more walking and biking where safety is not a barrier.²

Separated Bikeway: Separated Bikeways are bicycle facilities that have a vertical separator from motor vehicle traffic. Many are paired with a furnishing zone between the cycle track and motor vehicle travel lane and/or pedestrian area.³



Separated Bikeway example image.

Shared-Use Path: Paths shared by people walking and biking that are completely separated from motor vehicle traffic.
Caltrans classifies Shared-Use Paths or Bike Paths as Class I bikeways.



Shared Use Path example image.

Biking, Walking, and Rolling Networks:

The success of all modes of transportation is reliant on an established network to connect users to destinations. Biking, Walking, and Rolling Networks consist of infrastructure elements such as sidewalks and bike lanes to provide connectivity for active transportation users.

² National Center for Safe Routes to School: www.saferoutesinfo.org/

³ National Association of City Transportation Officials: https://nacto.org/



INTRODUCTION

Emeryville has become one of the Bay Area's top places to bike, walk, or roll due to the City's investment in comfortable and connected infrastructure. The city's location, small size, dense development patterns, mix of land uses, and access to local and regional transit also contribute to using sustainable forms of transportation. Emeryville benefits from connected sidewalks and an evolving network of bikeways, including the Bay Trail, Emeryville Greenway, and Doyle Street Greenway. Physical barriers such as the railroad tracks, Interstate 80, narrow sidewalks, superblocks, and busy arterial roads like San Pablo Avenue and Powell Street remain barriers for many to walk. bike, and roll comfortably and directly. The City is committed to developing pedestrian and bicycle infrastructure, investing in infill developments, and engaging with the community to support biking, walking, and

rolling in Emeryville and to neighboring cities. In the past 10 years, the City has completed the South Bayfront Bridge to provide another crossing over the railroad tracks. It has also designed and built several separated bikeways, with more on the way.

This Plan was developed at a time of racial and environmental crisis compounded by the COVID-19 pandemic. Commuting patterns have been altered due to greater work-from-home flexibility during the pandemic, but it is unclear whether they will be permanently changed. Bicycling and walking are low-cost and healthy transportation options that provide economic and livability benefits to communities. When Emeryville residents or visitors choose to walk or bicycle, the number of cars on the road is reduced, congestion is alleviated, and greenhouse

gas (GHG) emissions are reduced. Families that can replace some of their driving trips with active modes of transportation reduce their household expenses.

Through the sustained investment in projects and programs included in this *Active Transportation Plan*, Emeryville has the potential to further encourage residents and visitors to bike, walk, and roll to and through the city for work, shopping, school, and recreational trips. Ultimately, this Plan will help the City meet its environmental and economic goals and create a higher quality of life for its residents.

PURPOSE OF THE ACTIVE TRANSPORTATION PLAN

The Active Transportation Plan is a guide for improving the quality of life for every resident, worker, and visitor by providing not just safe, but joyful experiences on its streets, sidewalks, and trails.

This Plan is a blueprint for improving active transportation infrastructure and programs in Emeryville over the next 10 years. The City has a long history of supporting human-powered or active forms of transportation. Active transportation encompasses a number of different modes in addition to walking and bicycling, including rolling devices such as wheelchairs, scooters, skateboards, and rollerblades. This Plan seeks to accommodate the various ways in which people get around. Walking, riding bicycles, and now rolling on electric scooters and other new personal mobility devices provides non-polluting transportation options for residents and visitors. Many of the projects recommended in the City's Bicycle and Pedestrian Master Plans from 1998 and 2012 have been

constructed or are in development. This Active Transportation Plan leverages the work completed to date and provides newly revised recommendations based on an analysis of recent data and community input. The Plan enables the City to focus on projects that will have the most impact on improving safety, comfort, and mobility for all. Recommendations in the Active Transportation Plan take their first step toward becoming a reality when the City's Transportation Committee nominates projects to advance. Recommendations then move through the Capital Improvement Program (CIP) budget process. Once the City secures funding for the recommendation, and staff capacity is available, it will move through the project delivery process (outlined in Chapter 5). Some recommendations may be implemented opportunistically and integrated into other projects such as street resurfacing or private development projects. The document complements the Emeryville General Plan and guides the implementation of general plan policies that support active forms of transportation.



Bicyclists riding on the San Francisco Bay Trail next to Marshalls Department Store.

WHAT'S IN THE PLAN?

CHAPTER 2: Plan Vision and Goals

(page 16) outlines the vision, goals, and policies that guide this *Active Transportation Plan*. By establishing consensus around a vision for how the City's active transportation network should operate, the City can prioritize investments that help realize its goals.

CHAPTER 3: Biking, Walking, and Rolling in Emeryville Today

(page 25) describes the active transportation landscape in Emeryville, including a discussion of related themes that inform the recommended infrastructure projects, programs, and policies in the community. Understanding Emeryville's current travel patterns, strengths, and challenges will inform which types of projects and programs the City needs to thrive.

Projects (page 57) introduces the different types of biking, walking, and rolling projects and supporting amenities recommended

CHAPTER 4: Policies, Programs, and

and supporting amenities recommended for implementation. This chapter presents potential investments for the City to make that will respond to the transportation needs identified in previous chapters.

CHAPTER 5: Implementation and

Funding (page 149) outlines a strategy for the implementation of the proposed infrastructure projects as well as the recommended best practices for biking, walking, and rolling programs and policies. Public resources are limited and the City needs a strategy for assembling funding from internal and external sources.

By the numbers

PARTICIPATION



13 engagement activities held



Over 1,300 people participated



10 meetings with the Bicycle and Pedestrian Advisory Committee

INFRASTRUCTURE



16.7 miles of new bikeways recommended



5.9 miles of separated bikeways recommended



38 crossing improvements recommended

MAJOR PROJECTS AND STUDIES

The Active Transportation Plan includes many important projects. These five major projects include a suite of multimodal improvements that will transform the City's transportation network.

1) Bay Trail Access Improvements (page 113)

The Plan includes infrastructure recommendations such as new shared-use path connections, the Ashby Interchange Overcrossing, trail rehab projects, trail widening studies, and crossing improvements that will improve access to and along the Bay Trail.

2) Alameda CTC San Pablo Avenue Corridor Project (page 115)

The Alameda CTC San Pablo Avenue Corridor Project will include the addition of separated bikeways on San Pablo Avenue as well as improved crossings at key intersections in Emeryville.

3) 40th Street Multimodal Project (page 118)

The 40th Street Multimodal Project includes transit improvements along the entire eastwest corridor as well as biking, walking, and rolling improvements.

4) 40th Street Multimodal Phase II: Bay Trail Gap Closure (page 122)

The 40th Street Multimodal Project Phase II includes intersection upgrades and a two-way separated bikeway on the west side of Shellmound Street from Christie Avenue to the Bay Trail path at the 40th Street bridge.

5) Emeryville Loop Multimodal Project (page 128)

The Emeryville Loop Multimodal Project is located in central Emeryville and provides safe crossings and improved biking, walking, and rolling connections to the surrounding commercial areas.

6) Powell Street Separated Bikeway Study (page 138)

A number of biking, walking, and rolling improvements are recommended as part of the Powell Street Study, including separated bikeways, improved biking, walking, and rolling connections at the I-80 Undercrossing, and improved crossings at intersections.

Major Projects

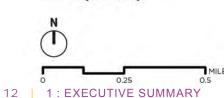
- 40th Street Multi-Modal Project
- Alameda CTC San Pablo Avenue Corridor Project
- Emeryville Loop Multi-Modal Project
- 40th Street Multi-modal Phase II: Bay Trail Gap Closure

Multi-Modal Study Areas

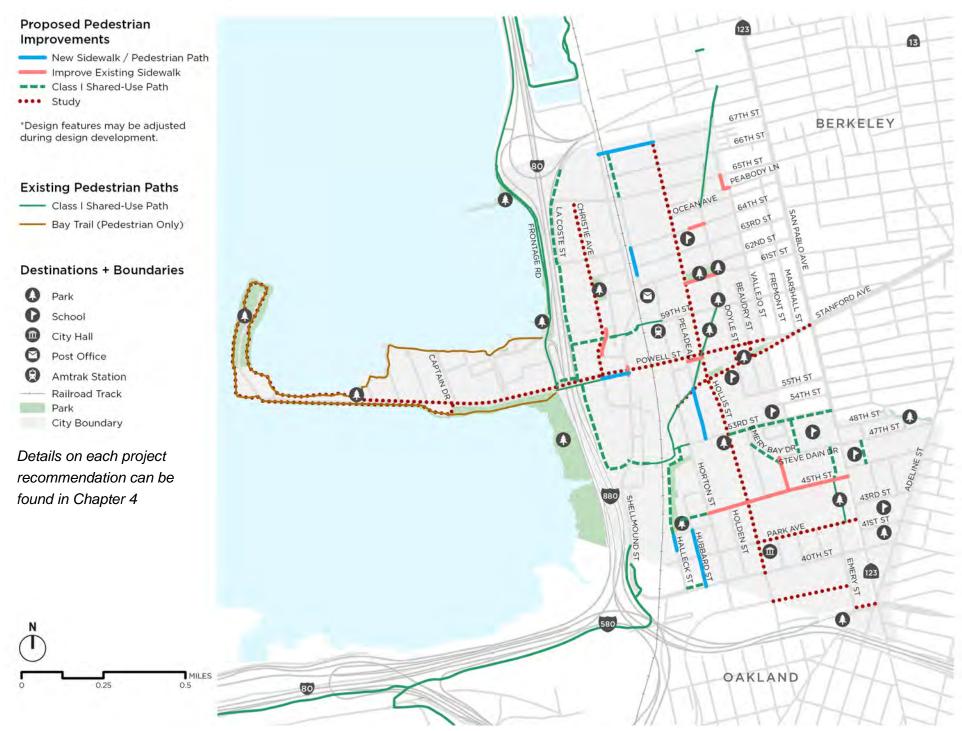
- F1 Christie Avenue Separated Bikeway Study
- F2 Hollis Street Transit Corridor and Bike Lane Study
- F3 Powell Street Study Segment 1
- F4 Powell Street Study Segment 2
- F5 Powell Street Study Segment 3
- F6 Powell Street Study Segment 4
- F7 Stanford Avenue Multi-Modal Study
- F8 Bay Trail Widening Study
- F9 Park Avenue Multi-Modal Study
- F-10 Mandela Parkway Extension / East Bay Bridge Shopping Center Connection
- F-11 Emeryville Crescent Trail

Destinations + Boundaries

- 0 Park
- O School
- City Hall
- Post Office
- Amtrak Station
- Railroad Track
- Park
- City Boundary







Proposed Spot Improvements

Intersection Upgrade

New or Upgrade Crossing

Signage

*Design features may be adjusted during design development.

Existing Pedestrian Paths

Class I Shared-Use Path

Class II Bicycle Lane

Class III Bicycle Route

 Class IIIB Bicycle Boulevard Class IV Separated Bikeway

Bay Trail (Pedestrian Only)

Destinations + Boundaries

0 Park

0 School

City Hall

Post Office

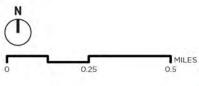
Amtrak Station

Railroad Track

Park

City Boundary

Details on each project recommendation can be found in Chapter 4





Proposed Bikeways

····· Class I Shared-Use Path

Class II Bicycle Lane

Class IIB Buffered Bicycle Lane

·-- Class III Bicycle Route

····· Class IIIB Bicycle Boulevard

····· Class IV Separated Bikeway

· · · · Study

••••• Trail Rehab Project

*Design features may be adjusted during design development. Bikeway design can be context-sensitive. Some Class II Bikeways may be upgraded to Class IV Bikeways in certain street contexts.

Existing Bikeways

Class I Shared-Use Path

Class II Bicycle Lane

Class IIB Buffered Bike Lane

Class III Bicycle Route

Class IIIB Bicycle Boulevard

Class IV Separated Bikeway

Destinations + Boundaries

0 Park

School

City Hall

Post Office

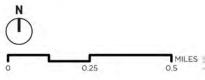
Amtrak Station

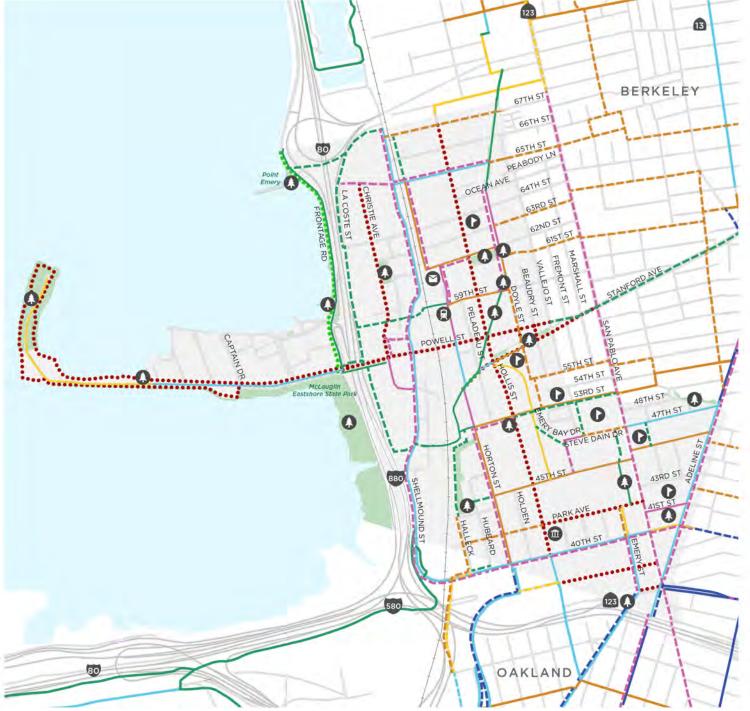
Railroad Track

Park

City Boundary

Details on each project recommendation can be found in Chapter 4







VISION STATEMENT

Purpose: This chapter outlines the vision, goals, and policies that guide this *Active Transportation Plan*.

Why it matters: By establishing consensus around a vision for how the City's active transportation network should operate, the City can prioritize investments that help realize its goals.

The vision and goals of the Emeryville *Active Transportation Plan* are drawn largely from community and Bicycle and Pedestrian Advisory Committee (BPAC) input, along with the current Emeryville General Plan and 2012 Pedestrian and Bicycle Plan. General Plan Guiding Principles related to biking, walking, and rolling are paraphrased as follows:

- ► A connected place: New and safe bicycle and pedestrian linkages across town and to the San Francisco Bay
- ► Enhanced and connected open space network and green streets: Building on the strength and connectivity of the city's greenways
- A diversity of transportation modes and choices: Fosters and provides incentives for active transportation modes



Improving car-free ways to access the waterfront is a priority for Emeryville residents and visitors.

Vision

The vision statement expresses what biking, walking, and rolling will be like in Emeryville in the future if the City successfully implements this *Active Transportation Plan*. The updated vision statement is:

The City of Emeryville is a community where active, sustainable transportation is the easy choice: it is safe, comfortable, equitable, and accessible to all.

The continuous, connected network of world-class facilities eliminates the necessity of driving a car and makes active transportation accessible to people of all identities (race, ethnicity, age, gender, socio-economic status, ability, or orientation). The City promotes active travel through infrastructure, education, and encouragement programs. The City inspires other communities with its visionary and forward-thinking commitment to active transportation.



The separated bikeway on 59th Street and Bay Wheels bike share station provide safe, comfortable, equitable, and accessible ways to get to the Amtrak station.

GOALS



Comfortable

The active transportation network is easy to navigate, including for parents, children, and seniors. Best practices in infrastructure design and programming reduces the risk of serious injury while biking, walking, or rolling throughout Emeryville.



Connected

The active transportation network is seamlessly integrated both within Emeryville and externally to neighboring communities. It allows for intermodal connectivity. Reaching destinations is direct and barrier-free.



Joyfu

Traveling along well-designed routes in the active transportation network is an enjoyable and attractive experience. People feel connected to one another and take pride in their streets and trails as public spaces and desirable destinations.



Equitable

The needs of the less resourced, whether by income, ability, employment access, education, age or another characteristic where disparity exists, are centered in project and program planning, prioritization, and implementation and given equal weight to residents' more resourced counterparts.¹



Sustainable

To help mitigate the climate crisis and reduce local pollution, the active transportation network encourages mode shift to zero-emission travel (biking, walking, rolling, and public transit) and helps lower the carbon footprint of those living and working in Emeryville. It includes other environmental benefits by increasing the number of shade trees and acreage of green stormwater infrastructure.



Implementable

The City incorporates active transportation network improvements into all aspects of the planning, development and construction process, including new private development projects. The City tackles complex and simple problems alike, allocating appropriate resources and creativity to each. The City leverages opportunities, large and small, to prioritize and implement any aspect of the active transportation network.

¹ Equity addresses the differences in lived experiences that may affect access to the active transportation network. Disadvantaged communities have a disproportionate burden of adverse environmental conditions, socioeconomic factors, and prevalence of certain health conditions.

RELATIONSHIP TO OTHER DOCUMENTS

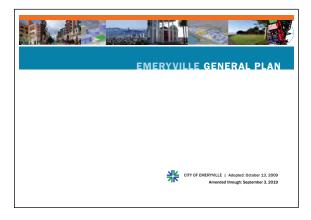
Emeryville's <u>General Plan</u> (Updated 2019) guides the physical development of the City and sets out five guiding principles:

- 1. A cohesive city of distinctive districts and livable neighborhoods. Emeryville's growth is shaped—through land use, urban form, and design—to create a tapestry of distinctive districts, and neighborhoods with a full complement of uses and easy access to parks, stores, and other amenities of everyday living.
- 2. A connected place. The General Plan fosters new connections— for automobiles, pedestrians, and bicyclists—between the western and eastern halves of the city; better connections to the Peninsula; and new and safe pedestrian and bicycle linkages to the San Francisco Bay.

3. Enhanced and connected open space network and green streets.

The General Plan outlines strategies for an expanded public realm, building on the strength and connectivity of the city's greenways, with a range of new parks, plazas, community commons, and recreational paths.

- 4. A walkable, fine-grained city, emphasizing pedestrians. The General Plan establishes that all of Emeryville will be easily traversed on foot.
- 5. A diversity of transportation modes and choices. The General Plan fosters and provides incentives for alternative transportation modes, including transit, car/vanpooling, bicycling, walking, and telecommuting.



The Active Transportation Plan helps the City realize these guiding principles along with implementing goals, policies, and recommendations adopted through complementary City planning efforts such as the City's Climate Action Plan 2.0, Citywide Planning Regulations and Design Guidelines, Sustainable Transportation Plan, and Complete Streets Policy (Resolution 13-03).

In addition, the City should consult the Alameda CTC Countywide Bikeways

Design Guide as a resource for implementing recommendations

in the Active Transportation Plan.

Climate Action Plan 2.0

The long term goal is to reduce Emeryville's GHG emissions to 80% below 2004 baseline levels by the year 2050 while creating a more vibrant, sustainable, and equitable city. Transportation is the single largest contributor to Emeryville's community GHG emissions, particularly considering the highways running through the city. Reducing transportation-related emissions will not only involve improving low-carbon transportation related to bicycles and buses, but also coordinating land-use policies to promote a denser, more walkable community with jobs and housing located close to other necessities.

The <u>Climate Action Plan</u> details 17 different objectives to achieve the goal of a 40% reduction in emissions by 2030. The three objectives related to the *Active Transportation Plan* include:

- Create vibrant neighborhoods where residents can easily walk to their basic daily needs.
- 2. Reduce the total vehicle miles traveled on local roads by 30%.
- **3.** Reduce the carbon intensity of vehicles through cleaner fuels and electrification by 30%.

The City of Emeryville Climate Action Plan 2.0 2016





The time to act on reducing greenhouse gas emissions and our carbon footprint is now

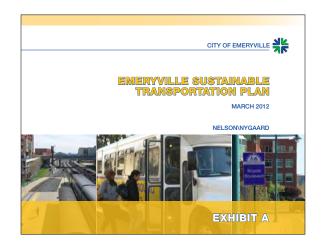
1

Sustainable Transportation Plan

The Emeryville Sustainable Transportation
Plan (2012) aims to implement the
transportation goals established in the
General Plan and achieve Emeryville's
overall vision of having a transportation
system that:

- 1. Reduces greenhouse gas emissions,
- 2. Moves the most people in the least space with the least energy, and
- 3. Promotes public health through exercise.

The Sustainable Transportation Plan establishes a total of 71 strategies aimed to shift Emeryville residents, employees, and visitors toward sustainable modes of transportation. The strategies are broken into categories related to transit, transportation demand management, parking, wayfinding, and bicycle and pedestrian improvements. The *Active Transportation Plan* will promote strategies categorized under Pedestrian Connectivity and Safety and Bicycle Connectivity and Safety.



Emeryville Complete Streets Policy

The City of Emeryville envisions a transportation system that encourages healthy, active living, promotes transportation options, reduces environmental impact, mitigates climate change, and supports greater social interaction and community identity by providing safe and convenient travel along and access streets through a comprehensive, integrated transportation network for pedestrians, bicyclists, public transportation riders, motorists, emergency responders, and people of all ages and abilities, including children youth, families, older adults, and individuals with disabilities. All transportation improvements will be planned, funded,

designed, constructed, operated, and maintained to provide safe mobility for all users appropriate to the function and context of the facility. The City's Complete Streets policy expresses a commitment to creating and maintaining Complete Streets that provide safe, comfortable, and convenient travel—for all categories of users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users, and operators of public transportation, emergency responders, seniors, children, youth, and families. The full policy can be found in **Appendix A: Emeryville Complete** Streets Policy.

The Active Transportation Plan also helps the City do its part to achieve larger regional and state goals embraced in Alameda Countywide Transportation Plan 2020, Alameda Countywide Active Transportation Plan, San Pablo Avenue

Corridor Project, Plan Bay Area 2050, Caltrans District 4 Bicycle Plan, and Toward an Active California: State Bicycle and Pedestrian Plan.

Emeryville Public Arts Master Plan

The Arts Master Plan aims to define the focus of the Art in Public Places Program and enhance quality of life for Emeryville's community through art and creative opportunities. The Emeryville Greenway is identified in the Plan as an opportunity area for the implementation of people-centric art that is engaging. The *Active Transportation Plan* seeks to promote the Art in Public Places Program by proposing biking and walking infrastructure improvements. As outlined in the Arts Master Plan, biking and walking infrastructure provides opportunities to integrate art.

Link to plan

North Alameda County Core Connections Plan (NACCP)

The NACCP assesses performance and identifies regionally significant projects in Northern Alameda County, including Emeryville, Southwest Berkeley, and West and Downtown Oakland. The Plan highlights projects that are designed to reduce congestion by providing access to sustainable, safe, and efficient multimodal transportation options.

The *Active Transportation Plan* will promote multimodal projects identified in the NACCP that are located in Emeryville.

Link to plan

Alameda CTC Countywide Bikeways Network

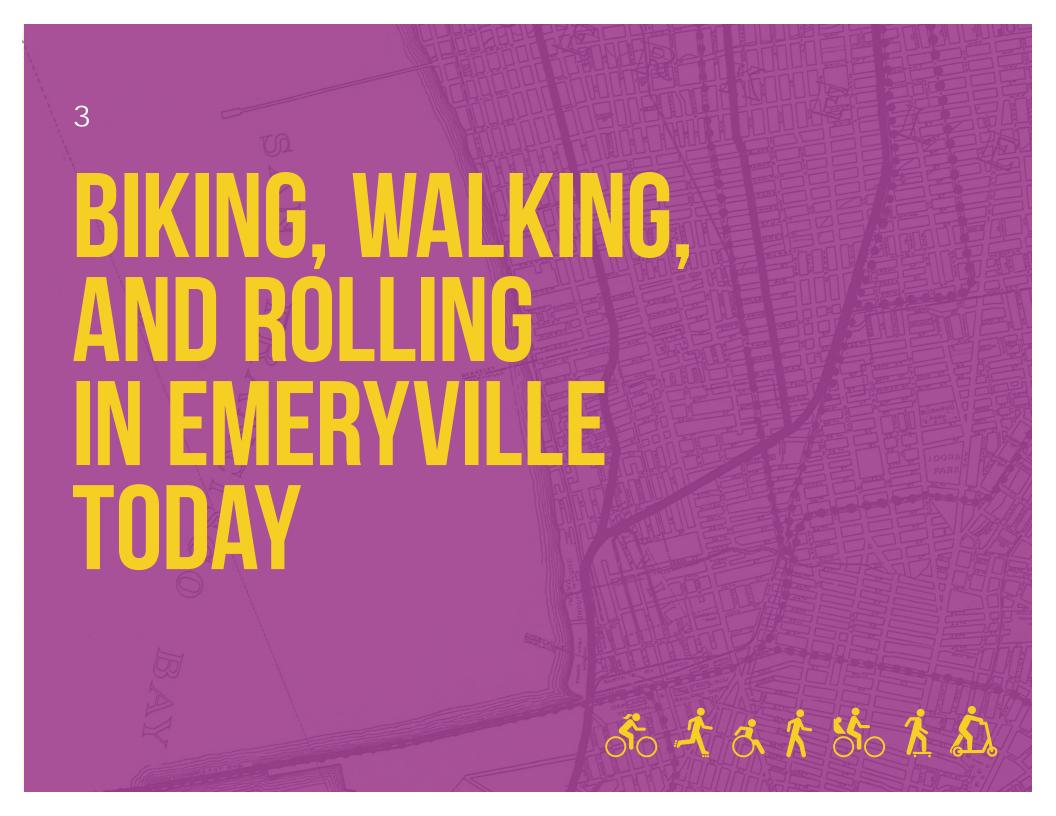
The Countywide Bikeways Network identifies 400 miles of conceptual corridors throughout Alameda County as a vision for an all ages and abilities network.

