

Alameda County

Overview

At the heart of the nine-county San Francisco Bay Area, Alameda County is the second-largest county, with a population of over 1.6 million. The extensive transportation network of roads, rails, buses, trails and pathways carries 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 growing more quickly than auto trips: between 2007 and 2015, the county saw 85,000 new commuters using transit, biking, walking or working remotely, compared to only 22,000 new commuters driving alone.

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.
- Currently, five of the Bay Area's top 10 most-congested freeway segments are in Alameda County, and average freeway delays are growing.
- The 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.
- Implementation of intelligent transportation systems, express lanes, metered lanes and other technology, and multimodal investments to reduce demand on our roadways are needed to provide traffic relief.



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

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.

- Approximately 100 million riders board transit annually in Alameda County.
- The Alameda-Contra Costa Transit District (AC Transit) serves 48 percent of annual countywide transit ridership on 150 bus routes.
- The San Francisco Bay Area Rapid Transit District (BART) serves 47 percent of annual countywide transit ridership, with 22 of BART's 46 stations located in Alameda County.
- San Francisco Bay Ferry service is also growing and averages 1,600 riders each weekday.



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.

- The Port of Oakland is the seventh busiest port in the nation by volume and handles 99 percent of container volume for Northern California.
- 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, which carry over 20,000 trucks of all classes per day on average.
- Alameda County contains the core of the Bay Area/Northern California freight and passenger rail system, and the demand for both freight and passenger service is growing.



Truck and rail queues at the 7th busiest port in the nation, the Port of Oakland.

Planning Framework

Several plans guide transportation development and funding decisions in Alameda County and were developed with input from the public and community and agency stakeholders across the county. The Countywide Transportation Plan, adopted in May 2016, articulates the vision for Alameda County's transportation system over a 25-year planning horizon and provides input to the Regional Transportation Plan (RTP). The Congestion Management Program adopted in December 2017 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 also plans for improvements in every city throughout the 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 include three first-time countywide plans, the Alameda County Goods Movement Plan adopted in February 2016, the Countywide Multimodal Arterial Plan adopted in June 2016 and the Countywide Transit Plan adopted in June 2016, as well as the Priority Development Area (PDA) Investment and Growth Strategy adopted in May 2017 and the Active Transportation Plan, currently in progress and scheduled for adoption in 2019, which includes updates to the bicycle and pedestrian plans.

The 2018 Comprehensive Investment Plan (CIP) adopted in April 2017 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 2019 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 RTP/Sustainable Communities Strategy, *Plan Bay Area 2040*.



Highway 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 7th Street Grade Separation project at the Port of Oakland to support improved goods movement in the county and a series of interchange improvements on I-880 at Winton Ave, Industrial Parkway West, and Whipple Road. In eastern Alameda County, highway projects include express lane improvements in the I-680 corridor and improvements to State Route 84. In southern Alameda County, improvements include the State Route 262 cross connector between I-680 and I-880.



I-680 Sunol Express Lanes groundbreaking for a new northbound 9-mile high-occupancy vehicle/express lane

To increase the use of alternative 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 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.

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

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Contra Costa County

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 about 1,035,111 people with about 352,506 jobs. Contra Costa is forecast to add 351,412 residents between 2010 and 2040, a 34 percent increase. The growth in population coincides with a growth of 106,808 new households forecasted by 2040. Job growth in Contra Costa is expected to be even more substantial, adding 145,607 new jobs, a 41 percent 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, extends 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 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:

¹ MTC/ABAG Projections 2017

- Support the efficient and reliable movement of people and goods using all available travel modes;
- Manage growth to sustain Contra Costa's economy, preserve its environment and support its communities;
- Expand safe, convenient and affordable alternatives to the single-occupant vehicle;
- Maintain the transportation system; and
- 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, carpool, 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.

CONTRA COSTA TIP PROJECTS

The projects in the proposed TIP support the goals CCTA has adopted especially the first and third goals:

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

Support efficient and reliable Movement on Highways and Arterial Roads. Probably the highest-profile Contra Costa County project in the TIP focused on enhancing vehicular movement is 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 2019 TIP also includes the HOV lane completion project on southbound I-680 through the SR 24 interchange. When completed, the project will

result in a continuous carpool lane from the Benicia-Martinez Bridge to the Alameda County line. In addition, the 2019 TIP also includes projects such as I-680 Bus on Shoulder and I-680 Advanced Technologies that utilize technology and innovation to improve operations and reduce congestion on the I-680 corridor.

Numerous arterial and interchange improvement projects are also planned to relieve congestion and improve circulation on city streets. In West County, these projects include improvements to I-80/Central Avenue in Richmond and I-80/San Pablo Dam Road in San Pablo. In Central County, they include the Kirker Pass Truck Climbing Lane project. East County projects include the widening of Brentwood Boulevard in Brentwood. In Southwest County, projects include improvements to Bollinger Canyon Road in San Ramon.

