CALTRANS BAY AREA
TRANSIT PLAN

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TRANSPORTATION MANAGEMENT & DESIGN, INC.

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Caltrans

FINAL REPORT

SEPTEMBER 2025

CALTRANS BAY AREA

TRANSIT PLAN

Director's Message

Caltrans Bay Area is pleased to launch the first District Transit Plan of its kind in the state – a pioneering effort in regional transit planning. The Caltrans **Bay Area Transit Plan** *for District 4, encompasses the nine Bay Area Counties of Alameda, Contra Costa, Napa, Marin, San Francisco, Santa Clara, San Mateo, Solano, and Sonoma.*

This Plan builds on the success of our previous modal plans—including the 2018 Caltrans District 4 Bike Plan and the 2021 Caltrans District 4 Pedestrian Plan—by identifying opportunities to strengthen public transit in District 4 while advancing Caltrans core principles of safety, equity, climate action, and prosperity.

This Transit Plan arrives at a pivotal moment for transit in the Bay Area. Public transit strives to be one of the safest, most efficient, and sustainable forms of transportation, providing vital access for millions of Californians while benefiting all travelers, including those who drive. The COVID- 19 pandemic placed significant strains on transit and exposed long-standing vulnerabilities and inequities in our transportation networks. As we recover and reassess priorities, we have an opportunity to apply our core principles and invest in an equitable, efficient, and resilient system.

I am proud of the progress being made in the region and State to prioritize transit. Caltrans is committed to unlocking the full potential of transit by investing in and leveraging the State Transportation Network to support transit and improve the experience for riders. This Plan supports the Director's Policy for Public Transit and is informed by several initiatives, including the Metropolitan Transportation Commission's Bay Area Transit Transformation Action Plan and Transit 2050+, as well as the California State Transportation Agency's Transit Transformation Task Force.

This Plan was accomplished through collaboration with Bay Area transit agencies, local and regional transportation partners, and the public. I would like to thank all who contributed, and a special thanks to the Metropolitan Transportation Commission and members of the *Caltrans Bay Area Transit Plan* Technical Advisory Committee.

We look forward to moving this Plan forward and working together with our partners and the community to help create a thriving and connected Bay Area.

Dina El-Tawansy
District 4 Director

Definitions and Notes

Following are definitions of frequently used terms throughout this document.

Bus Rapid Transit

A highly improved Bus Corridor providing some of the features of rail transit along busier routes, while also having the flexibility of buses. BRT is a combination of facility, system, and vehicle investments that increase the efficiency and effectiveness of the service to the end user. Appropriate and effective BRT implementation improves system performance, increases transit ridership, and improves air quality.

CalEnviroScreen

Currently in its fourth version, CalEnviroScreen includes an online mapping tool, a supplemental race analysis, and related documents. It analyzes data on environmental, public health, and socioeconomic conditions in California's 8,000 census tracts to provide a clear picture of cumulative pollution burdens and vulnerabilities in communities throughout the state.

Complete Streets

A complete street is a transportation facility that is planned, designed, constructed, operated, and maintained to provide comfortable and convenient mobility, and improve accessibility and connectivity to essential community destinations for all users, regardless of whether they are traveling as pedestrians, bicyclists, public transportation riders, or drivers.

Equity Priority Communities (EPCs)

Equity Priority Communities are census tracts that have a significant concentration of underserved populations, such as households with low incomes and people of color. A combination of additional factors helps define these areas. The EPC framework developed by the Metropolitan Transportation Commission (MTC) helps make decisions on investments that meaningfully reverse the disparities in access to transportation, housing and other community services.

First/Last Mile:

"First mile/last mile" highlights the method a transit rider uses to get to and from the nearest transit station or stop, usually by walking, biking, driving, or other mode (for example, from the user's home to the closest stop).

Frequent Service Stop

A transit stop that is served every 15 minutes or better.

High-Quality Transit Corridor

A corridor with fixed route bus service with service every 15 minutes or better during peak commute hours.

Microtransit

Microtransit offers riders an on-demand option that provides more flexibility than either fixed-route transit or by-appointment paratransit services.

Micromobility

Micromobility refers to small and lightweight vehicles. This includes human and electric-powered scooters, bicycles, skateboards, rickshaws, and cargo bikes.

DEFINITIONS AND NOTES (CONTINUED)

Mobility Hub

Places in a community that bring together public transit, bike share, car share, and other ways for people to get where they want to go without a private vehicle. Built around frequent and high-capacity transit, mobility hubs offer a safe, comfortable, convenient, and accessible space to seamlessly transfer from one type of transportation to another. For more information, refer to section 2.B.3 of the Complete Streets Transit Toolbox

State Transportation Network (STN)

Refers to the State Highway System and all other multimodal facilities owned and operated by Caltrans. This includes parallel paths, frontage roads, ramps, and other facilities not directly on a mainline of the State Highway System.

Public Transit

Generally refers to passenger service provided to the general public with fixed or variable schedules and routes at published fares.

Transit Stop

A location where transit vehicles stop to board and alight unload passengers. Transit stops can range from a neighborhood bus stop to a transfer center and rail station.

Transit Access Facilities

Transit access facilities are infrastructure treatments or facilities that improve the transit experience and the ease of use for people walking, biking, scooting, accessing microtransit, ride-hailing, ride-sharing, or using other travel modes to get to and from transit stops. Examples include accessibility features for people with disabilities and limited mobility; mobility hubs; safety enhancements at intersections, such as improved crosswalks, leading pedestrian intervals (LPIs), and crossing beacons; bicycle and micromobility parking facilities; pick-up and drop-off areas for microtransit, paratransit, ride-hailing, or ride-sharing; bus stop amenities, such as shelters, shade, seating, lighting, platforms, real-time next-bus arrival information screens, interactive kiosks, mobile phone charging stations, and emergency response buttons; and wayfinding.

Transit Priority Facilities

Transit priority facilities facilitate faster, more reliable transit, increasing person throughput on state highways by making transit more efficient and attracting a higher mode share. Some of these elements may include dedicated transit lanes (bus-only lanes); bus on shoulder; transit signal prioritization; managed lanes that support transit (high-occupancy vehicle lanes, express lanes, reversible lanes); queue jump lanes; or intersection treatments.

Transit-Supportive Facilities

Transit-supportive facilities are infrastructure treatments and elements that include both transit access and transit priority facilities

Acknowledgments

We are grateful for the invaluable insights that our regional partners have contributed to help shape this plan. They have guided us toward creating a plan that reflects our diverse communities' needs and preferences. We would like to acknowledge the contributions of the following organizations and individuals to this plan:

Technical Advisory Committee

Colin Dentel-Post & Shannon McCarthy, *Alameda County Transportation Commission*

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CHAPTER

01 Introduction

Introduction

The ***Caltrans Bay Area Transit Plan*** *is the first of its kind in the State of California and has been developed in coordination with transit agencies, regional partners, and local residents to identify deficiencies and potential improvements to increase transit reliability and access, and encourage more transit use along the State Transportation Network (STN) in the Bay Area.*

Caltrans Bay Area (District 4) developed this plan to serve as a complement to its existing ***Bicycle*** and ***Pedestrian*** plans and a regional tool to help meet State climate, health, equity, and environmental goals.

Source: VTA

Project Purpose

Caltrans Bay Area supports enhanced transit service on the STN (Figure 1) through coordination, collaboration, and partnerships with the Metropolitan Transportation Commission (MTC), transit agencies, county transportation authorities, local governments, Tribes, community-based organizations, and other local and regional stakeholders, in accordance with the Caltrans Director's Policy for Public Transit (in development).

Improvements along the STN will focus on increasing access to opportunities for transit-dependent populations, encourage people to make more trips via transit, and enhance the quality of life for residents and visitors of the nine-county Bay Area region by offering a more equitable, user-friendly, safe, healthy, resilient, and sustainable transportation system.

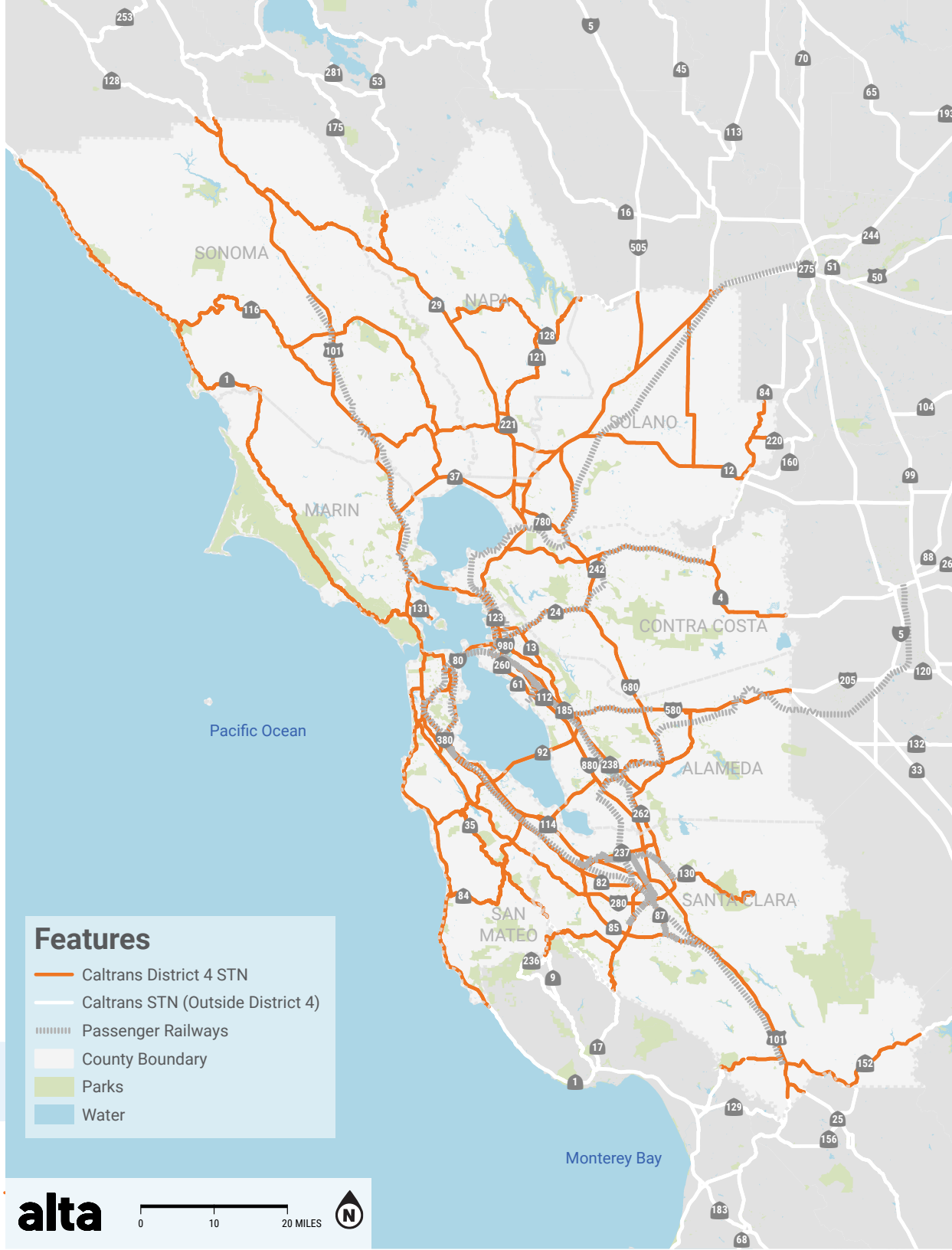


Figure 1. Caltrans Bay Area State Transportation Network

Overview

This plan provides a systematic assessment of transit facilities and services along the STN to understand where focused investments may benefit transit services along Caltrans right-of-way (ROW). While local and regional planning efforts focusing on transit reliability are underway, the STN is underutilized from a transit perspective, but presents a key opportunity to connecting local and regional transit, making transit more accessible, and improving the travel experience of transit riders. As such, this plan provides a toolbox of best practices and common standards on *transit priority* and *transit access* facilities for Caltrans and local partners to consider and leverage to increase access and reliability of transit in the Bay Area.

To clearly present the findings of this plan, its contents are organized into the following core elements:

Inventory of existing transit-supportive facilities on the STN.

District-level goals, objectives, and performance measures for transit-supportive facilities, with an emphasis on equity.

Toolbox of best practices, common standards, and types of transit-supportive facilities to consider on the STN or at Caltrans facilities (building off the Complete Streets Elements Toolbox).

Source: San Francisco Bay Ferry

Strategies and actions for Caltrans Bay Area to adopt to promote and streamline transit-supportive facilities, including transit access and transit priority facilities.

These elements were informed by a robust public and stakeholder engagement process, which included oversight by a technical advisory committee (TAC), direct stakeholder engagement, and various community outreach activities.

Chapter Organization

*This plan has been organized into **six distinct chapters**:*

CHAPTER 1

Introduction

Provides an overview and describes the purpose of the plan.

CHAPTER 2

Transit in the Bay Area Today

Provides updates on regional transit efforts in the Bay Area including transit-supportive facilities along the STN. This chapter also presents best practices for transit facilities throughout the Bay Area and beyond.

CHAPTER 3

Goals, Objectives, and Performance Measures

Provides a summary of the project vision, goals, objectives, and performance measures.

CHAPTER 4

Public and Stakeholder Outreach

Summarizes the comprehensive public and stakeholder outreach that was conducted to understand community needs and stakeholder feedback about transit project implementation along the STN in the local and state context.

CHAPTER 5

Complete Streets Transit Toolbox

Identifies a toolbox of best practices, common standards, and types of transit-supportive facilities to consider on the STN or throughout Caltrans facilities.

CHAPTER 6

Next Steps

Provides strategies for Caltrans Bay Area and regional partners to adopt to promote and streamline supportive facilities, including transit access and transit priority facilities.

Appendices

A set of appendices have also been included to provide additional context on the project and its findings.

CHAPTER

02 Transit in the Bay Area Today

Transit in the Bay Area Today

This chapter describes the review of existing Caltrans, regional, and local policies and plans to provide guidance for improving transit-supportive facilities in the Bay Area.

Best Practices in the Bay Area (and Beyond)

The project team conducted a review of best practices to better inform improved transit implementation along the STN. This included documents from the Federal Transit Administration (FTA), academic institutions, transit-associated think tanks, and regional and local agencies outside the Bay Area. This review provided a foundation for the development of the transit facility toolbox included in Chapter 5 of this plan.

For the full review, including individual summaries of documents with individual recommendations and key takeaways, see the Appendix 1 - Best Practices Literature Review. In no order of importance, a summary of the key takeaways from that review are provided on the following pages.

Source: Golden Gate Transit

TAKEAWAY

Transit as a Public Service

Public transit is a core community service, and has widespread support in public policies, particularly those related to equity and climate change. This is because transit is closely linked to improving access and resilience for a region's population. When public transit is treated as a business, and is expected to achieve profitability, it contradicts a range of goals, resolutions, and overarching policies aimed at reducing congestion, minimizing environmental impacts, and managing growth sustainably. In the Bay Area, public transit is essential to achieving the region's climate and equity goals, and it must be made accessible to everyone.

TAKEAWAY

Ensuring Equity in Transit

Equity must be considered in all aspects of transportation planning and funding. Transit-dependent populations often face multiple interconnected barriers to mobility and access to economic opportunities. For example, TransitCenter's *Equity in Practice: A Guidebook for Transit Agencies* explores how transit agencies often describe their mission in terms of operating safe and efficient service, but don't consider how agencies can optimize their service to help people who have been marginalized thrive. To break the cycle of marginalization, agencies must engage more deeply with the communities they serve and collect information about how people use, or are unable to use, their services. They must then structure themselves to deliver transit improvements that advance equity.

Source: LATVA

Ashland bus boarding island (Source: AC Transit).

TAKEAWAY

Transit-Oriented Streets for Everyone

By incorporating design elements and amenities that enhance safety, boost commercial activity, and increase vibrancy, transit-oriented streets support local businesses, pedestrians, people riding bicycles, people using strollers and wheelchairs, and drivers who also need safer access. Additionally, ensuring accessibility for people of all ages and abilities improves overall safety and accessibility for older adults and people with disabilities. The benefits of transit-oriented street design, first- and last-mile amenities, and a contextual approach are well documented, providing advantages for everyone, regardless of how they move around and access their community.

TAKEAWAY

Policy Alignment and the Importance of Strong Leadership

Strong leadership and collaboration among stakeholders are essential for the success of transit projects. To effectively incorporate transit-supportive design, overall service improvements, and equity, it is crucial to foster collaboration among leaders and decision makers. The idea of leaders encouraging a sense of ownership among stakeholders, which in turn generates broad public support, is explored in the *Southern California Association of Governments (SCAG) Transit Priority Best Practices – Regional Dedicated Lanes Study* and *TransitCenter's Equity in Practice: A Guidebook for Transit Agencies*. Additionally, leaders must recognize that transit works best when local policies support the transit network, such as through zoning regulations and parking pricing policies, which help advance transit improvements and create a policy environment that supports and enables these changes.

TAKEAWAY

Funding and Interrelated Impacts

Holistic impacts should be assessed to ensure seamless connectivity between providers. For example, to address transit delays caused by road conditions, regional and state funding programs should encourage local jurisdictions to collaborate on improving roads that could best improve transit efficiency. There are broader systemwide benefits to other individual improvements as well, such as enhancing intermodal connectivity and the overall user experience. Agencies and funders should take these benefits into account when prioritizing investments in transit-supportive projects, including collaborating with partner agencies on improvements to network segments they do not directly control.