The bike network will:

- Address Equity
- Improve Connectivity
- Improve Safety
- Connect Activity Centers
- Close Gaps and Barriers

Several corridors identified in the Countywide Bikeways Network are located within Emeryville including San Pablo Avenue, the Emeryville Greenway, Stanford Avenue, 65th Street, Powell Street, and 40th Street. The *Active Transportation Plan* will focus on multimodal improvements to these corridors.

Link to plan



BIKING, WALKING, AND ROLLING IN EMERYVILLE TODAY

Purpose: This chapter describes the active transportation landscape in Emeryville, including a discussion of related themes that inform the recommended infrastructure projects, programs, and policies in the community.

Why it matters: Understanding Emeryville's current travel patterns, strengths, and challenges will inform which types of projects and programs the City needs to thrive.

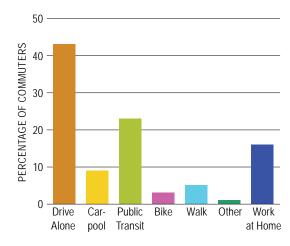


Figure 1. Commute modes (2020)

Demographics

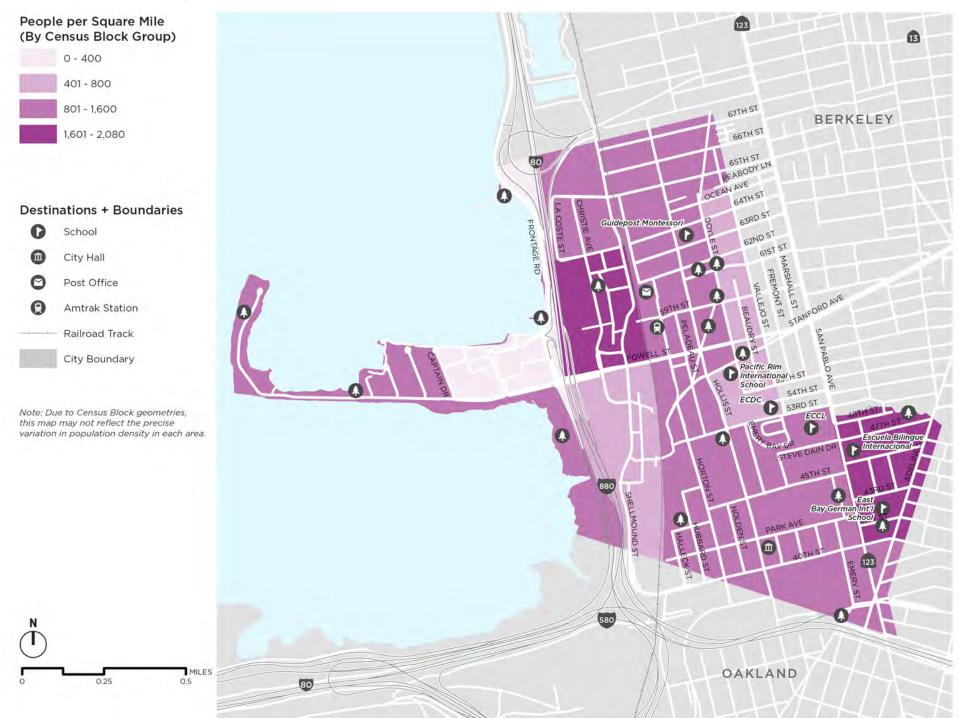
Emeryville is home to 11,679 residents, according to 2020 American Community Survey five-year estimates. The neighborhoods located in the southeastern corner of the City between San Pablo Avenue and Adeline Street as well as Christie Avenue north of Powell Street contain the highest density of residents compared to other areas of the City (Map 5). In addition to local residents, more than 24,000 employees are based in Emeryville. Major employers within the

City include a number of large offices and research facilities such as Pixar, Grifols, and Amyris. Emeryville also serves as a regional commercial and retail hub where a number of shopping centers attract many from surrounding areas.

The median age of Emeryville residents is 34.8 years, slightly younger than the median age of the San Francisco-Oakland-Berkeley metro area at 39.1 years. Young

adults aged 20-39 account for 54% of Emeryville's total population, while children account for 8% and adults over the age of 65 account for 11%.

Almost 43% of Emeryville's residents commute to work by driving alone (**Figure 1**). 23% reported commuting to work by public transit, and 8% reported biking or walking as their primary mode.



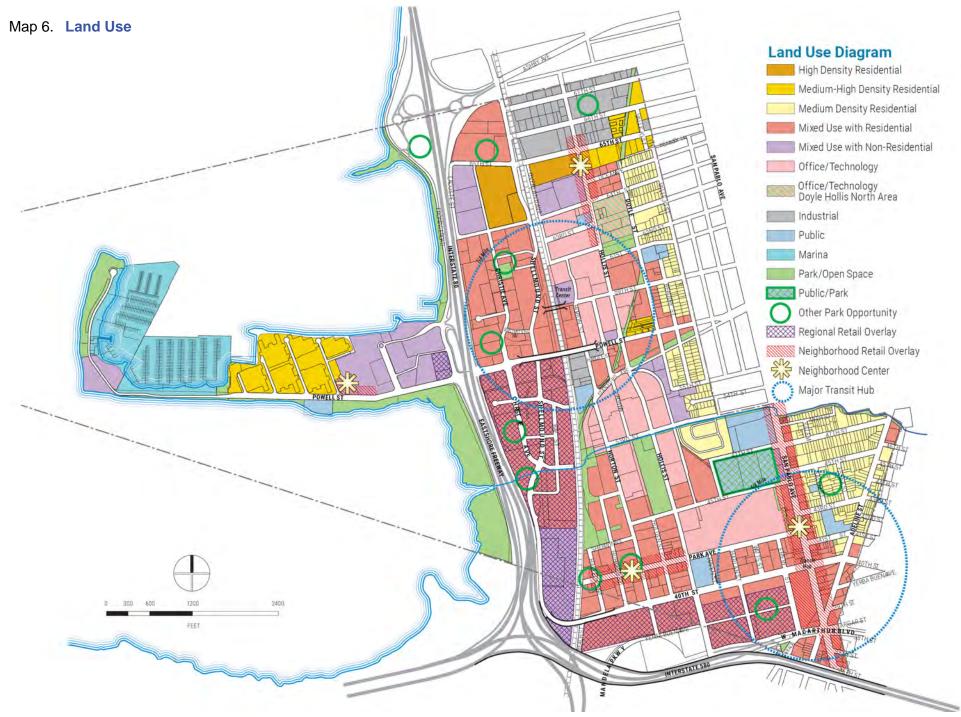
Major Destinations, Employment Centers, and Retail Hubs

Emeryville's current land use is a mix of office, commercial, residential, and industrial (including research and development). Areas zoned Mixed Use are the most prevalent land use type, accounting for 45% of the total land area. Prominent mixed-use areas are clustered around 40th Street, Shellmound Street, Christie Avenue, and San Pablo Avenue.

Emeryville contains a variety of employment, retail, and recreational destinations (**Map 6**). Major destinations within the City include the 40th Street/ Shellmound Street shops and restaurants concentrated at Bay Street shopping center, Powell Street Plaza, Emeryville Public Market, Bridgecourt Center, and IKEA, as well as the City's major employers such as Pixar, Grifols, Amyris, and a concentration of employment in the North Hollis and Watergate towers portions of town. Recreation and park destinations include the Bay Trail, Emeryville Greenway, Emeryville Marina Park, Emeryville Center of Community Life Pool, Christie Park, and Doyle Hollis Park.

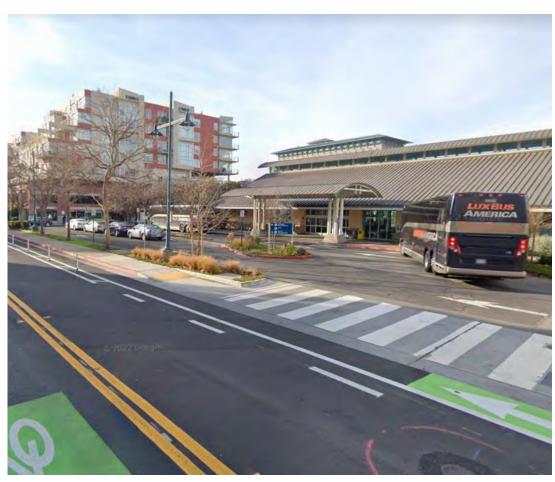
The geographic layout of Emeryville's major destinations, residential neighborhoods, and employers presents challenges to people biking, walking, and rolling between these points, with San Pablo Avenue, I-80,

and the Mainline railroad corridors creating barriers to those using active modes of transportation, particularly in traveling east-west and trying to access some of Emeryville's most attractive destinations for employment, recreation, and retail. North-south barriers include Powell and 40th, but parallel routes to arterials make the problems with their speed and volumes less acute, whereas I-80 and the railroad have limited bridge and underpass options, resulting in constrained east-west options for people biking, walking, and rolling and creating potential conflicts and choke points.



Transit

Emeryville is served by several transit providers and routes that offer connections to local and regional destinations (Map 7). The Amtrak Station and AC Transit Transbay bus stops throughout the City, as well as the nearby Ashby, MacArthur, and West Oakland Bay Area Rapid Transit (BART) stations give residents access to the surrounding region. Local bus providers including AC Transit and the Emery Go-Round provide connections in and around Emeryville, as well as to destinations in Berkeley and Oakland. According to AC Transit boarding and alighting counts from 2019, the most popular bus stops are located on 40th Street east of Horton Street. San Pablo Avenue, and on Christie Avenue between 64th Street and 65th Street. Prior to the COVID-19 pandemic, Casual Carpool Pickup locations were also available to residents near Captain Drive on the peninsula and at the intersection of Christie Avenue and 64th Street. Casual Carpool has been slow to return as of early 2023. Pedestrian improvements in these areas are especially important to consider in the Active Transportation Plan as well as first and last mile access to the BART stations in neighboring jurisdictions.



The Horton Street bike lane connects people biking and rolling to the Emeryville Amtrak Station.

Emeryville Transit Stops

- AC Transit Stop (Local)
- AC Transit Stop (Transbay)
- Emery Go-Round
- ba **BART Station**
- Amtrak Station
- Casual Carpool Pickup

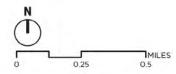
Destinations + Boundaries

- 0 School
- City Hall
- Post Office
- Park

Commercial

City Boundary





Equity

Equity is a key piece of all planning processes, including Emeryville's *Active Transportation Plan*. An equitable transportation system is accessible to underserved communities and is geographically distributed throughout neighborhoods and demographic groups. For the existing conditions phase of the Plan, concentrations of low-income workers and median household incomes within Emeryville were evaluated to better understand where there may be a need for biking, walking, and rolling infrastructure.

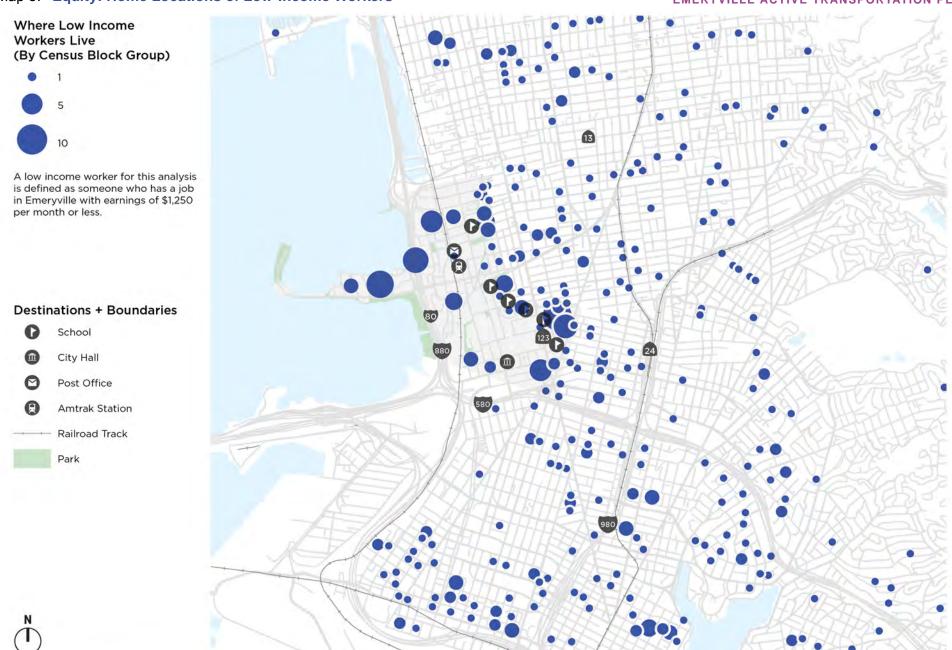
The home locations of low-income workers were evaluated using 2018 Longitudinal Employer-Household Dynamics (LEHD) data from the U.S. Census Bureau (**Map 8**). For this analysis, a low-income worker is defined as someone who has a job with earnings of \$1,250 per month or less. The home locations of low-income workers who work in Emeryville tend to be clustered on the eastern edge of the City in the

neighborhoods along Doyle Street, south of Stanford Avenue, and east of San Pablo Avenue between 40th Street and 48th Street. Active transportation improvements in these areas are especially important to creating an equitable transportation system.

The median annual household income of the City of Emeryville is \$104,063, slightly less than the surrounding San Francisco-Oakland-Berkeley metro area. Areas within Emeryville where median household incomes are lower than the City's median include the residential areas on the peninsula, the neighborhoods south of 53rd Street between Horton Street and Adeline Street, and the neighborhoods east of Doyle Street (Map 9). Residents of these neighborhoods will benefit from a wider variety of car-free transportation options including improved walking connections to nearby transit stops, low-stress biking and rolling infrastructure, and safer arterial crossings.

Several areas throughout Emeryville emerged as key places to consider for an equitable transportation system. The following locations have both a lower relative median household income than surrounding areas and also a concentration of low-income workers:

- East of San Pablo Avenue between 40th Street and 48th Street
- East of Doyle Street between Peabody Lane and 55th Street
- North of Powell Street between Frontage Road and Captain Drive





Biking, Walking, and Rolling Today

Every year, the United States Census surveys how commuters over the age of 16 get to work. **Table 1** presents journey to work data for Emeryville and compares it to Berkeley, Oakland, Alameda County, California, and the United States. In 2020, the most recent year for which data is available, 5.2% of Emeryville workers

walked to work and 2.9% bicycled to work. Emeryville's active modes and public transit commuting rate is higher than Alameda County, California, and the United States and comparable to Oakland's commuting trends.

Table 2 presents commuting trends over the past 10 years. While walking to work has declined from 9.6% in 2010 to 5.2% in 2020, bicycling, using public transit, and working from home have all increased. Driving alone in Emeryville has declined 20% over the past decade.

Table 1. Commute Mode Share Comparison

	WALKING	BICYCLING	WORKED AT HOME	PUBLIC TRANSIT	DROVE ALONE	OTHER
Emeryville	5.2%	2.9%	15.7%	22.8%	43.0%	10.4%
Berkeley	15.7%	6.6%	16.7%	23.2%	30.9%	6.9%
Oakland	3.6%	2.3%	10.8%	21.5%	49.9%	11.9%
Alameda County	3.3%	1.7%	11.0%	14.3%	58.5%	11.2%
California	2.5%	0.8%	8.4%	4.6%	72.1%	11.6%
United States	2.6%	0.5%	7.3%	4.6%	74.9%	10.1%

Table 2. Emeryville Commute Mode Trends, 2011 to 2020

	2011 TO 2015		2016 TO 2020	
	ACS 5 YEAR ESTIMATES	MARGIN OF ERROR	ACS 5 YEAR ESTIMATES	MARGIN OF ERROR
Walk	7.1%	±3.1	5.2%	±1.7
Bike	3.1%	±1.4	2.9%	±1.3
Work at Home	4.3%	±1.6	15.7%	±4.5
Public Transit	23.1%	±3.7	22.8%	±3.5
Drive Alone	50.2%	±5.1	43.0%	±4.3
Other	12.2%	NA	10.4%	NA

Given the high level of transit use among Emeryville residents, improving pedestrian and bicycle connections to transit will sustain the high level of transit ridership. Providing convenient and safe bicycle connections to employment in downtown Oakland, south Berkeley, and other nearby employment centers may further improve the bicycle and walking mode share. Telecommuting or working from home is also showing greater popularity.

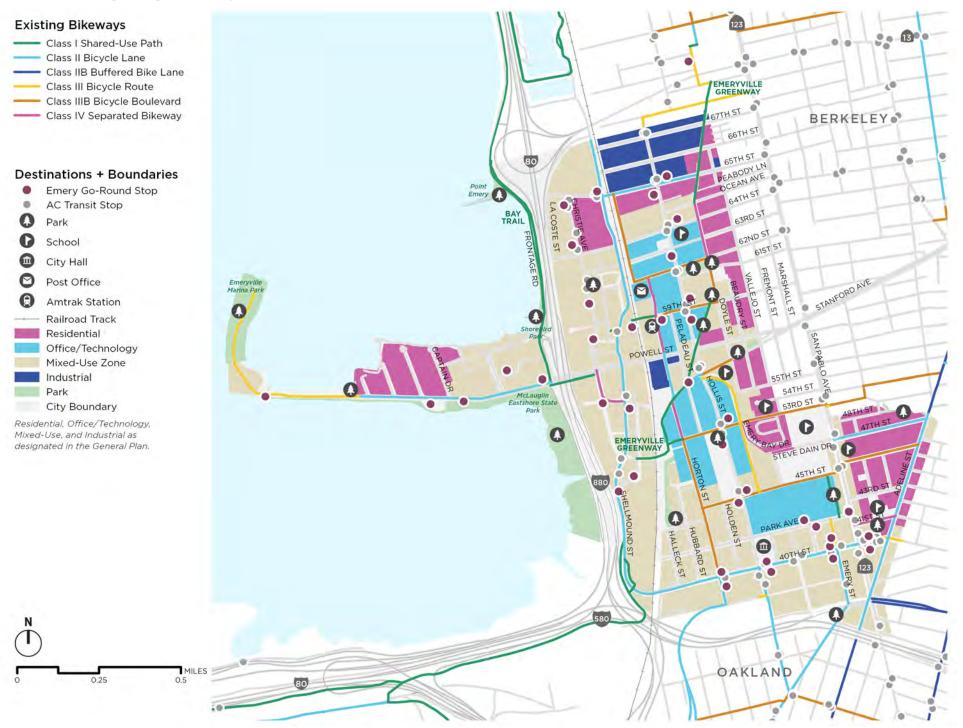
Emeryville's existing bike network is made up of shared-use paths, separated bikeways, buffered bike lanes, bike lanes, bike routes, and bicycle boulevards (**Table 3**). Descriptions below outline the definitions of these terms and how they will be used throughout this Plan.

Table 3. Existing Bike Network

BIKEWAY TYPE	MILEAGE	
Shared-Use Path (Class I)	2.1 miles	
Bicycle Lane (Class II)	4.2 miles	
Bicycle Route (Class III)	1.5 miles	
Bicycle Boulevard (Class IIIB)	2.5 miles	
Separated Bikeway (Class IV)	0.9 miles	
Total	11.1 miles	

Emeryville has a total of 11.1 miles of designated biking facilities (**Map 10**). These are recorded in the Plan as centerline street miles. Bicycle lanes are the most common facility type, accounting for 38% of the total biking network. Bicycle boulevards are the next most common facility type (2.5 miles), followed by shared-use paths (2.1 miles).

Key existing biking and rolling routes through Emeryville include north-south connections on Shellmound Street, the San Francisco Bay Trail, and the Emeryville Greenway, as well as eastwest connections on 40th Street and the South Bayfront Bridge. Bicycle boulevards throughout the City also provide important biking routes through residential areas where traffic volumes and speeds are lower. As Emeryville is situated between popular destinations in Oakland and Berkeley, low-stress biking connections not only within City limits but also to surrounding areas will be especially important in the development of project recommendations later in the planning process.



Bike Infrastructure

This visual glossary accompanies Map 10: Existing Designated Bicycle Facilities by defining the existing and potential future bikeway types in Emeryville with visual examples. In addition to common bikeway facility names, Caltrans uses four classes of bikeways (I, II, III, and IV). This plan uses those classifications, but expands the facility types by including Class IIB and Class IIIB designations to differentiate buffered bike lanes (Class IIB) from standard bike lanes (Class II) and bike boulevards (Class IIIB) to differentiate from standard bike routes (Class III). Separated Bikeways (Class IV) can take many different forms and three examples are shown on the following page.

Shared-Use Path (Class I)



Bike paths and shared-use paths are typically paved bi-directional pathways that are separate from the road right-of-way. Ideally, shared-use paths will follow a distinct course in a separate right-of-way, often along former railroad beds, along water courses, or other rights-of-way that usually have few crossing roadways. Source: FHWA.



Bike Lane (Class IIB)

Bike lanes designate an exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic. Source: NACTO.

Buffered Bike Lane (Class IIB)



Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Source: NACTO.

Bike Boulevard (Class IIIB)



Bicycle boulevards are streets with low motorized traffic volumes and speeds, designated and designed to give bicycle travel priority. Signs, pavement markings, and speed and volume management measures are used to discourage through trips by motor vehicles and create safe, convenient bicycle crossings of busy arterial streets. Source: NACTO.

Two-Way Cycle Track (Class IV)



Two-way cycle tracks (also known as protected bikeways, separated bikeways, and on-street bike paths) are physically separated cycle tracks that allow bicycle movement in both directions on one side of the road. Source: NACTO.

Raised Bikeway (Class IV)



Raised cycle tracks are bicycle facilities that are vertically separated from motor vehicle traffic. Many are paired with a furnishing zone between the cycle track and motor vehicle travel lane and/or pedestrian area. Source: NACTO.

Parking Protected Bikeway (Class IV)



One-way parking protected bikeways are at street level and use a parking lane for physical protection from passing traffic. Source: NACTO.

For more information on Separated Bikeway implementation, please see this guide from the California Bicycle Coalition: https://cal.streetsblog.org/wp-content/uploads/sites/13/2016/09/CalBike-Class-IV-Bikeways-Brochure-Final-Web.pdf

SAN FRANCISCO BAY TRAIL AND PARK ACCESS

Emeryville is home to a scenic and welltraveled segment of the San Francisco Bay Trail—a 500-mile planned shared-use path network that will circumnavigate the San Francisco Bay. Located along the City's waterfront and on several arterial roadways, Emeryville's Bay Trail segment provides walking and rolling access to the Bay Bridge as well as numerous parks along the waterfront including McLaughlin Eastshore State Park, the Emeryville Marina Park, Point Emery, the Berkeley Marina, Cesar Chavez Park, Golden Gate Fields, and the Albany Bulb. Walking and rolling routes to reach the trail within Emeryville are key connections in the active transportation network. As such, these connections should be given great focus.



The Emeryville Marina is a popular biking, walking, and rolling destination along the Bay Trail.

EMERYVILLE GREENWAY

The Emeryville Greenway is a Class I shared-use path that connects to a residential slow street where cars are not permitted to drive. The Greenway's seamless connection to the Doyle Street slow street enables biking and rolling conditions that are comfortable for all ages and abilities and are characterized by minimal interactions with car traffic. The Greenway serves as a prominent northsouth connection in the City's existing biking and rolling network, connecting to Berkeley's 9th Street bicycle boulevard to the north and the South Bayfront Bridge to the south where users can access the Bay Trail and Mandela Parkway. The Greenway provides an essential backbone when considering how to best maximize Emeryville's all ages and abilities network.



The Emeryville Greenway hosts a number of different user types with a wide range in abilities.



A raised bicycle lane next to the sidewalk on Shellmound St allows for people walking and rolling to comfortably share the same space.

The majority of Emeryville's street network is equipped with sidewalks, but some sidewalks are narrow or have barriers that make walking difficult. The City used input from the community to identify sidewalk barriers and width restrictions in the

existing pedestrian network (**Map 11**). The following corridors contain a high density of sidewalk width restrictions relative to other areas within Emeryville:

- 40th Street between Halleck Street and Adeline Street
- ► 64th Street between Christie Avenue and Vallejo Street
- Powell Street between Frontage Road and Beaudry Street

Arterial roadways also pose challenges to people walking throughout Emeryville. On- and off-ramp connections to I-80, high traffic volumes, and multiple lanes of traffic often characterize the areas surrounding walking destinations. Pedestrian signals and intersection upgrades that provide more protection for people walking will help improve the City's existing sidewalk network and encourage walking as a mode of transportation.

EXISTING ACTIVE TRANSPORTATION PROGRAMS

Bicycle-, walking-, and rolling-focused programs provide education and encouragement for residents. Prepandemic, Bike to Work Day was a celebration of bicycles as a fun and healthy way to get to work, as well as an opportunity for those who do not usually bike commute to try it out. Organized by Bike East Bay, the City of Emeryville has a long history of sponsoring "Energizer Stations" where participants can receive free snacks and coffee from local businesses, repair kits, and goodie bags.



The City of Emeryville has a long history of participating in the annual Bike to Work Day encouragement campaign.



Pedestrian Network Improvements

There are many features that contribute to a comfortable and safe walking environment.

New/Improved Sidewalk



Sidewalks and walkways are "pedestrian lanes" that provide people with space to travel within the public right-of-way that is separated from roadway vehicles. Source: FHWA.



