


Monterey Bay 2045

Moving Forward

Sustainability.
Mobility.
Accessibility.
Economy.
Social Equity.






2045 Metropolitan Transportation Plan / Sustainable Communities Strategy

Final
June 2022

Monterey Bay 2045 Moving Forward
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Moving Forward Monterey Bay 2045

Final

June 2022

24580 Silver Cloud Ct.
Monterey, CA 93940

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Michael La Pier, Monterey Peninsula Airport District (MPAD)

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Committees & Working Groups

MTP/SCS Executive Steering Committee
MTP/RTP Staff Working Group
AMBAG Planning Directors Forum
SBtCOG Technical Advisory Committee
SCCRTC Interagency Technical Advisory Committee
TAMC Technical Advisory Committee

AMBAG Staff

Amaury Berteaud, Special Projects Manager
Ana Flores, Senior Executive Assistant
Bhupendra Patel, Director of Modeling
Gina Schmidt, GIS Coordinator
Heather Adamson, Director of Planning, Project Manager
Maura F. Twomey, Executive Director
Miranda Taylor, Planner
Paul Hierling, Senior Planner
Will Condon, Planner

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Executive Summary

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Introduction

Solutions to the region's transportation needs require a comprehensive planning effort that coordinates land use patterns and transportation investments with the objective of developing an integrated, multimodal and equitable transportation system. The Metropolitan Transportation Plan (MTP) and its Sustainable Communities Strategy (SCS) are built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2045.

Our Vision

A Resilient and Sustainable Future

As the Monterey Bay Area emerges from 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, residents and leaders can work toward inclusivity and prosperity for those who live and work in the region by taking bold actions in the face of a rapidly changing world.

Moving Forward Monterey Bay 2045 explores how the region may grow over the next 25 years and offers cross-disciplinary strategies for regional government and its many partners to work together. Under the vision and strategies in the Plan, the region can work toward resilient, equitable solutions that will improve the lives of all current and future Monterey Bay Area residents.

The word "sustainable" is used in many contexts. In the case of this Plan it refers to the mandates arising from Senate Bill (SB) 375, California's Sustainable Communities and Climate Protection Act, to develop a Sustainable Communities Strategy. At the heart of SB 375 is the requirement to coordinate transportation investments with land use patterns such that the region makes informed decisions about where to invest the region's limited resources and simultaneously reduce greenhouse gases by providing more direct access to destinations as well as by providing alternative transportation options. Instead of basing investments solely on transportation need, this Plan is required to analyze where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region. One strategy included in this Plan to achieve this is more focused growth in high quality transit corridors. Another strategy in the Plan is to provide more travel choices as well as a safe and efficient transportation system with improved access to jobs and education for our residents. In addition, the 2045 MTP/SCS supports job creation through economic development, ensures our region's economic competitiveness through strategic investments in freight, and improves environmental outcomes for the region's residents by 2045.

Senate Bill 375

Under SB 375, the SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction targets as established by the California Air Resources Board (CARB)- a three percent reduction per capita change by 2020 and six percent per capita reduction by 2035 from passenger vehicles. Both targets are compared to 2005 levels of greenhouse gases. SB 375 was enacted to support the state's goals of Assembly Bill 32, the Global Warming Solutions Act of 2006. Meeting these targets will move the region toward overall sustainability and will provide benefits beyond reducing emissions.

Regional Growth

The Monterey Bay Area is projected to grow more slowly than the state and nation. A map of the region is shown in Figure ES-1. In 2015, there were 762,241 people in the Monterey Bay Area spread over an area of 5,157 square miles. In 2045, the population is expected to reach 869,776. Additionally, there were 262,660

housing units in the region in 2015. The region is expected to add more than 42,000 housing units by 2045 and more than 65,000 new jobs as shown in Figures ES-2 and ES-3.

Senate Bill 375

Senate Bill 375, passed in late 2008, requires the 18 Metropolitan Planning Organizations (MPO) in California to reduce transportation related per capita greenhouse gas emissions through a coordinated land use and transportation plan called the Sustainable Communities Strategy, or SCS. The SCS is included in AMBAG's Metropolitan Transportation Plan and will help shape the region's long range transportation plan, including the financing of transportation projects.

Under SB 375, the SCS must identify a regional development pattern and transportation system that can meet the regional greenhouse gas (GHG) targets reductions from cars and light trucks for 2020 and 2035.

Pursuant to statute, the California Air Resources Board (CARB) updated targets for each of the 18 MPOs across the state in 2018. CARB adopted the following updated targets for the Monterey Bay Area in

2020: 3% reduction from 2005 per capita GHG emissions

2035: 6% reduction from 2005 per capita GHG emissions

If the SCS cannot meet the GHG targets, an "Alternative Planning Scenario" must be prepared to show how the targets could be achieved.

Goals & Policies

AMBAG adopted a framework of goals and policy objectives to guide the development of the 2045 MTP/SCS. Chapter 1 presents these goals and policies within the context of the regional vision for 2045. The goal areas are:

- Access and Mobility
- Economic Vitality
- Environment
- Healthy Communities
- Social Equity
- System Preservation and Safety

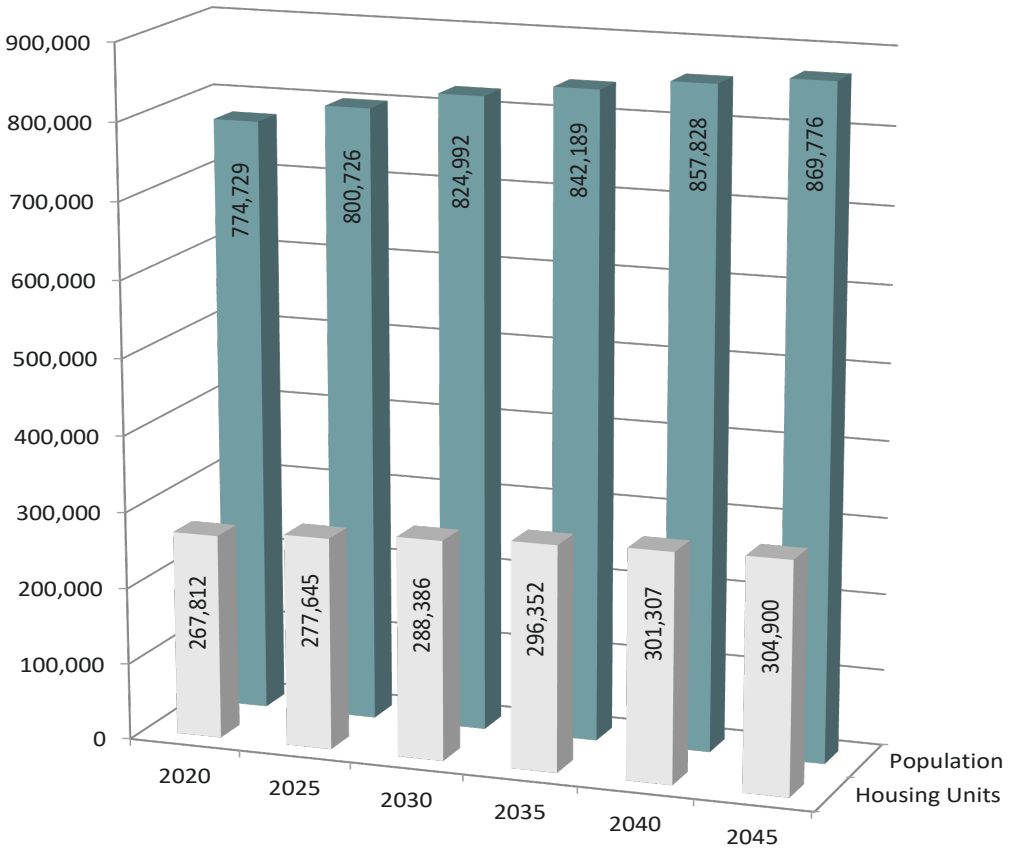
Transportation Investments

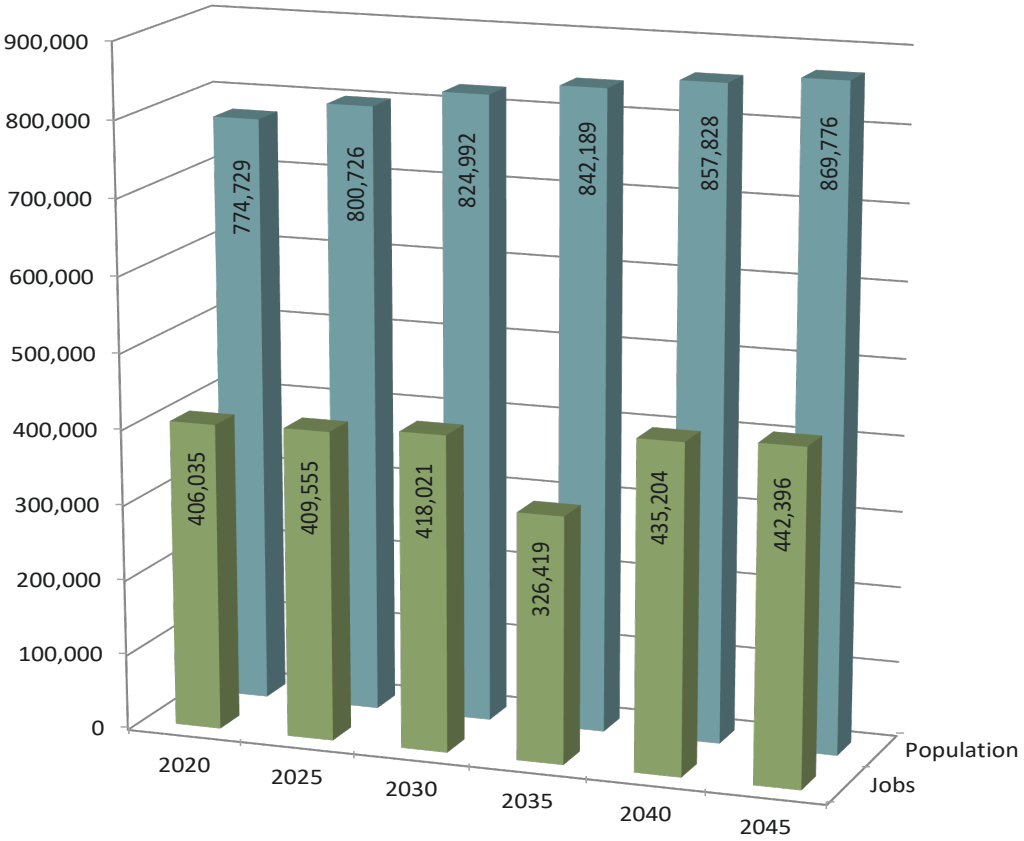
The 2045 MTP/SCS contains a number of improvements to the region's multimodal transportation system. These improvements include closures of critical gaps in the network that hinder access to jobs and daily needs, as well as the strategic expansion of the transportation system to provide the region with increased mobility.

