Alameda County

[Narrative summary provided by the Alameda County Transportation Commission.]

The COVID-19 pandemic reshaped travel demand and the way people use the transportation system in Alameda County; long-standing travel patterns have shifted and there is great uncertainty about the future. For example, transit ridership plummeted at the start of the pandemic across all operators; some riders have returned, but that recovery has been in fits and starts as case counts have risen and fallen. No transit agency has reported a new stable ridership state. Additionally, disruptions to the global supply chain have rippled through goods movement in Alameda County. Even the most stable indicators, like freeway congestion, have changed in fundamental ways since the start of the pandemic. Peak-period freeway speeds have increased (indicating less congestion), even as volumes in many places are back to pre-pandemic levels.

Given that much is still in flux, the transportation statistics reported below reflect pre-pandemic conditions. However, the vast majority of the multimodal roadway, highway/freeway, rail, and goods movement infrastructure described below is still operating and needs for upgrades and improvements exist throughout the system. Alameda CTC and our partners are aware that planning and project delivery of these improvements needs to respond to long-standing needs while also seeking to be resilient against multiple potential future trends.

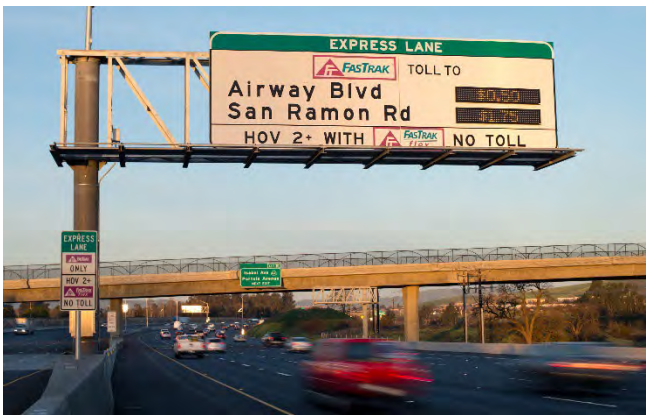
County Overview

Located at the heart of the nine-county San Francisco Bay Area, Alameda County is the second-largest county in the Bay Area, with a population of over 1.67 million. In 2019, the extensive transportation network of roads, rails, buses, trails and pathways carried roughly 1.2 million commute trips daily to, from, within, and through the county, supporting economic growth in the Bay Area, California, and the rest of the nation. The county's transportation system is multimodal, with non-auto trips on the rise, representing 30% of the overall mode share in 2019.

Roads and Highways

Alameda County roadways move people and goods within the county and beyond and support multiple transportation modes. As regional economic and population growth increase demand for goods and services, a variety of modes, including cars, transit, bikes, and trucks, are competing to access the same facilities.

- The majority of Alameda County's 3,978 road miles are highways, arterials and major local roads that provide access to housing, jobs, education, and transit. Forty percent of daily trips in Alameda County are carried on arterials and major roads.



Pictured: Travelers have made over 14.5 million trips on the I-580 Express Lanes since opening in February 2016.

- Historically, about five of the Bay Area's top 10 most-congested freeway segments have been in Alameda County.
- Congestion in Alameda County is compounded by the large amount of vehicle, rail, and freight travel through Alameda County between the origins and destinations of San Joaquin, Contra Costa, Santa Clara, San Francisco, and San Mateo counties.

Transit

Transit provides access to work, school, recreation, medical appointments, and other important destinations in Alameda County and includes rail, bus, ferry, and shuttle service provided by public and private operators.

- In 2019, Alameda County had a transit commute share of 18%, the second highest in the state, with approximately 96 million riders boarding transit annually.

- The Alameda-Contra Costa Transit District (AC Transit) served 49% of annual countywide transit ridership on 151 bus routes.

- The San Francisco Bay Area Rapid Transit District (BART) served 46% of annual countywide transit ridership, with 22 of BART's 50 stations located in Alameda County.

- San Francisco Bay Ferry service was also growing with the county's three ferry terminals on average serving about 10,000 commuters each weekday in 2019.

Pictured: AC Transit picking up passengers on a major arterial.

Goods Movement

Alameda County serves as a gateway to the world for goods movement to and from the county, Bay Area, Northern California, and beyond.

- Alameda County contains the core of the Bay Area/Northern California freight and passenger rail systems, and the demand for both freight and passenger service has grown over time.

- In 2019, the Port of Oakland was the eighth busiest port in the nation by volume and handled 99.9% of shipping container volume for Northern California.

- In addition, Oakland International Airport and two major Class I railroads support international and domestic trade.

- Key interregional and intraregional truck corridors in Alameda County include I-80, I-238, I-580, I-680, and I-880. In 2019, these corridors carried over 20,000 trucks of all classes per day, on average.

Pictured: Truck and rail queues at the 8th busiest port in the nation, the Port of Oakland.

Planning Framework

Several plans guide transportation development and funding decisions in Alameda County and are developed with input from the public, community groups and partner agencies across the county. Every four years, Alameda CTC adopts a Countywide Transportation Plan. The 2020 Countywide Transportation Plan (2020 CTP), adopted in November 2020, articulates the vision for Alameda County's transportation system over a 30-year planning horizon and provides input to the current regional plan - *Plan Bay Area 2050*. The 2020 CTP reinforces the vision of the previous two CTPs and has four goals that further describe the vision. The vision and goals were foundational in prioritizing projects and strategies to advance over the first 10 years of the plan horizon.

Vision statement:

Alameda County residents, businesses and visitors will be served by a premier transportation system that supports a vibrant and livable Alameda County through a connected and integrated multimodal transportation system promoting sustainability, access, transit operations, public health, and economic opportunities.

Goals:

1. **Accessible, Affordable, and Equitable.** Improve and expand connected multimodal choices that are available for people of all abilities, affordable to all income levels, and equitable.

2. **Safe, Healthy, and Sustainable**. Create safe multimodal facilities to walk, bike, and access public transportation to promote healthy outcomes and support strategies that reduce reliance on single-occupant vehicles and minimize impacts of pollutants and greenhouse gas emissions.

3. **High Quality and Modern Infrastructure**. Deliver a transportation system that is of a high quality, well-maintained, resilient and maximizes the benefits of new technologies for the public.

4. **Economic Vitality.** Support the growth of Alameda County's economy and vibrant local communities through a transportation system that is safe, reliable, efficient, cost-effective, high-capacity, and integrated with sustainable transit-oriented development facilitating multimodal local, regional, and interregional travel.

The county's Congestion Management Program, updated in October 2021, describes the strategies to assess, monitor, and improve the performance of the county's multimodal transportation system; address congestion; and protect the environment with strategies to help reduce greenhouse gas emissions.

The 2014 Transportation Expenditure Plan (TEP), funded by the local Measure BB sales tax for transportation approved by Alameda County voters in November 2014, spans 2015-2045 and plans for essential transportation improvements in every city throughout the County. The 2000 Measure B TEP sunset in 2022 after delivering improvements in every city throughout the County. Over the course of the 20-years, the Alameda CTC leveraged over $1.4 billion in local Measure B funds to deliver more than $4.1 billion in projects and programs to improve transportation and alleviate congestion in Alameda County. In addition, the 2010 Vehicle Registration Fee (VRF) TEP includes local road, pedestrian and bicyclist safety, transit, and transportation technology improvements.

Other plans that guide transportation development in Alameda County are the latest Priority Development Area (PDA) Investment and Growth Strategy, adopted in January 2022, and the Active Transportation Plan, adopted in May 2019.

The 2022 Comprehensive Investment Plan (CIP), most recently adopted in July 2021, brings all these long-range and countywide plans into the near term by focusing on investments over a five-year programming and allocation window. The purpose of the CIP

is to facilitate strategic programming and allocation of all fund sources under Alameda CTC's programming responsibilities, which include federal, state, regional, and local sources.

Alameda County TIP Project Highlights

The Alameda County projects in the 2023 TIP are targeted to improve the quality and efficiency of the transportation system by addressing the county's diverse transportation needs as identified in the aforementioned transportation plans, as well as the region's current RTP/Sustainable Communities Strategy, *Plan Bay Area 2050*.

Strategic highway, rail, and major arterial investments are targeted throughout the county to address identified gap closures, operational, and safety needs. In the more densely populated northern and central parts of the county, various improvements are identified for the I-80 and I-880 corridors, including the GoPort program of projects to improve truck and rail access to the Port of Oakland (7th Street Grade Separation East and West projects and Freight Intelligent Transportation Systems and Technology Master Plan) to support improved goods movement in the county and a series of interchange improvements on I-80 at Gilman Street and Ashby Avenue. On I-880, interchange improvements are progressing at Winton Ave, Industrial Parkway West, and Whipple Road. In eastern Alameda County, highway projects include express lane improvements in the I-680 corridor, including a 9-mile northbound express lane over the Sunol grade, and a gap closure project that will lead to a 48-mile continuous southbound express lane on I-680. Work is also moving forward on the last set of highway improvements to State Route 84, including widening SR 84 to expressway standards and improvements at the I-680/SR 84 interchanges. In southern Alameda County, improvements include the State Route 262 cross connector between I-680 and I-880. The first phase of the Rail Transportation Enhancement Program (RSEP) will improve safety at 28 at-grade rail crossings and two trespass locations along the Union Pacific rail tracks within six rail corridors in Alameda County.

Pictured: I-680/84 Interchange Improvements project under construction

To increase the use of alternative transportation modes, funding is also directed toward various transit, bicycle and pedestrian, and multimodal improvements on arterials and local roads throughout the county. These projects include the I-880 Oakland Alameda Access project to reduce conflicts between regional and local traffic and enhance bicycle and pedestrian accessibility and connectivity, multimodal arterial improvements along San Pablo Avenue and E. 14th Street, bus rapid transit (BRT), and transit- and Priority Development Area (PDA)-supportive projects such as the East Bay Greenway and accessibility improvements and modernization of BART stations. Additionally, a large investment in transit rehabilitation and fleet replacement is primarily directed toward AC Transit and BART.

Funding for the Alameda County TIP projects comes from a variety of local, regional, state, and federal sources, resulting from local, regional, and statewide partnerships to develop strategic funding packages, establish legislation, and prioritize transportation investments to advance project delivery. As a result, record-level investments are improving Alameda County's transportation system, including the local 2014 Measure BB, which will provide $8 billion in transportation improvements over the next 30 years.

Contra Costa County

[Narrative summary provided by the Contra Costa Transportation Authority]

Overview

While the Bay Area has more than doubled in population since 1950, Contra Costa County has grown even faster, more than tripling in population between 1950 and 2010. The Metropolitan Transportation Commission and the Association of Bay Area Governments (MTC/ABAG) now estimates that Contra Costa has a population of 1,128,660 people with approximately 414,290 jobs. Contra Costa is forecast to add 258,635 residents between 2020 and 2040, a 23% increase. The growth in population coincides with a growth of 75,775 new households forecasted by 2040. Job growth in Contra Costa is expected to add 83,825 new jobs, a 20% increase.[1]

The Contra Costa Transportation Authority (CCTA) serves as the Congestion Management Agency (CMA) for the county. As the CMA, CCTA prepares a Congestion Management Program and updates it biennially, prepares a recommended list of projects for funding through the State Transportation Improvement Program (STIP), and works with other CMAs and regional and State agencies to address transportation and growth issues in the region and the State. CCTA also manages Measure J, the 2004 half-cent sales tax that succeeded 1988's Measure C, which first established Contra Costa's transportation improvement and growth management program. Measure J, which began on April 1, 2009, extended the sales tax for another 25 years.