Crosswalk

Marked crosswalks indicate optimal or preferred locations for pedestrians to cross and help designate right-of-way for motorists to yield to pedestrians. Source: FHWA.



Rectangular Rapid Flashing Beacon (RRFB)

User-activated pedestrian signals that use flashing yellow lights to alert motorists to the presence of people walking in the crosswalk. They can be installed in midblock locations or at intersections where a full traffic signal is not warranted. In residential areas, alternative flashing signs may be considered that illuminate the perimeter of the sign.



Pedestrian Hybrid Beacon (PHB)

PHBs can warn and control traffic at unsignalized locations and assist pedestrians in crossing a street or highway at a marked crosswalk. The PHB rests in dark until a pedestrian activates it via a pushbutton or other form of detection. PHBs are used on higher speed and higher volume roadways than RRFBs. Source: FHWA.



Curb Extensions

Curb extensions—also known as bulb-outs or neckdowns—extend the sidewalk or curb line out into the parking lane and reduce the effective street width. Source: FHWA.



Leading Pedestrian Interval (LPI)

LPIs can be programmed into traffic signals to minimize conflicts between pedestrians crossing a roadway and left- or right-turning vehicles. LPIs give the pedestrian the WALK signal 3-7 seconds before the motorists are allowed to proceed through the intersection, which makes them more visible. Source: FHWA.



Median Refuge Island

A median refuge island, or crossing island, is a median with a refuge area that is intended to help protect pedestrians crossing a multilane road. Crossing islands should be considered as a supplement to the crosswalk. A pedestrian refuge island allows pedestrians to focus on one direction of traffic at a time as they cross and provides space to wait for an adequate gap in oncoming traffic before finishing the second phase of the crossing. Source: FHWA.



Signal Timing Adjustments

In general, shorter cycle lengths (ideally less than 90 seconds) and longer walk intervals provide better service to pedestrians and encourage better signal compliance. For optimal pedestrian service, fixed-time signal operation usually works best because it provides an automatic pedestrian phase. Source: FHWA.



No Right on Red

Prohibiting right turns on red should be considered where exclusive pedestrian phases or high pedestrian volumes are present. Source: FHWA.

BIKING, WALKING, AND ROLLING SAFETY

Bicycle- and pedestrian-related collision data can provide insight into specific locations and roadways that tend to have higher rates of collisions. This analysis uses collision data acquired from University of California Berkeley's Transportation Injury Mapping Systems (TIMS) between the dates 1/1/2017 and 12/31/2021 to determine high-level collision trends and areas in Emeryville with a history of frequent collisions. It is important to note that this analysis relied on reported collisions, and not all collisions involving people biking, walking, and rolling are reported. Further, near-crashes are not included as they are typically not reported.

In total, 33 bicycle-related collisions and 28 pedestrian-related collisions occurred in Emeryville during the study period. Bicycle-related collisions per year did not tend to drastically fluctuate from year to year, though reported collisions almost tripled from 2017 to 2018 (**Figure 2**).

Pedestrian-related collisions similarly did not drastically fluctuate throughout the study period; however, 2021 experienced an increase from 2020 (**Figure 3**). One pedestrian fatality occurred outside the study period in 2016 at the intersection of Powell Street and Christie Avenue in the pedestrian right-of-way.

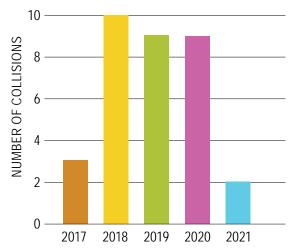


Figure 2. Bicycle-related collisions

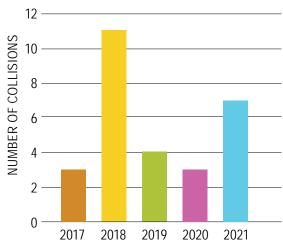


Figure 3. Pedestrian-related collisions

Bicycle-related Collision Trends

Bicycle-related collisions that occurred during the study period most commonly resulted in 'Minor Injury' severity type (Figure 4). Corridors within Emeryville that contain the highest rate of bicycle-related collisions include Hollis Street, San Pablo Avenue, and Frontage Road (Map 12). The following trends emerged during the safety analysis:

Six bicycle-related collisions occurred on San Pablo Avenue.

- Five bicycle-related collisions occurred at intersections on Emeryville's existing bicycle boulevard network.
- Two bicycle-related collisions occurred at the intersection of San Pablo Avenue, Adeline Street, and MacArthur Boulevard due to improper turning and being on the wrong side of the road.
- A severe collision occurred at the intersection of 63rd Street and Hollis Street within the automobile right-of-way.

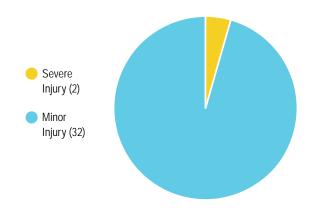


Figure 4. Bicycle collision severity



Pedestrian-related Collision Trends

Pedestrian-related collisions that occurred during the study period most commonly resulted in 'Minor Injury' severity type (**Figure 5**). Corridors within Emeryville that contain the highest rate of pedestrian-related collisions include Powell Street, 40th Street, and Hollis Street (**Map 13**). The following trends emerged during the safety analysis:

- Six pedestrian collisions occurred along Powell Street during the study period.
- Twelve collisions occurred within 1,000 feet of a school.

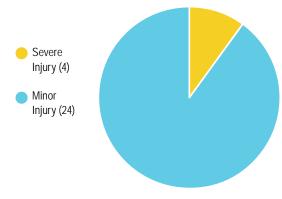


Figure 5. Pedestrian collision severity

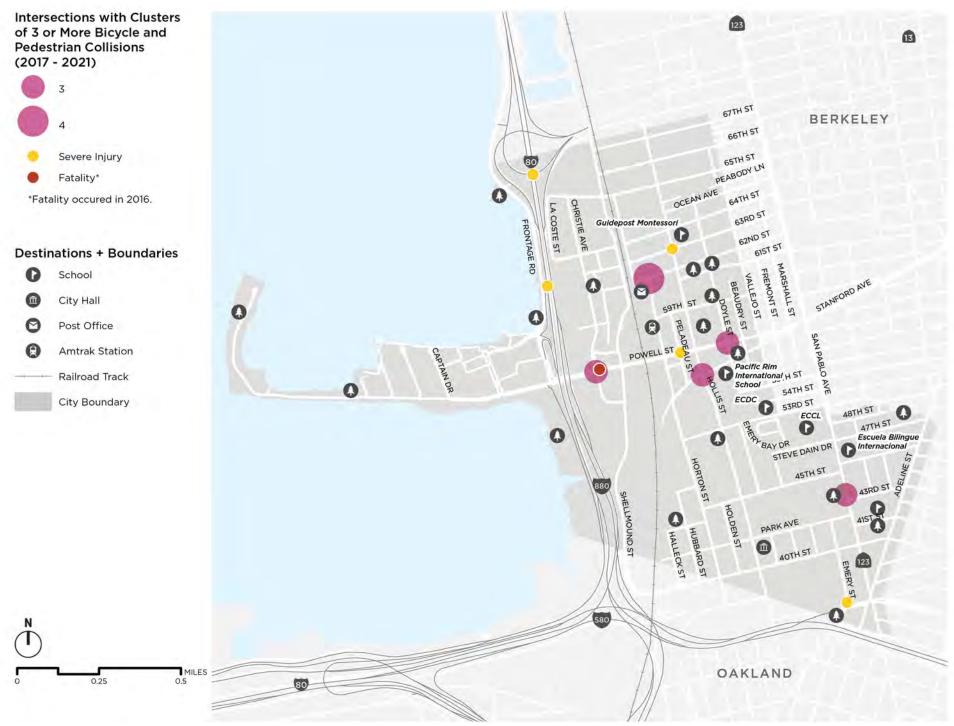
 One pedestrian fatality occurred in 2016—outside of the study period—at the intersection of Powell Street and Christie Avenue.

Collision Hotspots Analysis

In this safety analysis, collision hotspots are defined as locations where three or more bicycle- or pedestrian-related collisions occurred. Five intersections throughout Emeryville were identified (Map 14).

- 62nd Street and Horton Street
- Powell Street and Christie Avenue
- Powell Street and Doyle Street
- Stanford Avenue and Hollis Street
- 43rd Street and San Pablo Avenue





Connectivity

The Bicycle Level of Traffic Stress (BLTS) analysis in this Plan measures the perceived stress levels of people biking or rolling along Emeryville's roadways and shared-use paths. The less stressful—and therefore more comfortable—a biking and rolling facility is, the more accessible it will be to a larger portion of the population, both in age and ability. A biking and rolling network will be more comfortable if it is designed to reduce stress associated with potential vehicle conflicts.

Bikeways are considered low-stress if they involve very few traffic interactions by nature of the roadway's vehicle speeds and volumes (e.g., a shared low-traffic neighborhood street) or if there are greater degrees of physical separation between the bikeway and traffic lane (e.g., a separated bikeway on an arterial roadway). In order

to evaluate how well connected and comfortable Emeryville's existing bike network is, a BLTS analysis was performed on the city's street and trail network.

The BLTS analysis quantifies stress levels when a person is riding or rolling along a roadway, bike facility, or shared-use path. Inputs into how stressful a roadway or bikeway may feel include the number of traffic lanes, speed limit, presence of a bike facility, and presence of a physical separator between the bike facility and moving vehicles. The following levels of perceived stress, described by the type of bicyclist or roller the facility generally appeals to, were assigned to Emeryville's active transportation network:

- BLTS 1: All Ages and Abilities Corridor has a Class I Shared-Use Path or Class IV Separated Bikeway that provides a comfortable riding experience for all people biking or rolling.
- (Residential)
 Corridor is located within a residential area with low traffic speeds and low volumes that provides a comfortable onstreet riding experience for most people.
 Corridor may contain traffic calming, a

bicycle boulevard facility, or bike route.

BLTS 1.5: All Ages and Abilities

BLTS 2: Average Adult
 Corridor provides a comfortable riding experience for an adult who bikes.
 Corridor may contain buffered bike lanes on an arterial roadway or bike lanes.

BLTS 3: Confident Adult

Corridor provides a comfortable riding experience for an experienced adult.

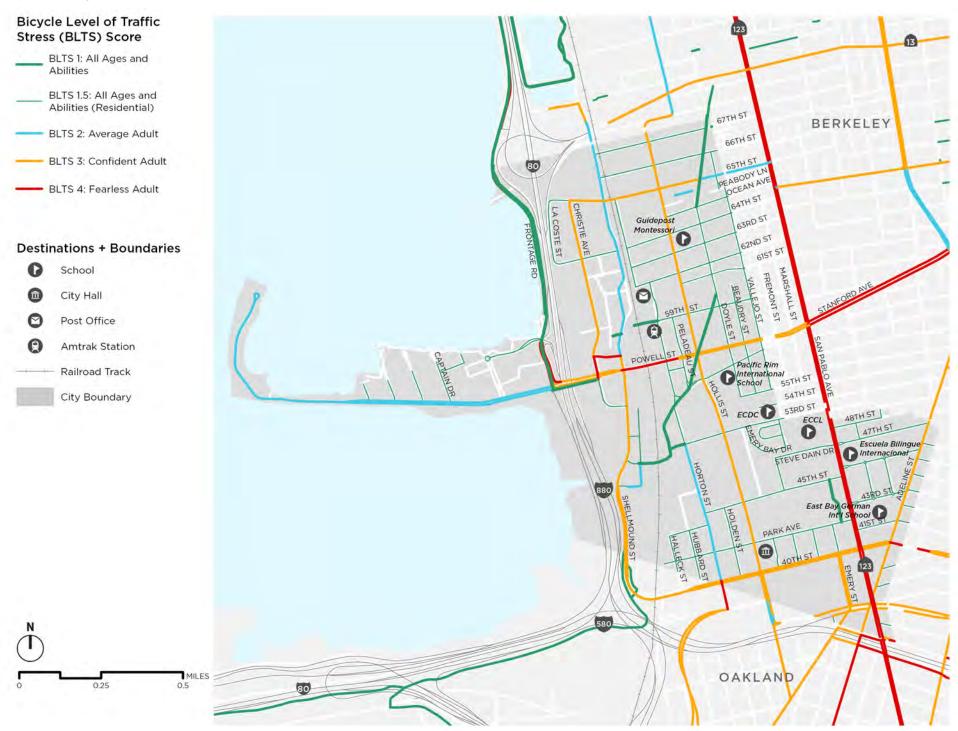
Corridor contains a bike facility with minimal separation from traffic such as a bike lane or bike route and hosts higher traffic speeds and volumes.

BLTS 4: Fearless Adult

Corridor is not comfortable for the majority of people biking. High traffic volumes, speeds, and multiple travel lanes without designated biking facilities are often barriers to people biking.

Emeryville's BLTS analysis revealed locations that are highly stressful for people biking and rolling, as well as areas where the low-stress network for all ages and abilities should be improved and better connected to popular destinations (Map 15). San Pablo Avenue and Powell Street emerged as the most stressful roadways to bike or roll on. Areas where low-stress

bikeways intersect these high-stress arterials, such as the intersection of 45th Street and San Pablo or Horton Street and Powell Street, emerged as places to be considered for spot improvements during the recommendations phase of the Plan. When considering Emeryville's existing low-stress network and the destinations it connects to, notable gaps include the Bay Street Shopping Mall, connections to the Bay Trail from north of Powell Street, and the commercial areas along 40th Street.



KEY TAKEAWAYS

Four key takeaways emerged from the existing conditions and data analysis phase of the Plan:

Arterial roadway crossings are stressful

The following arterial streets should be considered for crossing improvements and/ or parallel low-stress walking and rolling routes:

- ▶ 40th Street
- Powell Street
- San Pablo Avenue

Focus area: San Pablo Avenue and Adeline Street

Residents with the lowest incomes live in the southeast corner of Emeryville on each side of San Pablo Avenue and Adeline Street. This area also has the highest population density, meaning that there is greater need and opportunity to serve the area with low-cost transportation options.

Walking routes can be improved by removing identified barriers

Sidewalks with width restrictions near schools, community centers, transit corridors, and commercial areas should be considered for improvements to walkability.

The existing bikeway network is not comfortable for all ages and abilities

Upgrading existing bikeways to lowerstress facilities and improving bicycle boulevard arterial crossings will make the rolling network more accessible to a wider audience.



POLICIES, PROGRAMS, AND PROJECTS

Purpose: This chapter introduces the different types of biking, walking, and rolling projects and supporting amenities recommended for implementation.

Why it matters: This chapter presents potential steps the City can take to meet the transportation needs identified in previous chapters.

What We Heard

Across all of our outreach efforts with Emeryville residents and community members, we heard:

- Arterial roadways create barriers to people biking, walking, and rolling in Emeryville.
- There is a need for low-stress walking and rolling routes to transit, parks, schools, and shopping.
- There is a need for improved street crossings along transit corridors.
- Greenways and bike boulevards work well as walking and rolling routes.

How to Read this Chapter

This chapter is organized by the following main sections:

- Policies & Programs
- Projects
 - » Pedestrian Network & Spot Improvement Recommendations
 - » Bikeway Network Recommendations
 - » Multimodal Projects
- Studies

A key at the top of the subsequent pages will help orient you to these sections.



Pedestrians enjoy strolling along the Marina.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

MULTIMODAL PROJECTS

STUDIES

Policy Recommendations

A-1: COMMITMENT TO PLAN IMPLEMENTATION

A-1.1: The City will seek resources to implement the recommendations of the Active Transportation Plan.

A-1.2: As other roadway improvements are constructed by the City and other agencies, the City will evaluate opportunities to integrate pedestrian and bicycle infrastructure to advance implementation of the Active Transportation Plan.

A-2: MAINTENANCE

A-2.1: Bicycle facilities will be resurfaced at the time that the street on which they reside is resurfaced, to ensure equitable maintenance between vehicle and bicycle facilities.

A-2.2: The City will ensure sufficient funding in order to support bicycle and pedestrian maintenance activities.

A-3: SAFE ROUTES TO SCHOOLS

The City will continue to act as an engaged partner with the Emery Unified School District, local schools, and Alameda County in support of Safe Routes to School activities and programs.

A-4: BANNING RIGHT TURN ON RED

The City will evaluate banning vehicles from turning right while they have a red light signal on a case-by-case basis as projects move into the design phase.

A-5: PLAN EVALUATION

A-5.1: When the *Active Transportation Plan* is updated, the City will assess citywide bicycle and pedestrian data and conduct additional counts as needed.

A-5.2: When feasible, conduct bicycle and pedestrian counts before and after new projects are constructed.

A-5.3: The City will establish a centralized

database to track the implementation status of the bicycle and pedestrian network proposed in the *Active Transportation Plan*. The database, and its mapping component, will allow for the rapid creation of reports and maps to be deployed to officials and the public.

A-6: LEADING PEDESTRIAN INTERVALS

The City supports Leading Pedestrian Intervals and will evaluate opportunities to implement at signalized intersections where feasible, while taking into consideration transit needs.

A-7: LOWERING OF SPEED LIMITS

The City will evaluate how new legislation could be applied within current legislative restrictions on lowering of speed limits on streets with biking facilities.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

MULTIMODAL PROJECTS

STUDIES

Programmatic Recommendations

Pedestrian and bicycle programs, such as education and encouragement programs, are essential to increasing the desirability and safety of biking, walking, and rolling. Programs help build the "human infrastructure" of a bicycling and walking culture, and encourage more people to bike, walk, or roll. Many programs can be categorized according to the following "E's":

EQUITY RECOMMENDATIONS

The equity recommendations below encompass actions that could have been listed under many of the other program subheadings. However, bringing them together under the framework of equity ensures that the Plan reaches all ages and abilities by including communities of various ethnicities and reaching low-income communities.

ENCOURAGEMENT RECOMMENDATIONS

Encouragement programs provide incentives and support to help people leave their car at home and try walking or bicycling instead. Bicycle encouragement programs, in particular, target "interested but concerned" people who would like to ride a bike but who may not be confident in their skills or in their interactions with people driving.

EDUCATION AND SAFE ROUTES TO SCHOOL RECOMMENDATIONS

Education programs are designed to improve safety and awareness. They can include in-classroom or after school programs that teach students how to safely cross the street or bicycle in the road. They may also include brochures, posters, or other information aimed at people walking, bicycling, or driving.

EVALUATION RECOMMENDATIONS

Evaluation programs are an important component of any engineering or programmatic investment. They help the City measure its success at meeting the goals of this Plan and to identify adjustments that may be necessary.

A note on enforcement: Enforcement programs have historically been part of Active Transportation Plan recommendations. However, in many instances, police enforcement makes people feel less safe biking, walking, and rolling, particularly for people of color. As

¹ The term "human infrastructure" was coined by urban anthropologist Adonia Lugo to refer to the social relationships and communities that support bicycling

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

MULTIMODAL PROJECTS

STUDIES

a result, this Plan does not recommend general enforcement programs. Instead, the Plan seeks to use engineering to solve many of the common challenges historically addressed through enforcement, such as speeding and bike lane encroachment. This Plan also supports City collaboration with Emeryville Police Department on active transportation safety education and encouragement activities.

EQUITY PROGRAM RECOMMENDATIONS

B-1: Targeted Outreach and Programs

Emeryville is committed to supporting its diverse residents, underserved communities, and populations that typically don't bike, walk, or roll. Traditional methods of encouraging active transportation may not reach these groups (e.g., English outreach to non-English speakers), or may not address the unique needs of these groups (e.g., women are more likely to need to travel with a child). A focused effort to engage with these populations will help the City encourage biking, walking, and rolling for all residents.

Recommendation: Advertise and promote all programs in languages used by Emeryville residents, such as English, Spanish, Chinese, Thai, Amharic, Hindi, and Farsi. Offer programs specifically for women, families, non-English speaking communities, and other specific demographic groups.

B-2: Bicycle Accessories Giveaway Program

A barrier to safe bicycling is often the lack of necessary equipment (e.g., helmet, bike lights, locks, reflective attire). The City can pursue a program to provide necessary gear at no or reduced cost to low-income residents. For example, Bay Wheels has a "Bike Share for All" program that provides low-cost bike share memberships to people who qualify for CalFresh, SFMTA Lifeline Pass, or PG&E CARE utility discount.

Recommendation: Subsidize or provide free bicycle equipment to residents who qualify for CalFresh or PG&E CARE utility discount. The City could consider working with local bike shops to implement this program.

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B-3: Bicycle/Pedestrian Infrastructure Equity Program

People biking, walking, and rolling may be inequitably accommodated by infrastructure such as lighting, bathrooms, water fountains, bus stops, and sidewalk improvements.

Recommendation: Revise the Capital Improvement Program per recommendations from the Plan with review of equitable distribution of infrastructure that supports people walking and biking.

ENCOURAGEMENT PROGRAM RECOMMENDATIONS

B-4: Expanded Bike Share

Emeryville already participates in Lyft's Bay Wheels, the Bay Area's bike share system. There are a number of stations throughout the City that allow people to take point-to-point trips within the City and to connecting stations in Berkeley and Oakland. While Lyft has indicated that East Bay bike share is unlikely to expand further, the City should look for opportunities to expand bike share to additional locations in the City.

Recommendation: The City should look for opportunities to expand bike share to additional locations, such as areas of the City south of Powell Street and west of the railroad tracks.

B-5: Car-Free Street Events

Car-free street events promote health by creating a safe and attractive space for physical activity and social contact and are cost-effective compared to the cost of building new parks for the same purpose. These events have many names: Sunday Parkways, Ciclovías, Summer Streets, and Sunday Streets. Car-free street events temporarily close streets to motor vehicles and open them to the public for walking, bicycling, dancing, hula hooping, rollerskating, or other activities. They have been very successful internationally and are rapidly becoming popular in the United States. Events can be regularly scheduled or one-time occasions and are generally very popular and well attended.

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Recommendation: The City should integrate Conditions of Approval for site development to implement Employer-Based Encouragement Programs / Bicycle Friendly Business Programs (see recommendation B-7 on the next page). The City should support a regular, recurring car-free street event. While specific locations and times for these events can be developed through community outreach and support, one possibility for the City of Emeryville would be to combine a car-free street event with its Art in Public Places program. Possible locations include Park Avenue, Doyle Street/Greenway, Hollis Street, and Horton Street. Measure B funds could be used for general outreach and marketing.

B-6: Bicycle Friendly Community

The League of American Bicyclists recognizes communities that improve bicycling conditions through education, encouragement, enforcement, and evaluation programs. Communities can achieve diamond, platinum, gold, silver, or bronze status, or an honorary mention. Bicycle-friendliness can indicate that a community is healthy and vibrant. Like good schools and attractive downtowns, bicycle-friendliness can increase property values, spur business growth, and increase tourism. Emeryville is currently a Silver-level Bicycle Friendly Community.

Recommendation: This Plan recommends the City reapply for an elevated Bicycle Friendly Community status after implementation of the priority projects and many of the recommended programs identified in this Plan. In Emeryville's last report card, the League of American Bicyclists recommended Emeryville focus on expanding its bicycle network, updating its bicycle plan, offer targeted education to specific demographic groups who are underrepresented in the bicycling community, increase employer-based encouragement program, create a datadriven traffic enforcement program, and support bicycle integration with transit.

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B-7: Employer-Based Encouragement Programs / Bicycle Friendly Business Programs

Emeryville's large employment base means that working with employers may be an effective means of achieving the goals of this Plan. Biking, walking, and rolling to work has many benefits, including reducing the stress associated with driving in rush-hour traffic, reducing health costs by improving worker health, and helping businesses market their environmental sustainability.

Though the City cannot host these programs, it can work with or provide information to employers about commuting by foot or by bicycle. Employers can host bicycle classes and participate in Bike to Work Day, like the City of Emeryville does for its employees. Employers can also set up a National Bike Challenge (nationalbikechallenge.org) account so that employees can log their hours and set up an internal contest for who logs the most hours.

Emeryville could also consider starting a Bicycle Friendly Business Program, awarded by the League of American Bicyclists, which recognizes businesses that make it easy and convenient for both employees and customers to arrive by biking, walking, or rolling. This requires businesses to implement different strategies to accommodate the different needs of customers and employees.

Recommendation: The City should continue to work with or provide information to employers about alternative commute options, with the intention of reducing the number of Emeryville workers who drive alone to work, and should establish a Bicycle Friendly Business Program. It should continue to support Bike to Work Day as a car-free event and explore additional policies and programs that can encourage walking and biking to work. The City should serve as a role model by actively promoting alternative commute modes for City employees.

B-8: Bike Parking Retrofit Program

Accessible bike parking is a key feature of a robust and seamless active transportation network. New developments in Emeryville have regulations that include providing bike parking for renters; however, older developments do not have the same requirements. With limited options for some renters in older developments, the City should pursue a program to help implement bike parking in these private locations.

Recommendation: The City should consider opportunities to fund or subsidize a bike parking retrofit program to help existing private developments add bike parking to their property. The City could create a bike parking request program and fund public bike parking or lockers in areas of high demand. Funding sources may limit parking to be publicly accessible.

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SAFE ROUTES TO SCHOOL PROGRAM RECOMMENDATIONS

Safe Routes to School (SR2S) is a program that helps children to get to school by walking, bicycling, carpooling, or using transit. It envisions active kids using safe streets, helped by engaged adults including teachers, parents, and police officers, complemented by responsible drivers. Every state has a SR2S coordinator and grant program, and Alameda CTC has a robust countywide SR2S Program. Although Anna Yates Elementary is a participating school in the Alameda CTC program, no other schools in the City participate. In recent years, Anna Yates has implemented the following SR2S activities:

2019-2020 Activities

- International Walk and Roll to School Day
- Golden Sneaker Contest

2018-2019 Activities

- Pedestrian Rodeo
- Bike Rodeo
- Alameda County BikeMobile Visit
- Bike to School Day
- International Walk and Roll to School Day
- Golden Sneaker Contest

However, Anna Yates Elementary has not completed a School Safety Assessment to determine school-specific infrastructure recommendations.