One of the Plan's goals is to reduce per capita greenhouse gas emissions over the next 25 years, however,

Figure ES-1: Regional Map

Figure ES-2 and ES-3: Population, Housing Units and Jobs





Source: AMBAG 2022 Regional Growth Forecast

the total demand to move people and goods will continue to grow due to the region's projected population increase.

A strategic expansion of the transportation system is needed to provide the region with the mobility it needs. The 2045 MTP/SCS targets this expansion around mutually supportive bus transit, rail, key roadway, and active transportation projects. The Plan does so as cost effectively as possible by employing strategies such as combining maintenance and operations projects with bicycle and pedestrian facility improvements. Chapter 2 discusses these investments in greater detail.

Financial Plan

Of all the challenges facing the region today, there is perhaps none more critical than funding. Currently, the region faces a funding shortfall just to maintain and operate the existing system. With projected growth in population, employment, and demand for travel over the next 20 years, the costs of multimodal transportation are increasing, compounding the need for new sources of revenue.

The region must consider ways to stabilize existing revenue sources and supplement them with reasonably available new sources. The region needs a long-term, sustainable funding plan that ensures the region receives its fair share of funding and supports an efficient and effective transportation system that grows the economy, provides mobility choices, and improves quality of life.

Chapter 3 provides such a financial plan and identifies how much money is available to support the region's transportation investments. The Plan includes a revenue forecast of approximately $13.5 billion that includes local, state, and federal sources reasonably expected to be available over the timeline of the 2045 MTP/SCS.

Sustainable Communities Strategy

Chapter 4 contains the SCS which demonstrates the region's ability to exceed the GHG emission reduction targets set forth by the CARB. The SCS outlines the region's plan for integrating the transportation network within an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands while reducing GHG emissions. The overall SCS land use development pattern complements the proposed transportation network which emphasizes multimodal system enhancements, system preservation, and improved access to high quality transit.

Performance Measures

In support of the goals and policies established through public participation efforts and stakeholder involvement, a dozen performance measures were established to measure how well the Plan performs. The investments in the 2045 MTP/SCS are expected to result in significant benefits to the region with respect to transportation and mobility, economic activity and job creation, sustainability, and environmental justice. As described in Chapter 5, the 2045 MTP/SCS meets the greenhouse gas emission reduction targets set by CARB by achieving a three percent per capita reduction for 2020 and a six percent per capita reduction for 2045.

Public Participation

The development of the 2045 MTP/SCS involved implementation of one of the most comprehensive and coordinated public participation plans ever undertaken by AMBAG, exceeding legislative requirements.

AMBAG engaged a wide range of stakeholder groups, elected officials, special interest groups and the general public through a series of meetings and workshops. An interactive website expanded AMBAG's ability to engage and involve stakeholders and the public in shaping the 2045 MTP/SCS. During COVID-19, AMBAG held a number of workshops and meetings virtually to gather input on the development of the 2045 MTP/SCS. Virtual engagement has been successful over the development of the Plan and will continue, along with in person engagment, post pandemic. The input received through this process was critical in defining a preferred land use and transportation strategy and meeting/exceeding the 2045 MTP/SCS goals and policies. Chapter 6 details the public outreach process to involve and engage stakeholders and the public throughout the 2045 MTP/SCS planning process.

1 Vision

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Setting

Solutions to the region's transportation needs require a comprehensive planning effort that coordinates land use and transportation and develops an integrated, multimodal and equitable transportation system. The Metropolitan Transportation Plan (MTP) and its Sustainable Communities Strategy (SCS) are built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2045.

The region's population is largely concentrated in urban areas consisting of the 18 incorporated cities, which accounts for 78 percent of the total regional population. Unincorporated areas account for the remaining 22 percent. With the exception of Hollister and Salinas, major urban development in the Monterey Bay Area primarily occurs along the Bay coastal plains and foothills of the Monterey Peninsula from the City of Santa Cruz in the north to the City of Carmel-by-the-Sea to the south. The Santa Cruz, Watsonville, Seaside-Monterey, and Salinas urbanized areas are the most densely developed in the region.

In 2015, there were 762,241 people in the Monterey Bay Area spread over an area of 5,157 square miles. By 2045, the population is expected to reach 869,776. In addition, there were 262,660 housing units in the region in 2015. The region is expected to add more than 42,000 housing units by 2045.

The largest industries in the region by revenue and employment are tourism, agriculture, education, military, and other government sectors. These trends are expected to continue through 2045.

The 2045 MTP/SCS must comply with specific state and federal mandates. These include an SCS, per California Senate Bill 375 (Steinberg, 2008) (SB 375), that achieves GHG emissions–reduction targets set by the California Air Resources Board; compliance with federal civil rights requirements (Title VI); environmental justice considerations; air quality conformity; and public participation.

Key State goals, policies, and Executive Orders considered in the 2045 MTP/SCS:

- SB 375 and SCS Program and Evaluation Guidelines
- 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations
- California Transportation Plan 2050
- California Senate Bill 32 (Pavley, 2016): Reduce GHG emissions 40% below1990 levels by 2030
- EO B-55-18: Carbon Neutrality by 2045
- EO S-3-05: Reduce GHG emissions 80% below 1990 levels by 2050
- EO N-19-19: empowers the California State Transportation Agency (CalSTA) to leverage discretionary state transportation funds to help meet the state's climate goals.
- EO N-79-20: 100% zero-emission vehicle sales by 2035

Senate Bill 375

The SCS is a new element of the MTP, as required by SB 375, and is designed to demonstrate how the region will meet the regional greenhouse gas (GHG) reduction targets established by the California Air Resources Board (CARB). For the Monterey Bay region, the targets are a three percent per capita reduction by 2020 and six percent per capita reduction by 2035.

To achieve these GHG targets, the SCS examines development patterns, transportation investments, and transportation measures or policies that are determined to be feasible. In addition, the SCS must be consistent with the Regional Housing Needs Assessment (RHNA) and must address protection of resource areas. If the SCS does not meet regional GHG reduction targets, an Alternative Planning Strategy (APS) must be developed to demonstrate how the targets could be achieved.

Implementation of the 2045 MTP/SCS is anticipated to achieve a four percent per capita reduction by 2020 and a nearly seven percent per capita reduction by 2035.

A Resilient and Sustainable Future

When planning for the future, decisionmakers must craft both a strong principled vision that centers on equity and the practical, achievable steps that can make this vision a reality. Moving Forward Monterey Bay 2045 explores how the region may grow over the next 25 years and offers cross-disciplinary strategies for regional government and its many partners to work together. Under the vision and strategies included in the Plan, the region can work toward resilient, equitable solutions that will improve the lives of all current and future residents.

The 2045 MTP/SCS serves as a blueprint for addressing the mobility and sustainability challenges faced in the region. The 2045 MTP/SCS will improve the quality of life for residents by implementing sound land use and transportation choices for the future. By 2045, the region is envisioned to have more travel choices and a safer, more efficient transportation system that provides improved access to jobs and education. In addition, the Plan will support job creation, expand the region's economic competitiveness through investments in freight, and improve environmental quality for the region's nearly one million residents by 2045.

This 2045 MTP/SCS is built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2045.

Regional Growth

The Monterey Bay Area is projected to grow more slowly than the state and nation. By the year 2045, the region's population is forecasted to exceed 896,700 people. That's an increase of more than 134,500 people; along with more than 42,000 new housing units and over 65,000 new jobs. See Tables 1-1 through 1-3 for detailed forecast figures.

The regional growth forecast was developed by the Population Reference Bureau, which takes a jobs based approach to forecasting trends in growth for the region. The assumption is that the economy is a better predictor of population growth than traditional sources of migration data. Detailed information on the Regional Growth Forecast is included in Appendix A.

Jobs

The Monterey Bay Area is projected to add 65,000 jobs between 2015 and 2045.

The region is projected to experience job growth at a slightly slower rate than the state and nation. The primary reason is the region's below-average concentration in fast-growing sectors such as Information and Professional and Business Services. The region also has a below-average exposure to growth in foreign trade. Positive growth factors include an expected above average performance relative to state trends in the agriculture and tourism sectors.

Agricultural jobs are projected to increase modestly and, by 2045, will be the sixth largest major industry sector after Financial and Professional Services. Public job levels are also projected to increase modestly following recession cutbacks as government, schools and healthcare providers will be required to serve 134,000 additional residents in 2045 as compared to 2015.

The largest job gains in absolute numbers and percentage increases are in Other Services and Health Care & Social Assistance: Other Service 15,414,25 percent increase, and Health Care & Social Assistance 10,754,24 percent increase from 2015 to 2045. This growth will be led by sectors associated with health care and social services for an aging population.

