SFTP 2050: APPENDIX A

SFTP 2050 Investment Plan Development Process

Introduction

The San Francisco Transportation Plan (SFTP) is an investment plan that details how available transportation funds¹ will be spent between now and 2050. This document describes how the SFTP was created based on previous long-range planning work and local and regional priorities. The SFTP includes two funding scenarios: 1) the Investment Plan scenario, which matches expected and available revenues to future investments, and 2) the Vision Plan, which demonstrates how potential new revenues could be used to further fund outstanding transportation needs.

The SFTP used the previous phases of ConnectSF, the City's long-range planning effort, as inputs into the plan's development; inputs included ConnectSF community engagement, vision, goals, the Transit Strategy, and the Streets and Freeways Strategy. In addition, the SFTP built upon ongoing community engagement, known goals and priorities including San Francisco's Climate Action Plan, Transit First Policy, community-based plans, and regional transit operating plans to develop the investment plan scenario and vision plan scenario for the SFTP.

To understand the transportation needs through 2050, a multi-agency call for projects and programs was conducted in late 2020 to inform the SFTP update and the 2022 Transportation Expenditure Plan for the existing half-cent transportation sales tax. The process allowed all transportation agencies that serve San Francisco to submit transportation capital and operating funding needs through the year 2050. The needs were grouped into categories that are consistent with the categories for the 2022 Transportation Expenditure Plan which, if passed by voters in November 2022, will help implement the SFTP.

To create the SFTP 2050 Investment Strategy, Transportation Authority staff created a revenue forecast drawing upon projections of federal, state, regional, and local funds prepared by MTC for the 2021 Plan Bay Area update (PBA 2050). Revenue projections for the SFTP 2050 cover Fiscal Years 2020-21 through 2049-50. The SFTP also considers potential new revenue sources for transportation in San Francisco, which would require voter approval or other legislative actions. These vision revenue projections are based on Transportation Authority forecasts and the SFMTA's T2050 program. These revenues fund the SFTP 2050 Investment Vision.

This document provides an overview of the SFTP Investment and Vision Plan scenario development process, documenting key inputs used to guide priorities for the investment and vision funding levels for each category – major transit projects, transit maintenance and enhancements, paratransit, streets and freeways, transportation system development and management, transit operations, and existing obligations.

¹ More information on revenue sources available in Appendix B: Revenue Assumptions Table

Background: ConnectSF

The SFTP is a product of ConnectSF, San Francisco's multi-agency long-range planning process.

CONNECTSF: VISION AND STATEMENT OF NEEDS

ConnectSF Overview

Initiated in 2016, ConnectSF is a multi-agency collaborative process to build an effective, equitable, and sustainable transportation system for San Francisco's future. The ConnectSF program was motivated by a recognition that significant transportation investments will be needed to support the city's growth over the next several decades. ConnectSF is a partnership between the Municipal Transportation Agency (SFMTA), Planning Department (SF Planning), Office of Economic and Workforce Development (OEWD), and Transportation Authority (SFCTA) to support a shared understanding of how to approach long range transportation planning in the city.

Phase 1 of ConnectSF produced a 50-year Vision for what people want to see San Francisco look and feel like, generated by discussions with the public and the ConnectSF Futures Task Force, comprised of individuals representing different perspectives of San Francisco. The Task Force was convened to engage in the development of scenarios and discussions of trade-offs for possible futures for the city.

Phase 2 of ConnectSF, which began in 2018, set out to answer what San Francisco needs to do to achieve the Vision, accounting for projected land use and travel patterns through 2050. The Statement of Needs showed that new investments and policies would be needed to meet the ConnectSF goals and was followed by two modal studies that were completed in early 2022: the Transit Corridors Study (TCS) and the Streets and Freeways Study (SFS) – both of these studies are discussed in more detail in the following sections.

The outcomes of these studies are the Transit Strategy and the Streets and Freeways Strategy. These two strategies are foundational elements in developing the SFTP 2050 and updating the Transportation Element of the San Francisco General Plan. As an element of ConnectSF, the SFTP aims to move San Francisco closer to the ConnectSF Vision and Goals by incorporating the Transit Strategy and Streets and Freeways Strategy core recommendations. Figure 1 presents a schematic timeline of all the elements of ConnectSF in the context of the SFTP development.



Figure 1: Components of ConnectSF

ConnectSF Vision and Goals

The ConnectSF process included a robust community engagement process to shape the ConnectSF Vision¹ and Goals. ConnectSF established a Vision for the city's future where:

- San Francisco is a growing, diverse, equitable city.
- There is a multitude of transportation options that are available and affordable to all.
- There is faster project delivery resulting from strong civic and government engagement.

The ConnectSF team also developed five specific goals for the future of land use and transportation in San Francisco:²

- 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.

¹ ConnectSF Vision Report, March 2018. https://connectsf.org/about/components/vision/

² The ConnectSF Goals are described on page 7 of the ConnectSF Vision Report.

- 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 SFTP scenarios ensure that investment plans advance ConnectSF Vision and Goals.

ConnectSF Statement of Needs

Following the development of the Vision and Goals, and prior to the COVID-19 pandemic, the ConnectSF team completed the Statement of Needs.¹ The Statement of Needs identified challenges that need to be addressed to realize the ConnectSF Vision, including:

- Accommodate forecasted growth
- Create equitable transportation outcomes
- » Improve job access via sustainable modes
- » Improve transportation connections for outer neighborhoods
- Improve sustainability and efficiency
 - » Reduce emissions by shifting more trips to sustainable modes
 - » Further expand transit capacity
 - » Manage congestion

The ConnectSF team also identified a set of major transportation corridors that would be considered in the Transit Strategy and/or the Streets and Freeways Strategy, based on the future land use and transportation needs identified through the Statement of Needs. As shown in Figure 2, the recommendations from each study, which are discussed separately in the next two sections of this document, were used to develop the SFTP.