TAKEAWAY

Tailored Approaches

There are multiple routes to success in transit prioritization, depending on roadway design, location, and local, regional, and state goals. Given the interrelated impacts of service improvements, decision makers must also acknowledge that transit prioritization cannot be a one-size-fits-all approach. The National Association of City Transportation Officials (NACTO) Transit Street Design Guide and the National Academies of Science Transit Cooperative Research Program (TCRP) Prioritization of Public Transit Investments outline key principles and options for transit improvements that should be part of Caltrans' transit facility toolbox. To this end, separate programs are likely needed to support both coordinated transit corridor investments (e.g., bus lanes, transit signal priority [TSP], and arterial high-occupancy vehicle [HOV] lanes) and quick-build solutions for hotspots where transit delays are persistent.

Source: SFMTA

TAKEAWAY

The *Caltrans Bay Area Transit Plan* Is Unique

These findings demonstrate that the *Caltrans Bay Area Transit Plan* is the first of its kind. Based on this review, no state department of transportation or multi-regional governing agency has developed a similar comprehensive, region-wide plan or set of standards. While many agencies, organizations, and cities have developed plans, standards, and best practices for transit expansion and improvement, most of these guidelines are high-level and cannot be directly compared to the efforts of Caltrans Bay Area.

Source: VTA

Regional Efforts in the Bay Area

The development of this plan also included a review of local and regional documents focusing on transit development and related policies. The documents reviewed include a mix of operating and infrastructure studies, many of which detail local area transit and infrastructure improvements, including state-specific projects to improve access to transit, local area guidelines for transit infrastructure, and transit access policies. Some of the plans were more regional in scope and provided strategic direction, while others were more targeted toward geographically smaller areas in specific counties or cities within the Bay Area.

The document review was used to establish an understanding of relevant policies regarding transit-supportive facilities and transit equity in the Caltrans Bay Area region. This review also helped establish a new framework for the development of regional goals, objectives, and performance measures for implementing transit-supportive policies and infrastructure in the Bay Area. The outcomes of the review also served as the primary inputs into the Complete Streets Transit toolbox for transit infrastructure improvements, which is included in Chapter 5.

Particularly relevant documents reviewed included the *Caltrans Complete Streets Elements Toolbox 3.0.1*, which serves as a living document reflecting adopted statewide Caltrans' guidance and new elements appropriate for use along the STN, including transit-supportive facilities. *The Caltrans SB 743 Program Mitigation Playbook (2022)*, was another important document reviewed and provided guidance on how policies that reduce transportation impacts are measured, including how improvements to existing and new transit service can offset vehicle miles traveled (VMT). A full list of the reviewed documents can be found in Appendix 2 - Policy and Plans Context Memo.

The following is a high-level summary of findings from the review of local and regional plans regarding transit-supportive infrastructure planning and discussions of equity.

Source: Golden Gate Transit

Note: At the time of the development of this document, several relevant regional studies/ plans were under development, and as such their findings were not included in this plan. To the degree possible, however, coordination between these major initiatives and the findings of this plan was taken. These include the MTC Transit 2050+, MTC Regional Transit Assessment, MTC Bay Area Transit Priority Policy for Roadways, and the MTC Forward Commute Initiative.

Shared Vision

Improving transit service and using the Caltrans network to support regional transit service, is consistent with Caltrans and the statewide goals and visions on equity, climate change, environmental impacts, access, and travel behavior change. This is highlighted in various Caltrans produced documents such as the *Caltrans 2024-2028 Strategic Plan*, *Caltrans District 4 Adaptation Priorities Report*, *Caltrans Climate Action Plan for Transportation Infrastructure (CAPTI)*, *Caltrans California State Transportation Plan 2050*, and others.

Agency Coordination

Transit agencies have already identified a robust list of improvements and physical treatments along various STN and non-STN roadways that can be implemented to speed up buses and improve reliability. Intrinsic to implementing these treatments as well as improving system reliability, is the need for Caltrans to play a more active role in serving as a regional conduit, to improved coordination with agencies and communities to identify physical treatments that are effective and supportive of city, county, transit agency, and community goals.

Source: LAVTA

Reliability and Equity

Reliability is the most important aspect of transit service. Projects that improve the speed and frequency of transit service make transit more competitive with single-occupancy vehicle travel. This will encourage greater use of transit, further generating demand for more expanded service and better-connected networks. Additionally, faster, more frequent transit improves equity outcomes, particularly when improvements span Equity Priority Communities (EPCs) and other historically underrepresented populations. These equity impacts are presented in *MTC's Transit Transformation Action Plan*, *AC Transit's Major Corridors Study*, *C/CAG San Mateo County Equity Assessment, Framework, and Action Plan*, and other plans.

Intermodal Connections

Intermodal connections, specifically to local and regional bicycle and pedestrian networks, are important for access to transit service. This includes access to stops and stations for people walking, biking, and rolling (e.g., wheeled mobility devices used by people with disabilities, strollers, scooters, and skateboards). Knit together with a good active transportation network, improvements to major transit stations and park and rides should be improved to develop mobility hubs that facilitate more intuitive multimodal connections. This is presented in the *Caltrans D4 Pedestrian Plan*, the *AC Transit Multimodal Corridor Guidelines*, and *Pedestrian Access to Transit*.

Source: VTA

Streamlining

The Caltrans review processes and specifications for implementing agency-identified roadway improvements should be streamlined to help with the approval process of transit projects throughout the Bay Area and more specifically along the STN. These specifications would hasten the implementation of improvements that agencies have already identified and improve reliability.

Seamless Transit

Providing improved connections to and between transit networks will be important so that regional travel is not constrained by transit district boundaries. Connectivity can depend on coordinated timetables, comfortable transfer points, and coordinated marketing.

Bus Stops as Gateways

Bus stops serve as the gateways to transit systems. Transit riders are particularly sensitive to time spent waiting for transit as compared to time spent on transit. This underscores how inconvenient, uncomfortable, or unpleasant waiting areas are a significant barrier to transit use, particularly is it pertains to accessibility. These stops are not the same as larger transit hubs, but are instead those points closest to home, work, and other destinations. A person's ability to safely, comfortably, and quickly access these stops will often determine if they will even consider a trip via transit.

Source: VTA

Transit Facilities in the Bay Area

High-quality transit networks with connections for people walking and biking are important elements of an integrated, intermodal transportation system. Understanding where local needs, priorities, and proposed improvements currently exist was essential to the development of this plan. This section provides a review of the demographics of likely transit riders, local origins and destinations that generate trips, and an inventory of existing transit services and transit-supportive facilities along and near the STN.

The inventory of transit facilities included in this section was developed from data collected from MTC, as well as public transit agencies throughout the Bay Area. These data sets were complemented by publicly available data from the US Census and OpenStreetMap. While some transit agencies collected and shared comprehensive sets of data on transit access and transit priority facilities as well as ridership, existing staff capacity limited how much data was collected and shared with the project team. Data related to locations of known bottlenecks, microtransit zones, future route alignments, and transit priority facilities was limited. Similarly, the project team obtained limited tabular data on route- and stop-level ridership and station or stop amenities. The findings included in this section, therefore, do not provide an exhaustive analysis of existing infrastructure due to the limits in the data collected and shared by transit agencies. This project recommends additional data collection at the regional level to help understand transit service changes throughout the nine-county Bay Area.

Source: NVTA

Some findings included in this report may differ from those included in Appendices which were completed during earlier phases of the project.

Demographics

Comprising this demographic overview are the 7.7 million people who live in the nine-county region. While the service area for this project was defined as all locations within a quarter mile of STN roadways, the project team reviewed demographic data for all Bay Area residents with the understanding that transit users may live anywhere in the region but only travel through the STN, and not necessarily visit destinations along or close to the STN.

Equity Populations

The project team reviewed available sources of data to better understand where underserved and vulnerable communities are throughout the Bay Area: CalEnviroScreen Disadvantaged Communities (DAC) and MTC Equity Priority Communities (EPCs). As noted in **Figure 2**, these communities are most concentrated along I 880, SR 185, and Mission Boulevard in Alameda County; the I 80 and SR 4 corridor in Contra Costa County, US 101 in Santa Clara County, and SR 12 in Solano County.

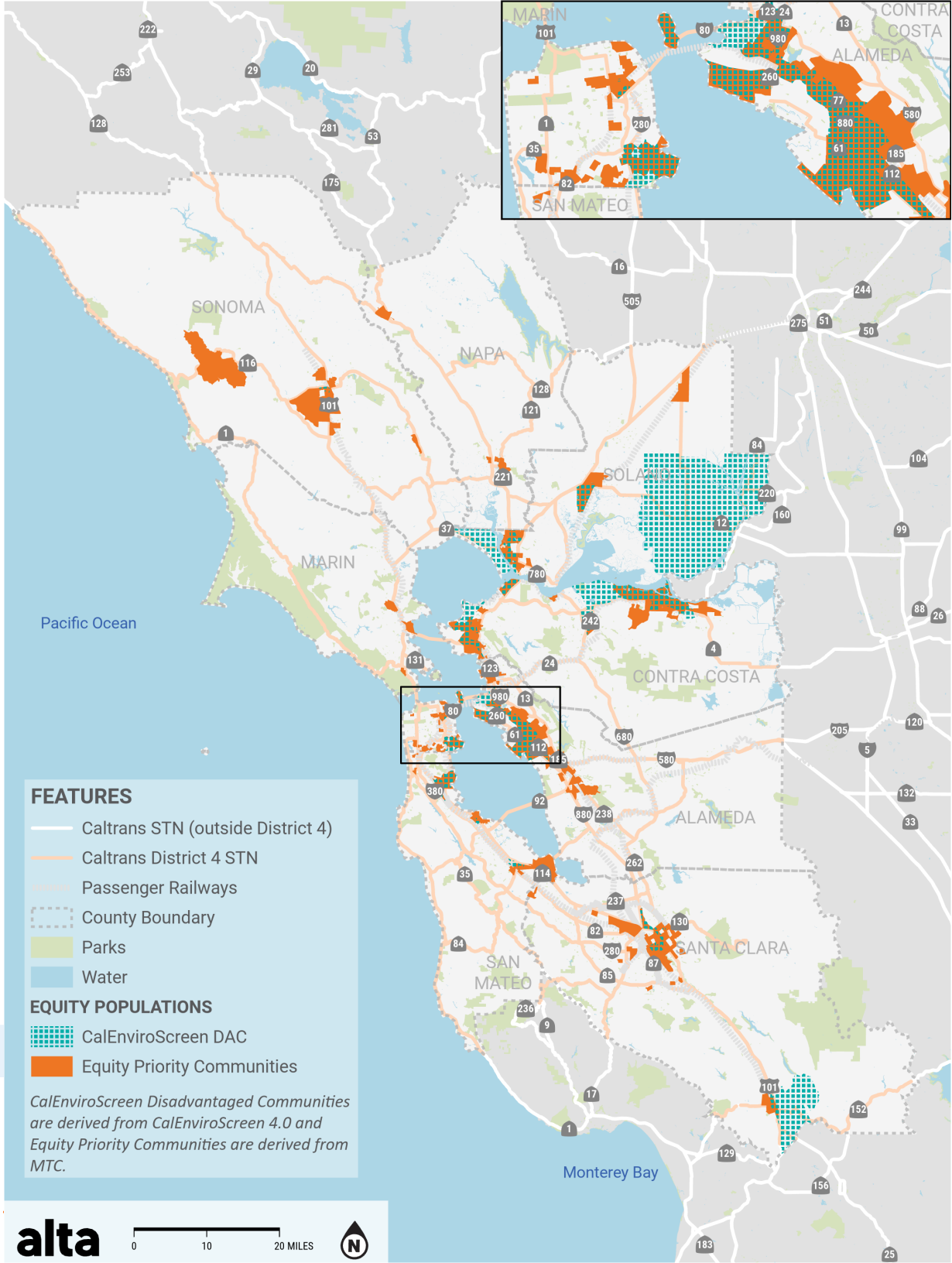


Figure 2. Equity Populations

Age

Overall, people under 18, young adults (18 to 24 years of age) and seniors (65+) tend to use transit at higher rates. Concord, Fremont, and Livermore have the highest concentrations of children under 18, while young adults are clustered around university/college campuses in Berkeley, Hayward (Alameda County), City of Napa, Palo Alto, San José and Santa Clara (Santa Clara County), San Francisco City and County. The Caltrans service area has several concentrations of seniors, with over 20% in Sonoma, Marin, and western portions of Santa Clara county.

Communities Relying Heavily on Transit

Areas with high numbers of likely transit riders are generally located in urban areas or near major universities within the Bay Area. As outlined in the Appendix 1 - Best Practices Literature Review, the populations most likely to use transit include zero-car households, low-income residents, youth (under 18), young adults (ages 18 to 24), and seniors (ages 65+).[1] This analysis highlighted that likely transit riders tend to be centered in western Alameda, San Francisco, and northern Santa Clara Counties, with several smaller pockets of likely riders in each of the other counties as well. Zero-car households are concentrated in Alameda (primarily in Oakland) and San Francisco Counties, as well as surrounding the campuses of the University of California – Berkeley in Alameda County and Stanford University in Santa Clara County.

Source: NVTA

These demographic trends provide essential context for where transit service may be most impactful. By considering the age, vulnerability based on location within EPCs, and clusters of zero-car households, along with existing transit services and amenities, existing gaps in the transit network may be more effectively identified. Furthermore, the Caltrans Transportation Equity Index (EQI) utilizes an Access to Destinations screen to assess where low income and/or tribal communities have the greatest gaps in access to destinations by transit. Access to Destination is another tool to identify where transit infrastructure may be most impactful.

1 *https://www.apta.com/wp-content/uploads/Resources/resources/reportsandpublications/Documents/APTA-Who-Rides-Public-Transportation-2017.pdf*

TRANSIT GENERATORS

The Bay Area is home to a wealth of destinations that attract people from throughout the region, including via transit. The project team completed an evaluation of existing service and identified potential gaps in service. The team considered origins and destinations as overall trip generators as well as transit trip generators. These locations included large employment clusters, hospitals, supermarkets, shopping malls, colleges, and universities, as well as other areas of high population density. Generally, the city and county of San Francisco and other large cities, such as Oakland in Alameda County and San José in Santa Clara County, are home to major employment centers and other regional destinations that tend to generate transit ridership. It is important to note that employment clusters also tend to be along the key corridors of the STN and concentrated in downtown districts or near major universities. Destinations along US 101 in San Francisco, Marin, and Sonoma Counties also drive transit activity, with several clusters of employment and community-serving businesses and institutions. I 880 in the East Bay, as well as SR 82 and SR 85 connecting cities in Silicon Valley, are also rich with destinations that have the potential to generate transit trips. Figure 3 shows these clusters of employment density in more detail. A more complete analysis of trip generators can be found in Appendix 3 - Transit-Supportive Infrastructure Inventory.