The Retail sector is projected to experience nearly a two percent growth or approximately 748 jobs.

Site-based Skilled Trade job levels are projected to rebound from recent lows, experiencing a 25 percent increase through 2045, adding 9,500 jobs throughout the region. Although there is a substantial gain measured from 2015 job levels, it is primarily driven by a slow return to more normal site-based skilled trade levels in the region.

2045 Manufacturing job levels are projected to increase by 2,500 jobs, or a 15 percent growth. These projections do not anticipate any major move of high tech manufacturing jobs from Silicon Valley to the Monterey Bay Area.

The Monterey Bay Area has more residents per job than the national average and that trend is expected to continue to 2045. This is due to the fact that a large portion of AMBAG's residents commute to jobs outside the region, primarily to jobs in Santa Clara County.

In addition, the Monterey Bay Area has an above average share of residents who live in group quarters and are not tied to the regional job market. This trend has continued since 1990, although the mix of group quarters residents has changed. Out commuting is expected to increase in line with Silicon Valley job growth but prison and college group quarters population are not expected to increase as fast as in the past, therefore reinforcing the existing interregional commute pattern.

The number of people per job surged during the 2008 recession as job levels fell while the population continued to grow. Between 2020 and 2045, job levels will grow more slowly than population as baby boomers retire from the workforce but remain in the population.

Population and Housing

The job growth forecast was translated into population growth using an analysis of residents per job, population to job ratio growth, and demographic trends over the last twenty years. Housing was derived from population

using an analysis of trends for household size based on sex, race and ethnicity as well as age.

The Monterey Bay Area has more residents per job than the national average and that trend is expected to continue to 2045. The population projections were derived by anticipating that the growth of the regional population-to-job ratio will move in line with the national trend as it has in the past, even though the ratio itself is higher. Based on the high population-to-job, the trending growth line and the demographics of the region, the regional population is projected to increase from 762,676 in 2015 to 896,776 in 2045 for an increase of nearly 18 percent, or 134,535 residents.

Projections for housing are derived from population estimates using demographic profiles containing data on gender, age, race and ethnicity to determine household formation rates for each category. These profiles and more information on the calculations for jobs, housing and population are included in Appendix A.

Table 1-1a: Employment Monterey County Coastal

Monterey County - Coastal	2020	2025	2030	2035	2040	2045
Regional Total	406,280	410,017	418,132	425,845	434,147	442,824
Monterey County Total	243,015	245,054	249,613	253,918	258,553	263,437
Carmel-By-The-Sea	3,566	3,593	3,674	3,752	3,833	3,915
Del Rey Oaks	748	7,170	7,332	7,488	7,650	7,814
Marina	6,548	6,621	6,765	6,899	7,055	7,217
Monterey	40,989	41,527	42,506	43,452	44,465	45,509
Pacific Grove	8,016	8,061	8,152	8,244	8,343	8,445
Sand City	2,092	2,102	2,151	2,188	2,224	2,259
Seaside	10,476	10,589	10,833	11,062	11,290	11,543

Table 1-1b: Employment Monterey County Inland

Monterey County - Inland	2020	2025	2030	2035	2040	2045
Regional Total	406,280	410,017	418,132	425,845	434,147	442,824
Monterey County Total	243,015	245,054	249,613	253,918	258,553	263,437
Gonzales	6,326	6,382	6,533	6,660	6,788	6,920
Greenfield	7,882	7,948	8,061	8,177	8,298	8,423
King City	8,195	8,248	8,371	8,511	8,669	8,832
Salinas	78,874	79,577	81,079	82,505	84,044	85,683
Soledad	9,010	9,079	9,161	9,235	9,333	9,462
Balance of County	60,293	60,574	61,553	62,439	63,396	64,395

Table 1-1c: Employment San Benito County

San Benito County	2020	2025	2030	2035	2040	2045
Regional Total	406,280	410,017	418,132	425,845	434,147	442,824
San Benito County Total	23,263	23,572	24,203	24,802	25,475	26,126
Hollister	15,492	15,728	16,207	16,655	17,121	17,613
San Juan Bautista	557	569	580	588	603	612
Balance of County	7,214	7,275	7,416	7,559	7,751	7,901

Table 1-1d: Employment Santa Cruz County

Santa Cruz County	2020	2025	2030	2035	2040	2045
Regional Total	406,280	410,017	418,132	425,845	434,147	442,824
Santa Cruz County Total	140,002	141,391	144,316	147,125	150,119	153,261
Capitola	12,250	13,276	13,633	12,902	13,181	13,454
Santa Cruz	43,865	44,317	45,594	46,863	48,203	49,636
Scotts Valley	10,109	10,185	10,345	10,489	10,637	10,797
Watsonville	28,514	28,765	29,156	29,505	29,896	30,303
Balance of County	45,264	45,748	46,588	47,366	48,202	49,071

Source: AMBAG 2022 Regional Growth Forecast

Table 1-2: Population

Geography	2015	2020	2025	2030	2035	2040	2045	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	**762,241**	**774,729**	**800,726**	**824,992**	**842,189**	**857,828**	**869,776**	**0.46%**	**12.27%**
Monterey County	**430,310**	**441,143**	**452,761**	**467,068**	**476,028**	**483,884**	**491,443**	**0.43%**	**11.40%**
Carmel-By-The-Sea	3,854	3,949	3,946	3,954	3,964	3,974	3,984	0.04%	0.89%
Del Rey Oaks	1,663	1,662	1,693	1,734	1,859	2,330	2,650	1.88%	59.45%
Gonzales	8,441	8,506	9,650	13,492	14,630	15,398	15,711	2.48%	84.70%
Greenfield	17,172	18,284	19,342	19,734	19,961	20,202	20,433	0.45%	11.75%
King City	13,736	14,797	15,376	16,101	16,689	16,881	17,064	0.57%	15.32%
Marina	21,057	22,321	23,723	25,126	26,713	28,433	30,044	1.20%	34.60%
Monterey	28,086	28,170	28,044	28,650	29,032	29,342	29,639	0.20%	5.21%
Pacific Grove	15,460	15,265	15,290	15,395	15,530	15,676	15,817	0.14%	3.62%
Salinas	158,059	162,222	166,226	170,459	173,393	175,358	177,128	0.35%	9.19%
Sand City	361	385	430	516	756	1,012	1,198	4.65%	211.17%
Seaside	33,815	33,537	34,497	35,107	35,634	36,582	38,316	0.53%	14.25%
Soledad	24,597	25,301	26,112	26,824	27,697	28,419	29,133	0.57%	15.15%
Balance of County	104,009	106,744	108,432	109,976	110,170	110,277	110,326	0.13%	3.36%
San Benito County	**58,138**	**62,353**	**69,324**	**73,778**	**77,638**	**80,788**	**83,366**	**1.17%**	**33.70%**
Hollister	37,314	40,646	42,604	43,327	44,421	45,345	45,599	0.46%	12.19%
San Juan Baustista	1,945	2,112	2,269	2,315	2,374	2,410	2,436	0.57%	15.34%
Balance of County	18,879	19,595	24,451	28,136	30,843	33,033	35,331	2.39%	80.31%
Santa Cruz County	**273,793**	**271,233**	**278,641**	**284,146**	**288,523**	**293,156**	**294,967**	**0.34%**	**8.75%**
Capitola	10,224	10,108	10,485	10,794	10,957	11,049	11,126	0.38%	10.07%
Santa Cruz	64,223	64,424	68,845	72,218	75,257	78,828	79,534	0.85%	23.45%
Scotts Valley	11,496	11,693	11,718	11,837	11,867	11,868	12,010	0.11%	2.71%
Watsonville	52,410	51,515	52,918	54,270	55,138	55,786	56,344	0.36%	9.37%
Balance of County	134,990	133,493	134,675	135,027	135,304	135,625	135,953	0.07%	1.84%

Source: AMBAG 2022 Regional Growth Forecast

Table 1-3: Housing Units

Geography	2015	2020	2025	2030	2035	2040	2045	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	**262,660**	**267,812**	**277,645**	**288,386**	**296,352**	**301,307**	**304,900**	**0.52%**	**13.85%**
Monterey County	**139,177**	**141,764**	**146,716**	**153,852**	**159,100**	**162,612**	**165,328**	**0.62%**	**16.62%**
Carmel-By-The-Sea	3,417	3,437	3,437	3,442	3,450	3,453	3,459	0.03%	0.64%
Del Rey Oaks	741	741	762	809	848	1,052	1,195	1.93%	61.27%
Gonzales	1,987	1,987	2,399	3,630	4,182	4,474	4,626	3.44%	132.81%
Greenfield	3,794	3,981	4,359	4,766	5,047	5,164	5,238	1.10%	31.57%
King City	3,283	3,432	3,672	4,002	4,282	4,356	4,403	1.00%	28.29%
Marina	7,334	7,784	8,277	8,837	9,265	9,521	9,693	0.88%	24.52%
Monterey	13,637	13,705	13,705	13,920	14,209	14,402	14,549	0.24%	6.16%
Pacific Grove	8,184	8,201	8,214	8,267	8,336	8,400	8,463	0.13%	3.19%
Salinas	43,001	43,411	45,552	48,673	50,968	52,229	53,150	0.81%	22.43%
Sand City	176	189	198	228	333	446	526	4.18%	178.31%
Seaside	10,913	10,920	11,437	11,925	12,248	12,604	13,192	0.76%	20.81%
Soledad	3,927	4,137	4,433	4,733	5,024	5,240	5,426	1.09%	31.16%
Balance of County	38,783	39,839	40,271	40,620	40,908	41,271	41,408	0.15%	3.94%
San Benito County	**18,262**	**19,913**	**21,721**	**23,333**	**24,773**	**25,452**	**25,775**	**1.04%**	**29.44%**
Hollister	10,757	11,917	12,501	13,177	13,701	14,054	14,122	0.68%	18.50%
San Juan Baustista	750	819	878	918	951	965	975	0.70%	19.05%
Balance of County	6,755	7,177	8,342	9,238	10,121	10,433	10,678	1.60%	48.78%
Santa Cruz County	**105,221**	**106,135**	**109,208**	**111,201**	**112,479**	**113,243**	**113,797**	**0.28%**	**7.22%**
Capitola	5,537	5,554	5,786	5,970	6,009	6,017	6,017	0.32%	8.34%
Santa Cruz	23,535	23,954	24,988	25,578	25,974	26,295	26,525	0.41%	10.73%
Scotts Valley	4,691	4,739	4,798	4,846	4,869	4,887	4,930	0.16%	4.03%
Watsonville	14,131	14,226	14,829	15,629	16,108	16,347	16,519	0.60%	16.12%
Balance of County	57,327	57,662	58,807	59,178	59,519	59,697	59,806	0.15%	3.72%