The Vision for Contra Costa

As part of the development of its 2017 Countywide Comprehensive Transportation Plan, or CTP, CCTA refined its vision for the future of the transportation system in Contra Costa:

> Strive to preserve and enhance the quality of life of local communities by promoting a healthy environment and strong economy to benefit all people and

[1] MTC/ABAG Plan Bay Area 2040 Projections 2018

areas of Contra Costa, through (1) a balanced, safe, and efficient transportation network, (2) cooperative planning, and (3) growth management. The transportation network should integrate all modes of transportation to meet the diverse needs of Contra Costa.

To achieve this vision, CCTA has identified five goals and 31 strategies to help carry them out. The five goals are:

1. Support the efficient and reliable movement of people and goods using all available travel modes;
2. Manage growth to sustain Contra Costa's economy, preserve its environment and support its communities;
3. Expand safe, convenient, and affordable alternatives to single-occupant vehicles;
4. Maintain the transportation system; and
5. Continue to invest wisely to maximize the benefits of available funding.

Achieving the vision and goals will require finding the right balance among the different, and sometimes competing, needs of Contra Costa's residents and businesses, including:

- Improving the regional system of roads, transit, trails, and pathways while ensuring that the existing system is well maintained;
- Balancing the needs of through-traffic with the access needs and quality of life of adjoining neighborhoods and business areas;
- Recognizing the differing needs and situations of Contra Costa's residents and subareas, while developing a workable approach to countywide and regional initiatives;
- Where feasible and beneficial, improve the capacity of roadways, while recognizing that these improvements will not, in the long run, eliminate congestion; and
- Supporting and encouraging the use of transit, carpools, bicycling, and walking, often within limited rights-of-way.

Finding this balance will require cooperation among the jurisdictions of Contra Costa and the support of residents and the business community.

CCTA is in the process of updating the five Action Plans for the four subregions in the County by focusing on innovative ideas to enhance Contra Costa's transportation network including emphasis on vehicle miles travelled (VMT) reduction, multi-modal transportation (roadways, transit, bicycle/pedestrian), and non-modal categories such as equity, safety, and climate change.

The development of the CTP for 2023 will follow with the primary overarching goals of: 1) Relieving Traffic Congestion on Highways and Interchanges, 2) Make Bus, Ferry, Passenger Train, and BART Rides Safer, Cleaner, and More Reliable, 3) Provide Access and Safe Transportation for Children, Seniors, Veterans, and People with Disabilities, and 4) Improve Transportation in our Communities.

Contra Costa TIP Projects

The projects in the proposed TIP support the goals CCTA has adopted, especially the first and third goals, as described on the previous page:

1. Support the efficient and reliable movement of people and goods using all available travel modes
3. Expand safe, convenient and affordable alternatives to single-occupant vehicles

Support efficient and reliable Movement on Highways and Arterial Roads

One of the highest-profile Contra Costa County project in the 2023 TIP focused on enhancing vehicular movement is future phases of the I-680/SR4 Interchange Improvement project. The project will reduce congestion and improve operations along SR4 and I-680 in the vicinity of the interchange. The 2023 TIP also includes the suite of projects making up Innovate 680, including the I-680 Northbound Express Lane Completion project, I-680 Part Time Transit Lane, and I-680 Coordinated Adaptive Ramp Metering (CARM). Other projects included in the TIP that are currently in the development phase include SR4 Operational Improvements and SR239.

Numerous arterial and interchange improvement projects are also planned to relieve congestion and improve circulation on city streets. These projects include future phases of improvements to I-80/Central Avenue in Richmond, I-80/San Pablo Dam Road in San Pablo, and the widening of Brentwood Boulevard (Phase 2) in Brentwood.

Expand safe, convenient, and affordable alternatives to the single-occupant vehicle

The 2023 TIP includes a number of projects that support the transit system, including the Hercules Intermodal Station, Concord BART Modernization, L Street Pathway to Transit in Antioch, and El Cerrito del Norte Transit Oriented Development Complete Streets project in El Cerrito.

The 2023 TIP also programs funding for several pedestrian and bicycle projects that will close gaps and/or improve pedestrian and bicyclist safety in Contra Costa. These include the Iron Horse Trail Bike and Pedestrian Overcrossing in San Ramon, the Safe Route to School Pedestrian Enhancement project at Lincoln Elementary in Richmond, the BART Pedestrian Bicycle Connectivity Project in Pittsburg, and the Mokelumne Trail Bike and Pedestrian Overcrossing in Brentwood.

Contra Costa projects in the 2023 TIP also support the goals of *Plan Bay Area 2050*, the Metropolitan Transportation Commission's (MTC) Regional Transportation Plan and Sustainable Communities Strategy, as shown below.

- Affordable: The I-680/SR4 Improvements will provide access to the Concord Naval Weapons Station where significant future housing development in the County is proposed.
- Connected: The suite of projects under the Innovate 680 Program, including Northbound I-680 Express Lane Completion, Part Time Transit Lane, and Advanced Technology will provide a safe and multimodal system for users.
- Diverse: The 2023 TIP includes projects in all regions of Contra Costa County.
- Healthy: The 2023 TIP includes active transportation projects such as Iron Horse Trail Bike and Pedestrian Overcrossing, BART Pedestrian Bicycle Connectivity Project in Pittsburg, and Mokelumne Trail Bike and Pedestrian Overcrossing that promote active transportation.
- Vibrant: SR 239 is intended to provide better access to east Contra Costa County, which will make the region more attractive for job creation.

Marin County

[Narrative summary provided by the Transportation Authority of Marin]

Marin County TIP Projects

Marin County is linked to San Francisco by the Golden Gate Bridge and to the East Bay by the Richmond-San Rafael Bridge. It is bordered on the north and northeast by Sonoma County and on the west by the Pacific Ocean. Marin is the slowest growing county in the region in terms of population. Marin currently has approximately 260,000 residents. Marin residents enjoy the county's small-town atmosphere and close connections to recreational areas. Over 90% of the growth anticipated in Marin County will occur within the urban corridor, along Highway 101.

Although Marin County is usually thought of as a suburban residential and recreational area, ranching and dairy farming are also major features of the rural areas of West Marin. Industry in the county includes movie and video production, computer software, communications equipment, bioengineering, financial services, printing, and the manufacture of plastic products, ceramics, and candles.

To address Marin County's most immediate transportation needs, residents, elected officials, and planners agreed, after extensive public meetings, that local funding was indispensable. As a result, Measure A, a ½ cent transportation sales tax, was approved in November 2004, generating approximately $25 million annually for 20 years. In November 2018, Marin voters approved the renewal and 30-year extension of the 1/2-cent transportation sales tax and expenditure plan under Measure AA.

Marin County voters also passed Measure B in November 2010 to increase the annual vehicle registration fee by $10 to help fund transportation improvements, generating approximately $2.3 million annually.

In addition to the sales tax and vehicle registration fee measures, Marin County has tapped into other regional, state, and federal funds to achieve the county's transportation goals. Marin County transportation projects support the adopted goals and vision of the Regional Transportation Plan and Sustainable Community Strategy (RTP/SCS), *Plan Bay Area 2050*.

Local matching funds will also help Marin County develop and implement plans to provide a variety of quality multi-modal transportation options for Marin residents, including safe routes to school projects, crossing guard programs, commute alternative and alternative fuel programs, improved bicycle and pedestrian access, senior and disabled mobility, and enhanced transit services.

Other notable projects of regional significance in Marin County include:

- **Marin Sonoma Narrows (MSN)** – The overall project scope includes upgrading US-101 from expressway to freeway, extending approximately 16 miles of high occupancy vehicle (HOV) lanes from SR-37 in Novato in Marin County to north of Corona Road Overcrossing in Petaluma in Sonoma County; constructing new interchanges, frontage roads, and pedestrian/bicycle facilities; and installing traffic operation system (TOS) improvements such as traffic monitoring stations and ramp metering on the mainline and ramps. The last substantial contract for the MSN project (Contract B7) started construction in 2022. This project is included in *Plan Bay Area 2050*.

- **North/South Greenway Gap Closure Project (Central Marin Ferry Connection (CFMC) Phase II)** – This project is the next phase of an overall effort to close a gap in the non-motorized transportation network in central Marin. The proposed multi-use path will connect the bicycle and pedestrian bridge crossing Sir Francis Drake Blvd with the pedestrian over-crossing of Highway 101 at the Lucky Drive On/Off Ramps. The project segments are in various levels of the project delivery stage, from the construction phase to the final design phase. This project is included as a programmatic category of improvements in the blueprint for the *Plan Bay Area 2050*.

- **Sonoma-Marin Area Rail Transit (SMART) Rail and Pathway Project** – In 2008, voters in Marin and Sonoma Counties passed Measure Q to collect a one-quarter percent sales tax for the construction and operation of the SMART District commuter rail and non-motorized pathway project in both counties. Construction began on Phase 1 of the project in 2012 and the start of revenue rail service commenced in August 2017. SMART's initial 43 miles of rail corridor includes 10 stations, from the Sonoma County Airport to Downtown San Rafael. Future extensions will include Windsor, Healdsburg, and ultimately Cloverdale. The full project will provide 70 miles of passenger rail service, connecting SMART passengers with jobs, education centers, retail hubs and housing along the Sonoma-Marin corridor, and a bicycle-pedestrian pathway. The pathway elements of this project are included as a programmatic category of improvements in the blueprint for *Plan Bay Area 2050*.

- **Richmond-San Rafael Bridge Improvements** – The Bay Area Toll Authority (BATA) completed a $74 million project to improve access to Eastbound I-580 across the Richmond-San Rafael Bridge in April 2018. Additionally, the project

added a multi-use path to the upper deck providing bicycle and pedestrian access between Marin and Contra Costa Counties. As a part of this portion of the work, the Main Street on-ramp was reconfigured in Marin and a retaining wall reconstructed in Richmond. The upper deck multi-use path features a 10-foot wide barrier-separated path from Main Street to Marine Street along the north part of I-580. The path provides access to an additional path to be constructed to Point Molate. Improvements will be made along Francisco Boulevard East in Marin and along Sir Francis Drake on-ramp to I-580 to better access the path. Usage data is being gathered to assist with the evaluation of the pilot project. This project is included in the blueprint for *Plan Bay Area 2050*.

- **Northbound US 101 to Eastbound I-580 Direct Connector Project** - Currently traffic must utilize local roads to transition from northbound US 101 to cross the bridge to Richmond. Funding in the amount of $135 million has been made available from Regional Measure 3. An additional $16.5 million was approved by Marin County voters as part of the 2018 Transportation Sales Tax for project acceleration and local features. The local funds have allowed the project to proceed while the RM-3 funds are held up due to litigation. A robust public outreach process was recently completed to explore alternatives prior to the formal start of the Project Initiation Document with Caltrans. A key feature of all alternatives is that the project will not preclude completion of the westbound I-580 to southbound US 101 direct connector when that project is initiated. The process includes multiple stakeholders, multiple jurisdictions, and elected officials. The formal Project Study Report, Project Report, and EIR are expected to be complete by late 2025. This project is included in the blueprint for *Plan Bay Area 2050* and will be added to the TIP as funding is identified.

- **Highway 101 Interchange Studies** – TAM is leading an effort to study and propose multi-modal transportation improvements at various interchanges along Highway 101, including improvements to the local roads approaching the interchanges. The intent of the program is to utilize local funds from the recently re-authorized transportation sales tax to prepare studies that can be used as supporting documents to pursue federal, state, and regional grant opportunities. The program was initiated in the spring of 2020. This project is included as a programmatic category of improvements in the blueprint for *Plan Bay Area 2050*.

Napa County

[Narrative summary provided by the Napa Valley Transportation Authority]

Napa County TIP Projects

At approximately 142,000 residents, Napa County has the smallest population of counties in the Bay Area. It is primarily an agricultural county, world-renowned for the quality of its vineyards and the wines produced from the region.