Emeryville is unique in that many of its schools are located in close proximity to one another. Anna Yates Elementary (grades K to 5), Emery Secondary (grades 6 to 12), the private Escuela Bilingue (pre-K to 8), the City's Child Development Center (a preschool), the Emeryville Center for Community Life, the private Pacific Rim International School (pre-K to 12), and the private East Bay German International School (pre-K to 12) are all within a few blocks of San Pablo Avenue between 41st and 53rd Streets. San Pablo Avenue is a major impediment to pedestrian travel in the area, and many students have to cross San Pablo to access their schools.

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B-9: Safe Routes to School Programs

The Alameda County SR2S Program offers the following programs that could be implemented in Emeryville:

- Alameda County BikeMobile The BikeMobile is like combining a bookmobile and a bicycle repair shop. The BikeMobile makes visits to schools to repair bicycles for students and reinforce safe bicycling habits.
- Bike Blender The Bike Blender uses bike pedal power to create smoothies, and can be a great tool to teach students about health and wellness. The Bike Blender can attend a school resource fair or other school-based festival or event.
- Bike Rodeos Bike rodeos are funfilled courses that focus on introducing elementary and middle school students to safe bicycle handling skills and riding techniques on the road. Classes could include a bicycle training course.

- Creation for Transportation Creation for Transportation is an art contest event that encourages high school students to explore the impacts of different transportation choices.
- Drive Your Bike The Drive Your Bike program is ideal for PE teachers who want to provide intensive bike safety education and training to middle and high school students.
- Golden Sneaker Contest Students are challenged to choose active travel for one week out of the year. The classroom with the most active trips wins the coveted Golden Sneaker trophy.
- Walk & Roll to School Day This worldwide celebration encourages students, families, and the school community to walk, bicycle, take transit, or use other nonmotorized transportation to get to school. Schools can also implement monthly or quarterly Walk & Roll to School Days to keep the enthusiasm up year-round.



A school safety training program where students learn how to properly fit their helmets.

- Music Notes Music Notes performs ageappropriate concerts that teach walking and biking safety through hip-hop songs and videos.
- Pedestrian Rodeos A team of safety instructors conducts this engaging and fun-filled traffic simulation course to teach students safe pedestrian behaviors.

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- Pedestrian Safety Workshops Pedestrian safety workshops are assembly-style presentations that teach students safe, lawful pedestrian behavior using a simulated city street course.
- Rail Safety Virtual Presentations Alameda County SR2S offers online rail safety presentations for K-12 classes.
- School Safety Assessments School Safety Assessments are often the starting point of a Safe Routes to School Program as they help students, parents, and neighbors assess routes to schools and identify safety considerations.



School safety assessments improve the walking and biking routes to school for parents and children.

- Stakeholders walk the main routes to school to discuss safety issues and develop possible short- and long-term solutions. Stakeholders may also use walking audits to evaluate the effectiveness of engineering improvements.
- Trains Walking School Buses are formed when a group of children walk together to school and are accompanied by one or two adults (usually parents or guardians). The walking school bus picks up students at designated meeting locations. Walking School Buses can be implemented informally among parents or neighbors or as official school-wide endeavors with trained volunteers and structured meeting times and locations. Bike Trains are similar, except children and adults bicycle to school.
- Youth Bicycle Safety Education Classes Typical school-based bicycle education programs educate students about the rules of the road, proper use



An activity where students learn the rules of the road when riding bike and how to cross the street safely.

of bicycle equipment, biking skills, street crossing skills, and the benefits of biking. Classes could include a bicycle training course.

Recommendation: The City should collaborate with Emery Unified School District for site assessment at qualifying schools and private schools to increase participation in the Alameda County SR2S program. In particular, Anna Yates and the other schools located at the ECCL campus should participate in a School Safety Assessment.

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EDUCATION PROGRAM RECOMMENDATIONS

B-10: Adult Bicycling Skills Classes

Most adults who bicycle have not received training on safe bicycling practices, the rules of the road, and bicycle handling skills. Bicycling skills classes can address this education gap. With a large planned increase in bicycle infrastructure in the coming years, the City should sponsor and partner with other organizations to provide Adult Bicycle Skills classes as a way to encourage people who are inexperienced or less comfortable biking to try out new facilities. The League of American Bicyclists offers classes taught by certified instructors. In addition, Bike East Bay offers

adult bicycle education classes periodically and at the request of local jurisdictions. These classes include Adult Learn to Ride Classes (for adults who do not know how to ride a bicycle), Urban Cycling 101 (for new or less-experienced people), and a series of advanced classes on topics such as avoiding bike theft, riding after dark, and carrying things by bike (for more experienced people).

Recommendation: This Plan recommends the City sponsor and host a range of adult bicycling skills classes or partner with County or regional activities on an ongoing basis.

B-11: Family Bicycling Skills Classes

Similar to adult bicycling skills classes, family bicycling skills classes support parents and children. Classes may teach parents how to ride safely with their children in an urban environment (either on the bike with them, or riding on the sidewalk next to them) with neighborhood rides, or may teach children how to bicycle safely and follow the rules of the road through games and fun. Bike East Bay offers Family Cycling Workshops for parents and kids.

Recommendation: This Plan recommends that the City sponsor and host family bicycling skills classes or partner with County or regional activities on an ongoing basis.

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EVALUATION RECOMMENDATIONS

B-12: Driver Education Program/ Campaign

The California Office of Traffic Safety regularly has grant opportunities to fund educational campaigns that support pedestrian, bicycle, and roadway safety. A driver education campaign can help educate drivers about safe driving around people biking, walking, and rolling. For example, people driving should look for people bicycling when making a right turn to avoid the "right hook" collision. They should also look for people walking in the crosswalk when making a left turn to avoid the "left hook" collision.

Recommendation: This Plan recommends the City implement a driver education program and/or campaign.

B-13: Traffic Counts

Pedestrian and bicycle counts are methods to evaluate not only the effectiveness of specific pedestrian and bicycle improvement projects but can also function as a way to measure progress towards reaching City goals.

Recommendations:

When collecting vehicle counts for roadway projects, the City should take a multimodal approach that includes counting pedestrians, bicycles, and other transportation modes as applicable. Continue and expand the use of automatic counters to collect data on key pedestrian and bicycle corridors, such as the Emeryville Greenway. Automatic count technologies can be useful for bicycle and pedestrian count efforts. In-pavement loop detectors accurately count bicycle activity on-street and infrared counters can count pedestrian and bicycle activities on paths.

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B-14: Wayfinding

Wayfinding provides direction and creates a sense of place for people biking and rolling. Emeryville currently uses purple-branded street signs to designate streets that are included in the citywide bike boulevard network. Continuing and expanding wayfinding efforts throughout the City's active transportation network will improve the quality and usability of the existing and proposed network.



Bike boulevard wayfinding on Horton Street.

Wayfinding Recommendations

To support easy navigation for pedestrians and bicyclists, cities are developing and installing comprehensive wayfinding or directional signage. Signs may also include "distance to" information, which displays mileage to community destinations. A citywide wayfinding system can raise awareness and improve access for residents and visitors to community assets such as ECCL, City Hall, the Bay Trail, the Senior Center, and parks.

The design of wayfinding signs can vary depending on the municipality. Guide signs may follow California's Manual on Uniform Traffic Control Devices (MUTCD) standards, which use additional plaques that display destinations and mileage. The City would mount these plaques under existing bike route and lane signs. Alternatively, the City may decide to design wayfinding signs that exhibit Emeryville's



Wayfinding designs can be simple or stylistically unique. They can also include standards for pavement and sidewalk markings.

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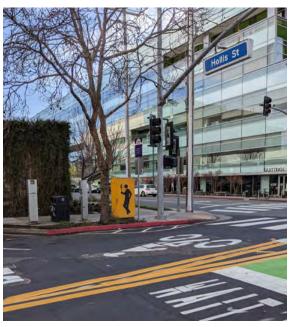
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unique style and commitment to public art, similar to the utility box public art designs. These signs display the community's identity and support of bicyclists. Wayfinding efforts made along the Bay Trail spine through Emeryville should adhere to Bay Trail Design Guidelines and Toolkit for Bay Trail wayfinding recommendations.

Emeryville has many non-square bikeway intersections along San Pablo Avenue that can be confusing to navigate on a bicycle. Bicyclists often have to navigate a jog in an intersection to continue the same direction of travel. Wayfinding signs installed at these intersections will help in these situations, in addition to directing bicyclists to local and regional attractions. Crossing under Interstate 80 and across the railroad tracks can also lead to confusion for people biking, walking, or rolling.

Development of a wayfinding signage plan requires interdepartmental and stakeholder collaboration to determine sign display





The wayfinding program could take inspiration from the City's unique and playful utility box artwork.

design, the frequency that signs should be installed and the destinations to be displayed on each sign. Staff, consultants or volunteers with significant bicycling and walking experience and knowledge of the local network should be involved to ensure local needs are met.

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How Did We Develop the Recommended Biking, Walking, and Rolling Network?

NEEDS ASSESSMENT

Safety – We identified where the most severe and highest number of repeat collisions were located.

Equity – We mapped the density of low-income workers throughout the City to understand which areas would most benefit from low-cost transportation options.

Comfort – We identified segments of the roadway network that are high-stress for people biking, walking, and rolling to understand existing barriers.

Connectivity – We assessed connectivity to popular destinations such as the Bay Trail and shopping centers for those using the all ages and abilities network.

PIIRI IC INPIIT

Participants identified key destinations, barriers in the active transportation network, and popular routes through an online web map and survey.

Feedback gathered from community meetings, listening sessions, biking and walking tours, online engagement, and youth outreach events include a need for improved biking, walking, and rolling routes.

EMERYVILLE BICYCLE AND PEDESTRIAN ADVISORY COMMITTEE

Emeryville's BPAC provided direct feedback and revisions to the project team at each step of the active transportation planning process—from visions and goals to infrastructure recommendations.

The BPAC's project wish lists from 2018, 2019, and goals from 2020 provided a foundation for the project team to build on when developing network recommendations.

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What We've Proposed

ALL AGES AND ABILITIES NETWORK

The all ages and abilities network lays out the proposed bikeway facilities that provide comfortable connections across and throughout Emeryville (**Map 16**). This network is comprised of facilities that provide as much separation as possible between vehicles and people biking or rolling including shared-use paths, separated bikeways, and greenways. Bike boulevards are not included in the all ages and abilities network as they do not provide separation between vehicles and people biking or rolling.

Key east-west connections in the proposed all ages and abilities network include separated bikeway facilities on 40th Street, Powell Street, and 65th Street, and a proposed greenway on 53rd Street. A new east-west connection is also planned as part of the 5801 Christie Avenue project and a City initiated General Plan Amendment to revise the location

of Shellmound Way. Key north-south connections include separated bikeway facilities on Shellmound Street and San Pablo Avenue, as well as shared-use paths parallel to I-80 and extending from Halleck Street.

SAFE ROUTES TO BIKING, WALKING, AND ROLLING DESTINATIONS

Throughout the public engagement process, community members expressed a need for more comfortable and improved walking and rolling routes to major destinations within Emeryville. In order to overcome existing barriers and gaps within the active transportation network, the project team used input from the public web map, community meetings, and walking and rolling tours to better understand where community members would like to go. Following public input, the project team focused on how to make the walking and rolling routes to parks, trails, shopping, transit, and schools more accessible and comfortable.

The following maps present Emeryville's parks, shopping, transit, and school destinations overlaid with the vision of the all ages and abilities network. The implementation of these biking and rolling projects aims to make these locations accessible to all users regardless of age or ability.

- ▶ Map 17 Safe Routes to Parks + Trails
- Map 18 Safe Routes to Shopping
- ▶ Map 19 Safe Routes to Transit
- Map 20 Safe Routes to School

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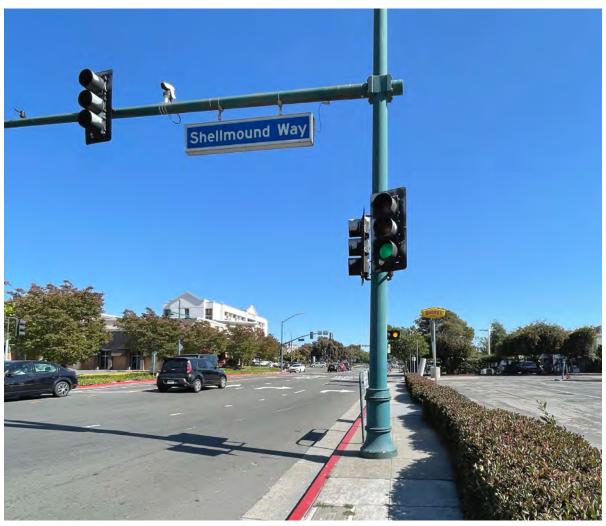
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COMFORTABLE AND CONNECTED PEDESTRIAN NETWORK

Community members mentioned obstructions in the walking path, upturned surfaces, and a lack of comfortable and wide walking spaces as the most common barriers in Emeryville's walking network. Using a two-pronged approach, the project team assessed both opportunities for larger scale shared-use paths across the city, as well as localized improvements to existing sidewalks based on feedback from community members.

INTERSECTION UPGRADES

Arterial crossings throughout Emeryville create barriers to people biking, walking, and rolling. Major intersection upgrades are proposed at a number of locations along Powell Street, 40th Street, San Pablo Avenue, and Hollis Street.



Obstructions such as signs, traffic poles, and utilities along narrow sidewalks create barriers to people walking.

All Ages and Abilities Network (Existing + Proposed)

Fully Built Network

The All Ages and Abilities Network inlcudes: Class I Shared-Use Paths, Class IV Separated Bikeways, and Overcrossings.

Non All Ages and Abilities Network (Existing + Proposed)

- Fully Built Network

Destinations + Boundaries

School

City Hall

Post Office

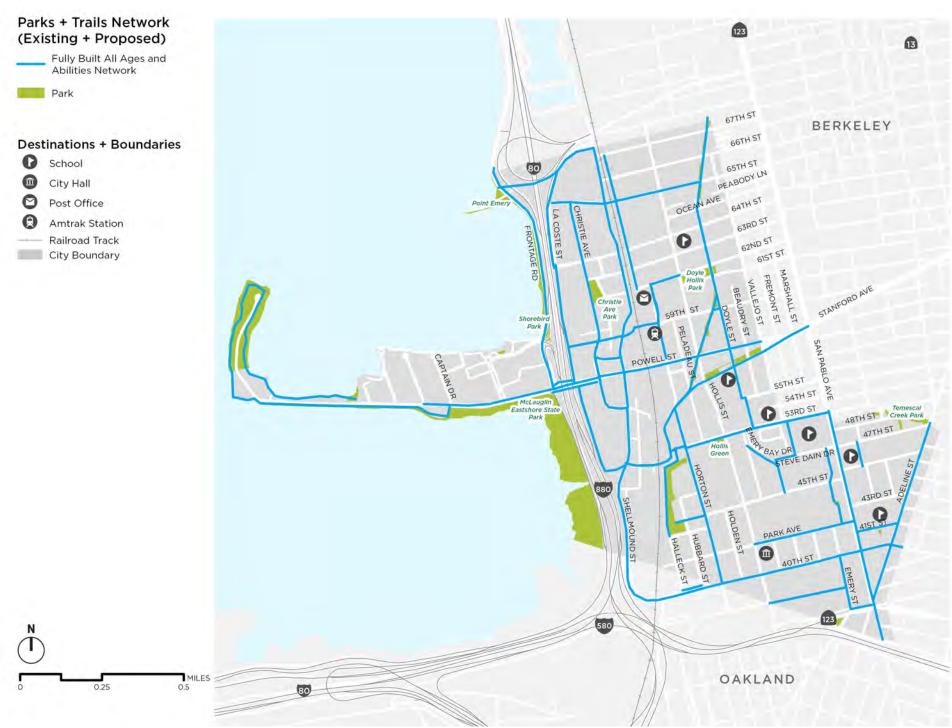
Amtrak Station

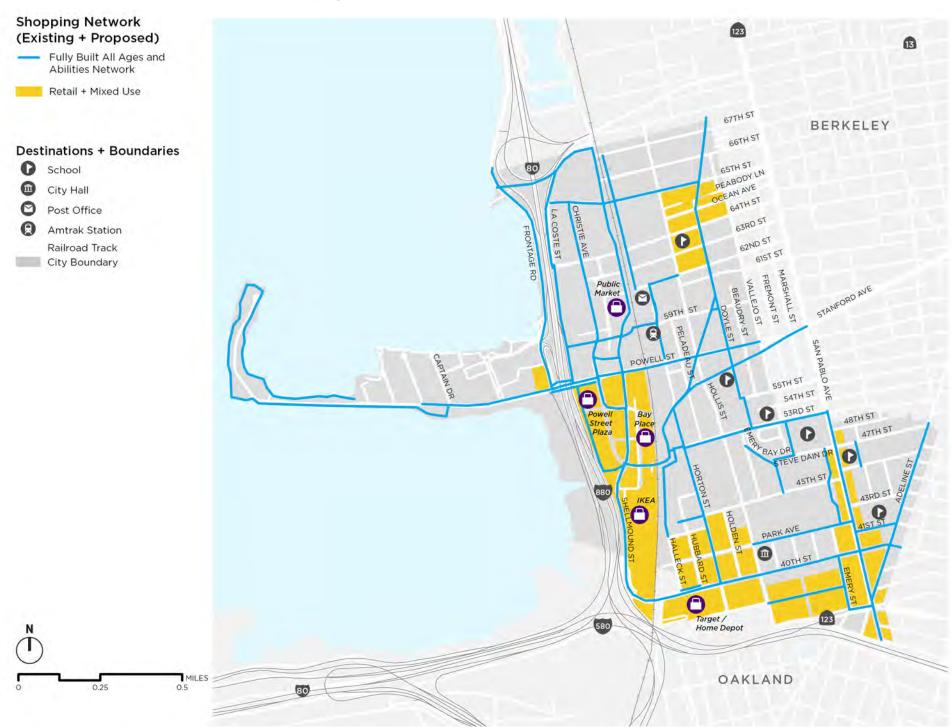
Railroad Track

City Boundary

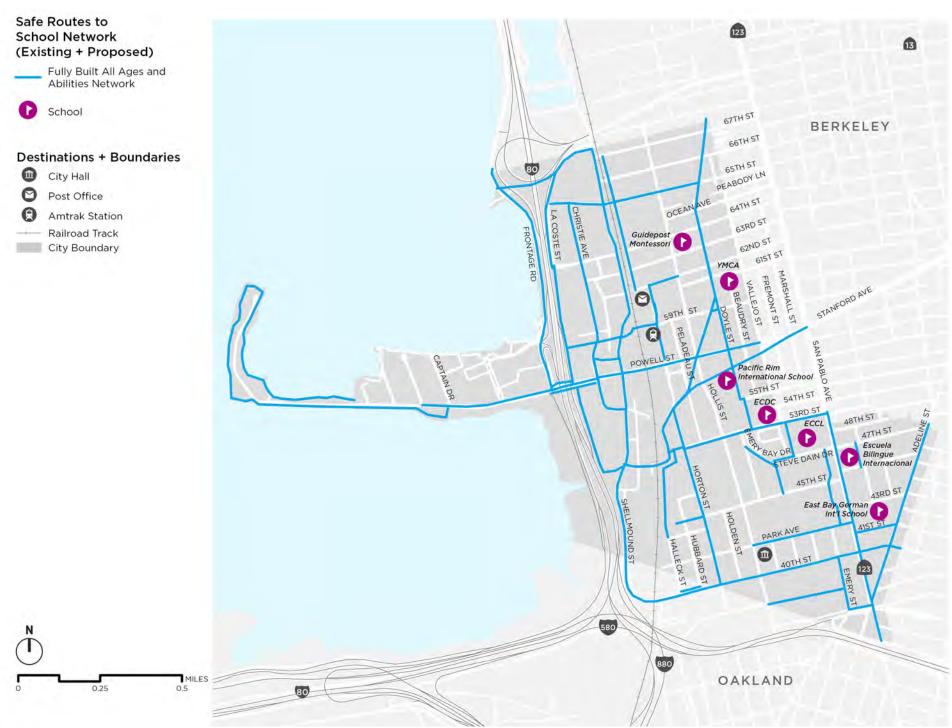


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Transit Network B (Existing + Proposed) Fully Built All Ages and Abilities Network AC Transit Stop 67TH ST BERKELEY Emery Go-Round 66TH ST Amtrak Station 65TH ST PEABODY LN Casual Carpool Pickup OCEAN AVE 64TH ST 63RD ST **Destinations + Boundaries** 62ND ST 61ST ST 0 School City Hall FREMONT ST Post Office Amtrak Station Railroad Track City Boundary SSTH ST 54TH ST 53RD ST 48TH ST ATTH ST 0 DAIN 45TH ST 43RD ST ELLMOUND ST 580 MILES OAKLAND 0.25 0.5



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Pedestrian Network Recommendations

Based on pedestrian improvement opportunities identified in the data analysis and issues community members indicated make walking challenging, the project team has highlighted focus areas. These areas include a suite of recommendations and may align with work already underway. The pedestrian improvement focus areas include:

- Crossing Busy Streets
 - » San Pablo Avenue
 - » Powell Street
 - » 40th Street
- Pedestrian Priority Zones

CROSSING BUSY STREETS

Throughout the engagement process, arterial roadways were identified by residents and community members as the most common barrier to walking in Emeryville. Using this lens, the project team focused on infrastructure recommendations that would improve the safety and pedestrian experiences around Emeryville's busiest roadways including Powell Street, 40th Street, and San Pablo Avenue.

The projects that follow are recommended to improve the safety and comfort for people walking along and across busy streets.



Comfortable pedestrian crossings of arterial roadways are important in the areas surrounding Emeryville's shopping hubs.

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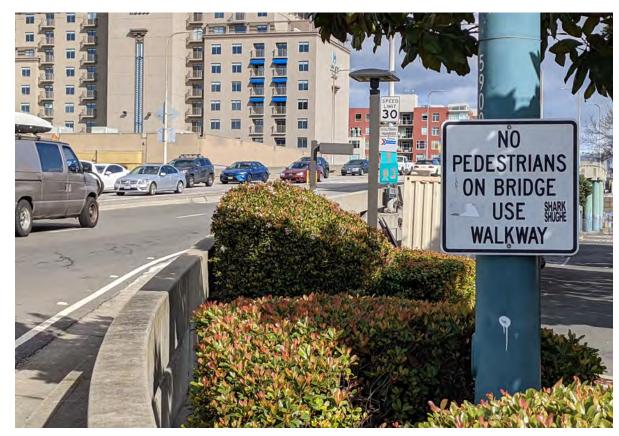
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SAN PABLO AVENUE PEDESTRIAN IMPROVEMENTS

Intersection Upgrades on San Pablo
 Avenue at the intersections of 53rd Street,
 40th Street, and MacArthur Boulevard/
 Adeline Street.

POWELL STREET PEDESTRIAN IMPROVEMENTS

- Intersection Upgrades on Powell Street at the intersections of Christie Avenue and Hollis Street
- Improved Sidewalk on Powell Street from Peladeau Street to Hollis Street and on Shellmound Street underneath the Powell Street bridge
- New Sidewalk on Powell Street from Christie Avenue to Shellmound Street
- Shared-Use Path (Class I) on the north side of Powell Street from Frontage Road to the I-80 eastbound on-ramp



A new walkway is proposed along Powell Street to improve the current walking connection.

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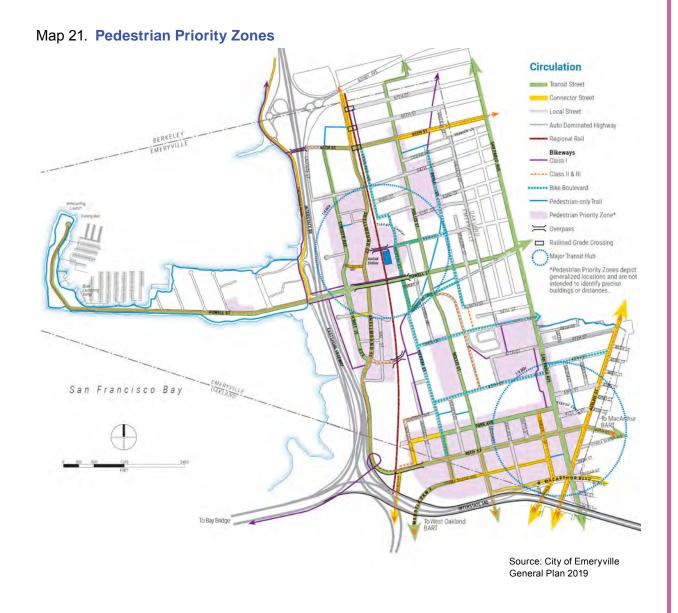
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40TH STREET PEDESTRIAN IMPROVEMENTS

- Major Intersection Upgrades on 40th
 Street at the intersections of Hubbard
 Street, Haven Street, Emery Street, San
 Pablo Avenue, and Adeline Street
- Shared-Use Path (Class I) on the north side of 40th Street between Hubbard Street and Halleck Street

PEDESTRIAN PRIORITY ZONES

In addition to improving the pedestrian experiences when crossing busy streets, the project team also focused on walking network improvements in the Pedestrian Priority Zones identified by the City's General Plan. Walking network improvements in these areas were identified based on the location of utility obstructions and narrow sidewalk widths throughout the zones. Infrastructure improvements such as crossing upgrades and improved existing sidewalk are recommended in these areas.