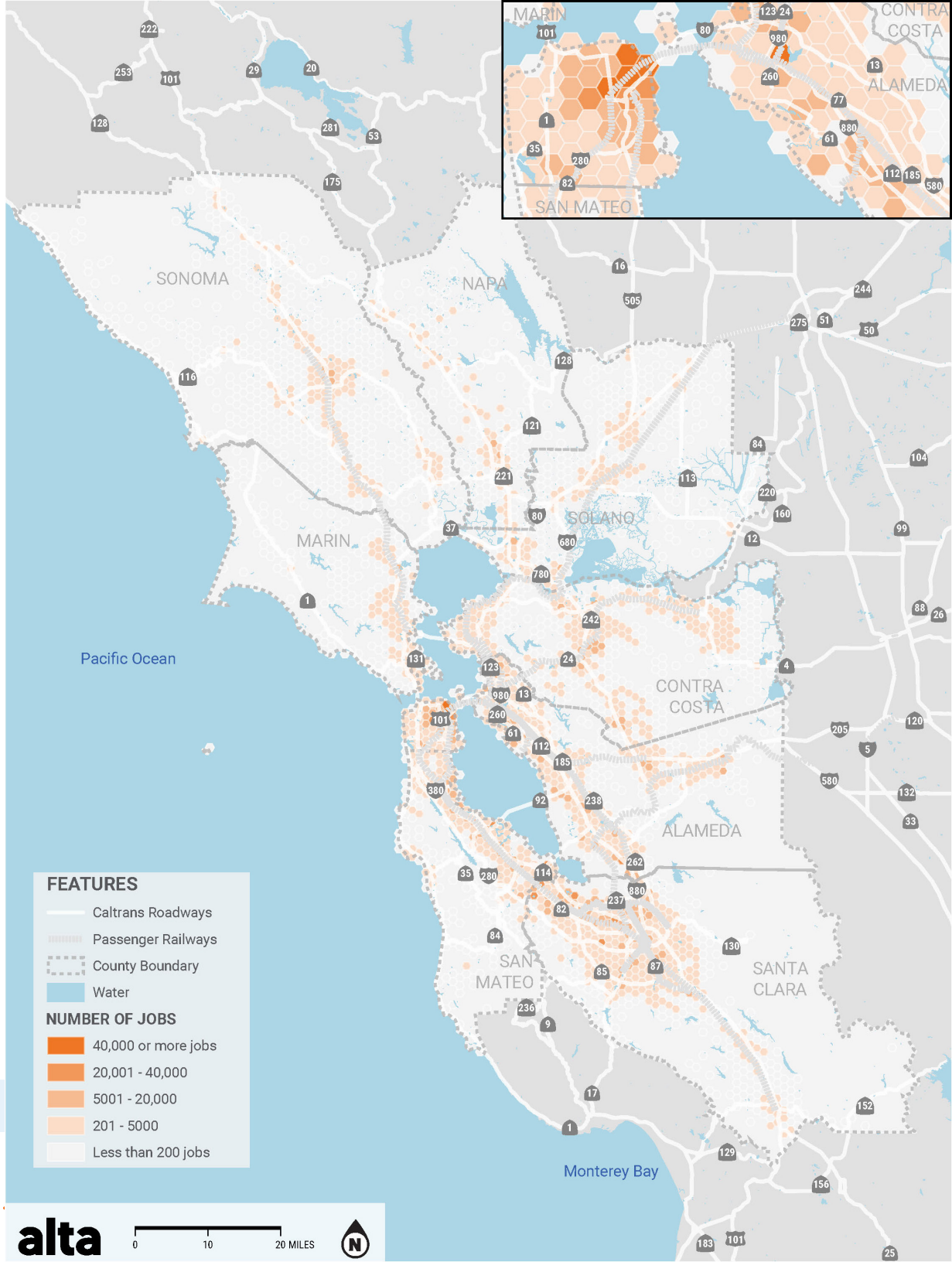


Figure 3. Employment Density

TRANSIT SERVICE AND INFRASTRUCTURE

The Bay Area is served by 27 public transit agencies and over 20 other operators providing transit service available to the public, including shuttles like the MVgo Shuttle in Mountain View, the Oakland Alameda Water Shuttle, and more. Transit service is most robust in San Francisco and Alameda Counties, as well as portions of western Contra Costa and north Santa Clara counties, where the largest regional destinations are located. However, gaps in service or frequency exist that prevent transit travel from and to certain areas or longer travel times, leading travelers to single-occupancy vehicles or rideshare transportation. Understanding the transportation options available to the public, as well as what environmental elements exist to support them, was key to evaluating system gaps where future service could be expanded or improved. As defined below, these services and infrastructure are categorized into two main groups:

- **Transit priority facilities (TPF)** consists of on-street facilities that help transit be faster, more reliable, and consequently more attractive for people. Some examples include dedicated transit lanes (bus-only lanes), transit signal prioritization, and managed lanes (HOV lanes, express lanes, reversible lanes) among others.
- **Transit access facilities (TAF)** includes treatments or projects that make it easier for people to get to and from transit stops and stations. Some of these improvements include designated pick-up and drop-off areas for microtransit, safety enhancements at intersections, first- and last-mile improvements for walking and biking, micromobility (e.g., bikeshare), and bike parking facilities.

Source: NVTA

AC Transit's International Boulevard Tempo Bus Rapid Transit Service, a Form of TPF (source: Caltrans).

TRANSIT PRIORITY FACILITIES

District 4 is well covered by transit, with the most robust service in San Francisco, Alameda, Contra Costa, and Santa Clara Counties, as previously noted. Local services are primarily focused on serving major cities in these counties, connecting BART stations to surrounding destinations and employment clusters. There are services that are geared to major corridors providing regular all-day service along a corridor. Transbay service connects East-Bay residential communities and job centers in San Francisco and along the Peninsula. Intercity, commuter rail, diesel multiple unit (DMU) rail, heavy metro rail, and light rail services provide a higher speed and higher capacity connection between communities as well as within communities.

Downtown San Francisco has the most frequent rail and bus service with train service every three minutes and bus service every five minutes, on average. This area is where multiple transit lines converge along a small number of streets and rail corridors. In suburban San Mateo and Sonoma counties, routes along SR 1 and SR 116 offer regular 30-minute or better service, with higher frequencies during peak morning and afternoon commute periods. SR 29 in Napa County offers the most frequent service among rural areas. It is important to highlight that currently there are gaps in frequent public transit service connecting San Mateo and Alameda County making it difficult for people living and working in each county to connect to jobs and services in the other county. Higher frequency services tend to have higher ridership as experienced in many of the urban areas within District 4.

The most common form of TPF in the Bay Area is Transit Signal Priority (TSP) systems which gives priority to transit vehicles at traffic signals. As noted in Figure 4, the most robust networks of TSP are in the more urban parts of District 4. Transit vehicles also benefit from access to HOV/express lanes on freeways throughout District 4, although it's unclear how significantly this TPF impacts transit service delivery since transit vehicles must compete with private vehicles. Other forms of TPF include queue jumps, which allow buses to bypass traffic at intersections, as well as bus-only lanes, managed lanes accessible to transit vehicles, and HOV bypass lanes at freeway on-ramps. Across the Caltrans service area, HOV lanes used by buses are a common form of TPF. In contrast, bus-only lanes are less common, with such lanes reported only in the AC Transit and San Francisco Municipal Transportation Agency districts. A significant gap in TPF exists at the nexus of transit routes with high ridership that use corridors without dedicated bus-only lanes. The four corridors with the highest transit ridership without any TPF are listed below.

- **Ashby Avenue, Berkeley** (Alameda County)
- **East 14th Street, San Leandro** (Alameda County)
- **Sloat Boulevard, San Francisco** (San Francisco County)
- **Thornton Avenue, Fremont** (Alameda County)

Additional findings identified several corridors that

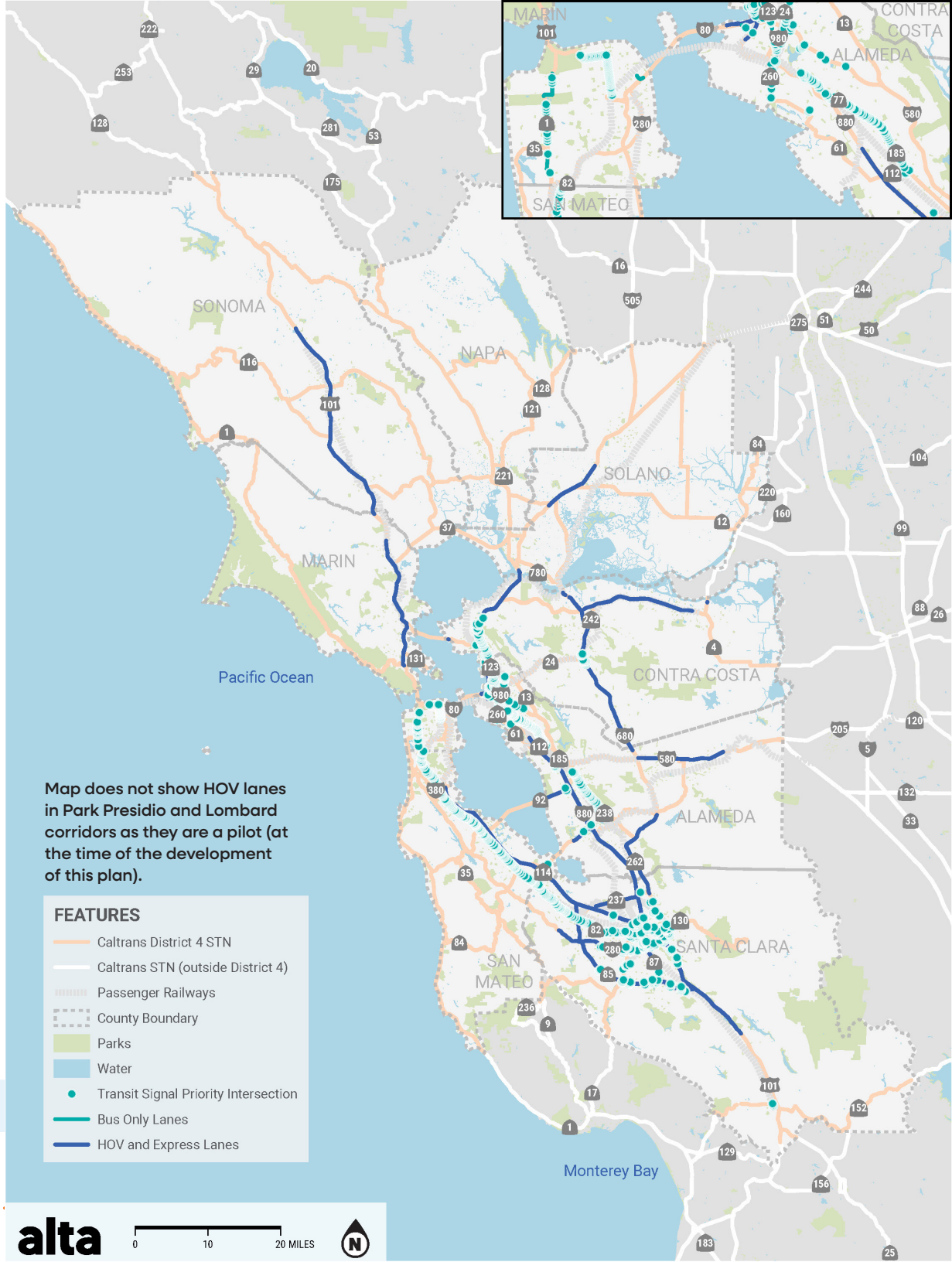


Figure 4. **Transit Priority Facilities**

SamTrans Route ECR operating on El Camino Real (SR 82) (source: SamTrans).

exhibit bottlenecks and could benefit from enhanced TPF. One example is that, SamTrans reported bottlenecks along El Camino Real, despite a high prevalence of TSP there. San Pablo Avenue (CA 123) in Alameda and Contra Costa counties was also highlighted as a corridor with bottlenecks. The Richmond-San Rafael, and Bay Bridges were also identified as areas that could benefit from TPF, along with segments of US 101 and I 280 in San Francisco.

NOTE: The findings in this section are based on limited data shared by MTC and regional transit agencies. This included limited tabular data on route- and stop-level ridership and station or stop amenities. The findings therefore, do not provide an exhaustive analysis of existing infrastructure. The Transit Plan team recommends additional data collection at the regional and state level to help develop a more complete picture of the various transit services offered throughout the Bay Area.

Portions of separated bikeway along San Pablo Avenue (SR 123) in Albany, a form of transit access facilities (source: Caltrans).

TRANSIT ACCESS FACILITIES

Transit access facilities (TAF) may also be referred to as first- and last-mile facilities. These can include existing bicycle friendly infrastructure (e.g., separated bike lanes), as well as shared-use facilities like trails and sidewalks. Other TAF include bike share and microtransit services, and bus stop amenities, like benches and garbage cans, bicycle storage, and lighting. Mobility hubs were also considered as part of the Bay Area's TAF.

District 4 is well served by pedestrian and bicycle infrastructure. In many cases, existing facilities provide comfortable connections to transit along the STN. For example, the Bay Trail and SMART trails are located near Caltrans-maintained roadways and provide connections to many transit stations. Most transit stops along the STN are proximate to some level of bicycle and pedestrian infrastructure. Given the robust transit network in the Bay Area, there are many locations where transfers can be made between five or more buses or trains.[1] However, the STN does not always accommodate pedestrian and bicycle safety when passengers are connecting to many of the high-ridership stops. This is noteworthy because BART, Caltrain, and other high-ridership transit locations offer the greatest potential for impact due to the number of transit routes serving these. Ensuring safe access infrastructure to transit nodes can improve overall connectivity, particularly in EPCs.

1 Having access to five or more transit routes allows users to access many locations throughout the region and locations that have a high number of transfers, which is why five routes is defined as a major transfer point.

Figure 5 denotes various microtransit and bikeshare services offered throughout the Bay Area. Bay Wheels bike share operates with a significant footprint covering San Francisco, Oakland, Berkeley, Emeryville, and San José. Similarly, microtransit services operate in relatively small, distinct zones, often where fixed-route transit is limited. MTC has plans for the implementation of mobility hubs to consolidate more of these amenities to facilitate better access to the transportation system and provide more convenient and comfortable multimodal transfers.

A detailed review of transit access facilities is available in Appendix 3 - Transit-Supportive Infrastructure Inventory.

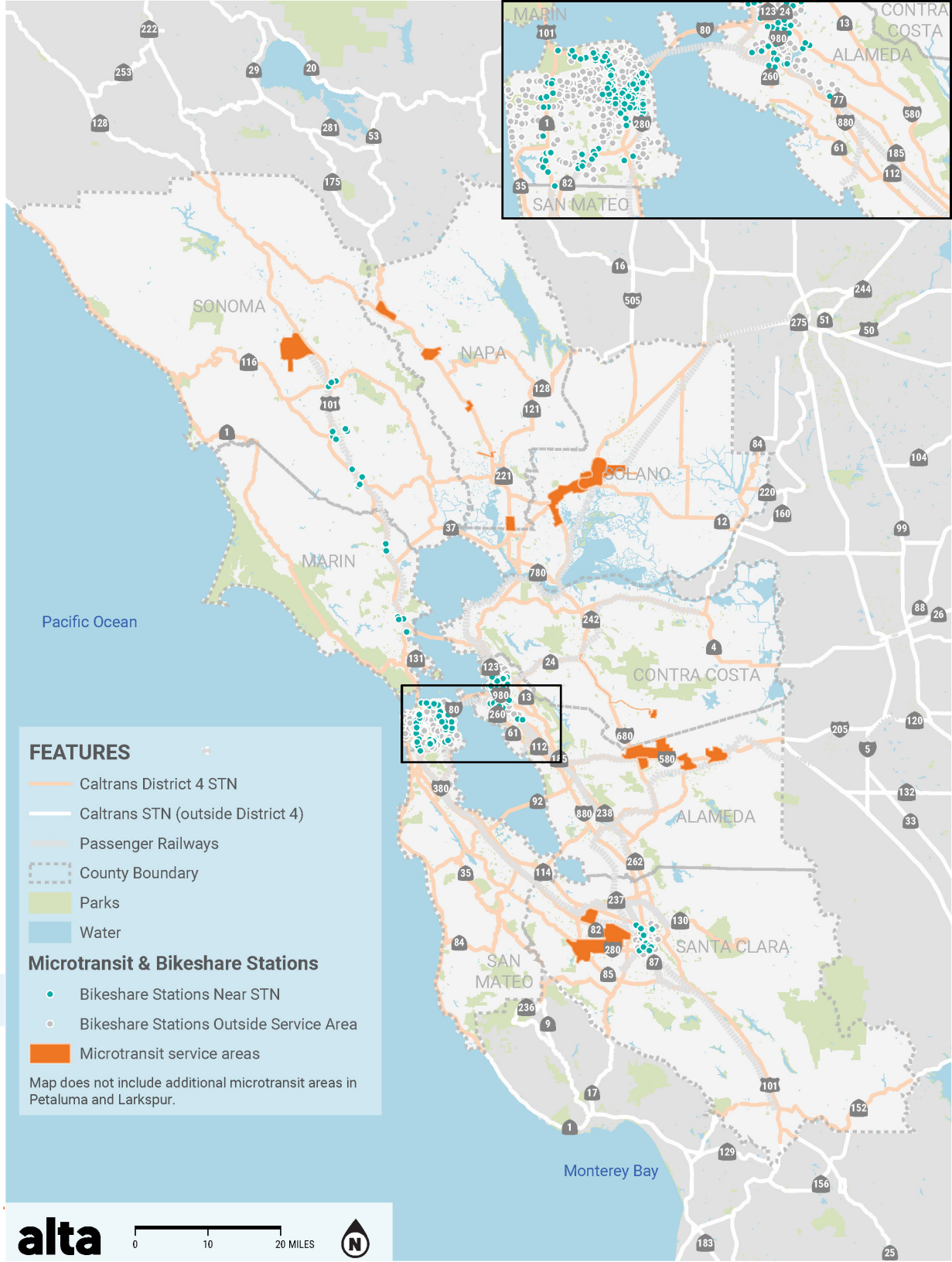


Figure 5. Bike Share and Other Microtransit Services

Map does not include microtransit areas in western Petaluma (LumaGo); Larkspur SMART station, Sonoma County Airport station, and Golden Gate Ferry Area.

CHAPTER

03 Vision, Goals, Objectives, and Performance Measures

Vision, Goals, Objectives, and Performance Measures

This chapter describes the vision, goals, objectives, and performance measures to help Caltrans Bay Area enhance transit speed, reliability, and access along the STN in the Bay Area. The goals, objectives, and performance measures have been designed to align with the Caltrans 2024-2028 Strategic Plan and to measure successes in implementing this Plan.

Vision

A **thriving** and **connected** Bay Area, with **reliable transit service**, **competitive travel times**, and an overall **comfortable**, **accessible**, and **efficient** State Transportation Network.

The following pages include descriptions of **goals, objectives, and performance measures** set forth as part of this planning process.

Key Terms

Vision is a broad aspirational statement for the desired future state of transit in the Bay Area.

Goals are general statements of what Caltrans Bay Area, MTC, transportation authorities, transportation agencies, and transit riders hope to achieve for the Bay Area transit network over time.

Objectives further define what actions are part of meeting these goals. Each objective has associated performance measures, which are organized to the right of each objective beneath the corresponding goal.

Performance Measures quantify progress in meeting the goals and objectives and provide guidance on how Caltrans will measure successes in implementing this Plan. Data for measuring performance will be collected by Caltrans and come from all project partners—Caltrans, transit agencies, local jurisdictions, and others. Performance measures have been designed to be data driven, measurable, and realistic.

Goals, Objectives and Performance Measures

GOAL 1

Safe and Complete Streets

Support the planning, design, funding, and implementation of safe and complete streets that enhance and improve transit travel time competitiveness, reliability, access, and safety while encouraging increased transit use for a wide variety of users and trip purposes.