Source: AMBAG 2022 Regional Growth Forecast

Goals & Policies

AMBAG began developing the 2045 MTP/SCS when the Board of Directors adopted the following goals and policy objectives:

- Access and Mobility – Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region.
- Economic Vitality – Raise the region's standard of living by enhancing the performance of the transportation system.
- Environment – Promote environmental sustainability and protect the natural environment.
- Healthy Communities – Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.
- Social Equity – Provide an equitable level of transportation services to all segments of the population.
- System Preservation and Safety – Preserve and ensure a sustainable and safe regional transportation system.

This framework of goals and policy objectives was used to guide the development of the 2045 MTP/SCS. Performance measures were established to evaluate how well the 2045 MTP/SCS performs in each of these areas.

Plan Overview

The 2045 MTP/SCS is a living document that must be updated to reflect the most current information and conditions and remain relevant and useful. Updating the Plan requires an examination of the progress the region is making, not just in terms of delivering projects, but also in terms of meeting the region's vision, goals, and objectives. The 2045 MTP/SCS complies with the Clean Air Act and the region is in attainment for air quality conformity.

Coordination

AMBAG is the federally designated metropolitan planning organization (MPO) for the counties of Monterey, San Benito, and Santa Cruz. As the MPO, AMBAG develops the 2045 MTP/SCS and updates it every four years through a bottom-up process involving numerous stakeholders. Transportation investments in the Monterey Bay Area that receive state and federal funds or require federal approvals must be consistent with the MTP/SCS and included in AMBAG's Metropolitan Transportation Improvement Program (MTIP). The MTIP is a four-year program and represents the near-term commitments of the 2045 MTP/SCS.

The 2045 MTP/SCS is an update to the 2040 MTP/SCS which was adopted in 2018. AMBAG worked closely with stakeholders to develop a new growth forecast and an updated multimodal transportation network with land use patterns and strategies based on reasonably available revenues.

AMBAG developed the 2045 MTP/SCS in close coordination with its three regional transportation planning agencies (RTPAs). Each of the three counties in the Monterey Bay Area has a RTPA responsible for countywide transportation planning and implementation- the Transportation Agency for Monterey County, the Santa Cruz

County Regional Transportation Commission and the San Benito County Council of Governments. Each of the RTPAs prepare their own county level transportation plan and prioritizes projects for funding. AMBAG works very closely with the RTPAs to coordinate project planning and priorities. AMBAG also worked in close coordination with the region's transit operators, local jurisdictions, Caltrans, the Monterey Bay Area Resources District, state and federal resource agencies, local agency formation commissions and other special purpose public agencies.

Scenario Development and Evaluation

During the development of the 2045 MTP/SCS, AMBAG developed and evaluated scenarios that included various land use assumptions and transportation system improvements and investments to see how each scenario could achieve the GHG targets established by CARB for the tri-county region as well as other performance measures. Extensive outreach with partner agencies, local jurisdictions, key stakeholders and the public was ongoing throughout the 2045 MTP/SCS planning process through workshops and meetings, surveys and interactive tools.

Beginning in 2019, AMBAG began the technical update to the 2040 MTP/SCS. This planning effort began by gathering and updating critical data as well as working with local jurisdictions on growth forecasts for 2020, 2035 and 2045. The regional growth forecast was then used as the growth parameter for the updating the various transportation and land use scenarios for the 2045 MTP/SCS.

Utilizing input from the public and stakeholders, AMBAG updated the land use and transportation scenarios through 2045. AMBAG evaluated these scenarios using a set of transportation, environmental and equity performance measures approved by the Board of Directors. These MTP/SCS scenarios were refined with continued extensive input from partner agencies and key stakeholders as well as from community workshops held in spring 2021. The preferred scenario builds on the region's success over the last four years in implementing the previous MTP/SCS and moves the region forward in meeting mobility, integrated land use and transportation strategies, and other regional goals. The components of the 2045 MTP/SCS are described briefly in the next section and in more detail in the succeeding chapters of this document.

Strategies and Investments

The MTP/SCS sets forth an integrated approach to transportation investments, described in Chapter 2, that makes the most out of the existing transportation system by investing in system preservation and maintenance and strategic system expansion and transportation management strategies. These transportation investments will provide more travel choices for the region's residents and visitors.

In Chapter 3, the financial plan identifies the funding strategies that are considered to be reasonably available through 2045.

In Chapter 4, the SCS identifies a future land use and development pattern integrated with transportation networks, programs and strategies.

The performance measures for the 2045 MTP/SCS are included in Chapter 5. These metrics quantify the transportation, environmental, economic and equity benefits of the Plan.

The public participation plan for developing the 2045 MTP/SCS is described in Chapter 6 and a glossary is included in Chapter 7.

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2 Transportation Investments

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Introduction

This chapter sets forth the investments and strategies that constitute the 2045 MTP/SCS. Transportation investments should seek to both optimize the performance of the existing system as well as strategically expand the system. This includes improvements ranging from systems preservation, roadway, rail, bus, bicycle and pedestrian facilities, transportation demand management, and transportation systems management strategies. As a result, the region will have more travel choices via an efficient multimodal transportation system.

The existing regional network consists of 481 miles of highways, 1,060 miles of regional transit service, and more than 1,200 miles of regional arterials. When implemented, the improvements in the 2045 MTP/SCS will develop an improved multimodal network while maintaining the existing system.

The experience during the COVID-19 pandemic has reaffirmed the need for a transportation system that offers choices for traveling around the Monterey Bay region and the need to leverage technology in ways to improve flexibility and adaptability to changing future conditions and disruptions.

Existing System

The existing Monterey Bay Area transportation system is comprised of roadways, transit, rail, bicycle and pedestrian networks, airports and aviation, goods movement, and management strategies. The following chapter discusses the existing system and the Plan's investments for strategic expansion.

System Preservation

The Monterey Bay Area has invested billions of dollars into building and expanding the multimodal transportation system. This 2045 MTP/SCS places a high priority on protecting the region's existing system and ensuring that the transportation system is operated as safely, efficiently, and effectively as possible.

Safety

In 2012, Congress passed the Moving Ahead for Progress in the 21st Century Act (MAP-21), which requires states to develop safety performance targets. Congress then passed the Fixing America's Surface Transportation Act (FAST Act) in 2015, which further expanded the role of performance measures. The California Department of Transportation (Caltrans) originally developed a Strategic Highway Safety Plan in 2005 with an overarching goal to reduce the California roadway fatality rate to less than 1.0 fatality per 100 million vehicle miles traveled (VMT) by 2010. Caltrans updated the Strategic Highway Safety Plan in 2015 to incorporate these performance measures while setting various strategies that state agencies can implement to reduce fatalities and highlight complementary actions that can be implemented by regional and local governments.

The projects and programs included in the 2045 MTP/SCS aim to reduce collisions and fatalities by improving the overall safety of the system. MAP-21 and the FAST Act require AMBAG to set and monitor safety performance metrics for the region. In addition, by reducing security vulnerabilities throughout the transportation infrastructure in the Monterey Bay area, the overall strength of the transportation system will be improved. General system upgrades will keep the system in a state of good repair and improve emergency preparedness.

AMBAG, the Regional Transportation Planning Agencies (RTPAs) - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito Council of Governments- and various local, state, and federal agencies continue to work together to improve the safety and security of the transportation system. In addition, AMBAG will set and begin monitoring safety performance as federally required. Refer to Chapter 5 for more detailed information on performance management.

Strategic System Expansion

One of the 2045 MTP/SCS's primary goals is to reduce per capita greenhouse gas emissions over the next 25 years. However, the total demand to move people and goods will continue to grow due to population increases. A strategic expansion of the transportation system will provide the region with the mobility and accessibility its residents need. The 2045 MTP/SCS targets this expansion around bus transit, rail, key roadways and active transportation. These networks must be improved in order to provide the accessibility and connectivity required for a diverse population. Included in this chapter are descriptions of these strategic improvements with example projects. For a complete list of funded projects see the Regional Transportation Plans for each of the three counties.

AMBAG recognizes the importance of coordinating with Federal Land Management Agencies (FLMAs) before projects are programmed in the Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP), and makes appropriate efforts to include the FLMAs in the transportation planning and project programming process on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to Federal lands.

Highways and Local Arterials

The three counties and 18 incorporated cities in the region are responsible for an extensive network of county and city streets and roads. Some of these roadways are regionally significant freeways, expressways, arterials and collectors, which not only serve local traffic, but also provide access and mobility for long distance trips within the region as well as trips that start or end outside of the region.