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Pedestrian Toolbox

The following list describes the linear pedestrian recommendations made to improve the walking comfort and connectivity in Emeryville. Using public input and findings from the needs assessment, the project team tailored each recommendation to the specific areas that they address. Areas surrounding commercial areas, arterial roadway crossings, and walkways with identified barriers guided the recommendation development process.



New Sidewalks / Pedestrian Paths

Sidewalks and pedestrian paths are designated lanes for people walking. They provide space to travel within the public right-of-way that is separated from moving vehicles. They can be directly adjacent to the roadway, or have physical separation in the form of plant boxes or grass buffers.



Improve Existing Sidewalks

Good sidewalks have minimal barriers for people walking on them. The project team suggests improving areas in Emeryville where the sidewalk is narrow or presents barriers.

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Shared-Use Paths (Class I)

As described in the bikeway toolbox section of this plan (page 100), shared-use paths are completely separated from motor vehicle traffic and are shared by people biking and rolling. Shared-use paths are an essential piece of the pedestrian network as they often provide access to parks and recreation.

Spot Improvements Toolbox

The following list describes the types of spot improvement categories recommended in the Plan. Further details on the specific improvement types will be unique to each location.

New or Upgrade Crossing

A proposed new crossing improvement where no crossing infrastructure currently exists, or a proposed improvement to an existing marked crossing to make it safer, easier, or more comfortable to cross.

Intersection Upgrade

A set of multiple improvements to an intersection that may consist of any of the items listed on the following pages or other improvements.

Signage

Signage improves the pedestrian network by informing people about where they are.

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Other Improvements



Crosswalk: Marked crosswalks indicate optimal or preferred locations for pedestrians to cross and help designate rights-of-way where motorists should yield to pedestrians. Pedestrians are sensitive to out-of-the-way travel, and reasonable accommodation should be made to make crossings both convenient and safe at locations with adequate visibility. Source: FHWA.



Rectangular Rapid Flashing Beacon (RRFB): RRFBs are pedestrian-actuated conspicuity enhancements used in combination with a pedestrian, school, or trail crossing warning sign to improve safety at uncontrolled, marked crosswalks.

Source: FHWA.



Pedestrian Hybrid Beacon (PHB): PHBs can warn and control traffic at unsignalized locations and assist pedestrians in crossing a street or highway at a marked crosswalk. Unlike a traffic signal, the PHB rests in dark until a pedestrian activates it via a pushbutton or other form of detection. Source: FHWA.



Curb Extensions: Curb extensions—also known as bulb-outs or neckdowns—extend the sidewalk or curb line out into the parking lane and reduce the effective street width. Source: FHWA.



Leading Pedestrian Interval (LPI): LPIs can be programmed into traffic signals to minimize conflicts between pedestrians crossing a roadway and left- or right-turning vehicles. LPIs give the pedestrian the WALK signal three to seven seconds before motorists are allowed to proceed through the intersection, which makes them more visible. Source: FHWA.



Median Refuge Island: A median refuge island, or crossing island, is a median with a refuge area that is intended to help protect pedestrians crossing a multilane road. Crossing islands should be considered as a supplement to the crosswalk. The presence of a pedestrian refuge island at a midblock location or intersection allows pedestrians to focus on one direction of traffic at a time as they cross and provides space to wait for an adequate gap in oncoming traffic before finishing the second phase of the crossing. Source: FHWA.



Signal Timing Adjustments: In general, shorter cycle lengths (ideally less than 90 seconds) and longer walk intervals provide better service to pedestrians and encourage better signal compliance. For optimal pedestrian service, fixed-time signal operation usually works best because it provides an automatic pedestrian phase. Source: FHWA.



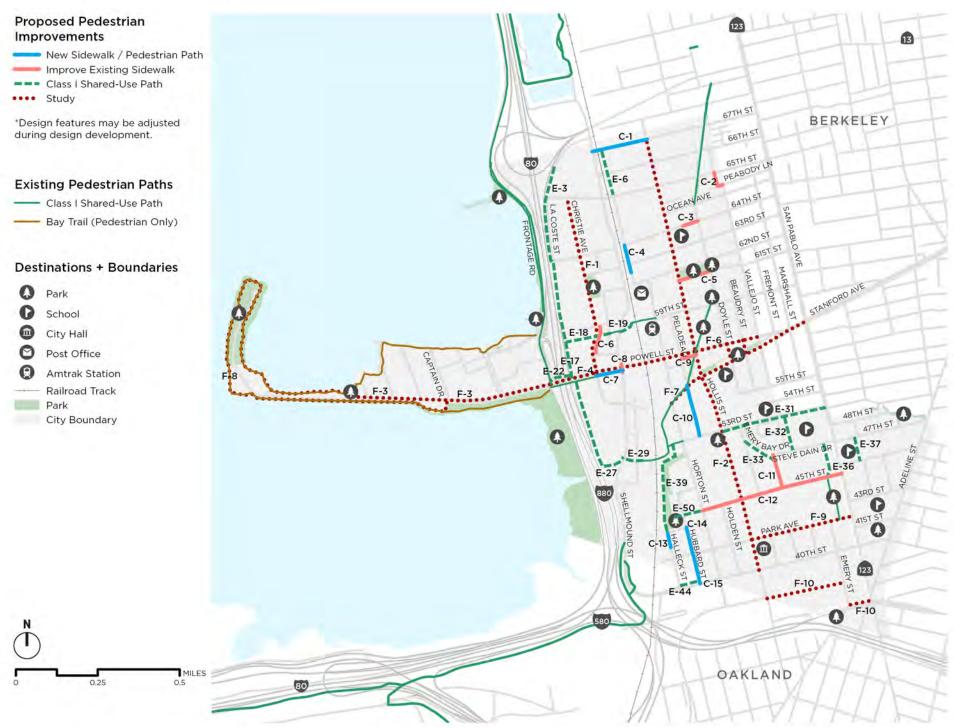
No Right on Red: Prohibiting right turns on red should be considered where exclusive pedestrian phases or high pedestrian volumes are present. Source: FHWA.



Bike Box: A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides people biking with a safe and visible way to get ahead of queuing traffic during the red signal phase. Source: FHWA.



Bike Signal Head: A bike signal head is an electronically powered traffic control device that should only be used in combination with an existing conventional traffic signal. Bike signals are typically used to improve identified safety or operational problems involving bicycle facilities or to provide guidance for people biking at intersections where they may have different needs from other road users. Bike signal heads may be installed at signalized intersections to indicate bike-specific signal phases or timing.



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This Plan recommends 2.8 miles of Shared-Use Paths, 2.5 miles of new or improved sidewalk, and 38 spot improvements as shown in **Map 22**, **Map 23**, and **Tables 4**, **5**, **and 6**.

Table 4. Walking Network Improvements

PROPOSED	QUANTITY
Shared-Use Path (Class I)	2.8 miles
New Sidewalk	1.1 miles
Improved Sidewalk	1.4 miles
Intersection Upgrade	27
New or Upgrade Crossing	7
Signage	4



Comfortable pedestrian walkways feature amenities such as benches and greenspace.

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Table 5. Pedestrian Network Recommendations

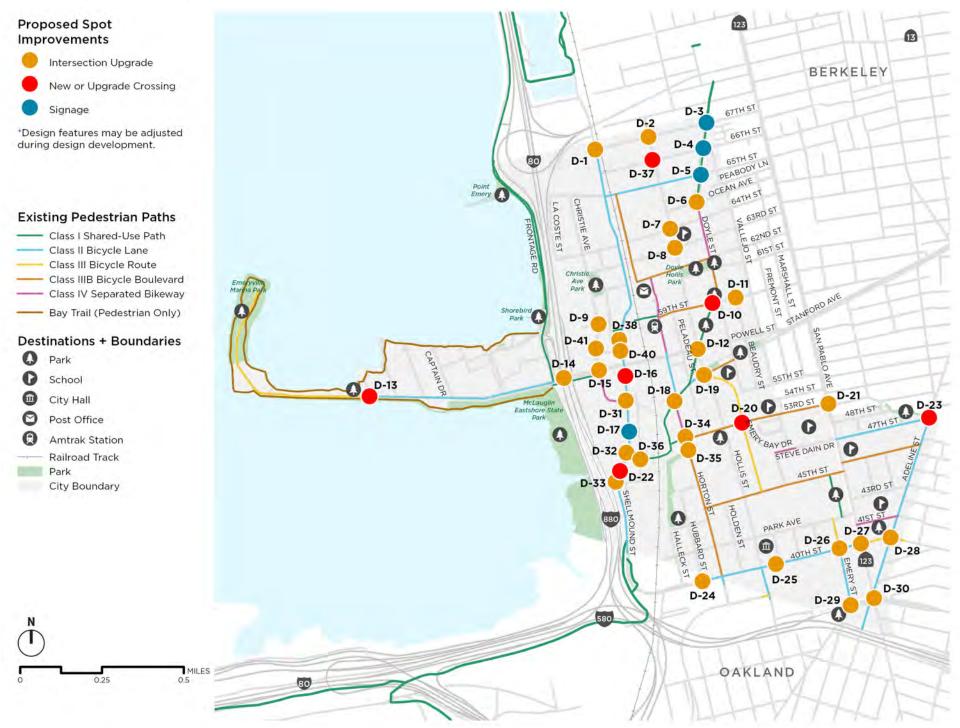
PROJECT ID	STREET	IMPROVEMENT TYPE	START	END	SIDE OF STREET	NOTES	MILEAGE
C-1	67th St	New Sidewalk	Shellmound St	Hollis St	Both	Add sidewalk on both sides of street.	0.17
C-2	Peabody Lane	Improve Existing Sidewalk	65th St	Vallejo St	Both	Alley difficult for pedestrians. Add stop sign, red curb, mirror for visibility, and lighting.	0.06
C-3	64th St	Improve Existing Sidewalk	260ft east of Hollis St	Doyle St	South	Improve existing sidewalk, make walking space wider and smoother.	0.05
C-4	Overland Ave	New Sidewalk	150' south of 63rd St	64th St	East	Extend existing sidewalk on east side of street to reach 64th St.	0.08
C-5	61st St	Improve Existing Sidewalk	Hollis St	Doyle St	North	Widen existing sidewalk.	0.10
C-6	Christie Ave	Improve Existing Sidewalk	59th St	Shellmound Way	Both	Improve existing sidewalk by widening walking path and/or removing obstructions such as signs and trash cans.	0.08
C-7	Powell St	New Sidewalk	Christie Ave	Shellmound St	South	Emeryville Loop. Pedestrian walkway on south side of Powell St.	0.08
C-8	Shellmound St - Powell St Underpass	Improve Existing Sidewalk	New Midblock Crossing	Hyatt Hotel Parking Lot Entrance	East	Fill sidewalk gap underneath Powell Street, remove obstructions in walking path including signs and landscaping that makes corners and navigation difficult for wheelchairs.	0.02

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Table 5, Pedestrian Network Recommendations, continued

PROJECT ID	STREET	IMPROVEMENT TYPE	START	END	SIDE OF STREET	NOTES	MILEAGE
C-9	Powell St	Improve Existing Sidewalk	Peladeau St	Hollis St	South	Sidewalk or a more direct/ accessible pedestrian path was requested on Powell between Christie and Hollis as part of the walking tour.	0.05
C-10	Chiron Way	New Sidewalk	Stanford Ave	53rd St	Both	Key Green Street in general plan. Remove gates and reconstruct with greenery.	0.16
C-11	Doyle St	Improve Existing Sidewalk	47th St	45th St	East	Widen existing sidewalk.	0.10
C-12	45th St	Improve Existing Sidewalk	Horton St	San Pablo Ave	Both	Corridor is lined with trees and has potential to be vibrant pedestrian and greenway space. Improve existing sidewalk space by widening or working with existing tree barriers.	0.44
C-13	Halleck St	New Sidewalk	Sherwin Ave	150ft North of Park Ave	West	New sidewalk on west side of Halleck St north of Pelco.	0.05
C-14	Hubbard St	New Sidewalk	Sherwin Ave	Park Ave	East	Add sidewalk on east side of street.	0.08
C-15	Hubbard St	New Sidewalk	Park Ave	40th St	Both	Add new sidewalk on both sides of Hubbard.	0.09



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Table 6. Spot Improvement Recommendations

PROJECT ID	CROSS STREET A	CROSS STREET B	IMPROVEMENT TYPE	NOTES
D-1	Shellmound St	67th St	Intersection Upgrade	Quiet Zone Traffic Signal. Add a crosswalk on southern leg of intersection to connect people walking north on east side to the existing sidewalk (sidewalk ends / is missing north of 67th on east side of street).
D-2	Hollis St	67th St	Intersection Upgrade	Quiet Zone Traffic Signal.
D-3	Emeryville Greenway	67th St	Signage	Add street name sign so Greenway users know which street they are crossing.
D-4	Emeryville Greenway	66th St	Signage	Add street name sign so Greenway users know which street they are crossing.
D-5	Emeryville Greenway	65th St	Signage	Add street name sign so Greenway users know which street they are crossing.
D-6	Doyle St	Ocean Ave	Intersection Upgrade	Intersection improvement.
D-7	Hollis St	64th St	Intersection Upgrade	Consider LPI and two-turn bike boxes at this location.
D-8	63rd St	Hollis St	Intersection Upgrade	Install signal, including crosswalks and curb extensions.
D-9	Christie Ave	59th St	Intersection Upgrade	Add crosswalks on west, north, and east legs of intersection. Consider signal warrant study.
D-10	Emeryville Greenway	59th St	New or Upgrade Crossing	Enhanced crossing, mid-block.
D-11	Beaudry St	59th St	Intersection Upgrade	Install stop sign at the intersection of 59th and Beaudry St.
D-12	Hollis St	Powell St	Intersection Upgrade	Raise crosswalk and eliminate slip lane, public feedback identified this location as a barrier to walking and biking.
D-13	Anchor Drive	Powell St	New or Upgrade Crossing	Enhanced crossing RRFB to transition to Shared-Use Path on other side of Powell St.

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Table 6, Spot Improvement Recommendations, continued

PROJECT ID	CROSS STREET A	CROSS STREET B	IMPROVEMENT TYPE	NOTES
D-14	I-80	Powell St	Intersection Upgrade	MTC I-80/Powell Street Interchange Transit Access Improvements. Install curb extensions on west side of Powell St/Frontage Rd, 10 foot sidewalk on north side of Powell St, Realign Bay Trail for Mode Separation, new bus stops. City to study potential removal of one westbound travel lane on Powell Street turning north onto West Frontage Road.
D-15	Christie Ave	Powell St	Intersection Upgrade	Eliminate one right turn lane/arrow on Christie southbound and Powell eastbound. Northwest corner (southbound Christie onto westbound Powell) turn radius squared. All-ped scramble study.
D-16	Shellmound St	F bus stop / Four Points Sheraton Hotel	New or Upgrade Crossing	Add midblock crossing across from Four Points Sheraton at F-bus stop.
D-17	Shellmound St	Brunswig Lane	Signage	Add a "Cross at Crosswalk" sign, work with property manager to add signage.
D-18	Horton St	Stanford Ave	Intersection Upgrade	BPAC 2019 intersection improvement, public identified barriers nearby on Horton.
D-19	Hollis St	Stanford Ave	Intersection Upgrade	Upgrade crosswalks, make protected intersection with curb extensions, bike boxes.
D-20	Spur Alley	53rd St	New or Upgrade Crossing	Midblock crossing, RRFB.
D-21	53rd St	San Pablo Ave	Intersection Upgrade	Add LPI, protected intersection with curb extensions, consider dashed green pavement markings across San Pablo.
D-22	Shellmound St	F-bus Stop (Bay Street)	New or Upgrade Crossing	RRFB.
D-23	Adeline St	47th St	New or Upgrade Crossing	Lit crosswalk, consider high visibility crosswalk.
D-24	Hubbard St	40th St	Intersection Upgrade	From 40th and San Pablo Bus Hub Project: Curb extensions on northern leg, dashed green pavement parkings for 40th St Two-Way Separated Bikeway, "Look Right" signs at crosswalk.
D-25	Bridgecourt Office	40th St	Intersection Upgrade	Sidewalk ramps on 40th St on both sides of office entrance.

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Table 6, Spot Improvement Recommendations, continued

PROJECT ID	CROSS STREET A	CROSS STREET B	IMPROVEMENT TYPE	NOTES
D-26	Emery St	40th St	Intersection Upgrade	Northwest protected corner, bike boxes, dashed green pavement markings, green-backed sharrows, consider bike signal head, add LPI.
D-27	San Pablo Ave	40th St	Intersection Upgrade	This intersection is included in the Alameda CTC San Pablo Avenue Corridor Project, currently in the design process at time of publication. This area is under Caltrans jurisdiction and Caltrans may or may not approve proposed projects.
D-28	Adeline St	40th St	Intersection Upgrade	Northwest protected corner, curb extensions, upgrade sidewalk, bike boxes, dashed green pavement markings, green-backed sharrows, consider bike signal head, add LPI.
D-29	Emery St	MacArthur Blvd	Intersection Upgrade	Intersection to be studied in alignment with upgrades to the Adeline/San Pablo/MacArthur intersection for improved crossing for bikes.
D-30	San Pablo Ave/Adeline St	MacArthur Blvd	Intersection Upgrade	Intersection included in the Alameda CTC San Pablo Avenue Corridor Project, currently in the design process at time of publication. This area is under Caltrans jurisdiction and Caltrans may or may not approve proposed projects. In alignment with Alameda CTC Project, study for linear bikeway west on MacArthur Boulevard to connect people biking to the intersection of Emery St and Peralta St.
D-31	Shellmound St	Christie Ave	Intersection Upgrade	Intersection upgrade as part of the Emeryville Loop Project. Concept includes modifying vehicle signal detection zones, adding bicycle signal and detection equipment at the Christie Avenue crossing, and modifying the signal phasing and timing to add a bicycle crossing phase.
D-32	Shellmound St	Ohlone Way	Intersection Upgrade	Intersection upgrade as part of the 40th Street Multimodal Project Phase II: Shellmound Street Gap Closure Project. Concept includes modifying vehicle signal detection zones, adding bicycle signal and detection equipment at the Sonesta Driveway crossing, and modifying the signal phasing and timing to add a bicycle crossing phase.

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Table 6, Spot Improvement Recommendations, continued

PROJECT ID	CROSS STREET A	CROSS STREET B	IMPROVEMENT TYPE	NOTES
D-33	Shellmound St	Bay St	Intersection Upgrade	Intersection upgrade as part of the 40th Street Multimodal Phase II: Bay Trail Gap Closure Project. Concept includes modifying vehicle signal detection zones and reconstructing an existing curbside AC Transit bus stop into a bus boarding island.
D-34	Horton St	53rd St	Intersection Upgrade	Install traffic light and traffic diverter to allow vehicle-free crossing of Horton Street as part of BMR improvements.
D-35	Horton St	120 feet south of 53rd St	Intersection Upgrade	Install new signalized pedestrian crossing as part of BMR improvements.
D-36	Bay St	Ohlone Way	Intersection Upgrade	Intersection upgrade as part of Bay Street grocery store project to help facilitate bike and pedestrian movements across Shellmound St and Bay Street and connection to the South Bayfront Bridge.
D-37	Hollis St	66th St	New or Upgrade Crossing	Add RRFB to cross Hollis Street.
D-38	Shellmound St	Marketplace Garage Exit	Intersection Upgrade	New Traffic Signal.
D-39	Shellmound St	IKEA Driveway	Intersection Upgrade	Intersection upgrade as part of the 40th Street Multimodal Phase II: Bay Trail Gap Closure Project. Concept includes removing trees, relocating traffic signal poles, reconstructing two median islands, upgrading the existing crosswalk into a bikeway crossing that may include supplemental bike signal equipment and a widened curb ramp.
D-40	Shellmound St	Shellmound Way	Intersection Upgrade	Intersection upgrade as part of the Emeryville Loop Project. Install protected intersection and paint crosswalk across north leg of the intersection.
D-41	Christie Ave	Shellmound Way	Intersection Upgrade	Intersection upgrade as part of the Emeryville Loop Project. Install protected intersection on southeast corner and paint crosswalk across south leg of the intersection.

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Bikeway Network Recommendations

Bicycling challenges and opportunities identified in the data needs analysis or that came up frequently in conversations with community members have been highlighted as focus areas. These areas include a suite of recommendations and may align with work already underway. The bikeway focus areas include:

- Separated Bikeways
- ► Emeryville Greenway/Doyle Street
- Leveraging Street Closures and Shared-Use Paths



The Emeryville Greenway provides raised crosswalks at intersections.

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SEPARATED BIKEWAYS

Separated Bikeways (Class IV) are onstreet bike lanes that are separated from motor vehicle traffic by a curb, median, planter boxes, parking, or other physical barrier. By separating people biking and rolling from moving traffic, these bike facilities offer a higher level of security than standard bike lanes and are designed to be comfortable for a wider spectrum of ages and abilities.

The project team proposes separated bikeways on the following arterial roadways in Emeryville to create a safer and more comfortable biking and rolling network:

- Shellmound Street from 67th Street to 40th Street
- 40th Street from Shellmound Street to Adeline Street

- 65th Street from Shellmound Street to the Emeryville Greenway
- The Emeryville Loop from Powell Street to Christie Avenue to Shellmound Way to Shellmound Street
- San Pablo Avenue from 53rd Street to 36th Street
- Doyle Street and 47th Street from 45th Street to the Community Pool

The addition of separated bikeways to Emeryville's existing biking and rolling network will create a backbone of safe and comfortable facilities that connect both north-south and east-west. The proposed facilities cover the entire city and improve access to the Bay Trail, shopping, and retail centers, as well as destinations in Berkeley and Oakland.



A two-way separated bikeway on Christie Avenue is a safe and comfortable segment of the San Francisco Bay Trail.

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EMERYVILLE GREENWAY / DOYLE STREET

Another key focus area in the biking and rolling network is the Emeryville Greenway and Doyle Slow Street. The Emeryville Greenway currently extends from Berkeley's 9th Street bike boulevard to Emeryville's Horton Street bike boulevard. As an integral segment of a regionally significant biking and walking route, improvements along the Greenway and Doyle Slow Street, as well as to the connections to get there, are especially important to creating a connected and comfortable network.

The following projects are recommended to improve the Emeryville Greenway:

 Raised Separated Bikeway (Class IV) on Doyle Street from Ocean Avenue to 61st Street

- Bike Boulevard (Class IIIB) connection on 63rd Street from Doyle Street to Vallejo Street
- Bike Boulevard (Class IIIB) connection on 61st Street from Doyle Street to Vallejo Street
- Bike Boulevard (Class IIIB) connection on 67th Street from Shellmound Street to the Emeryville Greenway
- Trail Rehab on the Emeryville Greenway between Horton Street and Peladeau Street
- Intersection Upgrades at Powell Street,59th Street, and Ocean Avenue
- New Signage at the intersections of 65th Street, 66th Street, and 67th Street



The Doyle Slow Street provides a comfortable biking, walking, and rolling connection for people of all ages and abilities.

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LEVERAGING STREET CLOSURES AND SHARED-USE PATHS

Street closures and shared-use paths are essential to creating an active transportation network that is designed for and accessible to all ages and abilities. As Emeryville continues to promote safe and comfortable biking and rolling connections, this focus area will be especially important moving forward.



The Doyle Slow Street restricts access to cars in some locations, creating an on-road biking and rolling facility that is comfortable for all ages and abilities.

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Bikeways Toolbox

Different types of bikeways are better suited to different types of roadways. Given the variation of roadway types in Emeryville, ranging from six-lane arterial roadways to low-traffic-volume residential streets, the planning team used local knowledge, speed limits, traffic volumes, and roadway widths to determine which type of biking or rolling facility or upgraded facility was best suited for each area on the active transportation network.



Shared-Use Path (Class I)

- Paths shared by people walking and biking that are completely separated from motor vehicle traffic
- Comfortable for people of all ages and abilities
- Typically located with or along parks, roadways medians, rail corridors, or bodies of water



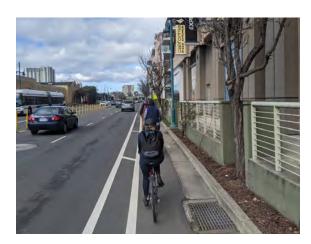
Separated Bikeway (Class IV)

- On-street bicycle space that is fully separated from motor vehicle traffic by either planter boxes, parking, curbs, or other physical barriers
- Often comfortable for all ages and abilities

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Buffered Bicycle Lane (Class II) (maps refer to these as IIB)

- Dedicated on-street bicycle lane that is separated from motor vehicle traffic by a painted buffer on the roadway
- The buffer provides additional comfort by providing space between people biking or rolling and moving motor vehicle traffic



Bicycle Lane (Class II)

- On-street dedicated lane for people biking or rolling that is directly adjacent to moving vehicles
- Comfortable for people biking or rolling who are confident in their abilities, and less suited for all ages and abilities



Bicycle Boulevard (Class III) (maps refer to these as IIIB)

- Calm local streets where people biking and rolling have priority, but share roadway space with motor vehicles
- Comfortable for people biking and rolling with a wider range of comfort levels
- Shared roadway bicycle markings on pavement and traffic calming measures such as speed bumps or traffic diverters characterize this facility type

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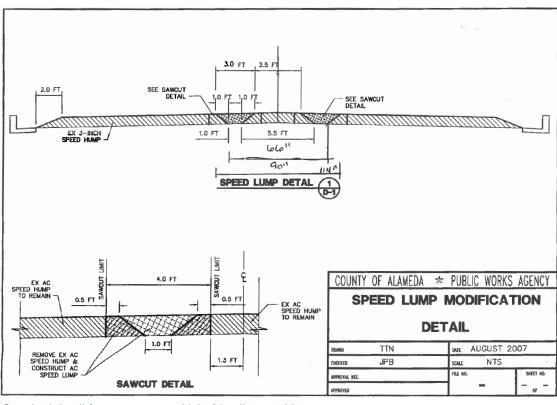
MULTIMODAL PROJECTS

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Traffic Calming

The City has several tools to slow vehicles speeds and reduce traffic volumes, also knowns as traffic calming. These tools could include, but are not limited to, curb extensions, speed humps, raised crosswalks, lane narrowing, and partial or full street closures. Traffic calming can be used to implement proposed bicycle boulevards where bicyclists and vehicles share the roadway. In some cases, traffic calming could be used on local streets that do not have a specific bikeway recommendation or the same streets recommended for other bikeway treatments to accommodate and encourage different types of bicycle riders.

