

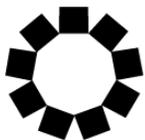


# Plan Bay Area 2050

A Vision for the Future

**FINAL**

Released October 1, 2021



ASSOCIATION OF BAY AREA GOVERNMENTS  
METROPOLITAN TRANSPORTATION COMMISSION

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## ABOUT MTC AND ABAG

Plan Bay Area 2050 is a joint project of the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), two regional government agencies that collaborate with the cities and counties of the Bay Area to plan for a more equitable, sustainable and prosperous region.

MTC is the transportation planning, financing and coordinating agency for the Bay Area, in addition to the region's federally-designated metropolitan planning organization and state-designated regional transportation planning agency. ABAG serves as the Council of Governments for the region, addressing issues of housing, resilience and economic development.

MTC and ABAG combined staffs in 2017 to more effectively coordinate regional planning across areas of expertise, including developing Plan Bay Area 2050, though the agencies retain separate governing boards made up of elected officials and appointees from around the region.

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Photo: Ben Botkin

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# Letter from the Executive Director

Metropolitan Transportation Commission | Association of Bay Area Governments

October 2021

To the residents of the Bay Area:

As we mark more than a year and a half since the onset of the COVID-19 pandemic, we continue to mourn the lives lost and extend immense gratitude to our frontline workers. Reflecting on the events of 2020 and 2021, we at MTC and ABAG stand in solidarity with the worldwide coalition of voices demanding action to confront racially discriminatory policies across public and private sectors — including our own field of regional planning. Together, these events underscore just how essential it is to plan for uncertainty and address systemic discrimination. Starting with the Horizon initiative in 2018, MTC and ABAG were already seeking to identify resilient and equitable solutions for an uncertain future. This work now feeds into the recommendations of Plan Bay Area 2050, the long-range plan for the nine-county San Francisco Bay Area, and provides greater degrees of confidence that the plan's strategies will advance equity regardless of uncertainties in the years to come.

Plan Bay Area 2050 is comprised of 35 strategies across the elements of housing, the economy, transportation and the environment, founded on multiple cycles of meticulous analysis and rigorous public engagement. Alongside the thoughtful, coordinated land use and transportation planning developed in prior iterations of Plan Bay Area, this plan expands its scope to introduce strategies for long-term economic development and environmental resilience. Importantly, equity is interwoven into every strategy, from housing strategies to produce one million new permanently affordable homes by 2050 to transit fare reforms that would reduce cost burdens for riders with low incomes.

We want to thank the many voices that contributed to Plan Bay Area 2050, including members of the public; peers at city, county, regional, state and federal agencies; and partners in the private, non-profit and advocacy spheres. Engagement was fundamental to shaping the plan, and the pandemic allowed innovation and flexibility through new online methods, enabling more diverse voices to weigh in at multiple decision points. In support of the plan's bold equity goals, we sought

to hear from the broadest spectrum of the public possible by offering engagement opportunities in multiple languages, connecting with young people who will inherit the Bay Area of 2050, and prioritizing the voices of historically underserved communities.

The release of this plan coincides with what appears to be a new era in policymaking at the state and federal levels. Bold new policy approaches that could lift people out of poverty, counter the effects of climate change and address centuries of racial inequity are cropping up each day at all levels of government. In Sacramento and Washington, D.C., leaders are discussing large-scale investments that would open new revenues for transit operators, cities, counties and regional agencies to carry out their own visionary plans. Plan Bay Area 2050 provides a regional blueprint for how to use these potential new resources to best support a more resilient and equitable Bay Area.

As we wrap up work on Plan Bay Area 2050, it is now time to transition from long-range planning to near-term action. The Plan Bay Area 2050 Implementation Plan details over 80 concrete actions that MTC, ABAG and our partners can take to advance strategies in the next five years. Turning the plan's vision into reality will require advocacy, legislation, research and, above all, partnership, because no strategy in the plan can be implemented by MTC and ABAG alone. The Bay Area will need to think beyond our neighborhoods and act collaboratively as a region if we are going to address the challenges at hand. Every Bay Area resident can contribute to a more equitable and resilient region. As residents of one of the most beautiful and diverse regions in the world, we must listen more intently, make stronger commitments, and respect one another.

Now, we look forward to getting down to the hard work of implementing the plan and realizing its vision. We hope that you will join us as we work toward a Bay Area that is more affordable, connected, diverse, healthy and vibrant for all, together.

Sincerely,

Therese W. McMillan,  
Executive Director



Photo: Ben Botkin

## Indigenous Land Acknowledgement

The land that makes up the nine-county San Francisco Bay Area has been home to diverse groups of Indigenous peoples with unique cultures and deeply rooted relationships to the land for over 10,000 years.<sup>1</sup> The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) acknowledge the Ohlone as the traditional caretakers of the land that makes up the Bay Area. We honor their connection to the land and the deep respect they hold for this region.

Ohlone is the most commonly used term for the predominant Indigenous group of the Bay Area, who are made up of linguistically similar but ethnically diverse Native American tribes. These tribes include the Chochenyo and the Karkin of the East Bay, the Ramaytush of San Francisco, the Yokuts of the South Bay and Central Valley, and the Muwekma tribe from throughout the region. Other Indigenous groups of the region are distinct from the Ohlone linguistic group, including the Coast Miwok and Southern Pomo of the Graton Rancheria community; the Kashaya, Patwin and Mishewal Wappo of the North Bay; and the Bay Miwok of the East Bay.<sup>2</sup> MTC and ABAG are committed to furthering meaningful partnerships with the tribes of this region.

Thank you for your stewardship.

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<sup>1</sup> UC Berkeley Centers for Educational Justice & Community Engagement. (© 2021). Ohlone Land.

<https://cejce.berkeley.edu/ohloneland>

<sup>2</sup> Bay Area Equity Atlas. (© 2021). Indigenous Populations in the Bay Area. <https://bayareaequityatlas.org/about/indigenous-populations-in-the-bay-area>

# Plan Bay Area 2050 Executive Summary

## What Is Plan Bay Area 2050?

Plan Bay Area 2050 is a 30-year plan that charts a course for a Bay Area that is affordable, connected, diverse, healthy and vibrant for all residents through 2050 and beyond. Thirty-five strategies comprise the heart of the plan to improve housing, the economy, transportation and the environment across the Bay Area’s nine counties — Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma. This long-range plan, developed by the Bay Area’s two regional planning agencies, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), lays out a \$1.4 trillion vision for a more equitable and resilient future for Bay Area residents.

## Plan Bay Area 2050 — The Four Elements

- Housing
- Economy
- Transportation
- Environment

## Plan Bay Area 2050 — Guiding Principles

The five guiding principles were shaped by extensive public engagement.

- Affordable
- Connected
- Diverse
- Healthy
- Vibrant

## About the Strategies

In Plan Bay Area 2050, a strategy is a public policy or set of investments that can be implemented in the Bay Area at the city, county, regional or state level over the next 30 years. A strategy is not a near-term action, a mandate for a jurisdiction or agency, or a legislative proposal. All levels of government — as well as advocacy groups, the private sector and Bay Area residents — have a

role to play in implementing the strategies. Specific actions and roles for MTC and ABAG, as well as partners, have been identified through the collaborative development of the Implementation Plan.

## The New Normal

The COVID-19 pandemic changed overnight how Bay Area residents live, work and travel. As a regional long-range plan developed during an unprecedented global health crisis, Plan Bay Area 2050 was shaped by and responds to COVID-19's new challenges in several ways. In summer 2020, MTC and ABAG staff connected with over 8,200 Bay Area residents online, in writing and over the phone to understand their present-day challenges and most pressing concerns. As a result, strategies in each of the four elements of the plan were added or adjusted to respond to the pandemic's effects.

Simultaneously, planning assumptions related to future financial projections and population growth were revised to reflect slower short-term growth. While the long-term impacts of this watershed event may change many aspects of life in the Bay Area, Plan Bay Area 2050 meets the moment and plans for the future by centering equity and resilience to uncertainty in each of its strategies.

## Preparing for an Uncertain Future

Between now and 2050, best estimates suggest the Bay Area's population will rise from nearly 8 million to over 10 million residents and that the number of jobs within the nine counties will climb from 4 million to more than 5 million. This growth will influence what the Bay Area looks like in 30 years, and many questions remain about where these new residents will live and work. In addition to growth, forces outside of the region's control such as climate change, economic booms and busts, and changing technologies will contribute to future uncertainty. The COVID-19 pandemic provides an extreme example of how these unprecedented events can reshape everyday life.

In order to craft a long-range plan that is resilient to future unknowns, MTC and ABAG planners developed a multi-year scenario-planning effort called Horizon prior to beginning work on Plan Bay Area 2050. Through Horizon, the agencies analyzed strategies and transportation projects in divergent potential future conditions called Futures, evaluating each strategy's probable success across three sets of future conditions. Each Future varied in terms of economic vibrancy,

population growth rates, severity of natural hazards like sea level rise and earthquakes, and adoption rates for telecommuting or autonomous vehicles, among other forces. The 35 strategies included in Plan Bay Area 2050 proved effective across multiple Futures or respond to challenges that remained unaddressed after the conclusion of the Horizon effort.

## Advancing Equity

MTC and ABAG define equity for Plan Bay Area 2050 as “just inclusion in a Bay Area where everyone can participate, prosper and reach their full potential.” The agencies strive to advance equity through careful consideration of investments and policies that affect historically and systemically marginalized, underserved and excluded groups, including people with low incomes, people with disabilities and communities of color. Each strategy in Plan Bay Area 2050 has been crafted to advance equity, with particular attention paid to the needs of people living in Equity Priority Communities, which are geographic areas that have a concentration of both residents of color and residents with low incomes, or that have a concentration of residents with low incomes and other factors such as limited English proficiency, seniors or people with disabilities.

Most of Plan Bay Area 2050’s investments are directed toward residents of Equity Priority Communities or other systemically underserved communities. Among its many equity-advancing components, the plan envisions billions of dollars for affordable housing production and preservation, a universal basic income to support residents’ essential needs, investments in means-based transit fare discounts, and subsidies to protect homes and businesses from natural hazards.



Photo: Noah Berger

## Plan Bay Area 2050's 35 Strategies

Housing Strategies — Cost: \$468 Billion<sup>3</sup>

- **Theme: Protect and Preserve Affordable Housing**
  - **H1. Further strengthen renter protections beyond state law.**  
Building upon recent tenant protection laws, limit annual rent increases to the rate of inflation, while exempting units less than 10 years old.  
Cost: \$2 billion
  - **H2. Preserve existing affordable housing.**  
Acquire homes currently affordable to low- and middle-income residents for preservation as permanently deed-restricted affordable housing.  
Cost: \$237 billion
- **Theme: Spur Housing Production for Residents of All Income Levels**
  - **H3. Allow a greater mix of housing densities and types in Growth Geographies.**  
Allow a variety of housing types at a range of densities to be built in Priority Development Areas, select Transit-Rich Areas and select High-Resource Areas.  
Cost: N/A
  - **H4. Build adequate affordable housing to ensure homes for all.**  
Construct enough deed-restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households.  
Cost: \$219 billion
  - **H5. Integrate affordable housing into all major housing projects.**  
Require a baseline of 10-20% of new market-rate housing developments of five units or more to be affordable to low-income households.  
Cost: N/A
  - **H6. Transform aging malls and office parks into neighborhoods.**  
Permit and promote the reuse of shopping malls and office parks with limited commercial viability as neighborhoods with housing for residents at all income levels.  
Cost: N/A
- **Theme: Create Inclusive Communities**

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<sup>3</sup> Numbers may not sum due to rounding.

- **H7. Provide targeted mortgage, rental and small business assistance to Equity Priority Communities.**  
Provide assistance to low-income communities and communities of color to address the legacy of exclusion and predatory lending, while helping to grow locally owned businesses.  
Cost: \$10 billion
- **H8. Accelerate reuse of public and community-owned land for mixed-income housing and essential services.**  
Help public agencies, community land trusts and other non-profit landowners accelerate the development of mixed-income affordable housing.  
Cost: N/A

Economic Strategies — Cost: \$234 Billion<sup>4</sup>

- ***Theme: Improve Economic Mobility***

- **EC1. Implement a statewide universal basic income.**  
Provide an average \$500 per month payment to all Bay Area households to improve family stability, promote economic mobility and increase consumer spending.  
Cost: \$205 billion
- **EC2. Expand job training and incubator programs.**  
Fund assistance programs for establishing new businesses, as well as job training programs, primarily in historically disinvested communities.  
Cost: \$5 billion
- **EC3. Invest in high-speed internet in underserved low-income communities.**  
Provide direct subsidies and construct public infrastructure to ensure all communities have affordable access to high-speed internet.  
Cost: \$10 billion

- ***Theme: Shift the Location of Jobs***

- **EC4. Allow greater commercial densities in Growth Geographies.**  
Allow greater densities for new commercial development in select Priority Development Areas and Transit-Rich Areas to encourage more jobs to locate near public transit.  
Cost: N/A

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<sup>4</sup> Numbers may not sum due to rounding.

- **EC5. Provide incentives to employers to shift jobs to housing-rich areas well served by transit.**

Provide subsidies to encourage employers to relocate offices to housing-rich areas near regional rail stations.

Cost: \$10 billion

- **EC6. Retain and invest in key industrial lands.**

Implement local land use policies to protect key industrial lands, identified as Priority Production Areas, while funding key infrastructure improvements in these areas.

Cost: \$4 billion

## Transportation Strategies — Cost: \$578 Billion<sup>5</sup>

- ***Theme: Maintain and Optimize the Existing System***

- **T1. Restore, operate and maintain the existing system.**

Commit to operate and maintain the Bay Area's roads and transit infrastructure while reversing pandemic-related cuts to total transit service hours.

Cost: \$389 billion

- **T2. Support community-led transportation enhancements in Equity Priority Communities.**

Provide direct funding to historically marginalized communities for locally identified transportation needs.

Cost: \$8 billion

- **T3. Enable a seamless mobility experience.**

Eliminate barriers to multi-operator transit trips by streamlining fare payment and trip planning while requiring schedule coordination at timed transfer hubs.

Cost: \$3 billion

- **T4. Reform regional transit fare policy.**

Streamline fare payment and replace existing operator-specific discounted fare programs with an integrated fare structure across all transit operators.

Cost: \$10 billion

- **T5. Implement per-mile tolling on congested freeways with transit alternatives.**

Apply a per-mile charge on auto travel on select congested freeway corridors where transit alternatives exist, with discounts for carpoolers, low-income residents, and off-

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<sup>5</sup> Numbers may not sum due to rounding.



freeway lanes for new and improved express bus services, carpools and toll-paying solo drivers.

Cost: \$9 billion

## Environmental Strategies — Cost: \$103 Billion<sup>6</sup>

- ***Theme: Reduce Risks from Hazards***

- **EN1. Adapt to sea level rise.**

Protect shoreline communities affected by sea level rise, prioritizing low-cost, high-benefit solutions and providing additional support to vulnerable populations.

Cost: \$19 billion

- **EN2. Provide means-based financial support to retrofit existing residential buildings.**

Adopt building ordinances and incentivize retrofits to existing buildings to meet higher seismic, wildfire, water and energy standards, providing means-based subsidies to offset associated costs.

Cost: \$15 billion

- **EN3. Fund energy upgrades to enable carbon neutrality in all existing commercial and public buildings.**

Support electrification and resilient power system upgrades in all public and commercial buildings.

Cost: \$18 billion

- ***Theme: Expand Access to Parks and Open Space***

- **EN4. Maintain urban growth boundaries.**

Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions.

Cost: N/A

- **EN5. Protect and manage high-value conservation lands.**

Provide strategic matching funds to help conserve and maintain high-priority natural and agricultural lands, including but not limited to, Priority Conservation Areas and wildland-urban interface areas.

Cost: \$15 billion

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<sup>6</sup> Numbers may not sum due to rounding.

- **EN6. Modernize and expand parks, trails and recreation facilities.**  
Invest in quality parks, trails and open spaces that provide inclusive recreation opportunities for people of all backgrounds, abilities and ages to enjoy.  
Cost: \$30 billion

- ***Theme: Reduce Climate Emissions***

- **EN7. Expand commute trip reduction programs at major employers.**  
Set a sustainable commute target for major employers as part of an expanded Bay Area Commuter Benefits Program, with employers responsible for funding incentives and disincentives to shift auto commuters to any combination of telecommuting, transit, walking and/or bicycling.  
Cost: N/A
- **EN8. Expand clean vehicle initiatives.**  
Expand investments in clean vehicles, including more fuel-efficient vehicles and electric vehicle subsidies and chargers.  
Cost: \$5 billion
- **EN9. Expand transportation demand management initiatives.**  
Expand investments in programs like vanpools, bikeshare, carshare and parking fees to discourage solo driving.  
Cost: \$1 billion

## Outcomes

Plan Bay Area 2050 is forecasted to make significant progress in tackling the greatest challenges facing the region, from housing affordability to the intensifying impacts of global climate change, based on the extensive analysis and modeling conducted over nearly four years of planning work by MTC and ABAG. Using simulation models to forecast future economic, land use and travel patterns over the next three decades, Plan Bay Area 2050 explores how the plan's strategies advance the region toward the adopted vision of a Bay Area that is affordable, connected, diverse, healthy and vibrant for all residents, with a strong focus on measuring equity outcomes.

If Plan Bay Area 2050's strategies were implemented, housing and transportation costs, the two largest expenditures for most Bay Area families today, would decrease as a share of household income by 2050, and families with low incomes would see larger reductions in these costs than the region at large. This is the first regional plan for the Bay Area that makes meaningful progress on this critical metric of affordability. Plan Bay Area 2050 would also prepare the region's workforce for future jobs while simultaneously planning for enough new housing to ensure that strong job growth is not met with an increase in the number of long-distance commuters traveling to the Bay Area from outside of the region.

Under Plan Bay Area 2050's strategies, just under half of all Bay Area households would live within one half-mile of frequent transit by 2050, with this share increasing to over 70% for households with low incomes. Transportation and environmental strategies that support active and shared modes, combined with a transit-supportive land use pattern, are forecasted to lower the share of Bay Area residents that drive to work alone from 50% in 2015 to 33% in 2050. Greenhouse gas emissions from transportation would decrease significantly as a result of these transportation and land use changes, and the Bay Area would meet the state mandate of a 19% reduction in per capita emissions by 2035 — but only if all strategies are implemented.

## Implementation Plan

How do the Plan Bay Area 2050 strategies get implemented? No strategy can be carried out by MTC and ABAG alone, so partners, policymakers and the public will be essential to realizing the plan's vision. Developed through months of in-depth engagement with staff from city, county, regional, state and federal agencies; equity and environmental groups; labor organizations;

businesses; and members of the public, the Plan Bay Area 2050 Implementation Plan identifies concrete actions that can be implemented within the next five years to advance each of the 35 strategies. Over 80 individual implementation actions have been identified, covering a wide array of activities ranging from new programs to areas of further study (see Chapter 7).

Implementation actions can be broadly classified into three types of activities, also known as implementation vehicles: advocacy and legislation; new, existing or restructured initiatives; and planning or research. The Implementation Plan identifies several near-term legislative priorities, including working to secure new revenues to fund strategies across the four elements.

Additionally, the Implementation Plan outlines near-term steps for new, existing or restructured programs housed within MTC and ABAG that have a nexus with the plan's strategies. Finally, additional planning or research work needed to inform future action is also included in the Implementation Plan, with future studies examining the future implications of road pricing and Priority Conservation Areas planned for the next few years.

## Looking Ahead

As the Bay Area continues to navigate the COVID-19 pandemic, there are many opportunities to enact new policies and practices to better reflect the needs and desires of all who live in the region. Together, Bay Area residents and leaders can work toward equity and prosperity by taking bold actions in the face of a rapidly changing world. The 35 strategies described in Plan Bay Area 2050 outline a vision for confronting unpredictable societal forces in a way that is inclusive and pragmatic — a plan for a Bay Area that is more affordable, connected, diverse, healthy and vibrant for all residents.

For more information, read the full plan and supplemental reports. To request translation of any part of the plan, or request other assistance, call (415) 778-6757 or email

[info@bayareametro.gov](mailto:info@bayareametro.gov).

# 1 | Introduction

## The Bay Area: Region at a Crossroads

The nine counties of the San Francisco Bay Area are world-renowned for their natural beauty, innovative spirit and diverse culture. Together, Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma counties form one of the most vibrant regions in the United States and the world, with nearly 8 million people of many different races, ethnicities, nationalities and cultures calling the Bay Area home. People of color have comprised the majority of the population since around 2000 — decades before the nation as a whole is expected to experience the same demographic shift.<sup>7, 8</sup>

Cities and towns surrounding the San Francisco Bay have symbolized progress and economic opportunity in the Golden State for centuries. From technological innovation and environmental stewardship to thriving art scenes and social justice movements, the region is recognized as a world-class problem-solver and trend-setter. Bay Area residents have consistently stepped up to face challenges and advocate for change, including leading nationally on LGBTQ rights and setting the stage for the Americans with Disabilities Act in recent decades.

By 2050, best estimates suggest the Bay Area's population will grow to just over 10 million residents, and that the number of jobs within the nine counties will climb to more than 5 million. Where in the region will these 2 million new people live and work? Will they be able to live conveniently near their jobs or work from home, or will they commute for hours each day? Will the children, grandchildren and great-grandchildren of today's residents be able to raise their own children in the region, or will they be priced out? Could entire neighborhoods be displaced by the effects of climate change?

The answers to these questions will depend on how the region addresses inequities as it grows. Well-crafted policies can help families stay in affordable homes, surrounded by inclusive communities, for generations. The nine counties and 101 cities and towns of the Bay Area can

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<sup>7</sup> Bay Area Census. (2000 US Census data). <http://www.bayareacensus.ca.gov/bayarea.htm> (See "Not Hispanic or Latino – White").

<sup>8</sup> Colby, S. L. and Ortman, J. M. (2015, March). *Projections of the Size and Composition of the U.S. Population: 2014 to 2060*. US Census Bureau. <https://www.census.gov/content/dam/Census/library/publications/2015/demo/p25-1143.pdf>

lead residents down the path of economic security to a thriving middle class while prioritizing communities of color and families with lower incomes that have been shut out of past opportunities. Strategic investments can protect increasingly vulnerable communities from the devastating effects of sea level rise, wildfires and earthquakes, while improving air quality and open spaces for everyone.

The decisions the Bay Area makes over the next 30 years will greatly shape its future residents' lives, even as many factors remain outside the region's control. Outside forces like climate change, new technologies and worldwide political volatility threaten to disrupt everyday life. Other new challenges will unquestionably emerge, requiring new solutions and new collaborations. The magnitude of forces the Bay Area will face may seem daunting, but as residents of one of the most innovative and accomplished regions in the world, important decisions about the future are ours to make.

When planning for the future, decision-makers must craft both a strong, principled vision that centers equity and the practical, achievable steps that can make this vision a reality. Plan Bay Area 2050 explores how the region may grow over the next 30 years and offers cross-disciplinary strategies for regional government and its many partners to work together. Under the vision and strategies of Plan Bay Area 2050, the region can work toward resilient, equitable solutions that will improve the lives of all current and future Bay Area residents.

### Plan Bay Area 2050 — A Resilient and Equitable Vision for the Bay Area's Future

The COVID-19 pandemic has starkly illustrated just how powerful unforeseeable forces can be. The pandemic upended daily life overnight, costing thousands of Bay Area lives and eliminating over 150,000 jobs in 2020.<sup>9</sup> Other challenges are poised to be even more disruptive to Bay Area life over the next 30 years. Perhaps the most serious existential consideration of all is climate change, a growing crisis that threatens to reshape the region through worsening cycles of flooding, extreme heat, drought and wildfire. While not tied to climate change, a major earthquake is also likely to hit the Bay Area in the coming decades.

Alongside the pandemic and the growing sense of urgency to address climate change, the early 2020s have ushered in a broad awakening to racial discrimination. In the Bay Area and beyond,

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<sup>9</sup> Li, R. and Blom, E. (2020, September 2). Bay Area Layoff Tracker: Over 150,000 jobs lost. San Francisco Chronicle. <https://projects.sfchronicle.com/2020/layoff-tracker/>

previously unheard voices are demanding new ways to solve problems. Decision-makers are explicitly acknowledging and addressing legacies of exclusion that are deeply, often invisibly, embedded in business-as-usual approaches. Some difficult equity conversations call for immediate action to address wrongdoings, while many others require long-term planning to solve longstanding problems.

While the Bay Area has a long history of working together to create a better, more inclusive region, opportunities abound to examine the past and continue the work to advance a more equitable and inclusive society. Some past policies and practices are obvious examples of inequity; exclusionary housing policies like redlining, for example, and practices like uprooting thriving Black neighborhoods to make way for transportation infrastructure are difficult parts of the Bay Area's past.

The deeply entrenched effects of these past policies and practices continue to affect lives today, and they must not be minimized. However, something as seemingly straightforward as planning a park in any neighborhood today can also bring up equity concerns that are less obvious. Which communities have access to high-quality parks and recreation spaces in the Bay Area today, and why? Can the region work together to balance the needs of all counties more evenly, so that all residents in every county can enjoy the region's beauty in open spaces?

MTC and ABAG explore these questions and many others in Plan Bay Area 2050, the region's long-range strategic plan focused on the interrelated elements of housing, the economy, transportation and the environment. The heart of the plan is 35 strategies, described in the chapters that follow. Each strategy has been crafted to weather uncertain future conditions and advance equity. This plan expands in scope beyond past Bay Area long-range plans by examining the themes of economic development and environmental resilience for the first time. The plan also meets all state and federal requirements for a Regional Transportation Plan and Sustainable Communities Strategy.<sup>10</sup>

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<sup>10</sup> For federal requirements, see the Federal Transit Administration website at: <https://www.transit.dot.gov/regulations-and-guidance/transportation-planning/metropolitan-planning-organization-mpo>. For California requirements, see Government Code Section 65080.

## Plan Bay Area 2050 Strategies

A Plan Bay Area 2050 strategy is a public policy or set of investments that can be implemented in the Bay Area at the city, county, regional or state level over the next 30 years. A strategy is not a near-term action, a mandate for a jurisdiction or agency, or a legislative proposal.

## Guiding Principles and Vision for Plan Bay Area 2050

Extensive public engagement led MTC and ABAG to five guiding principles that informed every step of Plan Bay Area 2050's development: affordable, connected, diverse, healthy and vibrant. These principles were distilled from thousands of comments received at online and in-person events, as people consistently cited issues like affordable housing, racial diversity, quality transportation options and climate change as top concerns for their future. MTC and the ABAG Executive Board formally adopted the principles in the following vision statement for Plan Bay Area 2050: "To ensure by the year 2050 that the Bay Area is affordable, connected, diverse, healthy and vibrant for all."

A guiding vision is a crucial complement to both policies and concrete actions in planning work. A common vision demonstrates leadership and consensus in an organization, setting the tone for the actions that follow. After the vision was adopted, the MTC and ABAG planning team used it to refine potential strategies for inclusion in the plan, resulting in the final 35 strategies. The five guiding principles also provide a structure to evaluate the plan's performance, as detailed in the outcomes chapter. While the strategies are described by topic in each of the elements chapters that follow, the outcomes chapter evaluates the overall combined impact of the strategies, using the five guiding principles as a framework to gauge how well they perform.

- Plan Bay Area 2050's cross-cutting themes: ***Resilience and Equity***
- Plan Bay Area 2050's Vision: ***To ensure by the year 2050 that the Bay Area is affordable, connected, diverse, healthy and vibrant for all.***
- Plan Bay Area 2050's Guiding Principles<sup>11</sup>
  - **Affordable** — All Bay Area residents and workers have sufficient access to housing options they can afford — households are economically secure.
  - **Connected** — An expanded, well-functioning, safe and multimodal transportation system connects the Bay Area — fast, frequent and efficient intercity trips are

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<sup>11</sup> Adopted by MTC and ABAG in September 2019.

complemented by a suite of local transportation options, connecting communities and creating a cohesive region.

- **Diverse** — The Bay Area is an inclusive region where people from all backgrounds, abilities, and ages can remain in place with access to the region’s assets and resources.
- **Healthy** — The region’s natural resources, open space, clean water and clean air are conserved — the region actively reduces its environmental footprint and protects residents from environmental impacts.
- **Vibrant** — The Bay Area region is an innovation leader, creating job opportunities for all and ample fiscal resources for communities.

### Bridging Past and Present — Legacies of Exclusion and Steps Toward Progress

The Bay Area has long been one of the most diverse and prosperous regions in the nation, but this prosperity has never been shared equally. Understanding the impacts that past policy decisions have had on people of color, people with low incomes, people with disabilities and other historically marginalized groups is a crucial starting point to understanding inequity in the region. Along with understanding the past, however, it is also critical to look toward the future. Recent government actions that affect the Bay Area’s housing, economy, transportation and environment have begun to undo a legacy of exclusion and make steps toward equity.

### Inclusive Communities to Call Home

Rising home prices have led to financial stability and a high quality of life for many Bay Area homeowners over the past few decades. For many others who live or want to live in the Bay Area, however, high rents and home prices are the primary obstacle to calling the region home. Housing growth in cities with growing high-wage workforces — notably those in Silicon Valley — has not kept pace with job growth, resulting in spillover demand for homes and higher housing costs throughout the region. Every day, Bay Area workers of all income levels struggle to find housing close to their workplaces, though this trend is particularly challenging for workers with low incomes.

Historical practices like redlining and urban renewal throughout the 20th century resulted in disinvestment within low-income communities and communities of color, and the effects of these practices are still felt. A home in a Black-majority part of the Bay Area today, for example, is worth

about \$164,000 less than a home with equivalent amenities in a neighborhood with very few Black people.<sup>12</sup>

While some exclusionary housing policies common across the United States originated in the Bay Area, the region's cities and towns, as well as state and federal governments, have recently begun to explicitly acknowledge and address these legacies of exclusion. Berkeley, for example, was the first city in the U.S. to zone neighborhoods exclusively for single-family houses in 1916, but the city council in early 2021 approved a resolution that will work toward ending exclusionary zoning, joining a wave of other cities nationwide doing the same.<sup>13</sup> At the state level, housing bills that explore statewide renter protections, streamline the approval process for affordable housing, and make it easier for homeowners to build in-law units, among many other proposed tactics, have proliferated in recent years to tackle the housing crisis.

### Sharing Prosperity

The Bay Area has reinvented its economy several times in the last half-century and is widely recognized as the global center for technological innovation. Despite a strong economy, however, the Bay Area also has the greatest income inequality of any region in California as of 2021.<sup>14</sup> Low- and middle-income workers have seen fewer gains than those in the top bracket in recent decades, and the gulf between high and low wages has widened with each economic bust. Even during booms, as incomes have risen, so has the measure of inequality for each of the nine Bay Area counties since 1980.<sup>15</sup> Most of the region's (and the nation's) overall income growth is received by households at the very top income levels. Bay Area households in the 90th percentile of incomes earned \$384,000 a year in 2018, compared to just \$32,000 for those in the bottom 10th percentile.<sup>16</sup>

One idea that local governments have begun testing to address economic inequity is a universal basic income, a strategy explored further in the economy chapter. First implemented in California

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<sup>12</sup> Levin, M. (2020, June 19). Black Californians' Housing Crisis, By The Numbers. CalMatters/CapRadio. <https://www.capradio.org/articles/2020/06/19/black-californians-housing-crisis-by-the-numbers/>

<sup>13</sup> Metcalfe, J. (2021, February 17). Berkeley may get rid of single-family zoning as a way to correct the arc of its ugly housing history. Berkeleyside. <https://www.berkeleyside.com/2021/02/17/berkeley-may-get-rid-of-single-family-zoning-as-a-way-to-correct-the-arc-of-its-ugly-housing-history>

<sup>14</sup> Bohn, S. and Thorman, T. (2020, January). Income Inequality in California. Public Policy Institute of California. <https://www.ppic.org/publication/income-inequality-in-california/>

<sup>15</sup> Ibid.

<sup>16</sup> Ibid.

by the neighboring city of Stockton, a number of other universal basic income pilots are on the horizon. In the Bay Area, Oakland, San Francisco, South San Francisco, Marin County and Santa Clara County are all exploring universal basic income programs. In July 2021, the state made \$35 million available to fund universal basic income pilots, with an emphasis on programs supporting pregnant people and young people leaving foster care.<sup>17</sup>

### Connecting Divided Communities

In the transportation realm, decisions that guided where housing, jobs and transportation infrastructure were built throughout the 20th century have deeply affected the Bay Area's most historically marginalized and systemically underserved communities. Federally funded highway projects in the 1950s and 1960s often routed construction through low-income communities of color in the region's urban core, displacing families and breaking up thriving downtowns.<sup>18</sup> The primary beneficiaries of these decisions lived miles away, in residential communities that relied on freeways for a convenient drive to downtown job centers.

In an unexpected turn, the 1989 Loma Prieta earthquake prompted Bay Area leaders to explore the possibility of knitting these communities back together. The earthquake damaged several freeway segments in the Bay Area, including an elevated structure running parallel to the Embarcadero in San Francisco and the Cypress Structure in Oakland. Leaders chose to remove the freeways rather than repair them, making way for multimodal corridors where drivers, transit vehicles, cyclists and pedestrians share the road. This Bay Area decision to elevate the needs of transit riders, bicyclists and pedestrians, alongside drivers, serves as a model for several Plan Bay Area 2050 transportation strategies, including more frequent, reliable transit service and infrastructure for a regional network of safe bike lanes as well as trails.

### Health and Safety for All Residents

Inequitable transportation, housing and economic policies have also left communities of color, low-income communities and residents with disabilities more exposed to environmental health

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<sup>17</sup> Beam, A. (2020, July). California approves 1st state-funded guaranteed income plan. Associated Press.

<https://apnews.com/article/govern-ment-and-politics-california-4fea151e0425f8188337e44a02ab8177>

<sup>18</sup> DiMento, J.F.C. and Ellis, C. (2012). Changing Lanes: Visions and Histories of Urban Freeways. MIT Press.

<http://doi.org/10.1080/02665433.2013.860821>

hazards.<sup>19</sup> While overall pollution levels have improved greatly over the past decades, disparate burdens on systemically underserved people remain. Many contaminated land sites are still in or adjacent to communities of color in the Bay Area today, and homes in Equity Priority Communities may be over 50% more likely to experience flooding from sea level rise. There are even disparities in which residents and communities see reinvestment following environmental disasters: neighborhoods with concentrations of residents of color and people with low incomes consistently see smaller amounts of reinvestment in their communities, which widens the overall gap in wealth inequality.<sup>20</sup>

Alongside these inequities, however, the Bay Area, and California as a whole, are recognized as national leaders in environmental advocacy, and lawmakers and governments have recently made strides in working toward better health and more resilient communities for all. Nonetheless, the Bay Area must ensure that its legacy of environmental stewardship is not used as a tool of exclusion that prevents people of color from calling the region home. Community-engaged planning work is already underway as required by Assembly Bill 617 (C. Garcia, Statutes of 2017), a mandate to improve community health and promote equity by reducing exposure to air pollutants in neighborhoods most affected by air pollution. Communities in places like West Oakland and Richmond, for example, now have a stronger voice in making the decisions that will affect environmental quality in their neighborhoods.

### Shaping What Comes Next

While history reveals that past planning actions across federal, state and local levels have sown the seeds of the greatest challenges facing our region today — fights to protect and expand civil rights, environmental justice, housing affordability, disparities in wages, and so much more — there is hope for a better future. The spirit of innovation and diversity inherent to the Bay Area's identity will be essential as residents face the coming years together. There is an opportunity for the Bay Area to lead nationally and globally as a region where equity is championed as a principle, and where planning work is humble enough to know that unforeseen circumstances will arise.

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<sup>19</sup> San Francisco Bay Conservation and Development Commission. (2019, June 7). Toward Equitable Shorelines: Environmental Justice and Social Equity at the San Francisco Bay. Staff Report. <https://bcdc.ca.gov/cm/2019/0620BPA2-17BackgroundReport.pdf>

<sup>20</sup> Howell, J. et al. (2018). As Disaster Costs Rise, So Does Inequality. *Socius: Sociological Research for a Dynamic World*, 4. <https://doi.org/10.1177/2378023118816795>

Bay Area voters have also shown time and again that they will step up to support ideas that equitably improve quality of life for all. Faced with declining financial support from federal and state governments, Bay Area cities and counties over the past decades have enacted various local transportation sales taxes to help themselves, and voters have approved three regional measures to generate billions of dollars for much-needed transportation projects. Voter-approved environmental actions in the 20th century have protected the Bay Area from unchecked sprawl, degrading air quality and a shrinking bay. The Bay Area public has shown that it is eager to solve big problems together, and effective long-range planning can create those opportunities.

### Navigating an Uncertain Future

Undeniably, the Bay Area will face unexpected and life-altering events over the next three decades and beyond. The COVID-19 public health crisis is a prime example of the unpredictability of things to come, and it will not be the last unforeseeable event with wide-reaching repercussions. Technological, environmental and economic changes are accelerating at an ever-quicken pace, requiring institutions to step up in response. Long-range planning in particular can guide responses to uncertainty through targeted policies and investments. Thoughtful long-range strategies can work to stabilize a high quality of life for Bay Area residents, no matter what may come.

Already, evidence of change is all around us. In less than a decade, ride-hailing companies have revolutionized how people get around, prompting transit operators to consider whether these on-demand private rides are a competitor to transit or a complement, or something in between. New revolutions in the transportation field, like self-driving cars or the growing acceptance of remote work, could remake the Bay Area's transportation system once again, or they may fade away as fads never fully realized. Nimble, forward-looking transportation strategies can help to keep Bay Area residents moving no matter what trends occur, while also helping to reduce greenhouse gas emissions.

Economic uncertainties are already on the minds of most Bay Area residents, as the economic fallout of the COVID-19 pandemic may take years to fully unfold. Economic booms and busts are bound to continue, regardless of any action the Bay Area takes, prompting new explorations of ways we might share the prosperity in good times and cushion against hardship when times are

tough. Economic strategies that promote upward mobility and improve access to jobs hold the promise of a society that is as equitable as it is prosperous, even through ups and downs.

The unknown effects of climate change cannot be overstated. By 2050, sea levels around San Francisco Bay may rise multiple feet, and already-hazardous wildfires and droughts are expected to intensify. Earthquakes also represent a perennial threat in California, and there is a significant chance of a major earthquake in the Bay Area within the next 30 years.<sup>21</sup> While no one can predict when an individual earthquake or flood may strike, strategies to retrofit homes and protect shoreline communities can ensure the safety of all Bay Area residents through these hazardous events.

The ever-increasing cost of housing in the Bay Area today also presents a threat to stability. The housing market may continue to rise unchecked, pricing out all but the wealthiest residents in certain areas. Future tastes in housing may change, becoming more urban, suburban or rural. More people may work from home in the future, giving rise to new needs for living and working spaces. Strategies for the future of housing can reduce housing costs and increase access to opportunity for all Bay Area families, while guiding all neighborhoods to be more inclusive of residents at all income levels.

Government has recently shown that it can respond to an unexpected crisis. Local, state and federal agencies responded in unprecedented and meaningful ways to the many housing crises brought on by COVID-19, including eviction moratoria, rental and mortgage support, and services for currently unhoused people. Strategies for the future can build off these successes and take them even further, with solutions tailored to the Bay Area and its unique needs.

### Planning for Success Together

What may seem like a moment of crisis can often be a catalyst for necessary growth, as in retrospect, moments of historic upheaval have ignited passionate action and long-term progress. As the Bay Area emerges from a historical moment of crisis, there are many opportunities for public agencies to adapt and reform policies and practices to better reflect the needs of all residents.

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<sup>21</sup> USGS. (2016, August). *Earthquake Outlook for the San Francisco Bay Region 2014–2043*.  
<https://pubs.usgs.gov/fs/2016/3020/fs20163020.pdf>

MTC and ABAG envision a more responsive, responsible and representative course for the region's future that reflects the shifting priorities of Bay Area residents. Through partnerships and bold actions in the face of a rapidly changing world, the region can find a path toward inclusivity and prosperity for those who live, work and too often struggle to remain here. The 35 strategies described in the following chapters outline a vision for confronting huge societal forces in a way that is both equitable and pragmatic, both resilient and inclusive — a plan for a region that is more affordable, connected, diverse, healthy and vibrant for all Bay Area residents.



Photo: Noah Berger

## Plan Bay Area 2050 Growth Geographies — Focus Areas for Future Housing and Jobs Growth

Throughout Plan Bay Area 2050, Growth Geographies are geographic areas used to guide where future growth in housing and jobs would be focused under the plan’s strategies over the next 30 years. These geographies are identified for growth either by local jurisdictions or because of their proximity to transit or access to opportunity. The four types of Growth Geographies analyzed in Plan Bay Area 2050 are:

- **Priority Development Areas (PDAs):** Areas generally near existing job centers or frequent transit that are locally identified (i.e., identified by towns, cities or counties) for housing and job growth.
- **Priority Production Areas (PPAs):** Locally identified places for job growth in middle-wage industries like manufacturing, logistics or other trades. An area must be zoned for industrial use or have a predominantly industrial use to be a PPA.
- **Transit-Rich Areas (TRAs):** Areas near rail, ferry or frequent bus service that were not already identified as PDAs. Specifically, these are areas where at least 50% of the area is within 1/2 mile of either an existing rail station or ferry terminal (with bus or rail service), a bus stop with peak service frequency of 15 minutes or less, or a planned rail station or planned ferry terminal (with bus or rail service).
- **High-Resource Areas (HRAs):** State-identified places with well-resourced schools and access to jobs and open space, among other advantages, that may have historically rejected more housing growth.<sup>22</sup> This designation only includes places that meet a baseline transit service threshold of bus service with peak headways of 30 minutes or better.