A regionally significant project refers to a transportation project that is on a facility which serves regional transportation needs (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers; or transportation terminals) and would normally be included in the modeling of the metropolitan area's transportation network. At a minimum, this includes all principal arterial highways and all fixed guideway transit facilities that offer a significant alternative to regional highway travel. (23 CFR § 450.104)

Projects for these roadways are included within the 2045 MTP/SCS and are included in the Project List (Appendix C). The 2045 MTP/SCS provides $3.5 billion for highway investments and $4.0 billion for local streets and roads. The majority of the roadway funding is for operations and maintenance. Overall, 42% of the region's local streets and roads projects include bike and pedestrian improvements, representing $1 billion in local streets and roads funding.

Highways

The Monterey Bay Area includes many highways that connect people between the three counties as well as outside the region. All of these highways need ongoing upkeep and improvements to continue providing safe access to all areas of the region. Figure 2-1 illustrates the 2045 Highway Network. However, the region cannot afford to fund all needed highway projects or there would be no revenue remaining for other transportation modes. The following are examples of regionally significant highway projects included in the 2045 MTP/SCS:

- U.S. 101 corridor
- SR 1, SR 68 and SR 156 West improvements

Figure 2-1: 2045 Regional Highway Network

- SR 25 improvements
- SR 156 widening
- SR 1 bus on shoulder lane improvements (Santa Cruz)

Local Arterials

Local streets and roads – including curbs and gutters, sidewalks, access ramps, bicycle paths, stop signs and traffic signals – are a critical component of the region's transportation system. The majority of travel, whether by car, bicycle, bus or foot, is done on local streets and roads. Please refer to the respective RTPA Regional Transportation Plans for additional information on regionally and nationally important local streets and roads.

Some examples of regionally significant projects on local arterials include:

- Marina – Salinas Multimodal (bus/roadway) Corridor Improvements
- U.S. 101/5th Street Operations Improvements

Transit

The region has three RTPAs which are responsible for long term transit planning for the Monterey Bay Area. This planning function is performed in partnership with the region's three transit operators: Monterey-Salinas Transit (MST), Santa Cruz Metropolitan Transit District (METRO), and San Benito Transit (County Express). Additional public transit providers include Amtrak and six paratransit operators.

A key focus of this 2045 MTP/SCS is to invest in an ambitious transit network that significantly expands the role that transit plays in meeting the region's mobility needs. The 2045 MTP/SCS incorporated transportation and transit enhancement activities as required by the FAST Act.

The 2045 MTP/SCS provides $4.0 billion in transit capital and operating investments. Over half of this funding is consumed by the cost of operating and maintaining the transit system. The balance pays for capital expenses such as purchasing new vehicles, infrastructure associated with adding routes and stations to the bus and rail system, building new storage and maintenance facilities, and improvements to help buses move more quickly through traffic. Figure 2-2 illustrates the 2045 Transit Network, including bus rapid transit and rail.

Bus Transit

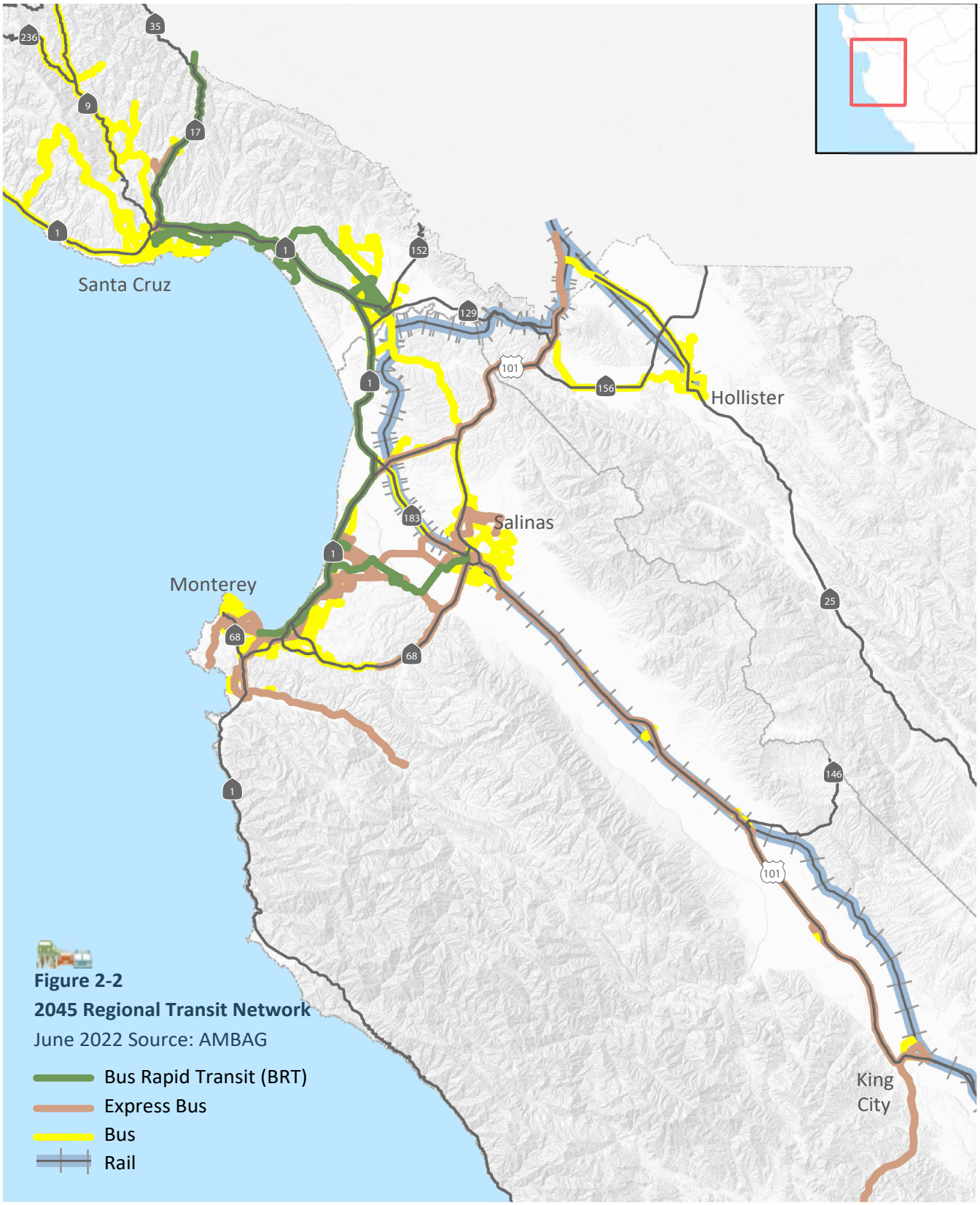
Bus transit is provided by MST, METRO and County Express. This Plan not only provides operations funding for transit agencies to expand their service, but also includes a land use pattern that dramatically increases the number of jobs within a ½ mile of transit, thereby encouraging more people to use the system. In addition to public transit providers, Greyhound Bus Lines and Amtrak provide longer distance intercity service. Employee buses and airport shuttles are also part of the transportation system.

Bus Rapid Transit and Express Service

The 2045 MTP/SCS allocates additional funding to bus transit in the region. Fixed route bus lines in the region are continuously evaluated and adjusted. In addition, new bus rapid transit (BRT) and express routes are planned in many key regional corridors, including:

- Marina – Salinas Multimodal Corridor
- SURF! Busway and Bus Rapid Transit Project

Figure 2-2: 2045 Regional Transit Network



- Salinas Bus Rapid Transit
- Monterey South County Express Bus Transit Enhancements
- Hollister to Salinas and Watsonville
- Bus on SR 1 Shoulder Project

Bus rapid transit is often designed for longer distance and higher speed service, usually on a dedicated facility, and may also include higher frequency service particularly during commute hours. Many of the new BRT routes in the region have 15 minute peak service planned whereas express buses often have 30 minute or more peak service frequencies. Bus rapid transit also could serve as a precursor to future planned rail services. When a dedicated facility is not available, BRT lite or express service can still serve the same route with high speeds by utilizing transit priority infrastructure such as queue jumps. BRT lite is bus rapid transit without the benefit of a dedicated lane. By utilizing any combination of the other features of BRT, the BRT lite still provides time savings over regular express and local transit services. Features of BRT can include, but are not limited to: dedicated bus lanes, queue jumps, signal prioritization, off-board fare systems, level boarding stations and real-time arrival information systems.

A **queue jump** is a type of roadway geometry used to provide preference to buses at intersections. It consists of an additional travel lane on the approach to a signalized intersection. This lane is often restricted to transit vehicles only. A queue jump lane is usually accompanied by a signal which provides a phase specifically for vehicles within the queue jump. Vehicles in the queue jump lane get a "head-start" over other queued vehicles and can therefore merge into the regular travel lanes immediately beyond the signal. The intent of the lane is to allow the higher capacity vehicles to cut to the front of the queue, reducing the delay caused by the signal and improving the operational efficiency of the transit system.