With its wineries, world-class restaurants, and restful scenery, this bucolic county lures four million visitors each year. Napa County voters and policy makers have embraced and adopted Smart Growth and agricultural preservation policies, including the first formal agricultural preserve in the country, which has protected the rural character of Napa County. The county's voters also approved Measure T, a transportation sales tax, in 2012 to rehabilitate local streets and roads, which took effect on July 1, 2018. The Napa Valley Transportation Authority (NVTA) has reviewed and approved the third round of five-year project lists submitted by each jurisdiction in the county. Projects can be viewed at www.NapaMeasureT.com.

Pictured: Measure T logo

As commercial and residential developments cluster along the highways in the southern portion of Napa County, compounded by four million visitors a year, there is great strain placed on the main routes SR 29, SR 12, SR 121, and Silverado Trail. Traffic congestion on main arterials has become a critical issue for workers, residents, visitors, and the economic vitality of the region.

Transit

The Vine transit service is provided to all the cities (including extensive service within the City of Napa), connecting service to Solano County, the BayLink Ferry in Vallejo, and to the El Cerrito Del Norte BART station in Contra Costa County. The Soscol Gateway Transit Center, in the City of Napa, opened in 2012 and route coverage and hours of service were updated to improve the transit system. NVTA is making improvements to the interchange at SR 29 and Imola Avenue by renovating a Park and Ride which will be served by Express Bus routes and reduce travel time from the City of Napa to the El Cerrito Del Norte BART station by approximately 10-15 minutes and an estimated $31,000 in annual operating cost. The park and ride project includes bus stop and passenger facilities on the SR 29 on- and off-ramps, as well as amenities for commuters, such as bicycle lockers and electric vehicle chargers. The Vine transit service operates throughout Napa County connecting riders to the Fairfield Transit Center & Suisun City Train Depot in Solano County, the Ferry Terminal in Vallejo, and to the El Cerrito Del Norte BART station in Contra Costa County. In 2020, Vine Transit made a number of service changes in response to reduced ridership demand associated with the coronavirus pandemic and public health orders, including reduced service hours, suspension of routes, postponed fare payment, increased cleaning and sanitation, seat spacing, and rear door only boarding. The Vine also changed the local service in the City of Napa to 100% stop-to-stop on-demand. Since those early changes in 2020, ridership has gradually begun to increase and Vine has lifted several of those changes and adapted its local service to include a hybrid of fixed route and on-demand service to meet the fluctuating needs of the system and to accommodate transit driver shortages.

Active Transportation

An update to the countywide bicycle plan was completed in October 2019 and includes a revision to the extensive planned bicycle network that is presently incomplete due to insufficient funds. A major 47-mile north/south Class I facility, the Napa Valley Vine Trail, is being pursued by a broad coalition of citizens, local organizations, and government agencies. The 6-mile Oak Knoll segment, the section between the Town of Yountville and northern part of the City of Napa, was completed in 2016. In collaboration with the Vine Trail partners the 8-mile St. Helena-Calistoga segment will start construction in summer 2022. The Imola Corridor Complete Streets Improvements plan, funded through a Caltrans Sustainable Communities Strategies grant, was completed in October 2020. A project

funded as a result of the Plan is the Caltrans 2020 State Highway Operation and Protection Program (SHOPP) Complete Streets Improvements ($5.1 million in complete street reservation funds) for bicycle, pedestrian, and transit improvements along the central segment between SR 29 and SR 221 as part of a Caltrans Capital Preventative Maintenance (CAPM) project. Construction is anticipated in 2024. In June 2022, NVTA submitted an Active Transportation Program (ATP) Cycle 6 grant application for funding to complete active transportation improvements along the west and east segments of the corridor.

Pictured: Vine Map of Calistoga – St. Helena sections

Roadway

The projects in the TIP address the areas of concern mentioned above. In the 2023 TIP, the roadway network will have new pavement at certain segments, safety improvements in key locations, some capacity increasing projects, and a number of enhancements to meet Complete Streets requirements.

Improvements to the Napa County highway system include interchange improvements at SR-29 and SR-221/Soscol Ferry Road. This multimodal project will allow for the continuous flow of north and southbound traffic along SR 29 while improving the access for pedestrians and bicycle for the future nearby Napa Pipe housing development. The project was awarded grant funding in March 2022 and is scheduled to begin construction in Summer of 2022.

Pictured: Soscol Junction Intersection Improvements – SR 29/SR 221/Soscol Ferry Road

NVTA continues to work with the City of Napa and Caltrans on the Silverado five-way intersection improvements. This project proposes to develop, and ultimately select, an alternative which will modify the intersection of Silverado Trail (State Route 121)/East Avenue/Third Street/ Coombsville Road), to reduce congestion, and improve safety and operations for motorists, bicyclists, and pedestrians. This project will also improve pedestrian/bicycle crossings, including upgrades to meet current Americans with Disabilities Act (ADA) standards.

Pictured: *Silverado Five-way – Conceptual Roundabout Improvements*

Preliminary design and environmental work started in June of 2020 for the Silverado five-way intersection improvements. After environmental work is completed, the project will move into the right-of-way phase in 2024.

Consistency with Plan Bay Area

All projects in the 2023 TIP are consistent with *Plan Bay Area 2050*. Major goals of *PBA 2050* include advancing low-cost transit projects, reducing greenhouse gas emissions, and investing in the active transportation system. Napa's projects support these goals by investing in operational improvements like roundabouts that reduce idling and congestion and lower GHG emissions. Other key projects identified in the TIP are multimodal improvements, including the Vine Trail which is a class I path that will eventually connect all the jurisdictions in Napa County, and the Imola Park and Ride that provide in-line transit stops on the highway on- and off-ramps to enhance the express bus service in Napa County and reduce running times.

City and County of San Francisco

[Narrative summary provided by the San Francisco County Transportation Authority]

County Overview

San Francisco has boomed over the last 10 years, and though the COVID pandemic may have temporarily slowed this growth, San Francisco is expected to see continued employment and residential growth. Employment is expected to grow at historic rates (around 5,000 jobs annually), reaching 918,000 jobs in San Francisco by 2050. Population is expected to grow faster than it has in the past. Over the previous 35 years, San Francisco added just under 6,000 residents per year. In the future, San Francisco is projected to add more than 10,000 new residents annually, reaching a population of 1,245,000 by 2050. San Francisco has over 60,000 new housing units in its development pipeline, with 20% of those units being classified as permanently affordable. All of this growth is putting tremendous strain on the city's transportation systems, as more trips are being made across all modes.

- Before the COVID-19 pandemic, transit ridership had grown on all of San Francisco's operators. Muni, already the Bay Area's largest transit provider, saw an increase in ridership of nearly 30,000 average weekday riders from 2010-2019. The Bay Area Rapid Transit District (BART), Caltrain, and the Water Emergency Transportation Authority (WETA) experienced double digit growth percentages in that same time period. Prior to the COVID-19 pandemic, transit passengers regularly experienced crowded conditions – sometimes having to watch overcrowded trains and buses pass them by during peak periods on key routes.

- In 2014, San Francisco was among one of the first cities in the U.S. to adopt a Vision Zero policy with the goal of ending traffic deaths by 2024 through a Safe Systems approach, which centers on human life and coordinates across city departments to implement actions prioritizing street safety addressing Safe Streets, Safe People, Safe Vehicles, and Data Systems.

- More people are walking and biking now, and car ownership levels have stayed relatively constant. Before the COVID-19 pandemic, over 45% of trips within San Francisco were made by walking and biking.

- San Francisco's roads and freeways experience more traffic and have become more congested at a faster pace than the rest of the Bay Area. Between 2013 and 2019, arterials became 22% slower during the morning peak and 24% slower during the evening peak. Since the COVID-19 pandemic, as the economy begins to recover, San Francisco traffic and congestion levels have risen and fallen, most likely in response to the emergence of virus variants, behavioral changes, and public policies.

- The economic boom has put a strain on more than just the transportation system. Housing has become disproportionately unaffordable for low-income and disadvantaged groups. These equity concerns challenge the city to identify ways that transportation investments can address equity impacts.

- Transportation Network Companies (TNCs), such as Uber and Lyft, have become household names and have contributed toward a rapidly changing transportation landscape. A study commissioned by Uber and Lyft found that they accounted for 12.8% of all vehicle miles traveled on San Francisco streets. This represents an estimated 15% of intra-city trips, and an estimated 20-26% of vehicle trips Downtown and South of Market during peak periods. An analysis of the 2020 TNC Annual Reports submitted to the California Public Utilities Commission, revealed that there were more than 30 times as many TNC trips per square mile in San Francisco than in any other California county. TNCs have prompted transportation professionals and policymakers to assess the adequacy of existing regulatory frameworks.

San Francisco's transportation system is intrinsically linked to the quality of life in the city. San Francisco's economic competitiveness requires a high level of mobility and accessibility, including reliable and affordable transit. All modes of travel—walking, biking, driving, and riding transit—rely on smooth and safely designed roads. Keeping pace with the city's rapidly growing population and job market will require addressing current capacity issues and implementing improvements. Safe neighborhoods require dependable transit access, at all times of day, and quality walking and biking infrastructure. A healthy environment requires reductions in greenhouse gas emissions, which can be achieved through strategies that reduce vehicle miles traveled. It is essential

that San Francisco meet these transportation challenges to improve the overall livability and affordability of the city.

San Francisco Planning Framework

On October 24, 2017, the Transportation Authority's Board of Commissioners approved the most recent San Francisco Transportation Plan, or SFTP, which serves as the countywide, long-range investment and policy blueprint for San Francisco's multi-modal transportation system. The SFTP is part of the ConnectSF program, the multi-agency, multi-year process to envision, plan and build a more effective, equitable, and sustainable transportation system for our future. The SFTP is due for another update, expected to be approved in October 2022; the SFTP will summarize San Francisco's priorities and investments and will demonstrate how they advance the 50-year vision of San Francisco's future that was designed through robust technical analysis, consultation with partner agencies, and a collaborative community process.

The SFTP outlines a diverse investment strategy to make progress toward five important goals through the year 2050:

- *Equity* - San Francisco is an inclusive, diverse, and equitable city that offers high-quality, affordable access to desired goods, services, activities, and destinations.
- *Economic Vitality* - To support a thriving economy, people, and businesses easily access key destinations for jobs and commerce in established and growing neighborhoods both within San Francisco and the region.
- *Environmental Sustainability* - The transportation and land use system support a healthy, resilient environment and sustainable choices for future generations.
- *Safety and Livability* - People have attractive and safe travel options that improve public health, support livable neighborhoods, and address the needs of all users.
- *Accountability and Engagement* - San Francisco agencies, the broader community, and elected officials work together to understand the City's transportation needs and deliver projects, programs, and services in a clear, concise, and timely fashion.

The plan also identifies complementary policy initiatives to help us make the most out of these investments.

Within a constrained budget largely set by local forecasts and MTC financial projections, the 2017 SFTP recommended three key categories of expenditures that serve as the basis for the 2023 TIP:

- Major capital projects and programs that would improve the efficiency of the existing system or cost-effectively expand system capacity;
- Small- to medium-scale transportation improvements that increase safety and expand or enhance the transportation system for all modes, including traffic calming, bicycle and pedestrian infrastructure, transit enhancements, street and signal upgrades, streetscape treatments, and transportation demand management; and
- Ongoing maintenance, operations, and replacement of our transit system and street network, including roadway repaving, traffic signal maintenance, and buying new transit vehicles to replace ones that have reached the end of their useful life.

Regional Planning Framework

The SFTP serves as the basis for San Francisco's transportation priorities and informs our engagement in the Regional Transportation Plan/Sustainable Communities Strategy. MTC and ABAG approved *Plan Bay Area 2050* (PBA 2050) in 2021. *PBA 2050* includes many of the same goals and strategies as the SFTP, including but not limited to:

- Restore, operate, and maintain the existing system
- Support community-led transportation enhancements in communities of concern
- Build a complete streets network
- Advance a regional vision zero policy through street design and reduced speeds
- Enhance local transit frequency, capacity, and reliability
- Expand and modernize the regional rail network
- Expand transportation demand management initiatives

San Francisco's 2023 TIP projects are consistent with and supportive of the adopted *PBA 2050*.