Expand safe, convenient and affordable alternatives to the single-occupant vehicle. The TIP includes a number of projects that support the transit system, including work at the Martinez and Hercules Intermodal Stations and Transit Oriented Developments at Walnut Creek BART station. The HOV improvements mentioned above will also support this goal.

The 2019 TIP also programs funding for a number of pedestrian and bicycle projects that will close gaps and improve pedestrian and bicyclist safety in Contra Costa. These include projects such as streetscape improvements near the BART stations in El Cerrito and Concord, the Iron Horse Trail Bike and Pedestrian Overcrossing in San Ramon, the Safe Route to School Pedestrian Enhancement project at Lincoln Elementary in Richmond, Monument Boulevard Class I Bike Path in Concord, the Mokelumne Trail Bike and Pedestrian Overcrossing in Brentwood, and Walk and Bike Leaders Program in West County.

[Narrative summary provided by the Contra Costa Transportation Authority]

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Marin County

Marin County TIP Projects

Although Marin is usually thought of as a suburban residential and recreational area, ranching and dairy farming are 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, candles, and cheese.

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 prefer to retain the county's small town atmosphere and have established strong policies against development outside the urban corridor. Over 90 percent of the growth anticipated in Marin County will occur within the urban corridor, along Highway 101.

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 on November 2, 2004, generating approximately \$25 million annually for 20 years. Marin residents also voted to pass Measure B on November 2, 2010 to increase the annual vehicle registration fee by \$10 to help fund transportation improvements, generating approximately \$2.2 million annually. In addition to the sales tax and vehicle registration fee measures, Marin County has aggressively tapped into other regional, state, and federal funds to achieve the county's transportation goals.

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 improved bicycle and pedestrian access, senior 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 17 miles of high occupancy vehicle (HOV) lanes from SR-37 in Novato, Marin County to north of Corona Road Overcrossing in Petaluma, 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 mainline and ramps.

- **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 crossing multiple jurisdictional boundaries in central Marin. The proposed multi-use path will connect the existing paths at the intersection of Old Redwood Highway and Wornum Drive with the recently-opened bridge crossing Sir Francis Drake that leads to the Cal Park Hill multi-use path. A segment of the project is in final design and the other segment of the path alignment will be studied during the preliminary engineering and environmental documentation phase.
- **Sonoma-Marín 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 include: south to Larkspur, which is scheduled to be completed in 2019; and north to 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-Marín corridor, and a bicycle-pedestrian pathway.
- **Richmond-San Rafael Bridge Improvements** – The Bay Area Toll Authority (BATA) completed a \$74 million project to improve access to Eastbound 580 across the Richmond-San Rafael Bridge in April 2018. Additionally, the project will add 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 will be reconfigured in Marin and a retaining wall will be reconstructed in Richmond. The upper deck multi-use path will feature a 10-foot wide barrier-separated path from Main Street to Marine Street along the north part of I-580. The path will provide 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.

[Narrative summary provided by the Transportation Authority of Marin]

Napa County

Napa County TIP Projects

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

With its wineries, world-class restaurants, and restful scenery, this bucolic county lures three 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 a transportation sales tax in 2012 to rehabilitate local streets and roads, which takes effect on July 1, 2018. The implementation and marketing plan is under development, the Napa Valley Transportation Authority (NVTa) has reviewed and approved the five-year project lists submitted by each jurisdiction in the county.



The three million tourists that visit each year, combined with commute and local traffic, places great strain on the transportation network. Traffic congestion on main arterials such as SR-29 and Silverado Trail has become a critical issue for workers, residents, and the economic vitality of the region.

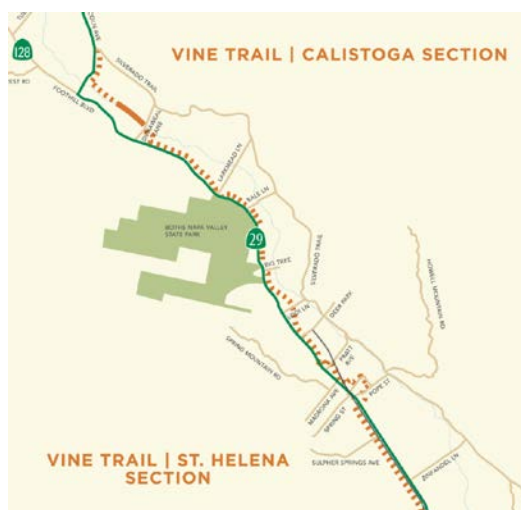
Transit

The Vine transit service is provided to all of 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 multimodal transit center in Napa, the Soscol Gateway Transit Center, opened in 2012 and route coverage and hours of service were updated to improve the transit system, currently a Comprehensive Operational Analysis is underway to further adjust and enhance transit service. Although transit service has been increasingly successful, particularly on the

express routes, congestion relief and safety improvements are still needed in several locations.