¹ ConnectSF Statement of Needs Report, December 2019. http://connectsf.org/wp-content/uploads/ConnectSF_Statement-of-Needs-Report-Final.pdf







Building on the public outreach conducted during the development of the Vision and Goals, the ConnectSF team conducted stakeholder and public outreach from late 2019 through early 2020, including public events in Equity Priority Communities, Nextdoor comment threads, and online surveys in English, Spanish, Chinese, and Tagalog. Presentations were also offered to community-based organizations. The goal of the outreach was to gather robust and diverse feedback on the findings from the Statement of Needs, such as how, where, and why people travel in San Francisco and the region today and in the future. This feedback informed the project concepts developed and analyzed in both the TCS and the SFS. The key themes that emerged from the outreach included:

- It is relatively easy to access downtown and travel within neighborhoods via transit, biking, and/or walking.
- People find it more difficult to use transit when traveling between neighborhoods and to areas outside of downtown. The main reasons shared were that transit is often slow, unreliable, and/or infrequent and has poor connections and too many transfers. Specific geographic areas or corridors of interest for improving transit, walking, and biking connections included the North area of the city and Southwest-North/Northwest.
- Outreach participants said that convenience (proximity and frequency) was most important in deciding how they travel. Other factors cited were safety, reliability, accessibility, and affordability.
- Outreach participants want transit-related policies and investments that increase service, expand transit infrastructure, improve operations, and change fares. Improvements to active transportation were also popular.

CONNECTSF: TRANSIT CORRIDORS STUDY

Transit Corridors Study Overview

The Transit Corridors Study (TCS) developed and evaluated options for capital investments in San Francisco's public transit network through 2050. As depicted in Figure 3, the TCS included four major elements. The first three elements comprised the TCS technical evaluation, which led to the Transit Strategy, released in December 2021.¹

Figure 3: TCS Elements and Timeline



TCS Goals and Priorities

The goals of the TCS were to prioritize local transit investments, identify regional transit priorities for the city, and articulate how these local and regional investments would support the ConnectSF vision and values. This included coordination with regional transit partners around relevant issues, including options for the planned Link21 second Transbay Crossing; the Downtown Rail Extension (DTX) and Pennsylvania Avenue Extension (PAX); and regional bus connections.

The TCS conducted a comparative analysis of representative transit concepts to understand the benefits that might be achieved through alternative major investments in each of the 13 ConnectSF transportation corridors.² The evaluation framework for this analysis was organized around 11 specific transit-focused objectives aligned with the ConnectSF Vision and Goals. Criteria and metrics were developed for each objective to capture how well each transit concept helped to achieve outcomes ranging from access and travel choices to cost-effectiveness and reliability. In addition to analyzing the transit concepts that had been proposed in formally defined ConnectSF corridors, the TCS also included consideration of citywide Muni bus and rail network reliability and efficiency improvements (similar to Muni Forward) that could be implemented in the shorter-term.

1 ConnectSF Transit Strategy, December 2021. https://connectsf.org/transit-strategy/

2 Concepts were intended to direct the commencement of corridor planning studies, rather than as formal project proposals; significant additional planning work and public engagement would be needed to define the details of any capital project advanced as a recommendation.

TCS Public Engagement

The ConnectSF team conducted public outreach in Spring 2021 to publicize and obtain input on proposed Transit Strategy initiatives. The outreach effort was modified due to COVID related restrictions on public meetings. Outreach included a Story Map (see https://arcg.is/1vz5G) – a web-based narrative format that illustrates content using text, maps, photos, and interactive elements – that summarized proposed investments being considered for the Transit Strategy. The Story Map was publicized through partnerships with community-based organizations (CBOs), an online town hall/webinar, and digital ads across multiple online platforms, and residents were encouraged to respond to the accompanying survey about their transit investment priorities. The following preferences expressed by people who responded to the survey are relevant to the SFTP:1

- **Cost-effective improvements to prioritize buses:** Over 40% of respondents ranked it as their first choice, and nearly 30% ranked it as their second choice.
- Improvements to the light rail system: Although only 20% of respondents ranked it as their first choice, over 50% ranked it as their second choice.
- Major rail investments with a 10+ year horizon: Nearly 40% of respondents ranked it as their first choice, and over 20% ranked it as their second choice.

Respondents cited "I want San Francisco to invest in major transit projects that will have the greatest impacts" and "I want to bring improvements to our transit system as fast as possible" as the primary reasons why they preferred more immediate improvements. The TCS also analyzed survey responses from specific demographic groups to better understand the preferences of populations who were underrepresented in the survey. This analysis supplemental available in the TCS Outreach Report.²

Study Outcomes – The Transit Strategy

The significant changes in San Francisco's transportation landscape during the pandemic highlighted the need to ensure that transit service works well for those who use it the most. The TCS evaluation demonstrated that, in most corridors, bus improvements can provide enough capacity and frequency to meet future travel demand, particularly if investments are focused on accelerating the renewal of existing capital assets and creating a focused high-frequency network. Modernizing the rail system to support key service improvements was the third citywide approach identified as a major investment priority. However, the analysis also showed that several corridors

¹ Survey did not include a scientific sample

² https://connectsf.org/wp-content/uploads/TCS_Outreach-Report_Final.pdf

will not be able to serve future community needs with bus-based projects alone; they require a major rail investment to build enough capacity to support future growth. The corresponding rail concepts for these corridors were selected as key priorities for major capital projects over the next few decades.

The overall recommendations that emerged from the TCS were synthesized into the ConnectSF Transit Strategy, which identifies both the long-term transit capital investment priorities for the city along with lower-cost projects that can deliver benefits sooner. The Transit Strategy's recommendations are organized into the following four major elements, all of which shaped investment priorities for the SFTP:

- Make the System Work Better. This element focuses on rehabilitation and replacement to clear the SFMTA's capital backlog and make the transit system more reliable. This is a systemwide effort to accelerate capital renewals, while each of the other three elements of the Transit Strategy propose improvements that are relevant to different subsets of the local or regional concepts that were studied in the TCS. The element also includes strategic service restoration throughout the city. An equity analysis of the 2021 service changes showed that modest improvements in travel time led to triple-digit increases in job access from some neighborhoods, reinforcing the importance of transit service to the city's post-pandemic recovery.
- Deliver a Five-Minute Network. This element includes street improvements that would support a citywide network of frequent, reliable bus and rail routes running every five minutes to provide quick, convenient access to all parts of San Francisco, including commercial districts, jobs, and housing. Many of the transit priority, street safety, and accessibility improvements would be implemented through existing programs such as Muni Forward. The future network would include express routes and a network of high-occupancy vehicle (HOV) lanes that would increase the speed and reliability of both local and regional transit services. These improvements could reduce crowding on the system to less than 5% of all transit trips.
- Renew and Modernize our Rail System. This element focuses on comprehensive upgrades and potential network reconfiguration to optimize the rail network, alleviate delays in the subway, improve reliability systemwide, and address crowding. Investments would include a new Muni train control system and improvements to individual lines that would enable longer trains and consistent, predictable service. These changes would allow the existing rail system to carry up to 30% more people. The strategy also supports regional rail upgrade programs including the BART Transbay Corridor Core Capacity Program, Caltrain Modernization Program, and Caltrain 2040 Business Plan.