San Francisco Congestion Management Program

Every two years, the San Francisco County Transportation Authority (Transportation Authority) prepares the San Francisco Congestion Management Program (CMP). This program is conducted in accordance with state law to monitor congestion and adopt

plans for mitigating traffic congestion that falls below certain thresholds. By statute, the CMP legislation originally focused its requirements on measuring traffic congestion, specifically through Level-of-Service (LOS), which grades roadway facilities by vehicle delay. The Transportation Authority has since evolved its CMP to include more multimodal and system performance monitoring. The most recent CMP was adopted by the Transportation Authority's Board of Commissioners in December 2021. It documented that the COVID pandemic disrupted peoples' health, livelihoods, activities, and the economy overall, and that these changes had a profound effect on peoples' travel and transportation system performance, including congestion levels and transit ridership.

San Francisco TIP Projects

Consistent with the framework laid out in the SFTP, the 2023 TIP includes a variety of projects in San Francisco over the next four years (FFY 2022-23 through FFY 2025-26) which will improve safety and mobility for its residents, workers, and visitors; improve air quality; reduce greenhouse gas emissions; and provide necessary infrastructure for anticipated housing and job growth.

Pictured: Construction of SFMTA's Central Subway Project

The 2023 TIP includes the San Francisco Municipal Transportation Agency's (SFMTA's) Central Subway Project, which will extend the Third Street Light Rail service to connect neighborhoods from Visitacion Valley, Bayview Hunters Point, South of Market (SOMA), and the Financial District to Chinatown. SFMTA anticipates starting revenue service in 2022. Previous TIPs also included the electrification of Caltrain and the completed Salesforce Transit Center that will serve as the San Francisco Bay Area northern terminus of the proposed California High Speed Rail. On September 6, 2016, Caltrain awarded contracts to construct the electrification infrastructure and to manufacture high-performance electric trains with

revenue service anticipated to begin in 2024. The terminus of the new electrified Caltrain service will be extended from its current San Francisco terminus at Fourth and King Streets to the new Salesforce Transit Center train station through the Caltrain Downtown Extension project, which also includes a pedestrian connection to BART and Muni and an intercity bus facility.

In January 2017, the Transportation Authority certified the final Environmental Impact Report for the Geary Corridor Bus Rapid Transit (BRT) project and worked in partnership with SFMTA and the Federal Transit Administration on the final federal approval of the project, which was granted in June 2018. SFMTA completed construction on the first phase of the project in Fall 2021 and anticipate beginning construction on the second phase in 2024. The approved BRT project will provide high-quality rapid transit service to reduce travel time, increase reliability, and improve passenger comfort. Elements of the BRT include dedicated bus lanes, transit signal priority, all-door boarding and proof of payment, reduced stop spacing, real-time bus arrival information for riders, high quality bus stations, and streetscape amenities to improve access for pedestrians and bicyclists to transit stations.

Pictured: SFMTA biodiesel-electric hybrid bus

In addition to the major capital projects listed above, the 2023 TIP identifies a number of other transit improvement projects and operational investments. For instance, it shows significant funds for the ongoing replacement of the SFMTA vehicle fleet, which served approximately 700,000 daily passengers pre-COVID-19, more than any other Bay Area transit system. During the COVID-19 pandemic and shelter-in-place, SFMTA's ridership decreased and the agency began developing a recovery strategy.

The SFMTA's vehicle acquisition and rehabilitation program, overhead line and rail replacement program, and facilities improvement program remain a priority as they will help provide better, more reliable service to its passengers. SFMTA's Core Capacity Program will implement improvements to the J and M rail corridors, two of the highest priority routes in the San Francisco Muni Forward Program. The project will include transit

signal priority, transit-only lanes, stop consolidation, and complementary facility and pedestrian improvements. The SFMTA's Communications-Based Train Control system will upgrade technology and equipment to improve efficiency, reliability, safety, and line capacity while decreasing travel times for the most heavily traveled segments of the light rail system. The 2023 TIP also contains similar critical rehabilitation and upgrade projects for regional transit operators that serve San Francisco, including BART and Caltrain.

Pictured: WB I-80 on- and off-ramps that connect Yerba Buena Island and Treasure Island to the eastern span of the Bay Bridge.

Another major capital project in the 2023 TIP is the Yerba Buena Island (YBI) Ramp Improvements Project. The project consists of three subprojects: 1) I-80 Westbound Ramps Project, which relocated the westbound off-ramp and reconstructed the westbound on-ramp on the north side of I-80 onto the San Francisco-Oakland Bay Bridge; 2) Southgate Realignment Project, which will reconstruct the I-80 eastbound off-ramp and will increase the length of the on- and off-ramps on a new alignment to allow the YBI Westbound Ramps Project to function as designed; and 3) West Side Bridges Seismic Retrofit Project, which will retrofit eight existing bridge structures along Treasure Island Road to meet current seismic safety standards. Construction of the I-80 Ramps project started in January 2014 and was completed in April 2020. Construction of the Southgate Realignment Project started in June 2020 and is scheduled to be completed in 2022. Construction of the Westside Bridges project is scheduled to begin in 2022 and is anticipated to be completed by 2026.

San Francisco has continued to implement transportation demand management programs to improve air quality and reduce greenhouse gas emissions. Officially designated as the Treasure Island Mobility Management Agency in 2014, the Transportation Authority completed the Treasure Island Mobility Management Study in 2022 to recommend pricing program policies as part of the effort to redevelop the Island into a sustainable urban neighborhood. As shown in the 2023 TIP, tolling is anticipated to start in 2024, concurrent with transit enhancements such as new AC Transit bus service,

an on-island shuttle service, and an affordability program. The overall mobility management program will also include ferry service and increased Muni service.

Linked to ongoing development efforts, the 2023 TIP includes significant transportation infrastructure to support planned growth in the southeast sector of the city, particularly SOMA, Mission Bay, Bayview/Hunters Point, Candlestick Point, and the San Francisco/San Mateo County line.

Many smaller projects in the 2023 TIP will be implemented in various locations throughout the city to preserve and enhance basic transportation infrastructure that benefits all users, including signal timing and management projects, street resurfacing, curb ramps, and numerous traffic calming measures. In addition, the 2023 TIP provides funding for projects that promote safety and connectivity for pedestrians, bicyclists, and transit riders. These include major streetscape projects and Vision Zero projects focused on reducing traffic deaths in San Francisco by 2024.

These improvements would not be possible without the support of local, regional, state, and federal fund sources. Proposition K, San Francisco's half-cent local sales tax for transportation that was approved by voters in November 2003, is used to fund everything from signals to streetcars, bicycles to boulevards, and pedestrian safety improvements to paving. It has also provided key funding for the city's major capital projects, including the Central Subway, the electrification of Caltrain and its extension to the new Salesforce Transit Center, and the Geary BRT project. Other fund sources that are important to further San Francisco's transportation system include, but are not limited to, Federal Transit Administration and Federal Highway Administration funds, state gas tax distributions to local streets, roads, and transit, state cap and trade and Senate Bill 1 funds, the regional bridge toll program, MTC's One Bay Area Grant and Lifeline Transportation Programs, San Francisco's Prop AA revenues from a county vehicle registration fee, San Francisco's TNC tax, and local bond measures.

The County looks forward to working with our project partners to bring these and other projects to fruition to improve the quality of life in our city and the Bay Area.

San Mateo County

[Narrative summary provided by the City/County Association of Governments of San Mateo County with assistance from San Mateo County Transportation Authority and San Mateo County Transit District]

San Mateo County TIP Projects

Pictured: Daily commute on US 101 Highway in San Mateo County.

The California Department of Finance estimates the current population of San Mateo County at 765,245. Projections completed in 2021 estimate that by 2040, San Mateo County's population will be 813,098. About one quarter of the county's 286,720 acres are urban, and the remaining three-quarters are primarily rangeland or forest. The urbanized area is concentrated in the vicinity of US 101, State Route 82 (El Camino Real), and the Caltrain corridor. The primary routes to the agricultural and open space coastal areas are State Route 92 (SR92) from San Mateo and State Route 1 (SR-1) from Pacifica. In 2020, about 65% of resident commuters drove to work, 9.9% carpooled, 10.1% took transit, and 9.5% worked from home. The remaining commuters took other modes of transportation. (*Source: 2020 American Community Survey)*

The projects in the 2023 TIP directly align with a number of the strategies included in MTC's *Plan Bay Area 2050* (listed below) while indirectly supporting many of the other strategies related to improving mobility, enhancing local transit, supporting balanced growth, creating inclusive communities, improving the economy, enhancing equity, protecting the environment, and reducing climate emissions.

- Transportation: Maintain and Optimize the Existing System
    - Strategy T1: Restore, Operate, and Maintain the Existing System

    - Strategy T2: Support Community-Led Transportation Enhancements in Equity Priority Communities
    - Strategy T3: Enable a Seamless Mobility Experience
    - Strategy T6: Improve Interchanges and Address Highway Bottlenecks
    - Strategy T7: Advance Other Regional Programs and Local Priorities
- Transportation: Create Healthy and Safe Streets
    - Strategy T8: Build a Complete Streets Network
    - Strategy T9: Advance Regional Vision Zero Policy through Street Design and Reduced Speeds
- Transportation: Build a Next-Generation Transit Network
    - Strategy T10: Enhance Local Transit Frequency, Capacity, and Reliability
    - Strategy T11: Expand and Modernize the Regional Rail Network
    - Strategy T12: Build an Integrated Regional Express Lane and Express Bus Network

The TIP projects have also been developed through the long-term planning efforts of C/CAG, the San Mateo County Transportation Authority, SamTrans, and Caltrain. These comprehensive planning efforts include but are not limited to the following: the San Mateo Countywide Transportation Plan 2040; San Mateo County Intelligent Transportation Systems Strategy Plan; SamTrans and Caltrain Short Range Transit Plans; SamTrans Strategic Plan 2015-2019; San Mateo County Transportation Authority Strategic Plan 2020-2024; the Caltrain Business Plan 2040; and the San Mateo County Comprehensive Bicycle and Pedestrian Plan. The emphasized transportation projects within San Mateo County include the following:

Roadway Projects

- **US-101 Corridor Interchange Improvements** — Various interchange improvement projects are under consideration. However, due to the limitation for expansion, most projects are for improved safety, operations, and management of the existing systems. San Mateo County's share of State Transportation Improvement Program (STIP) funds are programmed for improving the US-101/Woodside Road, the US-101/Produce Avenue, and the US-101/SR-92 interchanges. Additional project funds are provided by local transportation sales

tax and local jurisdiction contributions. There are other interchange improvement projects under development included in the TIP that may pursue STIP funding in the future. These include University Avenue, Holly Avenue, Peninsula Avenue, and Candlestick Point.

- **US 101 Express Lanes**— The US-101 (Bayshore Freeway) is the major north-south artery in San Mateo County. The San Mateo 101 Express Lanes Project is constructing 22 miles of express lanes in each direction, between the San Mateo/Santa Clara County Line and I-380 in South San Francisco. The southern segment of the Express Lanes from the San Mateo/Santa Clara County Line to Whipple Avenue in Redwood City recently commenced operation in early 2022 together with Santa Clara's Express Lanes. While construction continues with the northern segment of the Express Lanes from Whipple Avenue to I-380, scheduled to open by the end of 2022. The future managed lanes being planned between I-380 and San Francisco County is currently in the Environmental Phase.