Active Transportation

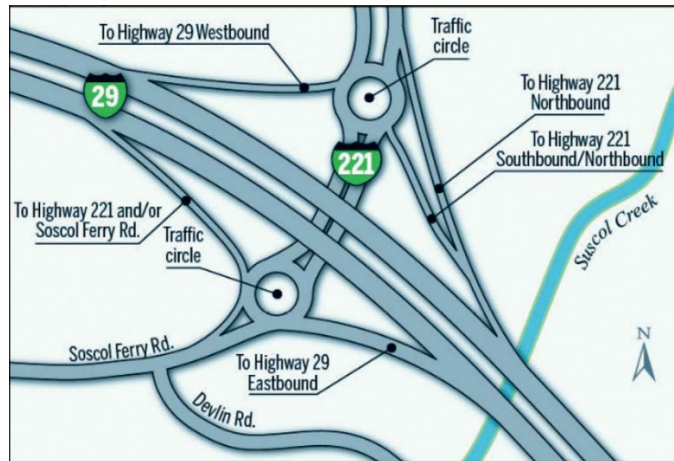
An update to the countywide bicycle plan is underway which includes a revision to the extensive planned bicycle network that is presently incomplete due to insufficient funds. A major 47-mile north/south Class I facility, the Napa Valley Vine Trail, is being pursued by a broad coalition of citizens, 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 is currently under development. A countywide pedestrian plan was completed in the summer of 2016 and developed a priority list of pedestrian projects throughout the county that will improve pedestrian access to schools and businesses.



Roadway

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

Improvements to the Napa County highway system include interchange improvements at SR-29 and SR-221/ Soscol Ferry Road. NVTa, in collaboration with Caltrans, released the Draft Environmental Document for public comment in 2016. NVTa is working with Caltrans and Napa County jurisdictions on a proposed alternative that would be more favorable for bicycles and pedestrians as well as preserve access to Soscol Ferry Road. It is anticipated the Environmental Impact Report (EIR) will be complete by the end of 2018 and detailed design work will begin in 2019.



NVTA continues to work with the City of Napa and Caltrans on the Project Initiation Document (PID) for the Silverado five-way intersection improvements. The PID was adopted by the Napa City Council on February 6, 2017 and submitted to Caltrans. Caltrans is projected to have the PID certified by July 2018.

The California Roundabout Project serves as the gateway to the City of Napa's Priority Development Area and will improve traffic circulation and level of service to the current intersection operations. Three roundabouts will be constructed at the intersections of First Street and California Boulevard, Second Street and California Boulevard, and at the northbound off-ramp of SR-29 at First Street. The Roundabouts are currently scheduled to begin construction in spring of 2019.



The projects in the TIP will improve the safety, access, and mobility of the multimodal transportation system in the Napa communities.

[Narrative summary provided by the Napa Valley Transportation Authority]

City and County of San Francisco

County Overview

San Francisco has been booming since 2010, seeing tremendous residential and employment growth. A total of 63,600 housing units are in the development pipeline. Between 2010 and 2014, San Francisco gained 120,000 new jobs, and tourism is at record-breaking highs. This boom is projected to continue, and by 2040, San Francisco is forecasted to add an additional 73,400 housing units to accommodate the city's growing population, and 275,000 jobs, many of which will be in new office space, maintaining San Francisco's position as the major jobs center of the region. All of this growth is putting tremendous strain on the city's transportation systems, as more trips are being made across all modes.

- Transit ridership has grown on all of San Francisco's operators. Muni, already the Bay Area's largest transit provider, has seen an increase in ridership of nearly 50,000 average weekday riders from 2010-2016. The Bay Area Rapid Transit District (BART), Caltrain and the Water Emergency Transportation Authority (WETA) have seen double digit growth percentages in that same time period. Transit passengers are regularly experiencing 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 engineering, enforcement and education projects and programs.
- More people are walking and biking now, with car ownership levels staying relatively constant. Over 30% of trips in San Francisco are made by walking and biking, and over 26,000 new commuters in San Francisco are walking and biking to work.
- San Francisco's roads and freeways are more congested, and have become more congested at a faster pace than the rest of the Bay Area. From 2013-15, average auto travel speeds on key arterials became 15% slower during the morning peak and 21% slower during the evening peak.
- 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. They represent an estimated 15% of intra-city trips, and an estimated 20-26% of vehicle trips Downtown and South of Market during peak periods. 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, riding transit—rely on smooth and safely designed roads. Current capacity issues must be addressed, and improvements must be made to keep pace with the city's rapidly growing population and job market. 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.