During the design phase, the City will coordinate traffic calming design and placement with emergency services providers. The City will use emergency-vehicle-friendly traffic calming techniques such as speed lumps (which have a gap that emergency vehicles' wheels can fit through). Alameda County Public Works has developed design standards for speed lumps that meet the dimensions of large firetrucks.



Standard detail for emergency vehicle-friendly speed lump.

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Bicycle Route (Class III)

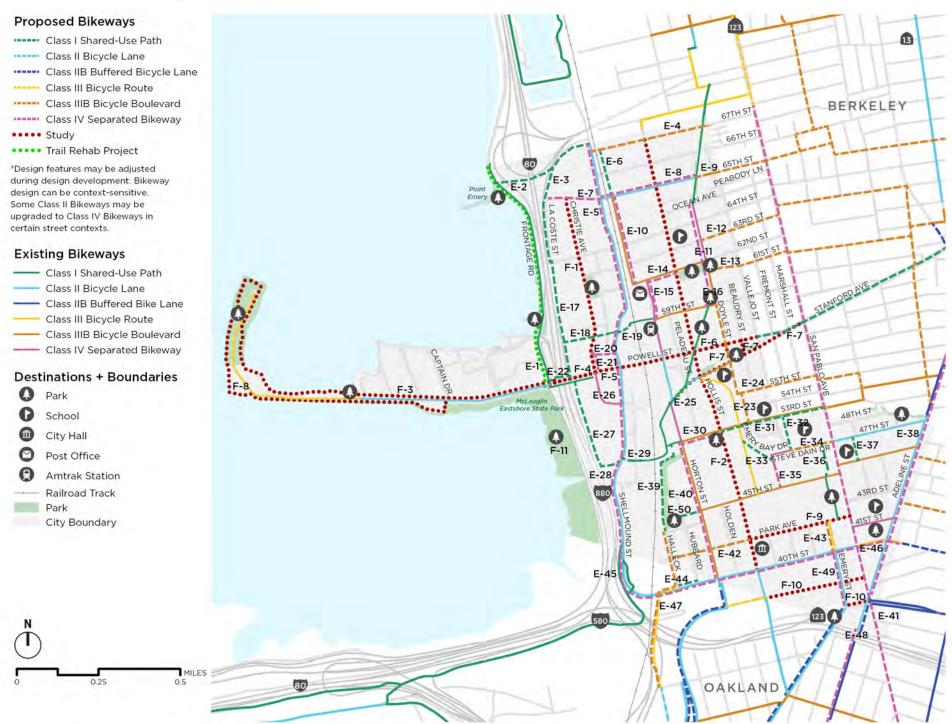
- Signed on-street bikeway route where motor vehicles and people biking and rolling share the same space
- Comfortable for people who are more confident biking or rolling
- Used when space for a separate bicycle facility may not be feasible
- Can include pavement markings

Biking and Rolling Recommendations Map

Over 15 miles of new bikeways are proposed in the *Active Transportation Plan* as shown in **Map 24** and **Tables 7 and 8**.

Table 7. Biking and Rolling Recommendations Table

BIKEWAY CLASS	EXISTING BIKEWAY MILEAGE	PROPOSED BIKEWAY MILEAGE
Shared-Use Path (Class I)	2.1 miles	2.8 miles
Bicycle Lane (Class II)	4.2 miles	0.0 miles
Buffered Bicycle Lane (Class IIB)	0.0 miles	0.7 miles
Bicycle Route (Class III)	1.5 miles	0.1 miles
Bicycle Boulevard (Class IIIB)	2.5 miles	2.1 miles
Separated Bikeway (Class IV)	0.9 miles	5.6 miles
Study	0.0 miles	6.1 miles
Trail Rehab Project	0.0 miles	0.8 miles
Total	11.1 miles	17.5 miles



PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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Table 8. Bikeway Network Recommendations

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-1	Bay Trail	Trail Rehab Project	Point Emery	Powell St	0.73	Class I Shared- Use Path	Repave existing Bay Trail trail to have smoother pavement.
E-2	I-80/Ashby Ave Interchange	Overcrossing	Frontage Rd	65th St	0.33	None	Ashby Overcrossing. Project in progress.
E-3	La Coste St	Class I Shared- Use Path	65th St	64th St	0.30	None	Short Term: add Bike Boulevard on La Coste Street. Long term: add Shared-Use Path to connect to Ashby Overcrossing. Project located on private property.
E-4	67th Street	Class IIIB Bicycle Boulevard	Shellmound St	Emeryville Greenway	0.35	None	Bike Boulevard connection to proposed Ashby Overcrossing.
E-5	Shellmound St	Class IV Separated Bikeway	Shellmound Way	67th St	0.66	Class II Bicycle Lane	Upgrade existing bikeways to Separated Bikeway. Emeryville Loop connection. Roadway width: 32' to 48'.
E-6	Parallel to Railroad Tracks	Class I Shared- Use Path	67th St	65th St	0.14	None	Add Shared- Use Path on gravel area east of railroad.
E-7	65th St	Class IV Separated Bikeway	La Coste St	Shellmound St	0.16	None	Add 2-way Separated Bikeway on north side of 65th Street with one lane of parking removal. Roadway width 40', existing parking on both sides of street.
E-8	65th St	Class IV Separated Bikeway	Shellmound St	Emeryville Greenway	0.30	Class IIB Buffered Bicycle Lane	Add Separated Bikeway with transit islands at Bus Stops. Remove one lane of parking. Proposed crosssection: 8' Parking, 6' bikeway, 3' buffer, 11' travel lane, 11' travel lane, 3' buffer, 6' bikeway.

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Table 8, Bikeway Network Recommendations, continued

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-9	65th St	Class IIIB Bicycle Boulevard	Emeryville Greenway	City Boundary near Vallejo St	0.07	None	Bike Boulevard connection to existing bikeway in Berkeley. Public identified route as in need of improvement.
E-10	Overland Ave	Class IV Separated Bikeway	62nd St	65th St	0.28	Class IIIB Bicycle Boulevard	Upgrade existing bike boulevard to Separated Bikeway.
E-11	Doyle St	Class IV Separated Bikeway	Ocean Ave	61st St	0.21	Class IV Separated Bikeway	Add raised Separated Bikeway on Doyle Street as part of Emeryville Greenway.
E-12	63rd St	Class IIIB Bicycle Boulevard	Doyle St	Vallejo St	0.10	None	Bike Boulevard connection to planned Oakland Bikeway.
E-13	61st St	Class IIIB Bicycle Boulevard	Doyle St	City Boundary near Vallejo St	0.10	None	Bike Boulevard connection Doyle Street to planned bikeway in Oakland. Public identified area as a popular destination.
E-14	62nd St	Class IV Separated Bikeway	Horton St	Hollis St	0.09	Class IIIB Bicycle Boulevard	Upgrade existing bike boulevard to Separated Bikeway.
E-15	Horton St	Class IV Separated Bikeway	59th St	62nd St	0.12	Class IV Separated Bikeways (posts)	Add Separated Bikeway. Convert to lanes to one-way northbound on Horton Street from 59th Street to 62nd Street to create dedicated loading/unloading space.
E-16	Doyle St - 59th St	Class IV Separated Bikeway	61st St	59th St / Emeryville Greenway	0.12	Class IIIB Bicycle Boulevard	Upgrade existing bike boulevard to Separated Bikeway.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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Table 8, Bikeway Network Recommendations, continued

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-17	Private property (parallel to I-80 east side)	Class I Shared- Use Path	64th St	Powell St	0.37	None	Add Shared-Use Path parallel to I-80 on east side. Bay Trail Connection.
E-18	5801 Christie Mixed-Use Project	Class I Shared- Use Path	Private property (parallel to I-80 east side)	Christie Ave	0.1	None	Shared-Use Path included in 5801 Christie Mixed-Use Project.
E-19	5850 Shellmound Way New Path & Connection to Bridge	Class I Shared- Use Path	Christie Ave	Existing Bridge to Amtrak Station	0.1	None	City Initiated General Plan Amendment to revise the location of Shellmound Way and add east-west path on the northern side of 5850 Shellmound Way.
E-20	Shellmound Way	Class IV Separated Bikeway	Christie Ave	Shellmound St	0.08	None	Emeryville Loop. Two-way Separated Bikeway on south side of street.
E-21	Christie Ave	Class IV Separated Bikeway	Shellmound Way	Powell St	0.07	None	Emeryville Loop. Two-way Separated Bikeway on east side of street.
E-22	Powell St / I-80 Undercrossing Path	Class I Shared- Use Path	Frontage Rd	I-80 On- Ramp / New Path Parallel to I-80	0.07	None	Add Shared-Use Path to north side of Powell Street. Proposed in 2019 BPAC Walking Tour Recommendations.
E-23	Doyle St	Class IIIB Bicycle Boulevard	53rd St	59th St	0.38	None	Bike Boulevard proposed in 2012 BPMP, involves private parking lot cut-through.
E-24	55th St	Class IIIB Bicycle Boulevard	Doyle St	Vallejo St	0.09	None	Bike Boulevard connection to planned Oakland Bikeway.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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Table 8, Bikeway Network Recommendations, continued

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-25	Stanford Ave	Trail Rehab Project	Horton St	Hollis St	0.07	Class II Bicycle Lane	Widen existing trail and make more comfortable for bikes. Retain trees and landscaping to comply with Prop 84 park grant.
E-26	Shellmound St	Class IV Separated Bikeway	Christie Ave	Shellmound Way	0.16	Class II Bicycle Lane	Emeryville Loop. Two-way Separated Bikeway on west side of street.
E-27	Bay Trail Connection	Class I Shared- Use Path	Powell St Plaza	South Bayfront Bridge	0.33	None	Add Shared-Use Path. Proposed in 2012 BPMP. Will require acquisition of Right-of-Way, included in General Plan. Project located on private property.
E-28	Shellmound St	Class IV Separated Bikeway	40th St Bridge	Christie Ave	0.44	Class II Bicycle Lane	40th Street Multimodal Phase II: Bay Trail Gap Closure Project. Concept includes removing two on-street bike lanes, realigning the vehicle lanes, and adding a two-way separated bikeway with a raised buffer on the west side of Shellmound Street.
E-29	Ohlone Way	Class I Shared- Use Path	Shellmound St	South Bayfront Bridge	0.06	None	Shared-Use path connection on Ohlone Way from Shellmound Street to South Bayfront Bridge. Approved as part of grocery store project. Project located on private property.
E-30	53rd St	Class IV Separated Bikeway	Horton St	Hollis St	0.13	Class IIIB Bicycle Boulevard	Upgrade existing Bike Boulevard on 53rd Street to Separated Bikeway as part of the Temescal Greenway.
E-31	53rd St	Class I Shared- Use Path	Hollis St	San Pablo Ave	0.32	Class IIIB Bicycle Boulevard	Add Shared-Use Path on south side of 53rd Street as part of the Temescal Greenway.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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Table 8, Bikeway Network Recommendations, continued

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-32	ECCL Path	Class I Shared- Use Path	53rd St	47th St	0.11	None	Shared-Use Path connection is a long term vision and requires redevelopment and easement from private property.
E-33	Connection between Spur Alley and 47th Street	Class I Shared- Use Path	Spur Alley	47th St	0.11	None	Shared-Use Path connection is a long term vision and requires redevelopment and easement from private property.
E-34	47th St	Class IIIB Bicycle Boulevard	Community Pool	San Pablo Ave	0.14	None	Bike Boulevard connection to Community Pool.
E-35	Doyle St	Class IV Separated Bikeway	45th St	47th St	0.10	None	Two-way Separated Bikeway connection on Doyle St.
E-36	AC Transit Yard Connection	Class I Shared- Use Path	47th St	45th St	0.10	None	Shared-Use connection is a long term vision and requires redevelopment and easement from private property.
E-37	New Path	Class I Shared- Use Path	45th St	47th St	0.08	None	Add Shared-Use Path. Proposed in 2012 BPMP.
E-38	Adeline St	Class IV Separated Bikeway	San Pablo Ave	Northern City Boundary	0.57	Class II Bicycle Lane	Project in progress through public works.
E-39	Sherwin Williams Trail	Class I Shared- Use Path	Sherwin Ave	Bay Street Bridge	0.29	None	Add Shared-Use Path connection on east side of railroad.
E-40	Horton St	Class IV Separated Bikeway	40th St	53rd St	0.43	Class IIIB Bicycle Boulevard	Upgrade existing bike boulevard to Separated Bikeway.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

MULTIMODAL PROJECTS

Table 8, Bikeway Network Recommendations, continued

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-41	San Pablo Ave	Class IV Separated Bikeway	36th St	54th St	0.72	None	Alameda CTC San Pablo Avenue Corridor Project. One-way cycletracks on both sides of the street. Includes pedestrian safety improvements at all major intersections and safe connections to all intersecting bike routes, including at Adeline, MacArthur, and 40th Street. Treatments include protected intersections, pedestrian and bus bulbs, ADA ramp upgrades, and median refuge islands. This area is under Caltrans jurisdiction. Caltrans may or may not approve proposed projects. Project also included in the Northern Alameda County Core Connection Plan and is identified by the Alameda CTC Countywide Bikeways Network as part of the future regional all ages and abilities network.
E-42	Park Ave	Class IIIB Bicycle Boulevard	Halleck St	Hollis St	0.25	None	Bike Boulevard connection to Park Avenue Multimodal Study. BPAC 2019.
E-43	Emery St	Class IIIB Bicycle Boulevard	Park Ave	40th St	0.09	Class III Bicycle Route	Bike Boulevard through connection parallel to San Pablo Avenue.
E-44	40th St	Class I Shared- Use Path	Halleck St	Hubbard St	0.06	Class II Bicycle Lane	Add Shared-Use Path on north side of 40th Street.
E-45	40th St Bridge	Class IV Separated Bikeway	Shellmound St	Hubbard St	0.34	Class II Bicycle Lane	Install flexible bollards on 40th Street for protection from moving vehicles.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

MULTIMODAL PROJECTS

Table 8, Bikeway Network Recommendations, continued

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-46	40th St	Class IV Separated Bikeway	Hubbard St	Adeline St	0.65	Class II Bicycle Lane	40th Street and San Pablo Avenue Bus Hub Project. Add full or partial street closure with pedestrian plazas and emergency vehicle access on 40th Street at the intersections of Watts, Haven, Holden, and Hubbard. Project is included in the Northern Alameda County Core Connection Plan and is identified by the Alameda CTC Countywide Bikeways Network as part of the future regional all ages and abilities network.
E-47	Beach St - Halleck St	Class IIIB Bicycle Boulevard	Sherwin Ave	34th St	0.52	None	Bike Boulevard connection from Mandela Parkway to 40th Street / Shellmound Street. BPAC 2019.
E-48	Adeline St	Class IIB Buffered Bicycle Lane	36th St	San Pablo Ave	0.10	Class II Bicycle Lane	Buffered bike lane widths: 5' bike lane with 2-3' foot buffer.
E-49	Emery St	Class IV Separated Bikeway	40th St	Peralta St	0.18	Class II Bicycle Lane	Upgrade existing Bike Lane to Two- Way Separated Bikeway.
E-50	45th Street Sherwin Williams Connector	Class I Shared- Use Path	Sherwin Williams Park	Horton St	0.06	None	Trail connection.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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Multimodal Focus Areas

Destinations and barriers identified in the data needs analysis or that came up frequently in conversations with community members have been highlighted as focus areas. These areas include a suite of recommendations and may align with work already underway. The multimodal focus areas improve conditions for walking, bicycling, and access to transit.

BAY TRAIL RECOMMENDATIONS

The San Francisco Bay Trail is a regional biking, walking, and rolling route that will eventually circumnavigate the San Francisco Bay. Emeryville's coastline hosts popular existing on- and off-street segments of the regional trail, as well as two spine routes that lead to the Bay Bridge and the Emeryville Marina. The future vision of the Bay Trail is a desire for completion of a pedestrian and bikeway connection that stretches the entirety of the Bay Bridge, connecting the East Bay to San Francisco. The Active Transportation Plan aims to promote this vision by focusing on improvements to Bay Trail access for those residing in and making trips through the City of Emeryville.

Throughout the public engagement process, walking and rolling access to and along the Bay Trail emerged as a key priority for Emeryville community members. With barriers to access in mind such as railway corridor and arterial roadway

crossings, the project team focused on walking and rolling where Emeryville's bike facilities connect to the Bay Trail. The project team also proposes trail rehab improvements to the existing Bay Trail segment from Powell Street north to the city's border with Berkeley.

These improvements may include trail repaving, crossing improvements, weeding, and trail maintenance recommendations.

All improvements to the Bay Trail will follow the Bay Trail Design Guidelines and Toolkit.

Consistent with the General Plan and in the interest of providing shoreline access to the Bay Bridge, this Plan calls for a feasibility study to determine if a bicycle and pedestrian path can be developed adjacent to the Emeryville Crescent without negatively impacting sensitive habitat.

Major Projects

- 40th Street Multi-Modal Project
- Alameda CTC San Pablo Avenue Corridor Project
- Emeryville Loop Multi-Modal Project
- 40th Street Multi-modal Phase II: Bay Trail Gap Closure

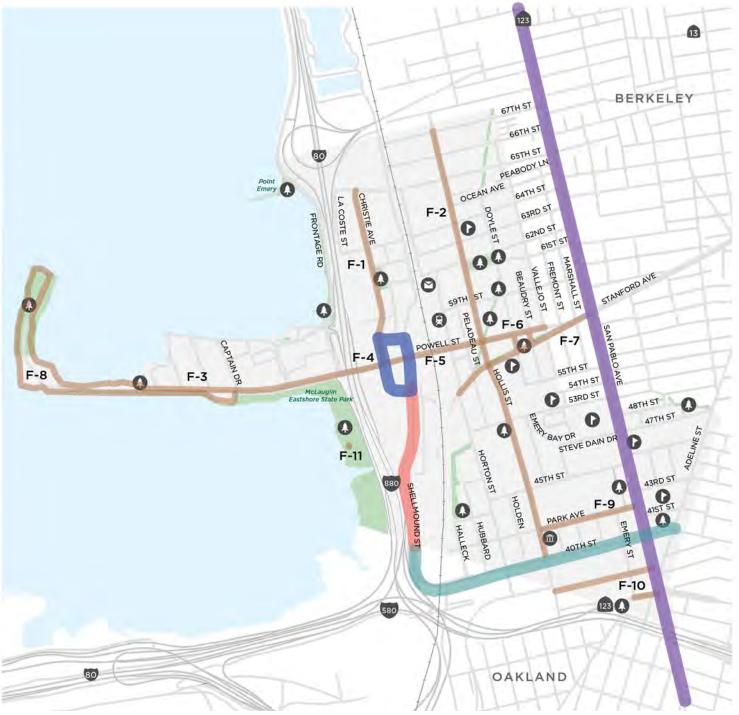
Multi-Modal Study Areas

- F1 Christie Avenue Separated Bikeway Study
- F2 Hollis Street Transit Corridor and Bike Lane Study
- F3 Powell Street Study Segment 1
- F4 Powell Street Study Segment 2
- F5 Powell Street Study Segment 3
- F6 Powell Street Study Segment 4
- F7 Stanford Avenue Multi-Modal Study
- F8 Bay Trail Widening Study
- F9 Park Avenue Multi-Modal Study
- F-10 Mandela Parkway Extension / East Bay Bridge Shopping Center Connection
- F-11 Emeryville Crescent Trail

Destinations + Boundaries

- Park
- School
 Sc
- City Hall
- Post Office
- Amtrak Station
- --- Railroad Track
- Park
- City Boundary





PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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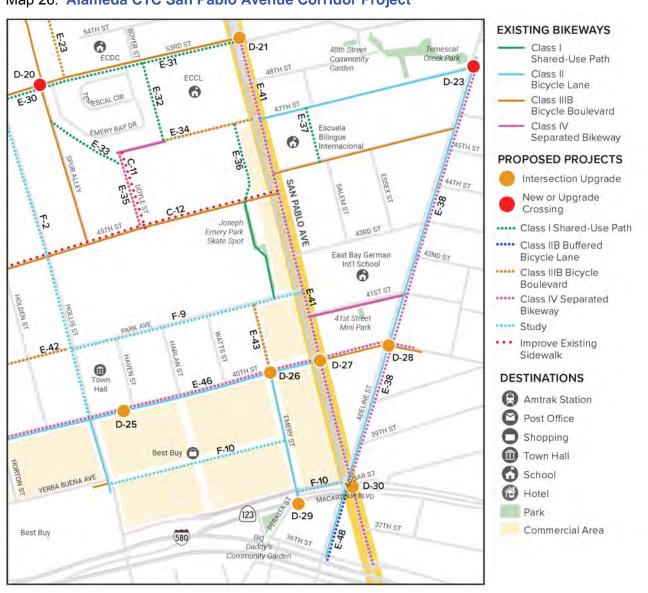
STUDIES

ALAMEDA CTC SAN PABLO AVENUE CORRIDOR PROJECT

The Alameda CTC San Pablo Avenue Corridor Project will implement improvements to make San Pablo Avenue function better and be safer for people who walk, bike, drive, and take the bus. In Oakland, Emeryville, and several blocks of South Berkeley, designs for side-running bus lanes and protected bike lanes on San Pablo Avenue are advancing. This overall concept was approved by the Alameda County Transportation Commission (CTC), which is leading the project, and supported by the Emeryville and Oakland city councils. Additional improvements in Oakland, Emeryville, Berkeley, and Albany will include more high-visibility and signalized crosswalks, improved bike crossings, upgraded lighting at bus stops and at crosswalks, and accessibility upgrades to serve people with disabilities.

In addition to aligning with the ongoing Alameda CTC project, the project team

Map 26. Alameda CTC San Pablo Avenue Corridor Project



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proposes the following infrastructure improvements to the biking, walking, and rolling network along the San Pablo Avenue Corridor:

- Improved Sidewalk connection on 45th
 Street from Horton Street to San Pablo
 Avenue
- Shared-Use Path (Class I) connection to San Pablo Avenue on 53rd Street from Horton Street to San Pablo Avenue.

For more information see **Table 9: Alameda CTC San Pablo Avenue Corridor Project** and visit

www.alamedactc.org/programs-projects/multimodal-arterial-roads/sanpabloave/



The San Pablo Avenue Corridor Project includes multimodal improvements from Albany to Oakland.

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Table 9. Alameda CTC San Pablo Avenue Corridor Improvements

As of June 2023, San Pablo Avenue is funded through final design for bicycle and transit lanes, which will include intersection upgrades. The proposed improvements in this Plan will be assessed for compatibility with the Alameda CTC San Pablo Avenue Corridor Project.

PROJECT ID	STREET	PROPOSED IMPROVEMENT	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-41	San Pablo Ave	Class IV Separated Bikeway	36th St	54th St	0.72	None	Alameda CTC San Pablo Avenue Corridor Project. One-way cycletracks on both sides of the street. Includes pedestrian safety improvements at all major intersections and safe connections to all intersecting bike routes, including at Adeline, MacArthur, and 40th Street. Treatments include protected intersections, pedestrian and bus bulbs, ADA ramp upgrades, and median refuge islands. This area is under Caltrans jurisdiction. Caltrans may or may not approve proposed projects. Project also included in the Northern Alameda County Core Connection Plan.
D-21	San Pablo Ave & 53rd St	Intersection Upgrade	NA	NA	NA	NA	Intersection included in the Alameda CTC San Pablo Avenue Corridor Project, currently in the design process at time of publication. This area is under Caltrans jurisdiction and Caltrans may or may not approve proposed projects
D-27	San Pablo Ave & 40th St	Intersection Upgrade	NA	NA	NA	NA	This intersection is included in the Alameda CTC San Pablo Avenue Corridor Project, currently in the design process at time of publication. This area is under Caltrans jurisdiction and Caltrans may or may not approve proposed projects.
D-30	San Pablo Ave, Adeline St, & MacArthur Blvd	Intersection Upgrade	NA	NA	NA	NA	Intersection included in the Alameda CTC San Pablo Avenue Corridor Project, currently in the design process at time of publication. This area is under Caltrans jurisdiction and Caltrans may or may not approve proposed projects

40TH STREET MULTIMODAL PROJECT

Another important multimodal focus area for biking, walking, and rolling infrastructure improvements includes the 40th Street Multimodal Project. The City of Emeryville has developed a 40th Street Concept Plan to create bus-only lanes, a two-way bikeway on the north side of the street, bicycle-pedestrian intersection improvements, bus stop improvements including passenger boarding areas, and streetscaping with opportunities for green infrastructure (natural storm water treatment) and public art. Closing some north-south streets to through traffic is being studied. The City has received funding to move into the next phase of detailed engineering and is assembling funding for construction. The western segment of 40th Street between Shellmound Street and Horton Street is also part of the Bay Trail spine alignment. Recommendation design in this location should meet Bay Trail goals and guidelines. The Active Transportation Plan is consistent with this effort.