Source: AC Transit

Objectives		Performance Measures	
1.A	Install transit priority facilities to improve travel speeds of transit operating in mixed traffic including buses, light rail, and streetcars.	1.A.1	Increase in the number of transit priority facilities integrated into Caltrans State Highway Operation and Protection Program (SHOPP) and non-SHOPP projects per fiscal year.
1.B	Expand transit access facilities for people walking, biking, and using micromobility to enhance safety, comfort, and connectivity between transit stops and stations and local/regional destinations.	1.B.1	Increase in the number of transit access facilities within a half mile of a transit stop integrated into Caltrans (SHOPP and non-SHOPP) projects per fiscal year.
1.C	Prioritize the implementation of centralized hubs that integrate transit and other shared travel modes to support a cohesive regional transit system.	1.C.1	Increase in the number of improvements to mobility hub projects implemented.

GOAL 2

Equity

Improve equity in transportation choices by helping to deliver transit projects on the STN that improve reliability and reduce travel times for all transit riders (all ages, abilities, ethnicities, genders, languages, races, and socioeconomic statuses), while ensuring people living in EPCs or disadvantaged communities who use transit regularly are meaningfully engaged throughout the design, construction, and operation of transit-supportive infrastructure and programs.

Source: LAVTA

Objectives		Performance Measures	
2.A	Invest in transit-supportive facilities to prioritize person throughput over single-occupancy vehicles including in EPCs/ disadvantaged communities, routes serving residents of EPCs/disadvantaged communities, and other areas affected by low air quality according to CalEnviroScreen. [Cross-listed with Climate Action]	2.A.1	Implementation of transit priority facilities benefiting equity populations.
2.B	Ensure that equity is considered in all transportation decision-making processes including the distribution of Caltrans resources and infrastructure.	2.B.1	Implementation of transit service improvement benefiting equity populations.
2.C	Ensure that historically underrepresented populations and residents of EPCs/ disadvantaged communities are actively engaged and provide input in transit-related projects.	2.C.1	Development of regionally balanced transit equity engagement, via existing regional transit equity bodies or a distinct Caltrans committee, to provide community-based insight on Caltrans transit planning.
2.D	Improve access to low-cost transportation options for low-income communities and other disadvantaged populations such as Black, Indigenous, and people of color (BIPOC) and people with disabilities.	2.D.1	Increase in percentage of transit access needs incorporated in EPCs/ disadvantaged communities.
2.E	Implement Americans with Disabilities Act (ADA)-compliant accessibility features as part of all transportation infrastructure projects along the STN to improve safe access to transit stops and stations for people with disabilities and aging populations.	2.E.1	Increase in the number of projects that provide an ADA accessibility improvement to current transit infrastructure, per year.

GOAL 3

Climate Action

Provide support in identifying and securing long-term resources for transit-supportive projects and transit service enhancements, in accordance with Caltrans statewide project delivery and funding guidelines.

Source: NVTA

Objectives		Performance Measures	
3.A	Evaluate investment opportunities, project scoping and design, and measures to help reduce per capita vehicle miles traveled (VMT).	3.A.1	Decrease in VMT in Transit Investments Areas.
3.B	Encourage transit-oriented development along the STN and adjacent Priority Development Areas (PDAs), Transit-Oriented Community Policy Areas, and Transit Priority Areas (TPAs)—as defined by MTC—by incentivizing the construction of additional housing units (particularly multi-family housing) and mixed-use developments, without parking minimums, to reduce distances between housing, work sites, and essential goods and services.	3.B.1	Increase in the total population within a half mile of a high-quality transit corridor.
3.C	Invest in transit-supportive facilities to prioritize person throughput over single-occupancy vehicles in EPCs/disadvantaged communities, routes serving residents of EPCs/disadvantaged communities, and other areas affected by low air quality according to CalEnviroScreen. *[Cross-listed with Equity]*	3.C.1	Increase in the number of transit-supportive facilities projects implemented per year along the STN.
3.D	Support the development, implementation, and maintenance of zero-emission bus and electric micromobility infrastructure as the state, local jurisdictions, and private entities invest in electric vehicle charging network development along the STN.	3.D.1	Increase in the percentage of zero-emission buses operated by partner agencies along the STN, with the goal of 100% zero-emission adoption by 2040.

GOAL 4

Transit Resource Prosperity

Provide support in identifying and securing long-term resources for transit-supportive projects and transit service enhancements, in accordance with Caltrans statewide project delivery and funding guidelines.

Source: NVTA

Objectives		Performance Measures	
4.A	Increase dedicated funding for transit-supportive facilities projects along the STN.	4.A.1	Positive change in transit funding relative to the change in funding for all other transportation modes.
4.B	Facilitate project-level coordination between the US Department of Transportation, California State Transportation Agency, MTC, and local and regional partners to assist Caltrans, county transportation authorities, and transit agencies in effectively leveraging and implementing federal and state funding programs, in coordination with MTC.	4.B.1	Increase in the frequency and number of partner coordination meetings to identify priorities and a funding framework for transit.
4.C	Ensure long-term maintenance of existing resources for Caltrans and local transit-supportive facilities projects.	4.C.1	Increase in the allocated funding for transit facility maintenance projects along the STN to ensure state of good repair, including the State Highway Operation and Protection Program (SHOPP).
4.D	Incorporate transit operating cost and ridership impacts into the decision-making process for all Caltrans investments in the Bay Area.	4.D.1	Inclusion of Caltrans staff and Transit Partners, trained to consider the impact of Caltrans investments, and project delivery on transit operations and ridership, on project development teams, and in Comprehensive Multimodal Corridor Plan development processes.

GOAL 5

Cultivating Excellence

Provide consistent, efficient, and timely Caltrans evaluation, permitting, and oversight processes to implement transit-supportive infrastructure projects and programs in Bay Area communities, in accordance with Caltrans statewide project delivery and funding guidelines and design standards. Establish a regional leadership role for Caltrans to improve coordination with and between cities, counties, and agencies involved in planning and implementing transit-supportive facilities across multiple jurisdictions in the Bay Area.

Source: Golden Gate Transit

Objectives		Performance Measures	
5.A	Refine design guidance and standards to prioritize context-sensitive solutions that support transit facilities and enhance connections to surrounding land uses.	5.A.1	Adoption by Caltrans of design guidance for transit priority and access facilities that standardizes and facilitates the review and implementation of transit-supportive facilities along the STN, in alignment with SB-960.
5.B	Reduce administrative barriers to local transit project delivery along the STN.	5.B.2	Reduction in overall time for the review and approval process for implementation of transit-related projects on the STN.
5.C	Streamline and coordinate the administrative permitting and project oversight processes for transit-supportive infrastructure projects along and intersecting with the STN in the Bay Area.	5.C.3	Implementation and utilization of updated guidelines/procedures to reduce time needed for review of transit-supportive projects and transit access projects along the STN.
5.D	Develop a role, standards, and clear approach for Caltrans Bay Area to coordinate with transit agencies, cities, and counties on planned transit-supportive projects across multiple jurisdictions along the STN.	5.D.4	Designation of a Caltrans transit subject matter expert at the District level for each potentially transit-relevant project, with expanded role for Transit Grants and Planning Branch, to facilitate the review process within Caltrans and partner agencies.

CHAPTER

04 Public and Stakeholder Outreach

Public and Stakeholder Outreach

Representatives from regional transportation authorities, transit operators, and a broad cross-section of Bay Area residents guided and informed the development of this plan.

The outreach and engagement efforts included Caltrans divisions, transportation agencies, advocacy groups, members of communities of concern, members of multicultural/non-English speaking communities, non-governmental organization/community-based organization (NGO/CBO) leaders, and the general public. To reach such a diverse audience, the project team used a multipronged approach to public engagement, with outreach strategies including assembling a technical advisory committee (TAC), hosting a project website, distributing a community survey, convening and participating in targeted stakeholder meetings, and providing social media content for partners to promote events and engagement.

Caltrans staff conducting outreach during Phase 1 of the project.

Technical Advisory Committee

The TAC included representatives from the MTC, as well as local and regional transportation agencies and transit operators in the Bay Area. The TAC was developed based on feedback from Caltrans staff and provided input to guide the Transit Plan's development process. This section summarizes the major discussion topics of the five TAC meetings that guided the development of the plan, as well as outcomes from each meeting. Meeting dates and topics were as follows:

MEETINGS

1. **October 2023**
   Project Introduction; Goals and Priorities Discussion; Constraints and Opportunities
2. **April 2024**
   Policy Research; Goals, Objectives, and Performance Measures Discussion
3. **July 2024**
   Transit Needs Assessment; Goals, Objectives, and Performance Measures
4. **December 2024**
   Complete Streets Transit Toolbox
5. **January 2025**
   Transit Needs Assessment and Subregional Meetings

The project team hosted the first TAC meeting with 21 members in attendance to introduce the project and identify goals and priorities for the project. These goals and priorities included a few common themes: prioritization of transit over other modes, increased investment in transit infrastructure, need for interjurisdictional coordination, need to focus on resiliency and equity, and a desire for streamlining Caltrans project approvals, design guidance, and standardization.

TAC members also identified barriers and solutions, and listed pending plans of which the project team should be aware. Barriers that TAC members considered in discussing solutions included Caltrans project oversight gaps, jurisdictional coordination shortcomings, fragmentation of provision of transit services in the Bay Area, tradeoffs between enhanced safety/access and transit speed/travel times, and slow access to state funding.

The second TAC meeting was used to discuss findings from the project team's review of best practices on transit provision and to further define the goals, objectives, and measurable outcomes for the plan. Policy findings were presented as outlined in Chapter 2 of this plan. TAC members also provided feedback to refine goals and objectives for the project and reviewed data requests from the project team.

For the third TAC meeting, the project team provided updates on the transit needs assessment (see Chapter 2), led a discussion with TAC members on performance measures (Chapter 3), and provided updates on the methodology used to prioritize transit enhancements.

At the fourth TAC meeting, Caltrans staff hosted a discussion on best practices for infrastructure facility development, which refined the facilities included in the transit facility toolbox (see Chapter 5).

The fifth and final meeting allowed members to comment on the initial findings from the Transit Needs Assessment (TNA), which identifies priority locations for transit investments on the STN. The project team also hosted a set of sub-regional meetings with TAC Members and representatives from regional transit agencies to further review the prioritization methods and early data findings at the county level. The TNA development will be continued during Summer 2025 (see Next Steps).

Caltrans staff conducting outreach during Phase 1 of the project.

Stakeholder Engagement

Stakeholder groups engaged through the development of this plan included transit, active transportation, and environment/climate justice advocacy groups. This included stakeholder group meetings that were held as part of the MTC Transit Priority Working Group. Meeting dates and topics included:

MEETINGS

1. **October 2023**
   Project Introduction; Goals and Priorities Discussion; Constraints and Opportunities
2. **April 2024**
   Policy Research; Goals, Objectives, and Performance Measures Discussion
3. **July 2024**
   Transit Needs Assessment; Goals, Objectives, and Performance
4. **December 2024**
   Complete Streets Transit Toolbox
5. **January 2025**
   Transit Needs Assessment and Subregional Meetings

As noted, these meetings were hosted as part of MTC's Transit Priority Working Group meetings and mirrored the TAC meetings in their format and outcomes, providing a similar opportunity for expert input into the project and process.

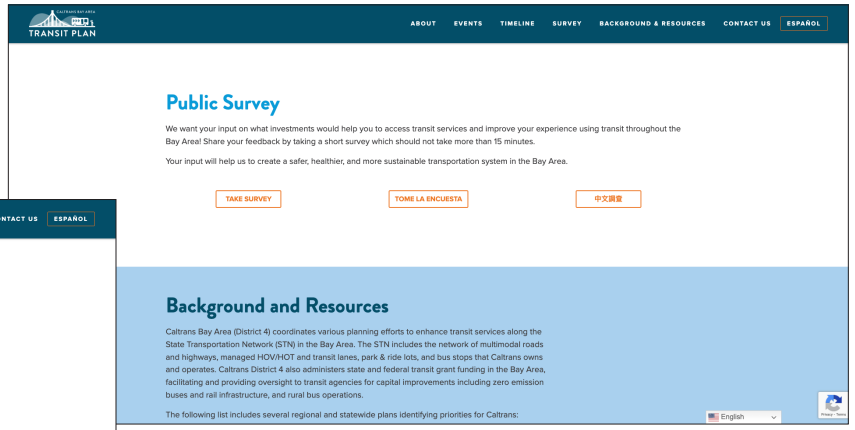
Community Outreach

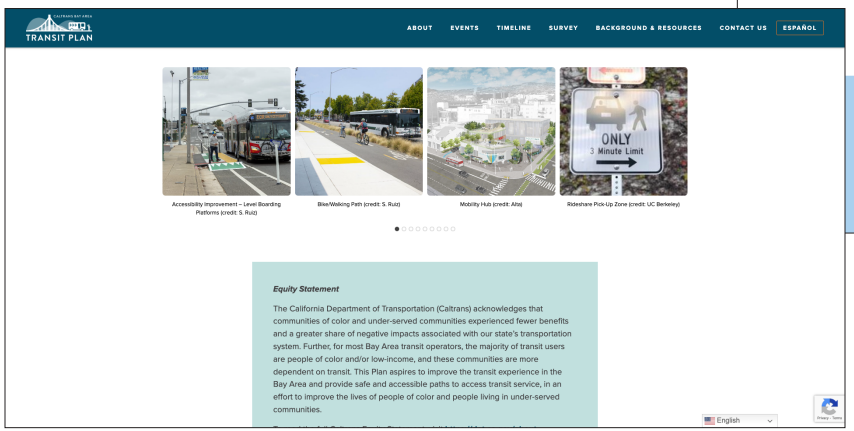
The project team used direct online marketing (e.g., Facebook, Instagram) to promote the project website and request feedback from the community at large in addition to local and regional agencies. The following is a summary of events and media used to engage the public about the project.

PROJECT WEBSITE

The project team developed a standalone project website (*https://caltransbayareatransitplan.org/*) to serve as the public landing page, and include information about the project, event notifications, an interactive survey, and listserv signup. The website was consistent with the branding for the project and other materials, and was available in various languages.

Figure 6. Project Website and Branding (Spanish Version)





DIRECT ENGAGEMENT

At the onset of the project, Caltrans staff and the project team engaged with the general public at various transit hubs and major bus stops throughout the Bay Area to encourage transit riders to take a survey gauging general opinions about transit in the Bay Area, existing facilities, and proposed improvements. The project team created collateral materials in the form of flyers in English, Spanish, and Chinese to encourage riders who speak those languages to complete the survey. Caltrans staff assisted transit riders without phones in taking the survey. Caltrans planning staff also attended Bike to Wherever Day 2024 “energizer stations” to encourage people riding to transit to participate as well.

September 2024 was Transit Month, and Caltrans staff attended events to discuss the *Caltrans Bay Area Transit Plan* and other ways that Caltrans supports public transit in the region. On September 24, staff attended the Let’s Talk Transit fair hosted by the Transbay Joint Powers Authority. The fair was located at the Salesforce Park (the rooftop above the Salesforce Transit Center) in San Francisco, alongside transit agencies such as Golden Gate Transit, AC Transit, WestCAT Lynx, and Caltrain, and regional transit partners such as MTC, Clipper, SF Transit Riders, and others. On Saturday, September 28, staff hosted a table at the Downtown Berkeley Transit Month rally, alongside Telegraph for People, AC Transit, the East Bay Transit Riders, and more, where residents came together to discuss and advocate for safe and complete streets.

Caltrans Staff engaging the public at the Downtown Berkeley Transit Month Rally.

Instagram post in traditional Chinese encouraging riders to complete the survey.

PUBLIC SURVEY

The project team developed an online survey to gauge interest in and opinions about transit services in the Bay Area. The survey ran from February to June 2024, and had 617 responses. The survey was available in English, Spanish, and Chinese to help increase participation by a large segment of Bay Area residents. Of these responses, 604 were in English, seven in Spanish, and six in Chinese. Respondents represented all nine counties in both primary residence and regular travel.

All major transit systems had representation, and frequency of use varied from at least once a day to once a month, and even less regularly. Respondents represented age distribution well, though the average respondent was white, male, and high income (household income of more than $200,000 per year). The barriers to transit use included the following themes:

BARRIERS TO TRANSIT USE

Service Frequency and Connectivity

- Infrequent, unreliable, or poorly coordinated transit services.
- Limited routes, poor regional connectivity, and inadequate first-/last-mile solutions.
- Scheduling issues, including poorly timed transfers and lack of late-night service.

Accessibility and Infrastructure

- Physical barriers such as long walking distances, inaccessible stations, and insufficient bike facilities.
- Lack of shelters, seating, and weather protection at stops.
- Poor signage and wayfinding, making navigation difficult.

Safety, Security, and Comfort

- Concerns about personal safety due to crime, unsafe roadways, or disruptive behavior.
- Dirty and poorly maintained transit environments.
- Overcrowded or uncomfortable transit vehicles.

Affordability and Convenience

- High transit costs and difficulty integrating transit with daily needs (e.g., carrying items, parking, or transferring systems).