Planning Framework

On October 24, 2017, the San Francisco County Transportation Authority (Transportation Authority) Board of Commissioners approved the 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 outlines a diverse investment strategy to make progress toward four important goals through the year 2040:

- Safe and livable neighborhoods
- Economic competitiveness
- World class infrastructure
- Environmental health

The plan also identifies complementary policy initiatives to help us make the most out of these investments. We developed the plan through robust technical analysis, consultation with partner agencies, and community outreach.

Within a constrained budget largely set by local forecasts and MTC financial projections, the SFTP recommended three key categories of expenditures that serve as the basis for the 2019 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.

San Francisco TIP Projects

Consistent with the framework laid out in the SFTP, the 2019 TIP includes a variety of projects in San Francisco over the next four years (FFY 2018-19 through FFY 2021-22) 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.



The 2019 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 the Visitacion Valley, Bayview Hunters Point, South of Market (SOMA), Financial District, to Chinatown. SFMTA anticipates starting revenue service in December 2019. The 2019 TIP

also includes the electrification of Caltrain and completion of the new Transbay Transit Center (TTC) 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 to manufacture high-performance electric trains. The electric trains are anticipated to be in service in 2022. The TTC entails construction of the new Transbay Terminal (anticipated to be open for use by Fall 2018),

the development of a blended high-speed rail system, coordination of high speed rail construction and operations with existing passenger rail services (e.g., Caltrain in the San Francisco Peninsula corridor), as well as construction of pedestrian and bicycle improvements associated with the TTC.



In 2013, the Transportation Authority, working in close coordination with the SFMTA, received certification for the final environmental document for the Van Ness Avenue Bus Rapid Transit (BRT) project and it is currently under construction. In January 2017, the Transportation Authority certified the final Environmental Impact Report for the Geary Corridor BRT project and is now working in partnership with SFMTA and the Federal Transit Administration on final federal approval of the project, expected in mid-2018. SFMTA plans to begin construction on the first phase of the project in Fall 2018. The proposed BRT projects would provide high-quality rapid transit service that would reduce travel time, increase reliability, and improve passenger comfort. Anticipated elements of San Francisco's BRT network include dedicated bus lanes, transit signal priority, all-door boarding and proof of payment, reduced stop spacing, real-time bus arrival information to riders, high quality bus stations, and streetscape amenities to improve access for pedestrians and bicyclists to the transit stations.



Photo by daver6, Flickr: [flic.kr/p/ePDbuH](https://www.flickr.com/photos/daver6/1501111111/)

In addition to the major capital projects listed above, the 2019 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 serves approximately 700,000 daily passengers, more than any other Bay Area transit system. The SFMTA's vehicle acquisition and rehabilitation program, overhead line and rail replacement

program, and facilities improvement program will help provide better, more reliable service to its passengers. The 2019 TIP also contains similar critical rehabilitation and

upgrade projects for regional transit operators that serve San Francisco, including the Bay Area Rapid Transit District (BART) and Caltrain.

The 2019 TIP includes the annual availability payments for the Presidio Parkway Project, which has been constructed under an innovative public-private partnership. The project has successfully replaced the structurally deficient Doyle Drive, the southern access to the Golden Gate Bridge on US 101 connecting San Francisco to Marin and the North Bay, with a safer, more context-sensitive, and more accessible Parkway.



Another major capital project in the 2019 TIP is the Yerba Buena Island (YBI) Ramp Improvements Project which 1) relocates the westbound exit ramp and reconstructs the westbound entrance ramp on the north side of I-80 onto the San Francisco-Oakland Bay Bridge; and 2) retrofits eight existing bridge

structures along Treasure Island Road to meet current seismic safety standards. This project is independent of, but closely coordinated with, the Bay Bridge and Treasure Island Redevelopment projects. Construction of the ramps started in January 2014 and is scheduled to be complete in Spring 2018. Construction of the bridges retrofit project is scheduled to begin in early 2020 and be completed by summer 2021.

San Francisco has continued its efforts to improve transportation demand management activities in order to improve air quality and reduce greenhouse gas emissions. Notably, the Transportation Authority, officially designated as the Treasure Island Mobility Management Agency in 2014, is currently undertaking the Treasure Island Mobility Management Study to recommend pricing program policies as part of the efforts to redevelop the Island to a sustainable urban neighborhood. As shown in the 2019 TIP, tolling is anticipated to start in July 2021, concurrently with transit enhancements such as new AC Transit bus service, and an on-island shuttle service. The overall mobility management program will also include ferry service and increased Muni service.

Linked to ongoing development efforts, the 2019 TIP includes significant new 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 2019 TIP would be implemented in various locations throughout the city to preserve and enhance the basic transportation infrastructure to benefit all users, including signal timing and management projects, street resurfacing projects, curb ramps, and numerous traffic calming projects. In addition, the 2019 TIP provides funding for projects that promote safety and connectivity for pedestrians, bicyclists, and transit riders, such as major streetscape projects and Vision Zero projects with a safety focus to reduce 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 also has provided key funding for the city's major capital projects, including Presidio Parkway, Central Subway, the electrification of Caltrain and its extension to the new TTC, and the Geary and Van Ness BRT projects. 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 and 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, 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.