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<sup>22</sup> Plan Bay Area 2050’s High-Resource Areas are a subset of the high-opportunity areas identified statewide by the California Department of Housing and Community Development that meet a minimum transit service threshold and are located in the Bay Area. See more at: <https://www.treasurer.ca.gov/ctcac/opportunity.asp>

# MAP 1-1 Plan Bay Area 2050 Growth Geographies

- Priority Development Area\*
- Priority Production Area
- Transit-Rich Area
- Transit-Rich and High-Resource Area
- High-Resource Area with Basic Bus Service\*\*
- Regional Rail Station (Existing)
- Regional Rail Station (Plan Bay Area 2050)
- Regional Rail (Existing)
- Regional Rail (Plan Bay Area 2050)\*\*\*
- ✈ Major Airport
- ⚓ Major Seaport

\* Priority Development Areas are locally designated geographies that meet transportation and planning criteria adopted under ABAG Resolution No. 02-19.

\*\* Peak headways of 16 to 30 minutes (January 2020).

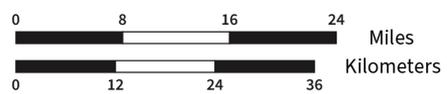
\*\*\* Includes intercity rail, commuter rail, and heavy rail systems with peak headway of one hour or less. New Transbay Rail Crossing alignment is representative only.

Areas shown guide Plan Bay Area 2050's development pattern, though they do not supersede local government land use authority.

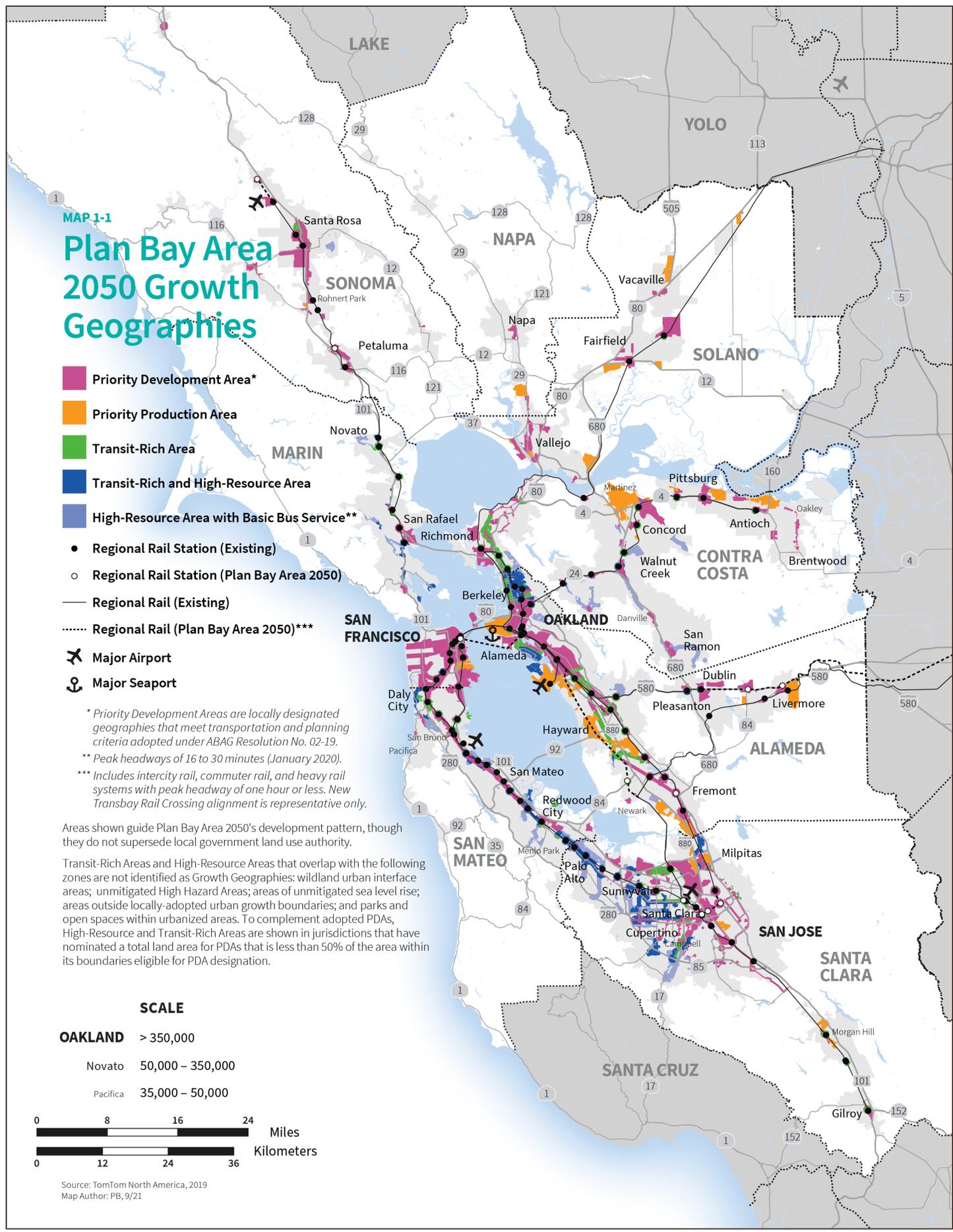
Transit-Rich Areas and High-Resource Areas that overlap with the following zones are not identified as Growth Geographies: wildland urban interface areas; unmitigated High Hazard Areas; areas of unmitigated sea level rise; areas outside locally-adopted urban growth boundaries; and parks and open spaces within urbanized areas. To complement adopted PDAs, High-Resource and Transit-Rich Areas are shown in jurisdictions that have nominated a total land area for PDAs that is less than 50% of the area within its boundaries eligible for PDA designation.

### SCALE

- OAKLAND** > 350,000
- Novato 50,000 – 350,000
- Pacifica 35,000 – 50,000



Source: TomTom North America, 2019  
Map Author: PB, 9/21



## Introduction | Supplementary Content

### Understanding Equity — Approaches and Terminology

#### Equity Platform

MTC and ABAG’s working definition of equity is “just inclusion in a Bay Area where everyone can participate, prosper and reach their full potential.” The agencies strive to advance equity through carefully considered investments and policies that affect historically and systemically marginalized, underserved and excluded groups, including people with low incomes, people with disabilities and communities of color. MTC and ABAG’s Equity Platform, launched in 2019, is based on a commitment to meaningfully reverse disparities in access and dismantle systemic exclusion.<sup>23</sup>

More specifically, both agencies acknowledge and seek to repair the historic role government and the planning profession have played in systemically denying opportunities to Black people and other communities of color through redlining, urban highways that uprooted neighborhoods, exclusionary zoning, redevelopment, segregation and discrimination. Plan Bay Area 2050 further articulates a regional vision for equity in each of the four element chapters that follow.

#### Terminology

Language is powerful, and the words we use to talk about equity matter. We specifically recognize the needs of Indigenous, Black, Hispanic and Latino people, and we also use the term communities of color, which effectively means non-white people. These communities, of course, are not monoliths, and many within them prefer different terms to describe themselves. Language and norms are shifting rapidly in this area, and we acknowledge that we will not capture everyone’s experiences.<sup>24</sup>

In addition to communities of color, we recognize the specific needs of people with disabilities, who face daily barriers to housing and transportation access and are over-represented in the ranks of the economically disadvantaged and unemployed.

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<sup>23</sup> Read more about the Equity Platform on the MTC website at: <https://mtc.ca.gov/about-mtc/what-mtc/mtc-abag-equity-platform>

<sup>24</sup> AP Stylebook (2021). Race-related coverage. <https://www.apstylebook.com/race-related-coverage>

We recognize that Indigenous, Black, Hispanic and Latino people, other communities of color, and people with disabilities are historically and systemically marginalized, underserved, and excluded. Other groups have also faced similar issues, including women, people with low incomes and seniors.

These terms indicate that society — both public and private institutions — has failed to adequately serve these groups over centuries, and that governments and the private sector must work harder to ensure that they thrive. Importantly, these are not terms that these communities use to describe themselves; rather, they indicate that the systems responsible for the damage must be responsible for the repairs.

### Equity Priority Communities

Throughout this document, the phrase Equity Priority Community refers to a geographic area (census tract) that has a concentration of both residents of color and residents with low incomes, or that has a concentration of residents with low incomes and any three or more of the following six factors: people with limited English proficiency, zero-vehicle households, seniors aged 75 years and over, people with one or more disability, single- parent families, and renters spending more than 50% of their household income on housing. This framework has been used by MTC, ABAG and other Bay Area public agencies since 2001 to focus and assess equity efforts across a number of planning, analysis and funding programs in the region.

Prior to 2021, MTC and ABAG used the term “Communities of Concern” for these areas. Following discussions within agency committees and with residents of these communities, the Commission and Executive Board in May 2021 adopted the term Equity Priority Communities to describe these places going forward. This small but meaningful change communicates that MTC and ABAG intend to prioritize these historically underserved and still underrepresented communities to advance equitable outcomes.

Refer to the Plan Bay Area 2050 Equity Analysis Report for more information on how the strategies of Plan Bay Area 2050 affect residents of these communities.

### Horizon — Expanding the Scope of Resilience

The Horizon initiative, a scenario-planning effort leading up to Plan Bay Area 2050, was the first comprehensive Bay Area planning effort to actively consider future uncertainties, including new

technologies like autonomous vehicles, rising sea levels, earthquakes, economic booms and busts, and political volatility. Findings from the Horizon process shaped the strategies included in Plan Bay Area 2050.

In 2018 and 2019, MTC and ABAG staff developed three streams of work as part of Horizon, all of which were guided by robust public engagement:

1. **Perspective papers:** A series of white papers explored strategies for issues previously outside the scope of Bay Area long-range planning. The five paper topics were autonomous vehicles, transportation demand management, regional growth strategies, the future of jobs and additional San Francisco Bay crossings.
2. **Futures planning:** Three divergent “what-if” scenarios called Futures were central to Horizon. Futures planning identified how a range of forces would potentially shape the Bay Area of 2050 and assessed the performance of strategies that emerged from the perspective papers using simulation models. This work transcended previous planning efforts by including a greater variety of political, technological, economic and environmental challenges, and it informed the strategies included in Plan Bay Area 2050.
3. **Project performance assessment:** Nearly 100 transportation projects were evaluated for cost effectiveness, equity impacts and alignment with the guiding principles of Plan Bay Area 2050 in each of the three divergent Futures. Findings from this analysis informed the formation of strategies for investing in the region’s transit and road systems, resulting in packages of investments that were likely to perform well across a variety of uncertain conditions.

### Resilient Strategies for Uncertain Times — Long-Range Planning Through Covid-19

While no one could have predicted the events of 2020, the years of uncertainty-based analysis completed by MTC and ABAG staff through 2018 and 2019’s Horizon initiative provided important insights into how shocks to the system could influence the effectiveness of various strategies. Horizon represented a new approach to long-range planning, deviating from the standard practice of planning based on a linear prediction of the future by instead analyzing strategies and investments in multiple, divergent visions of the Bay Area in 2050. The result was a set of strategies that had proved resilient to more than 20 sources of uncertainty, including economic recessions, major earthquakes and varying preferences for shared transportation.

As the COVID-19 pandemic began to upend daily life in the Bay Area in March 2020 with the onset of shelter-in-place orders in all nine counties, Horizon's analysis had already laid the foundation for responding to the unprecedented changes to life, work and travel that Bay Area residents would face as a result of the pandemic. As a regional long-range plan developed during an unprecedented global health crisis, Plan Bay Area 2050 was shaped by and responds to COVID-19's new challenges in several ways.

For example, through Horizon's analysis, MTC and ABAG planners assessed potential strategies in a future Bay Area where telecommute rates were similar to an average pre-pandemic weekday, and then again in a future where one out of every three employees worked remotely. Findings from this analysis later informed the creation of Strategy EN7, Expand Commute Trip Reduction Programs at Major Employers, which was added to the plan following the onset of the pandemic. As one of the new and enhanced strategies added to the plan following the release of the Plan Bay Area 2050 Draft Blueprint in February 2020, this strategy sought to address the unique challenges posed by COVID-19. The strategy would require major employers to set a sustainable commute target, while giving employees the flexibility to use any mix of telecommuting, active or shared modes of transportation to meet their employer's goal for non-single-occupancy vehicle commute mode share. This flexibility makes it more likely that the strategy would succeed regardless of future telecommuting rates.

Furthermore, strategies in each of the four elements of the plan were added or adjusted to respond to the pandemic's effects, presenting a holistic approach to a more resilient future. To address higher unemployment levels during the pandemic, Strategy EC1, Implement a Statewide Universal Basic Income, was reintroduced to the plan as a way to attenuate economic precarity. The strategy was first studied in Horizon but not selected for plan inclusion prior to the pandemic, but the unexpected economic turmoil of 2020 made it clear that Plan Bay Area 2050 needed to better address economic volatility. Additionally, revenues in the transportation element were directed toward returning baseline transit service hours to pre-pandemic levels and funding for active transportation infrastructure was increased. In the housing element, strategies were enhanced to support greater affordable housing production, in turn providing longstanding relief to cost burdened families with low incomes.

To best capture the impacts of these strategies and the financial capacity available to implement them, Plan Bay Area 2050 leverages updated planning assumptions that more closely represent

near-term conditions and trends. This includes a revised Final Regional Growth Forecast that assumes slower population and job growth in the near-term — with 200,000 fewer residents and 400,000 fewer jobs by 2025 than initially anticipated in the Draft Regional Growth Forecast. Financial assumptions were also revised in summer 2020 to reflect more limited near-term revenues from sources like tolls and sales taxes. Analytical tools were updated to reflect modestly higher rates of telecommuting through 2050, understanding that some but not all office-based workers will prefer to work remotely even after the pandemic recedes.

Ultimately, Plan Bay Area 2050 responds to the unique challenges of the pandemic with an eye toward the future, enabling the region to build back stronger and more equitably as it recovers from the pandemic. While the future is uncertain, MTC and ABAG remain committed to meeting those uncertainties head-on, with a focus on equity first and foremost.

### **New Approaches to Deepen and Diversify Public Engagement**

Developing a trillion-dollar plan for the Bay Area is no simple task. It is a multi-year process involving several regional agencies, nine counties, 101 towns and cities, elected officials, transit operators, planners, community-based organizations, business organizations, non-profits, and the general public. Despite this complexity, ongoing public engagement informed Plan Bay Area 2050's development at every phase.

Multiple rounds of public input transformed initial ideas into the 35 final strategies that comprise Plan Bay Area 2050. For example, strong public support for electric vehicles directed staff to expand the scope of the strategy for clean vehicle initiatives, resulting in exponentially increased funding for electric vehicle and charger subsidies. The strategy also includes even steeper discounts for low-income residents to ensure that cost is not a barrier to cleaner driving options, reflecting another desire expressed by the public.

### **New Strategies for Representative Engagement**

MTC and ABAG took intentional action to engage with people who were historically underrepresented in the regional planning process, including people with disabilities, youth, those with limited English proficiency and residents of Equity Priority Communities. This engagement effort required developing new avenues of public engagement specific to the plan, alongside discussions of Plan Bay Area 2050 at regular standing committees and in meetings with community-based organizations.

One new approach for Plan Bay Area 2050 was the “pop-up” engagement campaign. In 2019, prior to the onset of COVID-19, MTC and ABAG held in-person “pop-up” engagement sessions at farmers markets, libraries, marathons, parks, malls and other community gathering spaces, intercepting residents for impromptu discussions on regional planning topics. By popping up at dozens of sites throughout the region, staff members were able to interact with a diverse array of residents who had never before contributed to long-range planning. Two-thirds of engagement events and activities were held in or targeted to residents of Equity Priority Communities, and community-based organizations were compensated to convene focus groups for more in-depth discussions.

### Connections at a Safe Distance: Engagement During the Covid-19 Pandemic

When COVID-19 shelter-in-place orders hit the Bay Area in mid-March of 2020, MTC and ABAG had to devise new ways to reach the public while respecting social distancing requirements. Digital workshops and telephone town halls, two new engagement tools for the agencies, emerged as the most effective new methods of presenting in-depth content and receiving quality feedback from the general public. The workshops and telephone town halls were held in Cantonese, English, Mandarin and Spanish.

In summer 2020, MTC and ABAG held 24 public and stakeholder events. Residents were able to provide their feedback via online survey, informal virtual “coffee chats,” email, telephone, a statistically valid telephone poll and an online tribal summit. Over 178,000 comments were received from more than 8,200 residents. Plan Bay Area 2050 “wrapped up” its engagement efforts in summer 2021 following the release of the Draft Plan Bay Area 2050 and the completion of the third round of public and partner engagement.

### Engagement Highlights

- **450+ public and stakeholder events and activities** including in-person and virtual workshops, pop-up events, and board and working group meetings, among others.
- **234,000+ public comments received** during Horizon and Plan Bay Area 2050.
- **23,000+ participants** in the planning process.
- **Two-thirds of events and activities targeted to equity priority communities** and other underserved groups

## 2 | Housing

### A Long-Range Vision for Housing

Housing is among the most basic human rights, the literal foundation where we rest our bodies, nurture our families and live much of our lives. As the largest expense in the average family's budget, the cost of housing can have a huge impact on a family's ability to meet other basic needs. Home locations also influence the job, transportation, healthcare and recreation options available to us, as well as health impacts like exposure to pollution.

The Bay Area has 2.5 million homes and counting throughout its nine counties.<sup>25</sup> To accommodate a growing population expected to reach 10 million by 2050, more housing will need to be built throughout the region. Where that housing is built, and in what form, can impact the greatest challenges facing the Bay Area today, including housing affordability, access to job opportunities and reducing greenhouse gas emissions.

Strategies that enable housing production at all price points, while coordinating with existing and future transit service, can help the region to grow sustainably. Support for affordable housing production, access to opportunities like home ownership, and renter protections can help the region to grow more inclusively. Plan Bay Area 2050 showcases a vision for housing the 10 million people expected to live in the Bay Area in 2050, to be implemented by the region's 101 cities and towns using their deep knowledge of local needs and resources.

### Advancing Equity Through Housing

In Plan Bay Area 2050, an equitable future in housing is a future where every resident enjoys the bedrock of a strong, vibrant community: a safe, stable, accessible, affordable, high-quality home.

Equitable housing in the Bay Area means increased access to opportunity, such as well-resourced schools and well-maintained transit — for all, regardless of race or income. Equity also means more housing choices for families that have historically had few options and accessible homes for people with disabilities and older residents with mobility limitations.

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<sup>25</sup> ABAG and MTC (2021, January). Plan Bay Area 2050: Final Blueprint Growth Pattern. <https://www.planbayarea.org/document/finalblueprintreleasedecember2020growthpatternjan2021updatepdf>

Strategies in Plan Bay Area 2050 facilitate this access to opportunity by allowing for increases in affordable housing in places like High-Resource Areas and historically exclusionary areas. This includes ensuring families have the ability to stay in their homes and maintain the community connections and cultural fabrics of their neighborhoods, without being priced out. Families will also benefit from planned investments in their communities, including enhanced transit service, improved parks and better access to open space.

### Planning for Resilience to Housing Uncertainty

A family's ability to pay for housing can be vulnerable to economic ups and downs, and further uncertainties will shape housing markets in the coming decades. Climate hazards could devastate housing supply. Future preferences in housing may drive demand for either more suburban single-family homes or for apartments in cities close to transit and jobs. Housing costs, undeniably influenced by supply and demand, will also shift based on construction costs and population growth. The strategies included in the housing, environment and economy chapters of Plan Bay Area 2050 are responsive to these unknowns. They build on a robust framework developed in MTC and ABAG's previous long-range plan, Plan Bay Area 2040, which was adopted in 2017. The 2017 plan highlighted how insufficient action on regional housing policy could lead to even more unaffordability for all residents, and it called for bold regional action to tackle this challenge.

Plan Bay Area 2050 promotes stable and affordable housing that all Bay Area residents can rely on in a variety of uncertain future conditions. There is no silver bullet to solve the Bay Area's housing crisis, so the package of housing strategies included in Plan Bay Area 2050 leverages all tools currently at the region's disposal. New partnerships and investments can make affordable, resilient and long-term housing a reality in the face of uncertainty. The eight housing strategies offered in this chapter fall into three themes, working together toward an affordable, inclusive future:

1. **Protect and preserve affordable housing:** To increase housing security, the plan promotes further strengthening of renter protections beyond existing state law. It also seeks to preserve existing affordable housing, including expanding pathways to homeownership.
2. **Spur housing production for residents of all income levels:** The plan spurs housing production by encouraging jurisdictions to allow a greater mix of housing densities and types in areas that can accommodate growth. It also calls on cities and towns to promote adequate affordable housing, and it centers the integration of affordable housing into all

major housing projects. Creative re-envisioning of aging malls and office parks as new, transformed neighborhoods is another approach to help underused space meet current and future community needs.

3. **Create inclusive communities:** By providing targeted mortgage, rental and small business assistance to low- income communities and communities of color, and by accelerating the reuse of public and community-owned land for mixed-income housing, the plan promotes inclusive communities where many different types of people can work, live and interact together.

### Strategies — Protect and Preserve Affordable Housing

To protect current residents, especially those with the most precarious housing situations, Plan Bay Area 2050 proposes to **strengthen renter protections beyond state law**. This strategy builds upon an emergency rent cap established in 2019 by linking annual rent increases for all types of housing regionwide to the rate of inflation.<sup>26</sup> New units would be exempt for a period of 10 years (the timeframe developers and lenders typically use to determine the financial feasibility of a project) to ensure that the strategy does not discourage new housing production. The plan also proposes a regional network of tenant protection services, such as legal assistance and strengthened enforcement of recently adopted and longstanding protections, including stronger enforcement of fair housing laws. Some individual cities and organizations provide emergency legal assistance to tenants and operate rental and mortgage assistance funds, but regional coordination of this patchwork of programs could make the most of available funding and promote consistent standards and best practices.

While long-term actions like building and preserving more affordable housing for the Bay Area are crucial, tenant protection programs are equally critical tools to keep people housed and prevent homelessness. Currently, there is an acute need for enhanced tenant protection programs, as thousands of renters in the Bay Area risk immediate displacement upon the expiration of pandemic- enacted eviction moratoria. Comparable to the benefits that homeowners receive from Proposition 13's limits on property tax increases, renter protections can reduce rental housing volatility and support housing stability while enabling market-rate and affordable housing production to continue.

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<sup>26</sup> The Tenant Protection Act of 2019 caps annual rent increases at 5%, plus inflation, for buildings 15 years and older and bans landlords from evicting tenants who have lived in their apartments for a year or more without "just cause."

Renter protections play an important role in providing stability and preventing displacement, but they are only one part of the solution to a much larger problem. Looking out over the next three decades, robust renter protections — tied together with continued efforts to add secure, affordable housing and prevent its conversion to market-rate housing — provide a holistic effort to address the Bay Area’s housing affordability challenges.

Building upon strengthened renter protections, Plan Bay Area 2050 seeks to **preserve existing affordable housing** to expand housing security and pathways to home ownership for working families. This strategy would protect homes currently affordable to residents with low and moderate incomes (including both unsubsidized housing and homes with expiring deed restrictions) by funding their preservation as deed-restricted affordable housing. This process would involve pursuing tax incentives, targeted subsidies, favorable financing and other methods to transfer ownership of affordable units without deed restrictions to individual tenants, housing cooperatives, or public or non-profit housing organizations, including community land trusts.<sup>27</sup> Unsubsidized and subsidized affordable homes face challenges to their ongoing affordability. The cost of unsubsidized affordable homes can rise with few limitations as prices increase throughout the housing market. Deed restrictions keep subsidized homes affordable, but many are set to expire within the next 30 years.

Preservation aims to break a common displacement pattern: speculative acquisition of an aging building, eviction of the existing residents, renovation of the units, and then renting or selling the property to new residents with higher incomes. This pattern can displace residents with lower incomes while simultaneously reducing the housing stock affordable to them. The threat of displacement has only been heightened in the current environment, as investors become eager to acquire properties, displace tenants and list units at a higher price.

### Strategies — Spur Housing Production for Residents of All Income Levels

The magnitude of the Bay Area’s housing shortfall requires production strategies targeted at different segments of the affordability scale. First, **allowing a greater mix of housing densities and types in Growth Geographies** will make it easier to meet the future housing needs of all Bay Area residents. Under this strategy, new homes of various affordability levels would grow first and

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<sup>27</sup> Affordable homes without deed restrictions are also known as “unsubsidized affordable housing,” and are sometimes referred to as “naturally occurring affordable housing.”

foremost into parts of towns, cities and counties that their local governments identify for growth, generally near existing job centers or frequent transit. Additionally, other areas across the region with frequent, convenient transit would be candidates for new homes, as would well-resourced areas with advantages in school quality, job access and open space. These areas may have historically rejected more housing growth.

Rather than a one-size-fits-all approach, Plan Bay Area 2050 calls for tailoring the design and density of new homes to their local contexts. Larger-scale development would take place on vacant land or declining commercial lots, and smaller-scale housing (such as backyard accessory dwelling units or duplexes) would be built in single-family neighborhoods. To support mixed-income, diverse communities, affordable housing would become easier to build throughout these growth areas. See the Growth Geographies section in the Introduction for more on areas that are targeted for housing growth, along with a map of these areas regionwide.

To sustain the region's wealth of natural resources and open spaces, and provide residents greater access to transportation and jobs, Plan Bay Area 2050's housing strategies work hand-in-hand with its environment, economy and transportation strategies. Housing and environment strategies protect areas outside of urban growth boundaries from new development and bring green space into urban areas. Areas at very high risk of wildfire or sea level rise impacts are protected from additional construction and development. Economic strategies guide job growth toward places that currently have few jobs, while housing strategies encourage housing near job centers, working in tandem to address the geographic imbalance of housing and jobs in the region.

Furthermore, transportation investments that increase transit service or support walking and biking in growth areas are especially important to housing and sustainability goals. Plan Bay Area 2050's strategies to build a next-generation transit network and build a Complete Streets network that meets the needs of pedestrians, bicyclists and drivers, for example, would alleviate traffic congestion and transit crowding regionwide and provide safe, healthy transportation options in growing neighborhoods.

While more housing for people at every income level is needed, it is especially crucial that the Bay Area **build adequate affordable housing** for residents with lower or no incomes, including the unhoused, to meet the needs that market-rate developers are unable to serve. By making existing

funds go further, establishing new funding sources, expanding regional coordination and introducing incentives, this strategy would ensure that the estimated 400,000 new permanently affordable units needed in the region between now and 2050 are built. To protect the communities most vulnerable to harsh market forces, the strategy would also build enough deed-restricted homes to re-house community members experiencing homelessness or living in overcrowded housing. The recently established Bay Area Housing Finance Authority (BAHFA) has the authority to generate revenues to fund these measures, making it a key tool at the region's disposal.

Increasing affordable housing production in High-Resource Areas and in places where affordable housing has historically been prohibited, opposed or discouraged can increase access to opportunities like high-quality homes, schools and transportation for residents with low incomes. Residents currently experiencing displacement due to rising housing costs can also benefit from a concerted effort in affordable housing production. This strategy would prioritize existing or recently displaced community members to ensure that residents have an opportunity to remain within their neighborhoods.

Placing affordable housing production close to transit could provide people with low incomes the opportunity to benefit from transit access while reducing climate emissions from cars on the road, serving both environmental and equity goals. For the many jobs in communities that are not located near transit, however, housing production near jobs can enable shorter commutes to reach climate goals, even if people still have to drive.

In addition to building standalone affordable housing, Plan Bay Area 2050 calls for **integrating affordable housing into all major housing projects** to meet the needs of all residents by 2050. Numerous Bay Area cities have had inclusionary housing policies in effect for years, requiring developers to reserve a set number of homes in new buildings as affordable units. These policies promote the development of mixed-income apartment buildings without requiring a direct government subsidy. Instead, the cost of providing affordable housing is built into the developer's financial projections. Plan Bay Area 2050 envisions a regional approach to inclusionary zoning that is context-specific, with requirements for affordable housing ranging from 10% to 20% of the total number of apartments built. The percentage would be based on factors like the strength of the housing market and proximity to amenities like transit or well-resourced schools. An exemption

for buildings with five units or less would allow homeowners to affordably add backyard cottages and other accessory dwelling units.

The Bay Area's severe housing shortage will require innovative solutions as well as time-tested methods. One novel idea is to **transform aging shopping malls and office parks** into vibrant, mixed-use neighborhoods incorporating open space, shops, services and housing. With department stores and other retail storefronts facing a steady decline since the takeoff of online shopping (accelerated by the COVID-19 pandemic), this strategy turns an economic development challenge into an opportunity. Reimagining large, underutilized commercial spaces as housing can form an important nexus with economic development to transform the quintessential single-use sites of the 20th century into 21st century spaces that meet the needs of the future. This strategy would prioritize projects in Transit-Rich Areas and High-Resource Areas that provide high levels of affordable housing by providing technical assistance and low-interest loans. In addition to offering housing for people with a wide range of income levels, these revitalized sites could also become centers of community and learning. Public institutions such as community colleges and university extensions could complement retail and essential services.

### Strategies — Create Inclusive Communities

An additional suite of strategies works to move the Bay Area toward higher degrees of inclusivity and equity for all residents, complementing the 3 Ps of protection, preservation and production. These strategies recognize the need for targeted approaches that begin to reverse centuries of exclusionary race-based policies that have locked out people of color from homeownership and other housing opportunities.

Plan Bay Area 2050 aims to create inclusive communities by **providing targeted mortgage, rental and small business assistance to residents of Equity Priority Communities**. While a central tenet of Plan Bay Area 2050 is to encourage more housing, particularly affordable housing, in High-Resource Areas, this complementary strategy would be a first step to reverse the long trend of historic disinvestment in low-income communities of color. It would infuse investment into locally owned businesses and provide housing security for local residents. Targeted assistance includes a mix of mortgage down payment and rental assistance, with priority given to previously displaced or existing residents. Additionally, low-interest loans supporting small businesses would allow

community institutions to remain in place while expanding access to the start-up funding historically denied to members of communities of color.

Plan Bay Area 2050 also envisions a Bay Area that **accelerates the reuse of public and community lands for mixed-income housing and essential services**. Thousands of acres of land owned by cities, transit agencies, school districts, counties or other public agencies are currently sitting vacant or underutilized. Since this land is publicly owned, it offers unique strategic opportunities to advance multiple priorities like affordability and economic development. Deed-restricted affordable housing is more feasible on publicly owned lands because the land, a major expense for development, has already been acquired. Public lands are key opportunity sites for increasing the Bay Area’s supply of affordable housing, as well as nesting that housing within complete communities offering services and open space.

This strategy would establish a regional supply of land owned by public agencies, community land trusts and other non-profit landowners and coordinate its reuse as deed-restricted mixed-income affordable housing. Retooling public and community lands would involve matching sites with funding, developers and service providers, and also ensuring that projects benefit communities of color and other historically disinvested communities. Strategies to build adequate affordable housing and to provide targeted mortgage, rental and small business assistance to Equity Priority Communities align with this strategy to reuse public and community lands. This strategy would also deliver a large share of affordable housing near the region’s most frequent transit service. It would accelerate the efforts of transit agencies such as Bay Area Rapid Transit and the Santa Clara Valley Transportation Authority to reuse parking lots and other agency-owned land.

## **Funding and Implementation — Housing Strategies**

Together, Plan Bay Area 2050’s eight housing strategies work toward a more equitable, affordable future for residents with low incomes, and for all residents, by preserving and protecting the affordable housing currently available; stimulating new housing production; and prioritizing inclusive, mixed communities. Through advocacy, legislation, regional initiatives, planning and research over the next 30 years, MTC and ABAG can work with partners to secure a \$468 billion investment into our region’s future housing needs, ensuring that everyone in the Bay Area has a safe, affordable home — especially those historically and systemically marginalized, underserved and excluded.

## Housing Strategies — Cost: \$468 Billion<sup>28</sup>

- **Theme: Protect and Preserve Affordable Housing**
  - **H1. Further strengthen renter protections beyond state law.**  
Building upon recent tenant protection laws, limit annual rent increases to the rate of inflation, while exempting units less than 10 years old.  
Cost: \$2 billion
  - **H2. Preserve existing affordable housing.**  
Acquire homes currently affordable to low- and middle-income residents for preservation as permanently deed-restricted affordable housing.  
Cost: \$237 billion
- **Theme: Spur Housing Production for Residents of All Income Levels**
  - **H3. Allow a greater mix of housing densities and types in Growth Geographies.**  
Allow a variety of housing types at a range of densities to be built in Priority Development Areas, select Transit-Rich Areas and select High-Resource Areas.  
Cost: N/A
  - **H4. Build adequate affordable housing to ensure homes for all.**  
Construct enough deed-restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households.  
Cost: \$219 billion
  - **H5. Integrate affordable housing into all major housing projects.**  
Require a baseline of 10-20% of new market-rate housing developments of five units or more to be affordable to low-income households.  
Cost: N/A
  - **H6. Transform aging malls and office parks into neighborhoods.**  
Permit and promote the reuse of shopping malls and office parks with limited commercial viability as neighborhoods with housing for residents at all income levels.  
Cost: N/A
- **Theme: Create Inclusive Communities**
  - **H7. Provide targeted mortgage, rental and small business assistance to Equity Priority Communities.**  
Provide assistance to low-income communities and communities of color to address

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<sup>28</sup> Numbers may not sum due to rounding.

the legacy of exclusion and predatory lending, while helping to grow locally owned businesses.

Cost: \$10 billion

- **H8. Accelerate reuse of public and community-owned land for mixed-income housing and essential services.**

Help public agencies, community land trusts and other non-profit landowners accelerate the development of mixed-income affordable housing.

Cost: N/A



Photo: Karl Nielsen

## Housing | Supplementary Content

### What Is “Affordable Housing”?

The Bay Area housing market consists of market-rate, rent-regulated and deed-restricted affordable housing.

Over 90% of Bay Area homes are **market-rate**, meaning they are bought, sold or rented on the private real estate market. The price of new and existing market-rate housing is influenced by supply and demand, resulting in unaffordability to most residents with low and moderate incomes. Factors such as high land and construction costs, minimum parking requirements, maximum unit densities and other local policies contribute to higher supply costs. Swiftly increasing demand for housing compounds these supply-side challenges, leading to higher rents and home prices.

Cities or counties may voluntarily adopt **rent regulations** to stabilize rents or protect renters from discrimination. Rent regulations apply to homes in privately owned buildings subject to local government-adopted policies. For example, a city or county may adopt maximum annual rent increases or protections against eviction without a “just cause.”

A small share of homes in the Bay Area today are **deed-restricted affordable housing**. In accordance with state and federal standards, the price of these homes is tied to affordability levels for households with low and moderate incomes, for a period of time defined in the deed of ownership for a property. Homes with deed restrictions lasting 55 years or more are often considered “permanently affordable,” though few mechanisms exist to ensure true permanency. Deed-restricted affordable homes are created through a variety of mechanisms, including the preservation of existing homes occupied by households with low incomes and the production of deed-restricted affordable units by developers.

Both non-profit housing developers and developers that build market-rate housing may develop deed-restricted affordable housing — in some cases, to comply with “inclusionary zoning,” i.e., policies requiring that a share of new housing units be deed-restricted affordable. Generally, deed-restricted homes involve some form of public subsidy or are created to comply with regulatory requirements.

Public funding to support affordable housing production or preservation in the Bay Area has sharply declined since the 1980s, and today the region has among the smallest shares of deed-restricted affordable housing in the industrialized world. There is growing pressure for government to do more to address housing affordability for families with low and moderate incomes, especially in the wake of the COVID-19 pandemic.

Locally, efforts to address the “missing middle” — the shortage of homes affordable to families with moderate incomes — have been gaining momentum. Cities are exploring ways to increase their supply of duplexes, fourplexes and bungalow courts, and school districts in cities like Berkeley and San Francisco are exploring subsidized housing for teachers. Efforts like these suggest that housing cost relief in the region may expand to include more families with moderate incomes.

The commonly used income categories that determine eligibility for deed-restricted affordable housing today (subject to variations in household size and other factors) are outlined below. Eligibility is based on **Area Median Income (AMI)**, the midpoint of a region’s income distribution, to account for regional differences in cost of living.

- **Household Income Category: Extremely Low Income**
  - Income Threshold: Up to 30% of AMI
  - Example Jobs: Farm worker, barista, cashier, housekeeper
- **Household Income Category: Very Low Income**
  - Income Threshold: 30% to 50% of AMI
  - Example Jobs: Waiter, delivery driver, security guard, nursing aide
- **Household Income Category: Low Income**
  - Income Threshold: 50% to 80% of AMI
  - Example Jobs: Retail manager, emergency medical technician
- **Household Income Category: Moderate Income**
  - Income Threshold: 80% to 120% of AMI
  - Example Jobs: Construction site manager, data analyst, accountant
- **Household Income Category: Above-Moderate Income**

- Income Threshold: Above 120% of AMI
- Example Jobs: Doctor, software engineer, firefighter, CEO

### The Region's Role in Solving the Housing Crisis — BAHFA And Beyond

One of the most important emerging tools available to implement the plan's housing strategies is the Bay Area Housing Finance Authority (BAHFA). Established in 2019 through Assembly Bill 1487 (D. Chiu, Statutes of 2019), BAHFA has the potential to raise hundreds of millions of dollars annually through ballot measures and other revenue mechanisms for the entirety of the nine-county Bay Area. The new regional and local funding needed to ensure that every low-income household has access to permanently affordable housing is estimated in the plan at \$3.7 billion annually, and BAHFA equips the region with powerful financing potential to address systemic challenges.

While BAHFA represents a new opportunity to dramatically expand the Bay Area's capacity to coordinate planning, funding and delivery of affordable housing across the region, it also builds upon MTC's and ABAG's past strategic efforts to address the region's housing crisis. Other long-term approaches include:

**Planning Grants and Technical Assistance:** Through the Priority Development Area (PDA) Planning Program and the Regional Housing Technical Assistance Program, MTC and ABAG support local jurisdictions in completing plans that advance housing production and complete communities. Over its more than 10-year history, the PDA program has allowed cities to plan for more than 100,000 new housing units within walking distance of convenient transit. Established in 2020 with one-time state funding from a Regional Early Action Planning grant, the Regional Housing Technical Assistance Program will provide cities with tailored technical assistance to complete their upcoming Housing Elements.

**Investment in Affordable Housing:** Although neither ABAG nor MTC has historically played a major role in affordable housing, both agencies invest strategically in production and preservation efforts. Since 1978, ABAG has provided \$8 billion in low-cost capital to non-profits and local governments, much of it for affordable housing, through the Advancing California Finance Authority program. Through the \$50 million Transit-Oriented Affordable Housing program, MTC partners with community development financial institutions to provide developers access to flexible loans to purchase property near transit for affordable housing. MTC also invests in the

nearly \$49 million Bay Area Preservation Pilot, which finances the acquisition and preservation of multifamily buildings occupied by low-income households, ensuring their long-term affordability.

**Legislative Advocacy:** As part of larger advocacy efforts, MTC and ABAG advocate for legislation that addresses regional housing needs, with a focus on tenant protection, affordable housing production and affordable housing preservation. In 2019, the agencies not only supported legislation that established BAHFA, but also helped to pass the state’s first tenant protection bill, Assembly Bill 1482 (D. Chiu, Statutes of 2019), which capped annual rent increases at 5% plus inflation. The agencies also recently supported Senate Bill 10 (S. Wiener, Statutes of 2021) to make it easier for cities to zone for smaller, lower-cost housing developments, as well as bills intended to help homeowners build accessory dwelling units and make surplus public land more accessible to affordable housing developers. Housing bills at the state level have been proliferating in recent years as lawmakers recognize the extent of the state’s housing crisis. MTC and ABAG will continue to strategically pursue increased affordable housing funding and support policies and legislation at the state and federal levels that help expedite new housing for the Bay Area.

### Local Control in Housing Policy

Generally, federal law delegates land use control to states. In the late 19th century, California further delegated authority over land use to local governments as part of the “home rule” movement.<sup>29</sup> While Plan Bay Area 2050 proposes strategies to help the region accommodate a growing population more equitably, it does not mandate any changes to local zoning rules, general plans or processes for reviewing projects; nor does the plan create an enforceable direct or indirect cap on development locations or targets in the region. The Bay Area’s cities, towns and counties maintain control of all decisions to adopt plans and to permit or deny development projects. Plan Bay Area 2050 helps guide, but does not directly establish, new state-mandated Regional Housing Needs Allocation (RHNA) numbers for any jurisdiction. Read more about the separate RHNA process later in this chapter.