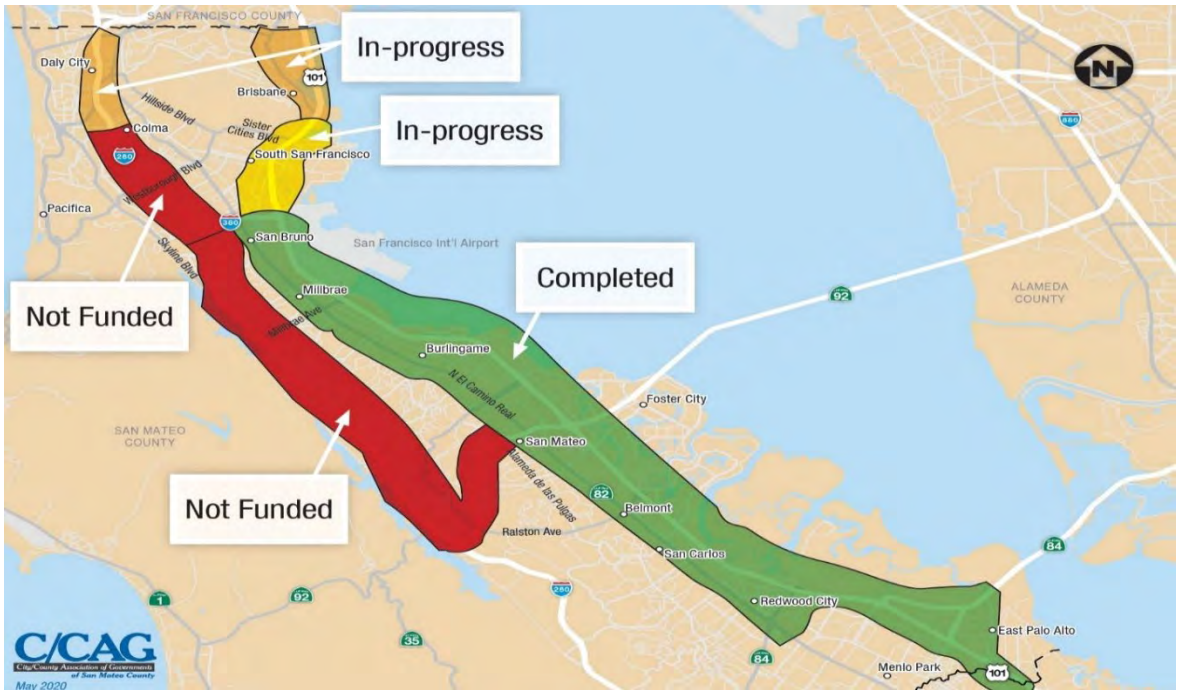
Pictured: Construction of US 101 Express Lanes from the San Mateo County/Santa Clare County line to I-380 in South San

Pictured: Opening celebration on Friday, February 10, 2022 for Phase I of the US 101 Express Lane project from the San Mateo County/Santa Clara County line to Whipple Avenue.

The San Mateo 101 Express Lanes Project is being funded through multiple sources including the County share of the State Transportation Improvement Program (STIP), Caltrans Interregional Transportation Improvement Program (ITIP), Federal Earmarks, State Senate Bill 1 (SB1) competitive grants, regional and local funds, and private sector contributions. The Environmental Phase of the remaining segment between I-380 and the San Francisco County line is being funded with Local Funds.

Pictured: Intelligent Transportation System (ITS) equipment along the San Mateo County Corridor.

- **Operational Improvements**— Operational improvements planned in the 2023 TIP include an expansion of the San Mateo County Smart Corridor Project, an intelligent transportation system (ITS) infrastructure to efficiently manage existing facilities through technology. The Smart Corridor program provides tools for cities to manage traffic on local streets during recurring and non-recurring traffic conditions; minimize incident travel time, queues and delays; and enhance traffic management coordination among multiple public agencies.



Pictured: San Mateo County Smart Corridor Project Limit and Implementation Status.

Funding for the Smart Corridor is from a combination of STIP funds, Transportation Fund for Clean Air grant, local vehicle license fees, and Proposition 1B Traffic Light Synchronization Program (TLSP) grant. Expansion areas include the cities of South San Francisco, Daly City, Colma, and Brisbane.

- **SR-1 Corridor**— SR-1 projects include various safety and operational improvements in Half Moon Bay, Pacifica, and the unincorporated areas. These projects include turn lanes, raised medians, acceleration lanes, signalized intersections or roundabouts, ramp modifications, and improvements to bike/ pedestrian crossings.
- **US 101/SR 92 Interchange Area Improvement Project**— The US 101/SR 92 Interchange is a major facility that serves regional traffic as well as local street connections. Heavy traffic volumes and inadequate capacity cause traffic delays and congestion within the interchange area and its vicinity. Inefficient weaving and merging at the interchange ramp connections also adds to higher-than-average accident rates at ramp and connector locations. The overall project will improve mobility and reduce freeway congestion as well as improve safety.

- **US 101 / Woodside Interchange Improvement project**— This project will improve interchange ramp intersections to reduce congestion for passenger vehicles and trucks, which will increase throughput of Port of Redwood City and industry truck movements to and from US 101. The project will also provide multimodal connections from Downtown Redwood City and the North Fair Oaks unincorporated community to the future Redwood City ferry terminal to be constructed at the Port of Redwood City currently under development.

Grade Separation Projects

- **Broadway Grade Separation Project—** This project will grade separate the railroad alignment at Broadway, between Carolan Avenue and California Drive in the City of Burlingame, CA and remove the existing at-grade crossing. Additionally, the project will eliminate the currently in-place Holdout Rule and will facilitate efficient movement of trains resulting in improved schedule and service. Furthermore, the project will include the Broadway Station improvements, and provide pedestrian and bicycle undercrossings at Cadillac Way, Carmelita Avenue and Majilla Avenue/Toyon Drive.
- **Other Caltrain Grade Separations—**While not currently listed in the TIP, several additional grade separation projects in San Mateo County are actively seeking State and Federal funding to support project delivery. Examples include South Linden Avenue/Scott Street Grade Separation, Ravenswood Grade Separation, Redwood City Grade Separations, and the City of San Mateo downtown grade separations.

Transit Projects—Caltrain

- **State of Good Repair (SOGR) Program** — The Caltrain SOGR program includes a number of projects with the shared goal of maintaining efficient and reliable railroad operations. These include replacing and rehabilitating track and related civil structures, such as the Guadalupe Creek bridge in Santa Clara County. Signal and communication equipment required to safely operate the railroad are routinely replaced as these system components reach the end of their useful lives.
- **Ticket Vending Machine Rehabilitation and Clipper Functionality** — This project is upgrading existing ticket vending machines (TVMs) at Caltrain stations to incorporate Clipper fare payment card functionality so patrons can easily add

value to their Clipper cards. The project will also relocate and upgrade Clipper card readers at station platforms to be more convenient for Caltrain patrons.

- **Caltrain Modernization** – The Caltrain Modernization Program, scheduled to be operational by 2024, will electrify and upgrade the performance, operating efficiency, capacity, safety, and reliability of Caltrain's commuter rail service. In the future, the infrastructure developed as part of the Caltrain Modernization Program will also accommodate California's statewide high-speed rail service. Caltrain and high-speed rail will primarily share Caltrain's existing tracks, operating on a blended system. The Caltrain Modernization Program includes the electrification of the existing Caltrain corridor between San Francisco and San Jose and the replacement of the majority of Caltrain's diesel fleet with high-performance electric trains called Electric Multiple Units (EMUs). The new EMUs will have better performance than diesel-powered trains and will result in improved air quality and reduced noise. This $2.44 billion program is funded through local, regional, state, and federal funding, including a $647 million core capacity grant from the Federal Transit Administration.
- **Caltrain Electrification Expansion** – This project will build on the PCEP and expand Caltrain's Electric Multiple Unit (EMU) fleet through the procurement of an additional 37 EMU vehicles. Once built, Caltrain will have a total of 19 seven-car EMUs. The electrification expansion project also includes wayside bicycle facility improvements and the installation of customer-facing WIFI between San Jose and San Francisco.

Transit Projects - SamTrans

- **Revenue Vehicle Replacement** – The 2023 TIP includes funding for the replacement of fixed route bus and paratransit fleets as the vehicles reach the end of their useful lives. As part of SamTrans' ongoing sustainability efforts, the agency is committed to the procurement of zero emission vehicles where technically feasible and is poised to have a 100% zero emissions fleet by 2038.
- **Express Bus Project** – The SamTrans Express Bus pilot will introduce express bus routes on US-101 serving origins and destinations in San Mateo, Santa Clara, and San Francisco Counties over a period of several years after the 101 Express Lanes are completed. The express bus routes will offer point-to-point or limited stop

service to key commuter destinations during peak commute periods. The initial launch of express bus service is envisioned to occur in conjunction with the opening of the express lanes project on US-101. This project is funded, in part, by a $15 million grant from the state's Transit and Intercity Rail Capital Program (TIRCP).

Active Transportation (Bike and Pedestrian Infrastructure)

The 2023 TIP includes funding for pedestrian enhancement projects, bicycle route improvement projects, and safe routes to school educational projects in numerous locations throughout San Mateo County. These projects promote alternative transportation modes and improve pedestrian and bicyclists' safety. Example projects include transit accessibility improvements for bicyclists and pedestrians, bicycle pedestrian freeway overcrossings in San Carlos and East Palo Alto, pedestrian sidewalk and crosswalk/median refuge installations, and expansion of the countywide bicycle network.

- **SR-82 Complete Streets Project in South San Francisco –** The 2023 TIP includes funding to construct major complete streets projects on the El Camino Real Highway which strives to establish a balance between transportation modes by providing bike and pedestrian enhancements in support of the Grand Boulevard Initiative concept.
- **Central Corridor Bike/Ped Safety improvements in Daly City –** The 2023 TIP includes funding to construct pedestrian and bicycle improvements in parts of Daly City and Unincorporated San Mateo County in support of the Grand Boulevard Initiative concept.
- **Buffered Bike Lane on SR-82 El Camino Real –** The 2023 TIP includes funding to construct a proposed buffered bike lane project on SR-82, El Camino Real. The project is 3.7 mile in length in the Cities of Millbrae and San Bruno. The project aims to provide greater distance between motor vehicles and bicyclists, contributing to the perception of safety among users of the bicycle network. The project will also connect to the existing transit network, including SamTrans bus service, BART and Caltrain services in the cities.

Santa Clara County

[Narrative summary provided by the Santa Clara Valley Transportation Authority]

Overview

As of January 2021, Santa Clara County's population was approximately 1.93 million, making it the most populous of the nine Bay Area counties. The county contains 15 incorporated cities including San Jose, which is the third largest city in California, after Los Angeles and San Diego.

Santa Clara County enjoys a relatively balanced jobs/housing split and county residents fill a high percentage of the county's jobs. However, the scale of the county's economy makes the percentage of people from outside the county traveling to work here translate into hundreds of thousands of additional daily commute trips. Northern Santa Clara County is the largest of the San Francisco Bay Area's major employment centers and attracts workers from most of the Bay Area, as well as the non-Bay Area counties of Merced, Monterey, San Benito, San Joaquin, and Santa Cruz.

Pictured: 101/SR85 interchange in Mountain View

Roads and Highways

Santa Clara County roadways move people and goods within the county and beyond. As regional economic and population growth increases demand for goods and services, a variety of users, including cars, compete to access the same roads, such as the major freeways: SR-17; SR-85; SR-87; US-101; I-280; I-680; and I-880. In addition, Santa Clara County is unique among California counties in that the County owns and operates its own "expressway" system. Unlike "expressways" in other areas, these are limited-access arterials.

Before the COVID-19 pandemic hit, traffic congestion in Santa Clara County was compounded by the large amount of travel through the county to origins and destinations of adjacent counties.

As traffic returns to pre-COVID levels, more intelligent transportation systems, express lanes, multimodal investments, and other improvements will be needed to improve efficiency of the roads.