• Build More Rail. This element focuses on major capital projects in transportation corridors where additional capacity and connectivity are most needed, including the Geary/19th Avenue Subway, extension of the Central Subway to Fisherman's Wharf, and a new Caltrain station to restore regional rail access to the Bayview. These larger corridor investments will require multi-year planning efforts and include regional rail extensions that were already being planned concurrent with the TCS, such as the Downtown Rail Extension (DTX) and Pennsylvania Avenue Extension (PAX).

Figure 4 provides a high-level summary of four key elements of the Transit Strategy.

Figure 4: Summary of TCS Recommendations



Make the System Work Better

with aggressive renewal and restoration

- Tackle the capital backlog
- Restore service equitably



Renew and Modernize our Rail System

with increased speed, reliability, and capacity

- Implement Muni Subway Renewal Program
- Improve Muni Metro reliability on the surface
- Support BART and Caltrain upgrade programs



Deliver a Five-Minute Network

with reliable service every five minutes on key bus and rail lines

- Implement transit priority, street safety, and accessibility improvements
- Support regional transit connections



Build More Rail

to San Francisco's busiest places

- Add new rail in the Geary / 19th Avenue corridors
- Extend Central Subway to Fisherman's Wharf
- Add a new Bayview Caltrain station, and complete the Downtown Rail Extension (DTX) and Pennsylvania Avenue Extension (PAX)
- Collaborate on regional study of a new Transbay Rail Crossing (Link21)

CONNECTSF: STREETS AND FREEWAYS STUDY

Streets and Freeways Study Overview

The Streets and Freeways Study (SFS) is the first comprehensive planning effort for San Francisco's Streets and Freeway network. This foundational work built on San Francisco's Transit First and Vision Zero policies, Racial Equity framework, and Climate Action Plan. Multiple concepts were developed and analyzed as part of the SFS. Concepts do not identify specific projects but are intended to guide future planning efforts.

SFS Goals and Priorities

The SFS seeks to support the overall ConnectSF goals by identifying the investments that are needed to make sure that infrastructure is maintained, low-carbon modes are accessible, safe, and reliable to use, and goods can easily be moved and delivered across the city. The SFS identified three key challenges that would shape the development of strategies to achieve these outcomes:

- Street space in San Francisco is limited. Strategies need to move more people and goods through the street space we have today.
- Past investments have frequently had unintended negative outcomes, such as divided communities, poor air quality, and safety challenges. Strategies should address these issues as a first priority.
- The world is in a climate crisis. San Francisco needs to make transit, carpooling, walking, and biking more convenient for more people to achieve its goal of net zero emissions by 2040.

The SFS identified five strategies to address these challenges and advance the ConnectSF Vision and goals:

- Maintain and reinvest in the current transportation system
- Prioritize transit and carpooling on our streets and freeways
- Build a complete network for walking and biking
- Prioritize safety in all investments and through targeted programs
- Repair harms and reconnect communities

SFS Public Engagement

The ConnectSF team conducted public outreach in Summer 2021 to publicize and obtain input on proposed Streets and Freeways Strategy recommendations. The outreach effort featured an online survey that summarized proposed recommendations considered for the Streets and Freeways Strategy and asked participants to prioritize various tools to advance each recommendation. The survey was publicized through partnerships with community-based organizations (CBOs), an online town hall/webinar,

and digital ads across multiple online platforms. Survey respondents expressed the following preferences.¹

Build a complete active network: About 70% of respondents ranked the three tools – reducing speed limits and creating more space on neighborhood streets; separated, high quality bike network; and walk and bike connections to transit – as important. There was a slight preference for improving walk and bike connections to transit.

Dedicate space for efficient travel options: The top three tools were ranked as important by about 50% of respondents; they are: rewards and discounts for using transit, traffic calming on local streets to minimize cut-through traffic, and manage curbs to reduce double parking.

Street safety: The top three tools were ranked as important by about 50% of respondents; they are: traffic calming, more dedicated space to walk and bike, and reduce speed limits. Advocating for authority to use speed safety cameras was ranked as important by 40% of respondents.

Major road transformations to major roads and freeways: Each of the three tools – reconnect communities that have experienced harms from the past investments, complete streets, and pairing freeway re-designs with land use plans and policies to support development and avoid displacement – were ranked as important by more than 70% of respondents. Complete streets was ranked important most frequently (50% of respondents).

Study Outcomes – The Streets and Freeways Strategy

The high-level concepts included in the Streets and Freeways Strategy are intended to guide future planning efforts, and would require additional planning, community engagement, and technical analysis. The concepts were organized based on four project types, all of which are reflected in the SFTP:

- Maintenance and Resilience. This element includes concepts to help prepare the city's transportation infrastructure for the risks of climate change.
- **Transit and HOV Priority.** This element prioritizes street space for transit and high-occupancy modes and improve traffic management.
- Safety and Active Transportation Network. This element includes concepts that expand the bike and walking network and improve street safety for the most vulnerable road users.

1 Survey did not include a scientific sample

 Reconnect Communities. This element includes medium-term and long-term concepts to redesign infrastructure, create more complete streets, and integrate transportation and land use planning.

Partner Plans

The SFTP 2050 aligns with partner agency plans. Since the last SFTP update in 2017, partner agencies have conducted two key studies outside of the ConnectSF work program that identify the need and priority for transportation projects in San Francisco. Figure 5 provides an overview of these plans and how they were used to inform the SFTP. The following sections discuss these plans, focusing on the goals and priorities, public engagement priorities (if applicable), and outcomes of each plan that informed the SFTP Investment and Vision Plan scenarios.