Zoning has been a contentious contributor to the housing crisis and to racial inequity. Plan Bay Area 2050 views zoning reforms as one tool to shift the region’s housing landscape toward inclusivity by allowing for more housing of different types to be built. Zoning must always be

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<sup>29</sup> Article XI, Sections 4 and 5 of the California Constitution

approached from a context-specific lens that identifies opportunity sites for future growth, as well as areas where additional growth is inappropriate. Currently, two similarly located parcels can be zoned for dramatically different uses depending upon the communities in which they are located, with one permitting a wide spectrum of housing types, and another allowing only single-family homes on larger lots.

Plan Bay Area 2050's Growth Geographies identify a mix of locally identified Priority Development Areas, areas near high-quality transit and areas of high opportunity as communities poised to accommodate additional growth. Meanwhile, areas outside of the existing urban footprint or in areas that are at a very high risk of wildfire are identified as areas where additional construction should be deprioritized.

### Regional Housing Needs Allocation: Planning for Near-Term Housing Demand

Every eight years, the California Department of Housing and Community Development (HCD) engages with each region in the state to determine how housing production will sufficiently meet the housing needs of people at all income levels in a process called the Regional Housing Needs Allocation (RHNA).<sup>30</sup> For the period from 2023 to 2031, HCD has identified a need of more than 441,000 housing units in the Bay Area — more than double the amount from the last eight-year cycle (187,000 units between 2015 and 2023).

In the Bay Area, ABAG must allocate each city and county a share of this forecasted number of housing units needed to increase the housing supply and mix of housing types for all jurisdictions in ways that also promote equity, strengthen the economy, improve connections between jobs and housing, and protect the environment. A new requirement for this RHNA period is that the allocations must **affirmatively further fair housing**, which means overcoming patterns of segregation and fostering inclusive communities that provide access to opportunity for all people.

After receiving their allocated housing units for the eight-year period from ABAG, each jurisdiction must update the Housing Element of its general plan to show where new housing could be built — a challenging prospect given the higher number of new homes needed. In addition to the overall number of homes assigned to each jurisdiction, the RHNA process dictates that housing must be planned for every affordability level. Historically, permitting for homes

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<sup>30</sup> To learn more about RHNA, visit the ABAG RHNA webpage at: <https://abag.ca.gov/our-work/housing/rhna-regional-housing-needs-allocation>

affordable to people with lower and moderate incomes has not kept pace with the Bay Area's RHNA targets. Housing Elements for this RHNA period must also demonstrate how they affirmatively further fair housing.

RHNA and Plan Bay Area 2050 discuss planning for housing on two separate time horizons: RHNA focuses on the shorter-term with its eight-year cycle, while Plan Bay Area 2050 presents a longer-term vision for the next 30 years. The two efforts, however, are coordinated, with RHNA's near-term focus setting the stage for early implementation of Plan Bay Area 2050's envisioned growth pattern.

To assist cities and counties with planning for new housing this cycle, HCD provided new state funding of \$250 million in the 2019-20 State Budget; \$25 million of these funds went directly to Bay Area jurisdictions, with an additional \$24 million allocated to ABAG. ABAG is deploying its funds through subgrants to all 109 jurisdictions and the recently launched Regional Housing Technical Assistance (RHTA) program. RHTA includes several forms of technical assistance, such as providing jurisdiction-specific data packets that include charts and graphs that local staff can add directly into their Housing Elements and the Housing Element Site Selection tool, an interactive map that identifies opportunity sites for rezoning.<sup>31</sup> Innovative ideas for engaging the community on housing planning, a regional consulting bench, and resources to support fair housing and resilience to hazards are also supported by these state funds.

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<sup>31</sup> To learn more about RHTA, visit the ABAG RHTA webpage at: <https://abag.ca.gov/our-work/housing/regional-housing-technical-assistance>

## 3 | Economy

### A Long-Range Vision for the Economy

Since the 1800s, booms and busts have characterized the Bay Area’s economy. Through the 19th century Gold Rush, the “dot-com” bubble of the 1990s, record economic growth into the 21st century, and the latest recession in the wake of the COVID-19 pandemic, a spirit of innovation and perseverance has defined the region through both good times and downturns.

The Bay Area has long prided itself on a diverse range of industries, including its internationally renowned technology sector and world-famous wine industry, and a well-educated labor force. The region’s economy guides the magnitude and location of job growth, which in turn influences commute flows and workforce development. Economic trends can either provide pathways to upward economic mobility or deepen wage inequality.

Over the next three decades, continuing cycles of economic growth and decline are sure to be a reality. Policies and investments that strengthen existing social safety nets and train the next generation of Bay Area workers and entrepreneurs can help families weather periods of economic recession. In times of economic booms, policies that balance out the locations of new housing and jobs can lessen the potential negative side effects of a vibrant economy, such as congested freeways and crowded trains. With the right partnerships and policies, the economy can be a force for equity and societal growth.

### Advancing Equity Through the Economy

With a gross domestic product of over \$900 billion, the Bay Area economy has ample opportunity to better serve historically marginalized communities as it recovers from the impacts of COVID-19.<sup>32</sup> In an equitable economy, all residents would be secure in their finances, even under deeply uncertain and shifting conditions.

Plan Bay Area 2050’s universal basic income strategy would help Bay Area residents with low or no incomes and people with disabilities — who are over-represented in the ranks of the economically disadvantaged and unemployed — to meet their basic needs. Job training programs and guaranteed high-speed internet access would prepare residents for the future economic

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<sup>32</sup> MTC, ABAG and Partners (2019). Vital Signs: Economic Output. <https://www.vitalsigns.mtc.ca.gov/economic-output>

landscape. The Bay Area’s economy would return to its pre-pandemic vigor, but future economic gains would be shared more evenly across the region’s population. Small local businesses would sustain vibrant neighborhoods where residents could reinvest their money in local goods and services.

With equity in sight, government support would help people who have been historically excluded from wealth-generating opportunities — like homeownership — to achieve these goals.

### Planning for Resilience to Economic Uncertainty

The future of the Bay Area’s economy will be shaped in large part by forces outside of the region’s control. Decisions made by national and state leaders will ripple through regional and local levels, affecting everything from interest and tax rates, minimum wages, and trade policies to transit funding and housing policy. Automation may render large swaths of jobs obsolete in the retail, service and manufacturing sectors while the rise of online platforms continues to shape those job markets, escalating the upward trend of employment in warehouses and from part-time to full-time gig work. Economic recovery from the pandemic may be swift or slow, robust or weak. Income inequality may worsen over the next three decades, or society may find more equitable solutions. Leading economists and world leaders who grapple with such questions often disagree, further underscoring the need for policy and investment designed to withstand these uncertainties.

To remain resilient in the face of these unpredictable forces, Plan Bay Area 2050 includes strategies that work together to address a variety of economic situations. The strategies outlined in this chapter fall into two overall themes to improve economic resilience:

1. **Improve economic mobility:** The plan aims to reduce poverty and bolster the middle class by investing in a suite of job training programs that prepare Bay Area residents for the future economic landscape. Relatedly, the plan strategizes to ensure that every resident has high-speed internet to take advantage of all current job and education opportunities. A universal basic income further improves economic security for residents most in need.
2. **Shift the location of jobs:** The plan supports a more balanced distribution of housing and jobs throughout the Bay Area, resulting in communities where people can live near where they work (if they choose), by promoting more dense growth near transit and incentivizing employers to locate jobs near homes and transit. Finally, the plan protects and improves key

industrial lands that are important for both middle-wage jobs and services such as manufacturing across the Bay Area.

### Strategies — Improve Economic Mobility

As the types of jobs available to Bay Area residents continue to shift, fewer and fewer middle-wage options are on the horizon looking out to 2050. This trend is typified by the manufacturing sector, which has seen employment numbers fall as automation enables more output with fewer workers. The outsourcing of work to states and countries with lower wages further drives the disappearance of middle-wage jobs in the region. Concurrently, the Bay Area's cost of living has risen significantly, buoyed by a self-reinforcing cycle of higher-wage job growth and rising housing costs. A stronger safety net, coupled with a concerted effort to open up more pathways to middle-wage jobs, is critical to ensuring that no one is priced out of the Bay Area.

Improving economic mobility is a complex undertaking beyond MTC's and ABAG's jurisdictional spheres that will require a coordinated, multi-pronged approach, as well as strong partnerships. Employers, educational institutions and job-training providers have a large role to play in reaching for economic equity, as do agencies at all levels of government. Private, public and community-based leaders will need to align policies, strategies and tactics to create a sustainable and thriving economic ecosystem that focuses explicitly on equity.

In the face of an ever-evolving labor market and increasing rates of job automation, a flexible workforce with in-demand skills is critical to ensuring continued economic growth and shared prosperity. While government has historically played a limited role in shaping the future labor market, a suite of approaches to **expand job training and incubator programs** could help to align the region's workforce with future needs and launch a next generation of entrepreneurs. Business incubators are organizations that offer leadership training, support, technical assistance and physical workspace for entrepreneurs at all career stages, and they may become central hubs for workforce development in the coming decades.

Funding assistance programs for establishing new businesses, as well as job training programs in partnership with community colleges, could make a major difference in preparing workers for the jobs of tomorrow. Locating these programs primarily in historically disinvested communities and

in Priority Production Areas that are identified by cities and towns for future jobs growth can ensure that the process is done equitably and in sync with local economic development plans.<sup>33</sup>

Paired with training programs to make sure workers and entrepreneurs have the right skills to match market demand, a strategy to **invest in high-speed internet in underserved, low-income communities** provides the necessary infrastructure to connect all Bay Area residents to remote work, education or e-commerce. Public health restrictions during the COVID-19 pandemic spurred a broad new swath of workers to telecommute in 2020, demonstrating that working from home, while certainly bringing its own challenges, can also be more effective and desirable than it may have seemed. From 2021 onward, telecommuting may become more commonplace than it was prior to the pandemic, though the full extent of the pandemic's effects on the workplace will likely take years to unfold. The recent shifts from in-person to online activities could become a long-term cultural shift as well, requiring everyone to have internet access for educational opportunities, healthcare appointments and more.

For most, working from home or engaging in other remote activities requires access to high-speed internet capable of video conferencing and transferring large amounts of data. However, many communities, both rural and urban, do not have the infrastructure needed to support such connectivity, and they could be left behind in a future economy that revolves around long-term remote connections. Plan Bay Area 2050's strategy to expand internet access envisions direct subsidies for families with low incomes to provide high-quality connectivity at a low cost. Looking out to 2050, infrastructure upgrades to extend high-speed internet cables along roads and other publicly owned rights-of-way could provide more Bay Area families with access to this increasingly important resource.

Building a truly inclusive economy will require bold action to ensure no one is left behind, embodied by a proposal to work with partners across the state to **implement a statewide universal basic income**. While job training programs and high-speed internet access are targeted strategies to improve economic mobility, a more transformational approach could guarantee a baseline level of income for all households in California. Because the Bay Area is part of the larger Northern California megaregion — and due to the significant amount of new funding required to advance a universal basic income program — this strategy would be deployed on a broader

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<sup>33</sup> Learn more about these areas in the Growth Geographies section in the Introduction.

geographic scale than other strategies, in partnership with neighboring regions and key state partners.

Stimulus checks that were sent out as part of the Coronavirus Aid, Relief, and Economic Security Act in response to COVID-19 were a recent example of universal basic income in action, providing much-needed funds to help struggling families pay for essentials like food and rent. Plan Bay Area 2050 builds upon this approach with a vision of regular monthly payments to all residents statewide to supplement wages and existing social safety nets. These payments would average \$500 per month but vary based on household size — a baseline income set low enough to not disincentivize work but instead supplement income and allow it to circulate through communities and spur local economic development. All households across the state would receive the universal basic income regardless of their resources, but tax increases on more affluent households would support the program, effectively canceling out any additional benefit for families with higher incomes.

### Strategies — Shift the Location of Jobs

In addition to improving economic mobility for all residents — particularly our most underserved — the Bay Area must also address its **jobs-to-housing imbalance**. This term refers to the current distribution of where jobs and housing are located in the Bay Area. San Francisco and Silicon Valley have many more jobs than homes, and many communities in the East Bay see residents commuting across the bay each day to reach their jobs. This trend is decades in the making, a result of land use policies focused on local needs and a transportation system that has been able to grow just enough to meet increased peak- period demand. It is also a product of the power of economic agglomeration, where like industries locate together (for example, information sector jobs clustered in the West Bay and South Bay).

This pattern of development cannot be sustained forever. If the status quo persists, commutes will continue to get longer, and the region risks losing jobs to other metro areas outside of the Bay Area with lower costs of living and more convenient commutes. In tandem with strategies to allow more housing near jobs (discussed more in the housing chapter), strategies to incentivize job creation in communities with limited employment opportunities can build toward a more sustainable and equitable land use pattern for the decades to come.

Negative impacts of the Bay Area's jobs-to-housing imbalance go beyond the traffic congestion and transit crowding typical of a pre-pandemic workday. Extended commute times negatively affect quality of life and the health of commuters, and they present a challenge to employers looking to attract and retain skilled workers. Balancing home and work centers to create live-work communities could alleviate these concerns, more equitably distribute business tax revenue between local jurisdictions, and stimulate economic activity across the region. Solving the problem requires a mix of synchronous housing and economic solutions that shift housing to areas with high concentrations of jobs and shift jobs to areas with high concentrations of housing. Plan Bay Area 2050's housing strategies encourage more housing across the board, particularly in areas of opportunity where access to jobs is high, while the following economic strategies seek to shift the location of jobs by using a mix of local land use changes and employer incentives.

First, local jurisdictions can support a more balanced distribution of job growth by **allowing greater commercial densities in Growth Geographies**. Growth Geographies, like Priority Development Areas and Transit-Rich Areas, are prime locations for additional commercial construction (for example, stores, offices or light-industrial spaces), given their location near areas of increased housing production or high-frequency transit. Tailoring locally determined land use regulations to allow for more job growth in strategic Growth Geographies would encourage employers to create jobs in places where employees can walk, bike or take transit to work easily. Locating jobs near transit is crucial for reducing greenhouse gas emissions and slowing climate change. Placing housing and jobs together will also allow for more complete, healthy communities — walkable places where housing, shopping, services and recreational spaces are intermingled.

Land use that allows for more commercial development alone may not be enough to attract employers to build in areas near housing or transit. A complementary strategy to **provide incentives to employers to shift jobs to housing-rich areas that are well served by transit** could further improve the balance of jobs and housing. This strategy would support the construction of offices and other workplaces in the East Bay; namely, along BART lines in suburban Contra Costa and Alameda counties, and adjacent to Capitol Corridor stations in Fairfield and Vacaville. Transit-rich North Bay communities like San Rafael and Santa Rosa are also poised to accommodate more workplaces. In turn, these new employment centers would draw in workers from the surrounding areas, shortening the distance that workers have to drive or enabling commutes by transit, walking or biking. For employees coming from elsewhere in the Bay Area, location near regional

transit routes would encourage workers to commute sustainably, reducing vehicle miles traveled and contributing to climate goals.

Finally, a strategy to **retain key industrial lands by establishing Priority Production Areas** would both support a more even jobs-to-housing balance regionwide and protect industrial land from the risk of conversion to residential uses. Priority Production Areas (PPAs) are locally identified places that are prime opportunity sites for job growth in middle-wage sectors like manufacturing or logistics. While some PPAs are located in jobs-rich places like San Francisco and the South Bay, the majority are concentrated in the North Bay and East Bay, where housing is plentiful but job opportunities are more limited. PPAs provide opportunity sites to grow jobs where people already live, benefitting the region's overall jobs-to-housing balance, particularly for workers in middle-wage industries.

Declining employment in these industries contributes to a self-reinforcing trend that further threatens industrial lands. As more and more job losses lead to lower demand for industrial land, employment in industrial sectors contracts even more. PPA sites are important for middle-wage job creation, and they also play a critical role in the everyday operations of the region, providing light manufacturing, prototyping, distribution and logistical services that power the information and professional service sectors. Losing functions like these to sites in the Central Valley and beyond would be a major loss to the Bay Area's innovation industry and the vibrancy of its economy.

In addition to local land use policies that would ensure industrial uses in Priority Production Areas, targeted infrastructure improvements like building upgrades and high-speed internet would further support individual businesses and make it possible for them to stay in the Bay Area despite the potentially lower costs of competing regions. Combined with upgrades to commercial buildings for energy-efficiency, described in detail in the environment chapter, this strategy highlights the potential for co-benefits between economic development and environmental sustainability.

## **Funding and Implementation — Economic Strategies**

Together, Plan Bay Area 2050's six economic strategies advance the Bay Area toward a more equitable future by improving economic mobility where most needed and by shifting the location

of jobs throughout the region. Through advocacy, legislation, initiatives, planning and research over the next 30 years, MTC and ABAG can work with partners to secure a \$234 billion investment in the Bay Area's future economy, ensuring that everyone — and especially those historically and systemically marginalized, underserved and excluded — can afford to both live and work where they desire.

### Economic Strategies — Cost: \$234 Billion<sup>34</sup>

- ***Theme: Improve Economic Mobility***

- **EC1. Implement a statewide universal basic income.**

Provide an average \$500 per month payment to all Bay Area households to improve family stability, promote economic mobility and increase consumer spending.

Cost: \$205 billion

- **EC2. Expand job training and incubator programs.**

Fund assistance programs for establishing new businesses, as well as job training programs, primarily in historically disinvested communities.

Cost: \$5 billion

- **EC3. Invest in high-speed internet in underserved low-income communities.**

Provide direct subsidies and construct public infrastructure to ensure all communities have affordable access to high-speed internet.

Cost: \$10 billion

- ***Theme: Shift the Location of Jobs***

- **EC4. Allow greater commercial densities in Growth Geographies.**

Allow greater densities for new commercial development in select Priority Development Areas and Transit-Rich Areas to encourage more jobs to locate near public transit.

Cost: N/A

- **EC5. Provide incentives to employers to shift jobs to housing-rich areas well served by transit.**

Provide subsidies to encourage employers to relocate offices to housing-rich areas near regional rail stations.

Cost: \$10 billion

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<sup>34</sup> Numbers may not sum due to rounding.

- **EC6. Retain and invest in key industrial lands.**

Implement local land use policies to protect key industrial lands, identified as Priority Production Areas, while funding key infrastructure improvements in these areas.

Cost: \$4 billion



Photo: Karl Nielsen

## Economy | Supplementary Content

### Horizon Initiative and the Future of Jobs

As part of the planning process leading up to Plan Bay Area 2050, MTC and ABAG explored the changing nature of jobs and other economic issues, as well as potential solutions, through the Horizon initiative. *The Future of Jobs Perspective Paper* looked at the Bay Area economy from four different lenses: automation and the risks it could entail; organizational changes, including the gig economy and the decline of salaried jobs; longstanding increases in regional inequality as top incomes rise; and the location and type of jobs that are growing in the region.<sup>35</sup> Shaped by robust public engagement, the most promising strategies identified in the paper were carried forward into Plan Bay Area 2050, ranging from job retraining programs to the integration of a universal basic income.

### Advancing Access to High-Speed Internet

High-speed internet service is no longer a luxury. As a utility approaching the importance of water or electricity in present-day California, internet connectivity is essential to both daily life and a vision of a more equitable future. A plan to provide affordable, reliable, high-speed internet to all Bay Area residents is one step in overcoming historic barriers to opportunity. More than 1.5 million California households do not have access to high-speed internet, and most of these households are in poor or historically disinvested communities or in rural areas.<sup>36</sup>

Even before COVID-19, the need for a coordinated approach to ensure affordable high-speed internet access to all Bay Area residents and businesses was apparent, but the pandemic made the gaps all the more glaring. Whether you are a student trying to learn remotely, a patient that relies on telehealth services, an employee collaborating with a remote team or a job-seeker jumpstarting a new career, reliable internet connectivity is essential.

Recent state and federal actions have opened up new funding streams to advance more equitable high-speed internet access, including a \$6 billion investment in the 2021 California state budget to

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<sup>35</sup> ABAG and MTC. (2019, May). *The Future of Jobs Perspective Paper*. <https://mtc.ca.gov/tools-and-resources/digital-library/future-jobs-perspective-paper>

<sup>36</sup> California Emerging Technology Fund. (2021). *Statewide Surveys: California Broadband Adoption by the Numbers*. <https://www.cetfund.org/action-and-results/statewide-surveys/>

improve infrastructure and access in underserved communities. These new funds, combined with existing programs in Oakland, San José and Marin County, hold the promise of extending internet connectivity to tens of thousands of Bay Area residents in the near term.

### Universal Basic Income Case Studies

Universal Basic Income (UBI) is an often-touted policy response to address growing income inequality and poverty by providing a guaranteed minimum income to all people in a certain area. At the national level, a UBI bill passed the House of Representatives twice in the 1970s, but it did not go further due to senators' concerns about expanding welfare.

At the state level, in July 2021, the Legislature passed a \$35 million guaranteed income program (differing from a UBI program in that only select groups, not all residents, will receive the funds) that will go toward monthly payments to pregnant people and foster youth phasing out of the system. It is the first state-funded guaranteed income program in the country.<sup>37</sup>

Despite promising early results, UBI remains in the testing stage, and the many pilots underway may provide more clarity on the questions surrounding it. One California UBI test that may offer valuable lessons to the Bay Area is the Stockton Economic Empowerment Demonstration project. Between February 2019 and February 2021, a group of 130 Stockton residents, selected at random and making below the city's median income, received \$500 a month. The median household income in Stockton, which borders the Bay Area, is \$46,033 — 25% below the state's and nearly 50% below the Bay Area's median household income. Results of the study indicated that full-time employment rose among those who received the basic income and that their financial, physical and emotional health improved.<sup>38</sup> Several Bay Area jurisdictions are considering or have launched UBI test programs as well, including Oakland, San Francisco, South San Francisco, Marin County and Santa Clara County.

Recognizing that larger and much longer studies are needed before any conclusions about UBI in America can be made, Plan Bay Area 2050 proposes to implement a statewide UBI that provides an average payment of \$500 a month to all households. Although not enough to live on, this baseline income amount may help with everyday emergencies, reduce anxiety and health

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<sup>37</sup> Beam, A. (2021, July 15). California approves 1st state-funded guaranteed income plan. AP News.

<https://apnews.com/article/government-and-politics-california-4fea151e0425f8188337e44a02ab8177>

<sup>38</sup> Treisman, R. (2021, March 4). California Program Giving \$500 No-Strings-Attached Stipends Pays Off, Study Finds. NPR.

<https://www.npr.org/2021/03/04/973653719/california-program-giving-500-no-strings-attached-stipends-pays-off-study-finds>

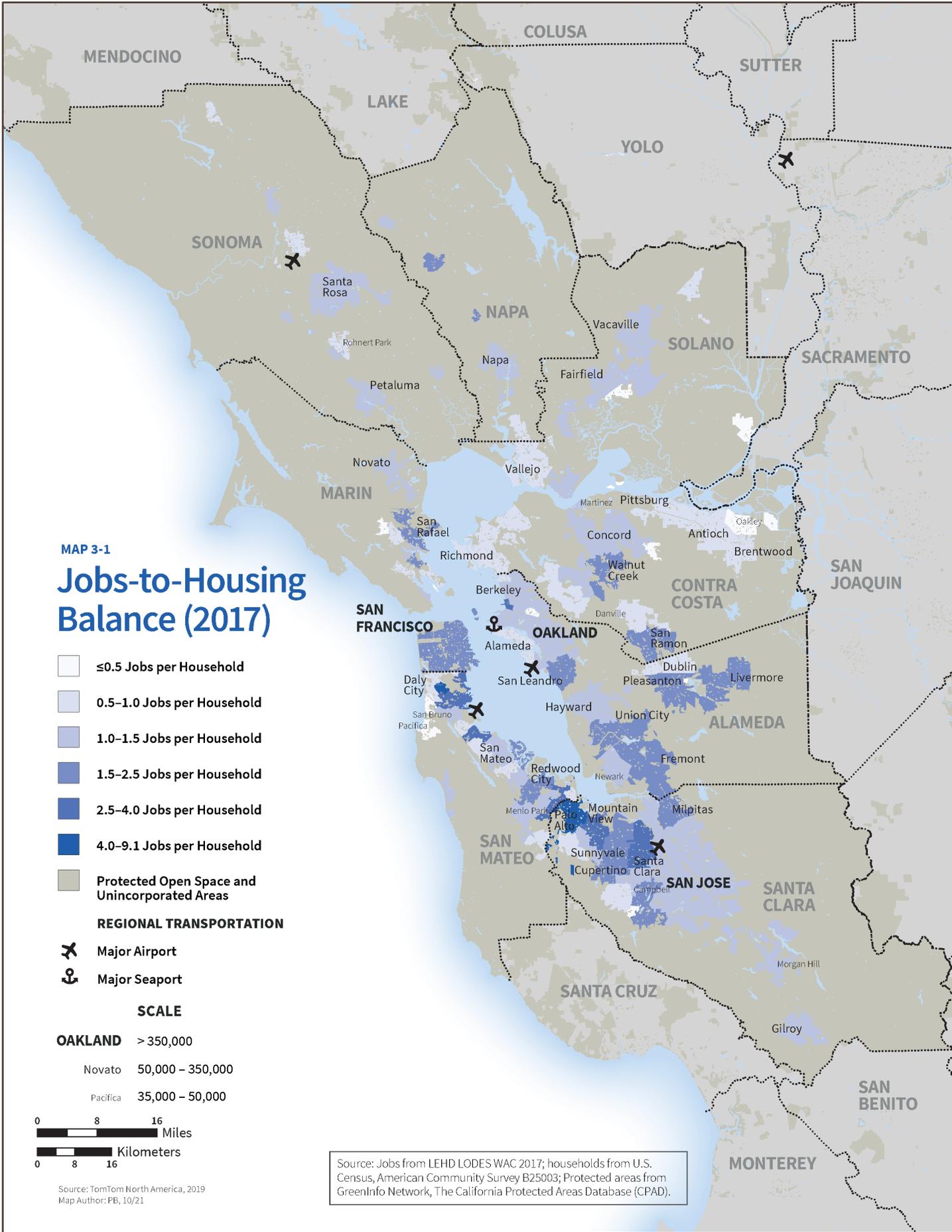
concerns, and improve family stability and access to opportunity. Plan Bay Area 2050's UBI strategy is also an opportunity to help test, refine and improve similar policies worldwide.

### Jobs and Housing — A Bay Area Balancing Act

Why do so many Bay Area communities have far more jobs than homes, while others have more homes than jobs? In some places, zoning restricts development exclusively to commercial buildings or single-family homes, and other policies also can limit the amount of housing or commercial space that can be built. Another factor is the tendency of similar types of businesses to cluster near one another — most notably in Silicon Valley, where many information and technology firms have co-located since the 1970s. Proximity to transit or to highways also plays a role, as businesses and workers choose locations that will enable quicker travel.

Compounded over many decades, these forces have resulted in a significant spatial imbalance of jobs and housing throughout the Bay Area. Generally, there is more housing than jobs in Alameda, Contra Costa, Solano and Sonoma counties, while there are more jobs than housing in Marin, Napa, San Francisco, San Mateo and Santa Clara counties. This creates a number of associated problems, such as traffic congestion and transit overcrowding in major commute corridors. The imbalance also reinforces other challenges, such as the displacement of longtime residents from neighborhoods where home values and rents have spiked.

Several Plan Bay Area 2050 strategies promote a more balanced distribution of jobs and housing across the region. Economic strategies encourage greater commercial densities in targeted growth areas and incentives for employers to locate in housing-rich communities with frequent transit service. Housing strategies encourage both market-rate and affordable housing development in High-Resource Areas and Transit-Rich Areas near major employment centers. Together, these strategies promote a healthier balance of jobs and housing throughout the Bay Area's nine counties.



MAP 3-1

# Jobs-to-Housing Balance (2017)

- ≤0.5 Jobs per Household
- 0.5–1.0 Jobs per Household
- 1.0–1.5 Jobs per Household
- 1.5–2.5 Jobs per Household
- 2.5–4.0 Jobs per Household
- 4.0–9.1 Jobs per Household
- Protected Open Space and Unincorporated Areas

**REGIONAL TRANSPORTATION**

- Major Airport
- Major Seaport

**SCALE**

- OAKLAND** > 350,000
- Novato 50,000 – 350,000
- Pacifica 35,000 – 50,000



Source: TomTom North America, 2019  
Map Author: PB, 10/21

Source: Jobs from LEHD LODS WAC 2017; households from U.S. Census, American Community Survey B25003; Protected areas from GreenInfo Network, The California Protected Areas Database (CPAD).

## The Northern California Megaregion and Goods Movement

The Northern California megaregion includes the nine-county Bay Area, the six-county Sacramento region, San Joaquin County and the three-county Monterey Bay region. The industry sectors that comprise the goods movement sector across this 19-county area support nearly one-third of related industries in the Bay Area. Industries in the goods movement sector are a key component of the region's economic strategy for increasing access to living-wage jobs that have low educational barriers to entry. The goods movement sector is growing, with today's nearly \$1 trillion in Northern California freight flows projected to double by 2040.<sup>39</sup>

Approximately 69% of freight-dependent goods movement sector employment in the Northern California megaregion is concentrated within the Bay Area. Dominant freight-dependent goods movement industries include agriculture, construction, manufacturing, wholesale trade and retail trade. Together, these industries employ roughly 1.5 million people in the megaregion, 28% of whom work in manufacturing.<sup>40</sup>

The megaregion serves as a domestic trade gateway to other regions in California and the rest of the U.S., and it is dependent on goods movement to provide consumer products, food and parcels. Although California has the fifth largest global economy, continued growth in global trade and the megaregion's population have stressed the existing transportation system. Plan Bay Area 2050's transportation strategies help to address these challenges.

The exponential growth in e-commerce has also transformed industrial land and the real estate market for warehouse and distribution centers. Strategic investments in freight infrastructure would support supply-chain efficiencies, allowing the megaregion to maintain its economic competitiveness, and better economic coordination would grow middle-wage jobs. Without sufficient investment in industrial lands, skills development programs and training opportunities, the Bay Area could miss out on opportunities to grow more middle-wage jobs for current and future residents.

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<sup>39</sup> MTC. (2019, June). Northern California Megaregion Goods Movement Study. <https://mtc.ca.gov/tools-and-resources/digital-library/northern-california-megaregion-goods-movement-study-executive>

<sup>40</sup> Ibid.



Photo: Karl Nielsen

## 4 | Transportation

### A Long-Range Vision for Transportation

The network of roads and transit routes crisscrossing the Bay Area makes it possible for residents and visitors to take millions of trips every day, whether commuting to work or school, shopping at local businesses, or meeting up with family and friends.

Even more importantly, the transportation choices available to a person or a family either expand or limit their options for stable housing and employment, quality healthcare and recreation. There is also a critical nexus between transportation and climate change, with the transportation sector currently producing over 40% of California’s greenhouse gas (GHG) emissions.<sup>41</sup>

Looking out to 2050, transportation investments and policies will be central components of the region’s future vitality, building toward a well-connected, safe and multimodal regional transportation network. Compared to today, the transportation system will carry millions more passengers on its trains, ferries, buses and roads, but more people may telecommute as well. Strategies across the areas of transportation, housing, the economy and the environment will need to work in unison to reduce GHG emissions and meet California’s ambitious climate goals while also increasing access to housing and job opportunities for all Bay Area residents.

### Advancing Equity Through Transportation

An equitable transportation system is one that is safe, accessible, affordable and reliable in meeting the needs of all residents, but especially those with the fewest options. Safety ensures that no one is discouraged from making a trip out of fear for their well-being, whether on transit, in a personal vehicle or simply walking. Further accessibility enhancements on sidewalks, streets and transit are critical to enable the region’s growing share of older residents, as well as people with disabilities, to move around the Bay Area as they choose.

Equity also means thoughtful consideration of who benefits from a transportation investment when prioritizing projects. In the short term, Plan Bay Area 2050 encourages investment in projects used primarily by people with lower incomes, like more frequent local bus service. An equitable transportation system is also one that does not exclude riders through high fares. Plan

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<sup>41</sup> California Air Resources Board. 2000-2018 GHG Inventory (2020 Edition). <https://ww2.arb.ca.gov/ghg-inventory-data>

Bay Area 2050 calls for reform to transit fares regionwide that would lower fare costs across the board, particularly for riders that use multiple transportation systems, and serve those most in need by offering income-based fare discounts.

### Strategies for Sustainable Connections to Opportunity

Plan Bay Area 2050 envisions a transportation system that, above all, prioritizes improved access to opportunity for all Bay Area residents. Strategies focus on meeting the needs of historically marginalized communities, ranging from more frequent bus service to safety-enhancing improvements for pedestrians and cyclists. Bold strategies that go beyond prior regional planning efforts to reduce climate emissions by higher margins and advance equity at the same time can demonstrate that climate and equity goals can go hand-in-hand. The plan's transportation strategies fall into three themes:

1. **Maintain and optimize the existing transportation system:** First and foremost, the plan identifies funding to operate and maintain our existing system of transit routes, roads and bridges, laying a strong foundation for further investments and policies. Strategies include reversing pandemic-related cuts to total transit service hours, creating a seamless transit experience with reformed fare payments, addressing near-term highway bottlenecks, implementing road pricing on select corridors for long-term congestion relief, funding community-led transportation investments in Equity Priority Communities, and supporting ongoing regional programs and local priorities.
2. **Create healthy and safe streets:** On top of this optimized system, roads would be made safer for all users — including drivers, cyclists, rollers (for example, people that use a wheelchair or scooter) and pedestrians — through context-specific speed limit reductions and a network of protected bike lanes and trails designed for people of all ages. Strategies include building a Complete Streets network and advancing a Vision Zero road safety policy to protect all road users.
3. **Build a next-generation transit network:** Finally, a slate of investments in transit steers the Bay Area toward a 21st century system that meets the needs of a growing population and delivers fast, frequent and reliable service throughout the region. Strategies invest in improving the frequency and reliability of local transit, selectively extend regional rail and increase frequencies to address crowding, and build out the express lanes network with coordinated express bus service.

## Strategies — Maintain and Optimize the Existing System

As the Bay Area emerges from COVID-19-related restrictions, there is a unique opportunity to rebuild existing transportation systems to serve more people and operate more cost-effectively. All of Plan Bay Area 2050's transportation strategies build upon a strong foundation of existing infrastructure and services. A future transit system that is maintained in good working order, where transit service hours have been restored to their pre-COVID levels and transit fares are simplified across operators, would improve reliability and reduce costs for all passengers under the plan's vision. New options for planning and paying for a trip would be easily accessible and include all modes. Equity Priority Communities, which have historically been denied a seat at the table, would have access to significant funding to advance their priorities. A handful of road-widening projects would provide short- to medium-term congestion relief, before a new per-mile fee is applied on select highways with transit alternatives to help relieve congestion and significantly reduce harmful greenhouse gas emissions. This new approach to congestion management could raise billions of dollars for new transportation investments, leading the system to operate more efficiently, equitably and sustainably than ever before.

Around two-thirds of the transportation funding in Plan Bay Area 2050 is earmarked for **restoring, operating and maintaining the existing system**, in line with MTC's long-held pledge to "Fix It First." This approach includes reserving funds to pay for ongoing replacement of aging buses and other transit assets, regular paving of local streets and freeways, and a host of other necessary investments to ensure that the region's transportation system continues to provide reliable service. Furthermore, with transit systems forced to cut routes or reduce frequencies during the COVID-19 pandemic, Plan Bay Area 2050 charts the course for returning transit service to the levels that the Bay Area relied on before the pandemic.

Beyond investing in the existing system, Plan Bay Area 2050 aims to **enable a seamless mobility experience** that will help travelers navigate the many options available to them and make more sustainable choices. To start, a free modern mobile app that assists travelers with trip planning — including navigating across transit schedules or understanding parking or shared mobility options at each end of the trip — would help to gather information from disparate sources in one place. Once a trip is in progress, low-cost measures like schedule coordination between operators to reduce wait times at transfer locations, as well as wayfinding signage at key transfer hubs, would facilitate a smoother experience. Complementary investments in bike parking at transit stations

and reforms to transit fares for multi-operator trips, described later in this chapter, further advance a seamless mobility experience under the plan's vision.

Another barrier to making transit within the Bay Area truly seamless and easy to navigate is the region's currently fractured fare structure, wherein dozens of transit operators each has its own set of fares and transfer discounts. Paired with schedule coordination and capital investments, a strategy to **reform regional fare policy** could simplify the experience of taking transit.

Standardizing transit fares across the region's transit operators could greatly reduce fare costs and simplify decisions on how to get around. For regional trips, exploring fares that price trips based on distance, rather than the number of independent boardings, could reduce costs and work toward a more affordable transportation system.

While these reforms support transit riders of all incomes, targeted discounts applied uniformly for riders with low incomes, as well as young riders and people with disabilities, would make further progress toward Plan Bay Area 2050's affordability goals. MTC's analysis suggests that fare integration alone would be roughly revenue-neutral to operators, because it incentivizes an increase in overall transit usage, which offsets lower individual fares. However, income-based discounts, including a 50% discount for households with low incomes, would involve substantial fare losses. Funding would be needed to ensure that transit operators do not experience an overall loss in operating revenue that could disrupt service.

Strategies that strengthen the transit network and sway individual behavior away from single-occupancy driving are critical to Plan Bay Area 2050's approach to tackling traffic congestion. However, these strategies often require time to take hold. In the near term, Plan Bay Area 2050 includes a strategy to **address highway bottlenecks and improve interchanges** through a limited selection of widenings or road extensions to serve new developments. These road projects may help reduce congestion temporarily, though they will likely increase vehicle miles traveled in the long term, with any congestion relief benefits disappearing by the year 2050. As such, Plan Bay Area 2050 also includes a suite of long-term solutions to the region's congestion challenges, including road pricing, transit-supportive land use and transit improvements, that have been shown to succeed across a variety of future conditions.

One of the most impactful long-term solutions to congestion is road pricing. Road tolls are a way to reflect the true cost of driving and motivate drivers to consider more sustainable options. Plan

Bay Area 2050 proposes **implementing per-mile tolling on select congested freeways where parallel transit options exist** to curb traffic congestion and climate emissions through 2050 and beyond, while generating new revenues for reinvestment in sustainable alternatives to driving. This strategy, applied on a limited number of freeway corridors throughout the region, would charge drivers a toll based on the number of miles driven, the number of passengers, and the time of day, with lower tolls charged to carpoolers and those traveling outside rush-hour periods.

To support equity goals and reduce this pricing measure's potentially regressive impact, households earning below the regional median income would receive a 50% discount. Importantly, revenue from tolling would be directly reinvested in improving transit alternatives, such as funding investments like express bus service, as well as in projects like electric vehicle charging infrastructure. An estimated \$25 billion in funding for transportation projects could be generated between 2030 and 2050, helping to fund transit investments for the latter years of Plan Bay Area 2050.

Historically and even today, decisions on which projects get implemented are largely top-down, with proposals and project selection coordinated by cities, counties or transit operators. These projects may not always align with the priorities of those who have faced barriers to participating in such decision-making — namely, communities of color or those with lower incomes. To address this misalignment, the plan calls to **support community-led transportation enhancements in Equity Priority Communities**, which will require public agencies to dedicate funding specifically for these projects and build trusting, collaborative relationships with these communities. MTC has several existing programs that focus on facilitating grassroots planning and funding projects that benefit Equity Priority Communities. MTC's Community-Based Transportation Planning Program funds local planning efforts in Equity Priority Communities, and a variety of MTC funding programs consider benefits to people with low incomes when awarding competitive grants. Plan Bay Area 2050 reserves billions of dollars for this strategy, laying the groundwork for a future where systemically underserved communities are empowered to prioritize improvements to best meet their needs.

Finally, the plan includes a strategy to **advance other regional programs and local priorities**, enabling uninterrupted delivery of services that Bay Area residents rely on every day. Regionwide, services like motorist aid and incident management will continue to keep travelers safe, and real-time information will be available through 511®. A host of locally identified priorities complement

these regional initiatives, providing small-scale but meaningful improvements, including intersection upgrades, local emissions reduction programs, and city- or county-led planning studies.

### Strategies — Create Healthy and Safe Streets

Safety and health are top of mind for all Bay Area residents as a result of COVID-19's impacts. The pandemic revealed a renewed interest in biking and walking for commuting, health and leisure. As people spent more time in their own neighborhoods due to shelter-in-place orders, local leaders nationwide repurposed road space formerly in the exclusive domain of cars as car-free “slow streets” where people could walk, bike and roll.<sup>42</sup> Slow streets programs and new parklets have cropped up around the Bay Area as people seek to spend quality, socially distanced time outdoors.<sup>43</sup>

Infrastructure and policy contribute to the safety and comfort of all travelers, including pedestrians, cyclists, skateboarders, and people who use wheelchairs or scooters. Many of these policy and infrastructure changes are attainable in the near term, and they would promote healthier, more environmentally friendly options for local trips like shopping at nearby businesses, as well as more convenient ways to access transit and avoid parking for longer-distance trips. Active transportation benefits both public health, through increased physical activity, and the environment, through zero-emissions travel.

Plan Bay Area 2050 lays the groundwork for a dramatic increase in active transportation trips, in recognition of the numerous co-benefits that these forms of transportation can provide. Infrastructure and policy approaches are combined to make conditions safer and more comfortable for active travelers of all ages. By 2050, protected bike lanes and off-street paths would be plentiful, connecting residents with commercial corridors, transit stops and community places. Vehicular speeds would be reduced, improving safety outcomes for everyone on the road and inviting more people to bike, walk and roll safely.