Transit

Transit provides access to work, school, recreation, medical appointments, and other important destinations in Santa Clara County. Various operators provide rail, bus, and shuttle service to destinations throughout the county. Most local bus, express bus, and light rail service is provided by the Santa Clara Valley Transportation Authority (VTA). In December 2021, VTA reported that its systemwide weekday ridership recovered to 47% of pre-pandemic levels.

Pictured: VTA's light rail from Alum Rock to Eastridge

Additionally, there are several bus services to neighboring counties. The Alameda-Contra Costa Transit (AC Transit) District operates bus service between the Milpitas and Fremont Bay Area Rapid Transit District (BART) stations and SamTrans buses connect Palo Alto with

San Mateo County. Santa Cruz Metro operates regional bus service between San Jose and Santa Cruz along Highway 17. The Dumbarton Express operates an all-day, two route bus service between the Union City BART station and Palo Alto via the Dumbarton Bridge. Finally, Monterey-Salinas Transit operates express service between San Jose and Monterey via Highway 101.

Caltrain, BART, Altamont Corridor Express (ACE), and Amtrak provide regional passenger rail services to San Francisco, Oakland, Stockton, Sacramento, and intermediate cities. Work continues on the BART extension from Berryessa to San Jose/Santa Clara, which is funded with State Transportation Improvement Program (STIP), Federal Transit Administration Section 5309, and local sales tax funds.

Goods Movement Study

A partnership between MTC, the Association of Monterey Bay Area Governments (AMBAG), Sacramento Area Council of Governments (SACOG), the San Joaquin Council of Governments (SJCOG) and the California Department of Transportation (Caltrans) conducted a Northern California Mega-Region Goods Movement Study (released in 2019). It examines truck, freight rail and air cargo infrastructure and services to ensure the county's connections to gateway facilities, such as ports and airports, remain economically competitive and major goods movement transportation routes remain efficient and vital links of the system. The study involved developing databases to track shipping and trip movements through the region/county and made projections of how goods movement will change over time.

Planning Framework

The Valley Transportation Plan (VTP) is the countywide long-range transportation plan for Santa Clara County. As the county's Congestion Management Agency (CMA), the VTA periodically updates this 25-year plan.

VTP 2040, the most recent version, was adopted by the VTA Board in October 2014, and builds upon the previous VTP 2035. VTP 2040 highlights the projects and programs that will be pursued in partnership with Member Agencies in the next 25 years. Some of the types of projects being pursued are Complete Streets, Express Lanes, Bus/Rail Rapid

Transit, and Bicycle and Pedestrian Improvements. VTP 2040 also includes a detailed discussion on planning activities that will take place during the life of the plan. VTA is in the process of updating the VTP.

Pictured: Bicyclist boarding SB route 60 bus at the Santa Clara Caltrain station

The VTP provides a planning and policy framework for developing and delivering future transportation projects. Location-specific improvements for all modes of travel are covered in three major program areas: Highways, Local System, and Transit. The Highways Program includes major freeway improvements, local freeway interchanges, and Express Lanes. The Local System includes local roadway improvements, expressway improvements, pedestrian and bicycle projects, and technology-related projects. The Transit Program includes projects related to transit efficiency and new transit improvements. Additional program areas that do not include specific projects are pavement management and the Community Design and Transportation Program. The plan also identifies transportation needs through a systematic approach based on input from local jurisdictions, elected officials, and the community.

In 2016, VTA also worked through Envision Silicon Valley as a partnership between VTA, Public Agencies, Transit Groups, and the Public to develop a comprehensive Ballot Measure (2016 Measure B) to develop projects that enhance transit, highways, expressways and active transportation (bicycles, pedestrians and complete streets). Many of the projects in 2016 Measure B provide a local revenue source that can be leveraged to help obtain additional funds through regional, state, and federal fund sources.

The combination of projects that originate in VTP 2040 and 2016 Measure B adhere to and align with the goals identified by *Plan Bay Area 2050*, the Bay Area's regional long-range plan adopted by MTC and the Association of Bay Area Governments (ABAG). *Plan Bay Area 2050* contains projects that promote complete streets, fund major transit investments, promote our Express Lanes program, and engage in the development of the Growth Geographies to better support the projects in the TIP.

Santa Clara County TIP Projects

Santa Clara County has several improvements to its transportation system planned and included in the 2023 TIP. Major transportation projects programmed in the 2023 TIP include the BART – Berryessa to San Jose/Santa Clara extension, funded with State Transportation Improvement Program (STIP) and local sales tax funds. Other projects funded in the STIP include three phases of Express Lane projects, two soundwalls, light rail from Alum Rock to Eastridge, and an urban streetscape project in San Jose. In addition to state funds, Santa Clara County also uses federal Surface Transportation Block Grant Program (STBG) and Congestion Mitigation and Air Quality Improvement program (CMAQ) funds for the improvement and maintenance of its multi-modal local streets and roads network. These projects were funded under the One Bay Area Grant (OBAG2) program. Additional federal funding is programmed to projects that improve bicycle, pedestrian infrastructure, Safe Routes to Schools, and complete streets projects. The county has access to its local transportation sales tax measures, which are used for transit projects as well as leveraging state and federal funds. To meet both internal and external travel demands Santa Clara County has developed multiple transportation investment strategies. The projects included in the 2023 TIP reflect both internal and gateway transportation investments in the county's roadway, transit, and bicycle networks.

Solano County

[Narrative summary provided by the Solano Transportation Authority]

County Overview

Solano County, which sits equidistant from both San Francisco and Sacramento, comprises seven cities: Fairfield, Benicia, Dixon, Rio Vista, Suisun City, Vacaville, and Vallejo. The county covers more than 900 square miles and produces over 80 diverse agricultural commodities. Solano County is home to approximately 430,000 people who rely on 1,900 miles of streets, roads, and highways to travel throughout the community and to nearby metropolitan centers, to commute to school and work, and to transport goods.

Over time, Solano County has taken strides to promote alternative transportation and multimodal commuting by expanding passenger rail service and constructing miles of sidewalks and bike lanes. The county's transportation network is always expanding and improving to meet the needs of its residents, which includes accommodating personal vehicles, local and intercity buses, a large volume of trucks, as well as bicyclists and pedestrians. Solano County is also home to Travis Air Force Base, which can add an additional heavy equipment component to local roadway use. Finally, because of its proximity to two major cities, Solano County serves not only local residents, but also a high volume of through traffic, which can result in acute congestion along major highway and freeway corridors, particularly the I-80 Corridor. In choosing transportation projects to implement, Solano County prioritizes projects that utilize data-driven solutions to resolve or mitigate the county's endemic transportation issues, particularly traffic congestion, gaps in the active transportation network, aging transit infrastructure, and a lack of education regarding alternative modes of transportation.

Planning Framework

The Solano County 2023 TIP project listings are developed in coordination with Solano Transportation Authority (STA), public transit agencies, the seven cities, and the County of Solano. The projects included in the 2023 TIP collectively reduce GHG emissions, improve mobility, reduce congestion, ensure travel safety, and provide ladders of

economic opportunity to the citizens of Solano County. These projects utilize solutions consistent with the goals and objectives of Solano Comprehensive Transportation Plan (CTP), including:

- Identify a transportation system that supports the existing and planned land uses of Solano County's seven cities and the County of Solano
- Maintain regional mobility while improving local mobility
- Assess projects and programs based on their ability to balance the goals of economy, environment, and equity
- Encourage projects and programs that maintain and use existing systems more efficiently before expanding infrastructure

The CTP emphasizes implementing data driven solutions for all elements of the county's transportation network from highways to sidewalks, as well as committing to effective transportation troubleshooting which directs every aspect of the county's project development and implementation. The selected projects were also informed by numerous feasibility studies and targeted plans or planning initiatives, including the Solano County Alternative Fuel and Infrastructure Plan, the Countywide Safe Routes to School Plan, the Countywide Safe Routes to Transit Plan, and the Countywide Bicycle Plan.

TIP Project Highlights

Roadway Projects

Solano County is currently planning 18 roadway projects to be delivered between FY 2022-23 and FY 2025-26. Many of these projects center on the regionally significant I-80 Corridor, as well as on other major highways and arterials throughout the county. While a portion of the projects merely represent responsible road maintenance and rehabilitation, several key projects will have transformational effects on their respective travel corridors. These key projects include:

- The I-80/I-680/SR 12 Interchange Project
- The Solano I-80 Managed Lanes
- The Solano Westbound I-80 Cordelia Truck Scales
- The Vaca Valley/I-505 Multimodal Improvements
- The Jepson Parkway: Leisure Town Road Phase 1B and 1C

The I-80/I-680/SR 12 Interchange Project will improve and widen the major freeways on the I-80 corridor as well as improving connectivity between regionally significant destinations. This large infrastructure project will also construct or improve interchanges along the corridor and add a third eastbound lane to SR12. The I-80 corridor will also be affected by the Solano I-80 Managed Lanes Project, which will convert existing HOV lanes to express lanes and will widen the I-80 to construct a new express lane in each direction along segments that are particularly congested. Solano County will also focus on improving its arterials through the Jepson Parkway Project, which will upgrade and link a series of existing local two- and four-lane roadways to provide a four- to six-lane north-south travel route for motorists who face increasing congestion when traveling between jurisdictions in central Solano County.

Pictured clockwise from top left: I-80/I-680/SR Interchange project; Vaca Valley/I-505 project; Jepson Parkway project before construction; Jepson Parkway after construction.

Though the roadway projects focus primarily on congestion management, the Vaca Valley/I-505 Project encompasses a series of multimodal improvements. The project will install roundabouts and construct bicycle/pedestrian facilities over I-505 connecting to existing facilities and incorporating ADA improvements, closing a pedestrian gap across I-505, and improving circulation for the local and regional bus systems. Traffic and roadway safety and conditions will improve for all users, complimenting concurrent Active Transportation Projects throughout the county.

Active Transportation Projects

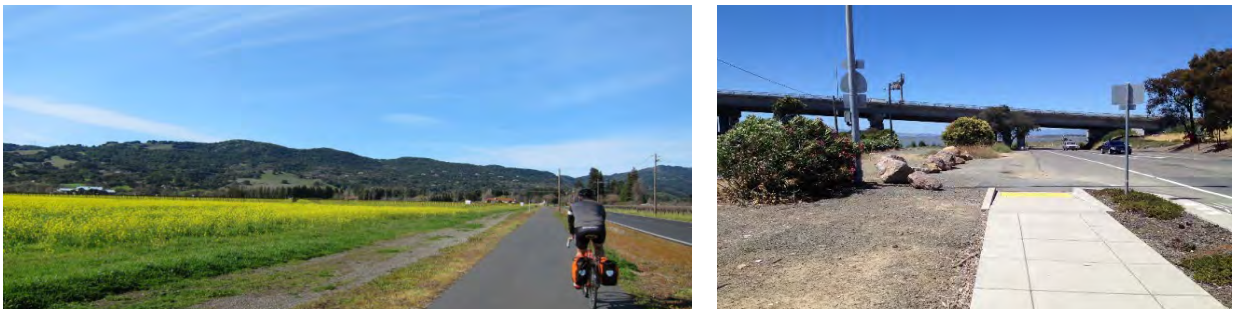
Solano County's Active Transportation Projects (ATPs) are multifunctional solutions to endemic mobility issues, serving multiple initiatives and goals including Safe Routes to School, Complete Streets, multimodal commuting, neighborhood connectivity, and access to outdoor recreation spaces. At present, there are 11 active transportation projects throughout Solano County that will be delivered between FY 2022-23 and FY 2025-26. Many projects further the goals of Solano County's Safe Routes to School initiative, which include both infrastructure and non-infrastructure components. Generally, the non-infrastructure projects aim to educate Solano County residents about their active transportation network and encourage the community to examine the viability of active transportation commutes, while the infrastructure components aim to bridge gaps in Solano County's network of bicyclist and pedestrian facilities or to provide first/last mile solutions for transit commuters. Notable projects include:

- Suisun Valley Bicycle and Pedestrian Imps
- McCoy Creek Trail - Phase 2
- Vallejo Bay Trail / Vine Trail Gap Closure

Most of Solano County's ATPs are expansions or gap closures that augment the existing bicycle and pedestrian infrastructure network, including not only new path links, but also complimentary signage, lighting, and landscaping to make active transportation comfortable, viable, and safe.