Project recommendations along 40th Street to improve the active transportation network include:

- Separated Bikeway (Class IV) on 40th
 Street from Shellmound Street to Adeline
 Street
- Major Intersection Upgrades along 40th Street at the intersections of Hubbard Street, Haven Street, Emery Street, San Pablo Avenue, and Adeline Street
- Shared-Use Path (Class I) on the north side of 40th Street from Halleck Street to Hubbard Street
- New Sidewalk on Hubbard Street from Sherwin Avenue to 40th Street
- Improved Sidewalk on Hollis Street from Park Avenue to 40th Street
- Bus Stop Improvement at the intersection of Hollis Street and 40th Street



40th Street currently hosts a bike lane with minimal separation from motor vehicles.

For more information see **Table 10: 40th Street Multimodal Project.**

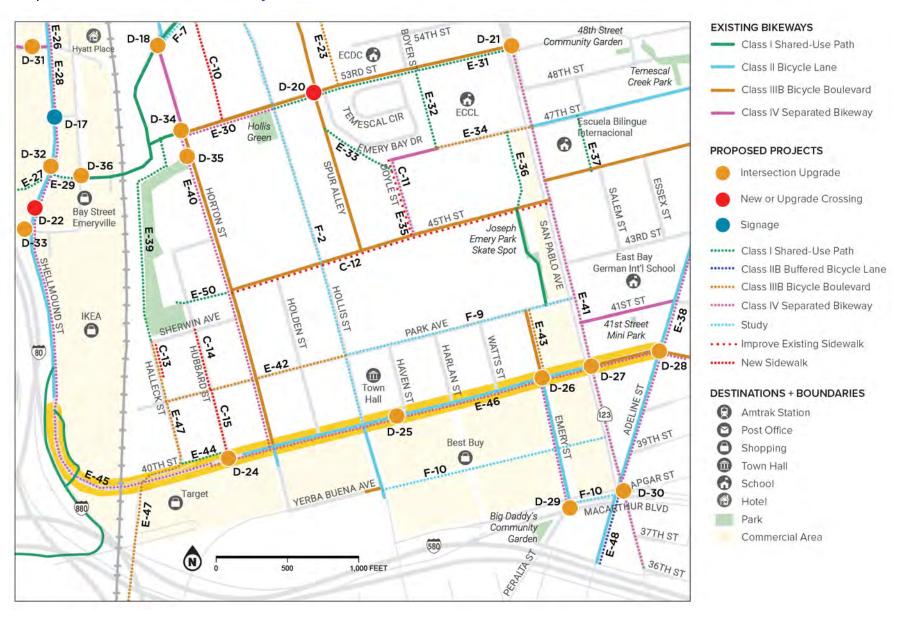
PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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Map 27. 40th Street Multimodal Project



PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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Table 10. 40th Street Multimodal Project

The 40th Street Multimodal Project will include intersection upgrades and bike, pedestrian, and transit improvements. The proposed improvements in this Plan will be assessed for compatibility with the 40th Street Multimodal Project.

PROJECT ID	STREET	PROPOSED IMPROVEMENT	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-44	40th St	Class I Shared- Use Path	Halleck St	Hubbard St	0.06	Class II Bicycle Lane	Add Shared-Use Path on north side of 40th Street.
E-46	40th St	Class IV Separated Bikeway	Hubbard St	Adeline St	0.65	Class II Bicycle Lane	40th Street and San Pablo Avenue Bus Hub Project. Add full or partial street closure with pedestrian plazas and emergency vehicle access on 40th Street at the intersections of Watts, Haven, Holden, and Hubbard. Project is included in the Northern Alameda County Core Connection Plan and is identified by the Alameda CTC Countywide Bikeways Network as part of the future regional all ages and abilities network.
E-45	40th St Bridge	Class IV Separated Bikeway	Shellmound St	Hubbard St	0.34	Class II Bicycle Lane	Install flexible bollards on 40th Street for protection from moving vehicles.
D-24	40th St & Hubbard St	Intersection Upgrade	NA	NA	NA	NA	From 40th and San Pablo Bus Hub Project: Curb extensions on northern leg, dashed green pavement parkings for 40th St Two-Way Separated Bikeway, "Look Right" signs at crosswalk.
D-25	40th St & Bridgecourt Office	Intersection Upgrade	NA	NA	NA	NA	Sidewalk ramps on 40th St on both sides of office entrance
D-26	40th St & Emery St	Intersection Upgrade	NA	NA	NA	NA	Northwest protected corner, bike boxes, dashed green pavement markings, green-backed sharrows, consider bike signal head, add LPI

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

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Table 10, 40th Street Multimodal Project, continued

PROJECT ID	STREET	PROPOSED IMPROVEMENT	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
D-27	40th St & San Pablo Ave	Intersection Upgrade	NA	NA	NA	NA	This intersection is included in the Alameda CTC San Pablo Avenue Corridor Project, currently in the design process at time of publication. This area is under Caltrans jurisdiction and Caltrans may or may not approve proposed projects.
D-28	40th St & Adeline St	Intersection Upgrade	NA	NA	NA	NA	Northwest protected corner, curb extensions, upgrade sidewalk, bike boxes, dashed green pavement markings, green-backed sharrows, consider bike signal head, add LPI

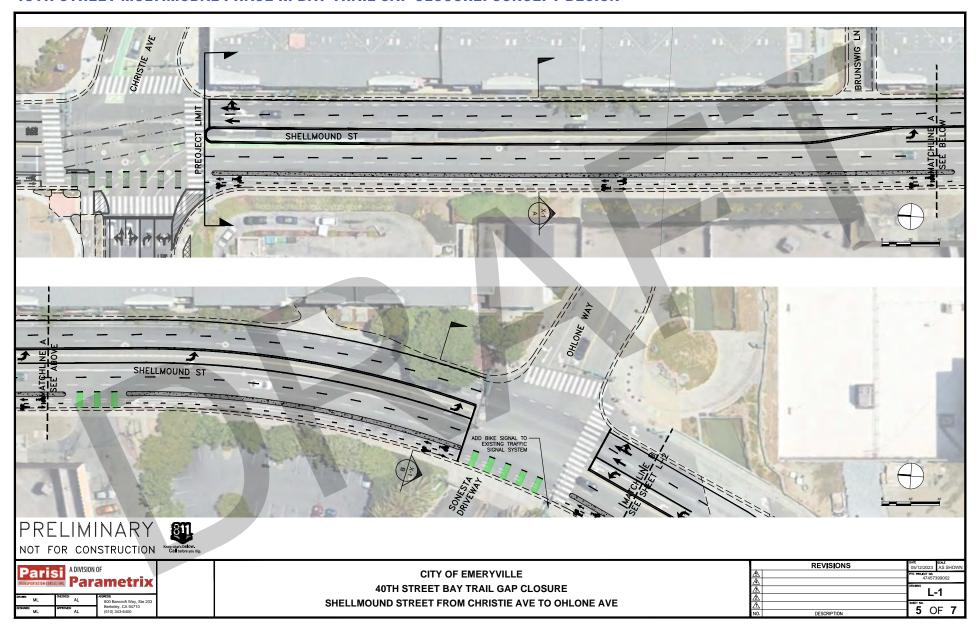
40TH STREET MULTIMODAL PHASE II: BAY TRAIL GAP CLOSURE

The 40th Street Multimodal Phase II: Bay Trail Gap Closure project provides an all ages and abilities bikeway connection between the Bay Trail trailhead at the 40th Street Bridge and the existing separated bikeway on Christie Avenue. The project also includes intersection upgrades along Shellmound Street at the intersection of Christie Avenue, Ohlone Way, and Bay Street.

Map 28. 40th Street Multimodal Phase II: Bay Trail Gap Closure

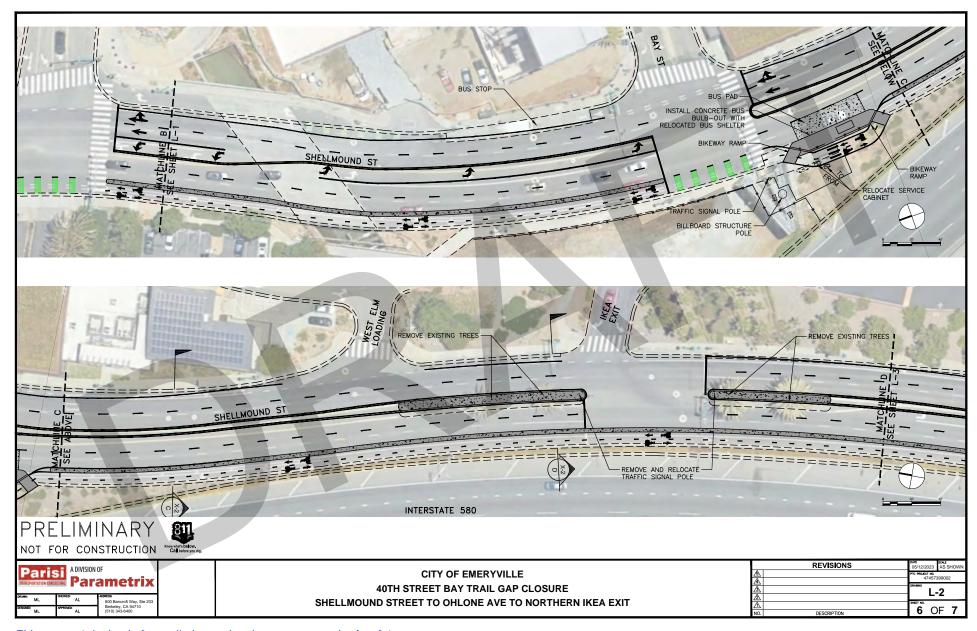


40TH STREET MULTIMODAL PHASE II: BAY TRAIL GAP CLOSURE: CONCEPT DESIGN



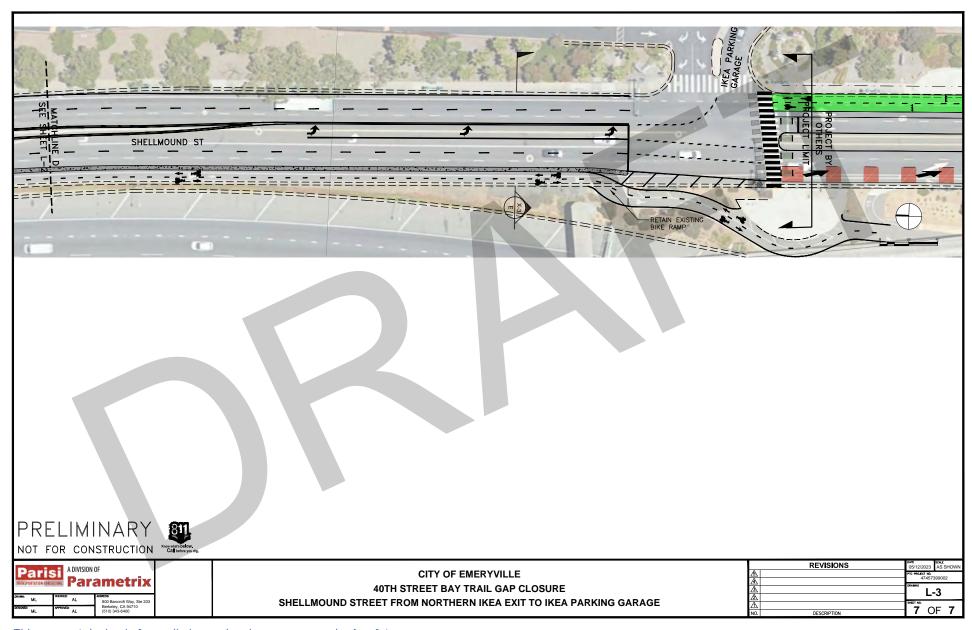
This concept design is for preliminary planning purposes only. Any future transit route modifications or bus stop improvements or relocation will require coordination with AC Transit and Emery Go-Round.

40TH STREET MULTIMODAL PHASE II: BAY TRAIL GAP CLOSURE: CONCEPT DESIGN



This concept design is for preliminary planning purposes only. Any future transit route modifications or bus stop improvements or relocation will require coordination with AC Transit and Emery Go-Round.

40TH STREET MULTIMODAL PHASE II: BAY TRAIL GAP CLOSURE: CONCEPT DESIGN



This concept design is for preliminary planning purposes only. Any future transit route modifications or bus stop improvements or relocation will require coordination with AC Transit and Emery Go-Round.

Table 11. 40th Street Multimodal Phase II: Bay Trail Gap Closure

The 40th Street Multimodal Project Phase II includes intersection upgrades and a two-way separated bikeway on the west side of Shellmound Street from Christie Avenue to the Bay Trail path at the 40th Street bridge.

PROJECT ID	STREET	PROPOSED IMPROVEMENT	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-28	Shellmound St	Class IV Separated Bikeway	Christie Ave	40th Street Bridge	0.43	Class II Bicycle Lane	40th Street Multimodal Phase II: Shellmound Gap Closure. Concept includes removing two on-street bike lanes, realigning the vehicle lanes, and adding a two-way separated bikeway with a raised buffer on the west side of Shellmound Street.
D-31	Shellmound St & Christie Ave	Intersection Upgrade	NA	NA	NA	NA	Intersection upgrade as part of the Emeryville Loop Project. Concept includes modifying vehicle signal detection zones, adding bicycle signal and detection equipment at the Christie Avenue crossing, and modifying the signal phasing and timing to add a bicycle crossing phase.
D-17	Shellmound St & Brunswig Lane	Signage	NA	NA	NA	NA	Add a "Cross at Crosswalk" sign, work with property manager to add signage.
D-32	Shellmound St & Ohlone Way	Intersection Upgrade	NA	NA	NA	NA	Intersection upgrade as part of the 40th Street Multimodal Project Phase II: Shellmound Street Gap Closure Project. Concept includes modifying vehicle signal detection zones, adding bicycle signal and detection equipment at the Sonesta Driveway crossing, and modifying the signal phasing and timing to add a bicycle crossing phase.

Table 11. 40th Street Multimodal Phase II: Bay Trail Gap Closure Project, continued

PROJECT ID	STREET	PROPOSED IMPROVEMENT	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
D-22	Shellmound St & F-bus Stop (Bay Street)	New or Upgrade Crossing	NA	NA	NA	NA	RRFB
D-33	Shellmound St & Bay St	Intersection Upgrade	NA	NA	NA	NA	Intersection upgrade as part of the 40th Street Multimodal Phase II: Bay Trail Gap Closure Project. Concept includes modifying vehicle signal detection zones and reconstructing an existing curbside AC Transit bus stop into a bus boarding island.
D-39	Shellmound St & IKEA Driveway	Intersection Upgrade	NA	NA	NA	NA	Intersection upgrade as part of the 40th Street Multimodal Phase II: Bay Trail Gap Closure Project. Concept includes removing trees, relocating traffic signal poles, reconstructing two median islands, upgrading the existing crosswalk into a bikeway crossing that may include supplemental bike signal equipment and a widened curb ramp.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

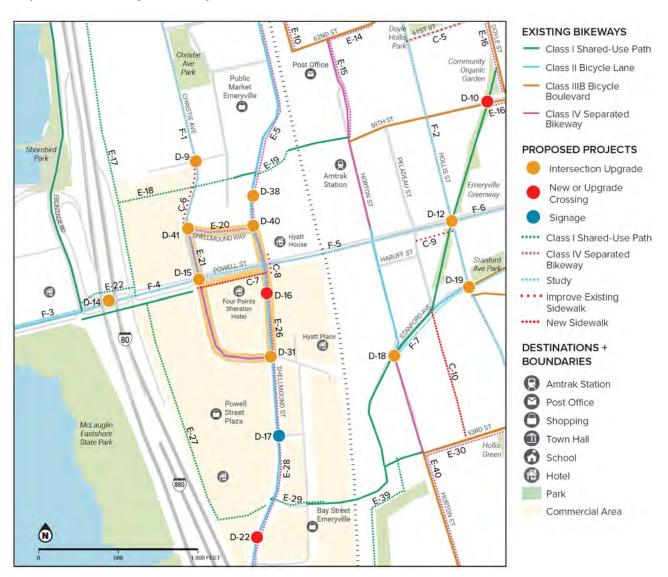
MULTIMODAL PROJECTS

STUDIES

THE EMERYVILLE LOOP

The Emeryville Loop project will provide safe, low-stress biking and walking routes to work and shopping destinations in central Emeryville and new designated transit lanes. The project closes a major gap in the City's existing active transportation network by providing a new pedestrian connection on Powell Street between Christie Avenue and Shellmound Street. Today, wide multilane arterial roadways that funnel high traffic volumes on and off I-80 pose barriers to people biking, walking, and rolling in the project area. This project will create separation between moving car traffic and people using active modes along high-stress arterials (Powell Street, Christie Avenue, Shellmound Street) and provide intersection improvements to make the arterial crossings safer and more comfortable.

Map 29. The Emeryville Loop



PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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The project includes construction of new two-way Class IV separated bikeway facilities on high-stress arterial roadways, construction of new sidewalk to close a gap in the existing walking network, widened sidewalk, the installation of protected intersections at four major four- to six-lane arterial intersections, one new midblock crossing, and dedicated transit lanes. These countermeasures will create a safer, low-stress environment for people biking, walking, and rolling.

Improvements in the project area will provide safer connections to low-wage workers who use transit or active modes of transportation to get to and from work. The project will also serve those residing in nearby equity priority communities located 900 feet east of the project. Not only is the project directly adjacent to regional retail destinations such as the Bay Street Shopping Mall, Powell Street Shopping Center, the Emeryville Public Market, and



The Emeryville Loop Project includes the addition of a protected intersection at Christie Avenue and Powell Street.

major hotel chains, but the project also connects these destinations to each other and diminishes barriers to reaching them. In addition to providing low-stress access, the project improves active transportation routes for those accessing regional destinations such as the Bay Trail, Amtrak Station, and the Emeryville Greenway.

For more information, see **Table 12**: **Emeryville Loop Multimodal Project.**

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

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THE EMERYVILLE LOOP: CONCEPT DESIGN



This concept design is for preliminary planning purposes only. Any future transit route modifications or bus stop improvements or relocation will require coordination with AC Transit and Emery Go-Round.

Christie Avenue/Powell Street City of Emeryville Active Transportation Plan



PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS MULTIMODAL

STUDIES

THE EMERYVILLE LOOP: CONCEPT DESIGN



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Christie Avenue

City of Emeryville Active Transportation Plan



Sidewalk Widening

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS **MULTIMODAL**

STUDIES

THE EMERYVILLE LOOP: CONCEPT DESIGN



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Christie Avenue/Shellmound Street City of Emeryville Active Transportation Plan



PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS MULTIMODAL

STUDIES

THE EMERYVILLE LOOP: CONCEPT DESIGN



This concept design is for preliminary planning purposes only. Any future transit route modifications or bus stop improvements or relocation will require coordination with AC Transit and Emery Go-Round.

Shellmound Street/Powell Street Overcrossing City of Emeryville Active Transportation Plan



PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS **MULTIMODAL**

STUDIES

THE EMERYVILLE LOOP: CONCEPT DESIGN



This concept design is for preliminary planning purposes only. Any future transit route modifications or bus stop improvements or relocation will require coordination with AC Transit and Emery Go-Round.





PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

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Table 12. Emeryville Loop Multimodal Project

The Emeryville Loop Multimodal Project will include intersection upgrades and bike, pedestrian, and transit improvements. The proposed improvements in this Plan will be assessed for compatibility with the Emeryville Loop Project.

PROJECT ID	STREET	PROPOSED IMPROVEMENT	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
E-20	Shellmound Way	Class IV Separated Bikeway	Christie Ave	Shellmound St	0.08	None	Emeryville Loop. Two-way Separated Bikeway on south side of street
E-26	Shellmound St	Class IV Separated Bikeway	Christie Ave	Shellmound Way	0.16	Class II Bicycle Lane	Emeryville Loop. Two-way Separated Bikeway on west side of street
E-21	Christie Ave	Class IV Separated Bikeway	Shellmound Way	Powell St	0.07	None	Emeryville Loop. Two-way Separated Bikeway on east side of street
C-7	Powell St	New Sidewalk	Christie Ave	Shellmound St	0.08	NA	Emeryville Loop. Pedestrian walkway on south side of Powell St
C-8	Shellmound St - Powell Underpass	Improve Existing Sidewalk	New Midblock Crossing	Hyatt Hotel Parking Lot Entrance	0.02	NA	Fill sidewalk gap underneath Powell Street on east side of roadway, remove obstructions in walking path including signs and landscaping that makes corners and navigation difficult for wheelchairs.
D-15	Christie Ave & Powell St	Intersection Upgrade	NA	NA	NA	NA	Eliminate one right turn lane/ arrow on Christie southbound and Powell eastbound. Northwest corner (southbound Christie onto westbound Powell) turn radius squared. All-ped scramble study.
D-16	Shellmound St & F bus stop / Four Points Sheraton Hotel	New or Upgrade Crossing	NA	NA	NA	NA	Add midblock crossing across from Four Points Sheraton at F-bus stop

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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STUDIES

Multimodal Studies

The following multimodal studies are recommended in the Active Transportation Plan. Studies provide an opportunity for the City to assess the feasibility and suitability of proposed biking, walking, and rolling corridor improvements before a project enters the design phase. Input from key stakeholders such as the City's Emergency Services teams, Emery Go-Round, AC Transit, and neighboring jurisdictions such as Berkeley and Oakland, in addition to feedback from the Emeryville community, are essential to a successful study. All studies proposed in the Active Transportation Plan include an assessment of both walking and biking improvements.

F-1 CHRISTIE AVENUE STUDY

Extent: Christie Avenue from Powell Street to 65th Street

Objective: Christie Avenue is a key north-south connection through Emeryville with a number of popular shopping, retail, hotel, and restaurant destinations. The addition of a separated bikeway in this location would greatly enhance the all ages and abilities network, and improve biking, walking, and rolling access to regional shopping destinations. Due to width restrictions and a necessary removal of one lane of street parking, the *Active Transportation Plan* proposes a study to determine the feasibility of a separated bikeway and the potential trade-offs. The segment of

Christie Avenue between Shellmound Way and Powell Street is already included in the Emeryville Loop project and will be converted to a separated bikeway in the future. By extending this separated bikeway project to reach northern Emeryville, the City will add another convenient, comfortable, and safe bikeway to the existing network.

Study: Add Class IV on Christie Avenue, remove one lane of parking.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

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MULTIMODAL PROJECTS

STUDIES

F-2 HOLLIS STREET TRANSIT CORRIDOR STUDY

Extent: Hollis Street from 40th Street to 67th Street

Objective: The Hollis Street Transit
Corridor Study will assess the feasibility of bike lane installation on Hollis Street from 40th Street to 67th Street as part of future transit corridor improvements. Upgrades to existing sidewalks, pedestrian crossing improvements, and the addition of transit stop amenities such shelters and benches will also be assessed. The study requires collaboration with AC Transit at each step of the project process.

Study: Evaluate the feasibility and tradeoffs involved in adding bicycle lanes on Hollis Street.



The Hollis Street Transit Corridor Study includes a study to understand the feasibility of installing bike lanes on Hollis Street

POWELL STREET STUDY

Objective: Powell Street is the City's only existing east-west access point to the marina and shoreline on the west side of I-80. As such, the addition of a bikeway facility that is comfortable for all ages and abilities is essential. Characterized by high traffic volumes and multiple lanes of traffic in each direction, the project team proposes a study to better understand the feasibility and trade-offs of adding a separated bikeway. While not part of MTC's I-80/ Powell Street Interchange Transit Access Improvement Project, the Powell Street Study should investigate if two dedicated right turn lanes from Powell Street to Frontage Road are necessary. There is interest among the public to shorten the crossing distance across Frontage Road.

F-3 Segment A Extent: Powell Street from Davenport Park to Frontage Road

Study: Two-way separated bikeway on the south side of Powell Street, 5-foot bikeway lanes and 4-foot buffer, reduce median, and

narrow travel lanes to 11 feet. Alternative: One-way separated bikeway on each side of Powell Street.

F-4 Segment B Extent: Powell Street from Frontage Road to Christie Avenue

Study: Two-way separated bikeway on the south side of Powell Street. Alternative 1: One-way separated bikeway on each side of Powell Street. Alternative 2: Consider upgrading existing shared-use path to separate people walking and rolling. This segment is also part of the Bay Trail spine alignment. Improvements recommended on the existing shared-use path on the south side of Powell Street must meet Bay Trail goals and design guidelines.

F-5 Segment C Extent: Powell Street from Christie Avenue to Hollis Street

Study: Two-way separated bikeway on the south side of Powell Street, 5' bikeway lanes and 5' buffer, remove one travel lane. Alternative: One-way separated bikeway on each side of Powell Street.



The intersection of Powell Street and Christie Avenue hosts high traffic volumes and provides key access to the Bay Trail.

F-6 Segment D Extent: Powell Street from Hollis Street to Vallejo Street

Study: Two-way separated bikeway on the south side of Powell Street, 5' lanes and 6' buffer, remove one travel lane. Study requires traffic signal rephasing for bike signal. Alternative: One-way separated bikeway on each side of the street.