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

San Mateo County

San Mateo County TIP Projects

California Department of Finance estimates the current population of San Mateo County at 770,203. Projections completed in 2016 estimate that by 2040, San Mateo County's population will be 886,272. About one quarter of the county's 286,720 acres is urban, and the remaining three-quarters are primarily rangeland or forest. The urbanized area is concentrated in the vicinity of US Highway 101, State Route 82, and the Caltrain corridor. The primary



routes to the agricultural and open space coastal areas are State Route 92 (SR 92) from San Mateo and State Route 1 (SR 1) from Pacifica. In 2015, about 70% of resident commuters drove to work, 11% carpoolled, and 9% took transit. The remaining commuters took other modes or worked from home.

Emphasized transportation projects within San Mateo County include the following:

Roadway Projects

- **US 101 Managed Lane** — The major north-south artery in San Mateo is the US Highway 101 (Bayshore Freeway). San Mateo County has the vision to extend the existing managed lanes on the US 101 corridor approximately from Redwood City to San Bruno. This project would connect to managed lanes being developed in Santa Clara County as well as



managed lanes planned in San Francisco. This project is 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, local measure funds, and private sector contributions.

- **US 101 corridor interchange improvements** — Various interchange improvements are in construction or under consideration. Due to the limitation for expansion, most projects are for improved operations and management of the existing system. The County share of STIP funds are programmed for improving the US 101/Woodside Road interchange, improving the US 101 Produce interchange, and the US 101/ SR 92 interchange. Additional project funds are provided by local transportation sales tax and local jurisdiction contributions.
- **SR 1 corridor** – Highway 1 projects include various safety and operational proposals in Half Moon Bay and the unincorporated areas that includes turn lanes, raised medians, acceleration lanes, and improving bike/ pedestrian crossings.
- **Operational Improvements** - Ramp metering has been completed along the entire US 101 within the county and along the portion of Interstate 280 north of I-380. Other operational improvements in the 2019 TIP include building out an intelligent transportation system (ITS) infrastructure to efficiently manage existing facilities through technology. Funding is from a combination of STIP funds and local vehicle license fees.

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, as well as signal and communication equipment that have reached the end of their useful lives. The SOGR program also includes station rehabilitation and improvements, ongoing rehabilitation of existing Caltrain rolling stock, and periodic assessment of the entire route to ensure the rail system is maintained in a state of good repair and is kept in good working order.
- **Caltrain Modernization** – The Caltrain Modernization Program, scheduled to be operational by 2022, 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; the installation of Positive Train Control (PTC); and the replacement of approximately 75 percent of Caltrain's diesel fleet with high-performance electric trains called Electric Multiple Units (EMUs).

- o **Positive Train Control** – PTC is an advanced signal system that will equip the Caltrain corridor with federally-mandated safety technology. The project will enhance overall safety by eliminating the risk of train-to-train collisions, reducing the risk of potential derailments and providing additional safety for railroad workers on the tracks.

The \$2.13 billion program is funded through local, regional, state, and federal funding, including a \$647 million core capacity grant from the Federal Transit Administration.

- **Peninsula Corridor Electrification Project** – The PCEP will electrify the Caltrain corridor with an overhead contact system that will supply power to new, Electric Multiple Unit (EMU) trains. The new EMUs will have better performance than diesel-powered trains and will result in improved air quality and reduced noise. The PCEP includes the replacement of approximately 75 percent of the current diesel fleet with 96 new EMUs.
 - o **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 40 EMU vehicles. This will build on the initial procurement of 96 EMUs through the Peninsula Corridor Electrification Project. This project also includes minor modifications to lengthen some platforms to accommodate 8-car EMUs as well as wayside bicycle facility improvements.
- **SamTrans Revenue Vehicle Replacement** –The 2019 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' on-going sustainability efforts, the agency is committed, with each sub-fleet replacement, to the procurement of zero emission vehicles where financially and technically feasible.
- **SamTrans Traffic Signal Priority Project** – This project will implement Traffic Signal Priority (TSP) technology for SamTrans buses traveling on El Camino Real in San Mateo County (State Route 82). This will help improve transit speed along the corridor by either giving buses early green lights or extending green lights at traffic intersections. SamTrans will build on the existing El Camino Real Smart Corridor Project, implemented by Caltrans and the City/County Association of Governments of San Mateo County (C/CAG), and deploy wayside antennas at intersections and transponders aboard buses.
- **SamTrans Express Bus Project** – The SamTrans Express Bus pilot will introduce a network of up to four express bus routes on US-101 serving origins and

destinations in San Mateo, Santa Clara, and San Francisco counties. 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 managed lane 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).