Figure 7. Survey Respondent Preferential Ranking of Investments to Increase the Speed and Reliability of Trips on Transit

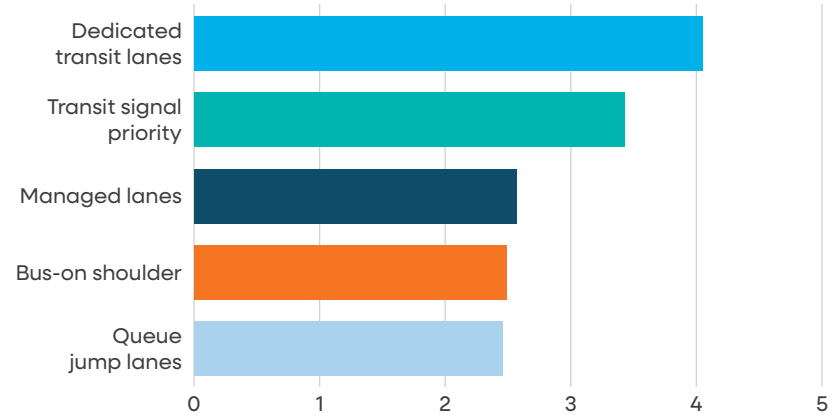


Figure 8. Survey Respondent Preferential Ranking of Investments to Improve User Experience Getting to and from Stations/Stops

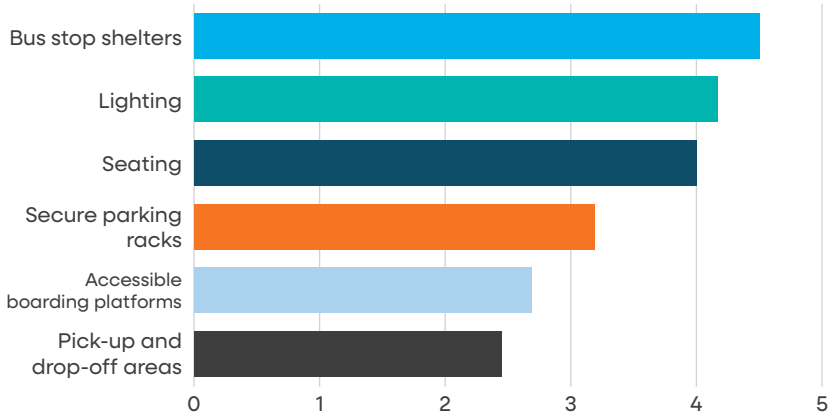


Figure 9. Survey Respondent Preferential Ranking of Investments to Improve User Experience Waiting at Stations and Stops

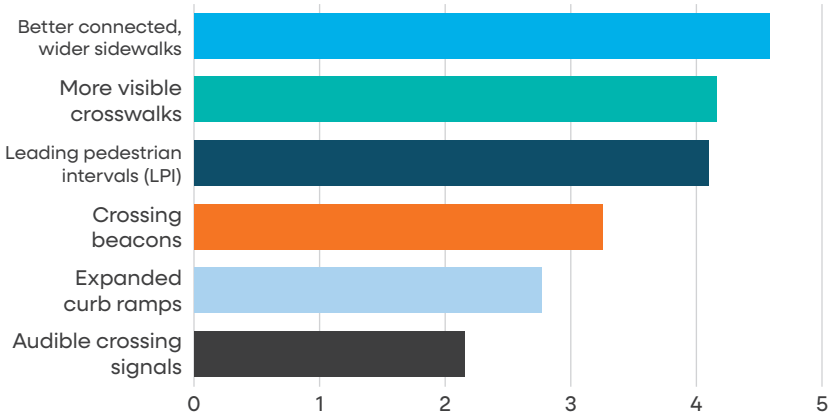
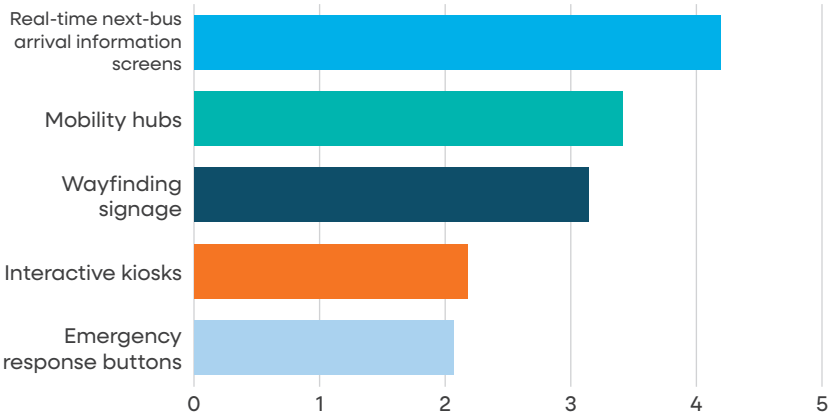


Figure 10. Survey Respondent Preferential Ranking of Investments to Improve Ease of Transit Trip Navigation and Connecting Transit Trips



Respondents also provided feedback on potential solutions to the themes listed above. Respondents noted wanting to see more dedicated transit lanes and transit signal priority improvements to increase the speed and reliability of transit. To improve their experience getting to and from stations/stops, respondents wanted to see the implementation of better connected and wider sidewalks, more visible and better lit street crossings, and leading pedestrian intervals (LPIs).

For waiting at stations, users expressed support for more/improved bus stop shelters, lighting, and seating. Finally, respondents noted wanting to see real-time next-bus arrival information screens, mobility hubs, and wayfinding signage implemented to make it easier to navigate and connect between transit trips. Solution results are shown in Figure 7 through Figure 10, where a higher score corresponds to a more frequent ranking.

Caltrans staff conducting outreach during Phase 1 of the project.

In their general comments, respondents advocated for transit-only lanes, dedicated bus lanes, and express bus routes to make public transit faster and more competitive with car travel. Many respondents expressed interest in redirecting funds from highway widening and expansion to investments in public transit systems, such as buses, trains, and active transportation infrastructure like bike lanes and pedestrian pathways. There was a clear emphasis on enhancing transit operations, increasing service frequency, creating dedicated transit lanes, and improving last-mile connectivity to encourage sustainable, multimodal transportation options. Respondents also stressed the importance of making streets safer for non-motorized users by implementing measures like protected bike lanes, pedestrian-friendly crossings, traffic calming, and reducing vehicle speeds.

Survey respondents emphasized creating safer, more accessible transit options for all users, improving infrastructure for underserved areas, and enhancing security to encourage broader use of public transit. They also highlighted the need for transit improvements, including better signage, cleaner and safer stations, and addressing barriers such as homelessness and crime on public transit. Suggestions included building separated bicycle facilities and pedestrian-friendly pathways, and encouraging biking and walking to transit hubs.

According to survey respondents, the top three priorities for Caltrans to improve transit along the STN should be:

1. **Prioritize transit over other transportation modes.**
2. **Improve navigation of and connections between transit systems/networks.**
3. **Maintain existing transit infrastructure.**

Finally, when comparing responses across multiple demographic categories, there were not many significant deviations between respondents' answers. The only answer that saw significantly more low-income and BIPOC (Black, Indigenous, and people of color) responses was to increase investment in accessible boarding platforms to improve their experience waiting at stations and stops.

Community feedback was used Caltrans Bay Area to inform the prioritization process. Feedback was shared with local and regional transit agencies to help shape future projects and related infrastructure improvements.

OUTREACH TO SENIORS AND RIDERS WITH DISABILITIES

Caltrans staff sought out and engaged seniors and riders with disabilities through a number of transit agency advisory groups on accessibility and paratransit, including the AC Transit General Manager's Accessibility Committee, the SFMTA Multimodal Accessibility Advisory Committee, the BART Accessibility Task Force, and Solano Transportation Authority Paratransit Coordinating Council. Riders discussed with Caltrans staff the importance for paratransit to be able to access transit priority infrastructure, the need for timely fixes to repairs of transit facilities, and increasing accessible facilities including Accessible Pedestrian Signals and Tactile Wayfinding.

Promotional materials for public survey.

CHAPTER

05 Complete Streets Transit Toolbox

Complete Streets Transit Toolbox

This chapter presents the Caltrans Bay Area Complete Streets Transit toolbox *which includes information on the implementation of transit priority and transit access facilities.*

The Toolbox provides information to assist local and regional transit agency and Caltrans project staff (including planners, project managers, engineers, designers) looking to build infrastructure along the STN. The chapter provides best practices for infrastructure elements to meet relevant goals and objectives included in Caltrans' Strategic Management Plan and Complete Streets policy (DP-37). The toolbox has been developed to build off and complement the existing guidance presented in the Caltrans *Complete Streets Elements Toolbox 3.0.1*.

What's Included:

This section provides information on best practices for infrastructure improvements for the following transit priority and transit access facilities:

TRANSIT PRIORITY FACILITIES

A. Lane Treatments

- Transit Lanes
- Part-Time Transit-only Lanes
- Queue Jump Lanes
- High-Occupancy Vehicle (HOV) Lanes

B. Signal Priority Treatments

- Transit Signal Priority
- Transit-Only Advanced Signal Indication

TRANSIT ACCESS FACILITIES

A. Bus Stops and Bus Amenities

- Bus Stops
- Freeway Access Stations
- Bus Bulbs
- Bus Boarding Islands
- Bus Stop Amenities
- Pedestrian and Bicycle Access
- Wayfinding
- Mobility Hubs

B. Other Transit Access Facilities

Reference Design Guidelines

The Transit Plan project team referenced the following documents as part of the development of this Toolbox:

- California Highway Design Manual (CA HDM) 7th Edition
- California Manual on Uniform Traffic Control Devices (CA MUTCD) Rev 8
- Caltrans Complete Streets Elements Toolbox 3.0.1
- Caltrans Design Information Bulletins
- Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) 11th Edition
- What is Transit Priority? (MTC)
- Transit Street Design Guide (NACTO)
- Public Right-of-Way Accessibility Guidelines (PROWAG)

Additional design guidelines and studies developed by local and regional transit agencies and transit research non-profits and universities were also referenced.

1

Transit Priority Facilities

Transit Priority Facilities include infrastructure treatments that focus on improving the speed and/or reliability of transit services. These treatments can be applied to an entire corridor or as individual spot improvements to address issues at specific locations. Some Transit Priority Facilities may impact traffic operations, but there are situations where preferential treatment for transit may be desirable, with the goal to maximize efficiency and minimize overall person delay. The primary types of facilities include *lane treatments* and *signal priority treatment*. Bus stop location and design can also improve speed and reliability but are discussed in the *Transit Access Facilities* section.

Bus rapid transit lane on Van Ness Avenue (US 101) in San Francisco (source: SFMTA).

A. LANE TREATMENTS

Lane treatments are transit priority facilities improvements related to travel lanes along the STN. The treatments can be implemented or repurposed to all or portions of existing travel lanes on roads or highways. The lane treatments presented consider not just transit movements but also coordination with other modes including biking, walking, and motor vehicles.

1.A.1 Transit Lanes

A transit lane is a traffic lane dedicated for use by transit vehicles. Transit lanes can accommodate bus rapid transit, light rail transit, express or limited-stop bus routes, or local bus service.

Typical Application

Transit lanes are often considered on urban streets and suburban corridors where there is frequent transit service and where traffic congestion would otherwise delay the transit service and impact its reliability.

Additional Considerations

- **Color Treatment:** Red-colored pavement treatments enhances in delineating public transit lanes from general vehicle traffic lanes and reduce illegal occupancy of transit lanes by non-transit vehicles and parking in transit lanes, resulting in reduced travel time of transit vehicles (*FHWA*, SFMTA). Colorized transit lanes still experience some unauthorized entry by private vehicles, but at a reduced rate.
- **Physical Separation:** Transit lanes may be physically separated from other traffic by a vertical element, such as a raised curb or vertical delineators. This physical separation protects the transit lane from incursion by unauthorized vehicles. Some transit lanes without physical separation have experienced challenges of unauthorized entry by private vehicles.

- **Enforcement:** Enforcement of rules and regulations related to transit priority facilities is used to maximize the effectiveness of transit lanes and includes automated camera enforcement, manual patrols, and other ways to address traffic infractions. While transit infrastructure that requires minimal enforcement tends to operate best, some level of enforcement is recommended, when available, for transit priority facilities to deter private vehicles from impacting transit operations. In the Bay Area, there are special provisions for limited automated camera enforcement for parking violations (AB-917).
- **Green Transitways:** For buses, grass can be planted between and adjacent to concrete running paths or guideways for bus wheels to substantially improve stormwater infiltration and retention, provide noise dampening benefits, and enhance the public space (NACTO).
- **Coordination of Transit Lanes with Bikeways:** Where both buses and bikeways are present in the same corridor, consideration should be given to minimizing conflicts between buses, bicyclists, and transit users. Conflict points between bus lanes and bikeways most commonly occur where both facilities are located adjacent to the curb. These preferences are rooted in the California Safe Systems Approach.
  - » Placing buses within a dedicated lane or separated space in the center of the street can improve transit travel time and reliability by reducing conflicts with other traffic, including bicycles, with resulting safety benefits, if considered with signal treatments and transit stop locations.
  - » Offset transit lanes utilize the right-most moving lane, but are offset from the curb by on-street parking or a bikeway or both. See section 2.A.4 Bus Boarding Islands for a discussion on the use of bus boarding islands for bus stops adjacent to bikeways.

Green transit lanes for bus service in Eugene, OR (source: NACTO).

Bus alongside bikeway on E 14th St (SR 185) in San Leandro (source: Caltrans).

  - » Americans with Disabilities Act (ADA) access and paratransit: transit lanes with separated bikeways require extra concern to ensure accessibility for paratransit parking and other ADA access. This could include breaks in the bike lane separation barrier, and curb ramps to the sidewalk at ADA parking spaces or regular intervals (OakDOT).

Transit lane separation for Muni along Van Ness Avenue (US 101) in San Francisco (source: SFMTA).

- **Bus Rapid Transit:** Transit lanes can be combined with other transit infrastructure elements to create bus rapid transit, a rapid mode of transportation that can provide the quality of rail transit and the flexibility of buses.

Reference Design Guidelines

- CA MUTCD Rev 8: Sections 2B.19-22 for standards and guidance for lane control signage, 2G.01-15 for standards and guidance for preferential and managed lane signage, 3D.01-02 for standards and guidance for preferential lane markings, and 8B.13-17 for standards and guidance for signage concerning light rail lane usage and grade crossings.
- FHWA MUTCD 11th Edition: Section 3H.07 Red-Colored Pavement for Public Transit Systems. This new set of federal guidance was adopted from the former FHWA Interim Approval for the Optional Use of Red-Colored Pavement for Transit. This guidance is not yet included in the CA MUTCD because the CA MUTCD is based on the 10th edition of the Federal MUTCD. Per 23 CFR, California has a 2-year period, through January 18, 2026, to develop a revised CA MUTCD in substantial conformance with the Federal MUTCD.

Transit lane separation on SR 185 in Oakland (source: Caltrans).

- CSET 3.0.1: Section H50
- NACTO Transit Street Design Guide: Lane design controls, transit lanes and transitways, pavement markings and color, separation elements, fare vending (at transit stops, such as along light rail or bus rapid transit lines)
- **Other resources:** UCLA Institute of Transportation Studies - Best Practices in Implementing Tactical Transit Lanes: provides guidance on the planning process and design considerations for developing low-cost, quick-build transit lanes

Caltrans Examples

SFMTA Van Ness Bus Rapid Transit (US 101), San Francisco; AC Transit Tempo Bus Rapid Transit on East 14th St/International Blvd (SR 185), Oakland and San Leandro; AC Transit San Pablo Avenue Bus Lanes and Bike Lanes Project (in development) (SR 123), Oakland, Emeryville, and Berkeley

1.A.2 Part-Time Transit-Only Lanes

Part-time transit-only lanes (including what is often referred to as “bus on shoulder”) allow authorized transit buses to drive in dedicated lanes under specifically designated operating conditions, to bypass congestion during peak periods. This can improve the travel time reliability of transit service and overall person-movement on the corridor while addressing roadway operational and performance issues. Part-time transit-only lanes can be located in parking lanes or on freeway shoulders. When determining whether to implement a part-time lane, certain factors should be considered, including, but not limited to:

- Frequency and duration of congestion.
- Length of acceptable shoulder width.
- Cost to upgrade.
- Existing or planned managed lanes.
- Transit ridership and frequency. There should be a sufficient number of transit vehicles expected to use the lane to avoid the perception of lane underutilization. Part-time lanes for buses should be expected to carry no less than four buses per hour.
- Potential for reducing delay.
- Potential for reducing VMT.
- Connectivity to transit hub, park-and-ride location, etc.

Part-time transit-only lane along Lincoln Boulevard (SR 1) in Santa Monica.

Typical Application

- Where the opportunity exists, transit services can benefit from utilizing parking lanes or the shoulders of a highway/freeway during peak commute times to avoiding traffic congestion and improve transit speed and reliability.
- An excellent example of using a parking lane can be seen in Santa Monica on Lincoln Boulevard between the I 10 Freeway overpass and the city limits at Ozone Avenue. During the peak commuter periods from 7-9 am and 4-7 pm, the parking spaces along Lincoln Boulevard are used for transit-only lanes. With access to this transit lane, transit riders can save eight minutes with one ride. Due to the success of this project, there are efforts to extend the temporary bus lanes beyond Santa Monica into Los Angeles to provide greater travel time savings.

Additional Considerations

- If located on the former shoulder, the structural section of the part-time lane must be adequate for the additional vehicle loading expected on it. This may require pavement reconstruction or rehabilitation. Roadway features not adequate for traffic loading, such as pull box covers and drainage systems, should be evaluated and upgraded or relocated as necessary.
- **Enforcement:** Similar to full-time transit lanes, enforcement of rules and regulations related to transit priority facilities is used to maximize the effectiveness of part-time transit lanes, particularly parking enforcement [See 1.A.1 Transit Lanes].