Figure 5: How Partner Plans Informed the SFTP

PARTNER PLAN	HOW IT INFORMED THE SFTP
Plan Bay Area 2050	Modeling, revenue forecasts, Equity Priority Communities
Climate Action Plan	Climate goals

The SFTP also aligns with and carries out San Francisco's Transit First Policy, adopted in 1973. The policy calls for prioritizing transit, walking and biking over private automobiles and outlines a set of Transit-First principles to guide decision-making. The principles support long-range transportation goals that are further advanced by the SFTP, such as mode shift, clean air, and equity.

PLAN BAY AREA 2050

Plan Bay Area Overview

Plan Bay Area (PBA) is the regional long-range plan that connects four key elements of Bay Area planning: housing, economy, transportation, and environment. The plan covers a 30-year horizon and provides a roadmap to meet projected household and employment growth in the nine-county San Francisco Bay Area. The regional governing bodies, Metropolitan Transportation Commission (MTC) and Associated Bay Area Governments (ABAG) work to carry out the planning process. The plan is a coordinated effort across agencies and stakeholders within the region to align goals and guide future planning and growth. Key inputs from PBA that shaped the SFTP investment priorities included future growth, revenue forecasts, and the Equity Priority Communities (EPC) framework. PBA 2050¹ was adopted in October 2021. The \$1.4 trillion plan provides 35 regional strategies to invest in an equitable and resilient Bay Area. PBA does not fund specific transportation projects, nor does it change local land use policy; it is the regional long-range plan that provides a guide for the region in identifying shared goals and potential strategies. PBA satisfies the federal government's requirement to develop a Long-Range Transportation Plan (LRTP) for urban areas with a population greater than 50,000. The plan also complies with California Senate Bill 375, which requires regions to complete a Sustainable Communities Strategy (SCS) as part of the RTP. The SCS is a plan that integrates transportation, land use, and housing to meet per-capita greenhouse gas reduction targets set by the California Air Resources Board (CARB).

Public input and community engagement shaped the PBA 2050 process. In total, over 450 public stakeholder events and activities were held with a total of 234,000 public comments. MTC and ABAG were intentional with their outreach – using the established Equity Framework to guide the engagement process. As a result, two-thirds of events and activities were targeted toward EPCs and other underserved populations. The input given during the engagement process led to the guiding principles which MTC and ABAG then used to identify potential projects and policies. Community input was then gathered to further expand and refine the identified strategies. The results led to a final set of 35 policies that integrate one or more guiding principles and address community concerns.

Study Outcomes

PBA 2050 identified 35 strategies to improve Bay Area quality of life, including 12 longrange transportation strategies. The transportation strategies fall under three larger themes, all of which strongly align with the ConnectSF recommendations (discussed in the following sections) and were foundational to the development of the SFTP. The themes were:

- Maintain and optimize the existing transportation system through maintenance and increased investment and policy action. These strategies include addressing pandemicrelated cuts to transit service and funding, congestion relief, and community-led investments in EPCs.
- Create healthy and safe streets by encouraging a balanced, multi-modal network and reducing speed limits in appropriate areas, expanding the existing bike lane network, and promoting Vision Zero safety policy.

1 https://www.planbayarea.org/

• Build a next-generation transit network by prioritizing transit investments that meet the growing demand for travel throughout the region.

The transportation investments proposed by PBA 2050 are estimated to cost \$578 billion.

CLIMATE ACTION PLAN

Climate Action Plan Overview

In December 2021, the City of San Francisco released the Climate Action Plan (CAP) calling for net-zero emissions by 2040.¹ The CAP builds on an established foundation of climate policy, as San Francisco has long been a leader in the region and the United States. The City's first CAP was published in 2004, and the city has since continued to prioritize environmental sustainability. Figure 6 presents and overview of San Francisco's climate policy milestones over the last two decades.

The CAP 2040 builds upon previous actions and research while using a data-driven approach to environmental planning. The plan was led by the San Francisco Department of Environment with collaborative efforts from other city departments including SFCTA, San Francisco Planning, SFMTA, the Office of Racial Equity, and the Public Utilities Commission. The recommendations put forth in the CAP shaped the climate goals of the SFTP and, as a result, the SFTP advances many of the CAP strategies.

Figure 6: San Francisco Climate Policy Milestones

YEAR	MILESTONE
2004	San Francisco's First Climate Action Plan
2013	San Francisco's updated Climate Action Plan
2015	0-50-100 Roots Climate Action Framework Launched
2016	Emissions Reduced by 30% Below 1990 Levels
2017	50% Low Carbon Trips Achieved — New Goals Set to 80%
2018	Mayor Breed Committs to Net-Zero Emissions by 2050
2019	San Francisco Board of Supervisors Declares a Climate Emergency
2019	100% Renewable Electricity Requirement for Large Commercial Buildings
2019	Emissions Reduced by 41% Below 1990 Levels (6 years ahead of schedule)
2020	Natural Gas Banned in New Construction
2021	Mayor Breed Advances Updates to Climate Action Goals in Chapter 9 of the Environment Code, Commits to Net-Zero Emissions by 2040, San Francisco Board of Supervisors Approves

Source: San Francisco Climate Action Plan, 2021.

1 https://sfenvironment.org/climateplan

CAP Goals and Priorities

The CAP prioritizes emission reduction to meet net-zero goals while also recognizing that Black, Indigenous, and People of Color, people with disabilities, and other underserved populations should be prioritized in the process. The plan makes the following four core commitments to advance climate justice: 1) build greater racial and social equity, 2) protect public health, 3) increase community resilience, and 4) foster a more just economy. The CAP identifies several Climate Action Goals to guide the process of identifying strategies and priorities, including specific **transportation** goals:

- By 2030, increase low-carbon trips to at least 80% of all trips and increase electric vehicles (EVs) to at least 25% of all private vehicles registered
- By 2040, increase EVs to 100% of all private vehicles registered

Additional Climate Action Goals included:

- **Buildings:** By 2021, require zero onsite fossil fuel emissions from all new buildings; By 2035, require zero onsite fossil fuel emissions from all large existing commercial buildings and all buildings by 2040
- Clean Energy: By 2025, supply 100% renewable electricity, and by 2040, supply 100% renewable energy
- Zero Waste: By 2030, reduce solid waste generation by at least 15% and reduce the amount of solid waste disposed of by incineration or landfill by at least 50% below 2015 levels
- Housing: Build at least 5,000 new housing units per year with maximum affordability, including no less than 30% affordable units, and with an emphasis on retaining and rehabilitating existing housing
- **Roots:** Sequester carbon through ecosystem restoration, including increased urban tree canopy, green infrastructure, and compost application
- Housing: Build at least 5,000 new housing units per year with maximum affordability, including not less than 30% affordable units, and with an emphasis on retaining and rehabilitating existing housing

The CAP goes beyond the reduction of emissions and includes actions that advance equity by addressing disparities by race, class, and other social determinants. Racial and Social Equity are one lens that the CAP uses to analyze and put forth solutions to the Bay Area's climate problems, recognizing that Bay Area BIPOC stand to be the most affected by climate pressures while simultaneously being the least responsible for causing climate change. Other lenses used are Economic Recovery and Just Transition, Protecting Public Health, and Resilience. All 5 lenses were used to identify critical issues and shape proposed strategies for future implementation.

CAP Outcomes

The CAP identifies 31 strategies and 159 supporting actions for San Francisco to achieve its climate and equity goals across sectors. Many of the strategies are reflective of ConnectSF recommendations, and the SFTP further advances the goal of achieving zero emissions through these efforts. The CAP includes seven transportation and land use strategies:

- Build a fast and reliable transit system that will be everyone's preferred way to get around.
- Create a complete and connected active transportation network that shifts trips from automobiles to walking, biking, and other active transportation modes.
- Develop pricing and financing of mobility that reflects the carbon cost and efficiency of different modes and projects and correct for inequities of past investments and priorities.
- Manage parking resources more efficiently.
- Promote job growth, housing, and other development along transit corridors.
- Strengthen and reconnect communities by increasing density, diversity of land uses, and location efficiency.
- Where motor vehicle use or travel is necessary, accelerate the adoption of zero-emissions vehicles (ZEV's) and other electric mobility options.

According to San Francisco's GHG inventory on which the CAP is based, transportation accounts for 47% of the City's emissions. The transportation sector has seen a 19% decrease in emissions since 2019, when the CAP was first introduced.

Public Input on Investment Priorities

To inform the SFTP planning process, the SFCTA engaged with communities, with a focus on Equity Priority Communities (EPCs), to gather input on their priorities for transportation investments. The team used a combination of three outreach methods to connect with the community: an online, multilingual survey, community conversations, and a public Town Hall. Key findings from outreach that informed SFTP investment priorities include the following:

- Transit investments were a clear priority for participants; many highlighted their preference to prioritize transit service expansion, increase reliability, and restore service to previous levels and previously existing lines.
- Equity and affordability were a key concern amongst participants, many of whom mentioned they would like to see improved affordability across all modes to reduce barriers for low-income residents.
- Although not the highest priority for funding, many participants mentioned that they would like to see investments in safety and active transportation projects.
- Perceived physical safety was a concern for many participants, noting that interventions such as pedestrian scale lighting and traffic enforcement would promote a greater sense of safety and encourage non-vehicular travel.
- Participants also mentioned that they would like to see new major rail projects and a more integrated transit system that connects to other transit systems across the region, such as BART and Caltrain.
- Transformative freeway projects, while presented as an option in the survey, were found to be the lowest priority for many participants and stakeholders despite there being previous interest in freeway removals and other projects that reduce vehicle capacity.
- The importance of project delivery and accountability was also mentioned by stakeholders; they would like a more transparent approach to communicating project impact, potential mitigation efforts, and return on investment.

Current Transit Conditions in San Francisco

Another key consideration for the SFTP is the capacity for transit revenues to maintain service. The SFTP considers the current condition of revenues needed to maintain transit service and capital investments in system maintenance.

For SFMTA, problems resulting from deferred capital investments disproportionately affect people who depend on transit, as recognized by a sizable majority of people who identified repairs and maintenance as high priorities in the SFMTA's 2021 customer

satisfaction survey.' A portion of the SFMTA's roughly \$500 million annual capital budget goes toward maintaining or replacing capital infrastructure.² For example, over the past decade the City has invested in maintaining Muni's vehicle fleet to make buses and trains more reliable, including replacing outdated vehicles with new ones. Strengthening the City's transit system must continue with repairing and replacing heavily used infrastructure while addressing the multi-year backlog of maintenance work, such as replacing the Muni Metro train control system and rebuilding Muni's bus yards, which are too small to accommodate the current fleet and do not meet current seismic safety standards. The current capital renewal backlog (infrastructure assets that are past their useful life) is \$3.8 billion, a figure that will continue to grow unless additional resources are directed towards strengthening the City's transit system.³

Even prior to the pandemic, the SFMTA had a growing budget deficit. Revenues from fares and parking that fund the City's transportation system did not cover ongoing expenses for transit service, infrastructure maintenance, and safety improvements for people walking and biking. These deficits were plugged by reserves and one-time sources. COVID-19 only exacerbated long-standing and growing structural deficits when it caused a steep drop in Muni revenue from parking and fares. Federal pandemic relief funds helped fill the gap but will run out in 2025. Moving forward, recovery in economic growth along with additional revenue sources will be needed to support continued restoration of Muni service levels and continued investments in making the City's transit system resilient, reliable, and financially sustainable in the long-term.

Regional rail operators (BART and Caltrain) also reduced service early in the Pandemic to match employee availability. Reduced service also reduced operational expenses as decreased demand lowered the agencies' fare revenues, though not nearly enough to offset the loss in revenue. For some agencies, reduced service reduced operational expenses, though the cost per-service-hour often increased with additional cleaning procedures and capacity restrictions to help fight the spread of COVID-19. As the region began to recover, service on some regional systems was restored close to prepandemic levels, despite reduced ridership. This has created more funding shortfalls because ridership on regional services has been slower to recover, while the systems have high fixed costs to operate.

- 2 SFMTA Capital Improvement Program, Fiscal Year 2021-2025. See p. 5 (Capital Program Overview).
- 3 SFMTA Annual State of Good Repair Report, 2020. See p. 23 (Reported Asset Backlog).