- **SamTrans' support of Grand Boulevard Initiative and Last Mile Connection Transportation Demand Management (TDM) Program** – SamTrans is a partner of the Grand Boulevard Initiative, which is a collaboration of cities, counties, transit agencies, among others, along the El Camino Real in the Peninsula and South Bay. This Corridor is a planned Priority Development Area (PDA) prioritized for housing and job development with amenities and services that foster a transit and pedestrian-friendly environment. The 2019 TIP includes planning and capital projects in support of this effort. In addition to being a partner in the Grand Boulevard Initiative, SamTrans also supports a number of pilot projects as part of the Last Mile Connection TDM program in San Mateo County.

Alternative Modes of Transportation

The 2019 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 2019 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 concept.

[Narrative summary provided by the City/County Association of Governments of San Mateo County]

Santa Clara County



Overview

As of July 1, 2017 Santa Clara County's population was approximately 1.95 million, making it the largest of the nine Bay Area counties. The county has 15 incorporated cities, including San Jose, which is

the third largest city in California, following Los Angeles and San Diego. Santa Clara continues to be the larger of the San Francisco Bay Area's two 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.

Santa Clara County enjoys a relatively balanced jobs/housing split and county residents fill roughly 80% of Santa Clara County's jobs. Significant and continuing housing construction over the last three years is causing that percentage to rise. However, the scale of the county's economy makes the relatively small import percentage translate into hundreds of thousands of daily commute trips.

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, transit, bikes and trucks, are competing to access the same roads. Major freeways include 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.

The congestion in Santa Clara County is compounded by the large amount of vehicle, rail and freight travel through the county to origins and destinations of neighboring San Joaquin, Alameda, San Benito, Santa Cruz and San Mateo counties. Accordingly,

implementation of intelligent transportation systems, express lanes, multimodal investments and other technology to reduce demand on the roadways are needed to provide traffic relief.

Transit

Transit provides access to work, school, recreation, medical appointments, and other important destinations in Santa Clara County and includes rail, bus, and shuttle service provided by various operators. Within the county, local bus, express bus, and light rail service is provided by the Santa Clara Valley Transportation Authority (VTA). Fiscal year 2017 numbers show total boardings at 29,057,047 for bus and 9,132,084 for light rail.



There are several bus services to neighboring counties. The Alameda-Contra Costa (AC) Transit District operates bus service between Milpitas and Fremont Bay Area Rapid Transit District (BART) stations. SamTrans buses connect Palo Alto with San Mateo County. Santa Cruz Metro operates regional bus service between the cities of San Jose and Santa Cruz along Highway 17. The Dumbarton Express operates an all-day, limited stop bus service between the

East Bay and the Peninsula via the Dumbarton Bridge. With two bus routes, the DB and the DB1, riders can get almost anywhere within Palo Alto. Finally, Monterey-Salinas Transit operates between San Jose and Monterey via Highway 101.

Caltrain, Altamont Corridor Express (ACE), and Amtrak's Capitol Corridor provide regional passenger rail services to San Francisco, Stockton, Sacramento and intermediate cities. During the period covered by the 2019 TIP, the BART extension to Milpitas and Berryessa in San Jose is expected to open. It is funded with State Transportation Improvement Program (STIP), Federal Transit Administration Section 5309, and local sales tax funds.

Goods Movement

The Santa Clara County Goods Movement Study 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 will require development of databases to track shipping and trip movements through

the region/county and make projections of how goods movement will change over time. Resulting products may include Goods Movement programs and capital projects.

Planning Framework

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

VTP 2040, the most recent plan, was adopted by the VTA Board in October 2014, and builds upon the previous plan VTP 2035. The plan 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 Rapid Transit, and Bicycle/Pedestrian Improvements. VTP 2040 also includes a detailed discussion on planning activities that will take place during the life of the plan.



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.

Santa Clara County TIP Projects

Santa Clara County has a number of improvements to its transportation system planned and included in the 2019 TIP. Major transportation projects programmed in the 2019 TIP include the BART - Berryessa to 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 and an urban streetscape project in San Jose. In addition to state funds, Santa Clara County also uses federal Surface Transportation Block Grant Program (STP) funds for the improvement and maintenance of its multi-modal local streets and roads network. The 2019 TIP includes approximately \$44.4 million to fund road rehabilitation projects throughout the county. 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 2019 TIP reflect both internal and gateway transportation investments in the county's roadway, transit and bicycle networks.

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

Solano County

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 1900 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, ferry service, express bus service and constructing miles of sidewalks, pedestrian paths 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, the County's largest employer, which can add an additional heavy equipment component to local roadway use. Finally, because of its location in the middle of two major regions, Solano County serves not only local residents but also a high volume of through traffic and freight, 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 2019 TIP project listing was developed in coordination with Solano Transportation Authority (STA), public transit agencies, the seven cities, the County of Solano, and several citizen advisory committees. The 38 projects included in the 2019 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, 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 Comprehensive Transportation Plan emphasizes implementing data driven solutions for all elements of the county's transportation network, from highways to sidewalks, and that commitment to effective transportation troubleshooting 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.