Reference Design Guidelines

- FHWA: Use of Freeway Shoulders for Travel - Guide for Planning, Evaluating, and Designing Part-Time Shoulder Use as a Traffic Management Strategy; Decision Support Framework and Paraments for Dynamic Part-Time Shoulder Use
- CA MUTCD Rev 8: Sections 2B.19-22 for standards and guidance for lane control signage, 2G.01-15 for standards and guidance for preferential and managed lane signage, 3D.01-.02 for standards and guidance for preferential lane markings
- CSET 3.0.1: H50, H51
- **Caltrans Guidance for Implementation of Part-Time Lanes (forthcoming 2025):** Caltrans is currently developing part-time transit lane design guidelines, which are to be finalized based on findings from the I 805/SR 94 Part-Time Transit-Only Lanes Pilot Demonstration Project in San Diego County conducted by the San Diego Association of Governments (SANDAG) in coordination with Caltrans, the California Highway Patrol, the Federal Transit Administration, and local stakeholder agencies. The pilot project started in Summer 2022 and will run through Summer 2025.
- **American Public Transportation Association:** Designing Bus Rapid Transit Running Ways (Section 3.2 "Bus use of shoulders")
- **Other Resources:** SANDAG – Bus on Shoulder Project: SR 94 and I 805; Monterey-Salinas Transit & Santa Cruz Metro - Monterey Bay Area Feasibility Study of Bus on Shoulder Operations on State Route 1 and the Monterey Branch Line

Part-time transit-only lane on SR 94 in San Diego (source: CSET).

Caltrans Examples

- Dumbarton Forward Project (in final design phase), Fremont and Menlo Park, with MTC; SR 94 & I 805, San Diego, with Metropolitan Transit System (District 11); Highway 1 (SR 1), Santa Cruz, with Santa Cruz METRO (D5) (planned); US 10; Lincoln Boulevard (SR 1), with Big Blue Bus, Santa Monica (D7)

1.A.3 Queue Jump Lanes

A queue jump lane is a designated area when approaching an intersection designed to provide space for transit to bypass mixed traffic in adjacent lanes. Queue jump lanes improve transit service efficiency along corridors and can be paired with transit signal priority.

Typical Application

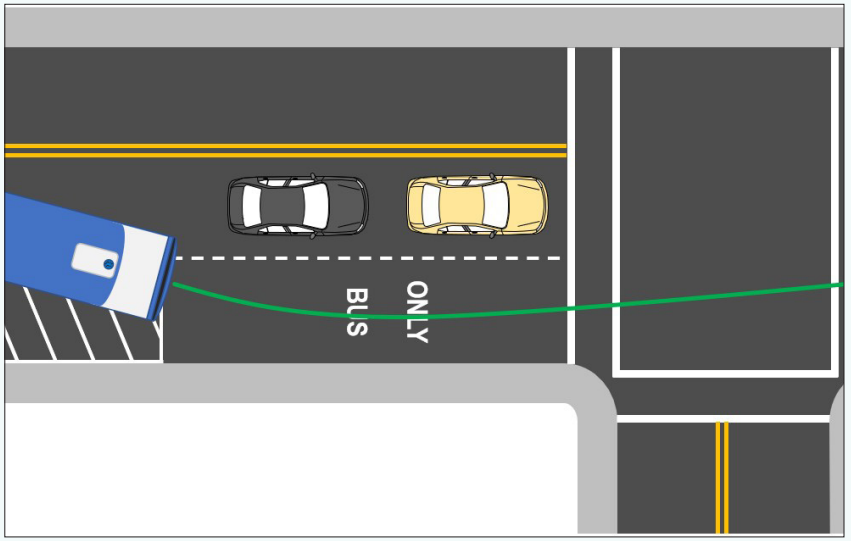
Queue jump lanes are often designed as right-turn lanes that permit transit to make through movements. Queue jump lanes have also been located in the left-turn lane or a center running lane for bypassing a heavy movement in an adjacent lane. Although the far side of the intersection is generally preferred as the bus stop location for signalized intersections, queue jump lanes at times may incorporate a bus stop at the near side of the intersection that enables the bus to merge into traffic at or near the front of the queue prior to a green signal indication for the adjacent mixed-traffic lanes. Where right turns are permitted at intersections, queue jump lanes work best when the volume of right turning traffic is low compared to the volume proceeding straight, such that transit is not delayed by a queue of right turning vehicles when using the lane to bypass the queue of traffic proceeding straight. Queue jump lanes also have optimal effect where their length exceeds the average queue length in adjacent mixed traffic lanes during the peak period.

Reference Design Guidelines

- CSET 3.0.1: H99
- NACTO Queue Jump Lanes
- **Other Resources:** GET bus: Transit Facilities Design: A Manual for Coordinating Public Transit & Land Use in Bakersfield (Sec. 5.1, Pg. 56)

Caltrans Examples

- El Camino Real (SR 82) & Page Mill Rd, Palo Alto; I 80 & Buchanan St, Albany



Queue jump lanes example diagram, showing space for buses to pass as they approach an intersection (source: CSET).

1.A.4 High-Occupancy Vehicle (HOV) Lanes

A high-occupancy vehicle (HOV) lane is a type of managed lane that is available for use by HOV (with a minimum required number of passengers per vehicle). Transit buses can utilize HOV lanes to bypass congestion on freeways and expressways where they are provided. HOV can be considered a transit facility infrastructure when the lane is a conversion of a general purpose lane, and not capacity expanding.

Typical Application

- HOV lanes can be designed to directly support transit when appropriate, with wayfinding and signage, queue jump lanes, on- or off-ramps, freeway access stations, transit facilities, and signal priority or other measures to bypass congestion.
- An HOV region-wide system is ideal, including park-and-ride/ transit facilities, and rideshare inducement and promotional programs.

HOV Lane in the Presidio (source: SFMTA)

Additional Considerations

- Conventional highways may be suitable for HOV lanes, in addition to controlled-access freeways. Caltrans District 4 has recently partnered with SFMTA on the Park Presidio Lombard Temporary HOV Lanes pilot project. Early analysis from SFMTA has shown improved transit time reliability.

Reference Design Guidelines

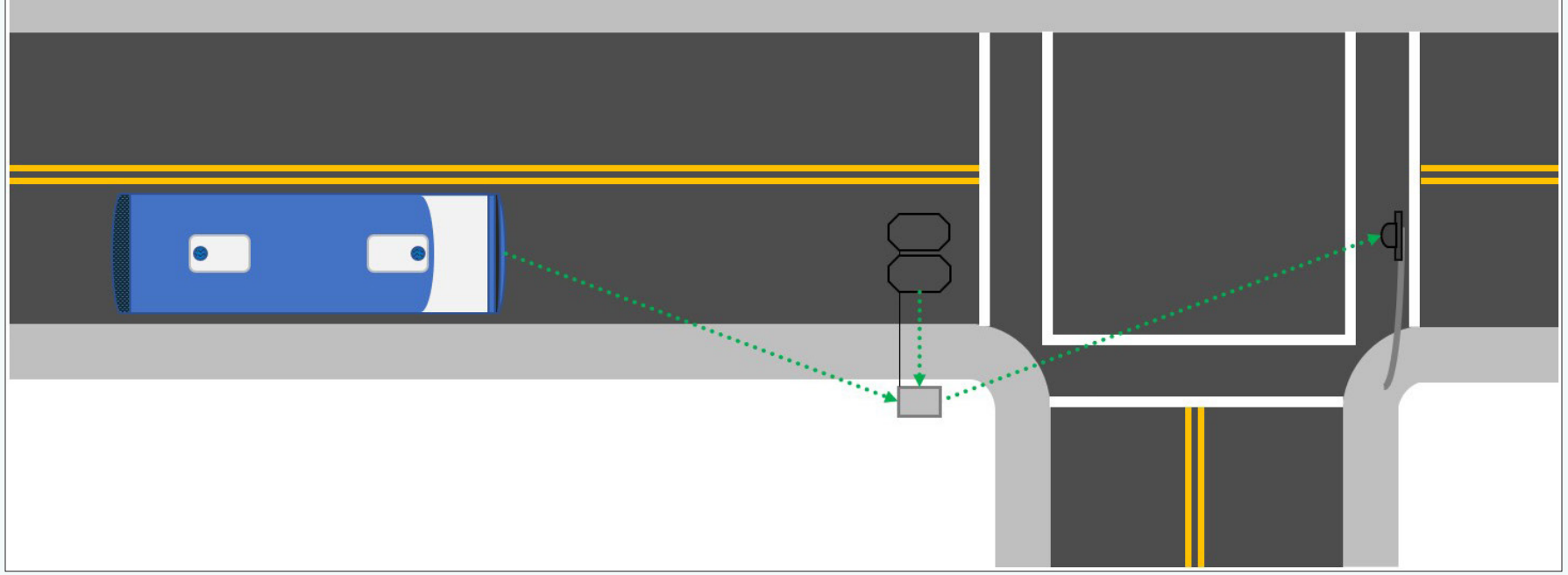
- Caltrans High-Occupancy Vehicle Guidelines
- Caltrans Managed Lane System Plan Guidelines

Caltrans Examples

- I 80 Bay Bridge approaches, Park Presidio Boulevard (SR 1), and Lombard Street (US 101), San Francisco

A Note about High-Occupancy/Toll (HOT Lanes)

A high-occupancy/toll lane (HOT lane) is a type of managed lane that is available for use by HOVs (with a minimum required number of passengers per vehicle) and is also available for use by vehicles not meeting the occupancy requirement in exchange for payment of a toll. While transit buses can utilize HOT lanes to bypass congestion on freeways and expressways where they are provided, HOT should not be considered a transit priority facility, as they are primarily designed for single occupancy vehicles and increase VMT similarly to new general-purpose lanes. But with certain additional facilities, including, queue jump lanes, signal priority, and freeway access stations, HOT could be beneficial to transit (UC Davis). Capacity-expanding HOT or HOV lanes should not be considered Transit Priority Facilities.



Transit Signal Priority (TSP) information relay diagram, showing approach signal passing between buses and traffic signals (source: CSET).

B. SIGNAL PRIORITY TREATMENTS

Signal priority treatments include special signal timing strategies and/or infrastructure that support transit operations at signalized intersections.

1.B.1 Transit Signal Priority (TSP)

Transit signal priority (TSP) utilizes a communication system between traffic signals and transit vehicles in order to extend the green signal indication when a transit vehicle is approaching an intersection, or to provide an early green signal indication when a transit vehicle is waiting at an intersection, thereby accommodating the vehicle's movement through the intersection without delaying its passengers at a traffic signal. TSP systems may be hardware-based or cloud-based. The benefits of TSP are improved transit travel time, reliability and on-time performance, and ability to utilize emergency vehicle preemption.

Typical Application

- TSP is best utilized in conjunction with locating transit stops/stations on the far side of intersections, which means the transit stop is positioned after the intersection on the transit route, allowing transit to go through the intersection before stopping.
- TSP can be utilized in conjunction with transit-only lanes or queue jump lanes.
- Where transit operates in mixed traffic conditions, TSP can be utilized on streets where traffic signal delay interferes with transit schedule adherence, or where traffic signal wait times (often combined with dwell times - where transit must wait at transit stops) cause transit travel times to be longer.

- TSP detection can be accomplished by light-based detection, sound-based detection, radio-based detection, and satellite-based GPS detection.
- On-board and off-board systems must work together for successful TSP operation, requiring coordination with the transit agencies.

Additional Considerations

- The TSP network needs to be compatible with Caltrans traffic controllers in order for the controller to receive and process the TSP signal from the transit vehicle.
- For hardware-based TSP, the current practice is for the local agency or transit agency to utilize a contractor to install the TSP network (auxiliary panel, phase selector, GPS radio antenna, cable, etc.) by way of the Caltrans encroachment permit process. Each transit vehicle is equipped with a transmitter.
- There are currently some limitations to existing Caltrans controller software:
  - » Unless an exception is granted, currently Caltrans software can only provide TSP for movements on the mainline of the intersection, and not for both directions of traffic.
  - » Transit agencies' ability to monitor TSP can often be difficult due to existing Caltrans signal controller software. Monitoring and evaluation are critical to maintaining TSP for optimized traffic and transit operations.
- TSP sensors may need to be mounted on new poles depending on the conditions and standards of the existing traffic signal poles, potentially contributing to higher costs.
- TSP is a rapidly evolving technology and should be monitored to maintain best practices with transit agencies and Caltrans.

Reference Design Guidelines

- CA MUTCD Rev 8: Section 4D.27
- Caltrans – Transit Signal Priority Research Tools
- Caltrans – Development of an Integrated Adaptive Transit Signal Priority (ATSP) and Dynamic Passenger Information (DPI) System
- Caltrans – Toward Deployment of Adaptive Transit Signal Priority Systems
- Caltrans – Complete Streets Elements Toolbox 3.0 H49
- **Other resources:** US DOT – Transit Signal Priority (TSP): A Planning and Implementation Handbook; NACTO - Active Transit Signal Priority

D4/Caltrans Examples

- San Pablo Ave (SR 123), Oakland; International Boulevard (SR 185), Oakland & San Leandro; El Camino Real (SR 82); AC Transit Mission Boulevard TSP (SR 238), Fremont and Union City.

1.B.2 Transit-Only Advanced Signal Indication (With Dedicated Transit Approach Lane)

A transit-only advanced signal indication allows transit vehicles to proceed through or turn at an intersection ahead of other traffic.

Typical Application

This treatment is installed in combination with a bus-only lane, rail-only lane, or queue jump lane, in order for transit vehicles to utilize a dedicated transit signal.

Reference Design Guidelines

- CA MUTCD Rev 8: Sections 2B.19-22 for standards and guidance for lane control signage, 4D.27 for standards and guidance for transit signal priority treatments
- **NACTO:** Active Transit Signal Priority (see: "Phase Insertions"), Transit Approach Lane

D4/Caltrans Examples

- Webster (SR 61) at Willie Stargell Avenue, Alameda; Van Ness (US 101) & Broadway, San Francisco

Transit-only advance signal for Muni in San Francisco (source: MTC).

2

Transit Access Facilities

Transit access facilities are infrastructure focused on improving the experience for transit passengers by providing direct, comfortable, and accessible infrastructure for pedestrians and bicyclists to access existing transit stop locations. This toolbox includes guiding passengers to bus stops, improving pedestrian and bicycle access to bus stops, mobility hubs, and park-and-ride.

A NOTE ON PARATRANSIT

Paratransit services require unique and specific guidelines and planning. When relevant, some recommendations for coordination with paratransit are included here, but this toolbox is not exhaustive on paratransit needs.

Improvements envisioned for paratransit include standardizing eligibility requirements for all the agencies, managing transfers across agencies, and allowing paratransit riders to pay with Clipper cards. (Transform)

Further consideration should be given to paratransit vehicle access to transit priority facilities including transit lanes and transit signal priority.

A NOTE ON ADA AND PLANNING FOR ACCESSIBILITY

ADA accessibility standards for Caltrans are detailed in DIB 82-06, and are noted through the toolbox.

The United States Department of Transportation (USDOT) recently published a final rule on Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) that will increase accessibility for transit users by providing local governments and other owner-operators of the public right-of-way clear, uniform, and technically defined standards of accessibility to guide their design decisions for new construction and alterations of transit stops in the public right-of-way (USDOT).

Everyone benefits from improved access for those who most need it: for example, ADA requirements often improve access for those with a stroller or a bicycle, rolling down a curb cut or taking an elevator to a train platform, and many will age into needing ADA-required benefits, and "whether permanent or temporary, many of us will have times when we need a helping hand, and the ADA makes that possible." ADA requirements are often considered "a floor, not a ceiling" for accessible design (Transform).

There is a wide range of disabilities to consider when planning transit facilities, including but not limited to: physical disabilities such as mobility impairments (including wheelchair users, cane users, and more), sensory disabilities (including vision or hearing impairments), cognitive disabilities (including intellectual disabilities, dementia), developmental disabilities (including autism spectrum disorder), and mental health conditions. All these conditions can impact a person's ability to navigate and access transit and other transportation systems effectively, and require planning and coordination between ADA requirements, wayfinding, and other transit amenities referenced throughout this document.

A. BUS STOPS AND BUS STOP AMENITIES

The following section includes guidance on bus stops and potential amenities. Additional items include considerations for locating bus stops, curb extensions/bus bulbs, and markings. These strategies improve the waiting experience for transit passengers, but many facilities can also improve speed and reliability for bus transit.

2.A.1 Bus Stops (Location and General Design Guidance)

Bus stop design and location is an important element in improving the quality of transit service, as it can both improve access and reliability.

Typical Application

- In determining bus stop locations, key factors to consider are the type of transit system being served, and the transit travel demand related to the origins/destinations and built environment of the local area.
- At a minimum, bus stops need to be clearly marked and indicate the transit routes servicing the stop, and include an accessible landing area for the bus platform zone.
- The bus stop should have clear parking restrictions (signage and/or curb paint treatment), which should be long enough to accommodate one bus length as well space to pull in and out of the stop. Bus stops with frequent bus services may require curb space to accommodate two buses.

Bus stop amenities for TEMPO riders in Oakland on International Boulevard (SR 185) (source: Caltrans).