A foundational element of Plan Bay Area 2050's transportation network is a strategy to **build a Complete Streets network**, a planning term popularized nationally to describe streets that meet

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<sup>42</sup> Schaper, D. (2020, August 16). The Pandemic Is Changing How People Get Around. NPR.

<https://www.npr.org/2020/08/16/902909092/the-pandemic-is-changing-how-people-get-around>

<sup>43</sup> Rudick, R. (2020, June 9). Tracking Slow Streets in the Bay Area. SF Streetsblog.

<https://sf.streetsblog.org/2020/06/09/tracking-slow-streets-in-the-bay-area/>

the needs of all users, including pedestrians, cyclists and rollers. Plan Bay Area 2050 envisions a well-connected network with 10,000 new miles of protected bike lanes and off-street paths, with particular emphases on connections to transit and investments in Equity Priority Communities. This strategy includes investments in regional multi-use trails, such as the California Coastal Trail, the Great California Delta Trail, the Iron Horse Regional Trail and the San Francisco Bay Trail, that are important assets for commuting or recreation. Aside from on-street infrastructure, a suite of complementary investments — including secure bike parking at transit stations, pedestrian lighting and intersection safety projects — supports a future where walking, biking and rolling are safe and comfortable choices for people of all ages and abilities.

Next, a strategy to **advance a regional Vision Zero policy** complements the regional network of safe bike lanes and trails by supporting additional safety projects and lowering vehicle speeds. Vision Zero is an internationally adopted framework that seeks to eliminate all traffic fatalities and severe injuries while increasing safe, healthy and equitable mobility for all.<sup>44</sup> Prompting drivers to go more slowly is a key focus area of Vision Zero, given the strong correlation between higher speeds and higher likelihood of serious injury or fatality in the event of a collision.

Plan Bay Area 2050 advances the Bay Area toward Vision Zero through a combined emphasis on lower speeds and street design for safer travel. This includes both a policy to reduce speeds on freeways to 55 miles per hour and the introduction of context-specific speed limit reductions with speeds capped at between 20 to 35 miles per hour on local streets.

Enforcement is a key equity consideration for this strategy, and it will require thoughtful implementation to ensure that undue burdens are not placed on communities of color. Billions of dollars are allocated to fund infrastructure investments that slow down cars without the need for in-person enforcement. Design elements like speed bumps and roundabouts on local roads naturally reduce speeds and improve pedestrian comfort levels. On freeways where options for design interventions are more limited, automated speed enforcement, while not yet permitted in California, presents a promising path forward for enforcement without bias.

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<sup>44</sup> The Vision Zero Network. (© 2021). What is the Vision Zero Network? <https://visionzeronetwork.org/about/vision-zero-network/>

## Strategies — Build a Next-Generation Transit Network

Prior to the pandemic, the Bay Area’s transit system faced crowding on its busiest routes, long wait times for transfers and missing links with no transit service, among other challenges. While some major projects have been completed since the last regional long-range plan update in 2017 — for example, Bay Area Rapid Transit (BART) extensions to Antioch and Berryessa and bus improvements like the Alameda-Contra Costa Transit District (AC Transit)’s Tempo bus rapid transit line — further investments will be required to meet the Bay Area’s needs as its population grows and transit ridership returns to pre-pandemic levels.

Coordinated investments in the region’s rail network would provide an expanded and improved foundation for transit, with more frequent and reliable feeder bus and light rail service providing local connections. Express bus service would play a larger role in helping people move throughout the Bay Area, leveraging a contiguous network of express lanes that enables carpoolers and buses to bypass congestion. Transit fare reforms described earlier would reduce the cost of transit for riders with low incomes, lowering the cost barrier and allowing all residents to benefit from these improvements.

The first step in creating a next-generation transit network in Plan Bay Area 2050 is to **enhance the frequency, reliability and capacity of existing local transit systems**. Bus and light rail systems provide important connections for trips around town or as start or end points to longer trips around the region. Improvements that make these connections more convenient build toward a more connected future. Frequency boosts can reduce wait times and crowding; strategic extensions can serve new jobs and housing centers; and infrastructure upgrades like bus-only lanes can make transit faster and more reliable for all.

Investments in local transit, including more frequent service or “quick build” improvements like bus-only lanes or transit signal priority, could be implemented relatively quickly to make a major impact in a short amount of time. Furthermore, projects improving local transit service tend to benefit transit riders with lower incomes, translating investments to equitable outcomes.<sup>45</sup> Most investments within this strategy are prioritized for near-term implementation, allowing riders with lower incomes to reap the earliest benefits.

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<sup>45</sup> MTC and ABAG. (2020, January). Futures Final Report: Resilient and Equitable Strategies for the Bay Area’s Future. <https://mtc.ca.gov/tools-resources/digital-library/horz-futures-reportweb-pdf>

To strengthen the quality of baseline service, frequency boosts on bus and light rail service throughout the Bay Area would be implemented. This includes improvements on urban systems like AC Transit, Muni and VTA, as well as on suburban systems like Napa VINE, County Connection in Contra Costa County, and Sonoma County Transit. More frequent service would allow passengers to enjoy shorter wait times, more convenient service and less crowding as ridership recovers in a post-pandemic world.

Beyond frequency boosts, a range of infrastructure investments would improve speed and reliability for local bus and light rail passengers under Plan Bay Area 2050's local transit strategy. Several of the region's highest-ridership bus corridors would be transformed through bus rapid transit investments, including San Francisco's Geary Boulevard, San Pablo Avenue in the East Bay, and El Camino Real in San Mateo and Santa Clara counties. In Santa Clara County, segments of downtown San José's street-level light rail would be moved underground or elevated to bypass traffic congestion. Throughout the Bay Area, transit signal priority investments would help buses coast through green lights at a low cost.

Rounding out this strategy, new local transit lines are envisioned to support areas forecasted for substantial new housing growth. This includes extensions of VTA light rail to Eastridge Mall and to Cupertino along Stevens Creek Boulevard, as well as new bus routes serving future development sites in Hunters Point and Candlestick Point in San Francisco and Alameda Point in the city of Alameda, among others.

Plan Bay Area 2050 also envisions an **expanded and modernized regional rail network**, with a set of investments that puts the Bay Area on the path toward a world-class rail system. The Bay Area's rail systems — BART, Caltrain, Capitol Corridor, the Altamont Corridor Express and Sonoma-Marín Area Rail Transit — are the backbone of mobility in the region, carrying hundreds of thousands of passengers each day to their destinations. The anchor of a plan for rail in the Bay Area, looking out over the next three decades, is Link21, a new program to transform Northern California's passenger rail network with a new transbay crossing between Oakland and San Francisco at its core. This new crossing will provide much-needed capacity in the heart of the Bay Area and beyond.

Various studies contributed to the conclusion that a new transbay crossing is needed, including the Bay Area Core Capacity Transit Study, a joint effort of BART, Muni, AC Transit, Caltrain, the

Water Emergency Transportation Authority (WETA), SFCTA and MTC.<sup>46</sup> A 2019 Horizon perspective paper titled *Crossings* also explored the relative merits of seven different potential transbay crossings, finding that a new rail crossing served by BART, conventional rail, or both held substantial benefits for the Bay Area when compared to a road crossing or no change at all.<sup>47</sup>

Boosting the frequencies of the Bay Area's current rail systems can also provide better service for riders throughout the region, and a limited set of rail extensions or new rail routes can fill in gaps in the network. These extensions include BART's extension to downtown San José, the Caltrain downtown San Francisco extension, and the return of rapid transit service on the Dumbarton rail bridge.

Plan Bay Area 2050 also responds to the challenge of in-commuters, or people who live outside of the nine-county Bay Area but commute into the region to work. Interregional commuters, many of whom commute via car due to a lack of competitive transit alternatives, see improved options under Plan Bay Area 2050's strategies. For those commuting into the Bay Area from the south, the plan includes investments that lay the foundation for California High-Speed Rail in the region. Commuters living east of the Bay Area in San Joaquin County can also expect to see a new rail connection through Valley Link, a commuter rail line that will connect the Dublin/ Pleasanton BART station with the Central Valley. These new interregional services are integrated into the regional transit system via schedule coordination, allowing for easy transfers with minimal wait times.

Ferries present another option for shoring up transbay capacity in the near term at a smaller scale. Plan Bay Area 2050 invests in new ferry service and increases in frequency to existing service to complement investments in regional transit. Such investments include new ferry service to Berkeley, Redwood City, Treasure Island, Mission Bay, Martinez, Hercules and Pittsburg, alongside frequency boosts across the Golden Gate and WETA systems.

Plan Bay Area 2050 includes a limited selection of freeway widening projects, with a larger focus on making better use of the existing freeway network. Express lanes have been a resource for Bay Area drivers since 2010, providing a reserved freeway lane that allows buses, carpoolers and fee-

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<sup>46</sup> MTC. (2016, July) *Briefing Book: Core Capacity Transit Study*. <https://mtc.ca.gov/tools-resources/digital-library/ccts-briefingbook-july2016pdf>

<sup>47</sup> MTC and ABAG. (2019, November). *Crossings: Transformative Investments for an Uncertain Future*. <https://mtc.ca.gov/tools-and-resources/digital-library/crossings-transformative-investments-uncertain-future>

paying solo drivers to bypass congestion on several corridors throughout the region. The tolls on these lanes increase as traffic increases and decrease as traffic decreases to provide more reliable travel times. Plan Bay Area 2050 builds an integrated regional express lanes and express bus network, resulting in 600 miles of express lanes throughout the Bay Area that would enable fast and reliable express bus service and carpool trips. Robust regional express bus service complements regional rail and local transit, providing an improved option for regional trips without the need for extensive infrastructure upgrades.

Planning for express lanes is closely linked with the aforementioned strategy to implement per-mile tolling on select freeways with transit alternatives. Express lanes serve as a near-term investment in improving travel conditions, with per-mile tolling providing a medium- to long-term policy flexible enough to ensure that roads do not become overwhelmed with congestion as the Bay Area's population grows, even if driving were to become cheaper or more attractive. On corridors where per-mile tolling is proposed under Plan Bay Area 2050, the express lanes could convert to carpool- and bus-only lanes, ensuring that carpoolers and bus passengers continue to see the benefits of a priority lane on freeways.

## **Funding and Implementation — Transportation Strategies**

Together, Plan Bay Area 2050's 12 transportation strategies move the Bay Area toward a more equitable future by ensuring that residents with low incomes can rely on the current system of roads and transit options, investing in more safe and healthy streets, and improving the region's transit network. Through advocacy, legislation, initiatives, planning and research over the next 30 years, MTC and ABAG can work with partners to secure a \$578 billion investment into our region's future mobility, ensuring that everyone — and especially those historically and systemically marginalized, underserved and excluded — can get where they need to go with safety and ease.



Photo: Noah Berger

## Transportation Strategies — Cost: \$578 Billion<sup>48</sup>

- **Theme: Maintain and Optimize the Existing System**
  - **T1. Restore, operate and maintain the existing system.**

Commit to operate and maintain the Bay Area’s roads and transit infrastructure while reversing pandemic-related cuts to total transit service hours.  
Cost: \$389 billion
  - **T2. Support community-led transportation enhancements in Equity Priority Communities.**

Provide direct funding to historically marginalized communities for locally identified transportation needs.  
Cost: \$8 billion
  - **T3. Enable a seamless mobility experience.**

Eliminate barriers to multi-operator transit trips by streamlining fare payment and trip planning while requiring schedule coordination at timed transfer hubs.  
Cost: \$3 billion
  - **T4. Reform regional transit fare policy.**

Streamline fare payment and replace existing operator- specific discounted fare programs with an integrated fare structure across all transit operators.  
Cost: \$10 billion
  - **T5. Implement per-mile tolling on congested freeways with transit alternatives.**

Apply a per-mile charge on auto travel on select congested freeway corridors where transit alternatives exist, with discounts for carpoolers, low-income residents, and off-peak travel; and reinvest excess revenues into transit alternatives in the corridor.  
Cost: \$1 billion
  - **T6. Improve interchanges and address highway bottlenecks.**

Rebuild interchanges and widen key highway bottlenecks to achieve short- to medium-term congestion relief.  
Cost: \$12 billion
  - **T7. Advance other regional programs and local priorities.**

Fund regional programs like motorist aid and 511 while supporting local transportation

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<sup>48</sup> Numbers may not sum due to rounding.

investments on arterials and local streets.

Cost: \$17 billion

- ***Theme: Create Healthy and Safe Streets***

- **T8. Build a Complete Streets network.**

Enhance streets to promote walking, biking and other micro-mobility through sidewalk improvements, car-free slow streets, and 10,000 miles of bike lanes or multi-use paths.

Cost: \$13 billion

- **T9. Advance regional Vision Zero policy through street design and reduced speeds.**

Reduce speed limits to between 20 and 35 miles per hour on local streets and 55 miles per hour on freeways, relying on design elements on local streets and automated speed enforcement on freeways.

Cost: \$4 billion

- ***Theme: Build a Next- Generation Transit Network***

- **T10. Enhance local transit frequency, capacity and reliability.**

Improve the quality and availability of local bus and light rail service, with new bus rapid transit lines, South Bay light rail extensions, and frequency increases focused in lower-income communities.

Cost: \$32 billion

- **T11. Expand and modernize the regional rail network.**

Better connect communities while increasing frequencies by advancing the Link21 new transbay rail crossing, BART to Silicon Valley Phase 2, Valley Link, Caltrain Downtown Rail Extension and Caltrain/High-Speed Rail grade separations, among other projects.

Cost: \$81 billion

- **T12. Build an integrated regional express lanes and express bus network.**

Complete the buildout of the regional express lanes network to provide uncongested freeway lanes for new and improved express bus services, carpools and toll-paying solo drivers.

Cost: \$9 billion

MAP 4-1

# Highway and Pricing Investments

- HIGHWAY WIDENING**
  - New Carpool Lane
  - New General Purpose Lane
  - Major Interchange Improvement
- EXPRESS LANES**
  - Existing/Under Construction
  - Existing Lane Conversion
  - New Single Lane
  - New Dual Lane
- PRICING**
  - Existing Toll Bridge Corridor
  - New BATA Toll Corridor
  - Per-Mile Tolling (Plan Bay Area 2050 Strategy)
  - Congestion Pricing Zone
- REGIONAL TRANSPORTATION**
  - ✈ Major Airport
  - ⚓ Major Seaport
  - Highway and Interstate
  - Major Road

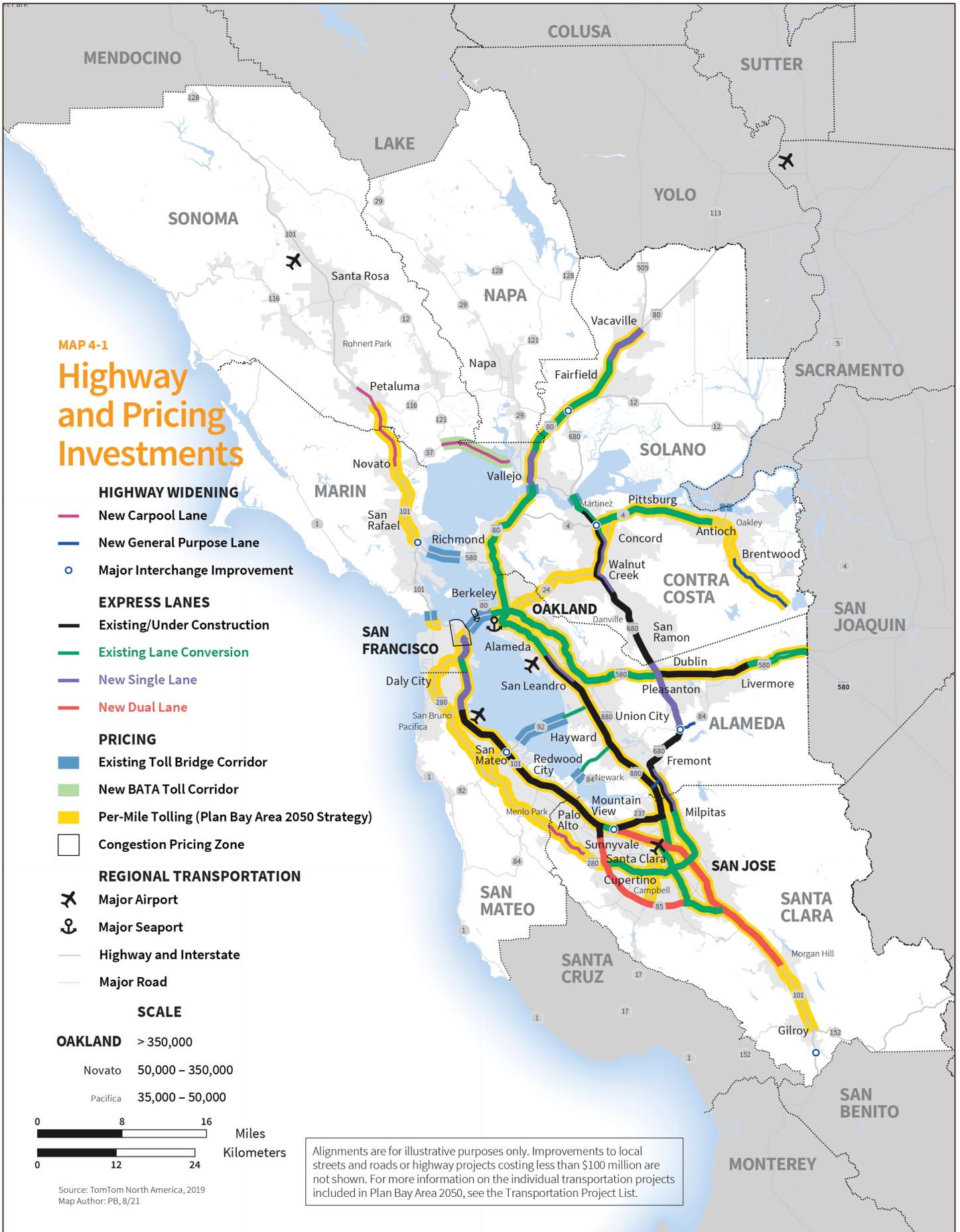
**SCALE**

- OAKLAND** > 350,000
- Novato 50,000 – 350,000
- Pacifica 35,000 – 50,000



Source: TomTom North America, 2019  
Map Author: PB, 8/21

Alignments are for illustrative purposes only. Improvements to local streets and roads or highway projects costing less than \$100 million are not shown. For more information on the individual transportation projects included in Plan Bay Area 2050, see the Transportation Project List.



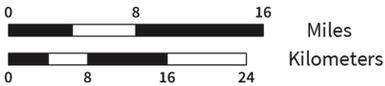
MAP 4-2

# Regional Transit Investments

- FERRY**
  - Existing Ferry Service
  - New Ferry Service
- RAIL**
  - Existing BART Service
  - New BART Service
  - BART Frequency Boost
  - Existing Commuter Rail Service
  - New Commuter Rail Service
  - Commuter Rail Frequency Boost
  - New BART or Commuter Rail Crossing
- HIGH-SPEED RAIL**
  - New Rail Service
- GROUP RAPID TRANSIT**
  - New Rail Service
- Plan Bay Area 2050 Growth Geographies
- REGIONAL TRANSPORTATION**
  - Major Airport
  - Major Seaport

**SCALE**

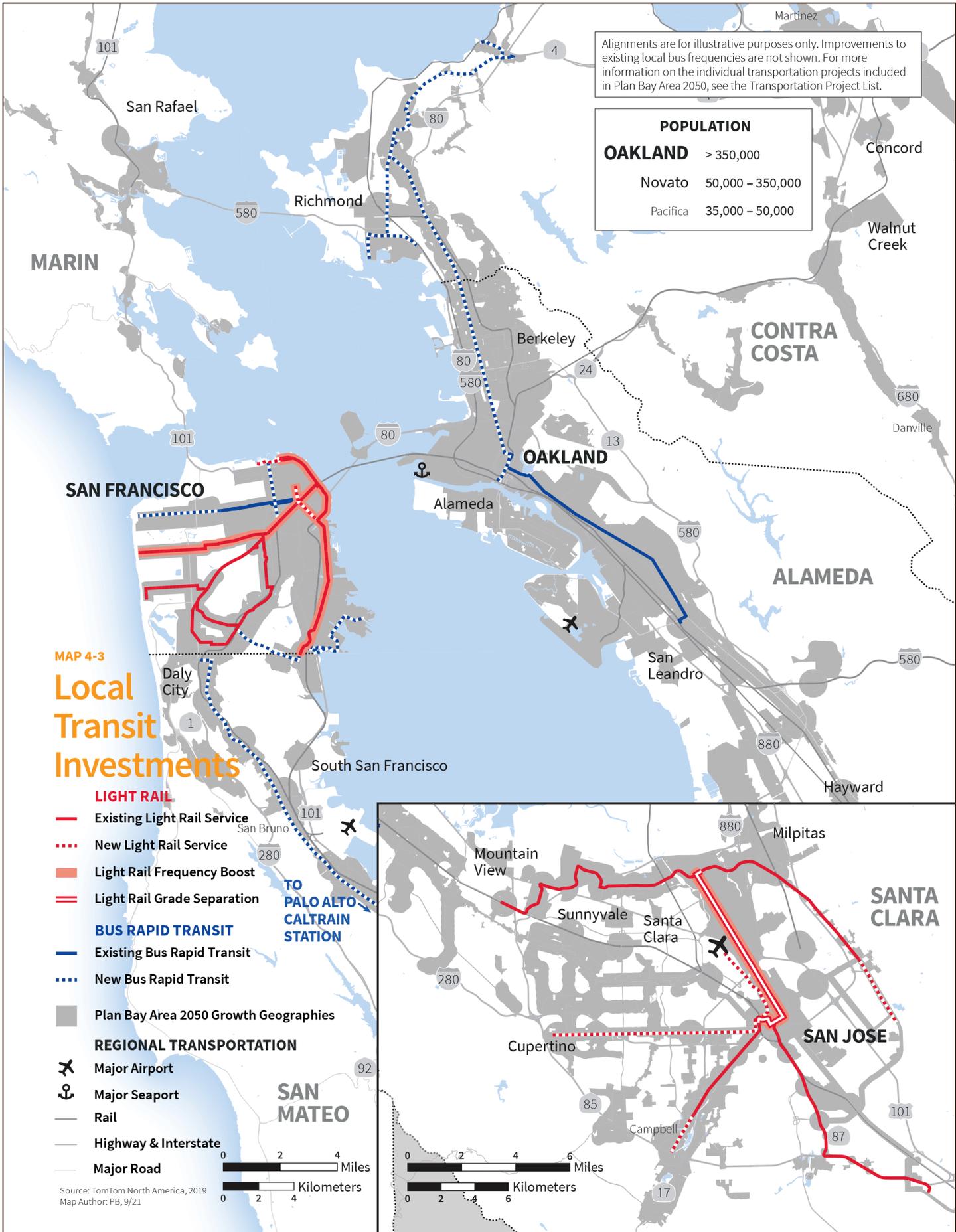
<b>OAKLAND</b>	> 350,000
Novato	50,000 – 350,000
Pacifica	35,000 – 50,000



Source: TomTom North America, 2019  
Map Author: PB, 8/21

Alignments are for illustrative purposes only. For more information on the individual transportation projects included in Plan Bay Area 2050, see the Transportation Project List.





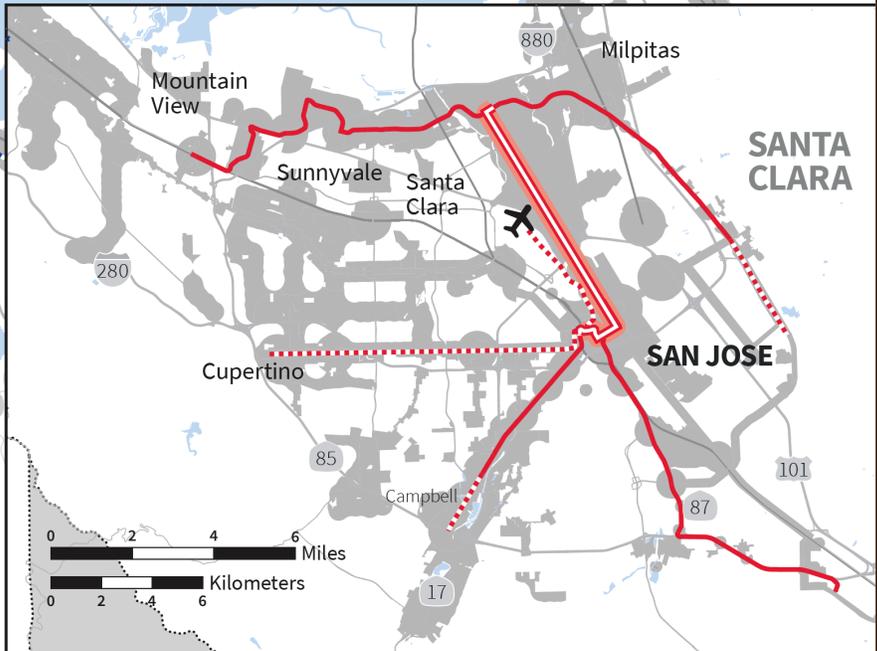
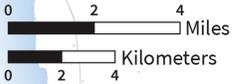
Alignments are for illustrative purposes only. Improvements to existing local bus frequencies are not shown. For more information on the individual transportation projects included in Plan Bay Area 2050, see the Transportation Project List.

POPULATION	
<b>OAKLAND</b>	> 350,000
Novato	50,000 – 350,000
Pacifica	35,000 – 50,000

**MAP 4-3**  
**Local Transit Investments**

- LIGHT RAIL**
- Existing Light Rail Service
- ⋯ New Light Rail Service
- ▬ Light Rail Frequency Boost
- ▬ Light Rail Grade Separation
- BUS RAPID TRANSIT**
- Existing Bus Rapid Transit
- ⋯ New Bus Rapid Transit

- Plan Bay Area 2050 Growth Geographies
- REGIONAL TRANSPORTATION**
- ✈ Major Airport
- ⚓ Major Seaport
- Rail
- Highway & Interstate
- Major Road



Source: TomTom North America, 2019  
 Map Author: PB, 9/21

MAP 4-4

# Express Bus Investments

## EXPRESS BUSES

### PREMIUM EXPRESS BUS

(Peak Headways of 15 Minutes or Less)

- Existing Route: Premium Express Bus Service
- - - New Route: Premium Express Bus Service

### EXPRESS BUS

(Peak Headways of 16–30 Minutes)

- Existing Route: Express Bus Service
- - - New Route: Express Bus Service

Plan Bay Area 2050 Growth Geographies

## REGIONAL TRANSPORTATION

-  Airport
-  Major Seaport
-  Highway and Interstate
-  Major Road

## SCALE

OAKLAND > 350,000

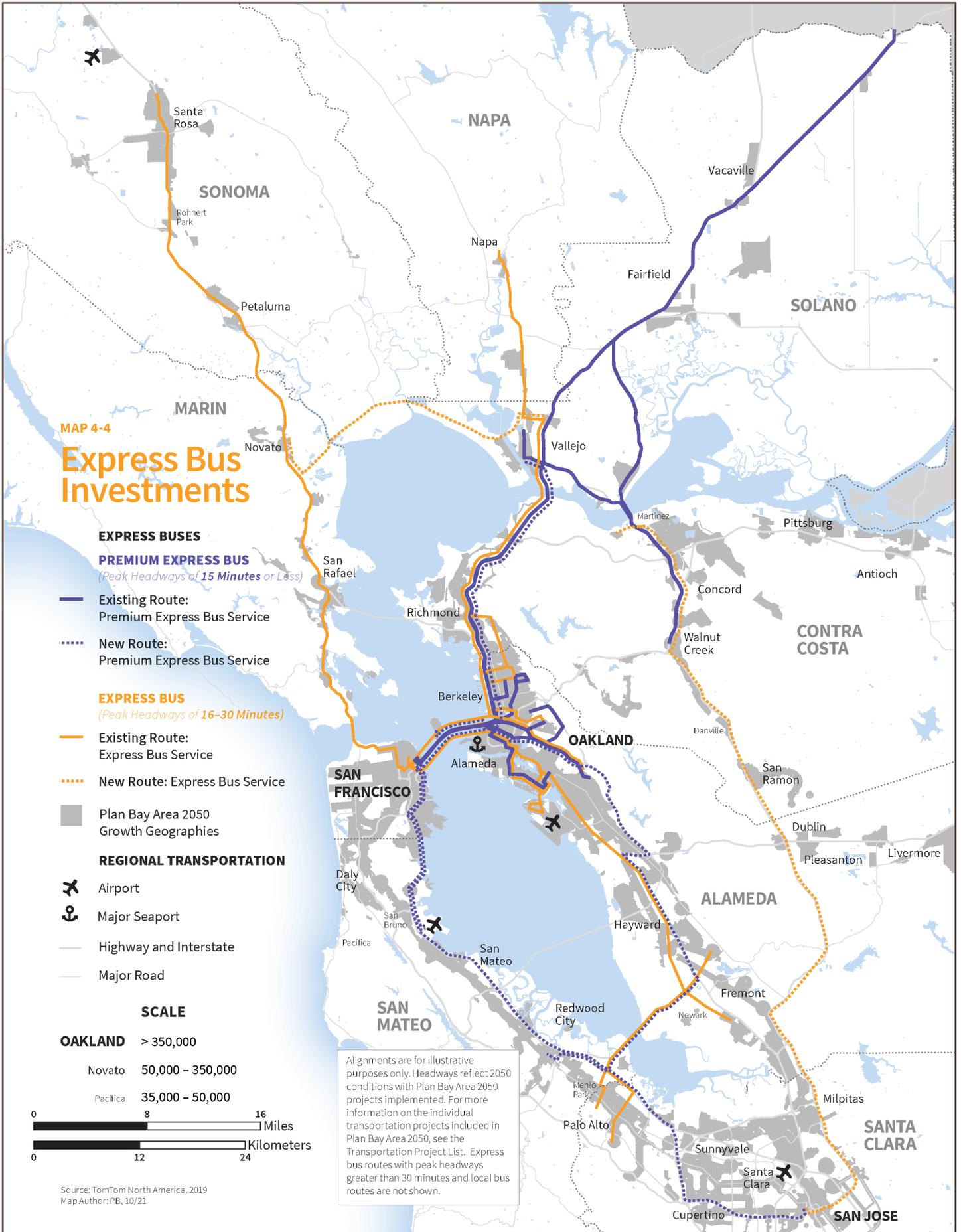
Novato 50,000 – 350,000

Pacifica 35,000 – 50,000



Source: TomTom North America, 2019  
Map Author: PB, 10/21

Alignments are for illustrative purposes only. Headways reflect 2050 conditions with Plan Bay Area 2050 projects implemented. For more information on the individual transportation projects included in Plan Bay Area 2050, see the Transportation Project List. Express bus routes with peak headways greater than 30 minutes and local bus routes are not shown.



## Transportation | Supplementary Content

### Autonomous Vehicles

While autonomous vehicles (AVs), otherwise known as self-driving cars, may seem like a far-off technology, most new vehicles sold today already operate with some level of automation, including automatic braking and lane-drifting correction. In San Francisco, the California Department of Motor Vehicles has authorized autonomous vehicles to roam the streets without a backup driver at the wheel, testing out this emerging technology.<sup>49</sup> Greater degrees of automation and increased adoption of AVs could greatly shape transportation's future in the Bay Area. More automation may make longer-distance commutes more feasible, but it may also reduce the attractiveness of more sustainable travel modes like transit or biking while increasing congestion and greenhouse gas emissions. Poised to launch another revolution in transportation, autonomous vehicles are one of the largest sources of uncertainty in planning for the region's future.

As home to much of the technological innovation driving the shift to AVs, the Bay Area is uniquely situated to take advantage of the opportunities and consider the risks AVs present. Many governmental and non-governmental organizations in the Bay Area are planning for a world with AVs: the City of San José has advanced a series of pilot programs to develop infrastructure and collect data; the GoMentum Station in Concord is a robust AV testing facility with road networks, tunnels and railroad crossings that simulate real-world driving conditions; and the Bishop Ranch Office Park in San Ramon is piloting AV shuttles to transport workers around the office park, to name a few.

As it leads worldwide on AV innovation, the Bay Area has an opportunity to shape the future with thoughtful, equitable AV policies and best practices. The San Francisco Municipal Transportation Agency and the San Francisco County Transportation Authority recently developed their Guiding Principles for Emerging Mobility, a policy framework to evaluate new mobility decision-making;<sup>50</sup> the Santa Clara Valley Transportation Authority is also developing an Automated Driving System Draft Policy; and the California Public Utilities Commission is working on a proposed framework

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<sup>49</sup> Korosec, K. (2020, December 9). Cruise begins driverless testing in San Francisco. TechCrunch.

<https://techcrunch.com/2020/12/09/cruise-begins-driveless-testing-in-san-francisco/>

<sup>50</sup> SFMTA (© 2021). Emerging Mobility: 10 Guiding Principles. <https://www.sfcta.org/policies/emerging-mobility#panelguiding-principles>

for regulating two AV pilot programs. At the state level, the principles established by the California Multi-Agency Workgroup on Autonomous Vehicles and the strategies outlined in the California Transportation Plan 2050 provide statewide guidance on future policy decisions.

Plan Bay Area 2050 recognizes that AVs could fundamentally change the way transportation networks are designed and operated. AV adoption could shape the future of public transit, climate emissions, labor markets and access to opportunity. These concerns have been incorporated into planning and analysis work from the start: through the Horizon effort, MTC and ABAG released an Autonomous Vehicles Perspective Paper that assessed potential opportunities and challenges and recommended strategies that would support the Plan Bay Area 2050 vision in an AV-enabled future.<sup>51</sup> All modeling work for the plan includes a fairly conservative assumption that 5% of vehicles will be autonomous by 2035, escalating to 20% by 2050.

### Clipper® START<sup>SM</sup> — Working Toward Equitable Regional Standards

Cost should not be a barrier to riding transit. MTC, together with transit operators, social service agencies and community-based organizations, launched Clipper® START<sup>SM</sup>, a fare discount pilot program for adults in the Bay Area whose annual earnings are below 200% of the federal poverty level. Introduced in summer 2020, the approximately \$17 million pilot program currently enables fare discounts ranging from 20% to 50%, depending on the operator, with more than 20 participating transit providers. The program moves the Bay Area toward a more consistent regional standard for fare discounts, and it supports the vision of MTC and ABAG's Equity Platform by building upon efforts to make transit more affordable and expand transportation choices for residents with low incomes.

### MTC Participatory Budgeting Pilot

Shared decision-making, community power-building, deeper civic engagement, and alignment between community needs and funding decisions are essential to realizing Plan Bay Area 2050's equity goals. Participatory budgeting is one tool that public administrators and planners can use to lift up community members' voices, providing a democratic framework through which community residents directly decide how to spend part of a public budget.

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<sup>51</sup> MTC, ABAG and ARUP. (2018, June). Autonomous Vehicles Perspective Paper. <https://mtc.ca.gov/tools-resources/digital-library/2018-06-25-autonomous-vehicles-perspective-paperpdf>

In 2018, MTC launched a pilot program in partnership with advocacy groups and local officials in two Bay Area communities: San Francisco's Bayview and Vallejo. Residents, community-based organizations and government officials worked together for a year to identify key transportation challenges and potential solutions, and \$1 million in regional transportation funding was allocated to investments prioritized by the participants.

In the Bayview, participants identified safety on transit as a key concern and funded the creation of three Transit Assistant positions through the SFMTA Muni Transit Assistance Program. Transit Assistants ride buses and light rail trains to provide an unarmed safety presence that can de-escalate conflicts and deter vandalism. In Vallejo, participants identified gaps at the beginning and end of transit trips as a key priority, opting to fund wayfinding signage and improvements to sidewalks and bus shelters.

The pilots' success highlights several best practices for advancing equity: defining equity as a strategic priority within funding policy; clearly outlining program structure and process; applying diversity and inclusion metrics to program evaluation; and building collaborative relationships.

### Active Transportation Plan

Historically, cities and counties have led planning efforts for active transportation infrastructure like bike lanes, off-street multi-use paths or pedestrian safety improvements. Regional agencies like MTC and ABAG have played a complementary role through efforts such as maintaining and expanding regional facilities like the San Francisco Bay Trail, adopting a regional Complete Streets policy, and funding certain active transportation projects. Since 2014, in partnership with the state, the region has begun to take an even more active role, awarding over \$325 million to active transportation projects through competitive Active Transportation Program grants.

MTC last released a regional plan for bicycle infrastructure in 2009. In the following years, cities and counties completed active transportation plans of their own, building out hundreds of miles of bike lanes and off-street paths. Walking, biking and rolling trips may cross city or county boundaries, so a regional plan that coordinates the infrastructure buildout needed for these trips can help to create safe, seamless paths for the Bay Area's cyclists, pedestrians, rollers and other active travelers.

In 2020, MTC initiated work on a regional Active Transportation Plan, intended to serve as a blueprint to strategically guide active transportation policy and investments. The Active Transportation Plan, anticipated for release in 2022, will support Plan Bay Area 2050's envisioned Complete Streets network, including the construction of 10,000 miles of new bike lanes and multi-use paths.

The Active Transportation Plan will also guide safety policies enacted at the local and regional levels in accordance with MTC's adopted Vision Zero policy, which fosters coordination throughout the region to eliminate traffic fatalities and serious injuries by the year 2030. This policy includes support for lower vehicular speeds and traffic calming elements described in the Plan Bay Area 2050 strategy to advance a regional Vision Zero policy.

Analysis from Horizon and Plan Bay Area 2050 found that investing in active transportation infrastructure can open up new destinations for people with low incomes and people with disabilities at a fraction of the price of higher-cost public transit infrastructure. Equity considerations will be front and center in the regional Active Transportation Plan, including partnerships with community-based organizations to identify priorities. The Active Transportation Plan will also coordinate with ongoing planning efforts like Community-Based Transportation Plans and local active transportation planning work.

### Exploring Automated Speed Enforcement to Address Bias

Black drivers across the country are up to five times more likely than white drivers to be stopped and searched while driving, yet despite these racial inequities in traffic stops, speed enforcement remains a crucial tool to save lives.<sup>52</sup> Automating traffic enforcement using safety cameras may be one way to reduce opportunities of bias in officer-initiated traffic stops. Enforcement by automated speed cameras in New York City has changed driver behavior significantly enough to reduce speeding by up to 60%. The National Highway Traffic Safety Administration reports that fixed speed cameras reduce injury crashes by 20% to 25%, and mobile speed cameras reduce injury collisions by 21% to 51%.<sup>53</sup>

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<sup>52</sup> Pierson, E. et al. (2020). A large-scale analysis of racial disparities in police stops across the United States. *Nature Human Behaviour*, 4(7), 736-745. doi:10.1038/s41562-020-0858-1. <https://www.nature.com/articles/s41562-020-0858-1>

<sup>53</sup> San Francisco Municipal Transportation Agency. (© 2021). Speed Safety Cameras. <https://www.sfmta.com/projects/speed-safety-cameras>

Although over 100 communities across the United States use automated speed enforcement, this tool is not currently authorized in California. A change to state law is required before this technology would be available to local jurisdictions. The California legislature has considered two bills that would allow automated speed enforcement in some capacity, once in 2017 and again in 2021. While the bills prompted important discussions around equity and data privacy, neither was passed into law.

MTC has joined forces with San Francisco, Oakland, San José and a wide spectrum of advocacy organizations to advocate for the option to employ automated speed enforcement.

### A Regional Approach to Recovery — Transit's Path Forward Following COVID-19

In March 2021, transit operators began to grapple with serious funding shortfalls, ridership drops, service cuts, changing safety guidelines and existential questions about the future of public transportation during the onset of the COVID-19 pandemic. In response, MTC took action in May to coordinate at a regional scale by convening a task force to help the Bay Area's transit operators and other decision-makers work together during the pandemic. The Blue Ribbon Transit Recovery Task Force, which wrapped up in July 2021, was comprised of 32 members representing transit operators across the Bay Area, as well as local elected officials, the state Senate and state Assembly, the California State Transportation Agency, business and labor groups, and transit and social justice advocates.

The task force assisted in distributing over \$1 billion in federal COVID-19 relief funds, as well as guiding transit agencies' recovery planning and developing a Transit Transformation Action Plan. Through the task force process, Bay Area transit agencies and their partners ultimately unanimously approved 27 near-term actions to be taken in partnership with MTC, county transportation agencies and other partners. The actions prioritize equity, connectivity, efficiency and customer service, revolving around the themes of fare-payment coordination and integration; customer information; transit priority on roadways to increase bus speeds and reliability; bus and rail network management reform; connected network planning; data collection and coordination; accessibility; and funding. Some actions build off of existing initiatives, while others represent

bold new steps to address complex challenges. The Commission supported the Action Plan in September 2021.<sup>54</sup>

As transit operators and their partners continue the near-term work of implementing the 27 actions, Plan Bay Area 2050 presents a complementary long-range plan for transit recovery in the region. On top of restoring transit service to pre-pandemic levels, Plan Bay Area 2050's transportation strategies infuse billions of dollars into faster and more reliable transit, including new rail lines and express bus service. Highway and local road improvements, plus an expanded network of bike lanes and paths, complement this suite of transit strategies and optimize connections to transit to round out a recovery path for Bay Area public transportation. By coordinating near-term and long-range transit planning, these two efforts — the Transit Transformation Action Plan and Plan Bay Area 2050 — outline the region's commitment to building a system that meets the needs of all current and future Bay Area residents.