Projects and programs included in the above mentioned plans are vetted through STA's numerous citizen's advisory committees and staff technical committees for input and prioritization. These committees include the Bicycle Advisory Committee, the Pedestrian Advisory Committee, Paratransit Coordinating Council, Safe Routes to School Technical Advisory Committee, and others. These committees are paramount to connecting with the local community and helping to spread the word regarding upcoming events or information campaigns.

TIP Project Highlights

Roadway Projects

Solano County is currently planning 16 roadway projects to be delivered between 2019 and 2022. Many of these projects center on the regionally significant I-80 corridor, or 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 I-80 Express Lanes - Fairfield & Vacaville Phase I & II "Sol80"
- The Vaca Valley/I-505 Multimodal Improvements
- Jepson Parkway: Phases 1B and 1C

The I-80/I-680/SR 12 Interchange Project consists of seven packages of work. The first package is complete, with Package 2A and 2B under design. Package 2A, will eliminate the drop lane from Eastbound SR-12 to Eastbound I-80. The I-80 corridor will also be affected by phases I and II of the "Sol80" project will convert existing HOV lanes to HOT lanes and will widen I-80 to construct a new express lane in each direction of a particularly congested segment. 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.





Jepson Parkway's TIP listing has been updated to describe two newly scoped phases, with a focus on multi-modalism. Phase 1B (funded) with limits on Leisure Town Road from Elmira Road to Sequoia, will widen the existing 2 lane road to 4 lanes, with center median, it will also add west linear setback and multiuse sidewalk. Phase 1C (unfunded) with limits from Sequoia Drive to Horse Creek, will widen the exiting 2 lane road to 4 lanes, with west side setback landscaping and multiuse sidewalk, and median; the timing of delivery of this project is dependent on developer funding.

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 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 14 active transportation projects throughout Solano County that will be delivered between 2019 and 2022. Many projects further the goals of Solano County's Safe Routes to School initiative, and include both infrastructure and noninfrastructure components. Generally, the noninfrastructure 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:

- Allison Bicycle / Pedestrian Improvements
- Suisun Valley Bicycle and Pedestrian Improvements

- McCoy Creek Trail - Phase 2
- Vallejo Bay Trail / Vine Trail Gap Closure

Most of Solano County's active transportation projects 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. The Allison Bicycle/Ped Improvements project will install additional bicycle and pedestrian infrastructure, including a new sidewalk with a substantial landscape buffer and bike lockers, to bridge the gap between existing bikes paths as well as increasing access transit facilities and a nearby commercial retail center.

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. In a similar vein, 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.



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 11 transit projects throughout Solano County that will be delivered between 2019 and 2022. These projects will usher the local transit fleet into modernity 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:

- Fairfield Transportation Center - Phase 3
- Vacaville Intermodal Station - Phase 2
- SolTrans: Bus Maintenance Facility Renovation

A plurality of Solano County's transit projects emphasize noninfrastructure components, such as education, service, and incentive programs to better serve Solano County residents. However, the cohort of planned infrastructure products 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 providing better access for transit users, cyclists, and pedestrians. Similarly, Phase 2 of the Vacaville Intermodal Station project will provide an additional park and ride lot and incorporate landscaping improvements, bioswales, and superior lighting.



New transit assets also require updated facilities. Under SolTrans, the Bus Maintenance Facility Renovation will repair existing facilities and update them to accommodate the introduction of electric buses. These improvements will help ease the transition to alternative fuel vehicles and allow service to continue operating smoothly.

Important Funding Sources

While most of the projects in the 2019 TIP are fully funded, a few projects have shortfalls or additional phases that will need financial support. Funding through Senate Bill 1 (SB1) will be an important source of competitive revenue for our larger projects. Regional Measure 3 (RM3) will also serve as an important source of funds for the I-80/I-680/SR12 interchange, WB Truck Scales, I-80 Express Lanes, and other projects not currently listed in the TIP, such as SR 37 and Vallejo Station Phase B. These regional and state funding sources will be imperative to developing a comprehensive and robust funding plan for much needed transportation projects within Solano County.

Summary

The Solano County TIP Listing is a balanced mix of roadway projects, transit projects, and active transportation projects. STA has a desire to provide multimodal transportation options that



improve access and reliability for our residents. The projects included in the 2019 TIP will help address the current and future transportation needs in Solano County. These projects are consistent with the Solano Comprehensive Transportation Plan (CTP) and have been identified as part of the STA's Routes of Regional Significance, Transit Centers of Regional Significance and included in a CTP subsidiary plan (e.g. Countywide Bicycle Plan and Countywide Pedestrian Plan).