- The far side of the intersection is the preferred location for bus stops for both improved safety and operational reasons. The far side location allows:
  - » Pedestrians to cross the intersection behind the bus where they are more visible to approaching drivers.
  - » The bus to re-enter the travel stream following a break in traffic caused by the signal timing.
  - » Transit signal priority to work more efficiently, wherein the bus proceeds through the intersection using the extended green time before stopping on the far side to drop off and pick up passengers (see Section 1.B.1 Signal Priority Treatments).
- For some stop-controlled intersections with only one travel lane in each direction and no shoulder, near-side in-lane stops may be preferred (NACTO).
- Caltrans planners and designers need to coordinate with local transit providers on any modifications to bus stops, bus stop amenities, or bus stop location.

Additional Considerations

- **Coordination of Bus Stops with Bikeways:** There are numerous ways to configure bus stops, and the designer should conduct a site analysis to develop a context-sensitive and appropriate design. In general, preference should first be given to a design that provides space for bicyclists to move comfortably within their own travel way separated from the bus lane and the area where pedestrians wait for and board buses. The next-preferred design option would provide a lower degree of separation, integrating pedestrians and bicyclists through the boarding area. The third preference would be to provide a space shared by bicyclists and buses. These preferences are rooted in the California Safe Systems Approach.
  - » Bus Pads: At pullout stops where the bus crosses a bike lane, if a concrete bus pad is installed, it should end at either the right edge of the bike lane or the left edge of the bike lane (including its full width), to prevent the creation of a longitudinal seam within the bike lane. Where bikes pass stopped buses, as on shared bus-bike lanes, bus pads should be provided across the full width of the lane to provide a level surface to both buses and bikes.
- **Planning for People with Disabilities:** The range of disabilities considered should include: physical disabilities such as mobility impairments (wheelchair users, cane users), sensory disabilities (vision or hearing impairments), cognitive disabilities (intellectual disabilities, dementia), developmental disabilities (autism spectrum disorder), mental health conditions, and neurological disorders; all of which can impact a person's ability to navigate and access public transportation systems effectively.
- Bus stop signs and information should follow the standards and guidelines now being produced by the Regional Mapping and Wayfinding Project (see Section 2.B.2 Wayfinding).
- Pullout bus stops can be challenging for transit operators as they necessitate reentering traffic from a stop, which can cause delays and potentially safety concerns. Pullout stops should be avoided when possible and analyzed on a case-by-case basis. (AC Transit-Supportive Design Guidelines 2025).

Reference Design Guidelines

- CA HDM 7th Edition: Topic 108.2-5 for guidance on the process of developing transit loading facilities, Index 303.4(2-3) for design guidance on bus stops configured as bus bays and bus bulbs, Index 626.4(3) and 636.4(3) for structural section guidance for concrete bus pads
- CA MUTCD Rev 8: Sections 2B.46.01, 2B.46.32, 2B.46.59-62, 2B.47.14, and 2B.48 for signage at bus stops; 3B.19 for bus stop pavement markings; 3B.23 for curb painting at bus stops; 3D.01 for bus-only lane markings at applicable bus stops
- CSET 3.0.1: H27, H28

Bus stop accessibility improvements on SR 66 in San Bernardino (source: CSET).

- **Caltrans:** Caltrans Traffic Calming Guide, Caltrans Roadway Lighting Manual (forthcoming)
- DIB 82-06**:** Section 4.3.16 for guidance on ADA requirements at bus stops
- DIB 94**:** Section 7 in-lane bus stops
- **FHWA:** Pedestrian Lighting Primer and Lighting Handbook
- **US Access Board:** Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (final adopted Rule) Section R309 Transit Stops and Transit Shelters
- **AC Transit:** Transit-Supportive Design Guidelines for guidance on accessible landing zones and clear zones for ADA access at bus stops; ADA Accessibility and bus stop placements are governed by AC Transit Board Policy 501.
- **NACTO:** Station & Stop Principles; Universal Design Elements; Bus Stops; Small Transit Shelter; Large Transit Shelter; Passenger Information & Wayfinding and System Wayfinding & Brand Seating (benches and leaning rails); Accessible Paths & Slopes; Bike Parking; Platform Height; Transit Curbs
- **Project for Public Spaces:** Lighting Use & Design

Caltrans Examples

- Van Ness Ave (US 101), San Francisco; East 14th and International Blvd (SR 185), Oakland; Webster St (SR 61) & Willie Stargell Ave, Alameda

Source: VTA

2.A.2 Freeway Access Stations

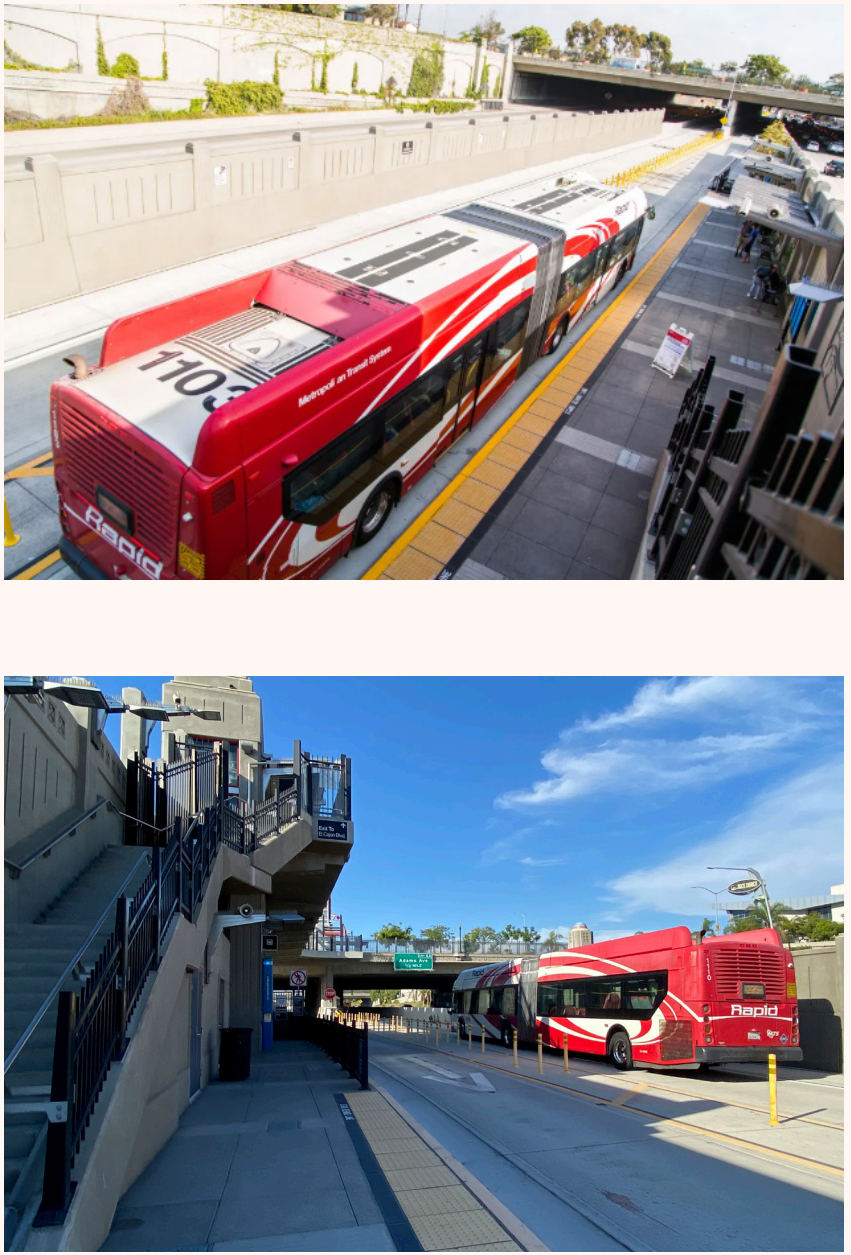
Freeway access stations provide direct access to a transit line operating within the footprint of a freeway, expressway, or controlled-access ramp that links to a freeway or expressway.

Typical Application

- Used at locations that have high demand for express transit services utilizing the freeway or expressway and where technically feasible, with sufficient available right-of-way for safe operations. Locations include freeway medians, transit centers, and mobility hubs (including park-and-ride lots).

Additional Considerations

- Historically, some freeway access stations have been in locations that inadvertently encourage pedestrians and bicyclists to cross ramps at uncontrolled locations, which is not desirable; locating freeway access stations and bus stops to where ramps are directly connected to local streets rather than further toward the freeway is preferred for safety, though this may increase transit travel times. Ideal conditions include easy, safe access for pedestrians and bicyclists with minimal transit travel time disruption.
- When appropriate, locating bus stops within the freeway may be considered for commuter express bus service. This strategy helps with transit efficiency by locating the bus stop either at the end of an offramp or the beginning of an onramp, or in freeway medians (where space is available), such that the bus can quickly exit and re-enter the freeway. Current examples of this can be seen in Napa County, SR 29 at Imola Avenue.
- For existing freeway access bus stops that may be difficult to access by pedestrians and bicyclists, projects and treatments to improve pedestrian and bicycle access should be considered.



Freeway access at the Boulevard Transit Plaza in San Diego from overpass level (top) and underpass level (bottom) on I 15 at El Cajon Boulevard (source: Caltrans).

- A prominent, large-scale example within the San Francisco Bay Area is the Salesforce Transit Center, also known as the Transbay Terminal. It is served by express buses that operate a significant portion of their route utilizing the freeway. The facility has bus bays (pullouts) for passenger boarding/alighting on an elevated, controlled-access ramp that links directly to the I 80 freeway and Bay Bridge. The bus bays are accessed by way of the Transit Center building.

Reference Design Guidelines

- CA MUTCD Rev 8: Section 2D.48 for guidance on transit operator signage at park-and-ride lots, Section 4L.103(CA) for guidance on flashing warning beacons at bus stops on freeway interchanges
- CSET 3.0.1: H28

D4/Caltrans Examples

- Salesforce Transit Center (to I 80), San Francisco; Boulevard Transit Plaza, El Cajon Boulevard and I 15, San Diego (D11); Fairfield Transit Center (to I 80); Imola Park and Ride (to SR 29), Napa

Freeway access for AC Transitbay buses to the Salesforce Transit Center in San Francisco (top) and for buses at the Imola Park-n-ride in Napa (bottom) (source: MTC).

2.A.3 Bus Bulbs

A bus bulb is a curb extension that accommodates a bus stop, allowing the bus to dwell within the travel lane to pick up and drop off passengers.

Typical Application

Bus bulbs are typically used where the bus has its own lane or where traffic volumes in the curbside lane would otherwise impede and delay buses from re-entering the lane from a pullout bus stop. In the latter case, bus bulbs provide some of the benefits of a transit lane by prioritizing the efficient operation of the bus, thus increasing person throughput and reducing traveler delay. Bus bulbs are also used where additional sidewalk space is needed to accommodate a shelter and seating at a bus stop (see Section 2.A.4 Bus Boarding Islands for guidance where Class II bike lanes or a Class IV bikeway is present).

Additional Considerations

- While stopping in the traffic lane may impact traffic operations, there are situations where preferential treatment for transit may be desirable, with the goal to minimize overall person delay.
- Bus bulbs may be useful with low speeds (usually under 40 mph), and where parking is permitted at all times. (DIB-94)
- Like with Bus Boarding Islands, bus bulbs should not be installed where the prevailing speed is over 35 mph. Bus bulbs are also appropriate where additional room is needed to accommodate amenities like shelters.
- Bus bulbs may include some hardened infrastructure to improve comfort and sense of safety for transit users.

Reference Design Guidelines

- CA HDM 7th Edition – Topic 303.4 for guidance on sidewalk bulb-outs, with Index 303.4(2) specific to bus bulbs
- CSET 3.0.1: H04, H14
- CA MUTCD Rev 8: see Section 2.A.1 Bus Stops
- DIB 82-06: Section 4.3.16 for requirements for ADA accessibility
- DIB 94: Section 7.2
- AASHTO Guide for Geometric Design of Transit Facilities on Highways and Streets

Caltrans Examples

- Euclid Ave & E 14th St. (SR 185), San Leandro; Sloat & 19th Ave (SR 1), San Francisco

Bus bulb on O'Farrell Street in San Francisco (source: SFMTA).

2.A.4 Bus Boarding Islands

Bus boarding islands, or floating bus stops, are bus stops where the boarding platform is separated from the sidewalk by a bike lane. The bike lane is brought behind the bus stop to eliminate any potential conflict points between buses pulling into the stop and cyclists in the bike lane.

Typical Application

- Bus boarding islands are typically used on streets with a Class IV protected bikeway and can also be employed on streets with Class II bicycle lanes. They are located between the bikeway and the lane accommodating the bus, which can be either a bus-only lane, a mixed traffic lane, or a parking lane.
- Bus boarding islands place the bike lane behind the bus stop, which minimizes conflicts between the bicycle movement and the bus boarding/alighting operation. They also reduce the chance of a cyclist riding in a bus operator's blind spot.
- Bus boarding islands also provide a dedicated space for passenger boarding/alighting and reduce transit vehicle dwell times at bus stops.

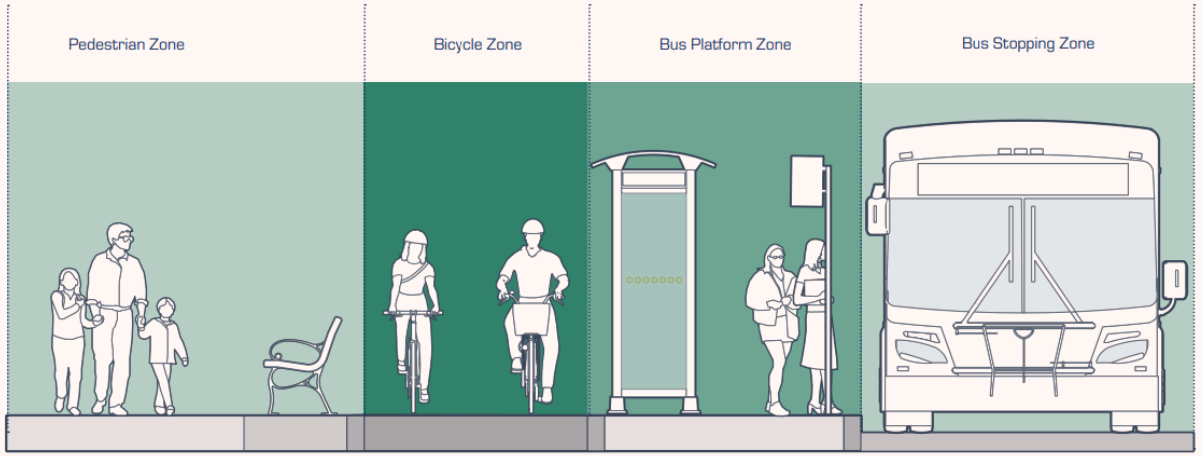
Additional Considerations

- Floating bus islands have two types of bus operational benefits. When a bus approaches a floating bus stop, it does not need to exit and re-enter the vehicle lane to serve each request for boarding or alighting. Merging back into the travel lane can be challenging for bus operators due to motorists failing to yield to the merging movement. Eliminating this issue can lead to travel time savings, which translates into operational cost savings and improved travel experience for customers. The other operational benefit includes a designated area for passengers to wait for their bus. (AC Transit - Transit-Supportive Design Guidelines).

Bus boarding island in Emeryville (source: AC Transit).

- The operational improvements offered by the in-lane bus stop can offset any operational delay for other motor vehicles when person throughput, rather than vehicle-throughput, is considered.
- Floating bus stops have special maintenance considerations because of the channelization created for the bikeway route. Bikeways may catch debris, dirt, and leaves, which should be swept regularly or seasonally. Leaves, especially when wet, are very slippery and can create hazards for bicyclists passing through the area. (AC Transit - Transit-Supportive Design Guidelines).

- Special attention should be given to the required ADA accessibility of the boarding island including a boarding and alighting area with a minimum of 8 feet of clear length measured perpendicular to the curb and 5 feet of clear width measured horizontal to the curb (see Caltrans DIB 82-06 Section 4.3.16). Evaluate whether a level pedestrian crossing should be provided between the sidewalk and the island, if feasible with the drainage design, as an alternative to the use of ramps. The benefits of a level pedestrian crossing are that it requires less exertion from wheelchair users, compared to the use of ramps, and that the level pedestrian crossing functions as a speed table within the bike lane in order to slow bicycle traffic and alert bicyclists to the pedestrian crossing.
- When possible, boarding islands should include amenities such as shade or seating, to encourage use by passengers and avoid extended boarding time (some passengers may wait on the sidewalk without amenities, leading to longer passenger boarding times).
- Bus boarding islands may be useful with low speeds (usually under 40 mph). (DIB-94)



Bus boarding island diagram (Source: AC Transit).

Reference Design Guidelines

- CA MUTCD Rev 8: see Section 2.A.1 Bus Stops
- DIB 82-06: Section 4.3.16 for requirements for ADA accessibility (use guidance from the Complete Streets Elements Toolbox H47)
- DIB 94: Section 7.3
- CSET 3.0.1: H47
- Caltrans District 4 Bike Plan: (update forthcoming 2025)
- AC Transit Transit-Supportive Design Guidelines

Caltrans Examples

- San Pablo Ave Bus Lanes and Bike Lanes Project, Oakland, Emeryville, and South Berkeley (planned); Central Ave (SR 61) and 8th St, Alameda (planned).