### California High-Speed Rail — Connecting to The Megaregion, and Beyond

When it comes to transportation megaprojects, there is no project bigger than California High-Speed Rail, designed to connect the Bay Area, Central Valley and Los Angeles in under three hours. Approved by voters in 2008, construction is well underway in the Central Valley, with new viaducts being built to enable travel at more than 200 miles per hour through the heart of the Golden State. When completed, the project will allow Bay Area residents, commuters and visitors to reach destinations throughout California much more quickly, while avoiding congested highways and busy airports. Importantly, high-speed rail (HSR) also aligns with state and regional climate goals, providing a lower-emissions alternative to driving or flying within the corridor.

With a total cost exceeding \$80 billion, high-speed rail will create new opportunities for communities across the Bay Area, but none more so than in the four cities with HSR stations — San Francisco, Millbrae, San José and Gilroy. While each community has its own unique character and context, these hubs will provide the opportunity for affordable, seamless connections and easy access to destinations not just in the region but in the megaregion and beyond. Each HSR

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<sup>54</sup> The Commission received and supported the Blue Ribbon Transit Recovery Task Force's Transit Transformation Action Plan at the September 22, 2021 Commission Meeting. The supporting materials are available online at: <http://mtc.legistar.com/gateway.aspx?M=F&ID=c871f4d9-59fa-4065-a385-f8221ce579ab.pdf>

station area is identified as a Plan Bay Area 2050 Growth Geography — a focus point for future jobs and housing.

Certainly, not every Bay Area resident will be able to live within walking or biking distance of these four HSR stations. Existing regional rail systems like Caltrain, BART, VTA and Muni will provide connectivity at HSR rail hubs — creating a supportive “rail skeleton” for a next-generation transit network. Infrastructure projects like Caltrain Modernization, slated for completion by 2023, will also improve speeds and service frequencies for Bay Area residents to more quickly connect to planned HSR stations. In the decades ahead, Plan Bay Area 2050 identifies a suite of dual-purpose improvements to provide better access to HSR. In the region’s core, this includes the extension of Caltrain/HSR to San Francisco’s Salesforce Transit Center, the modernization of San José’s Diridon Station and selective grade separations. Further south, grade separations, electrification and modernization investments throughout the Caltrain/HSR corridor extending through the Pacheco Pass would play an integral role in making the statewide vision a reality.

With a funding gap of at least \$15 billion to connect the Bay Area and the Central Valley, and approximately \$45 billion more needed to complete connections to Southern California, it is clear that the federal and state governments must play a central role in funding and delivering this megaproject. Significant and sustained funds from Washington, D.C., and Sacramento are critical to enacting the voter-approved vision. MTC and ABAG are well-positioned to take on a significant role in advocating for federal infrastructure dollars, as Congress considers major infrastructure packages in the months and years ahead.

Moreover, with the Bay Area poised to invest billions of dollars to remake this central corridor, a strong, shared regional vision is critical. MTC and ABAG will work closely with partners in Sacramento and Washington, D.C., to represent Bay Area residents’ priorities for rail connections throughout the region and beyond, including working to ensure that the next phase of construction prioritizes the “Valley to Valley” segment, connecting the Central Valley trunk line to the jobs-rich Bay Area.



Photo: Karl Nielsen

## 5 | Environment

### A Long-Range Vision for the Environment

A healthy natural environment is the foundation for a thriving society. Without fresh air to breathe, clean water to drink, access to nature, and protection from hazardous threats, investments in transportation, housing and economic systems can only go so far to ensure a good quality of life.

What's more, public health orders that confined many to their own neighborhoods throughout 2020 revealed an acute need for more open space. From parks and trails to outdoor dining, quality outdoor spaces are more essential for health and recreation than ever before.

For many, the natural beauty and scenic destinations in all nine Bay Area counties are the primary reason to live in the area. Yearlong temperate weather; fresh food from local farms; and easy access to beaches, forests and mountains have lured residents and visitors alike to the region for centuries. All residents should be able to enjoy these natural riches, but currently access to open space is not shared equally. Threats like climate change and earthquakes also loom large over the region. Bold and timely actions during the next 30 years can ensure that the natural environment is protected from hazards and shared more equitably among the residents who rely on it. California and the Bay Area are leaders in environmental awareness and advocacy, and with thoughtful policies and investments that center equity, governments and their partners can ensure the continued beauty, health and prosperity of the land, water, air and people of the Bay Area.

### Advancing Equity Through the Environment

In an equitable future, all Bay Area residents, regardless of race, age or income, would have access to open space; clean air and water; safe housing; and a full suite of sustainable, accessible transportation choices. All residents, including seniors and those with disabilities, would be able to easily access parks and open spaces close to home and fully enjoy the region's rich natural resources. Climate change's effects grow more hazardous with each additional degree in global temperature, and they are felt most acutely by underserved communities of color and people

with lower incomes — people who often already face uncertain housing situations and health risks before any shock to the region hits.

Equitable environmental strategies must account for past injustices and seek to improve housing stability for those most at risk of displacement due to environmental causes, ensuring the most vulnerable communities are prepared to withstand a range of future environmental shocks. Plan Bay Area 2050 proposes long-term strategies and means-based support to protect those most at risk from environmental hazards and the effects of climate change, including retrofitting residential buildings against wildfires and earthquakes and protecting vulnerable communities from sea level rise.

### Planning for Resilience to Environmental Uncertainty

Plan Bay Area 2050 prioritizes the preservation and improvement of land, air and water in Bay Area communities through strategies that conserve and better use current resources, mitigate the effects of climate change, adapt to hazardous climate events, or minimize the impacts of disastrous seismic episodes or events. Near-, medium- and long-term strategies are all crucial to realizing a vision of an equitable and resilient natural environment in the face of uncertainty. This chapter's strategies fall under three themes to ensure that the Bay Area is environmentally — and equitably — thriving in 2050:

1. **Expand access to parks and open space:** Plan Bay Area 2050 proposes strategies to expand and modernize the Bay Area's open spaces, including accessibility upgrades for people with disabilities and seniors with limited mobility. These spaces range from ecosystem-critical conservation lands to community-building gathering spaces like parks, trails and recreation facilities. Urban growth boundaries established by local jurisdictions as of 2020 would be maintained as housing strategies support growth within an existing urban footprint.
2. **Reduce climate emissions from vehicles:** The plan seeks to mitigate emissions and reduce future climate impacts at the employer level by expanding commute trip reduction programs at major employers. On an individual level, the plan encourages Bay Area residents to drive less through transportation demand management initiatives. When people do choose to drive, Plan Bay Area 2050's strategy to expand clean vehicle initiatives could help them purchase and power their cars with the most environmentally friendly options.
3. **Reduce risks from hazards:** The plan puts forward strategic adaptation measures to address climate change and other natural hazards. Seismic and wildfire impacts are addressed by means-based financial support to retrofit residential buildings. Energy upgrades to enable

carbon neutrality in all commercial and public buildings help to ensure health and safety for everyone. Finally, Plan Bay Area 2050 would fund adaptation measures that protect communities from the dangers of sea level rise.

### Strategies — Expand Access to Parks and Open Space

COVID-19 has exposed just how valuable access to parks and open space can be. Historically, access to parks and open space has been more limited in neighborhoods where low-income people of color live than in wealthier, whiter neighborhoods, largely due to housing and land use decisions. Parks in well-resourced, historically exclusionary areas are more numerous and of higher quality. The need to protect and expand open space, particularly in places with dense housing or limited access to quality parks, has never been clearer.

Whether for exercise, relaxation or socialization, the ease with which a person can access safe, well-maintained parks and open spaces can play a role in physical and mental wellbeing. Aside from these direct benefits, research has shown that greening efforts like planting street trees and expanding parks provide important long-term public health benefits enjoyed by all residents, like improving local air quality and providing shade to reduce extreme heat. Engaging with local communities to create and enhance parks where many people live and work, without displacing residents, is particularly important to equity goals. Additionally, improving access to the Bay Area's open spaces on the periphery of urban areas is key to ensuring equitable access to our region's natural riches. Plan Bay Area 2050's transportation strategies help more people access these spaces by supporting community-led transportation enhancements, eliminating barriers to multi-operator transit trips, and improving the region's roads and highways.

In addition to recreation and health benefits, undeveloped open spaces outside the region's urban footprint play a role in limiting sprawl and supporting climate goals. Restricting future development so that these open spaces remain in their natural state focuses development within more sustainable places — those that are near major employment centers and close to, if not already connected to, services and utilities. Such focused development patterns reduce the number of cars on the road and associated emissions from transportation and other sources. Developed lands on average produce an order of magnitude more greenhouse gas emissions than agricultural or natural lands, but emissions vary by type of developed land: walkable, transit-friendly neighborhoods have a lower climate footprint than poorly connected, low-density

neighborhoods where driving is the primary form of transportation.<sup>55</sup> Creating and improving parks, while also implementing more sustainable land management practices, will improve resilience to wildfires and other hazards, enhance the ability of lands to sequester and store carbon, support urban greening, and provide employment opportunities.

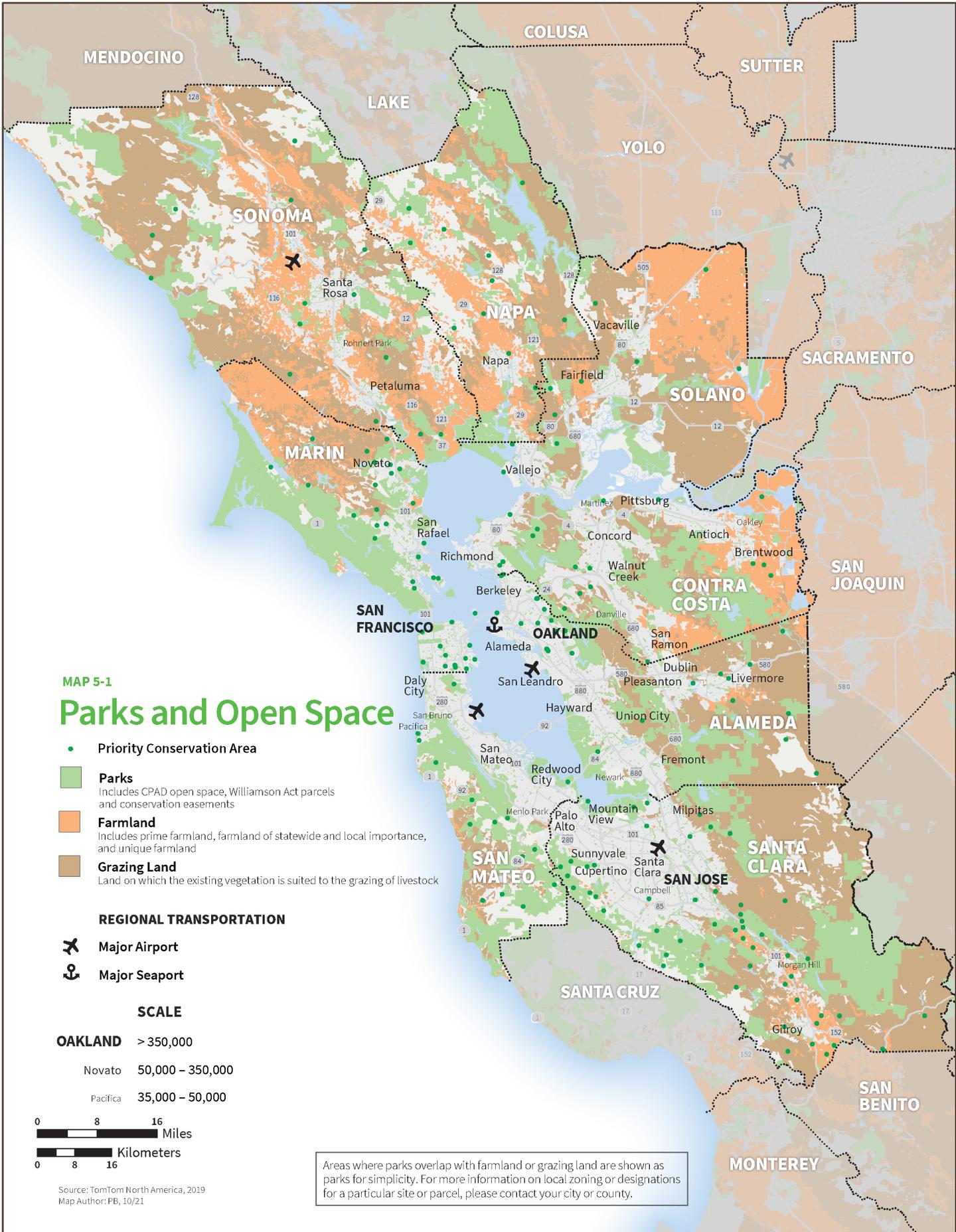
Plan Bay Area 2050 includes strategic investments to **modernize and expand parks, trails and recreation facilities** that will help ensure that the Bay Area’s growing population has access to open space, regardless of where they live. With a forecasted 35% increase in the Bay Area’s population by 2050, additional investments in parks and recreation facilities will be essential to prevent overcrowding and degradation of these vital community resources. Keeping these spaces in a state of good repair and improving them to better provide community-tailored programming can elevate the role of these spaces in building strong, equitable communities. Collaborative action to locate new park facilities in neighborhoods that currently lack open space, including Equity Priority Communities and other historically disinvested areas, would work toward equity goals. As they plan upgrades to open community spaces, governments and their partners must focus on meeting the specific needs of people with disabilities who face systemic barriers to access in all spheres of life. Such steps could build toward a future where all people have an open space in their community where they can relax, connect and play.

The Bay Area is sustained by its natural lands, ranging from the farms and fields that support our local food systems to buffer zones that stand between wildfire-risk areas and cities or towns. The protection and management of these natural lands has numerous benefits, ranging from carbon sequestration, which slows climate change, to water purification, groundwater storage and flood mitigation. These highly valuable ecological benefits are costly to provide artificially; in many cases, they are impossible to replace once they are lost. Plan Bay Area 2050 outlines further actions to **protect high-value conservation lands** that can ensure today’s natural lands continue to thrive well into the future. Regional funds that augment local investments to conserve and manage critical lands would support a regional goal of protecting and maintaining over 2 million acres of open space by 2050.

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<sup>55</sup> US EPA. (2021). Sources of Greenhouse Gas Emissions. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

In order to curb urban sprawl, Plan Bay Area 2050 **maintains urban growth boundaries** already established by local jurisdictions and counties as of 2020. There are currently a variety of locally adopted land use policies that limit where greenfield development may occur. Maintaining boundaries for urban growth will direct new growth within an existing urban footprint, rather than allowing for further sprawl, while simultaneously preserving invaluable open spaces. Strategies described in detail in the housing chapter, such as allowing more housing in Transit-Rich Areas or High-Resource Areas, are projected to spur enough new housing construction to accommodate all projected household growth. The housing needs of a growing region can be balanced in a way that fosters more inclusive communities, supports sustainable transportation choices and works toward environmental health.



MAP 5-1

# Parks and Open Space

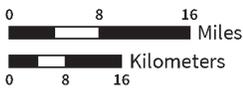
- **Priority Conservation Area**
- **Parks**  
Includes CPAD open space, Williamson Act parcels and conservation easements
- **Farmland**  
Includes prime farmland, farmland of statewide and local importance, and unique farmland
- **Grazing Land**  
Land on which the existing vegetation is suited to the grazing of livestock

**REGIONAL TRANSPORTATION**

- ✈ **Major Airport**
- ⚓ **Major Seaport**

**SCALE**

<b>OAKLAND</b>	> 350,000
Novato	50,000 – 350,000
Pacifica	35,000 – 50,000



Source: TomTom North America, 2019  
Map Author: PB, 10/21

Areas where parks overlap with farmland or grazing land are shown as parks for simplicity. For more information on local zoning or designations for a particular site or parcel, please contact your city or county.

## Strategies — Reduce Climate Emissions

The importance of addressing climate change in the face of ever-worsening events like fires, drought, extreme heat and flooding — and the inequitable burdens they all impose — calls for a swift and sustained reduction in greenhouse gas (GHG) emissions across multiple sectors. Senate Bill 375 (D. Steinberg, Statutes of 2008), a state mandate to reduce GHG emissions from transportation, calls on regions across the state to combat climate change by coordinating land use and transportation planning across cities and counties.

The following environmental strategies work in concert with other strategies described in the housing, transportation and economy chapters of Plan Bay Area 2050 to reduce climate emissions. When implemented together as one package of policies and investments, the 35 plan strategies reduce GHG emissions by focusing housing and commercial construction in walkable, transit-accessible places; investing in transit and active transportation; and shifting the location of jobs to encourage shorter commutes.

Strategies in this chapter recognize that action is needed at a variety of scales and on different timelines. Employers contribute by encouraging their employees to commute sustainably through incentives and disincentives. For individuals, the plan offers policies that support more sustainable transportation choices and promote access to zero-emissions vehicles. Outside the realm of transportation, buildings are retrofitted to be more efficient and emit less pollution. Together, these strategies could make a dramatic dent in the Bay Area's climate emissions, meeting state-mandated targets while simultaneously advancing equitable outcomes.

Nearly one in four trips taken on a typical day in the Bay Area is a commute trip. Plan Bay Area 2050 encourages sustainable commuting habits by **expanding commute trip reduction programs at major employers**. This strategy would require larger firms to provide alternatives to their workers to reduce their rates of driving alone to the workplace. Plan Bay Area 2050 includes significant investments in transit service enhancements, bike lanes and trails, and high-speed internet infrastructure, enabling a future with greener commutes. Employer policies that allow employees to work from home or commute without their cars leverage these investments.

This strategy relies on both increased work-from-home options and a package of incentives and disincentives to encourage more commutes by shared modes (like transit or carpooling) or active modes (like walking or biking), rather than driving alone. The benefits of these options go far

beyond climate emissions. Even amid the obvious employment stresses they brought on, stay-at-home orders associated with the COVID-19 pandemic also demonstrated to many workers and employers the quality-of-life benefits that periodic working from home can bring. Increased telecommuting could also relieve pressure on crowded trains, buses and roadways at peak hours.

By the year 2035, large employers would have to ensure that no more than 40% of their workforce commutes by car on an average workday under the Plan Bay Area 2050 vision. To minimize impacts on small businesses and rural jobs, businesses with fewer than 50 employees would be exempt from this policy, as would agricultural employers. Each employer would have the flexibility to choose the right set of tools for their employees to meet or exceed this target.

Employers may provide free or subsidized transit passes to encourage transit use over car commuting, for example, or direct cash subsidies for employees who choose to walk, bike or telecommute. Parking lots could be reduced in size or eliminated, with the land reused for housing. Compressed work schedules could be yet another tool for employers to help reduce the number of workers commuting by car on any given weekday.

Next, **expanding transportation demand management initiatives** can support and augment employers' commute programs, providing a path to emissions reductions at the individual level. There are many different tactics that make it easier for individuals to shift behavior away from driving alone. Collectively, these tactics are known as transportation demand management (TDM). By reducing Bay Area residents' need to drive alone and making sustainable choices more attractive, government and employers can encourage behavioral shifts that result in fewer cars on the road. Traffic, GHG emissions, and road fatalities and injuries will all decline as a result. Transportation demand management is an area ripe for partnership between regional government, local jurisdictions and the private sector, as well as an opportunity to partner with the state Legislature and the Bay Area Air Quality Management District.

Today, a number of transportation demand management programs are already in place to promote more sustainable travel, including bike share and car share programs and locally imposed trip caps that limit the number of vehicle trips to and from specific employment areas. The Bay Area Commuter Benefits Program, codified into law in 2016, mandates that all employers in the Bay Area with 50 or more full-time employees offer their employees benefits that encourage alternatives to solo car commuting. MTC also coordinates several other transportation

demand management initiatives, such as vanpools, education programs, and mobility hubs that concentrate transit and other shared transportation options at community spaces. These programs and others like them would receive funding and additional support at the regional level to compound their impacts and reach more Bay Area residents.

Every auto trip begins and ends at a parking spot, making parking another transportation demand management tool with great potential to shift individual behavior. There are a number of means at policymakers' and employers' fingertips related to parking that can encourage people to use alternatives to driving alone to work. For example, commuter benefits programs can financially incentivize employees to take transit, and eliminating free parking at workplaces may discourage them from driving. An oversupply of parking encourages driving and impacts everyone, whether they drive or not. In addition to the harmful environmental effects of increased driving, the costs of constructing and managing parking in a building are typically passed on to property owners and renters. Land currently used for personal vehicle storage also prevents other potentially valuable uses of the space, such as housing or parks.

However, there are enduring policies in many cities and counties that mandate building a minimum number of parking spaces at new housing and office developments, regardless of demand. Removing parking mandates can allow for parking to better match market demand while aligning with transportation demand management strategies that reduce driving and traffic. Implementing this strategy benefits housing affordability as well, by allowing developers to forgo the expense of adding unnecessary parking and pass those savings on to renters or homebuyers.

While Plan Bay Area 2050 seeks to reduce the overall need for vehicle trips, it also recognizes that every trip is different and that cars will continue to be a transportation option into the future. In addition to the above strategies that reduce driving trips, the plan also explores strategies that can make those remaining auto trips as sustainable as possible by **expanding clean vehicle initiatives**. The long lifespan of most vehicles presents an opportunity for Bay Area residents to retire their older, more polluting vehicles in exchange for rebates to buy zero-emission vehicles.

Aside from support for vehicle purchasing, a suite of supportive programs within MTC's Climate Initiatives Program would further facilitate the adoption of clean vehicles. These programs include a regional electric vehicle charger network and incentives to trade in fossil fuel-powered vehicles for electric vehicles. To advance equity through clean vehicle initiatives, Plan Bay Area 2050 places

a specific emphasis on providing charging infrastructure in Equity Priority Communities and supporting households with low incomes to choose electric when replacing vehicles.

### Strategies — Reduce Risks from Hazards

The most high-profile and more visibly destructive environmental events come from hazards like extreme weather, wildfires, droughts, earthquakes and sea level rise. Plan Bay Area 2050's third suite of environmental strategies falls under the theme of reducing risks from these hazards.

Even today, the impacts of extreme weather are evident. Wildfires that threaten thousands of homes are now an annual occurrence; autumn days with extreme, fire-prone weather have more than doubled in California since the 1980s; and prolonged periods of drought continue to increase and become more variable across the West.<sup>56, 57</sup> Traffic is already routinely rerouted on several low-lying roads during king tide events — annual periods of very high tides that are becoming more frequent as sea levels rise, offering a preview of how flooding may alter the landscape in coming decades. The threat of a major earthquake has also always loomed large over the region, with recent notable earthquakes occurring in the Bay Area in 1989 with the Loma Prieta and in southern Napa County in 2014. Scientific forecasts estimate a roughly 75% chance that the region will experience a major earthquake over the next 30 years.<sup>58</sup>

Events like fires, floods, droughts and earthquakes will continue to shape the Bay Area over the next 30 years and beyond. Plan Bay Area 2050 takes these risks into account, discouraging growth in high-risk wildfire areas; planning to protect homes, businesses and transportation infrastructure from sea level rise; and considering avenues to minimize damage from a major earthquake. One major question for the region is how much sea level rise is expected to occur over the next 30 years. The plan assumes 2 feet of sea level rise by 2050 and addresses those near-term inundation impacts, preparing to prevent temporary shoreline flooding events (from either sea level rise or storms) from becoming permanent.<sup>59</sup> Given the uncertainty of exactly how

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<sup>56</sup> Goss, M. et al. (2020). Climate change is increasing the risk of extreme autumn wildfire conditions across California. *Environmental Research Letters*, 15(9). <https://doi.org/10.1088/1748-9326/ab83a7>

<sup>57</sup> Brandt, Rosemary (2021, April 5). Longer, More Frequent Periods of Drought Plague Western United States. *UArizona News*. <https://news.arizona.edu/story/longer-more-frequent-periods-drought-plague-western-united-states>

<sup>58</sup> USGS. (2016). *Earthquake Outlook for the San Francisco Bay Region 2014–2043*. <https://pubs.usgs.gov/fs/2016/3020/fs20163020.pdf>

<sup>59</sup> See the *State of California Sea-Level Rise Guidance 2018 Update*, which projects a 1 in 200 chance of exceeding 1.9 feet by the year 2050, characterizing this projection as a medium-high risk averse choice:

[https://www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20180314/Item3\\_Exhibit-A OPC SLR Guidance-rd3.pdf](https://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A OPC SLR Guidance-rd3.pdf)

and when these hazards will manifest in the region, strategies in Plan Bay Area 2050 seek to advance common-sense solutions to better prepare residents for any scenario.

A major earthquake could happen at any time, and wildfires already rage across the Bay Area. While newly constructed houses and apartment buildings are now subject to much stricter requirements on seismic integrity, fire resistance and utility efficiency, much of the region's existing home stock is comprised of buildings that are decades or centuries old. Many older buildings are not built to withstand major shaking, with structural deficiencies that make them vulnerable to damage during earthquakes, and they often lack the protections needed to reduce risk of burning during wildfires. Older buildings also tend to be less water- and energy-efficient, adding to climate emissions that in turn make wildfire, sea level rise and other climate-influenced hazards more severe.

To ensure that cost is not a barrier to living in a safe, hazard-resistant home, Plan Bay Area 2050 aims to **provide means-based financial support to retrofit existing residential buildings**. These investments would ensure higher wildfire and seismic standards to protect residents, especially those with low incomes, from fire and earthquakes. This strategy would also fund water and energy upgrades to lower utility bills and reduce waste.

For residents living in wildfire-prone parts of the Bay Area, fire-resistant roofing and fire-wise landscaping are key areas of safety-focused home improvement. Older homes throughout the Bay Area are also in need of safety upgrades to bring them up to modern standards. Targeted investments for homes would address structural weaknesses that lead to seismic damage, such as buildings with unbraced crawl spaces or multi-story buildings with large openings on the ground floor, known as soft-story buildings.

Other home modification assistance, beyond safety upgrades, could include energy efficiency upgrades and electrification to replace natural gas for heating and cooking. These improvements would save families money on their energy bills and help to reduce GHG emissions, further strengthening all the plan's strategies that work together to reduce climate emissions.

Drought and water supply are also major environmental concerns for California and the Bay Area looking out to the mid-21st century. To reduce water use in homes and yards designed before modern standards, Plan Bay Area 2050 supports residential water efficiency upgrades. The plan's housing strategies also encourage less water use by promoting a mix of different housing types,

including infill development and multi-family developments that conserve more water per person than single-family homes. Together, these housing and environmental strategies seek to limit the overall water demand in the Bay Area and reduce the strain of future droughts on water supplies.

Plan Bay Area 2050 primarily directs financial assistance for building renovations toward households with low incomes and families living in Equity Priority Communities that may not have the resources for home improvements. Families living in buildings constructed before current safety codes were adopted and owners of apartment buildings would also receive financial support for renovations.

In addition to residential buildings, improvements targeting public and commercial buildings help meet Plan Bay Area 2050's climate goals and ensure that critical services remain functional in the event of a disruptive environmental hazard. A regional plan to **fund energy upgrades to enable carbon neutrality in all existing commercial and public buildings** would amplify the combined impact of climate emissions reduction strategies. Local governments across California are aggressively adopting all-electric new construction standards (i.e., to use electricity rather than rely on fossil fuels such as natural gas or propane to power furnaces, boilers or water heaters), though more leadership and action are still needed to retrofit existing public and commercial buildings in the region to make them carbon-neutral. Plan Bay Area 2050 supports fully decarbonizing existing publicly owned and commercial buildings by eliminating natural gas components and installing energy-efficient electrical systems.

Additionally, the plan supports the development of solar storage and microgrids to facilitate on-site clean energy generation, empowering communities to be more resilient to power loss during interruptions. These investments make essential buildings like hospitals, schools and food markets safer in the event of an earthquake or fire and reduce their contribution to climate change — a force that accelerates the severity and frequency of environmental hazards.

By 2050, flooding from rising sea levels threatens to destroy tens of thousands of homes and workplaces, and close several major highways. Coordinated action at the regional level is needed to **adapt to sea level rise** and protect homes, businesses, transportation corridors and natural resources. Without intervention, flooding could have devastating impacts regionwide, including constricting an already limited housing supply even further. Plan Bay Area 2050 imagines a future of regional sea level rise adaptation, where vulnerable communities can employ a mix of human-

engineered “grey” infrastructure and natural “green” infrastructure to protect the majority of these at-risk areas, as well as road and rail assets at risk of inundation.

While there is still important research to be done to understand the appropriateness and efficacy of various adaptation measures, Plan Bay Area 2050 emphasizes nature-based interventions, such as restoring degraded marshes or implementing ecotone levees — physical structures that protect communities and provide surface area where shoreline vegetation and habitats can slowly migrate up slope over time. These natural interventions have ecological benefits beyond stemming the impacts of sea level rise, as marshlands provide animal habitats, restore ecosystems and purify water. Plants growing in marshes or on ecotone levees also pull carbon dioxide from the air, contributing to lower climate emissions, not to mention their scenic and recreational value. Plan Bay Area 2050 adds its efforts to an existing regional goal of restoring 100,000 acres of marsh.<sup>60</sup>

In cases where natural methods are not feasible due to space or development, built infrastructure like sea walls, traditional levees (embankments typically constructed with fill material), or infrastructure elevation provide other options. Sea walls and levees are already employed throughout the Bay Area and currently protect San Francisco’s Embarcadero and port facilities, the city of Belvedere in Marin County, and Foster City in San Mateo County. San Francisco International Airport is also planning to surround itself with a sea wall in the coming decade.<sup>61</sup> Elevating infrastructure, of interest particularly for transportation corridors, allows low-lying connections to remain in operation, albeit at a substantial financial cost. Through elevation and other interventions, Plan Bay Area 2050 protects road and rail corridors that are vulnerable to flooding, including State Route 37, a critical east-west connection for the North Bay; segments of U.S. Highway 101 in the Peninsula and Marin County; and vital freight and commuter rail lines traversing marshlands in Solano and Santa Clara counties.

Plan Bay Area 2050 focuses resources on protecting Equity Priority Communities with limited financial resources from flooding and related displacement. Under the plan’s strategies, 98% of

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<sup>60</sup> The goal was established in the 1999 Baylands Ecosystem Habitat Goals and remains a regional goal as of its latest update, in 2015: [https://baylandsgoals.sfei.org/wp-content/uploads/2015/10/Baylands\\_Complete\\_Report.pdf](https://baylandsgoals.sfei.org/wp-content/uploads/2015/10/Baylands_Complete_Report.pdf)

<sup>61</sup> San Francisco International Airport. (2019, March). Airport Shoreline Protection Program: Fiscal Feasibility Study. <https://sfgov.legistar.com/View.ashx?M=F&ID=7513892&GUID=EC2CED9E-FB3A-4A25-930E-D481824BE6AD>

homes regionwide are protected from sea level rise, including all homes in Equity Priority Communities, as well as most workplaces in the region.

## Funding and Implementation — Environmental Strategies

Plan Bay Area 2050’s environmental strategies chart the course for a Bay Area where development is focused within an existing urban footprint; ringed by natural lands that are well-maintained; and dotted with parks and trails that provide easy access to open space, regardless of where a person lives. Together, these nine environmental strategies shift the Bay Area toward a more equitable future by ensuring that residents with low incomes can live in safe homes, access nature and breathe fresh air. Through advocacy, legislation, initiatives, planning and research over the next 30 years, MTC and ABAG can work with partners to secure a \$103 billion investment into our region’s future health and safety, ensuring that our natural land, air and water belongs to everyone — especially those historically and systemically marginalized, underserved and excluded.



Photo: Noah Berger

## Environmental Strategies — Cost: \$103 Billion<sup>62</sup>

- **Theme: Reduce Risks from Hazards**

- **EN1. Adapt to sea level rise.**

Protect shoreline communities affected by sea level rise, prioritizing low-cost, high-benefit solutions and providing additional support to vulnerable populations.

Cost: \$19 billion

- **EN2. Provide means-based financial support to retrofit existing residential buildings.**

Adopt building ordinances and incentivize retrofits to existing buildings to meet higher seismic, wildfire, water and energy standards, providing means-based subsidies to offset associated costs.

Cost: \$15 billion

- **EN3. Fund energy upgrades to enable carbon neutrality in all existing commercial and public buildings.**

Support electrification and resilient power system upgrades in all public and commercial buildings.

Cost: \$18 billion

- **Theme: Expand Access to Parks and Open Space**

- **EN4. Maintain urban growth boundaries.**

Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions.

Cost: N/A

- **EN5. Protect and manage high-value conservation lands.**

Provide strategic matching funds to help conserve and maintain high-priority natural and agricultural lands, including but not limited to, Priority Conservation Areas and wildland-urban interface areas.

Cost: \$15 billion

- **EN6. Modernize and expand parks, trails and recreation facilities.**

Invest in quality parks, trails and open spaces that provide inclusive recreation opportunities for people of all backgrounds, abilities and ages to enjoy.

Cost: \$30 billion

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<sup>62</sup> Numbers may not sum due to rounding.

- **Theme: Reduce Climate Emissions**

- **EN7. Expand commute trip reduction programs at major employers.**

Set a sustainable commute target for major employers as part of an expanded Bay Area Commuter Benefits Program, with employers responsible for funding incentives and disincentives to shift auto commuters to any combination of telecommuting, transit, walking and/or bicycling.

Cost: N/A

- **EN8. Expand clean vehicle initiatives.**

Expand investments in clean vehicles, including more fuel-efficient vehicles and electric vehicle subsidies and chargers.

Cost: \$5 billion

- **EN9. Expand transportation demand management initiatives.**

Expand investments in programs like vanpools, bikeshare, carshare and parking fees to discourage solo driving.

Cost: \$1 billion

## Environment | Supplementary Content

### New Development and Transportation Impacts — Senate Bill 743 as Emerging Policy

Senate Bill 743 (D. Steinberg, Statutes of 2013), implemented across the state in 2020, represents a rethinking of the transportation impacts of development. Historically, California environmental review has evaluated the transportation impacts of new developments based on their forecasted change in traffic congestion as measured by **level of service**, a method to qualitatively describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay and safety. Infill development in existing neighborhoods, when measured by level of service, could appear to be more environmentally harmful than development on greenfield sites in uncongested exurbs due to existing congestion within the already urbanized area. SB 743 updates the environmental review process to focus instead on the amount of new driving — as measured by **vehicle miles traveled** — that development incentivizes. As a result, developers may shift their anti-congestion priorities from roadway widening to support for shared or active travel or transportation demand management. While it is still too soon to quantify the impacts of SB 743, this reframing of environmental review is a significant new approach that will influence regional climate and housing production goals.

### Clean Air Plan — The Air District’s Strategy for Pollution Reduction

The Bay Area Air Quality Management District (Air District) is the Bay Area’s air pollution control agency. In 2017, the Air District adopted Spare the Air, Cool the Climate, its current Clean Air Plan, which provides a regional framework to meet state and federal air quality standards and work toward eliminating health risk disparities from exposure to air pollution. The Clean Air Plan further defines a vision and a regional climate protection strategy for transitioning to a post-carbon economy and achieving ambitious state greenhouse gas reduction targets for 2030 and 2050. While Plan Bay Area 2050’s strategies work to reduce per capita CO<sub>2</sub> emissions from vehicles and buildings, the Air District’s plan addresses a much wider range of pollutants from a much larger number of sources. To that end, Plan Bay Area 2050 is one piece of the air quality puzzle, but additional policies and investments are needed to meet the Air District’s more ambitious targets.

Several Plan Bay Area 2050 strategies align with Clean Air Plan strategies, including road pricing, advancing electric vehicle adoption, and retrofitting buildings to be more energy-efficient and carbon-neutral. In addition, the Air District advocates for limiting fossil fuel combustion at

industrial facilities, stopping methane leaks, reducing exposure to toxic air contaminants, promoting clean fuels and supporting community choice energy programs throughout the Bay Area as part of its plan.

Since 2017, the Air District's Community Health Protection Program has also been working with Bay Area communities to plan and implement Assembly Bill 617 (C. Garcia, Statutes of 2017), a mandate to improve community health and promote equity by reducing exposure to air pollutants in neighborhoods most impacted by air pollution. Air District staff work closely with state, local and regional governments, including MTC and ABAG, as well as community groups and other stakeholders, to identify and reduce harmful air pollutants. Strategies included in Plan Bay Area 2050 advance equity by aligning with the goals and objectives of the Community Health Protection Program to target investments where they are most needed.

### State Action on Vehicles

The Bay Area is not acting alone to promote a more sustainable future. Several mandates and pieces of legislation have been enacted in recent years at the state level to address GHG emissions, including California Executive Order N-79-20 (2020), which requires all new vehicles sales to be zero-emission vehicles by 2035. Plan Bay Area 2050's clean vehicle strategy accelerates the Bay Area's transition in advance of the state mandate by subsidizing charging infrastructure required to support an all-electric future and by promoting incentives to encourage vehicle owners to trade in their older, high-polluting cars for zero-emission vehicles. The state mandate will require significant support to achieve, particularly to reach lower-income buyers, and Plan Bay Area 2050's investment in a buyback incentive will help the region step up to meet the state's goals.

Additionally, Senate Bill 1014 (N. Skinner, Statutes of 2018) establishes new requirements for transportation network companies (such as Uber and Lyft) to curb GHG emissions. The California Public Utilities Commission and the California Air Resources Board are in the process of finalizing the regulatory framework; the companies will be required to develop a GHG emissions reduction plan and begin meeting their GHG reduction targets by 2023.

### Sea Level Rise Adaptation Approaches

There are a number of adaptation options for rising sea levels, each with its own suitability along the San Francisco Bay's diverse shoreline. While the right measure for each vulnerable community

in the Bay Area will be determined through local planning and engagement, Plan Bay Area 2050 imagines the following set of example adaptation techniques that could be deployed in response to rising seas. In reality, there are many more possible sea level rise adaptation measures, including a number of nature-based solutions like submerged aquatic vegetation, nearshore reefs and beach nourishment, that could be prioritized where suitable.

- **Marsh restoration:** rehabilitating or re-establishing a marsh area to return its natural functions and restore wetland habitat; 100,000 acres of marsh restoration is a goal for the region.
- **Ecotone levees:** creating a gently sloped levee, which can attenuate waves, ecotone levees provide a wetland- upland transition zone habitat and allow marshland to migrate upslope.
- **Elevation:** reconstructing roadway or rail infrastructure so that it is higher than the projected inundation level while maintaining or creating connections between ecosystems.
- **Managed retreat:** acquiring residential properties where other adaptation efforts are cost-prohibitive or unlikely to be successful in the long-term.
- **Sea walls and traditional levees:** constructing physical barriers, either of human-engineered materials in the case of sea walls, or natural materials in the case of levees, to deter erosion and inundation.