¹ https://www.sfmta.com/blog/muni-customer-satisfaction-survey

Investment Priorities

Based on the outcomes of prior ConnectSF phases, recent partner plans, and SFTP outreach, the SFCTA identified the following priorities for the Investment Plan:

- Invest to maintain pavement, transit assets, and prepare for resilience by keeping roads, sidewalks, signs, signals and bikelanes in overall good condition and reducing the maintenance backlog for local and regional transit to improve transit reliability.
- Invest to improve transit reliability and efficiency, particularly on the busiest lines
- Invest in core capacity and rail modernization to allow for more frequent Muni and BART train service
- Invest in street safety improvements across the city
- Invest in the walking and bike network to close gaps in the network and improve connections to transit

The priorities will be further advanced by the Vision Plan. Based on the outcomes of recent partner plans and SFTP outreach, the SFCTA identified the following priorities for the Vision Plan:

- Increase funding levels for Muni to meet or exceed pre-pandemic levels
- Support transit reliability and metro modernization by focusing on state of good repair
- Invest in street safety for all travelers
- Advance the next generation of transportation projects to make new rail capacity and reconnect communities and repair past harms of past investments in our major roads and freeways

Concept Development Process

INVESTMENT PLAN

The majority (about 85%) of the of the revenues for the SFTP are committed, which means they are already dedicated to certain projects or have a narrow set of eligible uses. The discretionary revenues in the plan (about \$13B in the Investment Plan scenario) have more flexibility for how they can be allocated. The priorities defined in the above section were used to guide how discretionary revenues were allocated. Considerations about the current transit system were also used in this decision-making process, specifically (1) that

the available revenues can only support SFMTA transit operations at 2022 service levels until 2025 and (2) that SFMTA has expressed a significant maintenance backlog that puts providing consistent and reliable long-term service at risk.

SCENARIOS

Within the discretionary revenue, there is about \$3 billion that have enough flexibility to go towards transit operations or maintenance. Three alternatives were assessed (described below) to understand the tradeoffs of allocating the approximately \$3 billion in revenues in different ways.

- Investing in all modes: this alternative allocated revenue to maintain 2022 Muni service levels, reduce the funding gap for Muni state of good repair to about 42%, maintain the citywide goal for an overall street condition of PCI score 75¹, advance street safety projects, begin planning for next generation transportation projects, and programs to support a shift to more trips made by sustainable modes.
- 2. Focus on Muni Operations: this alternative fully put the revenues towards Muni operations and resulted in maintaining current (2022) service levels and an additional 5% increase in the operations budget. Because all this money was put towards operations in this scenario, the funding gap for Muni state of good repair increases to 45%, a PCI score of 75 cannot be met, and additional funding for street safety, planning for next generation transit projects, and mode shift programs cannot be allocated.
- **3. Focus on Muni state of good repair:** this alternative fully put the revenues toward Muni state of good repair and resulted in a reduced funding gap for Muni state of good repair to 33%. In this alternative, 2022 Muni service levels are maintained, a PCI score of 75 cannot be met, and additional funding for street safety, planning for next generation transit projects, and mode shift programs cannot be allocated.

Based on public priorities voiced through outreach, the project team determined that scenario 1 was best suited for advancement, as it prioritizes transit as well as other community priorities and advances more of the 5 ConnectSF goals.

VISION PLAN

The Vision Plan assumes multiple potential new revenue sources, totaling about \$15 billion. The majority of revenues (\$8.5 billion) is assumed to come from San Francisco's share of a new regional measure and other local sources. These

1 PCI is a Pavement Condition Index, which considers the overall condition of all San Francisco streets.

revenues are allocated based on the priorities outlined in the previous section, with a specific goal to increase transit service investment levels beyond pre-pandemic conditions and further improve street safety.

SFMTA's T2050 plan makes up \$6.7 billion of the vision revenues.¹ The SFTP allocates this portion of the vision revenue to reflect SFMTA's stated uses of this revenue – about half to transit operations, about half to transit maintenance, and a portion towards the Safe Routes to School program².

Investment and Vision Plans

Figure 7 below, includes the SFTP Investment and Vision Plan funding levels for identified projects and programs; all costs are shown in billions of dollars (2020). The needs are organized by overarching categories and subcategories, which align with the 2022 Transportation Expenditure Plan³. The Investment Level column describes the extent to which the SFTP Investment Plan funds San Francisco's need. For programs which receive additional funds in the Vision Plan, the additional benefit is described. The Resilience Co-Benefit column notes projects or programs that would include improvements to address the risks of climate change – sea level rise, earthquakes, or other natural risks.

About \$2 billion of the new local/regional discretionary revenue in the Vision Plan is set aside as a placeholder for transit operations / transit capital investments. This allows flexibility for this future new revenue to be put towards transit operations to further increase service levels, toward transit capital maintenance and rehabilitation, and/or to capital projects to further expand bus or rail in San Francisco. The SFCTA will continue to work closely with local and the regional stakeholders to identify which new revenue sources to pursue and when and how to best allocate the resources.

- 1 https://www.sfmta.com/projects/transportation-2050
- 2 https://www.sfmta.com/sfmta-school-safety-programs
- 3 https://www.sfcta.org/ExpenditurePlan