Several projects also focus on increasing recreational access to public green spaces. The Suisun Valley Bicycle and Pedestrian Improvements Project will construct a staging area to connect to an expanded network of bike paths in an Agri-tourism area. Similarly, the

Vallejo Bay Trail / Vine Trail Gap Closure project will bridge a longstanding gap between three popular trails with a multi-use path. This project is the culmination of an extended feasibility study that evaluated multiple routes to determine the most effective and least environmentally impactful method of closing this gap in Solano County's trail network.



Pictured: Vallejo Bay Trail/Vine Trail Gap Closure project – Completed segment (left) and segment to be addressed (right)

Many projects of this type are phased, improving Solano County's active transportation network step-by-step and endeavoring to account for the mobility needs of all users. Phase 2 of the McCoy Creek Trail project will install a Class I bicycle and pedestrian path that will close a key gap in Suisun trail system, bridge a canal, remove barriers to mobility by meeting current ADA accessibility requirements, and provide a safe route to two local schools.

Transit Projects

Solano County's transit projects aim to preserve or replace transit assets, improve transit education and the overall experience for local residents, prepare to incorporate new technology, and build new facilities to meet and induce demand. At present, there are 20 transit projects throughout Solano County that will be delivered between FY 2022-23 and FY 2025-26. These projects will modernize the local transit fleet by introducing electric vehicles, educate and cater to vulnerable transit users, including elderly and disabled riders, and provide excellent transit facilities for all users. Notable projects include:

- Connected Mobility Implementation Plan
- TIRCP Solano Regional Transit Improvements 2020
- SolanoExpress Bus Electrification
- SolTrans Electric Bus Charging Infrastructure

A plurality of Solano County's transit projects emphasize non-infrastructure components, such as education, service, and incentive programs to better serve Solano County residents. However, the cohort of planned infrastructure projects will have a significant beneficial impact on the travel experience of all users and will encourage and enable multimodal commuting. Phase 3 of the Fairfield Transportation Center project will construct additional parking to provide a first/last mile solution for commuters, as well as provide better access for transit users, cyclists, and pedestrians.

STA was awarded $10.4M through the 2020 Transit and Intercity Rail Program (TIRCP) to improve the access, reliability, frequency, integration, and safety of regional transit services throughout and outside Solano County. Five project components were funded in this application, specifically: the Network Integration Planning; In-Line Charging Infrastructure at five locations; Improvements at the Vacaville Transit Center; Improvements at the Fairfield-Vacaville (Hannigan) Train Station; and Improvements at the Fairfield Transportation Center. Every component of the application is fully integrated to the local transit and active transportation system, with the goal of better integrating to the regional transit system, as well to create a seamless, safe, and frequent regional transit system.

New transit assets also require updated facilities. Under SolTrans, the Electric Bus Charging Infrastructure project will update existing facilities to accommodate SolanoExpress Bus Electrification. These improvements will help ease the transition to alternative fuel vehicles and allow service to continue operating smoothly.

Pictured: SolTrans electric bus (left); SolTrans Electric Bus Charging Infrastructure project (right).

Sonoma County

[Narrative summary provided by the Sonoma County Transportation Authority]

Sonoma County Overview

Sonoma County is the largest of the four North Bay counties by area, covering over one million acres of land, and is home to almost half a million people (2021 US Census). More than half of the population is located in cities along the Highway 101 corridor along with concentrations of jobs, services, and shopping centers. Populated areas outside of this corridor are in and around the Cities of Sebastopol and Sonoma, the Russian River area, the Sonoma Valley, and along the Pacific Coast.

Sonoma County has a relatively balanced jobs/housing split with over 84% of its residents working within the county (Sonoma County Travel Behavior Study). The economy is based on a diverse mix of agriculture, manufacturing, tourism, and services (health care, education, retail, food service, etc.).

Travel in the county is oriented towards private passenger vehicles, with 87% of commuters traveling to work by automobile (drive alone or carpool – US Census Bureau). Non-work travel is also auto-oriented, but travelers are more likely to travel together, or share rides, for school, recreation, shopping, and other trips (Sonoma County Travel Model). Trip distance and duration vary based on trip purpose and travel mode. Work trips are longer (14 miles or 22 minutes, on average) and school, shopping, and other trips are generally shorter (5-7 miles or 11-13 minutes, on average).

Traffic volumes and congestion are heaviest during morning and evening peak periods during weekdays and are particularly heavy on Friday evenings on weekends. The Sonoma County Travel Model estimates that roughly 23,500 hours were lost each day due to congestion and that congestion will continue to increase as countywide population and employment increase.

Transportation ranks as one of the key issues among Sonoma County residents. The transportation system in the county includes several state highways, 2,700 miles of streets and roads, and four bus transit providers. Sonoma County also has an approved sales tax measure, which helps to fund key multi-modal transportation projects within the county.

Sonoma and Marin Counties also share a sales tax measure to fund the Sonoma Marin Area Rail Transit (SMART) project.

Planning Framework

Sonoma Comprehensive Transportation Plan Consistency

The TIP project listing for Sonoma County was developed in coordination with the Sonoma County Transportation Authority (SCTA), public transit operators, and the nine cities and the County of Sonoma. The projects included in the 2023 TIP serve to meet goals adopted by the SCTA Board for the Comprehensive Transportation Plan of Sonoma County: *Moving Forward 2050*.

VISION

Connecting people and places as we transition our transportation network to zero-emissions by 2050. Our guiding principles are to improve **safety**, **equity**, and **quality of life.**

GOALS

Our transportation system should be:

1. Connected and Reliable

Deliver a seamless network that allows people to use a variety of transportation types easily, affordably and dependably.

2. Safe and Well-Maintained

Provide safe and well-maintained transportation infrastructure.

3. Community Oriented and Place-Based

Implement place-based transportation projects, tailored to urban, suburban, and rural communities that will improve local mobility.

4. Zero-Emissions

Provide zero-emission transportation opportunities that meet diverse community needs, improve health and enhance quality of life.

Roadway

There are several projects in the 2023 TIP that continue the addition of High Occupancy Vehicle (HOV) Lanes on Highway 101 in Sonoma County from the Marin County line to

the Town of Windsor, which has been a longstanding need for local and interregional travel. The Highway 101 projects collectively serve to reduce congestion, maintain the current facility, upgrade the facility to current safety standards, and reduce emissions by encouraging carpooling and use of express bus service. The Highway 101 projects also address local access across Highway 101 with interchange improvements, widening of local streets and the addition of sidewalks and bike lanes. There are also several local pavement maintenance projects needed to protect existing infrastructure included in the 2023 TIP. Also included are bridge replacement projects, needed for seismic safety, maintenance, and expansion of local roadways.

Replacement of the North Petaluma Overhead, Highway 101 over SMART Under construction in 2022

Transit

Sonoma County currently has four bus transit operators. Sonoma County Transit serves the entire county and Golden Gate Transit serves the 101 Corridor as far north as Santa Rosa. The cities of Petaluma and Santa Rosa have transit systems that serve their

respective cities. Sonoma County also shares a rail transit district (SMART) with Marin County that became operational in 2017. The 2023 TIP contains projects that will ensure preventative maintenance for transit vehicles and facilities, including purchase of clean air vehicles for the transit fleets. Transit and maintenance yards will receive upgrades. Bus stops and hubs will be improved in multiple locations, including improvements to accessibility, pedestrian and bicycle access, and technology. Transit operators will receive operating assistance for fixed-route and ADA paratransit. Transit operators will also receive capital, planning, and operating assistance related to the coronavirus public health emergency including costs to shutdown, maintain and restart service, purchase of PPE and supplies, and administrative leave.

Sonoma County Transit Zero Emission Battery Electric Bus

Active Transportation

The Sonoma County Transportation Authority (SCTA) is working with stakeholders to implement a Safe Routes to Schools program that receives federal funds to expand the number of schools served. The program seeks to educate school children on safe biking and walking practices and encourages school children to use bicycling and walking as an alternative mode of transportation.

The SCTA also administers funds to implement student pass subsidy programs, and free ride trip reduction projects to reduce the number of single occupant vehicles on city streets and enhance air quality.

Several jurisdictions have bicycle and pedestrian improvement projects that will close gaps in or extend on- and off-road bicycle facilities. Additionally, proposed pedestrian improvements will enhance safety, accessibility, and walkability in various locations. Examples include gap closures of the West County Trail near the community of Graton and a bicycle and pedestrian overcrossing in Santa Rosa. Both are partially funded with State Transportation Improvement Program (STIP) funds.

The SCTA is working on a bike share pilot program along the SMART corridor and managing the implementation of other transportation demand management measures.

Planned Marin-Sonoma Bike Share Pilot Program

Summary

Sonoma County is a self-help county, having passed a quarter cent sales tax measure (Measure M) in 2004 and another in 2020 that will begin when Measure M ends in 2025(Go Sonoma). SCTA has focused using these funds to match other state and federal sources to complete a third lane in either direction along US 101, and to implement needed road and bike pathway projects all around the county.

The Sonoma County 2023 TIP listing is a balanced mix of roadway projects, transit projects, and alternative modes projects. The projects included in the 2023 TIP will help

address the current and future transportation needs in Sonoma County: the transit programming directly addresses our connected and reliable goal, while our road maintenance projects fit nicely with that goal plus the safe and well-maintained goal. The bicycle and pedestrian projects listed in the TIP address the community oriented and place based and zero emissions goals. Thus, these projects are consistent with the Sonoma Comprehensive Transportation Plan. Sonoma County transportation projects support adopted goals and vision of the regional transportation plan and sustainable community Strategy (RTP/SCS), *Plan Bay Area 2050*.

Various Counties

This section contains projects that span multiple counties and consolidated groups of projects (group listings) that contain projects in various counties.

Group Listings include similar-type projects throughout the region that are bundled together rather than listed individually within the TIP. This includes projects funded through the state-managed programs, such as the State Highway Operations and Protection Program (SHOPP) which maintains the state highway system; the Highway Safety Improvement Program (HSIP) which improves safety on local roadways; and the Highway Bridge Program (HBP) which rehabilitates and replaces local bridges. Projects included within the Group Listings may be found in Appendix A-51.

Multiple Counties

This section contains projects involving multiple counties, such as projects sponsored by MTC or other region-wide jurisdictions that cover more than one county.

The projects are within several counties and are generally sponsored by a regional agency or a project sponsor acting on behalf of other entities. In some instances, these are projects that cover and benefit the entire region.

Regional Projects

Overview

The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) track and forecast the region's demographics and economic trends to inform and guide Plan Bay Area investments and policy decisions. Between now and 2050, the nine-county San Francisco Bay Area is projected to add more than 1 million jobs, 2 million people, and 1.5 million homes, for a total of more than 5 million jobs, 10 million people, and 4 million homes. These figures translate to more drivers on the Bay Area's roads and riders on both local and regional transit systems. This increase in the use of the region's transportation infrastructure will necessitate greater coordination to ease the flow of riders and traffic between destinations.