MAP 5-2

# Sea Level Rise Resilience Investments

## ADAPTATION INVESTMENTS

 Elevated Roads/Rail, Ecotone and Traditional Levees, Seawalls and Tidal Gates

 Marsh Restoration

## AREAS OF PROTECTION

 Areas Protected

 Areas Not Protected

## CRITICAL INFRASTRUCTURE

 Major Seaport

 Major Airport

 Rail

 Highway and Interstate

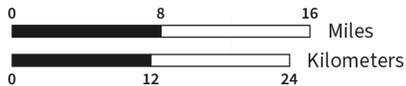
 Major Road

## SCALE

**OAKLAND** > 350,000

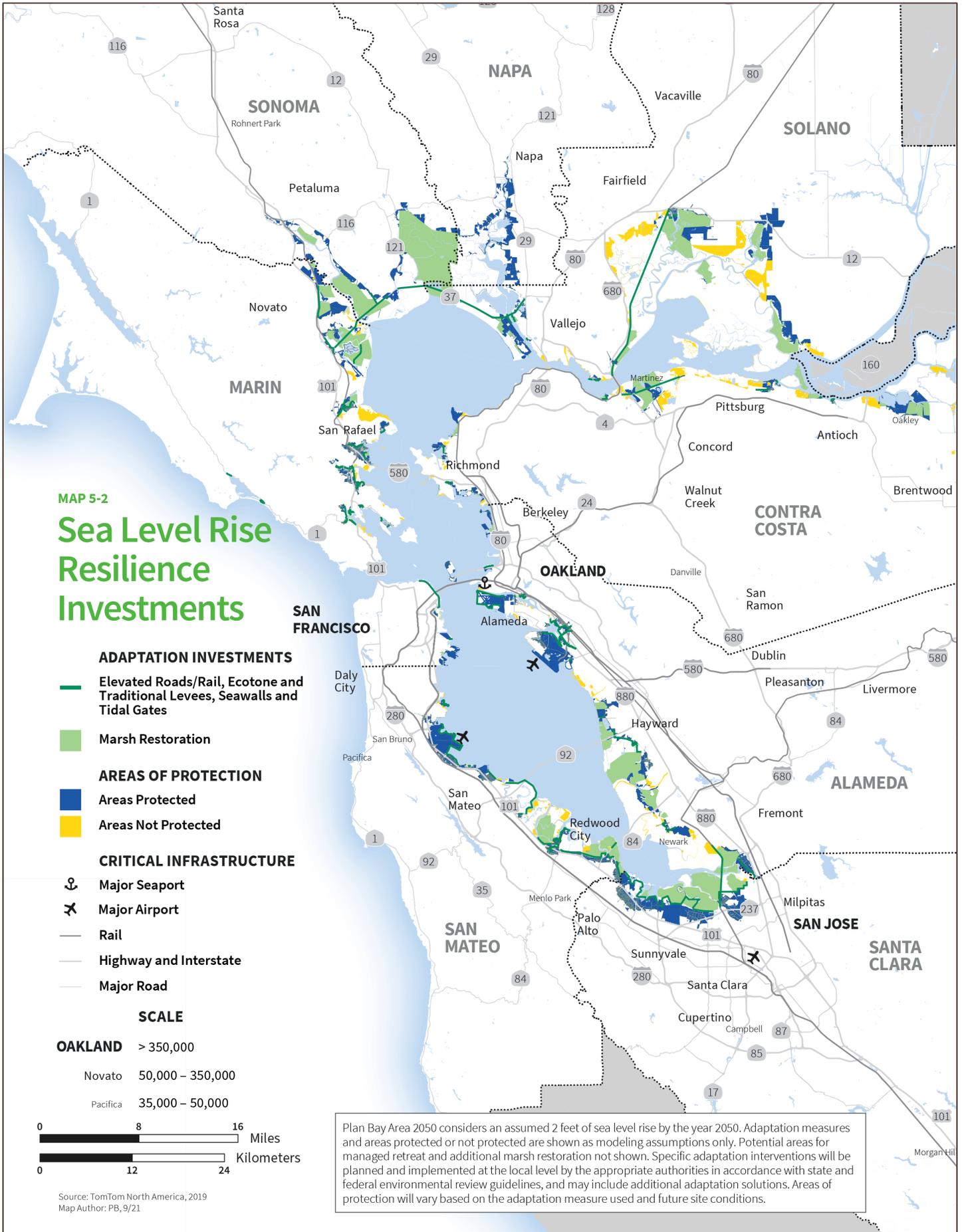
Novato 50,000 – 350,000

Pacifica 35,000 – 50,000



Source: TomTom North America, 2019  
Map Author: PB, 9/21

Plan Bay Area 2050 considers an assumed 2 feet of sea level rise by the year 2050. Adaptation measures and areas protected or not protected are shown as modeling assumptions only. Potential areas for managed retreat and additional marsh restoration not shown. Specific adaptation interventions will be planned and implemented at the local level by the appropriate authorities in accordance with state and federal environmental review guidelines, and may include additional adaptation solutions. Areas of protection will vary based on the adaptation measure used and future site conditions.



## Bay Adapt — Regional Strategy for a Rising Bay

Bay Adapt is a regional initiative that aims to answer the question: What are the top actions necessary to adapt the Bay Area faster, better and more equitably to rising sea levels?

Threatening our wetlands, frontline communities, infrastructure, homes and workplaces, a rising bay requires collective will, local and regionwide action, and broad leadership. No one agency, jurisdiction or community can or should do it alone. Led by the San Francisco Bay Conservation and Development Commission (BCDC), a state agency dedicated to the bay's coastal management, and in partnership with community, local, regional, state and federal leaders, Bay Adapt developed a platform of priority actions in 2021. BCDC will continue to facilitate the implementation of the actions by key partners in 2021 and beyond.

This strategic initiative builds upon the work of BCDC's Adapting to Rising Tides program. In 2020, BCDC, the Bay Area Regional Collaborative, MTC, ABAG and Caltrans released Adapting to Rising Tides Bay Area, a groundbreaking regional vulnerability and adaptation study. The study assessed the potential impacts of sea level rise across a number of areas, ranging from transportation networks to socially vulnerable communities, natural resources, and areas primed for future housing construction. The report also included a number of local case studies throughout the Bay Area, providing critical implementation direction for cities and towns. The study highlighted the urgency with which regional and local actors must come together to address this looming crisis.

## Preparing for Climate Uncertainty: Wildfire Mitigation and Adaptation

Realizing that frequent fires do occur naturally in the area, Native American tribes in what is now Northern California held controlled burns for thousands of years as a land management strategy before they were prohibited from doing so by the California state government nearly a century ago.<sup>63</sup> Since the 1980s, the fires that sweep across the state have increased in size and ferocity; five of the six largest fires in California history occurred in 2020 alone.<sup>64</sup> Scientists agree that the influence of climate change is evident in the increased fire risk of the 21st century, as hotter air means drier plants that burn more readily in fire seasons with longer and longer durations.<sup>65</sup>

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<sup>63</sup> Sommer, L. (2020, August 24). To Manage Wildfire, California Looks To What Tribes Have Known All Along. *NPR*. <https://www.npr.org/2020/08/24/899422710>

<sup>64</sup> State of California. (2021). California's Wildfire and Forest Resilience Action Plan. <https://fmtf.fire.ca.gov/media/cjwfpckz/californiawildfireandforestresilienceactionplan.pdf>

<sup>65</sup> Goss, M. et al. (2020). Climate change is increasing the risk of extreme autumn wildfire conditions across California. *Environmental Research Letters*, 15(9). <https://doi.org/10.1088/1748-9326/ab83a7>

The potential destruction of a wildfire cannot be understated. In 2017, wildfires in the North Bay resulted in the destruction of nearly 10,000 homes. Damage to homes, infrastructure and ecosystems are immediate impacts of intensified wildfires, with air- and water- quality impacts extending far beyond the fire's footprint. Plan Bay Area 2050 addresses wildfire with strategies that rely on the three core adaptation principles of **land use**, **land management** and **structural hardening**:

1. **Land use strategies** ensure that future development does not occur in the most at-risk places. Plan Bay Area 2050 maintains urban growth boundaries by restricting growth outside them and does not allow for new priority growth areas to overlap with the highest fire hazard severity zones. This restriction on growth is made feasible by the identification of other safer, more easily mitigated areas of the region to accommodate future growth.
2. **Land management**, of both open and working lands, aims to reduce the intensity of future fires by addressing vegetation and other land characteristics that contribute to wildfires. Wildfire management techniques include reducing combustible materials, called fuel loads, and retaining critical buffer zones that slow the spread of wildfire where forests and urbanized areas meet. The strategy to protect and manage high-value conservation land would ensure the stewardship of these lands for generations.
3. **Structural hardening** combats fire risk in communities already at risk of fire damage. The strategy to modernize existing residential buildings is designed to reduce risk in over 75,000 Bay Area homes. This strategy would incentivize proven structural hardening methods — like wildfire-resistant roofing and fire-wise landscaping — to support residents in high-risk zones.

Together, these strategies focus future growth away from the highest-fire-risk zones, support increased wildland management programs to reduce ignition risk and fire intensity, and support residential building upgrades that reduce the likelihood of damage when fires occur in the wildland-urban interface.

## 6 | Outcomes

### Outlining a Shared Vision for the Future

From the beginning, public input and engagement have fundamentally shaped Plan Bay Area 2050. Work for this regional plan started by talking to Bay Area residents in 2018 to understand their priorities looking out to 2050, resulting in the adopted vision and guiding principles for Plan Bay Area 2050: to ensure by the year 2050 that the Bay Area is affordable, connected, diverse, healthy and vibrant for all.

In the three years that followed, much has changed for the Bay Area — the COVID-19 pandemic upended everyday life; a period of unprecedented economic growth turned to a recession; wildfires cast an orange haze over our skies; and social movements for racial justice gained momentum. As a plan rooted in resilience to uncertainty as well as equity, Plan Bay Area 2050 is well positioned to advance the priorities identified by Bay Area residents, even in this unpredictable time.

The prior chapters outlined 35 strategies across four elements: housing, the economy, transportation and the environment. This chapter delves into the Bay Area’s forecasted future in 2050 with the strategies in place, and it is organized by guiding principle. Strategies are interrelated and often have impacts across and beyond their designated topic areas; for example, a housing strategy to allow more housing in Transit-Rich Areas also impacts transportation and the natural environment, and the “connected” and “healthy” guiding principles both capture these overlapping impacts. For a full breakdown of the performance outcomes of Plan Bay Area 2050’s strategies, as well as MTC and ABAG’s analysis of how these outcomes differ from a regional trajectory where no new policies or investments are made to tackle our cross-cutting crises, refer to the Plan Bay Area 2050 Performance Report.

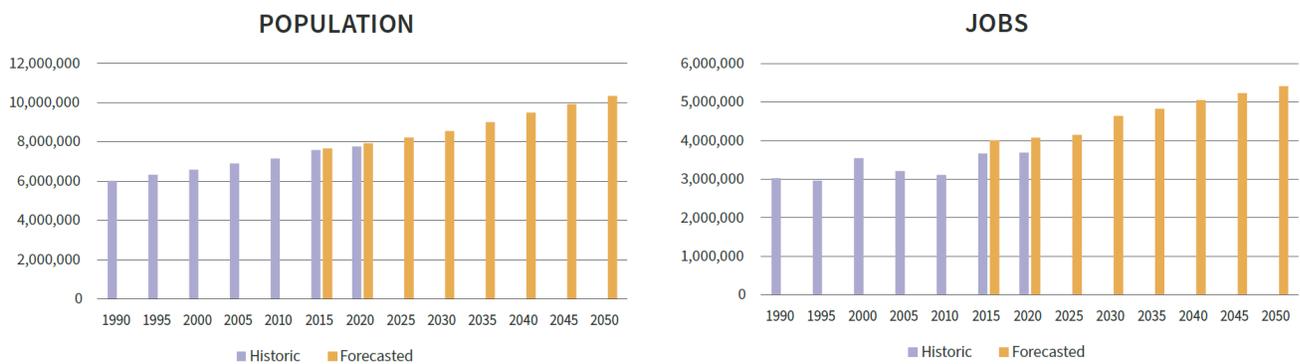
### Growing to Accommodate the Bay Area of 2050

The Bay Area in 2020 was in the midst of unprecedented economic growth before the COVID-19 pandemic hit, bringing with it an economic recession. More booms and busts can be expected over the next three decades, and despite these economic ups and downs, the number of households and jobs in the region is projected to grow through 2050.

Between 2015 and 2050, the region is forecasted to add 1.4 million new jobs, for a total of 5.4 million Bay Area workers. Household growth is anticipated to roughly follow pace, adding slightly fewer than 1.4 million new households for a total of 4 million households by 2050. This growth would bring the Bay Area’s population to an estimated 10.3 million residents by 2050, up from around 7.8 million today.

To accommodate new families and meet the needs of those living in the Bay Area today, Plan Bay Area 2050 plans for sufficient housing growth (i.e., growth in the number of homes available) to ensure that strong job growth is not met with an increase in traffic congestion and long-distance commuters traveling to the Bay Area from outside of the region. In total, the region would need to build another 1.4 million new homes by 2050 to meet forecasted future demand.

**Figure 6-1.** Historic and forecasted population and job growth<sup>66</sup>



### Regional Growth Trends

New jobs and housing, as shaped by Plan Bay Area 2050’s strategies, would grow in locations that support transit and advance access to opportunities like jobs, well-resourced schools, healthcare and open spaces. A number of strategies play a direct role in shaping the trajectory of growth, from allowing more housing density in growth areas to maintaining present-day urban growth boundaries to limit sprawl.

As a result of the plan’s strategies, housing growth is forecasted to cluster in defined Growth Geographies, with 85% of new households locating to these areas deemed well positioned for

<sup>66</sup> Historic population data come from the California Department of Finance's Population and Housing Estimates (1990 to 2015) and the U.S. Census Bureau's Public Law 94-171 Redistricting Data (2020). Historic jobs data (1990 to 2020) are annual averages from the Bureau of Labor Statistics' Quarterly Census of Employment and Wages. Self-employed individuals are not included in the historic jobs count, though they are included in the forecasted jobs count.

growth due to their proximity to existing or planned transit and/or their location in state-defined High-Resource Areas.<sup>67</sup> In particular, Transit-Rich Areas would see the lion's share of new household growth, with over 80% of new households located in Transit-Rich Areas. Meanwhile, historically exclusive High-Resource Areas are projected to house nearly 30% of new households.

Household growth by location is outlined below:

- **Growth Geographies**
  - Number of households in 2015: 1,018,000
  - Number of households in 2050: 2,178,000
  - Percentage change (2015 to 2050): +114%
  - Share of regional growth (2015 to 2050): 85%
- **Priority Development Areas**
  - Number of households in 2015: 687,000
  - Number of households in 2050: 1,672,000
  - Percentage change (2015 to 2050): +143%
  - Share of regional growth (2015 to 2050): 72%
- **Transit-Rich Areas**
  - Number of households in 2015: 1,343,000
  - Number of households in 2050: 2,460,000
  - Percentage change (2015 to 2050): +83%
  - Share of regional growth (2015 to 2050): 82%
- **High-Resource Areas**
  - Number of households in 2015: 1,144,000
  - Number of households in 2050: 1,526,000
  - Percentage change (2015 to 2050): +33%
  - Share of regional growth (2015 to 2050): 28%
- **Region**

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<sup>67</sup> See the Growth Geographies section in the Introduction chapter for more information on the Plan Bay Area 2050 Growth Geographies.

- Number of households in 2015: 2,677,000
- Number of households in 2050: 4,043,000
- Percentage change (2015 to 2050): +51%
- Share of regional growth (2015 to 2050): 100%<sup>68</sup>

While not as focused as housing growth, the majority of all job growth would be concentrated in Growth Geographies, with 60% of jobs expected to be located within walking distance of high-quality transit. The co-location of household and job growth in these areas is critical to enabling shorter and more sustainable commutes, as well as providing much-needed services to new residents. A smaller share of job growth is predicted for High-Resource Areas; job growth is a lower priority in these areas, many of which are already located near major employment centers in the Peninsula and South Bay.

Job growth by location is outlined below:

- **Growth Geographies**
  - Number of jobs in 2015: 2,382,000
  - Number of jobs in 2050: 3,156,000
  - Percentage change (2015 to 2050): +32%
  - Share of regional growth (2015 to 2050): 55%
- **Priority Development Areas**
  - Number of jobs in 2015: 1,882,000
  - Number of jobs in 2050: 2,561,000
  - Percentage change (2015 to 2050): +36%
  - Share of regional growth (2015 to 2050): 48%
- **Transit-Rich Areas**
  - Number of jobs in 2015: 2,504,000
  - Number of jobs in 2050: 3,386,000

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<sup>68</sup> Numbers do not sum to 100% because Priority Development Areas, Transit-Rich Areas and High-Resource Areas are not mutually exclusive.

- Percentage change (2015 to 2050): +35%
- Share of regional growth (2015 to 2050): 63%
- **High-Resource Areas**
  - Number of jobs in 2015: 1,332,000
  - Number of jobs in 2050: 1,530,000
  - Percentage change (2015 to 2050): +35%
  - Share of regional growth (2015 to 2050): 63%
- **Region**
  - Number of jobs in 2015: 4,005,000
  - Number of jobs in 2050: 5,408,000
  - Percentage change (2015 to 2050): +35%
  - Share of regional growth (2015 to 2050): 100%<sup>69</sup>

### Local Growth Trends

MTC and ABAG’s analysis shows that Plan Bay Area 2050’s strategies would also shift how people, homes and jobs are distributed across the Bay Area’s nine counties. Santa Clara County, currently the region’s most populous county, is expected to lead the counties in household growth, with one in every three new households located in the county. As home to large employment clusters, Santa Clara County is also anticipated to lead in job growth, as prominent industries like information and technology are poised to see further growth and as education, healthcare and business services are expected to expand to support a growing population. In total, just under 35% of new jobs in the region are projected to be located in Santa Clara County.

The East Bay, comprised of Alameda and Contra Costa counties, is expected to take on another one-third of housing growth, distributed across urban and suburban Growth Geographies. The two counties combined are projected to accommodate around one-third of the region’s job growth. Alameda County is expected to have the second highest share of both household and job growth after Santa Clara County. Because so much of the Bay Area’s housing is already located in Alameda County, with many of its residents commuting to other counties for work, intensified job

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<sup>69</sup> Numbers do not sum to 100% because Priority Development Areas, Transit-Rich Areas and High-Resource Areas are not mutually exclusive.

growth in Alameda County could help to address the jobs-to-housing imbalance and associated transportation challenges, such as congested roads and crowded trains.

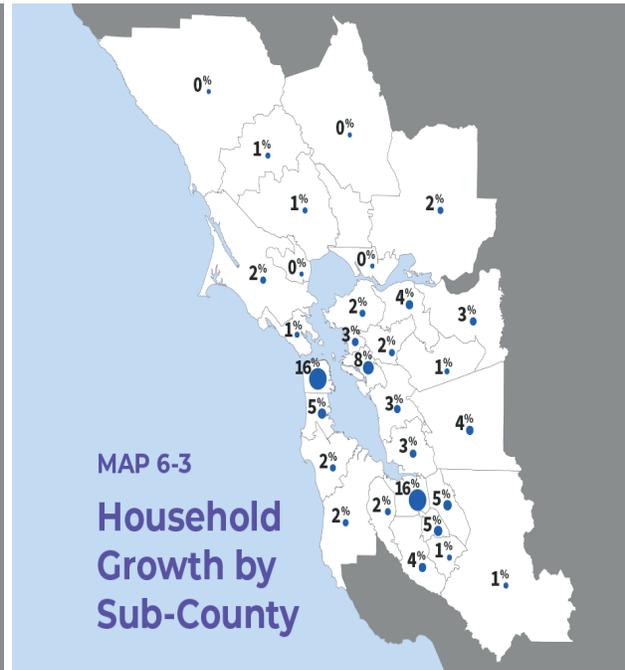
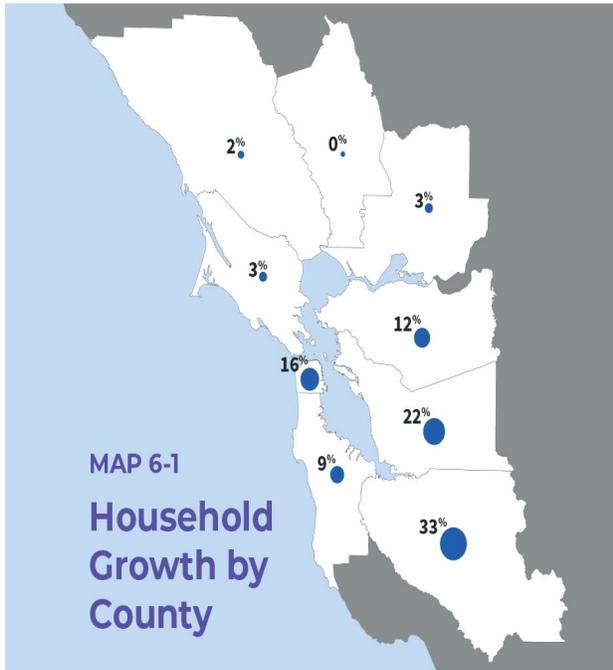
On the Peninsula, San Francisco and San Mateo counties are the forecasted home to one-quarter of new regional households and jobs. Intensified growth in these counties that historically have been slow to grow would make it possible for more people to live near their workplaces. Major new transit investments, ranging from Caltrain frequency improvements to the Link21 new transbay rail crossing between the East Bay, San Francisco and points south, would be essential to support this growth in a sustainable manner.

Together, the North Bay counties of Marin, Napa, Sonoma and Solano are expected to be home to less than 10% of new households and jobs, as relatively limited job centers and transit options coupled with wildfire risk make these counties less suited for growth. In fact, Marin County is projected to see a minor net loss in jobs as its population continues to age and exit the workforce.

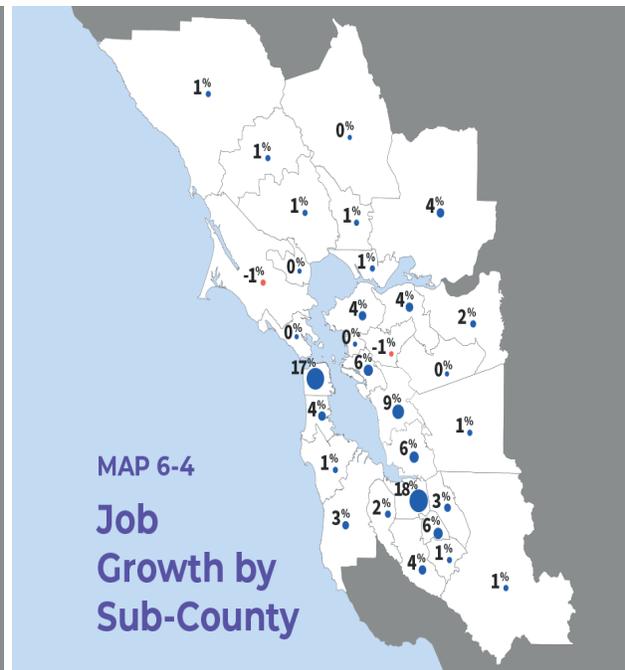
The following maps illustrate the household and jobs growth between 2015 and 2050, as a share of region's growth. It is important to note that the nine-county Bay Area is divided into 34 sub-county areas, called superdistricts. Superdistricts are combinations of cities, towns and unincorporated areas that allow the public to see the more localized growth pattern in Plan Bay Area 2050. Superdistricts within San Francisco have been combined to show the total city share. More information on the superdistricts can be found in the layer documentation:

<https://opendata.mtc.ca.gov/datasets/travel-model-super-districts>.

**Household Growth Between 2015 and 2050 (as a share of region's growth) — +1.4M Households**



**Job Growth Between 2015 and 2050 (as a share of region's growth) — +1.4M Jobs**



## Understanding Outcomes by Guiding Principle

Plan Bay Area 2050’s vision is to make the Bay Area more affordable, connected, diverse, healthy and vibrant for all who live here. How well does it succeed? The following projections contrast conditions today (represented using 2015 baseline data) against forecasted outcomes in the year 2050. While these outcomes may be influenced by future unknowns, they represent MTC and ABAG’s best possible guess of how the region would look in the future under the plan’s strategies. Comparing today’s conditions against future performance shows where the plan succeeds and where more work is needed.

### Affordable Outcomes

Housing and transportation costs, the two largest expenditures for most Bay Area families today, would decrease as a share of household income by 2050 under Plan Bay Area 2050’s strategies. Families with low incomes would see larger reductions in these costs than the region at large, providing much-needed relief for many families struggling to afford other necessities like food, healthcare or education. This outcome would be driven by a sizeable investment in new affordable housing construction, including a requirement that all new large developments make 10% to 20% of their units affordable, and preservation of existing affordable units. These strategies would result in 1 million new affordable homes by the year 2050 — enough for every new and existing family with a low income. By 2050, one quarter of all Bay Area homes, including roughly two in five homes in Equity Priority Communities, would be deed-restricted affordable.

**Figure 6-2.** Affordable housing demand and production by strategy

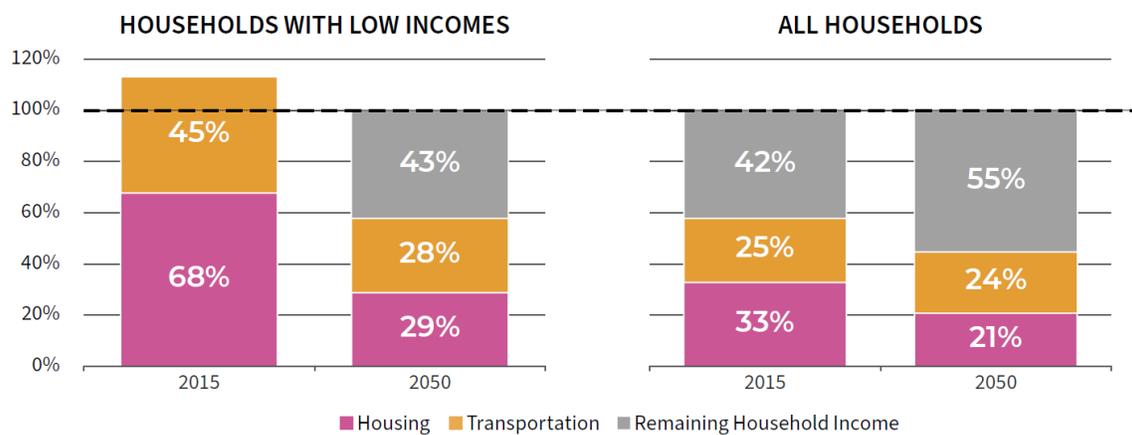


Housing costs would also decrease for middle- and upper-income households as housing production better matches the demand for new housing. Furthermore, the strategies would link

affordability and sustainability goals, directing new housing growth within existing urban growth boundaries to avoid sprawl into cheaper greenfield construction sites and reduce greenhouse gas emissions.

Household transportation costs would also decrease slightly under Plan Bay Area 2050's strategies, even when accounting for new per-mile tolling on congested freeway corridors. Greater rates of transit usage and telecommuting, combined with a strategy to reduce the cost of long-distance and multi-operator transit trips through fare integration, would help to reduce household transportation costs for residents of all income levels. For residents with low incomes, transportation costs would decrease even further as a result of discounts on transit fares and per-mile tolls for people with low incomes.

**Figure 6-3.** Share of household income spent on housing and transportation costs<sup>70</sup>



### Connected Outcomes

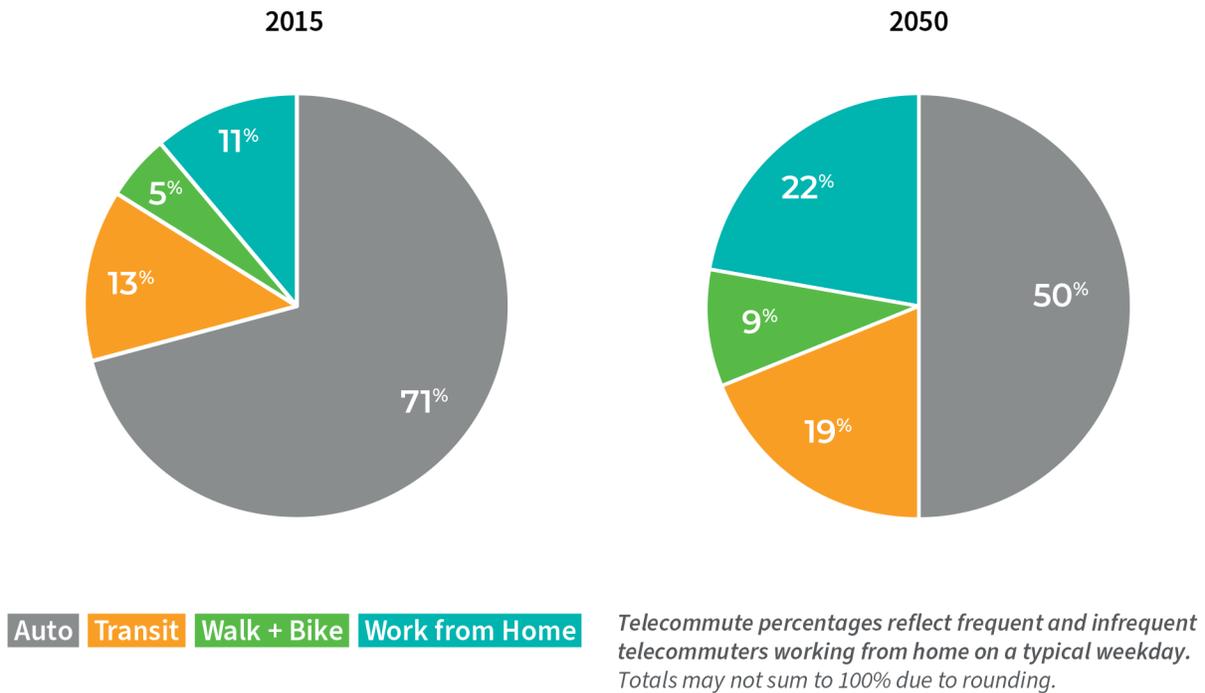
Plan strategies across the four elements aim to work together to promote a safer and better-connected Bay Area by 2050. Housing and economy strategies encourage walkable, transit-connected communities, bolstered by an expanded set of Growth Geographies that go beyond locally nominated Priority Development Areas. In fact, if the strategies in Plan Bay Area 2050 were implemented, by 2050 nearly half of all Bay Area households would live within one half-mile of frequent transit, including nearly three-quarters of all households with low incomes. This land use pattern, supported by billions of dollars in infrastructure investment and policy reforms that

<sup>70</sup> Accounting for people with no incomes, people on financial assistance and the currently unhoused, housing and transportation costs as a share of income exceeded 100% for households with low incomes in 2015.

improve biking, walking, use of a wheelchair, riding transit and carpooling, would support a significant shift away from auto dependence for all trips. While today 70% of commuters drive to work either alone or in a carpool, that number would decrease to 50% by 2050 under plan strategies, as a greater share of Bay Area residents are expected to work from home or walk, bike or take transit to work.

Altogether, the strategies would contribute to small but meaningful gains in the share of jobs accessible within a reasonably short trip by foot, bike or transit. Measured as the share of the Bay Area's jobs that can be reached within a 20-minute walk or bike ride, a 30-minute drive, or a 45-minute transit trip, employment accessibility would increase slightly for pedestrians, cyclists and transit passengers. For drivers, travel times would remain roughly on par with 2015 levels even as the population expands by millions, with highway tolling and speed limit reductions expected to incentivize greater use of transit and telecommuting. In Equity Priority Communities, employment accessibility improvements would be even greater, particularly for cyclists and transit riders. Additionally, land use changes that would allow for the construction of more mixed-use developments, which cluster homes, shops and offices together where appropriate, would likely result in better accessibility to other types of destinations like community centers and supermarkets.

Figure 6-4. Commute mode share



### Diverse Outcomes

Affordability is closely tied with a vision for a diverse and inclusive Bay Area, and many of the affordability strategies described above also would contribute to advancing the plan's guiding principle of diversity. Strategies that allow more housing construction in High-Resource Areas would counterbalance the exclusionary history of many of these places and would increase access to opportunity for more Bay Area residents.

If the strategies in Plan Bay Area 2050 are implemented, by 2050 the share of housing in the region's High-Resource Areas that is affordable by deed restriction would increase from a mere 2% to a much more sizeable 24%. New affordable housing options in these neighborhoods would allow residents with low incomes to take advantage of resources tied with upward economic mobility, such as quality schools, and also enable a modest decrease in concentrated affluence throughout the region. Transit-Rich Areas, when compared to High-Resource Areas, would see even greater gains in the share of residents with low incomes, indicating that families with low incomes would be able to benefit from investments that improve transportation in inclusive communities. Residents with low incomes would comprise nearly 40% of residents in Transit-Rich

Areas, up from 30% in 2015, allowing more people with low incomes to take fuller advantage of the Bay Area's improved transportation network.

Displacement, which occurs when housing costs rise to the point where existing residents cannot afford to remain in their homes, has been an entrenched problem in the Bay Area for decades. Strategies that expand access to mortgage down payments for families with low incomes would support greater rates of homeownership, sheltering these families from volatile rent prices and tempering displacement risk. The share of families with low incomes that own their own homes is projected to increase from 40% in 2015 to 50% by 2050. When combined with strategies that expand protections for renters and increase the number of affordable homes in Equity Priority Communities and other vulnerable areas, these strategies would mitigate displacement risk somewhat in the region, though residents in approximately 20% of all Growth Geographies still would experience displacement risk.

While the disruptive impacts of displacement on individuals and communities are significant, the strategies in Plan Bay Area 2050 would increase the likelihood of displaced families relocating to affordable housing in other Bay Area Growth Geographies rather than being forced out of the region. The share of households with low incomes would increase in all Growth Geographies with Plan Bay Area 2050 strategies in place, even when accounting for displacement, which suggests that displaced families would largely move to new Growth Geographies instead of to the more affordable periphery of the Bay Area's nine counties.

Displacement trends are outlined below.

#### *Share of Neighborhoods (Tracts) That Experience Displacement Between 2015 and 2050*

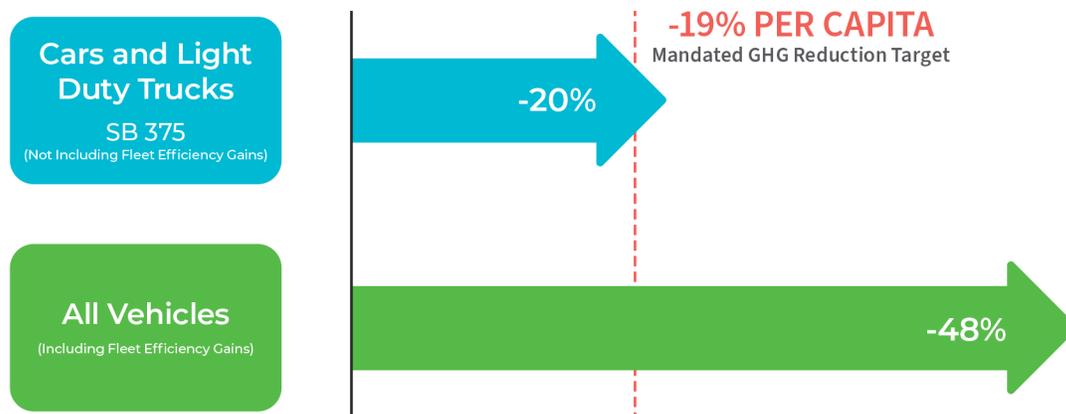
- **Regionwide**
  - All Neighborhoods (total 1,579 neighborhoods) — 48%
  - Equity Priority Communities (total 339 neighborhoods) — 40%
  - High Displacement Risk Tracts (total 850 neighborhoods) — 37%
- **Within Growth Geographies**
  - Growth Geographies (total 492 neighborhoods) — 17%
  - High-Resource Areas (total 199 neighborhoods) — 17%
  - Transit-Rich Area (total 344 neighborhoods) — 9%

## Healthy Outcomes

Plan Bay Area 2050 seeks to put the Bay Area’s people and the environment on a trajectory to be healthier, safer and more prepared for natural hazards by 2050. Several plan strategies would reduce air pollution, a key determinant of climate change and public health. Greenhouse gas emissions from transportation would decrease significantly in the years leading up to 2035, representing a 20% decrease in per capita emissions when compared to 2005 (meeting the state mandate of a 19% reduction by that year) — but only if all plan strategies are implemented. It is important to reiterate that this reduction would be achieved through the coordinated efforts of all strategies across the four elements.

While not counted toward greenhouse gas emissions reduction targets under SB 375, the plan would also promote greener buildings. Emissions from residential buildings, which also contribute to greenhouse gas emissions through energy consumption, would decrease by 16% by 2050 if water and energy retrofits that support more energy-efficient homes are implemented.

**Figure 6-5.** Percent reduction in per capita greenhouse gas emissions between 2005 and 2035<sup>71</sup>



Environmental benefits from Plan Bay Area 2050 would go beyond climate emissions. Roads would be safer for all users because of strategies that support a regional Vision Zero policy, including expanded infrastructure for cyclists, pedestrians and rollers, and lower vehicle speeds enforced by street design and speed cameras. Thousands of fatalities and serious injuries could be averted between now and 2050 with these strategies in place. However, Plan Bay Area 2050

<sup>71</sup> Under Senate Bill 375 (D. Steinberg, Statutes of 2008), emissions reductions from future improvements in vehicle fuel efficiency associated with state regulatory action do not count toward a region’s greenhouse gas emissions reduction target.

would fall short of completely eliminating road fatalities and injuries, highlighting the need for bolder approaches to advancing road safety.

Access to parks and open space is another focus area of the plan, with strategies promoting improved access to urban parks and expansive conservation lands outside the urban core. Investments that protect and maintain open space would pay dividends, with co-benefits to human health and environmental sustainability. The average acres of urban space per resident would increase by 25% between today and 2050; residents of Equity Priority Communities would experience an even larger increase to account for the relatively limited access to open space in these areas today. The increase would come from combined efforts to modernize and enhance existing parks and create new parks, with an emphasis on opening new parks in Equity Priority Communities.

The region would also be more prepared to face natural hazards like rising seas and earthquakes under plan strategies. Nearly all homes in the Bay Area, and all homes in Equity Priority Communities, would be protected from two feet of sea level rise. Major road and rail corridors at risk of flooding would be protected, ensuring that a contiguous transportation network would remain intact. Additionally, all high-risk homes would be retrofitted to reduce major damage risk from seismic and wildfire events, which would help to protect families from displacement, ensure that homes are not lost to hazards and lower the risk of intensifying the regional housing crisis.

### Vibrant Outcomes

Plan Bay Area 2050 aims to promote economic vibrancy through two primary routes: improving pathways to economic mobility, and distributing jobs and housing more evenly throughout the region. Under the plan's strategies, results would include shorter commutes and more equitably spread tax revenues, albeit with some limitations.

Lopsided job growth in low-wage and high-wage industries, with a corresponding decline in middle-wage employment, have characterized previous decades. While the number of jobs in high-wage industries would continue to see the largest increases through 2050, Plan Bay Area 2050 would make some headway on increasing the number of jobs in middle-wage industries through business incubators and job retraining programs. The largest share of all new jobs, around 40%, would be in high-wage industries, like information or professional and business services, followed by middle-wage industries at 38%. The number of jobs in low-wage industries

would see slower growth through 2050 when compared to years prior to 2015 due to automation and shifts in the labor market, but gains in middle-wage employment would bolster pathways to the middle class for residents without a college degree.

Job growth by industry income category is outlined below:

- **Low-wage industries**
  - Number of Jobs (2015) — 981,000
  - Number of Jobs (2050) — 1,276,000
  - Change in Number of Jobs (2015 to 2050) — 295,000
  - Share of Regional Growth (2015 to 2050) — 21%
- **Middle-wage industries**
  - Number of Jobs (2015) — 1,586,000
  - Number of Jobs (2050) — 2,118,000
  - Change in Number of Jobs (2015 to 2050) — 532,000
  - Share of Regional Growth (2015 to 2050) — 38%
- **High-wage industries**
  - Number of Jobs (2015) — 1,438,000
  - Number of Jobs (2050) — 2,014,000
  - Change in Number of Jobs (2015 to 2050) — 576,000
  - Share of Regional Growth (2015 to 2050) — 41%

Not only would Plan Bay Area 2050 influence the types of jobs that would be created in the region through business incubators and job retraining programs, but it also would shape the geography of job growth. Trends in job and household growth would support a more balanced spatial distribution and in turn would alleviate crowding on roads and transit networks. Regionwide, the jobs-to-housing ratio is projected to decrease slightly, from 1.5 jobs per home in 2015 to 1.3 in 2050, reflecting a higher rate of housing production to accommodate demand, even as jobs grow. In the West Bay and South Bay, strategies to stimulate housing construction would help to better balance jobs and housing by 2050. Meanwhile, in the North Bay and East Bay, strategies to draw

jobs closer to predominantly residential communities would result in more limited changes, suggesting more work is needed to address this imbalance.

## Looking Ahead

The challenges of 2020 have set the Bay Area on a new path, and the future continues to be highly uncertain. Plan Bay Area 2050 is a proposal for how the region can rebuild in a way that recognizes past inequities and positions the Bay Area for success across a variety of future conditions. While Plan Bay Area 2050 cannot right all the wrongs of the past, it demonstrates how the region can make meaningful progress toward realizing the vision that was voiced by members of the public and that inspired this work. With the plan's strategies in place, the nine-county region will be better positioned to become a more affordable, connected, diverse, healthy and vibrant place for all.

Plan Bay Area 2050 would make progress on some of the most deep-rooted challenges facing our region today, from housing affordability to climate emissions. Many of the outcomes shared in this chapter are encouraging snapshots of what the future could hold. Others inspire thought on how a next iteration of strategies could reach beyond what this plan would accomplish. Achieving the plan's vision will require collaboration across all levels of government, between the private and public sectors, and from individual Bay Area residents from all walks of life. Otherwise, these outcomes will remain theoretical. The following chapter outlines a plan for implementing the strategies discussed in Plan Bay Area 2050, with a focus on the next five years.

## Outcomes | Supplementary Content

### An Uncertain Future — Forecasting Equity and Performance Outcomes

The plan's strategies are designed to be resilient and have been tested by MTC and ABAG planning staff under multiple scenarios through the Horizon initiative. While state law requires Plan Bay Area 2050 to develop a singular projection of the future, this type of forecasting, especially in light of the challenges that arose from the pandemic, is clouded by uncertainties. Economic and population growth, emerging trends, shifting cultural preferences for different types of homes or travel, and the viability of new technologies like autonomous vehicles will all impact how effectively Plan Bay Area 2050's strategies can be carried out. Rather than striving for a false sense of precision, this chapter focuses on the overall magnitude and direction of changes for certain key indicators to understand Plan Bay Area 2050's effectiveness — highlighting areas where the strategies move the region in the right direction, but also acknowledging where outcomes fall short of the visionary aims established for the plan by the public.

### Measuring Equity Outcomes — Race, Household Income and Home Location

Historical and present-day policies have led to disparate outcomes for many people of color in the Bay Area and beyond, ranging from higher mortality rates from COVID-19 to persistently lower wages for the same work. While the strategies in Plan Bay Area 2050 cannot address all past wrongs or undo systemic marginalization, they have been crafted to support more equitable outcomes than past regional plans and to advance the priorities of communities that have long been shut out of decision-making.