Figure 7: SFTP 2050 Investment Plan and Vision Plan Funding Levels

PROGRAM	INVESTMENT LEVEL	NEED (\$B, 2020)	INVESTMENT Plan (\$B, 2020)	VISION PLAN (\$B, 2020)	RESILIENCE Co-benefit
Major Transit Projects					
Muni Reliability and Efficiency Capital Improvements Transit reliability improvements (e.g Muni Forward, transit only lanes, transit signal priority, etc.)	Investment: Fully funds transit priority improvements on major transit lines	\$1.09	\$1.09	\$1.09	
Muni Rail Core Capacity Includes train control, light rail vehicle feel expansion, 3-car trains in the Muni Metro Tunnel and on the N Judah, Muni Metro subway enhancements, and Muni Facility Expansion	Investment: Fully funds all needs, except for the expansion of new Muni Facilities	\$0.82	\$0.72	\$0.72	Х
BART Core Capacity San Francisco's share of costs for more BART train cars and system improvements to run more trains	Investment: Fully funds need for San Francisco's share	\$3.54	\$3.54	\$3.54	
Caltrain Enhanced Service: Capital Capacity Improvements Increase Caltrain service from 6 to 8 trains per hour	Investment: Does not fund need	\$1.21	\$0	\$0	
Caltrain Downtown Extension Extension for Caltrain and future High-Speed Rail from 4th and King to Salesforce Transit Center	Investment: Fully funds need	\$5.00	\$5.00	\$5.00	
Pennsylvania Alignment (PAX) underground alignment for Caltrain and future High Speed Rail to 4th and King station	Investment: Funds design phase Vision: Additional investment to be used for leveraging to fully fund need	\$2.50	\$.04	*	Х
ransit Maintenance & Enhancements					
ransit Maintenance, Rehabilitation and Replacement					
Muni Vehicles Maintenance, Rehabilitation and Replacement Maintains Muni vehicles for 30 years	Investment: Funds 70% of need Vision: Increases funding to reach approximately 85% of need	\$7.06	\$4.95	\$5.95*	Х
Muni Facilities Maintenance, Rehabilitation and Replacement Maintains Muni facilities for 30 years	Investment: Funds approximately 25% of need Vision: Increases funding to approximately 70% of need	\$4.66	\$1.09	\$3.35*	Х
Muni Guideways Maintenance, Rehabilitation and Replacement Maintains Muni guideways for 30 years	Investment: Funds approximately 85% of need Vision: Increases funding to approximately 90% of need	\$2.55	\$2.18	\$2.31*	Х
BART Maintenance, Rehabilitation and Replacement – San Francisco Share Maintains BART system for 30 years	Investment: Funds approximately 10% of need Vision: Increases funding to approximately 40% of need	\$5.59	\$0.61	\$2.15	Х
Caltrain Maintenance, Rehabilitation and Replacement – San Francisco Share Maintains Caltrain system for 30 years	Investment: Funds approximately 60% of need Vision: Increases funding to approximately 65% of need	\$0.96	\$0.55	\$0.60	Х
Ferry Maintenance, Rehabilitation and Replacement – San Francisco Share Maintains ferry system for 30 years	Investment: Funds approximately 40% of need and maintains landside assets	\$0.04	\$0.01	\$0.01	Х

PROGRAM	INVESTMENT LEVEL	NEED (\$B, 2020)	INVESTMENT PLAN (\$B, 2020)	VISION PLAN (\$B, 2020)	RESILIENCE Co-benefit
Transit Enhancements					
Southeast Waterfront Transportation Improvements – Capital Improvements Multimodal path and transit service provisions	Investment: Fully funds city transportation commitments for multimodal path and transit service; assumes developer fees.	\$0.64	\$0.64	\$0.64	
F-Line Extension Extends Muni F-Line to Fishermans Warf	Investment: Fully funds F-line extension; assumes outside funding.	\$0.10	\$0.10	\$0.10	
Additional Muni Motor Coaches Up to 110 new Muni buses	Investment: Funds approximately 65% of need	\$0.23	\$0.16	\$0.16	
Other Transit Improvements Improvements to transit facilities (e.g. elevator upgrades, accessibility, etc.)	Investment: Funds approximately 23% of need	\$0.61	\$0.14	\$0.14	
BART Station Access, Safety and Capacity – San Francisco Share Improvement to BART stations related to customer experience and accommodating more passengers	Investment: Funds street level improvements between BART and Muni system	\$0.71	\$0.11	\$0.11	
Bayview Caltrain Station New Caltrain station in the Bayview station to restore service	Investment: Fully funds a new station in the Bayview; cost assumes the Oakdale location	\$0.10	\$0.10	\$0.10	
Mission Bay Ferry Landing Mission Bay ferry terminal for regional service	Investment: Fully funds need	\$0.06	\$0.06	\$0.06	Х
Next Generation Transit Investments Major transit projects to improve connections within the city and to the region (e.g. central subway extension, Geary/19th Ave Rail, Link 21) ¹	Investment: Funds initial planning phases for project development Vision: Additional investments for project advancement and funding that could be used for implementation of one mid-size transit extension or put towards a larger project	\$3.95	\$0.18	*	
Regional and Local Express Bus – Capital Investments New buses for expanded express bus	Investment: Funds approximately 10% of need	\$0.12	\$0.01	\$0.01	
Paratransit					
SFMTA Paratransit Operations Paratransit door-to-door van, taxi, and other transportation services for seniors and people with disabilities who are unable to use fixed route transit service	Investment: Fully funds need	\$1.27	\$1.27	\$1.27	

1 A large portion of need is not shown because these next generation transit projects are being developed and costs are unknown. Costs are currently estimated to be about \$50B.

PROGRAM	INVESTMENT LEVEL	NEED (\$B, 2020)	INVESTMENT Plan (\$B, 2020)	VISION PLAN (\$B, 2020)	RESILIENCE CO-BENEFIT
Streets and Freeways					
Maintenance, Rehabilitation, and Replacement					
Street Resurfacing, Rehabilitation and Maintenance Maintains San Francisco's streets, sidewalks, and bike lanes for 30 years	Investment: Maintains current overall current condition, consistent with City Capital Plan (PCI score 75) ¹	\$2.45	\$2.45	\$2.45	Х
Increased Street Resurfacing, Rehabilitation and Maintenance Additional cost to further improve conditions of San Francisco's streets, sidewalks, and bike lanes for 30 years	Investment: Does not fund need	\$4.37	\$0	\$0	
Signs and Signals Maintenance and Rehabilitation Upgrades San Francisco's signs and signals for 30 years	Investment: Funds approximately 12% of need Vision: Increases funding to approximately 50%	\$1.69	\$0.20	\$0.85	
Pedestrian and Bicycle Facilities Maintenance Supports maintenance of paint, soft hit posts, and sidewalks	Investment: Funds approximately 50% of need	\$0.25	\$0.14	\$0.14	Х
Safe and Complete Streets					
Priority Active Transportation Network Improvements including closing gaps, expanding networks, and establishing mobility hubs	Investment: Funds 87 miles of improvements as defined in the ConnectSF Streets and Freeways Strategy ²	\$0.28	\$0.28	\$0.28	
Bicycle Improvements Planning, design, implementation for additional 120 miles of the active transportation network	Investment: Funds approximately 50% of need	\$0.55	\$0.28	\$0.28	
Pedestrian Improvements Safety, walkability and neighborhood connectivity, and streetscape improvements	Investment: Funds approximately 15% of safety improvement needs Vision: Fully funds need for safety improvements	\$4.86	\$0.71	\$1.41	Х
Traffic Calming Includes street redesigns to slow traffic on neighborhood streets and biggest roads and automated photo traffic enforcement	Investment: Funds the majority of needs Vision: Fully funds need	\$0.38	\$0.37	\$0.38	
Signs and Signals New signs and signals	Investment: Funds approximately 30% of need Vision: Increases funding to approximately 65%	\$0.55	\$0.16	\$0.36	
Safe Routes to School Maintains and expands the current program	Investment: Funds approximately 25% of need Vision: Fully funds need	\$0.06	\$0.01	\$0.06	
Vision Zero Education Programming to build support for safer streets	Investment: Funds approximately 65% of need	\$0.06	\$0.04	\$0.04	
Curb Ramps Inspection and repairs of curb ramps	Investment: Funds approximately 37% of need	\$0.46	\$0.17	\$0.17	
Tree Planting Planting and maintenance of new street trees	Investment: Funds approximately 35% of need	\$0.23	\$0.08	\$0.08	Х