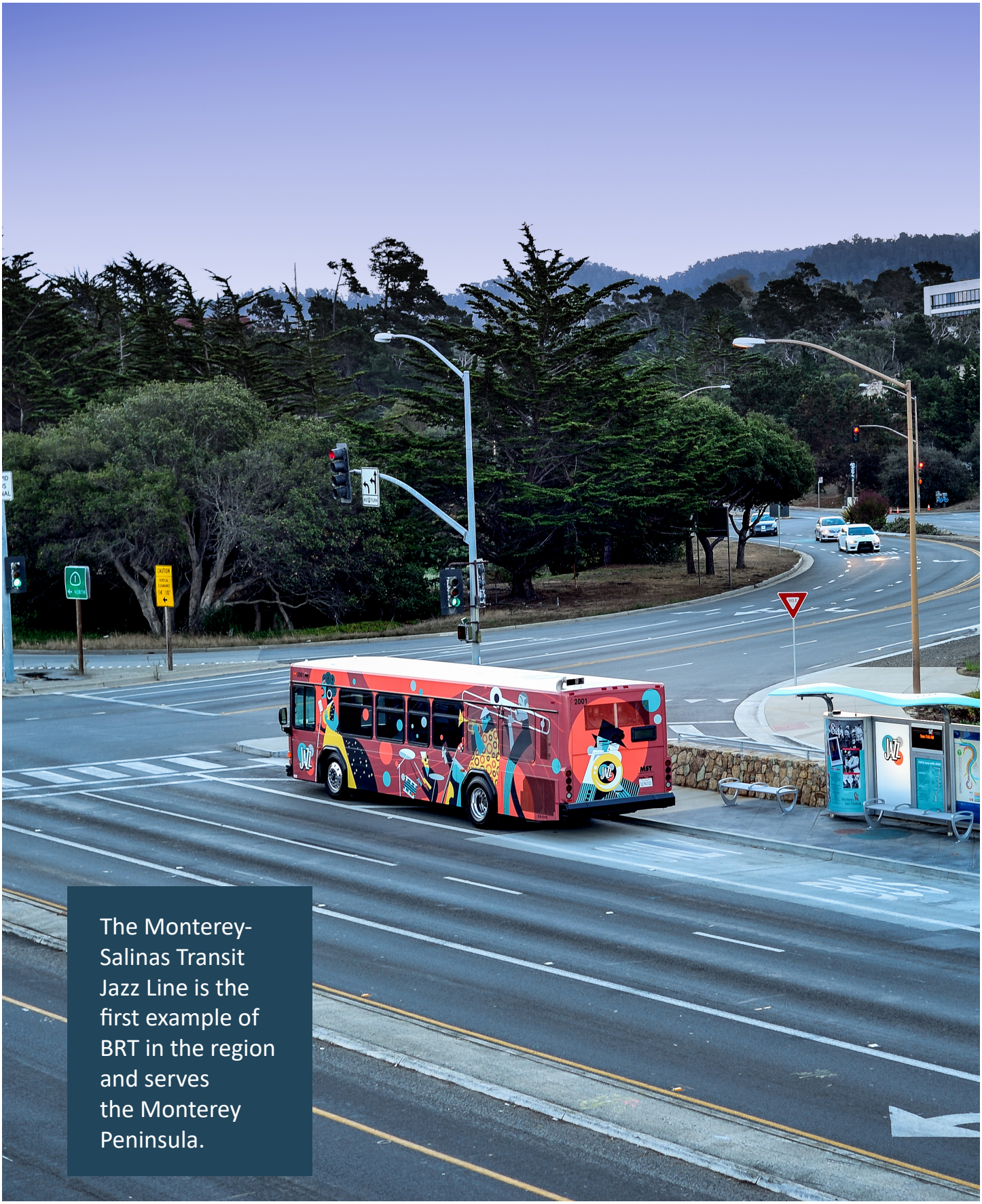
Assembly Bill (AB) 946 (Stone, 2013) grants MST and Santa Cruz METRO legislative authority to evaluate bus-on-shoulder solutions to alleviate traffic congestion along state highways similar to other programs implemented throughout the country. Using bus on shoulders is a low cost strategy to improve bus running times and reliability for transit systems.

In 2018, MST and Santa Cruz METRO completed a joint feasibility study for Bus on Shoulder Transit Operations on Highway 1 and the rail right-of-way in Monterey County. The study led to the implementation of the SR 1 Bus on Shoulder Project in Santa Cruz County.

Expanded Local Service

A system of high frequency local bus services on key corridors will provide both improved local service plus access to BRT and rail services. Some examples of regionally significant local transit service include:

- South County (Monterey) transit enhancements- including express or commuter based service
- Universty of California Santa Cruz (UCSC) & inter-city bus frequency improvements
- System wide operations funding
- Bus fleet replacement with alternative propulsion- specifically battery electric transit buses



The Monterey-Salinas Transit Jazz Line is the first example of BRT in the region and serves the Monterey Peninsula.

Travel by transit offers many benefits to the performance of the regional transportation network in the Monterey Bay Area region. First, transit provides an opportunity for reducing VMT, through shifts from low occupancy modes such as driving alone to a very high occupancy mode of travel. Second, for commute trips, which tend to occur at peak periods of travel demand when congestion is highest, transit service can provide substantial congestion relief. High quality transit service also provides mobility for both transit dependent and choice riders, residents and employees in higher density and mixed use areas where auto travel can be impractical.

Commuters are more likely to take transit if they can easily walk or bike from their home or job to a transit stop or station. As a result, walking and cycling infrastructure improvements are often an effective way to support transit use. Good intermodal connections, such as convenient park-and-ride locations, on-board bike racks, secure bicycle parking, safe and pleasant access routes, and shortcuts can enhance the appeal of both non-motorized and transit modes. Additional information on park-and-ride locations is included in the RTPA's county-level Regional Transportation Plans.

Demand Response Service

In addition to the three fixed route bus operators, there are several small demand-responsive public bus and van transit systems operate in the region:

- San Benito County Express
- MST RIDES
- Greenfield Auto Lift
- King City Transit
- METRO ParaCruz
- Community Bridges Lift Line

A full list of providers is included in the Coordinated Plan.

Coordinated Plan

A Public Transit-Human Services Transportation Plan (Coordinated Plan) was prepared by AMBAG for the tri-county region as required by federal statutes. The Coordinated Plan identifies local transit needs for the elderly, disabled, and low income, and facilitates applications for the Federal Transit Administration (FTA) Section 5310 grant program. It also includes strategies and activities to address identified gaps in the transit network and achieve efficiencies in service delivery. The Coordinated Plan, last adopted by AMBAG in October 2018, is currently being updated and will be completed by Fall 2022.

Passenger Rail

Rail projects are an important component of the regional transportation network that enhance mobility opportunities for the region's diverse population and lead to economic vitality for the region. The planned rail services complement each other and result in reducing auto trips on regional highways.

California State Rail Plan

Federal law requires that states develop state rail plans no less frequently than every five years to be eligible for federal funding for high-speed rail and intercity passenger rail programs. The law also encourages states to develop strategies and policies for enhanced passenger and freight rail services that benefit the public. The 2013 California State Rail Plan makes the state compliant with 49 U.S.C. Sec. 22102 concerning state rail plans and state rail administration.

The California State Rail Plan establishes a statewide vision and objectives, sets priorities, and develops implementation strategies to enhance passenger and freight rail service in the public interest. It provides a comprehensive listing of long range investment needs for California's passenger and freight infrastructure and supports the state's goal of developing an integrated, multimodal transportation network.

Amtrak

The only regular rail passenger service currently operating in the region is provided by Amtrak, the most popular long distance passenger train in the United States. The Coast Starlight, which connects Los Angeles to Seattle, stops in Salinas, the only Amtrak rail station in the region. This route operates one train in each direction daily. In the future, Amtrak will expand service by offering Coast Starlight stops at new stations in Soledad and King City.

Rail passengers can ride the Amtrak bus to connect to the Capitol Corridor route, which runs daily between San Jose and Sacramento. There are also three round trip connecting bus services between the state Capitol and Monterey County daily. Each major area of Monterey County – the Monterey Peninsula, Salinas, and the South Monterey County cities – is served by this connecting bus service. The Amtrak Capitol Corridor service provides four round trips between San Jose and Sacramento on weekdays and six round trips on weekends. The Capitol Corridor connecting bus service to Monterey County serves Watsonville, Salinas, California State University Monterey Bay (CSUMB) and four locations within the City of Monterey.

Commuter and Light Rail

The Transportation Agency for Monterey County (TAMC) and the Santa Cruz County Regional Transportation Commission (SCCRTC) are working to bring rail service to Monterey and Santa Cruz Counties, so that residents can use rail to travel to jobs, education and entertainment.

The Monterey County Rail Extension project extends passenger rail service from Santa Clara County south to Salinas. This is a transformative project that will revitalize the downtown Salinas train station and create new multimodal transportation hubs for the disadvantaged communities of Pajaro and Castroville.

In 2021, TAMC adopted the Monterey Bay Area Rail Network Integration Study. The purpose of this study is to lay the groundwork for implementing the 2018 California State Rail Plan in the Monterey Bay Area by determining the optimal options for: rail connectivity and operations, equipment needs, governance, and community benefits for service between Monterey County and Santa Clara County, Monterey and Santa Cruz, and the Coast Rail Corridor.

In 2012, the Santa Cruz County Regional Transportation Commission (SCCRTC) purchased a rail line extending almost 32 miles from Davenport to Pajaro. The SCCRTC evaluated the rail right-of-way for the most effective and efficient use as a transportation facility. In 2014, the SCCRTC conducted a passenger rail feasibility study which evaluated the feasibility of several passenger rail service scenarios. As a follow up, the SCCRTC conducted an Unified Corridor Study which will evaluate the transportation uses of the rail right-of-way along with improvements to the parallel corridors of Soquel Drive/Avenue and Highway 1. The goal of this effort is to determine the best combination of projects and improvements along each route so that they complement one another and enhance the mobility in the region. The study was completed in December 2018.

In late 2019, SCCRTC initiated the Transit Corridor Alternatives Analysis (TCAA) to evaluate public transit investment options that provide an integrated transit network for Santa Cruz County utilizing all or part of the length of the rail right-of-way as a dedicated transit facility. The ultimate goal of the TCAA is to identify one locally-preferred transit alternative that meets the needs of the diverse community for which it will serve. In February 2021, SCCRTC accepted the TCCA that selected the Electric Passenger Rail as the locally preferred alternative.

Active Transportation

For the purposes of the 2045 MTP/SCS, active transportation refers to bicycling and walking. Walking and bicycling are essential parts of the region's transportation system, are low cost, do not emit greenhouse gases, can help reduce roadway congestion, and increase health and quality of life of residents. In addition, these types of facilities can often be implemented as part of maintenance and operations projects making this kind of investment very cost effective.