One major limitation of Plan Bay Area 2050, and of the analysis of the plan's outcomes included in this chapter, is a lack of data by race. Because there is limited data available on past and present transportation patterns by race, MTC and ABAG's simulation models are not able to project how transportation behavior varies by race in the future — a constraint to explore in future regional plans. Instead of racial analysis, the plan's equity outcomes rely on two proxies: household income and home location.

While not all people of color have low incomes, analyzing outcomes by income level can shed light on how residents with the fewest resources — among whom people of color are disproportionately represented — would benefit from the plan's strategies. The other lens used

for equity analysis is geographic in nature. MTC and ABAG define Equity Priority Communities using data that includes race, income and other demographics of individual neighborhoods at the census tract level. MTC and ABAG use this national census data to identify neighborhoods with concentrations of people whose lives may have been affected by discriminatory policies and practices. Where applicable, this chapter highlights outcomes for residents of these communities in 2050, providing another proxy for race where direct analytical tools are lacking.

For more information on Plan Bay Area 2050's equity outcomes, see the Plan Bay Area 2050 Equity Analysis Report.



Photo: Karl Nielsen

## 7 | Implementation Plan

### Short-Term Steps for Long-Term Change

Plan Bay Area 2050 puts forward policy ideas and investment proposals that could transform the San Francisco Bay Area into a more resilient and equitable place to live, work and play over the next 30 years. To identify the near-term steps necessary to accelerate this long-term vision, the Implementation Plan focuses on concrete actions that MTC and ABAG can advance, in partnership with other organizations, in the next five years for each of the 35 adopted strategies.

The Implementation Plan builds upon the Action Plan that MTC and ABAG pioneered as part of Plan Bay Area 2040, the region's previous long-range plan. The Action Plan focused on areas where the plan's performance was moving in the wrong direction and sought to address emerging policy issues such as housing and resilience. The Plan Bay Area 2050 Implementation Plan represents an even more comprehensive effort, identifying ways to advance the complete suite of strategies included in the plan.

Partnership and collaboration are major components of this effort. None of the plan's strategies can be implemented by MTC and ABAG alone. Continued engagement with partners, policymakers and the public will be needed to tackle shared challenges through 2025 and beyond.

### Goals and Objectives

MTC and ABAG identified four overarching and interconnected goals for the Implementation Plan process. First, the Implementation Plan is designed to maximize viability of Plan Bay Area 2050's strategies with a focus on equity, effectiveness and efficiency. Second, the Implementation Plan seeks to reinforce the recommendations of existing initiatives that complement Plan Bay Area 2050's strategies and vision. Finally, the Implementation Plan aims to address emerging and cross-cutting strategic issues raised by partners, policymakers and the public, while supporting timely achievement of the plan's technical assumptions. The agencies have also identified four specific implementation objectives.

### Implementation Plan Goals

- **Goal 1:** Maximize viability of the plan's strategies with a focus on equity, effectiveness and efficiency

- **Goal 2:** Reinforce the recommendations of existing initiatives that complement the plan’s strategies and vision
- **Goal 3:** Address emerging and cross-cutting strategic issues raised by partners, policymakers and the public
- **Goal 4:** Support the timely achievement of the plan’s technical assumptions

### Objective #1 — Assess Requirements for Strategy Success

For each of the plan’s adopted strategies, MTC and ABAG assessed where the agencies currently stand with respect to four key factors for strategy success, assigning each factor a rating of limited, partial or existing:

- **AUTHORITY**  
The assignment to carry out the strategies and attendant tasks involved, generally established through legislation or other legal means.
- **FINANCIAL RESOURCES**  
Stable, controlled funding in the amounts required to carry out strategies.
- **PUBLIC AND POLITICAL SUPPORT**  
While less quantifiable than the other factors, support from members of the public and their elected representatives is critical for attaining and maintaining the authority, funding and capacity needed to carry out implementation actions.
- **TECHNICAL CAPACITY**  
The knowledge, staffing, process and procedure required to successfully implement strategies.

### Objective #2 — Identify MTC’s and ABAG’s Implementation Role

MTC and ABAG identified what the agencies’ implementation roles should be for each of the strategies moving forward, using the four success factors as a guide. These roles are defined as:

- **LEAD**  
MTC and/or ABAG already have, or should work to secure, significant elements of all four strategy success factors. “Lead” does not mean “leading alone” — this role may involve serving as a champion, chief advocate, coalition leader or catalyst over the next five years.
- **PARTNER**  
MTC and/or ABAG already have, or should work to secure, some — but not all — elements

of the four strategy success factors. The strategy's ultimate success will depend upon partnership among regional policymakers, local governments, partner agencies and civic organizations.

- **SUPPORT**

MTC and/or ABAG do not have, and are not in the best position to secure, significant elements of the four strategy success factors. MTC and ABAG will offer support for strategy implementation efforts led by other entities.

Implementation roles may encompass affiliated MTC and ABAG entities such as the Bay Area Housing Finance Authority (BAHFA), the Bay Area Toll Authority (BATA), the Bay Area Regional Energy Network (BayREN), the Bay Area Regional Collaborative (BARC), or the San Francisco Estuary Partnership (SFEP). These entities are identified where appropriate.

### Objective #3 — Identify Vehicles for Strategy Implementation

After identifying the strategy success requirements and roles, MTC and ABAG determined the appropriate methods for strategy implementation, broadly defined in three categories, or “vehicles”:

- ADVOCACY AND LEGISLATION
- NEW, EXISTING OR RESTRUCTURED INITIATIVES
- PLANNING OR RESEARCH

### Objective #4 — Recommend Specific Implementation Actions, Timelines and Strategic Partners

For each strategy, MTC and ABAG proposed one or more specific actions that could support implementation over a five-year period, categorized by the three implementation vehicles. Developed by staff, partners and stakeholders and incorporating feedback from policymakers, these implementation actions are the who, what, where, when and how of making the strategies a reality.

Implementation actions are focused on actions that MTC and ABAG are proposing to commit to, generally in collaboration with select strategic partners who are identified at a broad level for each plan strategy. Please note that the list of partners for any strategy is not intended to be exhaustive and additional partners may be engaged as implementation activities and initiatives

move forward. A proposed implementation timeframe is also identified for each action, where Year 1 describes in-progress or about-to-commence work in 2021 and Year 5 corresponds to 2025.

### Engagement With Partners and the Public

The external engagement process for the Implementation Plan kicked off in November 2020 with two large virtual sessions. These online workshops drew more than 150 participants representing over 100 different organizations and entities, including local jurisdictions, public agencies, non-profits and advocacy groups.

These virtual sessions generated over 3,000 discrete pieces of data for MTC and ABAG staff to consider and evaluate, including over 500 partnership recommendations and more than 500 implementation action recommendations. From November 2020 to April 2021, staff held three dozen small group follow-up discussions with over 40 separate organizations. These conversations helped develop draft implementation actions in greater detail, including discussion of potential supporting roles for partners.

Throughout summer 2021, the Partnership Phase expanded the implementation focus beyond MTC and ABAG to identify the partnerships and commitments needed to move the plan's strategies forward. MTC and ABAG conducted another round of focused discussions with small groups and received comments on the Draft Implementation Plan throughout summer 2021. A stakeholder workshop was held in July, followed by a webinar summarizing the input received. Over 45 distinct partners, including city and county staff, transit agencies, labor organizations, and environmental groups, offered commitments or statements of support to advance implementation across all plan strategies over the next five years.

Public engagement activities for the Implementation Plan included an online survey and a text-based survey, which were available in English, Spanish and Chinese, and 10 focus groups with community-based organizations and Bay Area youth. The goal of the public engagement process was to gauge the public's top priorities for implementation over the next five years. For more information about the engagement conducted for the Plan Bay Area 2050 Implementation Plan, see the Plan Bay Area 2050 Public Engagement Report.

## Strategy Assessment and Role Recommendations

For the first Implementation Plan objective, MTC and ABAG staff conducted a strategy assessment to identify and evaluate current conditions with respect to four key factors for success: authority, financial resources, technical capacity, and public and political support. The strategy assessment also recommended roles for MTC and ABAG moving forward — whether to lead, partner or support strategy implementation.

Results of the strategy assessment and role recommendations are presented in the summary tables and text that follow, and incorporate feedback from staff, partners, advisory groups and policymakers. The tables also list the projected cost of implementing each strategy over the plan period ending in 2050. Several strategies would require incremental increases in administrative costs to implement. In these cases, the strategy cost is shown as not applicable (N/A). For more information about the strategy assessment and role recommendations for each of the plan’s strategies, including an overall contextual summary, please see the Plan Bay Area 2050 Implementation Plan Briefs.

## Housing

The governance landscape for housing in the Bay Area has rapidly evolved over the last several years. MTC and ABAG now have a Housing and Local Planning team; state legislation established the Bay Area Housing Finance Authority (BAHFA); the state infused meaningful funding into housing planning through Regional and Local Early Action Planning Grants; and the ABAG Housing Committee was formed. These developments have provided authority, resources and capacity for the region to act in several strategic areas, outlined below, where previously MTC and/or ABAG’s roles would have been more limited.

Overall, however, financial resources remain a challenge for housing, and significant infusions of revenue — whether from federal or state government programs, or a potential regional revenue measure — will be essential to making progress. BAHFA, ABAG and MTC have a major opportunity over the next several years to prioritize production of housing at all levels of affordability, preserve existing affordable housing, and protect residents facing housing instability and displacement. It is important to note that leading efforts does not mean leading alone. Instead, regional government will lead efforts that support local governments, with a focus on developing new funding sources to support high-cost housing strategies.

## *Role Recommendations for Housing Strategies*

### **Strategy Assessment**

- H1. Further Strengthen Renter Protections Beyond State Law — Cost: \$2 billion
  - Authority: Limited
  - Financial Resources: Limited
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Support**
- H2. Preserve Existing Affordable Housing — Cost: \$237 billion
  - Authority: Existing
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Limited
  - **MTC/ABAG Recommended Implementation Role: Lead**
- H3. Allow a Greater Mix of Housing Densities and Types in Growth Geographies<sup>72</sup> — Cost: N/A
  - Authority: Limited
  - Financial Resources: Existing
  - Public and Political Support: Partial
  - Technical Capacity: Existing
  - **MTC/ABAG Recommended Implementation Role: Partner**
- H4. Build Adequate Affordable Housing to Ensure Homes for All — Cost: \$219 billion
  - Authority: Existing
  - Financial Resources: Limited
  - Public and Political Support: Partial
  - Technical Capacity: Limited

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<sup>72</sup> High-impact strategy in achieving GHG reduction target.

- **MTC/ABAG Recommended Implementation Role: Lead**
- H5. Integrate Affordable Housing into All Major Housing Projects — Cost: N/A
  - Authority: Limited
  - Financial Resources: Existing
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Support**
- H6. Transform Aging Malls and Office Parks into Neighborhoods — Cost: N/A
  - Authority: Limited
  - Financial Resources: Existing
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**
- H7. Provide Targeted Mortgage, Rental and Small Business Assistance to Equity Priority Communities — Cost: \$10 billion
  - Authority: Existing
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Lead**
- H8. Accelerate Reuse of Public and Community Land for Mixed-Income Housing and Services — Cost: N/A
  - Authority: Existing
  - Financial Resources: Existing
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Lead**

## Economy

While MTC and ABAG currently lack the authority, financial resources and technical capacity to carry out Plan Bay Area 2050's economic strategies, the interconnected nature of long-range regional planning, as reflected in the interplay between all plan strategies, has revealed that more coordination on key economic issues at the regional scale may be needed. Over the course of several months in summer 2021, MTC and ABAG convened the Regional Governmental Partnership for Local Economic Rebound. This effort brought together local elected officials and stakeholders from many different sectors to identify key economic challenges facing the region and potential partnership and collaboration opportunities moving forward. For the most part, it is recommended that MTC and ABAG partner with or support the work of other organizations that are more directly able to implement economic strategies.

### *Role Recommendations for Economic Strategies*

#### **Strategy Assessment**

- EC1. Implement a Statewide Universal Basic Income — Cost: \$205 billion
  - Authority: Limited
  - Financial Resources: Limited
  - Public and Political Support: Partial
  - Technical Capacity: Limited
  - **MTC/ABAG Recommended Implementation Role: Support**
- EC2. Expand Job Training and Incubator Programs — Cost: \$5 billion
  - Authority: Limited
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Limited
  - **MTC/ABAG Recommended Implementation Role: Support**
- EC3. Invest in High-Speed Internet in Underserved Low-Income Communities — Cost: \$10 billion
  - Authority: Limited
  - Financial Resources: Limited

- Public and Political Support: Existing
- Technical Capacity: Limited
- **MTC/ABAG Recommended Implementation Role: Support**
- EC4. Allow Greater Commercial Densities in Growth Geographies<sup>73</sup> — Cost: N/A
  - Authority: Limited
  - Financial Resources: Existing
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**
- EC5. Provide Incentives to Employers to Shift Jobs to Housing-Rich Areas Well Served by Transit — Cost: \$10 billion
  - Authority: Limited
  - Financial Resources: Limited
  - Public and Political Support: Partial
  - Technical Capacity: Limited
  - **MTC/ABAG Recommended Implementation Role: Support**
- EC6. Retain and Invest in Key Industrial Lands — Cost: \$4 billion
  - Authority: Limited
  - Financial Resources: Partial
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**

## Transportation

Given MTC's statutory role as transportation planner, funder and coordinator for the Bay Area, most Plan Bay Area 2050 transportation strategies received a Lead or Partner role designation. A Lead role has been identified for strategies that focus on transportation system optimization and recovery where there is a clear need for regional leadership. By contrast, a Partner role has been

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<sup>73</sup> High-impact strategy in achieving GHG reduction target.

identified for strategies, particularly those that require construction of new transportation infrastructure, where close partnership with county transportation agencies, transit operators, local transportation departments and the state, among others, will be essential for strategy success.

### *Role Recommendations for Transportation Strategies*

#### **Strategy Assessment**

- T1. Restore, Operate and Maintain the Existing System — Cost: \$389 billion
  - Authority: Partial
  - Financial Resources: Partial
  - Public and Political Support: Existing
  - Technical Capacity: Existing
  - **MTC/ABAG Recommended Implementation Role: Lead**
- T2. Support Community- Led Transportation Enhancements in Equity Priority Communities — Cost: \$8 billion
  - Authority: Partial
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**
- T3. Enable a Seamless Mobility Experience — Cost: \$3 billion
  - Authority: Partial
  - Financial Resources: Partial
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Lead**
- T4. Reform Regional Fare Policy — Cost: \$10 billion
  - Authority: Partial
  - Financial Resources: Limited

- Public and Political Support: Partial
- Technical Capacity: Partial
- **MTC/ABAG Recommended Implementation Role: Lead**
- T5. Implement Per-Mile Tolling on Congested Freeways with Transit Alternatives<sup>74</sup> — Cost: \$1 billion
  - Authority: Limited
  - Financial Resources: Partial
  - Public and Political Support: Limited
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Lead**
- T6. Improve Interchanges and Address Highway Bottlenecks — Cost: \$12 billion
  - Authority: Limited
  - Financial Resources: Partial
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Support**
- T7. Advance Other Regional Programs and Local Priorities — Cost: \$17 billion
  - Authority: Partial
  - Financial Resources: Partial
  - Public and Political Support: Existing
  - Technical Capacity: Existing
  - **MTC/ABAG Recommended Implementation Role: Partner**
- T8. Build a Complete Streets Network — Cost: \$13 billion
  - Authority: Limited
  - Financial Resources: Partial
  - Public and Political Support: Existing

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<sup>74</sup> High-impact strategy in achieving GHG reduction target.

- Technical Capacity: Partial
- **MTC/ABAG Recommended Implementation Role: Partner**
- T9. Advance Regional Vision Zero Policy Through Street Design and Reduced Speeds<sup>75</sup> — Cost: \$4 billion
  - Authority: Partial
  - Financial Resources: Partial
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**
- T10. Enhance Local Transit Frequency, Capacity and Reliability — Cost: \$32 billion
  - Authority: Partial
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Existing
  - **MTC/ABAG Recommended Implementation Role: Partner**
- T11. Expand and Modernize the Regional Rail Network — Cost: \$81 billion
  - Authority: Partial
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**
- T12. Build an Integrated Regional Express Lanes and Express Bus Network — Cost: \$9 billion
  - Authority: Partial
  - Financial Resources: Partial
  - Public and Political Support: Partial
  - Technical Capacity: Existing

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<sup>75</sup> High-impact strategy in achieving GHG reduction target.

- **MTC/ABAG Recommended Implementation Role: Partner**

## Environment

The strategy assessment revealed broadly similar themes across the plan’s environmental strategies, indicating that the strategies are popular, but the financial resources to support them are less secure. In addition, while MTC and ABAG (including entities such as the San Francisco Estuary Partnership and Bay Area Regional Energy Network, which are both housed within ABAG) have a variety of authorities and capacities to support the strategies, these capacities are not sufficient to implement the full scope of identified needs.

For sea level rise adaptation, assessment results indicate that MTC and ABAG are well positioned to partner on coordination and funding efforts with the San Francisco Bay Conservation and Development Commission, cities and counties, community-based organizations, non-profits, and businesses, among others. MTC and ABAG are also poised to take a leadership role on implementation of strategies related to reducing climate emissions — namely, strategies focused on commute trip reduction and transportation demand management.

### *Role Recommendation for Environmental Strategies*

#### **Strategy Assessment**

- EN1. Adapt to Sea Level Rise — Cost: \$19 billion
  - Authority: Partial
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**
- EN2. Provide Means-Based Financial Support to Retrofit Existing Buildings (Energy, Water, Seismic, Fire) — Cost: \$15 billion
  - Authority: Partial
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Partial

- **MTC/ABAG Recommended Implementation Role: Partner**
- EN3. Fund Energy Upgrades to Enable Carbon-Neutrality in All Existing Commercial and Public Buildings — Cost: \$18 billion
  - Authority: Partial
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Support**
- EN4. Maintain Urban Growth Boundaries<sup>76</sup> — Cost: N/A
  - Authority: Limited
  - Financial Resources: Existing
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Support**
- EN5. Protect and Manage High-Value Conservation Lands — Cost: \$15 billion
  - Authority: Partial
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**
- EN6. Modernize and Expand Parks, Trails, and Recreation Facilities — Cost: \$30 billion
  - Authority: Limited
  - Financial Resources: Limited
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**

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<sup>76</sup> High-impact strategy in achieving GHG reduction target.

- EN7. Expand Commute Trip Reduction Programs at Major Employers<sup>77</sup> — Cost: N/A
  - Authority: Partial
  - Financial Resources: Existing
  - Public and Political Support: Partial
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Co-Lead (with Air District)**
- EN8. Expand Clean Vehicle Initiatives<sup>78</sup> — Cost: \$5 billion
  - Authority: Partial
  - Financial Resources: Partial
  - Public and Political Support: Existing
  - Technical Capacity: Partial
  - **MTC/ABAG Recommended Implementation Role: Partner**
- EN9. Expand Transportation Demand Management Initiatives<sup>79</sup> — Cost: \$1 billion
  - Authority: Partial
  - Financial Resources: Partial
  - Public and Political Support: Partial
  - Technical Capacity: Existing
  - **MTC/ABAG Recommended Implementation Role: Lead**

### Implementation Actions

MTC and ABAG propose the following implementation actions, which are organized by Plan Bay Area 2050's elements and themes. For more detail on the proposed implementation actions over a five-year period, please see the Plan Bay Area 2050 Implementation Plan Briefs.

### Core Implementation Focus Areas

Several implementation themes emerged as common areas of focus across all of the plan's strategies. These included realizing the revenues needed to implement the plan, engaging in

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<sup>77</sup> High-impact strategy in achieving GHG reduction target.

<sup>78</sup> High-impact strategy in achieving GHG reduction target.

<sup>79</sup> High-impact strategy in achieving GHG reduction target.

advocacy at the state and federal level, advancing existing initiatives, and ensuring an equitable recovery from the COVID-19 pandemic.

- **Revenues:** Plan Bay Area 2050 is an ambitious, \$1.4 trillion plan that relies on approximately \$780 billion in new revenues. As a result, a focus on generating revenues is needed to support the plan’s strategies. MTC and ABAG will collaborate with partners to advocate for financial resources, whether from federal, state, regional or local sources. It will also be important to align with ongoing developments at the state and federal levels as revenues from recovery and relief efforts are distributed and wide-ranging federal infrastructure bill efforts move forward, including a surface transportation reauthorization bill later in 2021. Advocating at the state level to generate funds for resilience and housing needs will also be a regional priority. An expanded discussion on funding the plan will follow later in this chapter.
- **Advocacy:** MTC and ABAG develop and adopt an Advocacy Program each year, and the agencies will work to ensure that the goals and objectives of this program align with key implementation priorities identified for Plan Bay Area 2050. For 2021, these priorities encompass a wide variety of areas, including renter protections; speed limits and enforcement; broadband subsidies for households with low incomes; authorization to pilot all-lane tolling or other pricing strategies; and allowances for higher housing densities in Transit-Rich Areas, High-Resource Areas, or jobs-rich jurisdictions; among others. It will be important to deliberately pursue these advocacy aims while ensuring that additional priorities that have emerged from the Implementation Plan process are incorporated into future advocacy programs.
- **Existing Initiatives:** There are many ongoing initiatives within MTC and ABAG that support Plan Bay Area 2050’s strategies in different ways. Continuing these initiatives while also working to further their strategic alignment with the plan’s vision and goals will be a major focus of the implementation period.
  - Active Transportation Program
  - Climate Initiatives Program
  - Clipper® STARTSM Pilot Program
  - Community-Based Transportation Planning Program
  - Commuter Benefits Program
  - Coordinated Public Transit-Human Services Transportation Plan
  - Express Lanes

- “Forward” Commute Initiatives
- I-880 Express Lanes Toll Discount Pilot
- Priority Conservation Area (PCA) Program
- Priority Development Area (PDA) Program
- Regional Advance Mitigation Program
- Regional Housing Technical Assistance Program
- Regional Trails Program
- Vision Zero Policy
- **Equitable Recovery:** As the Bay Area emerges from the COVID-19 pandemic, it will be essential to think through what an inclusive, equitable recovery looks like. In addition to the Regional Governmental Partnership for Local Economic Rebound noted earlier — which has examined the nexus between infrastructure delivery and economic stimulus, among other areas — MTC and ABAG are exploring other recovery priorities, including workforce development needs and opportunities.

### Cross-Cutting Implementation Actions

In addition to the strategy-specific implementation actions identified in this chapter, there are several key actions that will support multiple strategies and even multiple elements of the plan. These cross-cutting implementation actions are identified below:

- **Advocate for reforms to Senate Bill 375 and/or associated state guidelines to support improved policy outcomes with respect to reducing greenhouse gas emissions and facilitate enhanced collaboration at all levels of government in meeting shared climate goals**
  - Timeframe: Years 1-2
  - Implementation Vehicle: Advocacy and Legislation
- **Pursue strategic and targeted streamlining of the California Environmental Quality Act in order to advance Plan Bay Area 2050 housing and infrastructure goals without diminishing environmental safeguards**
  - Timeframe: Years 1-2
  - Implementation Vehicle: Advocacy and Legislation
- **Update the framework and methodology for identification of Equity Priority Communities**

- Timeframe: Years 2-3
- Implementation Vehicle: New, Existing or Restructured Initiatives
- **Provide Implementation Plan status updates and progress reports annually starting in 2022 to MTC's and ABAG's committees and boards, with the goal of refreshing the Implementation Plan as part of the next Plan Bay Area update process in 2025**
  - Timeframe: Ongoing
  - Implementation Vehicle: Planning or Research
- **Build upon the robust performance tracking work in Vital Signs, the regional performance monitoring initiative, as a tool to more effectively gauge Plan Bay Area 2050 implementation progress**
  - Timeframe: Ongoing
  - Implementation Vehicle: Planning or Research

## Housing

For housing, key implementation actions include providing financial resources and technical assistance through the Regional Housing Technical Assistance and Priority Development Area planning programs. These programs will support local jurisdictions in a myriad of ways as they develop their Housing Element updates and bolster the Plan Bay Area 2050 themes of spurring housing production for people at all income levels and creating inclusive communities. Agencies will also partner with a wide range of stakeholders on initiatives to study and accelerate the redevelopment of aging malls and office parks and catalyze the reuse of public and community-owned land. Finally, BAHFA will launch and deliver a suite of pilot projects that will equitably advance protection, preservation and production of affordable housing.

### *Implementation Spotlight: Advancing Regional Housing Goals*

To further Plan Bay Area 2050's housing strategies, MTC and ABAG have launched the Expanded Regional Housing Portfolio, which represents a new cross-sector, collaborative approach to address the region's housing challenges through comprehensive, data-driven, equity-focused programs and strategies. A central pillar of this effort is BAHFA, the first state-approved regional housing finance authority in California. BAHFA provides the region with a powerful new set of financing tools that can raise significant new housing revenue from a variety of sources, including a regional ballot measure, state or federal appropriations, and philanthropic and corporate contributions.

In addition to seeking new funding, the Expanded Regional Housing Portfolio furthers a framework based on the “3Ps”: protect current residents from displacement, preserve existing affordable housing and produce new housing to secure long-term affordability. Five new regional pilot programs will support this work:

1. Support the Design and Rollout of a Homelessness Prevention System
2. Strengthen the Regional Rental and Mortgage Assistance Network
3. Enhance Preservation Financing Tools and Provide Technical Assistance
4. Support a Regional Affordable Housing Application Platform (“Doorway”)
5. Build and Maintain a Regional Affordable Housing Pipeline Database

The 2021-22 California state budget includes \$20 million to underwrite the work of BAHFA, which, among other tasks, will help accelerate and deliver the pilot projects identified above. MTC and ABAG are also developing an outcomes-driven Business Plan to ensure the success of this work. Slated to be completed by 2023, the Business Plan will center on developing a strategic, equity-focused framework, including measurable outcomes; identifying and designing innovative funding and financing tools; and designing and recommending an effective structure and operations for BAHFA and the Expanded Regional Housing Portfolio.

### *Implementation Actions for the Housing Element*

THEME: PROTECT AND PRESERVE AFFORDABLE HOUSING — STRATEGIES H1 AND H2

- Implementation Actions
  - 1a) Advocate for renter protections for tenants and low-income communities to prevent unjust evictions and displacement.
    - Timeline: Ongoing
    - Implementation Vehicle: Advocacy and Legislation
  - 1b) Seek new revenues for affordable housing preservation.
    - Timeline: Ongoing
    - Implementation Vehicle: Advocacy and Legislation
  - 1c) Launch and deliver BAHFA pilot projects to develop standardized best practices for tenant protection programs; scope potential regional-scale anti-displacement programs; and launch and deliver a BAHFA pilot program to pursue new affordable

housing preservation strategies, including the restructured Bay Area Preservation Pilot Program.

- Timeline: Years 2–4
- Implementation Vehicle: New, Existing or Restructured Initiatives
- 1d) Complete and implement the Expanded Regional Housing Portfolio and BAHFA Business Plan.
  - Timeline: Years 1–3
  - Implementation Vehicle: Planning or Research
- 1e) Evaluate changes to federal and state policies to increase incentives for, and viability of, affordable housing preservation strategies.
  - Timeline: Ongoing
  - Implementation Vehicle: Planning or Research

THEME: SPUR HOUSING PRODUCTION FOR PEOPLE OF ALL INCOME LEVELS — STRATEGIES H3, H4, H5 AND H6

- Implementation Actions
  - 2a) Advocate for legislation that enables a greater mix of housing densities and types in Growth Geographies.
    - Timeline: Ongoing
    - Implementation Vehicle: Advocacy and Legislation
  - 2b) Seek new revenues for affordable housing production and explore better coordination of existing funding streams.
    - Timeline: Ongoing
    - Implementation Vehicle: Advocacy and Legislation
  - 2c) Continue and seek greater strategic alignment of existing and future programs and financial resources to help local jurisdictions increase their supply of affordable homes and develop context-specific inclusionary zoning and affordable housing incentives. Relevant existing programs include PDA Planning Grants, PDA Technical Assistance and Regional Housing Technical Assistance; new programs could be introduced to support planning and redevelopment of malls and office parks in PDAs and other Growth Geographies. Funding includes existing and eligible new funding sources.
    - Timeline: Ongoing
    - Implementation Vehicle: New, Existing or Restructured Initiatives

- 2d) Assist local jurisdictions to complete or initiate plans for all remaining PDAs by 2025.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 2e) Complete and implement the Transit-Oriented Development (TOD) Policy update to ensure land use supports transit investments and access to transit.
  - Timeline: Years 1–2 (policy update); Ongoing thereafter
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 2f) Launch and deliver BAHFA pilot projects to facilitate production and ensure equitable access to affordable housing, including a regional affordable housing application platform (“Doorway”) and an affordable housing pipeline database.
  - Timeline: Years 2–4
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 2g) Complete and implement the Expanded Regional Housing Portfolio and BAHFA Business Plan.
  - Timeline: Years 1–3
  - Implementation Vehicle: Planning or Research
- 2h) Evaluate changes to federal and state policies to increase incentives for, and the viability of, affordable housing production strategies.
  - Timeline: Ongoing
  - Implementation Vehicle: Planning or Research
- 2i) Identify redevelopment opportunities and challenges and partner with local jurisdictions, community members, property owners, affordable housing developers, and other stakeholders to accelerate the redevelopment of aging malls and office parks.
  - Timeline: Years 2–5
  - Implementation Vehicle: Planning or Research

THEME: CREATE INCLUSIVE COMMUNITIES — STRATEGIES H7 AND H8

- Implementation Actions

- 3a) Seek new revenues for rental, mortgage and small-business assistance programs.

- Timeline: Ongoing
  - Implementation Vehicle: Advocacy and Legislation
- 3b) Launch and deliver BAHFA pilot projects that will focus on developing standardized best practices for tenant protection programs and scoping potential regional-scale anti-displacement programs.
  - Timeline: Years 2–4
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 3c) Partner with local jurisdictions and other stakeholders through BAHFA to develop and roll out a regional homelessness prevention system.
  - Timeline: Years 1–4
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 3d) Continue and seek greater strategic alignment of existing programs and financial resources to plan for public land reuse and to advance residential and mixed-use projects with a large share of affordable housing. Programs include the PDA Planning Grants and PDA Technical Assistance programs, and funds include current and eligible new sources.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 3e) Complete and implement the Expanded Regional Housing Portfolio and BAHFA Business Plan.
  - Timeline: Years 1–3
  - Implementation Vehicle: Planning or Research
- 3f) Advance an initiative identifying challenges and opportunities for catalyzing the reuse of public and community-owned land by partnering with local jurisdictions, community members, public landowners, community land trusts and a broad range of other stakeholders.
  - Timeline: Years 2–5
  - Implementation Vehicle: Planning or Research

## Economy

Key implementation focus areas for Plan Bay Area 2050's economy element include new workforce actions aimed at supporting the plan's ambitious transportation, housing and resilience infrastructure goals as well as enhanced collaboration on regional and megaregional economic needs with labor, business and education partners, among others, moving forward. The agencies will also be evaluating funding sources to support the development of a pilot Priority Production Area Planning and Technical Assistance Program.

### *Implementation Spotlight: Supporting Jobs in Growth Geographies*

Priority Development Areas (PDAs) and Priority Production Areas (PPAs) are two Plan Bay Area 2050 Growth Geographies that could shape the distribution of future job growth in a manner that can support economic vitality and the plan's climate goals. Both are locally identified places — nominated by towns, cities or counties — where more jobs could be accommodated. PDAs are generally near existing job centers or frequent transit and are locally prioritized for both housing and job growth, while PPAs are typically existing industrial areas that are primed for growth in middle-wage industries like manufacturing, utilities and logistics. PDAs work to support Strategy EC4, to allow greater commercial densities in Growth Geographies, as well as Strategy EC5, to provide incentives to employers to shift jobs to housing-rich areas well served by transit. PPAs support Strategy EC6, to retain and invest in key industrial lands.

Several implementation actions have been identified to support local planning efforts that prepare for job growth in PDAs and PPAs. Over the next five years, MTC and ABAG will evaluate funding sources and develop a pilot PPA Planning and Technical Assistance Program, with a goal of supporting up to five PPAs by 2025. The agencies will also offer planning and technical assistance surrounding greater commercial densities and seek greater strategic alignment of existing programs, including the PDA Planning and Technical Assistance Grant Program, with expanded emphasis on integrating housing and job growth at transit-supportive densities in transit-rich Growth Geographies.

### *Implementation Actions for the Economy Element*

THEME: IMPROVE ECONOMIC MOBILITY — STRATEGIES EC1, EC2 AND EC3

- Implementation Actions

- 4a) Advocate for a potential statewide pilot program related to a universal basic income.
  - Timeline: Years 3–5
  - Implementation Vehicle: Advocacy and Legislation
- 4b) Support increased funding for job training programs, including pre-apprenticeships, as well as incubator program.
  - Timeline: Years 3–5
  - Implementation Vehicle: Advocacy and Legislation
- 4c) Advocate for the importance of apprenticeships and high road career opportunities, including construction, to improve economic mobility and support the plan’s ambitious housing and infrastructure goals, with an emphasis on recruiting women, veterans, formerly incarcerated people, people of color and residents of Equity Priority Communities.
  - Timeline: Years 2–5
  - Implementation Vehicle: Advocacy and Legislation
- 4d) Advocate for continued federal and state support for internet subsidies and a more deliberate state approach to expanding access to broadband for households with low incomes.
  - Timeline: Ongoing
  - Implementation Vehicle: Advocacy and Legislation
- 4e) Implement the recommendations of MTC and ABAG’s Regional Governmental Partnership for Local Economic Rebound initiative.
  - Timeline: Years 2–5
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 4f) Partner with regional economy stakeholders, including labor, business, and education partners, on research and modeling of workforce supply challenges facing the region and megaregion.
  - Timeline: Years 2–4
  - Implementation Vehicle: Planning or Research

THEME: SHIFT THE LOCATION OF JOBS — STRATEGIES EC4, EC5 AND EC6

- Implementation Actions

- 5a) Advocate for legislation that enables a greater mix of commercial densities as outlined in the plan’s Growth Geographies.
  - Timeline: Ongoing
  - Implementation Vehicle: Advocacy and Legislation
- 5b) Complete and implement the TOD Policy update to ensure land use supports transit investments.
  - Timeline: Years 1–2 (policy update); Ongoing thereafter
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 5c) Continue and seek greater strategic alignment of existing programs, including the PDA Planning Grants Program, with expanded emphasis on integrating housing and job growth at transit- supportive densities in transit-rich Growth Geographies.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 5d) Evaluate funding sources and develop a pilot PPA planning and technical assistance program, with a goal of supporting up to five PPAs by 2025.
  - Timeline: Years 1–5
  - Implementation Vehicle: New, Existing or Restructured Initiatives

## Transportation

Key implementation actions for Plan Bay Area 2050’s transportation element include implementing the recommendations of the Blue Ribbon Transit Recovery Task Force, the Fare Coordination and Integration Study, and the Regional Active Transportation Plan. Advocating for major capital projects and positioning them for success will be a major implementation focus area in collaboration with local, regional and megaregional partners. In addition, work is underway to update MTC’s Transit-Oriented Development Policy to ensure land use supports current and planned transit investments. Looking ahead, MTC will lead the Next-Generation Freeways Study to further explore freeway all-lane tolling and complementary strategies through engagement with partners and the public.

### *Implementation Spotlight: Next-Generation Freeways Study*

Plan Bay Area 2050’s transportation strategies aim to support the mobility needs of all residents, with an emphasis on addressing mobility needs in underserved communities and meeting state

mandated climate emissions reduction goals. Strategy T5, to implement per-mile tolling on congested freeways with transit alternatives, could be one of the most impactful strategies to accomplish these aims by encouraging future Bay Area residents to choose transit, carpooling or an active mode rather than driving alone. To begin the work of implementing this strategy, MTC and ABAG must first identify ways to equitably advance roadway pricing through deep engagement, working toward a modernized, multimodal regional transportation network with improved mobility, environmental and equity outcomes for all.

One near-term step forward is the Next-Generation Bay Area Freeways Study, a multi-pronged effort to explore freeway pricing mechanisms and complementary strategies through robust public engagement, simulation modeling and financial analysis. Throughout all elements of the study, equity will be centered as MTC, partners and the public discuss options for road pricing policy and associated tradeoffs. MTC will lead the study and partner with Caltrans, county transportation agencies, transit agencies, engagement experts and community-based organizations for this work. The study is slated to conclude in 2023.

### *Implementation Actions for the Transportation Element*

#### THEME: MAINTAIN AND OPTIMIZE THE EXISTING SYSTEM — STRATEGIES T1, T2, T3, T4, T5, T6 AND T7

- Implementation Actions
  - 6a) Seek new revenues and/or increased funding for transportation, including operations and maintenance needs; community-led enhancements; and fare policy reform, including means-based considerations.
    - Timeline: Ongoing
    - Implementation Vehicle: Advocacy and Legislation
  - 6b) Evaluate and, if necessary, seek state legislative authority to support implementation of the Fare Coordination and Integration Study recommendations.
    - Timeline: Years 1–2
    - Implementation Vehicle: Advocacy and Legislation
  - 6c) Coordinate the Bay Area’s transportation pandemic recovery with a focus on stabilization, rebuilding and ridership restoration.
    - Timeline: Years 1–2
    - Implementation Vehicle: New, Existing or Restructured Initiatives

- 6d) Reassess Plan Bay Area 2050's transportation element financial assumptions in 2023 to better reflect the region's post-COVID-19 financial conditions.
  - Timeline: Years 3–4
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 6e) Continue existing asset management programs such as StreetSaver, StreetSaver Plus, and the Pavement Technical Assistance Program, among others, and develop detailed asset management plans for each of the BATA toll bridges as identified in the BATA Recovery Action Plan.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 6f) Implement the system optimization recommendations of the Blue Ribbon Transit Recovery Task Force related to fare integration and payment, mapping and wayfinding, bus transit priority, and transit network planning, including fare integration and payment recommendations, such as implementing the recommendations of the Fare Coordination and Integration Study and funding related pilot projects; customer information recommendations, such as finalizing regional mapping and wayfinding standards, delivering pilot projects, and developing a regional mapping data services digital platform; bus transit priority recommendations, such as adopting a Transit Priority Policy and Corridor Assessment, and delivering near-term transit corridor projects; transit network planning recommendations, such as adopting a Bay Area Connected Network Plan and standardizing transit data collection to provide accurate customer information.
  - Timeline: Year 1 (fares); Years 1–3 (bus signal priority and transit network); Years 1–4 (mapping and wayfinding)
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 6g) Update guidelines for the upcoming cycle of the Community-Based Transportation Planning (CBTP) Program and explore restructuring of the Lifeline Transportation Program and/or using other existing funding sources to support the development and advancement of CBTPs and participatory budgeting projects.
  - Timeline: Years 1–3
  - Implementation Vehicle: New, Existing or Restructured Initiatives

- 6h) Implement the recommendations of the Blue Ribbon Transit Recovery Task force related to accessibility, including designating a mobility manager and identifying key paratransit reforms through the Coordinated Plan update.
  - Timeline: Years 1–3
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 6i) Deploy the Clipper® Mobile app, next-generation Clipper® and a single regional mobility account platform to improve seamless integration of the network.
  - Timeline: Years 3–5
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 6j) Continue and seek greater strategic alignment of existing programs, including the CBTP Program, Clipper® START, the I-880 Express Lanes Toll Discount Pilot, Express Lanes, 511, the “Forward” Commute Initiatives and Connected Bay Area, among others.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 6k) Identify strategies to equitably advance roadway pricing on congested freeways through technical analysis and deep engagement with key partners, stakeholders and the public.
  - Timeline: Years 2–3
  - Implementation Vehicle: Planning or Research

THEME: CREATE HEALTHY AND SAFE STREETS — STRATEGIES T8 AND T9

- Implementation Actions
  - 7a) Seek new revenues and/or increased funding for transportation, including for Complete Streets and Vision Zero priorities.
    - Timeline: Ongoing
    - Implementation Vehicle: Advocacy and Legislation
  - 7b) Advocate for policy changes that will improve roadway safety, particularly for the most vulnerable users, including but not limited to authorization for automated speed enforcement.
    - Timeline: Years 1–2
    - Implementation Vehicle: Advocacy and Legislation

- 7c) Complete and implement the recommendations of the Regional Active Transportation Plan.
  - Timeline: Years 1–5
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 7d) Continue and seek greater strategic alignment of existing programs, such as the Active Transportation Program, the Quick-Build Technical Assistance program, local roadway asset inventory development and the Vision Zero shared data initiative.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives

THEME: BUILD A NEXT-GENERATION TRANSIT NETWORK — STRATEGIES T10, T11 AND T12

- Implementation Actions

- 8a) Seek new revenues and/or increased funding for transportation, including for local and regional transit expansion, and convene stakeholders through late 2023 to identify priorities and a funding framework for a future transportation ballot measure that would include new funding for transit.
  - Timeline: Ongoing
  - Implementation Vehicle: Advocacy and Legislation
- 8b) Advocate for major capital projects and position them for success, including sequencing projects to align with funding availability as well as assessing their existing funding, project readiness and characteristics that support Plan Bay Area 2050 goals.
  - Timeline: Years 1–4
  - Implementation Vehicle: Advocacy and Legislation
- 8c) Advocate for the next phase of California High-Speed Rail (CAHSR) construction to connect the Central Valley to the Bay Area, while partnering with state agencies to seek more federal and state monies for the project.
  - Timeline: Ongoing
  - Implementation Vehicle: Advocacy and Legislation
- 8d) Advocate for changes to state law and federal regulations that will expand opportunities to convert general-purpose and part-time travel lanes to priced facilities.
  - Timeline: Ongoing
  - Implementation Vehicle: Advocacy and Legislation

- 8e) Continue and seek greater strategic alignment of existing programs, including the “Forward” Commute Initiatives person-throughput investments and transit signal priority investments, as well as the express lanes network expansion, and follow the recommendations of the Bay Area Express Lanes Strategic Plan, which will guide future network investments, priorities and policies.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 8f) Implement the transit network recommendations of the Blue Ribbon Transit Recovery Task Force, including bus transit priority on future routes, connected network planning, and bus/rail network management reforms, including developing a Business Case for reform and delivery of the Rail Partnership and Governance Assessment.
  - Timeline: Years 1–3
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 8g) Complete and implement the TOD Policy update to ensure land use supports transit investments and access to transit.
  - Timeline: Years 1–2 (policy update); Ongoing thereafter
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 8h) Collaborate with local, regional and megaregional partners on major transportation projects to evaluate regional project delivery paradigms and support improved schedule adherence and reduced costs.
  - Timeline: Years 1–4
  - Implementation Vehicle: New, Existing or Restructured Initiatives

## Environment

For Plan Bay Area 2050’s environment element, key implementation actions include evaluating and establishing clear roles and responsibilities for sea level rise adaptation planning, funding and implementation, in collaboration with key partners. MTC is proposing to restructure its Climate Initiatives Program and its transportation demand management programs to ensure that they can effectively increase in scale over the next five years, particularly given the expanded scope of these strategies in Plan Bay Area 2050. The feasibility of expanding the scope and mission of the Bay Area Regional Energy Network (BayREN) to develop a broader range of programs that support

water and energy upgrades will also be evaluated. Finally, Priority Conservation Areas, a framework first established by ABAG in the late 2000s, have also been identified for a revamp toward a more data-driven approach that addresses a wider range of policy concerns, including resilience and equity.