2.A.5 Bus Stop Amenities

Amenities at bus stops range from those that improve passenger comfort to those that increase the efficiency of transit operations. The level of amenities should be related to demand. They include:

- Transit shelters and shade or wind protection structures, including trees
- Real-time and static passenger information
- Wayfinding signage
- Seating
- Pedestrian-scale lighting
- Secure bike parking (also e-scooters)
- Level or near-level boarding, including platforms or transit curbs
- Bus stop pavement markings and appropriate queuing space for buses
- Waste receptacle
- Braille/talking bus stop audio service
- Off-board fare payment
- Food or drink vendors
- Hydration station and restrooms

Public art at a bus stop on Van Ness Ave (US 101), San Francisco (source: Caltrans).

Typical Application

Passenger amenities are found at a range of types of bus stops, with specific features dependent on the local context, available space, and funding provided. Caltrans planners and designers need to involve local transit providers in decision-making and funding. Bus stop amenities are also considered complete streets elements and are tracked in the Caltrans Asset Management Tool. Additional support and guidance may be available through District and Headquarters Complete Streets staff.

Additional Considerations

- Some localities are improving on the basic bus stop design by integrating the space into the local community and providing amenities to help pass the time while waiting. A key benefit of this approach is a real or perceived improvement in safety by increasing the visibility of the space through public use (APTA). The amenities offered at enhanced transit waiting areas can include:
  - » Wi-Fi connectivity
  - » Charging station for phones and/or tablets
  - » Public art
  - » Children's play structures
- Crime Prevention Through Environmental Design: this is a multidisciplinary approach to crime prevention that uses urban and architectural design and the management of urban and architectural environments (International CPTED Association)

Reference Design Guidelines

- CA HDM 7th Edition: Index 626.4(3)
- CA MUTCD Rev 8: Section 2D.50.09-11 for guidance on placement of wayfinding signage oriented to pedestrians, 3B.19 for bus stop pavement markings, 9B.23 for guidance on bicycle parking area signage
- CSET 3.0.1: H27, H48, H99
- DIB 82-06: Section 4.3.16 for requirements for ADA accessibility
- **American Public Transportation Association:** Bus Stop Design and Placement Security Considerations
- **NACTO:** see Section 2.A.1 Bus Stops, Green Infrastructure
- **Other Resources:** Project for Public Spaces - Placemaking in Transit, Thinking Beyond the Station, The Placemaking Process, Lighting Use & Design
- **TransitCenter:** From Sorry to Superb: Everything You Need to Know about Great Bus Stops

Caltrans Examples

- Van Ness Ave (US 101), San Francisco; East 14th St/International Blvd (SR 185), Oakland; Webster St (SR 61) & Willie Stargell Ave, Alameda

Bus stop amenities at the Boulevard Transit Plaza on I 15 at El Cajon Boulevard in San Diego (source: Caltrans).

B. OTHER TRANSIT ACCESS AMENITIES

2.B.1 Pedestrian and Bicycle Access

To access a transit stop or station, all passengers travel at least a short distance by foot, wheelchair, bicycle, or other assistive device; this is referred to as the "first-and last-mile" connection (the distance covered between a transit stop and the "final" destination). A well-developed and connected network that creates a low-stress experience suitable for all ages and abilities can encourage a mode shift from motor vehicles to utilizing pedestrian or bicycle access with transit.

Typical Application

The full breadth of pedestrian and bicycle access guidance can be found in the Caltrans Complete Streets Transit toolbox 3.0, including: considerations and strategies on appropriate use of bikeway classifications; crosswalk treatments and pedestrian refuges; bicycle intersection elements including bike boxes, two-stage turn queue boxes, and more.

People walking and using bikes in conjunction with transit (source: VTA).

People biking between Lucky Drive Bus Pad and Larkspur Ferry Terminal on the Corte Madera Creek Greenway adjacent to US 101 in Larkspur (source: Caltrans).

Additional Considerations

- Improving the safety of non-motorists is imperative in promoting active transportation modes, especially around transit stations where different transportation modes have much higher rates of interaction (Mineta).
- A bicycle-to-transit trip typically extends the catchment area of a bus stop or train station (potentially up to two or three miles.) Thus, it is critical and beneficial for transit that stops and their surrounding environments are safe and accessible for all users.
- Secure bike parking is an important element in encouraging bicycle access to transit.
- Facilities for blind and visually impaired pedestrians should be particularly emphasized, including Accessible Pedestrian Signals, Tactile Wayfinding, and other facilities.

Reference Design Guidelines

- CSET 3.0.1
- Mineta Transportation Institute at San José State University Enhancement of Multimodal Traffic Safety in High-Quality Transit Areas, 2021
- Caltrans District 4 Bicycle Best Practices
- Caltrans District 4 Pedestrian Plan and Bicycle Plan
- FHWA: Pedestrian Safety Guide for Transit Agencies
- American Public Transportation Association: A Practical Transit Agency Guide to Bicycle Integration and Equitable Mobility

Caltrans Examples

- Corte Madera Creek Bike Ped Greenway (connecting to SMART & Ferry Terminal), Larkspur. SMART Pathway/Great Redwood Trail, San Rafael

2.B.2 Wayfinding

Wayfinding signage enables individuals to navigate a city, town, or region and assist them to find their destination of choice. This signage points out the services, amenities, or interesting locations nearby (CSET 3.0.1). Wayfinding signage can be designed for pedestrian, bicycle, and transit users. Wayfinding should be used at transit stops, park-and-ride lots, mobility hubs, and other key locations to assist people navigating an area.

Typical Application

- Signage should be placed between services at major decision points to support wayfinding and connections. Signage shall direct users to platforms, bus stops, taxis, parking, bicycle parking, adjacent streets, and exits. (MTC).
- MTC's Regional Mapping & Wayfinding Program is creating signage standards for transit stops throughout the region; all wayfinding on the STN should adhere to new regional wayfinding standards when applicable.

Additional Considerations

- Historically, freeway-located wayfinding for transit was primarily limited to rail transit hubs; as Mobility Hubs, high-quality transit lanes, and other high-frequency bus transit infrastructure is becoming more prevalent, Caltrans should consider utilizing freeway wayfinding for bus transit as necessary.

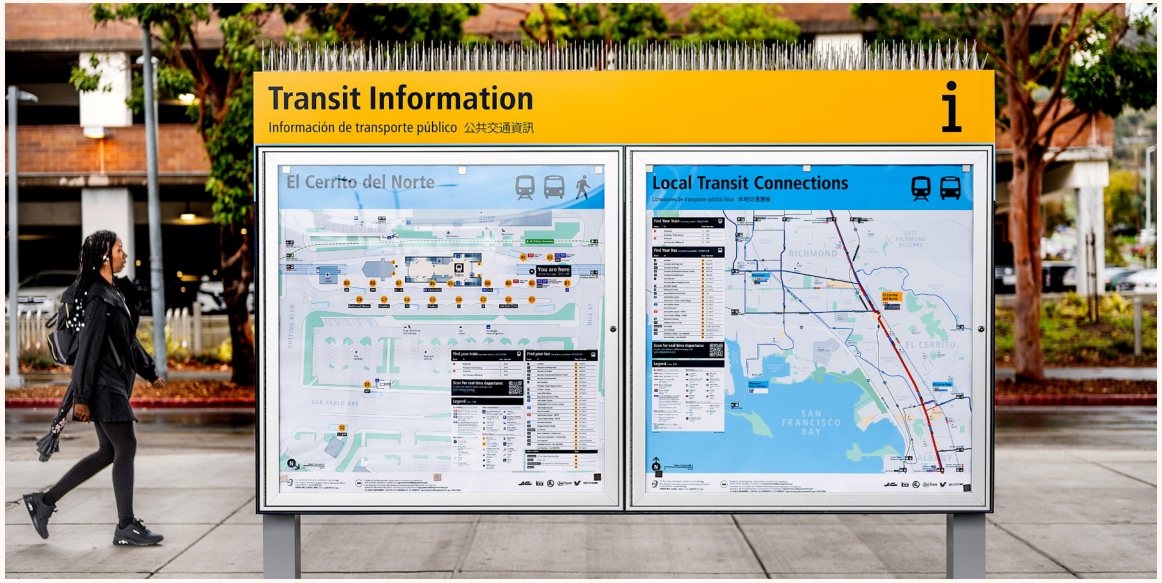
Wayfinding signage at BART and Caltrain station (source: CSET).

Reference Design Guidelines

- CA MUTCD Rev 8: Sections 2D.50 Community Wayfinding Signs
- CSET 3.0.1: H99
- Caltrans Tourist-Oriented Directional Signs Program
- Caltrans Mobility Hub Design & Operations Guidelines (forthcoming 2025)
- MTC Regional Transit Wayfinding Designs & Standards (forthcoming 2025)

Caltrans Examples

- MTC Regional Transit Wayfinding Designs & Standards



MTC Regional transit wayfinding signage for walking directions (top) and regional connections (bottom) by the El Cerrito del Norte BART stop (sources: MTC).

2.B.3 Mobility Hubs

Mobility hubs are locations that provide an integrated suite of mobility services, amenities, and technologies to enable seamless multimodal trips serving the community at large and individual users. These facilities are often developed at Caltrans-owned Park & Ride lots; and are categorized into multimodal and commuter ridershare facilities.

Typical Application

- Multimodal mobility hubs have more amenities and prioritize multimodal connectivity, including:
  - » Access to two or more transportation services
  - » Enhanced access for bicyclists and pedestrians to the site
  - » Human-centered design that creates a sense of place
  - » Context-sensitive programming and amenities
  - » Flexible space to adapt to evolving needs.
- Mobility hubs are designed to enhance connectivity of multimodal travel while reducing greenhouse gas emissions, offering equity, safety, and value to a city or regional transit system. (CSET 3.0.1)

Mobility hub example diagram of some travel options that may be available, including rail, bus, bike, and shared vehicles (source: MTC).

- MTC's Regional Mobility Hub Program envisions Mobility Hubs to serve as community anchors and offer a welcoming environment that enables travelers of all backgrounds and abilities to access multiple transportation options – including shared scooters, bicycles and cars, as well as transit – and supportive amenities in a cohesive space. Mobility hubs are places in a community that bring together public transit, bike share, car share, and other ways for people to get where they want to go without a private vehicle. (MTC)
- Mobility hubs are best utilized where commuters and non-commuters can also satisfy errand-based trips such as grocery shopping. (CSET 3.0.1)
- Mobility hubs can be located where transit services already come together, or in communities and locations where transportation is needed the most. MTC has prioritized investments for regionally significant mobility hubs. (MTC)

Fairfield Transportation Center serving I 80 mobility hub provides comfortable transfers and amenities (source: City of Fairfield).

Additional Considerations

- Many Caltrans owned and operated park-and-ride lots are becoming outfitted with more amenities and will become either multimodal or commuter rideshare mobility hubs.
- Commuter Rideshare Mobility Hubs are considered Mobility Hubs, but these facilities are typically in rural locations where it may not be feasible or beneficial to have all the amenities and multimodal connections. Commuter Rideshares are more similar to traditional park-and-ride facilities as they are typically more focused on only carpool and vanpool uses. Coordination with transit agencies should occur to determine which amenities should be prioritized.
- Transit Priority Facilities may be utilized to prioritize transit access to Mobility Hubs, including transit lanes, queue jump lanes, TSP and more.

Reference Design Guidelines

- CA HDM 7th Edition: Topic & Table 636.4, Topics 905 & 915
- CA MUTCD Rev 8: Section 2D.48 (Park-Ride Sign)
- CSET 3.0.1: H19, H99
- Caltrans Park & Ride Program Resource Guide, Caltrans Park and Ride Inventory, Park and Ride Program Resource Guide, Mobility Hub Design & Operations Guidelines (forthcoming 2025)
- 2020 VTA Bus Stop & Facility Criteria and Standards-Section 3

Other Resources

- **MTC:** Mobility Hubs, Bay Area Mobility Hub Implementation Playbook
- **VTA:** Bus Stop & Facility Criteria and Standards - Section 3

Caltrans Examples

- Salesforce Transit Center, San Francisco; Fairfield Transportation Center, Fairfield

CHAPTER

06 Next Steps

Next Steps

This chapter outlines the next steps for the Caltrans Bay Area Transit Plan. *The strategies presented below have been designed to follow the goals and objectives of the* **Transit Plan** *(see Chapter 3), as well as the overall statewide goals and objectives.*

These strategies highlight how Caltrans Bay Area plans to implement improved investment in transit on the State Transportation Network (STN), including supporting the development and implementation of the *Caltrans Director's Transit Policy*, including its core priorities of 1) planning, 2) projects, and 3) data and technology targets.

Source: Golden Gate Transit

State and Regional Efforts on Transit

There are various state and regional efforts that will influence tangible improvements in how Caltrans Bay Area approaches transit performance evaluation and transit infrastructure delivery, including:

- SB-125, which establishes a Transit Transformation Task Force (TTTF) led by the California State Transportation Agency to "develop policy recommendations to grow transit ridership, improve the transit experience and address long-term operational needs." The TTTF has issued a preliminary Findings and Policy Recommendations that impact Caltrans, including strategy recommendations to standardize, support, and scale transit priority facilities; expedite delivery of transit-supportive infrastructure; and coordinate and collaborate to deliver infrastructure across jurisdictions. The California State Transportation Agency will submit a final report of findings and policy recommendations based on the TTTF's efforts to the State Legislature by November 2025.
- SB-960, which requires the Director of Transportation to adopt a transit policy to guide the implementation of transit priority facilities and transit stops on the State Highway System, as specified. The bill also requires the department to adopt, on or before July 1, 2027, guidance that defines transit performance measures and identifies the department's responsibilities in supporting transit vehicles on the State Highway System.
- Ongoing coordination with MTC and other regional partners to align Caltrans Bay Area (District 4) transit planning with regional and local transit priority initiatives, including the MTC Bay Area Transit Priority Policy for Roadways and MTC Regional Transit Assessment.

1

TRANSIT PLANNING & FUNDING

Increase the role and capacity for District staff to consider the impact of Caltrans investments on transit operations and ridership, in Comprehensive Multimodal Corridor Plan and other formal regional and corridor planning processes, and incorporating transit into projects through the State Highway Operations and Protection Program (SHOPP). This includes bringing activities such as FTA-required transit agency plans, Transportation Asset Management (TAM) plans, Coordinated Plans, Short Range Transit Plans, Long Range Transit Plans, and Public Transportation Agency Safety Plans, into the formal regional transportation planning process. Furthermore, District 4 should work with Caltrans Headquarters & transit stakeholders to identify resources for maintenance and operations.

Note: The TTTF identified findings and policy recommendations for those strategies which require further development, including: establishing a by-right permitting mechanism for transit infrastructure; and updating state funding programs and guidelines to encourage the delivery of transit priority facilities.

2

PROJECT DELIVERY

Increase the role and capacity for District staff from the Transit Grants and Planning Branch, and other divisions with training in transit planning and operation to be embedded throughout the lifecycle of transit-related projects, potentially from grant writing to the streamlined implementation and review of transit-supportive and transit access projects on the STN. This would facilitate the further integration of transit into Project Delivery, Operations, Maintenance and other Caltrans functions; promote transit priority projects where feasible in project review and on project development teams; and assist in advocating for compliance with the Director's Policy for Public Transit (currently under development).

Note: The TTTF identified findings and policy recommendations for these strategies, including: encouraging implementation of transit priority facilities on the STN and ensuring that the STN can be used by transit riders.

3

DATA COLLECTION & PERFORMANCE MEASURES

Developing formal Caltrans performance goals is an important step in prioritizing transit infrastructure in Caltrans project delivery and planning, which requires both improving data collection – identifying and focusing on gaps in coordination with transit agencies while working with existing data collection measures to avoid redundancy or burdensome reporting – and working with Caltrans Headquarters to set and meet complete street performance goals with transit-specific measures to monitor transit priority implementation on the STN. Finally, Caltrans should work with regional stakeholders to develop and maintain a consistent set of performance measures and datasets to help in prioritizing transit infrastructure investments.

Note: SB 960 requires Caltrans to adopt guidance that defines transit performance measures and identifies the Department's responsibilities in supporting transit vehicles on the STN. Caltrans role in adhering to SB 960 performance metrics will be further addressed in the Director's Policy on Public Transit.

4

TRANSIT NEEDS ASSESSMENT

Caltrans Bay Area will work to further define the methods developed for this Plan. This in turn will help identify segments along the State Transportation Network (STN) where increased investment on transit access and transit priority facilities could be most impactful on transit service. The District will also work with Caltrans Headquarters Office of Transit Planning and regional partners to further refine the locations-based needs assessment in the future to better align with Statewide methodology (currently in development) and local priorities. The updated methods should account for local priorities (i.e., countywide priorities), transit ridership, user safety (i.e., collision data), existing access infrastructure (i.e., transit agency and bicycle and pedestrian infrastructure), as well as the concentration of transit-dependent populations. Finally, the Transit Plan project team recommends that transit improvements be considered as part of the overall maintenance work package for each STN segment as funding decisions are made to improve STN segments in particular those ranked higher through the needs assessment.

Staying on Track

This Bay Area Transit Plan should be updated and revised at least every four years to align with statewide Transit Plans and other statewide and regional efforts.

Source: SamTrans

Appendices

1. Best Practices Literature Review
2. Policy and Plans Context Memo
3. Transit-Supportive Infrastructure Inventory
4. Goals, Objectives, and Performance Measures
5. Public Engagement Summaries
6. Complete Streets Transit Toolbox

NOTE: Some maps, findings, and language included in the final report may differ from those used in the Appendices which were completed during earlier phases of the project.


CALTRANS BAY AREA
TRANSIT PLAN
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