In addition to better coordination among systems, these projected increases in population and employment raise concerns about the environmental impact of transporting these individuals and the goods that they will need. Senate Bill 375 mandates per-capita greenhouse gas (GHG) target achievements for years 2020 and 2035 as established by the California Air Resources Board. The region's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), *Plan Bay Area 2050*, achieves the greenhouse gas emissions reduction target required by state law through a more efficient land use pattern, key transportation investments, and initiatives such as accelerated electric vehicle deployment. It also achieves the housing target required by state law to provide housing for all of the region's population over the next three decades, relying on local communities' support for policies that direct the lion's share of housing growth into Priority Development Areas. *Plan Bay Area 2050* not only meets but exceeds its GHG emissions reduction target. By 2035, the typical Bay Area resident is expected to reduce their daily transportation carbon dioxide emissions by 20 percent when compared to 2005.

While MTC has considered the effects of transportation investments on GHG emissions in prior regional transportation plans, *Plan Bay Area 2050* was the third regional effort with an aggressive and achievable emission reduction goal developed under SB 375. By accelerating efforts to emphasize infill growth and to boost funding for public transit, the plan represents a bold step for the region in this era of climate change. The 2023 TIP's project programming is consistent with and supports the goals of *Plan Bay Area 2050*.

Regional TIP Projects

To address the issues facing the Bay Area as a whole, certain regional projects and programs have been included in the 2023 TIP. Among these are funding for planning activities undertaken by regional entities such as MTC and ABAG and marketing to support the region's transportation operations. Other projects in this area are as follows:

Clipper[sm] – Clipper[sm] was introduced in the Bay Area to provide a consistent experience for riders across multiple transit systems. It is an all-in-one transit card that can be used on nearly all Bay Area transit operators, including AC Transit, BART, Caltrain, Golden Gate Transit and Ferry, San Francisco Muni, SamTrans and VTA. The card may be customized to the user's travel preferences by loading passes, ride-books, discounted tickets or cash value. This may be done online, by phone, through Clipper[sm] Add Value machines or participating retailers, through an employee benefit program or automatically using the Auto-load feature.

511 – 511 provides information regarding transit, rideshare, traffic and bicycling to users by phone or through the 511.org website. Callers to the 511 system can get estimated travel times for trips, traffic congestion updates, transit departure time predictions, carpooling and vanpooling information and other assistance. Users of the website are able to plan trips by transit or roads, view traffic maps, find carpool members, view bicycle maps and safety tips, and access other information.

Safety – Many projects in the 2023 TIP are aimed at increasing the safety of the Bay Area's highways. Activities such as bridge and pavement rehabilitation and highway shoulder widening projects help prevent accidents by addressing unsafe road conditions. Under its Incident Management Program, the Metropolitan Transportation Commission Service Authority for Freeways and Expressways (MTC SAFE), in conjunction with Caltrans and the California Highway Patrol, operates both the Freeway Assist Program and the Freeway Service Patrol (FSP) in the Bay Area. The Freeway Assist Program provides motorists experiencing breakdowns and flat tires with access to assistance 24 hours a day via call boxes and the 511 phone system. The FSP is a fleet of over 70 roving tow and service trucks deployed during peak travel times to clear accidents, assist motorists, and remove dangerous debris from freeways.

Regional and Inter-Regional Freight Rail Projects – The 2023 TIP includes several regional and inter-regional freight rail projects that will not only facilitate economic growth, but also aid in reducing greenhouse gas and PM emissions. Alameda County Transportation Commission's (Alameda CTC's) 7th Street Grade Separation (East) project aims to alleviate congestion at the Port of Oakland. Similarly, the Port of Oakland will be studying options for greater rail

connectivity between their facilities and the Central Valley. Finally, the Port of Oakland Freight Intelligent Transportation Systems (FITS) project aims to improve both freight and rail efficiency in the Port of Oakland. Many of these projects received funding through the state's Trade Corridor Enhancement Program (TCEP), largely funded through Senate Bill 1 proceeds and federal sources.

Climate Initiatives Program – Many measures are being taken to reduce greenhouse gas (GHG) emissions and/or to mitigate the effects of climate change as required by state and federal law. Such measures and programs include innovative grants for activities such as car/bike sharing, Spare the Air Youth Program to educate and inspire youth to take alternate forms of transportation, and promotion of electric vehicles (EV) and EV infrastructure.

Tollway Projects

Regional Measure 1 Toll Bridge Program

In November 1988, Bay Area voters approved Regional Measure 1 (RM 1), which authorized a standard base auto toll of $1.00 on all seven state-owned Bay Area toll bridges – the Antioch, Benicia-Martinez, Carquinez, Dumbarton, Richmond-San Rafael, San Mateo-Hayward and San Francisco-Oakland Bay bridges. The additional revenues generated by the base toll increase were designated for a number of bridge, highway, and transit improvement projects designed to reduce congestion on the bridges.

In 1998, the Metropolitan Transportation Commission (MTC), in its role as the Bay Area Toll Authority (BATA), assumed administration of these base toll funds as well as responsibility for overseeing the RM 1 toll bridge capital improvement program. Two RM 1 projects — the widening of the Benicia-Martinez Bridge and construction of the West Grand Avenue connector to the San Francisco-Oakland Bay Bridge — had, by then, already been completed by Caltrans, which continues to provide the engineering staffing for design and construction oversight of the projects, reimbursed by BATA.

The RM 1 projects have been completed. The program cost approximately $2.4 billion and was funded primarily by BATA toll funds. The projects and their status are as follows:

- New Carquinez Bridge (Open to traffic in 2003)
- New Benicia-Martinez Bridge (Open to traffic in 2007)
- Existing Benicia-Martinez Bridge Modified for Southbound Only Traffic (Completed in 2009)
- Major Rehabilitation of Richmond-San Rafael Bridge
    - Replacement of trestle and rehabilitation of fenders (Completed in 2005)
    - Resurfacing of bridge deck (Completed in 2006)
- Completion of Richmond Parkway (Completed in 2001)
- Widening of San Mateo-Hayward Bridge and eastern approach (Open to traffic in 2003)
- Improvements to the western approach to Dumbarton Bridge
    - Modifications to US 101/University Avenue interchange (Completed in 2004)
    - Widening of State Route 84/Bayfront Expressway (Open to traffic in 2004)

- Reconstruction of Interstate 880/State Route 92 Interchange (Completed in 2011)

Toll Bridge Seismic Retrofit Program

Tolls on all state-owned bridges in the Bay Area include seismic surcharges applied to the base toll. Administered by BATA, these toll funds are used in combination with other state and federal moneys to finance a multibillion-dollar toll bridge seismic retrofit program affecting the state-owned Bay Area toll bridges. Caltrans' engineering staff determines what retrofit work is needed on each bridge based on traffic uses, expected life of the bridge, cost of higher post-earthquake performance levels, and other considerations. Each retrofit is designed to a level that, at a minimum, will ensure that the bridge will remain standing in an earthquake.

When first conceived, the Toll Bridge Seismic Retrofit Program only identified seven of the nine state owned toll bridges to need seismic retrofit – excluding the Dumbarton and Antioch Bridges. Further seismic vulnerability studies on those bridges determined the need for retrofit based on current seismic standards. In 2009, Assembly Bill 1175 was signed to add these bridges to the program. Tolls were subsequently increased to cover the cost of these retrofits.

The $9.4 billion Toll Bridge Seismic Retrofit Program is overseen by the Toll Bridge Program Oversight Committee – a committee composed of the executive directors of BATA and the California Transportation Commission and the director of Caltrans. The projects and their status are as follows:

Toll Bridge Seismic Retrofit Program

- Antioch Bridge — Strengthen or replace structural elements, add isolation and dampening features (Completed in 2012)
- Benicia-Martinez Bridge (original 1962 span) — Strengthen or replace structural elements, add isolation and dampening features (Completed in 2002)
- Carquinez (1958 eastbound structure) Bridge — Strengthen or replace structural elements, add isolation and dampening features (Completed in 2002)
- Dumbarton Bridge — Strengthen or replace structural elements, add isolation and dampening features (Completed in 2012)
- Richmond-San Rafael — Strengthen or replace structural elements, add isolation and dampening features (Completed in 2005)
- San Francisco-Oakland Bay (west span) — Strengthen or replace structural elements, add isolation and dampening features (Completed in 2004)

- San Francisco-Oakland Bay (west approach) — Strengthen or replace structural elements, add isolation and dampening features (Completed in 2009)
- San Francisco-Oakland Bay (east span) — Construct new bridge (Opened to traffic in September 2013)
- San Mateo-Hayward — Strengthen or replace structural elements, add isolation and dampening features (Completed in 2000)

Toll Bridge Rehabilitation Plan

BATA annually adopts a revised 10-Year Toll Bridge Rehabilitation Plan for the state-owned bridges that provides for on-going funds to maintain the structural integrity of the bridges and approaches, secure and update bridge facilities, and upgrade the revenue collection system for the bridges. BATA and Caltrans work closely to identify critical needs to prioritize funding and delivery.

The Rehabilitation Plan totals nearly $2.8 billion over a 10-year period and includes rehabilitation and operational improvements of toll bridges, approaches and facilities and the maintenance and replacement of tolling equipment.

Regional Measure 2 Toll Bridge Program

On March 2, 2004, voters passed Regional Measure 2 (RM2), raising the toll on the seven State-owned toll bridges in the San Francisco Bay Area by $1.00. This extra dollar is to fund various transportation projects within the region that have been determined to reduce congestion or to make improvements to travel in the toll bridge corridors, as identified in SB 916 (Chapter 715, Statutes of 2004). Specifically, RM2 identifies thirty-six capital and fourteen transit operating assistance projects and programs eligible to receive RM2 funding (California Streets and Highway Code Section 30914 (c) & (d)). The capital program totals $1.5 billion in project investments to be implemented over time and the operating program is funded at up to 38% of annual revenues, or approximately $44 million per year.

In accordance with the legislation as approved by the voters, the Bay Area Toll Authority (BATA) is the financial manager for RM2 funds, whose responsibilities include the preparation of financial plans, the issuance of debt financing, and the disbursal of funds to project sponsors. The Metropolitan Transportation Commission (MTC) is the program and project coordinator, whose responsibilities include reviewing project applications, programming and allocating funds to specific projects, and monitoring project delivery. In some cases, MTC also serves as the project sponsor, for the regional Transit Connectivity Study, as well as certain regional

customer service projects, such as the Transit Commuter Benefits promotion, the Real Time Transit information program, and implementation of Clipper(sm), formerly known as TransLink®.

More information is available at: https://mtc.ca.gov/funding/regional-funding/regional-measure-2

Express Lane Program

The 2023 TIP includes a number of express lanes projects that will be operated by MTC through the Bay Area Infrastructure Financing Authority (BAIFA). MTC's express lanes complement other express lanes in the region, collectively known as 'Bay Area Express Lanes'. Express lanes allow solo drivers the choice to pay for a more reliable trip, while carpools travel toll free. Tolls change dynamically based on traffic congestion and are collected by FasTrak. MTC's express lanes are mostly conversions of existing high-occupancy vehicle lanes, but in a few cases involve widening to provide a new lane. They are in various stages of development: initial study, environmental clearance, design and construction.

- ALA-680 Express Lane: SR-84 to Alcosta Blvd;
- ALA-880 Express Lanes: North of Hacienda to Hegenberger; and
- SOL-80 Express Lanes: Air Base Parkway to I-505.

More information is available at: https://mtc.ca.gov/operations/traveler-services/bay-area-express-lanes

Regional Measure 3 Toll Bridge Program

On June 5, 2018, voters passed Regional Measure 3 (RM3). RM3 approved a $3 toll increase to be phased in between 2019 and 2025. The tolls will provide funding for capital and operating projects identified in the expenditure plan contained in SB 595. The projects are a mix of transit, roadway, and active transportation projects located throughout the Bay Area. Projects to be funded through RM3 will be amended into the TIP as they move forward. Currently RM3 is on hold pending review from the California Supreme Court.

More information is available at: https://mtc.ca.gov/funding/regional-funding/regional-measure-3