### *Implementation Spotlight: Reexamining Priority Conservation Areas*

Priority Conservation Areas (PCAs) are locations nominated by local jurisdictions, open space districts or parks districts and designated by ABAG for the protection of natural habitats and the preservation of open space for future generations in the Bay Area. This includes farming, ranching, recreational and resource lands, which are collectively critical to supporting quality of life in the Bay Area. The first PCAs were adopted in 2008, with over 185 Bay Area PCAs now identified.

These geographies are one of the key regional policy tools available to support the implementation of Plan Bay Area 2050's environmental strategies, including Strategy EN5, to protect and manage high-value conservation lands. Discussions with stakeholders through the development of the Implementation Plan unearthed interest in revisiting the program structure in order to prioritize data-driven and science-based approaches. MTC and ABAG will engage with a variety of stakeholders and partners to provide guidelines and resources to support future conservation work, while also broadening the scope of the PCA program to promote climate resilience and equity. Work on the PCA program update will occur over the next two years, providing an opportunity for the revised framework to be applied during the next long-range planning cycle.

### *Implementation Actions for the Environment Element*

THEME: REDUCE RISKS FROM HAZARDS — STRATEGIES EN1, EN2 AND EN3

- Implementation Actions
  - 9a) Seek new revenues to support sea level rise adaptation.
    - Timeline: Ongoing
    - Implementation Vehicle: Advocacy and Legislation
  - 9b) Advocate for legislative reforms to better address climate adaptation and resilience goals; and establish clear roles and responsibilities for sea level rise adaptation planning, funding and implementation through the BARC Regional Climate Adaptation Legislative Working Group.

- Timeline: Years 1–2
  - Implementation Vehicle: Advocacy and Legislation
- 9c) Seek new revenues to incentivize residential building retrofits, energy upgrades and electrification; and advocate for changes relative to the use of ratepayer funds.
  - Timeline: Years 3–5
  - Implementation Vehicle: Advocacy and Legislation
- 9d) Support multi-benefit, multi-jurisdictional shoreline adaptation efforts, working in partnership with cities, counties and other key partners, with a goal of supporting up to five adaptation planning processes by 2025.
  - Timeline: Years 3–5
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 9e) Support BCDC in implementing the Bay Adapt Joint Platform, a collaborative strategy to adapt to rising sea levels.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 9f) Support BCDC in the developing a One Bay Vision for sea level rise adaptation rooted in community, Bay ecosystems and the economy, incorporating this vision into the next Plan Bay Area update.
  - Timeline: Years 2–5
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 9g) Prioritize implementation of natural and nature-based solutions through SFEP’s projects and programs.
  - Timeline: Years 3–5
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 9h) Evaluate the feasibility of expanding BayREN’s scope/mission to support retrofits and water/energy upgrades for residential buildings, and to support energy upgrades and electrification for existing commercial and public buildings.
  - Timeline: Years 2–4
  - Implementation Vehicle: New, Existing or Restructured Initiatives

- 9i) Develop a sea level rise funding plan to support the implementation of projects that reduce sea level rise risks to communities, infrastructure and ecology, prioritizing green infrastructure wherever possible.
  - Timeline: Years 1–3
  - Implementation Vehicle: Planning or Research
- 9j) Study and identify Plan Bay Area 2050 Growth Geographies for resilience risk and opportunities and reform Growth Geography planning guidance accordingly.
  - Timeline: Years 2–4
  - Implementation Vehicle: Planning or Research
- 9k) Compile detailed assessments for seismic, wildfire, water and energy needs, which will explore financial needs, key relevant initiatives, best practices, key stakeholders, and workforce and technology needs, among other areas.
  - Timeline: Years 1–3
  - Implementation Vehicle: Planning or Research

THEME: EXPAND ACCESS TO PARKS AND OPEN SPACE — STRATEGIES EN4, EN5 AND EN6

- Implementation Actions
  - 10a) Advocate for the preservation of existing urban growth boundaries (UGBs) to avoid net expansion of areas eligible for urban development.
    - Timeline: Years 3–5
    - Implementation Vehicle: Advocacy and Legislation
  - 10b) Seek new revenues to support land conservation as well as for parks, recreation and open space, with a special emphasis on improving access and enhancing amenities for Equity Priority Communities.
    - Timeline: Years 3–5
    - Implementation Vehicle: Advocacy and Legislation
  - 10c) Revamp the PCA planning framework using a data-driven approach to better prioritize the most critical areas for conservation, while addressing a broader range of policy concerns.
    - Timeline: Years 2–3
    - Implementation Vehicle: New, Existing or Restructured Initiatives

- 10d) Continue and seek greater strategic alignment of existing programs, including funding and implementation of the Regional Advance Mitigation Program (RAMP), as well as the San Francisco Bay Trail, San Francisco Bay Area Water Trail, the Priority Conservation Area Program and Quick-Build technical assistance.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives

THEME: REDUCE CLIMATE EMISSIONS —STRATEGIES EN7, EN8 AND EN9

- Implementation Actions

- 11a) Evaluate and, if determined necessary and feasible, seek legislative authority to modify or expand the existing Bay Area Commuter Benefits Program in partnership with the Air District.
  - Timeline: Years 1–2 (Evaluate); Years 3–5 (Seek)
  - Implementation Vehicle: Advocacy and Legislation
- 11b) Seek new revenues and/or increased funding to support climate, electrification and travel demand management needs.
  - Timeline: Ongoing
  - Implementation Vehicle: Advocacy and Legislation
- 11c) Convene local governments, transportation demand management (TDM) partners, transit agencies and employers to expand and foster relationships, target outreach, support education, develop metrics, share data and identify shared goals.
  - Timeline: Ongoing
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 11d) Identify the resources and capacities necessary to implement an expanded Bay Area Commuter Benefits Program at both the Air District and MTC, including an effort to improve program data and enhance database functionality, while using existing resources to develop program messaging.
  - Timeline: Years 1–2
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 11e) Restructure MTC’s Climate Initiatives Program to ensure it can effectively scale over the next five years, while advancing existing initiatives including electric vehicle incentives, electric vehicle charger programs, local parking policies, curb management,

Targeted Transportation Alternatives, Mobility Hubs, vanpooling, car sharing, MTC SHIFT as well as bikeshare and e-bike incentive programs.

- Timeline: Years 2–5
- Implementation Vehicle: New, Existing or Restructured Initiatives
- 11f) Coordinate an agency-wide, cross-sectional approach for operational TDM programs to increase equity, efficiency and effectiveness and support a shared regional vision for TDM.
  - Timeline: Years 2–5
  - Implementation Vehicle: New, Existing or Restructured Initiatives
- 11g) Conduct research such as focus groups, workshops, surveys, polls and studies to support the development of strategies and approaches that will maximize the viability of sustainable commute targets for major employers to implement.
  - Timeline: Years 2–4
  - Implementation Vehicle: Planning or Research

### Funding Plan Bay Area 2050

Plan Bay Area 2050 envisions an investment in the Bay Area’s future of approximately \$1.4 trillion between now and 2050. A central element of implementing this vision is understanding the potential cost of carrying out each of these strategies, as well as identifying the resources available to meet those needs. More than \$600 billion in existing revenues have been identified to support Plan Bay Area 2050’s strategies, the majority of which are revenues that fund transportation operations and expansion. Two other existing revenue sources include just over \$100 billion for housing, primarily focused on affordable housing maintenance and production, and \$16 billion to support environmental aims like emissions reductions and planned sea level rise adaptation projects.

The inclusion of the environment and economy elements in Plan Bay Area 2050 has broadened the scope of the financial analysis required of the plan, and information on existing funding streams for these areas is less readily available. As such, existing funding identified for these two elements is likely underrepresented. This is particularly true for the economy element and environmental strategies related to parks and open space, where no existing funding is assumed.

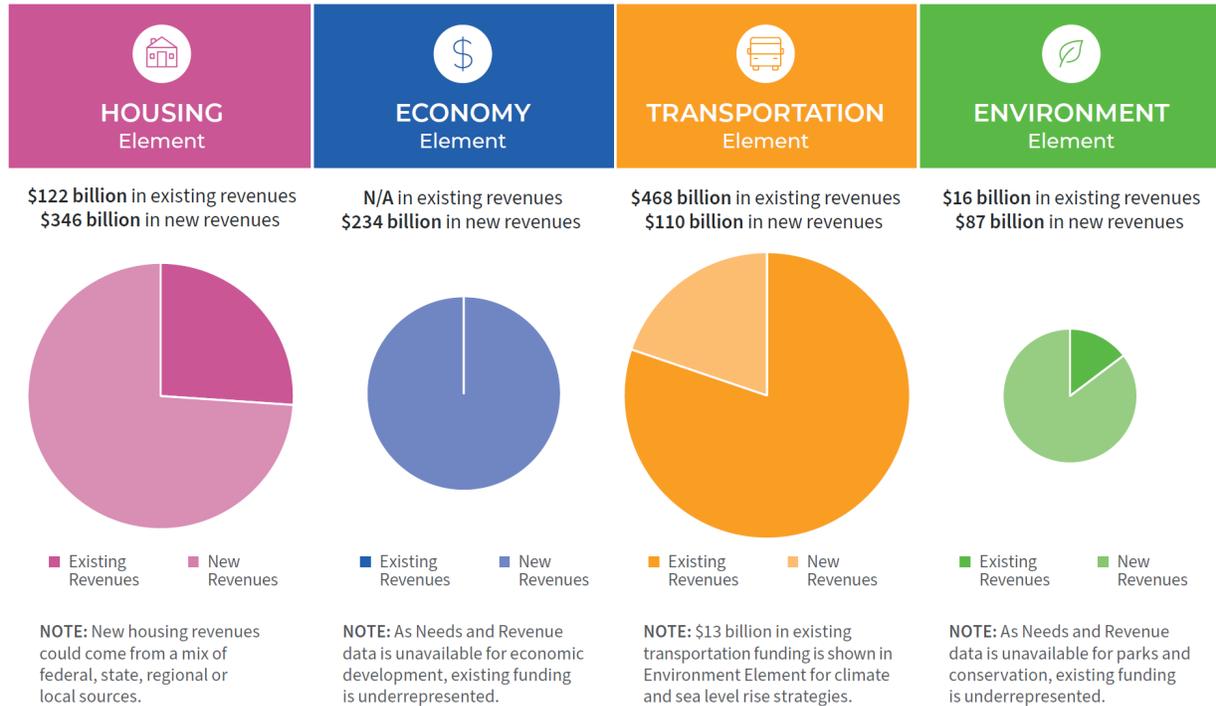
These two elements in particular will need further study and partnership to fully understand what funds already exist and where more financial support is needed.

The transportation element, which has the highest cost of Plan Bay Area 2050's four elements, has relatively robust revenues that currently support the existing system's maintenance and operation. New revenues, however, would be needed to fund the plan's more transformational investments and policies, such as the new Link21 transbay rail crossing or regional fare discounts for millions of trips each day. Such revenues would be generated by implementation of specific Plan Bay Area 2050 strategies like freeway pricing and parking fees, as well as a future regional revenue measure. Independent polling conducted in 2019 found over two-thirds of Bay Area residents were in support of a regional revenue measure for transportation. Working with partners to allow Bay Area voters to decide on such a measure is a key near-term implementation action for MTC and ABAG.

Plan Bay Area 2050's housing, environment and economy elements would require a much stronger reliance on new revenues, reflecting the historically limited role of government spending in these areas. For the housing element, the next most costly after transportation, existing local and state programs to support affordable housing production and preservation can be expected to account for around one-quarter of the funding needed to carry out the plan's housing strategies. Plan Bay Area 2050 intensifies the focus on capital investments for affordable housing production and preservation, requiring a substantial increase in funding to match the scale of the crises the Bay Area must now address.

Thinking ahead to 2050, addressing the challenges that stand in the way of equitable economic development and environmental resilience would require significantly more financial resources than would be expected should today's funding paradigms continue. For example, an economy strategy to implement a universal basic income would require an estimated \$200 billion, reflecting a significant break from current levels of investment in economic development. Similarly, current resources for environmental strategies fall short of what would be needed to carry out the proactive approach to open space expansion, sea level rise adaptation and building modernization laid out in Plan Bay Area 2050.

**Figure 7-1.** Existing and new revenues by element



### New Revenues on the Horizon

Given the gap between existing and needed revenues, new funding sources will be essential to advancing Plan Bay Area 2050’s strategies. While the specific sources of new revenue have yet to be determined, there are a variety of ways that new funding could be generated. These range from user fees like parking surcharges and all-road tolling to increasing taxes on wealth, income, sales or property.

Bay Area voters and policymakers have stepped up to tackle big regional problems in the past, from the inception of the BART system in the 1950s and 1960s to voter-approved bonds for affordable housing in recent years. In the environment sphere, a revenue-generating measure by the San Francisco Bay Restoration Authority in 2016 passed with 70% approval across the region — the Bay Area’s first-ever tax to prepare for sea level rise.

Following the onset of the COVID-19 pandemic, federal and state governments made significant funding available for a wide array of emergency response uses, including lifeline transit service and help for renters and businesses to remain in place during economic turmoil. These policy conversations have continued throughout 2021 and are likely to continue for years as

governments reassess their roles in confronting immense challenges like income inequality and climate change.

At the federal level, there has been bipartisan support for large-scale investments to modernize and expand infrastructure. Discussions have centered around a number of investment priorities, including the needs to rehabilitate the nation's roads and bridges; expand transit access through large and small capital projects; advance the adoption of zero-emissions vehicles; increase connectivity to high-speed internet; more efficiently manage national water and electricity systems; and prepare for worsening climate events.

As the Fixing America's Surface Transportation (FAST) Act expires in 2021, federal lawmakers are proposing a trillion-dollar infrastructure bill including re-authorization of the act at much higher overall funding levels. While the exact amount of funding and the framework for distributing it are still under discussion, widespread support for these investments suggests that new federal funding streams could direct billions of additional dollars to the Bay Area to implement Plan Bay Area 2050's priorities and projects.

The state of California also has acted recently to provide resources to help cities, counties and regions tackle large-scale challenges. In the housing sphere, the Regional Early Action Program (REAP) was initiated in the FY2018-19 state budget to align local housing plans with state-mandated goals to increase housing production. The FY2021-22 state budget includes a second infusion of funds for the program with a focus on reducing vehicle miles traveled through implementation of strategies recommended by long-range plans like Plan Bay Area 2050. This new funding will support programs and capital projects that accelerate infill development, promote multimodal communities, shift travel behavior away from solo driving and increase transit ridership. Other recent funds identified at the state level include \$35 million to implement the country's first statewide guaranteed income pilot and \$6 billion to expand high-speed internet access. More information on both of these state allocations can be found in the Plan Bay Area 2050 Economy Element.

Aligning revenues with recommendations from the long-range plan is a critical first step toward implementation. In the Bay Area, the One Bay Area Grant (OBAG) program is a policy and programming framework that aligns select federal transportation revenues with recommendations from long-range plans. MTC will embark on a third OBAG cycle beginning in

2022 in order to advance Plan Bay Area 2050 and other regional policy aims. Priorities include implementing the region's focused growth framework and climate goals and supporting the agencies' adopted Equity Platform and Regional Vision Zero policy. MTC expects to approve the OBAG 3 framework in December 2021, with a call for projects anticipated in early 2022.

Ultimately, securing and distributing funding to implement Plan Bay Area 2050 will require collaboration with partners from many sectors and organizations, ranging from agencies at all government levels to the residents working to place a new revenue measure on the ballot. Through all stages of implementation, partnership remains foundational to Plan Bay Area 2050. The following section provides more detail on the diverse coalition of stakeholders needed to realize Plan Bay Area 2050's vision.

### Strategic Partnership Opportunities

As discussed earlier in this chapter, this Implementation Plan focuses on implementation actions that MTC and/or ABAG propose to commit to over the next one to five years. Actions can fall under the purview of MTC, ABAG, or both agencies collectively, and as such, the agencies are referred to as MTC/ABAG in this section. Undoubtedly, each implementation action detailed in the prior tables will require partnership to enact. During the Partnership Phase of the Implementation Plan, over 45 distinct partners offered potential commitments or statements of support to advance implementation across all plan strategies.

Incorporating this feedback, MTC and ABAG have identified a selection of strategic partners that will be integral to implementing Plan Bay Area 2050, including:

- Bay Area Air Quality Management District (Air District)
- Bay Conservation and Development Commission (BCDC)
- Business Community
- Community-Based Organizations, Advocates and Non-Profits
- County Transportation Agencies (CTAs)
- Labor Organizations
- Local Jurisdictions
- State Agencies
- Transit Agencies

It is important to note that this list of partners and partnership areas is not exhaustive and reflects a shortlist of high- priority focus areas where MTC/ABAG and listed partners can work to advance the adopted Plan Bay Area 2050 strategies. Additional partners will be engaged as specific initiatives, planning projects and advocacy priorities move forward over the plan’s implementation period.

### Bay Area Air Quality Management District (Air District)

As the regional air pollution control agency for the nine-county Bay Area, the Air District is tasked with overseeing policies and adopting regulations to control stationary sources of air pollution. The Air District and MTC/ABAG collaborate on initiatives including electric vehicle infrastructure and incentives; freight and goods movement; and the Commuter Benefits Program, which provides incentives for commuters to take transit or vanpool to work. Given the significantly expanded climate strategies in Plan Bay Area 2050, MTC/ ABAG look forward to continuing and growing their partnership with the Air District on a range of efforts that will encourage mode shift away from auto commute trips, reduce greenhouse gas emissions, and improve air quality, with a specific focus on supporting the needs of Equity Priority Communities, AB 617 communities, and other communities over-burdened by pollution. Through AB 617, for example, the Air District supported the development of the West Oakland Community Action Plan, which contained community-developed recommendations to improve transit service and improve the design and safety of local streets for pedestrians and bike trips.

High-priority initiative areas for greater coordination include expanding the Commuter Benefits Program to support sustainable commute targets, expanding vehicle electrification efforts and accelerating building decarbonization efforts at the regional level. For the Commuter Benefits Program, MTC/ABAG would like to work collaboratively with the Air District to conduct research, convene local partners and employers, and build greater regional consensus for sustainable commute targets, while also working to optimize the program’s design and identify the resources and authority needed to expand the program. Given the significantly expanded clean vehicle incentives and infrastructure envisioned by Plan Bay Area 2050, the agencies will also have to work closely to restructure existing vehicle electrification initiatives to ensure that they can scale effectively. Finally, the Air District will be an essential implementation partner for the plan’s building decarbonization strategies given their existing decarbonization programs and initiatives, funding, and authority to regulate stationary pollution sources.

### *Partnership Focus Strategies*

- Economy — EC6
- Transportation — T2
- Environment — EN2, EN3, EN7, EN8, EN9

### **Bay Conservation and Development Commission (BCDC)**

With planning, permitting and enforcement authorities over San Francisco Bay, BCDC has a major role in preparing for, and adapting to, rising sea levels caused by climate change. MTC/ABAG and BCDC have partnered on numerous projects and initiatives, including the Adapting to Rising Tides program, the San Francisco Bay Trail, the San Francisco Bay Area Water Trail, the San Francisco Bay Area Seaport Plan, various shoreline-adjacent transportation projects, and most recently, the Bay Adapt process.

Beginning in 2019, Bay Adapt, a voluntary, collaborative initiative led by BCDC, sought to establish regional agreement on the actions necessary to protect the Bay Area's people and natural and built environments from sea level rise. In June 2021, Bay Adapt's 35-member Leadership Advisory Group of executive-level leaders from private, public and non-profit organizations unanimously agreed to support its implementation. The Bay Adapt Joint Platform lays out nine actions and 21 tasks that will enable the region to adapt faster, better and more equitably to a rising bay; the actions identified in the Plan Bay Area 2050 Implementation Plan are fully consistent with and supportive of the Bay Adapt Joint Platform.

A major partnership priority for MTC/ABAG is to work collaboratively with BCDC and other key partners to establish clear roles and responsibilities for sea level rise adaptation planning, funding and implementation through the BARC Regional Climate Adaptation Working Group. Moving forward, MTC/ABAG will also support BCDC in the development of a One Bay Vision for sea level rise adaptation rooted in community, bay ecosystems and the economy, and work to incorporate this vision into the next Plan Bay Area update.

Additional partnership focus areas for sea level rise adaptation include raising revenues to support planning and adaptation projects, pursuing joint legislative advocacy, and developing a sea level rise funding plan for implementation.

### *Partnership Focus Strategies*

- Environment — EN1

### **Business Community**

The Bay Area business community encompasses a broad range of voices, including large and small businesses, employer associations, advocacy groups and economic development associations. This community has an essential role in ensuring that the Bay Area’s economy is vibrant, innovative and sustainable, as well as an inclusive engine of economic opportunity for all of the Bay Area’s residents. As such, businesses have been important stakeholders in many MTC/ ABAG-led efforts over the years, from megaregional transportation projects to the development of the CASA Compact to address the Bay Area’s chronic housing affordability challenges.

MTC/ABAG expect that the business community will continue to be a key implementation partner moving forward across a number of Plan Bay Area 2050 strategies, touching each of the plan’s four core elements. Based on discussions during the Partnership Phase of the Implementation Plan, MTC/ ABAG would especially welcome the business community’s engagement on the region’s transportation and housing needs — whether supporting potential regional revenue measures, advocating for major regional and megaregional transportation projects and initiatives in conjunction with an evaluation of project delivery paradigms, or advancing production of both market-rate and affordable housing in Growth Geographies. Other key partnership focus areas include: providing leadership and expertise on regional economic recovery efforts, ongoing engagement to expand commute trip reduction programs at major employers, and further exploration of jobs-to-housing balance issues and considerations.

Partnership Phase discussions also revealed workforce development concerns from the business community related to staff shortages and challenging labor market conditions as the pandemic continues. Moving forward, MTC/ABAG are proposing to partner with regional economy stakeholders including labor, business and education partners, to further research and model the workforce supply challenges facing the region and megaregion.

### *Partnership Focus Strategies*

- Housing — H3, H4, H6
- Economy — EC2, EC3, EC4, EC5, EC6

- Transportation — T1, T3, T4, T5, T8, T10, T11, T12
- Environment — EN1, EN3, EN7, EN9

### Community-Based Organizations, Advocates and Non-Profits

The Bay Area’s unparalleled community of community-based organizations (CBOs), advocates and non-profits bring a wealth of knowledge and expertise to optimize and accelerate implementation of Plan Bay Area 2050’s strategies across all of the plan’s elements. In addition to deep experience engaging with communities and conducting high-impact advocacy campaigns at the local, regional and state levels, these groups have been active stakeholders in many MTC- and ABAG-led initiatives over the years. Past key efforts have included previous iterations of Plan Bay Area, the OBAG Program, the PCA Program and CASA, among many others.

Moving forward into the plan’s implementation period, MTC/ABAG welcome continued partnership and engagement from advocates and non-profits in several priority focus areas. These focus areas include partnering in efforts to reexamine the Equity Priority Communities framework and methodology, providing input on the development of the Expanded Regional Housing Portfolio Business Plan, supporting BAHFA pilot programs, and discussing the vision for a regional public lands network. MTC/ABAG also look forward to partnering to revise the PCA planning framework to better incorporate science, resilience and equity, among other areas, in addition to continuing dialogue regarding key transit priorities in the post-COVID environment.

From a broader perspective, a major consideration across many of the identified Plan Bay Area 2050 strategies involves coordinated public engagement to best support the needs of Equity Priority Communities. MTC/ABAG intend to continue, and to strengthen, engagement efforts in collaboration and partnership with advocates, non-profits and CBOs in the years ahead.

### *Partnership Focus Strategies*

- Housing — H1, H2, H3, H4, H5, H7, H8
- Economy — EC1, EC2, EC3, EC4
- Transportation — T1, T2, T3, T4, T5, T8, T9, T10
- Environment — EN1, EN2, EN4, EN5, EN6, EN7, EN8

## County Transportation Agencies (CTAs)

The region's nine CTAs deliver transportation projects and programs to improve access and mobility for the residents of their counties, in addition to providing technical assistance to local jurisdictions. As the transportation planner, funder and coordinator for the nine-county Bay Area, MTC/ABAG has long-standing relationships with CTAs and a strong history of collaborating to meet the region's most pressing transportation needs.

Some of the most critical areas for partnership between MTC/ABAG and CTAs involve coordination on a wide range of project delivery needs and considerations, facilitating the Bay Area's transportation recovery from the COVID-19 pandemic — including through implementation of the recommendations of the Blue Ribbon Transit Recovery Task Force's Bay Area Transit Transformation Action Plan — and partnering on overall GHG emissions reduction efforts. In the project delivery space, key focus areas will involve working to seek and secure revenues to fill transportation funding gaps, including authorization of a potential regional revenue measure. Further collaboration is necessary to improve schedule adherence, reduce project costs and evaluate project delivery paradigms for major capital projects. With respect to GHG emissions reduction efforts, it will be essential for CTA long-range transportation plans to more closely align with Plan Bay Area 2050, including a stronger emphasis on countywide development patterns.

Other related implementation priorities with CTAs — who were active collaborators throughout the Partnership Phase of the Implementation Plan — involve partnering in a study to equitably advance roadway pricing, furthering implementation of the Express Lanes Strategic Plan, accelerating Complete Streets and Vision Zero improvements — including through technical assistance to local jurisdictions — and advancing electric vehicle and transportation demand management initiatives.

### *Partnership Focus Strategies*

- Housing — H3, H8
- Economy — EC4, EC5, EC6
- Transportation — T1, T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12
- Environment — EN1, EN7, EN8, EN9

## Labor Organizations

The Bay Area’s labor organizations represent workers who pursue collective bargaining with their employers to secure better wages, improve working conditions and enhance representation for their members. Unions have an essential role in advocating for working class interests and creating and sustaining pathways to the middle class for residents with low incomes.

Especially relevant for Plan Bay Area 2050’s goals are the unions representing transit agency employees, as well as unions representing the building and construction trades. MTC/ABAG look forward to working closely with labor partners in areas of mutual interest moving forward. In the transportation realm, this includes supporting the restoration of transit in the post-COVID environment and delivering a wide range of local and regional transit expansion projects. In the housing and resilience realms, workforce considerations will be key to affordable housing production goals; sea level rise adaptation efforts; and efforts to upgrade residential, commercial and public buildings.

Labor partners identified the critical need of ensuring an adequately sized and skilled construction workforce during the Implementation Plan Partnership Phase. The Implementation Plan therefore includes workforce actions aimed at making the plan’s ambitious transportation, housing and resilience infrastructure goals more achievable, and also recommends partnering with labor organizations on regional and megaregional economic needs through research and modeling. The agencies are especially interested in exploring how the region can support the recruitment, training and retention of women, veterans, formerly incarcerated people, people of color and residents of Equity Priority Communities into “high road” career opportunities.<sup>80</sup>

### *Partnership Focus Strategies*

- Housing — H3, H4, H6, H8
- Economy — EC2, EC4, EC6
- Transportation — T1, T10, T11, T12
- Environment — EN1, EN2, EN3

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<sup>80</sup> Based on the California Workforce Development Board’s definition, “high road” employers refers to firms that compete based on quality of product and service achieved through innovation and investment in human capital and can thus generate family-supporting jobs where workers have agency and voice.

## Local Jurisdictions

The Bay Area’s local jurisdictions have a variety of authorities and capacities to support implementation of Plan Bay Area 2050, especially given local control of land use decisions. In addition to their housing and local planning responsibilities, local jurisdictions often have public works, transportation, economic and workforce development, and/or parks and recreation departments that are on the frontlines of delivering or operating projects, initiatives and programs. Local jurisdictions have been key partners in many MTC/ABAG-led processes to date, including RHNA, the PDA Program and the PCA Program, among others.

MTC/ABAG look forward to expanding on existing relationships and initiatives and further building upon the recent successes of the REAP and Local Early Action Planning (LEAP) programs to ensure implementation success across all four elements of the plan. Select high-priority implementation partnership areas include local jurisdictions taking a lead role in allowing a greater mix of housing and commercial densities in Plan Bay Area 2050 Growth Geographies, as well as in working to strengthen renter protections and redevelop aging malls and office parks. Close collaboration will be required to align local land use decisions with potential regionally led efforts to preserve existing and produce new affordable housing.

Local jurisdictions will have a key role in deploying community-identified transportation enhancements, such as bus-only lanes or transit signal priority, as well as advancing planning and project delivery of critical bicycle and pedestrian facilities. MTC/ABAG would further welcome the participation and support of local jurisdictions in envisioning an equitable economic recovery, as well as in a wide range of environmental areas, including developing local shoreline adaptation plans, pursuing decarbonization strategies for public buildings and creating a supportive regulatory environment for electric vehicle charging infrastructure.

Across the region, local jurisdictions have a wide variety of existing efforts and initiatives that can support identified strategy focus areas and provide models for other cities. The City of Berkeley, for example, has adopted a resolution calling for the end of exclusionary zoning by 2022. The City of Fremont recently announced the “Earn and Learn Fremont” pilot program, which offers participants pathways to new careers in advanced manufacturing, and adopted an updated Vision Zero Action Plan commemorating five years of Vision Zero implementation in the city. The cities of San José and Oakland have been leading efforts to close the digital divide through multi-sector

partnerships and collaborations. Finally, the City of San Anselmo has developed a Zero Emission Vehicle Roadmap, while the City and County of San Francisco has been taking the lead in electric vehicle fleet adoption.

### *Partnership Focus Strategies*

- Housing — H1, H2, H3, H4, H5, H6, H7, H8
- Economy — EC1, EC2, EC3, EC4, EC5, EC6
- Transportation — T1, T2, T3, T6, T7, T8, T9, T10
- Environment — EN1, EN2, EN3, EN4, EN5, EN6, EN7, EN8, EN9

### State Agencies

State agencies are key funding partners across all areas of Plan Bay Area 2050, with important roles in establishing the overall policy and regulatory environment.<sup>81</sup> MTC/ABAG have long-standing relationships with partners such as the California Department of Transportation (Caltrans), the Air Resources Board (CARB), Housing and Community Development, the California Transportation Commission (CTC) and the California State Transportation Agency (CalSTA), among others.

MTC/ABAG look forward to deepening and strengthening these relationships as the agencies work in concert with the state to advance key regional priorities while achieving statewide policy goals. Select high-priority focus areas for transportation include advancing major capital projects through statewide funding programs, as well as facilitating the creation of healthy and safe streets through speed limit reductions and active transportation project streamlining.

On housing, greater technical assistance for local and regional partners in areas such as housing preservation will be necessary in order to meet statewide policy goals. Additional key focus areas where state leadership will be required include simplifying and streamlining application processes for state housing funding sources, as well as broadening high-speed internet access in underserved communities. Finally, flexible and dedicated funding, as well as more detailed

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<sup>81</sup> State agencies include the Air Resources Board, the California Department of Transportation, the California Transportation Commission, the California State Transportation Agency, the California High-Speed Rail Authority, the Governor's Office of Business and Economic Development, Housing and Community Development, the Strategic Growth Council, OPR, Natural Resources Agency, and the California Earthquake Authority, among others.

guidance on how to align with statewide policy goals, will help advance critical environmental strategy areas, ranging from climate adaptation and resilience to parks and conservation.

Overall, the state has a number of initiatives underway that will help support implementation of key plan strategies. Related to transportation, Caltrans is testing how user charges can work with various technologies through the California Road Charge pilot program and also recently released a Pedestrian Plan for the Bay Area and a Bay Area Adaptation Priorities Report. California Governor Newsom’s Executive Order N-79-20 directs a number of state agencies, including CARB, CalSTA, the CTC, Caltrans, the Energy Commission and the Public Utilities Commission, among others — to ensure that 100% of in-state sales of new passenger cars and trucks will be zero emission by 2035. Additionally, CalSTA adopted the Climate Action Plan for Transportation Infrastructure in July 2021, which outlines a vision for using statewide transportation spending to advance climate, public health, safety and equity goals.

On the environmental front, Executive Order N-82-20 directs the California Natural Resources Agency to lead a planning effort to combat the biodiversity and climate crises and protect at least 30% of California’s land and coastal waters by 2030. Finally, on broadband, the state of California has a major initiative underway to expand high-speed internet access, with the FY2021-22 state budget featuring a \$6 billion investment to expand broadband infrastructure and enhance internet access for unserved and underserved communities.

### *Partnership Focus Strategies*

- Housing — H1, H2, H3, H4, H6, H7, H8
- Economy — EC1, EC2, EC3
- Transportation — T1, T2, T3, T5, T6, T7, T8, T9, T10, T11, T12
- Environment — EN1, EN2, EN3, EN5, EN6, EN8

### **Transit Agencies**

The region’s more than two dozen transit operators maintain and operate trains, buses and ferries, while delivering transit capital projects to optimize and expand the system. MTC/ABAG and transit operators have long partnered to support public transportation and the many residents who rely on transit.

The most pressing and immediate partnership area between MTC/ABAG and transit operators involves facilitating the recovery of the Bay Area transit systems from the COVID-19 pandemic. Implementing the recommendations of the Blue Ribbon Transit Recovery Task Force’s Bay Area Transit Transformation Action Plan will be critical. These recommendations address many areas that will ensure that Bay Area transit comes back stronger than ever, including fares and payment, customer information, bus transit priority, bus/rail network management reforms, connected network planning, accessibility, and funding, among others.

An additional priority focus area will involve partnering on project delivery needs and considerations. Most important will be positioning major capital projects for success on a regional level, with additional focus on improving schedule adherence, reducing project costs and evaluating project delivery paradigms.

Advancing select housing, economy and environment strategies will also be critical for MTC/ABAG and transit operators. On housing, for example, there are numerous transit-oriented development projects taking place in jurisdictions across the North Bay, many of which are located in adopted Priority Development Areas and centered around Sonoma Marin Area Rapid Transit (SMART) stations. In 2020, the Bay Area Rapid Transit (BART) Board of Directors amended its transit-oriented development policy to support the production of affordable housing.

#### *Partnership Focus Strategies*

- Housing — H3, H8
- Economy — EC4, EC5
- Transportation — T1, T2, T3, T4, T5, T10, T11, T12
- Environment — EN1, EN3, EN6, EN7

## **The Path Ahead**

MTC and ABAG can provide strong regional leadership on some of the most pressing housing, economic, transportation and environmental challenges facing the Bay Area over the next 30 years, but regional government alone cannot achieve any of the plan’s bold and visionary ideas. The agencies are grateful for the dedication partners have shown throughout the four-year planning process and look forward to continued collaboration moving forward. Partnership will be critical as the region begins work on the advocacy, initiatives, projects and planning that will make

Plan Bay Area 2050 a reality. The near- term actions of the Implementation Plan set the stage for crucial relationships that must be developed and maintained for decades to come. Equity and resilience must continue to be front and center in all decisions that move the plan’s strategies forward. By emphasizing partnership and collaboration, regional leadership lays the groundwork for successfully implementing all of Plan Bay Area 2050’s strategies, resulting in a more affordable, connected, diverse, healthy and vibrant region for every Bay Area resident.



**Photo: Karl Nielsen**

## Supplemental Reports

The [Plan Bay Area 2050 supplemental reports](#) provide more detail on specific subject areas covered in the plan.

### **Air Quality Conformity Report**

The Air Quality Conformity Report demonstrates that Plan Bay Area 2050 and the Amended 2021 Transportation Improvement Program conform with the latest U.S. Environmental Protection Agency transportation conformity regulations and the Bay Area Conformity State Implementation Plan.

### **Environmental Impact Report**

The Environmental Impact Report (EIR) for Plan Bay Area 2050 programmatically assesses and discloses the potential environmental impacts of implementing the strategies of Plan Bay Area 2050. The EIR also recommends measures to mitigate any significant adverse impacts and analyzes a reasonable range of alternatives to the proposed plan.

### **Equity Analysis Report**

The equity analysis for Plan Bay Area 2050 reflects on the equity lens approach used in the planning process and shares forecasted outcomes of the plan and its impact on existing disparities in the region. The analysis also demonstrates MTC's compliance as a metropolitan planning organization (MPO) with federal requirements related to Title VI and environmental justice in the Regional Transportation Plan (RTP) development process.

### **Forecasting and Modeling Report**

This report presents a technical overview of the demographic, economic, land use and travel simulation modeling that supported the development of Plan Bay Area 2050. This includes documentation of the inputs, assumptions and processes used to forecast future patterns and behavior, as well as a discussion of how these items varied for each EIR Alternative. The report also details the regional forecast of jobs, population, and housing growth by jurisdiction and county.

### **Implementation Plan Briefs**

This document is a series of briefs that accompany each of the 35 strategies included in Plan Bay Area 2050, providing more detailed information on implementation priorities for the next five

years. Each brief includes an assessment of strategy success factors, a recommended MTC/ABAG implementation role, MTC/ABAG implementation actions and timeframes, and strategic partners for implementation, as well as an overall summary plus key considerations moving forward. These briefs focus on implementation actions as identified by MTC/ABAG through collaboration with a variety of stakeholders, partners and the public, though they do not preclude recognition of new implementation priorities over the course of the coming years.

### **Native American Tribal Outreach and Government-to-Government Consultation Report**

State and federal regulations require MTC and ABAG to conduct government-to-government consultation with tribal governments of federally recognized Native American tribes regarding MTC and ABAG's planning and programming activities, as well as to analyze and avoid or mitigate impacts to Native American cultural resources under the California Environmental Quality Act (CEQA). This report documents MTC and ABAG's engagement and government-to-government consultation activities with the region's Native American tribes during the preparation of Plan Bay Area 2050.

### **Performance Report**

This report describes the performance assessment activities that supported the development of Plan Bay Area 2050, including the assessment of individual strategies and transportation investments under different external forces through the Horizon initiative and the performance assessment of the packages of strategies that comprise the plan and EIR Alternatives. Performance activities emphasized the plan's cross-cutting themes of resilience and equity, enabled by new and improved techniques to assess equity impacts. This report also contains a summary of federal transportation performance monitoring activities.

### **Public Engagement Report**

A comprehensive program of public involvement activities is a key part of MTC and ABAG's long-range plan development process for Plan Bay Area 2050. This report details outreach and engagement activities with the public, local government officials and partners, and includes a federal Public Participation Plan that describes the public's involvement in the plan's development and engagement activities. The engagement activities ranged from one-on-one meetings to multi-lingual workshops to public hearings with the public, community-based organizations, non-profits and private sector partners in each of the region's nine counties. Due to the COVID-19

pandemic, virtual and telephone activities were incorporated into the public engagement program for Plan Bay Area 2050.

### **Technical Assumptions Report**

This report details the assumptions that were used to craft Plan Bay Area 2050 across the areas of housing, the economy, transportation and the environment over the plan period (2021 to 2050). The report documents the methodology used to forecast future revenues available from federal, state, regional and local sources. It also includes a detailed description of the estimated funding needed to operate and maintain the existing system of transit services, local streets and roads, highways, and local and regional bridges. For each of the 35 strategies, it includes a detailed strategy description and information on strategy cost assumptions.

### **Transportation Project List**

The Transportation Project List individually lists the projects and programs included in Plan Bay Area 2050.

### **Statutorily Required Plan Maps**

This report provides a compendium of all maps required by state statute not included in the primary plan document.

# Metropolitan Transportation Commission and Association of Bay Area Governments

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