F-7 STANFORD AVENUE STUDY

The Stanford Avenue Study is a multijurisdictional study that seeks to improve the biking, walking, and rolling connection between central Emeryville, Oakland, and Berkeley. The study includes separated bikeways (Class IV) on Stanford Avenue from San Pablo Avenue to the Emeryville Greenway, as well as northsouth improvements between Stanford Avenue and Powell Street on Beaudry Street and Doyle Street. The study aims to connect to the proposed Shared-Use Path on Stanford Avenue from the Emeryville border to King Street, derived from the 2019 Let's Bike Oakland Plan. This new facility will create a safer and more comfortable connection for Emeryville residents and community members to access the Ashby BART Station and downtown Berkeley.



Stanford Avenue connects to a proposed shared-use path along Stanford Avenue in Oakland and Shattuck Avenue in Berkeley.

Objective: As a key connection to the surrounding region east of Emeryville, Stanford Avenue is a prime candidate for a bikeway that is comfortable for all ages and abilities. Building from the shareduse path proposed in the 2019 Let's Bike Oakland Plan on Stanford Avenue from the Emeryville Border to Adeline Street in Berkeley, the *Active Transportation Plan* recommends a separated bikeway.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

MULTIMODAL PROJECTS

STUDIES



Existing street configuration on Stanford Avenue from Doyle to Beaudry.



One alternative that could be studied on Stanford Avenue is expanding space for a raised two-way cycle track by removing on-street parking.



Another alternative that could be studied is to expand the sidewalk to create a Shared-Use Path. This concept may require the removal or relocation of trees, but keeps on-street parking.

Extent: Stanford Avenue from Horton Street to San Pablo Avenue

Study: Add contra-flow separated bikeway on Stanford to connect users from planned shared-use path on Stanford Avenue in Oakland to the Doyle Slow Street and Bayfront Bridge. Eliminate onstreet parking. Add a bicycle boulevard to the eastbound travel lane. Consider implementing speed humps.

Additional Study Segments:

Extent: Beaudry Street from Powell Street to Stanford Avenue

Study: Add bicycle boulevard on Beaudry Street. Convert to one-way southbound and extend sidewalk into street. Alternative: Create a car-free space (Village Green) from Stanford to the park limit on the north side.

Extent: Doyle Street from Powell Street to Stanford Avenue

Study: Convert Doyle Street from Powell Street to Stanford Avenue to a one-way street in the northbound direction. Repurpose the removed travel lane to be a widened sidewalk and park extension for people biking, walking, and rolling.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

MULTIMODAL PROJECTS

STUDIES

F-8 BAY TRAIL WIDENING STUDY

Extent: Bay Trail Pedestrian Path from Frontage Road to Davenport Mini Park

Objective: The Bay Trail spine circumnavigating the Emeryville Marina is a popular destination for people biking, walking, and rolling. Due to narrow path widths and large volumes of trail users, the *Active Transportation Plan* considers this area a key location for an upgrade to a Shared-Use Path. A study is proposed to better understand the feasibility of widening the trail to accommodate users of biking, walking, and rolling modes.

Study: Widen and convert existing pedestrian paths on the peninsula to a Shared-Use Path.



Study proposed to widen the pedestrian path on the Emeryville Marina.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

MULTIMODAL PROJECTS

STUDIES

F-9 PARK AVENUE MULTIMODAL CORRIDOR STUDY

Extent: Park Avenue from Hollis Street to San Pablo Avenue

Objective: Park Avenue is situated one block north of and parallel to 40th Street. Hosting destinations such as the Emeryville City Hall and Pixar Animation Studios, Park Avenue is a prime location for a multimodal corridor that provides connected and comfortable space for all modes of transportation. The Active Transportation Plan proposes improvements to the biking, walking, and rolling network. Due to trade-offs such as parking removal and realignment, as well as sidewalk extensions into the current roadway, a study is proposed to better understand project details and potential concepts.

Study: Add one-way separated bikeways on both sides of Park Avenue. Convert existing angled parking on the north side of the street to parallel parking. Widen sidewalk on south side of street and create more pedestrian-friendly space.



Converting the angled parking on Park Avenue to parallel parking will create space for biking, walking, and rolling improvements.

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS

MULTIMODAL PROJECTS

STUDIES

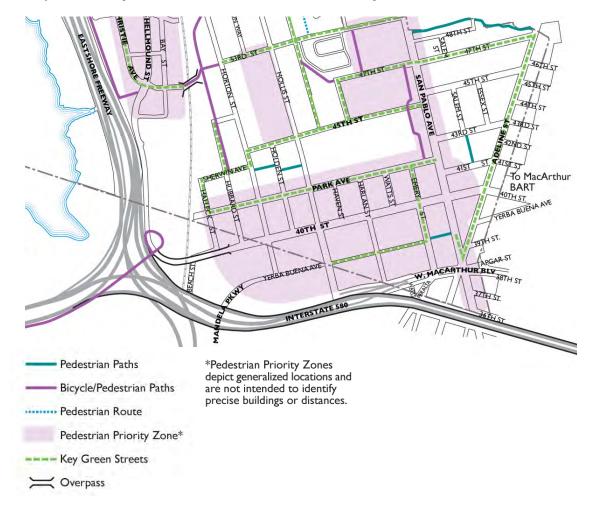
F-10 MANDELA PARKWAY EXTENSIONS / EAST BAY BRIDGE SHOPPING CENTER CLASS IV STUDY

Extent: East Bay Bridge Shopping Center Parking Lot from Mandela Parkway to Emery Street

Objective: The Mandela Parkway Extension through the East Bay Bridge Shopping Center is identified as a Connector Street and a Key Green Street in the Emeryville General Plan. To improve biking and walking access to the shopping center from the southeast corner of the City, a study to understand the feasibility and suitability of installing a two-way separated bikeway and improved connection for people walking through the shopping center parking lot is recommended. Improvements on this corridor would create safer biking and walking connections between Mandela Parkway to the west and the proposed separated bikeway facility on Emery Street.

Study: Add Class IV connection through Bay Bridge Shopping Center Parking Lot and on West MacArthur Boulevard from Emery Street to San Pablo Avenue.

Map 30. Emeryville General Plan Mandela Parkway Extension



POLICY AND PROGRAM RECOMMENDATIONS

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS MULTIMODAL PROJECTS

STUDIES

Table 13. Multimodal Studies

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
F-1	Christie Ave	Study	Powell St	65th St	0.55	None	Separated Bikeway Study. Street width ranges from 56' near Powell to 42' with parking in middle section, 32' no parking towards north.
F-2	Hollis St	Study	40th St	67th St	1.36	None	Study potential for installing bike lanes on Hollis St as part of the transit street. Sidewalk and pedestrian improvements included.
F-3	Powell St	Study	Davenport Park	Frontage Rd	0.42	Class IIB Buffered Bicycle Lane	Study: Two-way Separated Bikeway onroad, south side of Powell, 6' bike lanes and 4' buffer, reduced median, and travel lanes narrowed to 11'. Alt: One-way Separated Bikeway.
F-4	Powell St	Study	Frontage Rd	Christie Ave	0.15	None	Study: Two-way Separated Bikeway onroad, south side of Powell. Alternative 1: One-way Separated Bikeway. Alternative 2: consider upgrading existing Shared-Use Path on south side of Powell Street to separate walkers and bikers. In alignment with the I-80/Powell Street Interchange Transit Access Improvement Project, study for the removal of one turn lane in the westbound direction at the intersection of W Frontage Rd and Powell Street. This area is under Caltrans jurisdiction. Caltrans may or may not approve proposed projects.

Table 13. Multimodal Studies, continued

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
F-5	Powell St	Study	Christie Ave	Hollis St	0.31	None	Study: Two-way Separated Bikeway onroad, south side of Powell, 5' lanes and 5' buffer, remove one travel lane. Alt: One-way Separated Bikeway.
F-6	Powell St	Study	Hollis St	Vallejo St	0.20	None	Study: Two-way Separated Bikeway onroad, south side of Powell, 5' lanes and 6' buffer, remove one travel lane, requires traffic signal rephasing for bike signal. Alt: Oneway Class Separated Bikeway.
F-7	Beaudry St	Study	Powell St	Stanford Ave	0.04	None	Study: Add Bike Boulevard on Beaudry St. Make one-way southbound and extend sidewalk 1/2 of street.
F-7	Doyle St	Study	Powell St	Stanford Ave	0.06	None	Study: Make Doyle Street between Powell St and Stanford Ave one way northbound for cars. Repurpose half of street as sidewalk / park extension.
F-7	Stanford Ave	Study	Horton St	San Pablo Ave	0.48	None	Study: Eliminate on-street parking, replace with contra-flow Separated Bikeway, eastbound travel lane as Class 3B. Consider implementing speed humps. This segment of Stanford Ave is also identified by the Alameda CTC Countywide Bikeways Network as part of the future regional all ages and abilities network.
F-8	Bay Trail	Study	Frontage Rd	Davenport Mini Park	2.04	Pedestrian Path	Shared-Use Path widening study.

POLICY AND PROGRAM RECOMMENDATIONS

PEDESTRIAN NETWORK & SPOT IMPROVEMENT PROJECTS

BIKEWAY PROJECTS MULTIMODAL PROJECTS

STUDIES

Table 13. Multimodal Studies, continued

PROJECT ID	STREET	PROPOSED BIKEWAY	START	END	MILEAGE	EXISTING BIKEWAY	NOTES
F-9	Park Ave	Study	Hollis St	San Pablo Ave	0.31	None	Multimodal corridor study. Consider: Add Separated Bikeway, convert angled parking to parallel parking, widen sidewalk.
F-10	Mandela Parkway Extension / East Bay Bridge Shopping Center Parking Lot	Study	Hollis St	San Pablo Ave	0.24	None	General Plan Key Green Street. Study: Two-way Separated Bikeway on road through East Bay Bridge Shopping Center and feasibility of separated bikeway and improved lighting on West MacArthur Blvd between Emery Street and San Pablo Avenue.
F-11	Emeryville Crescent Trail	Study	McLaughlin State Park		NA	None	Consistent with the General Plan and in the interest of providing shoreline access to the Bay Bridge, this Plan calls for a feasibility study to determine if a bicycle and pedestrian path can be developed adjacent to the Emeryville Crescent without negatively impacting sensitive habitat.

New Mobility

Bike share and micromobility (scooters, e-bikes, and other personal mobility devices) are becoming an increasingly important component of the transportation environment. These mobility devices can be personally owned or they can be rented as part of shared mobility systems. Shared micromobility systems can be operated under many different operating models and sizes to fit the specific needs and goals of the City and the community. Implementation of these systems creates additional flexible, lower-cost transportation options within the service area. Powered micromobility devices expand the suite of alternative transportation modes that can reduce automobile dependency. They can be more readily combined with transit and human-powered transportation trips to expand transportation options.

There are six principles that should help guide micromobility systems planning and infrastructure design:

1. Advance mobility justice:

Micromobility can provide users with healthy, safe, and affordable transportation options that provide access to economic opportunities. Powered mobility devices can further enhance this effect. Micromobility and bike share systems should be implemented to equitably and successfully serve equity priority communities and areas with concentrations of walking and bicycling.

- 2. Design for safety: Designing for safety requires identifying and prioritizing the most vulnerable roadway and trail users first, then accounting for design features that will improve safety for all users.
- 3. Complement the natural environment: Shared-use paths and green infrastructure components can complement the natural environment while preserving the user experience.

4. Prioritize the human experience:

Micromobility and bike share-specific infrastructure should strive for a consistent user experience across the City. Implementing these items should be done with a "do no harm" approach to incorporating these modes along existing active and shared modes of transportation.

5. Expand user amenities: Bike and pedestrian amenities along shared-use paths and slow streets, including seating, bottle filling/drinking fountain stations, restrooms, and bicycle repair stations, are essential to improving user experience. With powered micromobility and other new and emerging modes, public charging infrastructure offers convenience while also reducing risk of "stranded" users or inoperable devices/ vehicles that have lost power. Such investments can also provide public charging for motorized wheelchairs or personal phones.

6. Design for the future: New mobility and bike share staff should track trends, identify shifts in user groups, and conduct research when possible (surveys, counts, or data from vendors). Understanding these trends can help Emeryville prepare for future investments in these areas.

Micromobility systems should include accessible vehicles within their fleets. The City and system operator should conduct targeted outreach to the appropriate stakeholder groups to better define and plan for their specific needs.

The City should also provide dedicated scooter/bike share parking locations. These locations should be found throughout the service area and should be designed and located to minimize disruptions to other people biking, walking, and rolling.

In addition to micromobility vehicle and program design, the development of successful micromobility systems is also dependent on construction and maintenance of safe and comfortable travel facilities. Providing low-stress on- and off-street travel facilities will make traveling by bike or scooter more attractive, which will help convert trips from single occupancy vehicles and improve access to transit services for longer journeys. Comfortable on-street or trail facilities can also reduce instances of users riding on the sidewalk.

The City may consider pursuing a Micromobility Feasibility Study in conjunction with feedback from the community to determine where and how to implement a micromobility program.

Quick-Build Projects

Quick-build is a method to help local governments implement biking, walking, rolling, and micromobility improvements on a minimal budget and on a compressed timeline. Quick-build projects can help meet a community's need for safer crossings, slower streets, an extended bikeway network, or safer routes to transit, schools, and workplaces. Compared to longer-term projects, quick-build projects are flexible and designed to be easily changed or even removed if necessary.

Plans like the *Active Transportation Plan* can help guide potential locations for quick-build projects. Examples of projects that can be implemented as quick-build include separated bikeways, protected intersections, tightened corners at intersections to slow traffic speeds, signal phase changes, slow streets, and traffic calming efforts.

For more information on Quick-Build Guidelines see this document.



IMPLEMENTATION AND FUNDING

Purpose: This chapter outlines a strategy for the implementation of the proposed infrastructure projects as well as the recommended best practices for biking, walking, and rolling programs and policies.

Why it matters: Public resources are limited and the City needs a strategy for assembling funding from internal and external sources.

The adoption of this Active Transportation Plan is the first step in moving projects toward construction and enjoyment by the community. The project delivery process is explained in the graphic on the next page. Implementation of the proposed bicycle and pedestrian programs and improvements described in the previous chapters of the Active Transportation Plan will require public and private funding from a combination of sources. Recommendations in the Active Transportation Plan take their first step toward becoming a reality when the City's Transportation Committee nominates projects to advance. Recommendations then move through the Capital Improvement Program (CIP)

budget process. Once the City secures funding for the recommendation, and staff capacity is available, it will move through the project delivery process (outlined in this chapter). Some recommendations may be implemented opportunistically and integrated into other projects such as street resurfacing or private development projects. Many regional connections will also require coordination with agencies outside the City such as Caltrans, Alameda CTC, the MTC, and AC Transit. To facilitate implementation efforts, this chapter presents the project cost estimates and potential funding sources.

Project Delivery Process

COST ESTIMATES

Estimating the cost of active transportation projects can be quite a complex task. In addition to inflation and fluctuations in the costs of materials and labor, the wide range of project types, existing conditions, and scale of a given project greatly influence final costs. From smaller striping jobs to larger capital-intensive projects that include signals, concrete work, and paving, each project presents its own unique challenges. As such, there is no one-size-fits-all approach to estimating costs. For comparison, the "Doyle Street Shared Street Project" and the "40th Street Multimodal Project" illustrate these variations in project costs.

- ► The "Doyle Street Shared Street Project" was a quick-build pedestrian and bicycle striping project covering 0.18 miles and came to a total cost of approximately \$120,000 in 2023 dollars (\$667,000 per mile).
- The "40th Street Multimodal Project" encompasses pedestrian, bicycle, transit, and signal infrastructure which spans 0.92 miles and is currently estimated to have a total cost of \$15,000,000 in 2023 dollars (\$16,000,000 per mile).

While both of these projects include installing Class IV bicycle lanes, the scale and scope of these comparative projects varies widely, resulting in the 25-fold difference in expenditures.

How a Project Gets Built

PROJECT DELIVERY STEPS



Budgeting



Preliminary Planning & **Engineering**



Conceptual Design



Detailed Design



Construction

The City allocates money in its Capital Improvement Plan for priority projects in the Active Transportation Plan. Additional funds are secured through external sources.

Additional data is reviewed to determine final feasibility of recommendations in the Active Transportation Plan. Modifications are made if necessary.

The City starts the first phases of design with the input of the public, AC Transit, and emergency services providers. The City and completes the Project Approval and **Environmental Document** phase.

The City completes the design with the input of the public, AC Transit, and emergency services providers by producing construction plans, specifications, and cost estimates (PS&E).

The City manages the construction of the project and notifies the public about progress. The City monitors the project for future maintenance needs.





Public input gathered at Budget Advisory Committee and City Council meetings.





Public input collected at Transportation Committee and Bicycle and Pedestrian Advisory Committee (BPAC) Meetings. Other committees and special public meetings may be held for larger projects as needed.





Project delivery updates provided to Transportation Committee, BPAC, and other relevant committees.



Stakeholder coordination with businesses and residents provided through community updates.

Public Input

Public Notification

PUBLIC PARTICIPATION

FUNDING SOURCES

There are a variety of potential funding sources, including local, regional, state, and federal. Emeryville should also take advantage of private contributions in developing the proposed system. This could include requiring development to construct adjacent recommendations as a condition of development approval where there is a nexus of traffic impacts. The funding sources considered most relevant for Emeryville are described below.

Local and Regional Grant Programs

EMERYVILLE CAPITAL IMPROVEMENT PROGRAM

The City's Capital Improvement Program establishes the infrastructure funding plan over a five-year timeframe. The City uses restricted and unrestricted resources to fund capital projects. Restricted funds include developer impact fees, revenues from other agencies/special funds, grants, bond proceeds, and funds provided by the Successor Agency. Unrestricted funds include tax increment revenues. commercial transfer tax revenues. discretionary General Fund, and operating budget program contributions. The Capital Improvement Program Revenue Projection schedule details the available revenues. The 2019-2024 Capital Improvement Program budgets \$2.9 million for pedestrian and bicycle projects.

CONDITIONS OF APPROVAL (COA)

The City, where applicable, typically includes pedestrian and bicycle improvements as conditions of approval on private development projects. Improvements may include new sidewalks, bicycle facilities along the project frontage, intersection improvements to facilitate project site access, bicycle parking, and other amenities. In commercial areas, property owners are required to maintain street trees and sidewalks along their frontage.

PLANNED ROADWAY IMPROVEMENTS

The City receives funding by formula and through competitive grant sources to repave streets, replace signals, or make other improvements. Pedestrian and bicycle improvements can often be included in ongoing roadway projects or planned roadway improvements for a nominal cost. This may include adding curb ramps during a utility reconstruction or marking bicycle lanes or stencils during routine roadway paving projects. The City of Emeryville should continue to review planned roadway projects to determine if there are opportunities for coordination between these planned projects and the pedestrian and bicycle recommendations presented in this Plan.

ALAMEDA COUNTY COMPREHENSIVE INVESTMENT PLAN

The purpose of the Comprehensive Investment Plan is to facilitate strategic programming and allocation of all federal, state, regional, and local fund sources under the Alameda CTC's purview. This includes, but is not limited to, federal Surface Transportation Program/ Congestion Mitigation Air Quality, State Transportation Improvement Program, County Transportation Fund for Clean Air, and local sales tax measures and vehicle registration fee programs. The Comprehensive Investment Plan streamlines the programming of these fund sources by considering all available fund sources through a consolidated process that prioritizes, evaluates, and recommends funding to critical transportation infrastructure and operations needs that build and maintain the county's transportation system. The expenditure

and revenue assumptions included in the Comprehensive Investment Plan are updated annually and proposals for new projects and programs are considered every two years as part of a full Comprehensive Investment Plan update cycle. Funds are programmed by the Alameda CTC.

TRANSPORTATION DEVELOPMENT ACT ARTICLE 3

Transportation Development Act Article 3 (TDA 3) provides funding annually for bicycle and pedestrian projects. Two percent of TDA 3 funds collected within the county are used for TDA 3 projects. MTC policies require that all projects be reviewed by a BPAC or similar body before approval. Funds are programmed by the Alameda CTC.

TRANSPORTATION FUND FOR CLEAN AIR

The Transportation Fund for Clean Air (TFCA) is a local fund source for the Bay Area Air Quality Management District. TFCA funds projects that result in a reduction of motor vehicle emissions. Sixty percent of TFCA funds are awarded by the Air District through the TFCA Regional Fund, and to eligible programs implemented directly by the Air District, referred as Air District-sponsored programs. The remaining 40 percent of this funding is passed through to the designated agencies of the nine Bay Area counties through the County Program Manager Fund and is awarded by these agencies to TFCA-eligible projects located within those counties.

Funds are programmed by the Bay Area Air Quality Management District (Regional Fund) and Alameda CTC (County Program).

State Grant Programs

CALIFORNIA ACTIVE TRANSPORTATION PROGRAM

California's Active Transportation Program (ATP) funds infrastructure and programmatic projects that support the program goals of shifting trips to walking and bicycling, reducing GHG emissions, and improving public health. Competitive application cycles occur every one to two years, typically in the spring or early summer. Eligible projects include construction of bicycling and walking facilities, new or expanded programmatic activities, or projects that include a combination of infrastructure and noninfrastructure components. Typically, no local match is required, though extra points are awarded to applicants who do identify matching funds.

Funds are programmed by the California Transportation Commission.

SUSTAINABLE TRANSPORTATION PLANNING GRANTS

Caltrans Sustainable Transportation
Planning Grants are available to
communities for planning, study, and
design work to identify and evaluate
projects, including conducting outreach or
implementing pilot projects. Communities
are typically required to provide an 11.47
percent local match, but staff time or in-kind
donations are eligible to be used for the
match provided the required documentation
is submitted.

Funds are programmed by Caltrans.

SOLUTIONS FOR CONGESTED

CORRIDORS PROGRAM

Funded by SB1, the Congested Corridors Program strives to reduce congestion in highly traveled and congested roads through performance improvements that balance transportation improvements, community impacts, and environmental benefits. This program can fund a wide array of improvements including bicycle facilities and pedestrian facilities. Eligible projects must be detailed in an approved corridor-focused planning document. These projects must include aspects that benefit all modes of transportation using an array of strategies that can change travel behavior, dedicate right-of-way for bikes and transit, and reduce vehicle miles traveled.

Funds are programmed by the California Transportation Commission.

OFFICE OF TRAFFIC SAFETY

Under the Fixing America's Surface
Transportation Act, 5 percent of Section
405 funds are dedicated to addressing
nonmotorized safety. These funds may be
used for law enforcement training related to
pedestrian and bicycle safety, enforcement
campaigns, and public education and
awareness campaigns.

Funds are programmed by the California Office of Traffic Safety.

RECREATIONAL TRAILS PROGRAM

The Recreational Trails Program helps provide recreational trials for both motorized and nonmotorized trail use. Eligible products include trail maintenance and restoration, trailside and trailhead facilities, equipment for maintenance, new trail construction, and more.

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

AFFORDABLE HOUSING AND SUSTAINABLE COMMUNITIES PROGRAM

The Affordable Housing and Sustainable Communities Program (AHSC) funds land-use, housing, transportation, and land preservation projects that support infill and compact development that reduces GHG emissions. AHSC is typically applied for by affordable housing developers with the City as a partner. Projects must fall within one of three project area types: transit-oriented development, integrated connectivity project, or rural innovation project areas. Fundable activities include affordable housing developments, sustainable transportation infrastructure, transportation-related amenities, and program costs.

Funds are programmed by the Strategic Growth Council and implemented by the Department of Housing and Community Development.

URBAN GREENING GRANTS

Urban Greening Grants support the development of green infrastructure projects that reduce GHG emissions and provide multiple benefits. Projects must include one of three criteria, most relevantly: reduce commute vehicle miles traveled by constructing bicycle paths, bicycle lanes, or pedestrian facilities that provide safe routes for travel between residences, workplaces, commercial centers, and schools. Eligible projects include green streets and alleyways and nonmotorized urban trails that provide safe routes for travel between residences, workplaces, commercial centers, and schools.

Funds are programmed by the California Natural Resources Agency.

STATEWIDE PARK PROGRAM (SPP)

The Statewide Park Program solicits competitive grants to fund new parks and recreation opportunities in critically underserved communities across California. Funds can be used to create and expand or renovate existing parks. All projects must include at least one "recreation feature" which includes nonmotorized trails. No match is required.

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

Other State Programs

SENATE BILL 1: LOCAL PARTNERSHIP PROGRAM

This program provides local and regional agencies that have passed sales tax measures, developer fees, or other transportation-imposed fees to fund road maintenance and rehabilitation. sound walls, and other transportation improvement projects. Jurisdictions with these taxes or fees are then eligible for a formulaic annual distribution of no less than \$100,000. These jurisdictions are also eligible for a competitive grant program. Local Partnership Program funds can be used for a wide variety of transportation purposes including roadway rehabilitation and construction, transit capital and infrastructure, bicycle and pedestrian improvements, and green infrastructure.

Funds are programmed by California Transportation Commission.

SENATE BILL 1: ROAD MAINTENANCE AND REHABILITATION PROGRAM

Senate Bill 1 created the Road
Maintenance and Rehabilitation Program
to address deferred maintenance on
state highways and local road systems.
Program funds can be spent on both
design and construction efforts. On-street
active transportation-related maintenance
projects are eligible if program maintenance
and other thresholds are met. Funds are
allocated to eligible jurisdictions.

Funds are programmed by the State Controller's Office.