1 https://www.onesanfrancisco.org/Draft-Plan-2022

2 https://connectsf.org/about/resources-and-media/

PROGRAM	INVESTMENT LEVEL	NEED (\$B, 2020)	INVESTMENT Plan (\$B, 2020)	VISION PLAN (\$B, 2020)	RESILIENCE Co-benefit
Freeway Safety and Operational Improvements					
Vision Zero Ramp Safety Safety improvements at 30 freeway ramp locations in SF	Investment: Fully funds need defined in ConnectSF Streets and Freeways Strategy	\$0.03	\$0.03	\$0.03	
Managed Lanes and Express Bus Capital investments for managed lanes network on US-101 and I-280 and purchase of buses to expand express bus service (operations costs excluded)	Investment: completion of Managed Lane and additional express bus service on US-101, from King St to Alemany Maze	\$0.30	\$0.20	\$0.20	
Transformative Freeway & Major Street Projects Redesign major roads and freeways to improve connectivity and land use opportunities (e.g. Alemany Interchange; Alemany Stack; Geary Fill) ¹	Investment: Funds initial planning phases for project development Vision: Additional investments for project advancement	\$0.90	\$0.22	\$0.47	Х
Balboa Park Northbound I-280 On-Ramp Closure	Investment: Fully funds the study and implementation to improve safety	\$0.01	\$0.01	\$0.01	
Balboa Park Southbound I-280 Off-Ramp Reconfiguration	Investment: Fully funds the redesign from a free-flow off ramp to a T-intersection	\$0.02	\$0.02	\$0.02	
Transportation System Development & Management					
Transportation Demand Management					
Transportation Demand Management Parking and Pricing; Research and Evaluation; Mode Shift and Incentives; New Mobility (incl. pilots); Transit Education; Land Use	Investment: Funds approximately 50% of need	\$0.08	\$0.04	\$0.04	
Treasure Island Capital Program Capital transportation improvements including West Side Bridges and YBI Multi-Use Path	Investment: Fully funds tolling, buses and shuttles, ferry vessel and landside equipment, and other capital costs	\$0.45	\$0.45	\$0.45	
Treasure Island Mobility Management Program Operations Treasure Island Transportation Affordability Program	Investment: Fully funds program operations and affordability program	\$1.25	\$1.25	\$1.25	
Downtown Congestion Pricing Program Downtown Pricing Program, including discounts, where revenues go towards increased transit service and bicycle, pedestrian, and transit infrastructure improvements	Investment: Fully funds the Congestion Pricing Program	\$1.09	\$1.09	\$1.09	

1 The category includes initial planning for these efforts, full project costs are being developed.

PROGRAM	INVESTMENT LEVEL	NEED (\$B, 2020)	INVESTMENT Plan (\$B, 2020)	VISION PLAN (\$B, 2020)	RESILIENCE Co-benefit
Transportation, Land Use, and Community Coordination					
Neighborhood Transportation Program Community based planning efforts for each supervisorial district	Investment: Fully funds need	\$0.19	\$0.19	\$0.19	Х
Equity Priority Transportation Program Community based planning efforts for underserved neighborhoods and areas with vulnerable population, as well as citywide equity evaluations and planning efforts	Investment: Fully funds need	\$0.19	\$0.19	\$0.19	
Development Oriented Transportation Community based planning efforts to identify transportation improvements that support increased housing density in existing primarily low density neighborhoods	Investment: Fully funds need	\$0.26	\$0.26	\$0.26	
Hunters Point Shipyard and Candlestick Point New local streets within the Hunters Point Shipyard and Candlestick Point area	Investment: Fully funds need	\$0.50	\$0.50	\$0.50	
Citywide and Modal Planning Program Transportation studies and planning	Investment: Fully funds need	\$0.03	\$0.03	\$0.03	
Transit Operations					
SFMTA Baseline Operations 2022 Muni Investment Levels	Investment: Fully funds 2022 Muni operations	\$33.8	\$33.8	\$33.8	
SFMTA Operations Increment Increment investment to reach 2019 investment levels	Vision: Fully funds to 2019 investment levels	\$5.96	\$0	\$5.96	
SFMTA Free Muni for Youth Free transit for all youth 18 years or younger	Investment: Fully funds need	\$0.06	\$0.06	\$0.06	
Transit Strategy Additional Operations Operations related to Muni forward express bus	Investment: Does not fund need Vision: Funds approximately 10% of need	\$5.26	\$0	\$0.44*	
BART Operations – San Francisco Share BART operations for 30 years	Investment: Nearly meets 2019 investment levels Vision: Fully funds 2019 investment levels	\$9.90	\$9.84	\$9.90	
Caltrain Operations – San Francisco Share Caltrain operations for 30 years	Investment: Fully funds Caltrain electrification service of 6 trains per hour	\$2.80	\$2.80	\$2.80	
Existing Obligations					
Debt Service/Existing Obligations	Investment: Fully funds need	\$0.55	\$0.55	\$0.55	

* The about \$2 billion of the new local/regional discretionary revenue in the Vision Plan could go towards these programs.