As the region works toward reducing congestion and greenhouse gases, walking and bicycling will become more essential to meet the region's future needs. To make active transportation a more attractive and feasible mode of travel for the different users in the region, additional infrastructure improvements are needed. Given that all trips, including automobile trips, start with walking, it is important to ensure that the sidewalks and streets are accommodating to all users. In all, the 2045 MTP/SCS's active transportation improvements total $1 billion. In addition, nearly one-half of the local streets and roads projects contain active transportation components, totalling approximately $1 billion.

Bicycle and Pedestrian Facilities

When Caltrans and local jurisdictions provide bicycle and pedestrian amenities, they not only are encouraging recreational opportunities but are also providing an alternative to driving. In the region, the RTPAs administer the distribution and use of bicycle and pedestrian funds as provided for under the Transportation Development Act (TDA).

TAMC and SCCRTC provide ongoing bicycle programs covering facilities planning, policy development, education/promotion, and staffing of the respective county Bicycle Advisory Committees. Program efforts are focused on coordination and incorporation of bicycle planning and promotion into all planning activities including general plan development, capital improvement programming, development review, environmental review, and other transportation system management efforts. Some examples of bicycle and pedestrian projects

around the region are:

- Monterey Bay Sanctuary Scenic Trail
- Carmel to Pebble Beach Bicycle Facility
- Bicycle sharing, lockers, bus shelters and wayfinding signs
- Sidewalk enhancements
- Bicycle and pedestrian plans
- Fort Ord Regional Trail and Greenway

Bicycle Network

A considerable bicycle network exists, particularly in the urbanized portions of the region. Although there is a general lack of continuity in bike lanes striped on the region's street network, progress has been made in planning and funding bikeway improvements as well as bicycle supportive facilities. TAMC and SCCRTC are developing a Monterey Bay Sanctuary Scenic Trail. Continued emphasis on improving bicycle routes that safely connect employment centers and residential locations will increase commuter bicycle use. A map of the regional bicycle network is shown in Figure 2-3.

Bikeways in the region are classified in four categories:

- *Class I Bikeway* – Typically called a "bike path" or "multiuse path," a Class I bikeway provides bicycle travel on a right-of-way completely separated from any street or highway. Class I bikeways are not for the exclusive use of bicyclists, and can be used by pedestrians, joggers, and other non-motorized users.
- *Class II Bikeway* – Often referred to as a "bike lane," a Class II bikeway provides a striped lane for one-way travel on a street or highway.
- *Class III Bikeway* – Generally referred to as a "bike route," a Class III bikeway may include signage or sharrows and provides for shared use with vehicles.
- *Class IV Bikeway* – Often referred to as a "Cycle Track," a Class IV bikeway provides bicycle travel in designated lanes on roadways which are also separated from traffic by barricades, such as bollards or curbs.

Pedestrian Facilities

Pedestrian travel is a vital part of the transportation, economic and social life of the Monterey Bay Area, and pedestrian amenities — such as appropriately sized sidewalks, crosswalks, curb cuts, landscaping, and benches — are seen as beneficial additions that make communities walkable, friendly, and livable.

Pedestrian facilities including sidewalks, streets, and trails are fundamental to the functioning of Monterey Bay Area neighborhoods. Cities that promote walking in all its forms are promoting healthy neighborhoods and communities. Local jurisdictions are working to achieve an effective pedestrian network by implementing pedestrian infrastructure improvements in conjunction with new and redeveloped streets, and working closely with the public to identify where existing gaps in pedestrian facilities exist. In some areas, local jurisdictions are implementing traffic calming projects to slow vehicular traffic and create more attractive pedestrian environments.

The region is placing more emphasis on walking as a viable, inexpensive, nonpolluting, and healthy way to travel. Most pedestrian infrastructure is in the form of sidewalks; however, there are also many significant trails in the

region. Multipurpose trails are separated from roadways and are usually shared by more than one user type including rollerbladers, bicyclists, skateboarders, pedestrians, horses, and joggers.

Opportunities for additional shared use facilities may be present in the region. For example, Pacific Gas and Electric (PG&E) owns and operates pipelines that distribute natural gas to most communities throughout the region via 12" and 20" pipelines. Many of these pipelines have 25 to 100 foot easements that could be utilized for pedestrian and bicycle paths. In addition, PG&E has easements throughout the state for electrical transmission lines, some of which have been made into linear greenbelts with bicycle and pedestrian paths.

Complete Streets - Streets for All Users

Complete streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Complete streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from bus stops and train stations.

Making these travel choices more convenient, attractive, and safe means people do not need to rely solely on automobiles. They can replace frustrating trips in their cars with bus rides or heart healthy bicycle and walking trips. Complete streets improves the efficiency and capacity of existing roads too, by moving people in the same amount of space – think of all the people who can fit on a bus or streetcar versus the same amount of people each driving their own car. Getting more productivity out of the existing road and public transportation systems is vital to reducing congestion.

Complete streets are particularly prudent as more communities are tightening their budgets and looking to ensure long term benefits from investments. An existing transportation budget can incorporate Complete streets projects with little to no additional funding, accomplished through re-prioritizing projects and allocating funds to projects that improve overall mobility. Many of the ways to create more complete roadways are low cost, fast to implement and high impact.

Source: Smart Growth America, http://www.smartgrowthamerica.org/

Complete Streets

The Complete Streets Act of 2008 (AB 1358) requires cities and counties to incorporate the concept of complete streets in their general plan updates to ensure that transportation plans meet the needs of all users of the roadway system. AMBAG supports and encourages implementation of complete streets policies in the 2045 MTP/SCS. The Regional Complete Streets Guidebook, included as Appendix H, was developed by staff from the Transportation Agency for Monterey County, the San Benito County Council of Governments and the Santa Cruz County Regional Transportation Commission. Regional agencies will work with local jurisdictions as they implement complete streets strategies within their jurisdiction by providing information and resources to support local planning activities. Complete streets must be context sensitive to adjacent land uses in order to function well for diverse roadway users. Recognizing that roadways have primarily been designed to serve the automobile, regional complete streets efforts highlight bicycle and pedestrian access as an essential design objective. In addition, the California State Pedestrian and Bicycle Plan, *Toward an Active California*, lays out foundational policies and actions that Caltrans and its partner agencies will take to achieve the department's ambitous statewide goals to double walking and bicycling trips by 2020.

Figure 2-3: 2045 Regional Bicycle Network

Safe Routes to School

SAFETEA-LU established the Safe Routes to School program to "enable and encourage primary and secondary school children to walk and bicycle to school" and to support infrastructure related and educational projects that are geared toward providing a safe, appealing environment for walking and bicycling. Safe Routes to School programs can play a critical role in eliminating some of the vehicle trips that occur during peak periods to drop off or pick up students by ensuring safe routes to bike or walk to school.

Under MAP-21, and continued in the FAST Act, Safe Routes to School has been combined with other bicycling and walking programs into a new program called Transportation Alternatives. There is less funding available for Transportation Alternatives than for the programs that were consolidated and there is no longer dedicated funding for Safe Routes to School.

TAMC created a Safe Routes to Schools Program that offers tools, programming, and resources to schools, guardians, and communities aimed at improving safety and traffic around schools. The goal of the program is to keep every child safe and healthy by reducing the number of students involved in collisions to zero. Efforts of TAMC's Safe Routes to Schools Program are focused on reducing traffic around schools, improving safety for kids during their commute to school, encouraging kids to be more active, and connecting communities with resources to support safe routes to schools. One of the core pillars of the Safe Routes to School Program is the educational trainings that are led for youth. The programming is notably called "Walk Smart" and "Bike Smart," whereby students are training on the habits of safe walking and bicycling habits to facilitate an increase in walking and cycling among youth while simultaneously reducing the rate of crashes involving youth.

Trails

The Monterey Bay Sanctuary Scenic Trail (MBSST) is planned to be a multiuse recreation and interpretive pathway that links existing and newly established trail segments into a continuous coastal trail around the Monterey Bay. The MBSST Final Master Plan and Environmental Impact Report was adopted by SCCRTC in November 2013. The TAMC MBSST Final Master Plan was adopted in January 2008.

In addition to providing bicycle and pedestrian facilities, interpretive features educate users of the trail about the natural and cultural resources of the Monterey Bay National Marine Sanctuary and its environs. The trail is located and designed so visitors can explore and enjoy the coastal communities of Santa Cruz and Monterey Counties, while respecting residential, agricultural, and environmentally sensitive surroundings along the trail.

The approximately 110 mile coastal trail corridor provides public access along the Monterey Bay from Santa Cruz to Monterey. The trail is envisioned for pedestrians and bicyclists, with each trail section dictated by natural landforms and features, existing land uses, and desired destinations. The project links existing local trails, bridging the gaps between them. Sections of the MBSST network will be included in the California Coastal Trail, a 1,200 mile hiking trail which will eventually extend the entire length of the California Coast.

The Monterey Bay Sanctuary Scenic Trail incorporates the California Coastal Trail and includes coordination with the State Coastal Conservancy and Coastal Commission to implement the California Coastal Trail in the AMBAG region. Coordination continues to coordinate with coastal partner agencies to develop and accommodate the California Coastal Trail in the regional plan. Transportation partners are coordinating with local jurisdictions and congressional representatives to fund and construct trail segments identified in the Master Plan, which will be incorporated in a larger California Coastal Trail project being developed statewide. Refer to the MBSST Master Plans for more information.

Wide sidewalks with amenities not only makes the street more usable for all modes it also improves the attractiveness of the street.

Active transportation includes walking. Pedestrian crossings with textured pavers and short crossing distances improves safety.

Complete streets does not exclude planning for automobiles, rather it incorporates improvements that make it easier for all modes to coexist.

Active transportation includes bicycling. Separated facilities increase safety and therefore increase the possibility that people of all ages will use alternate modes of transportation.