[Narrative summary provided by the Solano Transportation Authority]



Sonoma County

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 over half a million people.

Sonoma County has a relatively balanced jobs/housing split with over 83% of its residents working within the county. The economy is based on a diverse mix of agriculture, manufacturing, high tech and telecommunications, and the service sector.

Transportation ranks as one of the key issues among Sonoma County residents. The transportation system in the county includes several state highways, 2,300 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 2019 TIP serve to meet the SCTA Board approved goals for the *2016 Comprehensive Transportation Plan of Sonoma County*:

- Maintain the System
- Relieve Congestion
- Reduce Emissions
- Plan for Safety and Health
- Promote Economic Vitality

Roadway

There are several projects in the 2019 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 2019 TIP. Also included are bridge replacement projects, needed for seismic safety, maintenance, and expansion of local roadways.



Petaluma River Bridge, US Highway 101 Completed in 2016

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 2016. The 2019 TIP contains projects that will allow for the installation of a clean natural gas fueling station and purchase clean air vehicles for the transit fleets. Transit facilities including metropolitan transportation hubs and maintenance yards will receive upgrades. Bus stops will be improved in multiple locations. New bus routes will be added and existing routes will be modified to continue to coordinate with SMART service.



Sonoma County Transit Clean Air Vehicle

Alternative Modes

The Sonoma County Transportation Authority (SCTA) is working with stakeholders to implement a Safe Routes to Schools program that will receive 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 extend Class I bike paths, or create new pathways. Additionally, proposed pedestrian improvements will enhance walkability inside city centers and along waterways and coastline. Examples include the SMART multi-use path and bicycle and pedestrian enhancements on Old Redwood Highway in Windsor, both partially funded with State Transportation Improvement Program (STIP) funds.

The SCTA is working on a car share pilot program in Santa Rosa and managing pilot programs to implement other transportation demand management measures.



Santa Rosa Zip Car Pilot Program

Summary

Sonoma County is a self-help county, having passed a quarter cent sales tax measure (Measure M) in 2004. SCTA has focused using these funds to match other state and federal sources to complete a third lane in either direction along US 101.

The Sonoma County 2019 TIP listing is a balanced mix of roadway projects, transit projects, and alternative modes projects. The projects included in the 2019 TIP will help address the current and future transportation needs in Sonoma County. These projects are consistent with the Sonoma Comprehensive Transportation Plan and the Regional Plan Bay Area.

[Narrative summary provided by the Sonoma County Transportation Authority]

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; Highway Safety Improvement Program (HSIP) which improves safety on local roadways; and Highway Bridge Program (HBP) which rehabilitates and replaces local bridges. Projects included within the Group Listings may be found in Appendix A-48.



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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 the entire region, benefiting the entire region.

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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 2010 and 2040, the nine-county San Francisco Bay Area is projected to add 1.1 million jobs, 2.1 million people, and 660,000 homes, for a total of 4.5 million jobs, 9.3 million people, and 3.4 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. Plan Bay Area 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 not only meets but exceeds its GHG emissions reduction target. By 2040, the typical Bay Area resident is expected to reduce his or her daily transportation carbon dioxide emissions by 18 percent compared to 2005 conditions.

While MTC has considered the effects of transportation investments on GHG emissions in prior regional transportation plans, Plan Bay Area was the first regional effort with an aggressive and achievable emission reduction goal. 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 2019 TIP's project programming is consistent with and supports the goals of Plan Bay Area, and its successor, *Plan Bay Area 2040*.

Regional TIP Projects

To address the issues facing the Bay Area as a whole, certain regional projects and programs have been included in the 2019 TIP. Among these are funding for planning activities undertaken by regional entities such as MTC, ABAG, and the Bay Conservation & Development Commission (BCDC) and marketing to support the region's transportation operations. Other projects in this area are as follows:

Clippersm – Clippersm 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 Clippersm 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 2019 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 2019 TIP includes a number of 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 (ACTC'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 be in need of 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 approximately \$600 million 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 disbursement 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®.

Express Lane Program

The 2019 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 build a new lane. They are in various stages of development: initial study, environmental clearance, design and construction.

- CC-680 Northern Segment Express Lane: Southbound from Benicia/Martinez Bridge Toll Plaza to El Cerro;
- CC-680 Northern Segment Express Lane: Northbound from North Main to Benicia/Martinez Bridge Toll Plaza;
- ALA-880 Express Lanes: Dixon Landing to Hegenberger;
- ALA/CC-80 (Carquinez Bridge to Powell) and Bay Bridge Approaches (ALA-80, ALA-580 and ALA-880 to Toll Plaza) Express Lanes; and
- SOL-80 Express Lanes: Red Top to I-505.

More information is available at: <https://mtc.ca.gov/our-work/plans-projects/major-regional-projects/mtc-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.