Complete streets attract more people to get out of their cars. As people walk to their destination they are more likely to patronize other businesses along the way.

Active transportation includes bicycling to get to the bus. Accommodations on buses for bicycles is important so that people have more options to get to and from bus stops.

The Fort Ord Regional Trail and Greenway (FORTAG) will build approximately 28-miles of a paved bicycle and pedestrian access path through the former Fort Ord that will providea safe, separated route connecting the Monterey Bay Sanctuary Scenic Trail with local parks, schools, shopping, and the new Fort Ord National Monument. The project will also connect residents in the cities Marina, Monterey, Del Rey Oaks, and Seaside with jobs, events, and classes at California State University Monterey Bay (CSUMB).

Aviation

Airports within the region function for movement into and out of the region for both people and goods. The major passenger airport in the region is the Monterey Regional Airport.

California Aviation System Plan

The California Aviation System Plan is a multi-element plan prepared by the Department of Transportation (Caltrans), Division of Aeronautics, with the goal of developing and preserving of airports responsive to the needs of the state. There are 14 public use airports in the Central Coast Region, the planning region for the California Aviation System Plan. This Plan considers the following Monterey Bay Area airports to be the region's highest priority facilities for enhancement:

- Hollister Municipal
- Watsonville Municipal
- Mesa Del Rey Municipal
- Salinas Municipal
- Marina Municipal

Enhancements to these airports would improve regional and state system capacity and safety.

Monterey Bay Area Airports

The region has six publicly owned civil aviation airports:

- Monterey Regional
- Salinas Municipal
- King City Municipal (Mesa del Rey)
- Marina Municipal
- Watsonville Municipal
- Hollister Municipal

Of these six, only the Monterey Regional Airport has scheduled air carrier service.

In addition to the publicly owned airports, several private airports operate in the region. Of these, the Frazier Lake Airpark is the only one that allows public use. The remainder of the privately owned airports are used for agricultural, business, and private purposes.

In addition, there are currently two operational military airfields in the Monterey Bay Area:

- Camp Roberts Army Airfield and Heliport
- Fort Hunter-Liggett Army Heliport.

Monterey Regional Airport

Monterey Regional Airport (MRY) has two parallel runways with the longest at 7,598 feet. There is a control tower and instrument landing capability. This airport is the major regional airport, with commercial freight, passenger traffic, military traffic, and general aviation needs. The facility is located north of SR 68 (Monterey-Salinas Highway) and east of the City of Monterey. The 498 acre airport is the only airport in California operated as a self-governing district, the Monterey Peninsula Airport District. In 2019, five commercial airlines served the airport for a total of 205,662 enplanements.

Primary air-carrier airports with annual enplanements over 10,000 are required to have an Airport Ground Access Improvement Program. State Routes 1 and 68 provide the primary ground access to the airport for both people and freight. MST provides public transit service from Monterey and Salinas to the airport, during daytime hours on Mondays through Saturdays, only. An airport limousine service and taxicabs also serve the airport. Many local hospitality industries provide their own shuttle services for guests. A new Master Plan and Airport Layout Plan were initiated in 2014 and completed in 2016. The Master Plan's environmental review was completed, and the Plan was adopted in 2018. Additional information on airport access can be found in the TAMC Regional Transportation Plan.

Salinas Municipal Airport

Salinas Municipal Airport is located three miles southeast of the City of Salinas on a 763 acre site. It has four runways with the longest at 6,004 feet. There is a control tower and instrument landing capability. Operated for general aviation purposes by the City of Salinas, 70,110 general aviation operations took place in 2019, with 158 based aircraft.

Mesa Del Rey Municipal Airport in King City

King City Municipal (Mesa del Rey) Airport is located north of King City on 214 acres. In 2019, it handled 7,862 general aviation operations with one 4,500 foot runway. There is neither a control tower nor instrument landing capability at this airport. A publicly owned airport, it is operated by the City of King for general aviation purposes and has 12 based aircraft. The airport is home to the Sean D. Tucker Academy that provides in-depth study of aircraft control. This is an advantage for the Mesa Del Rey Airport, which could prove to be beneficial to the patronage of the airport if widely promoted.

Marina Municipal

Marina Municipal Airport is located north of Reservation Road in the City of Marina on 845.5 acres of the former Fritzsche Army Airfield. This general aviation airport had an estimated 42,000 operations in 2019 on its one, 3,485 foot runway. The regional Airport Surveillance Radar is located northwest of this airport.

Watsonville Municipal

Watsonville Municipal Airport is located on a 330 acre site to the northwest of Watsonville. In 2019, there were an estimated 60,000 general aviation operations on two runways, the longest at 4,500 feet. There is no control tower but the airport has instrument landing capability. Operated by the City of Watsonville, this is the sole public use airport in Santa Cruz County, and is classified as a general transport airport serving general aviation and business jets.

Most of the local airports are small and do not have scheduled air carrier service (Watsonville Municipal Airport).

Much of the region's agricultural goods are currently transported by truck, though the MTP/SCS looks towards converting these trips to rail in the long term.

Hollister Municipal

Hollister Municipal Airport is located northwest of the City of Hollister on 343 acres. It services 87 aircraft and there were an estimated 57,489 operations in 2019. Hollister Municipal also hastwo runways, one 6,350 foot runway, and one 3,150 foot runway. There are no control tower or instrument landing capabilities at this airport. A publicly owned airport, it is operated by the City of Hollister for general aviation purposes.

Frazier Lake Airpark

Frazier Lake Airpark is the only privately owned airport in the region that is open to the general public. It is located 4 miles northwest of Hollister Municipal Airport. Frazier Lake Airpark has a 2,500 foot grass turf runway and a 3,000 foot water runway for sea planes. In 2019, there were 7,190 general aviation operations, and 90 based aircraft.

Airports Economic Impact Study

The Airports Economic Impact Study prepared by AMBAG in 2003, was designed to evaluate the economic impacts of each of the Monterey Bay region's six public airports on the local vicinity served by the airport and to provide a regional picture of the combined airports importance to the three county economy. The total direct, indirect and induced economic benefit of the six regional airports was estimated to be $1.38 billion annually. The Monterey Bay Area's airports play an important role in the total regional economy, providing service to agriculture, tourism, government, emergency services and other business interests throughout the region.

Regional Airport System Plan

The Regional Airport System Plan (RASP) was completed by AMBAG in 2006. The RASP projects a moderate growth rate in aircraft operations as a result of increased activity in general aviation and a continuation of growth by air taxi services. In addition, projections recently prepared by Monterey Peninsula Airport District (MPAD) for the Monterey Regional Airport Master Plan forecasted continued increasing passenger enplanements over the next 20 years. With availability for increased operations, the existing general public airports in the region could absorb aircraft from other regions.

Goods Movement

The Central Coast is well known for the variety of agricultural products grown here. The Salinas Valley is commonly referred to as "America's Salad Bowl" due to the sheer amount of produce grown and exported to markets in other parts of the country and world.

Strawberries and other berries are key crops throughout the region, and are the number one crops by value in Monterey and Santa Cruz Counties. See Table 2-1 for a list of the region's top agricultural products by county. Lettuce, wine grapes, broccoli, and nursery products also are important agricultural products for the Central Coast. The region is a key producer of wine. Monterey County, for example, produced grapes for wine valued at $248 million in 2018. Both Monterey and San Benito Counties are major producers of field crops, fruits and nuts, vegetable/row crops and livestock.

The agricultural industry is critical to the success of the regional economy and its health partly depends on the ability to move goods not just throughout the region but outside of the region. Agriculture relies on the connectivity and condition of highways, and local roads that connect crop production with buyer markets via major state routes and U.S. 101. Therefore, it is necessary for the health of the region that all the major roads, highways and railways carrying goods to and from crop production locations (such as U.S. 101, SR 46, SR 129, SR 152, SR 156 and SR 183) are maintained to support efficient delivery and shipment of goods. Figure 2-4

illustrates the Goods Movement Network. A summary of the various plans and studies that document the importance of goods movement to the region and the efforts to improve the delivery of agricultural products to consumer markets is discussed in this section.

The majority of the goods in the region are delivered to buyer markets via the highway and road network rather than railways. However, there is a recognized need for transitioning the Central Coast's truck freight to rail freight in order to alleviate pressure on the region's highways and roads as well as to reduce congestion and increase safety for all users of those roads.

Table 2-1: Top Regional Agricultural Crops (Millions/Year)

County	Top Crops (Millions)
Monterey	Berries, Strawberries, Fresh Market ($746.1)
	Lettuce, Romaine ($483.3)
	Lettuce, Head ($436.0)
San Benito	Vegetables, Unspecified ($39.9)
	Lettuce, Bulk Salad Products ($21.1)
	Nursery Products, Misc ($20.4)
Santa Cruz	Berries, Strawberries, Fresh Market ($172.6)
	Berries, Raspberries ($104.3)
	Flowers Cut, Unspecified ($60.0)

Source: AMBAG, Central Coast California Commercial Flows Study, 2012

Central Coast Coalition

The purpose of the Central Coast Coalition (Coalition) is to increase the awareness of the U.S. 101 Corridor along the central coast as a major economic asset to the regions, the state and the nation, and to secure investments for its improvement. The Central Coast Coalition is comprised of the Santa Barbara Association of Governments, Council of San Benito County Governments, Transportation Agency of Monterey, San Luis Obispo Council of Governments, Santa Cruz County Regional Transportation Commission, and AMBAG. The Coalition was formed in 2010 and has worked together to develop and distribute information about the Corridor including but not limited to improvement needs, funding options and strategies, as well as economic impacts and benefits. In addition, the Coalition seeks out funding for improvements within the Corridor, coordinates with Caltrans District 5 to develop projects, and seeks support from public and private partners to raise awareness about the importance of the Corridor. Caltrans District 5 is developing a U.S. 101 Business Plan to create a multimodal investment strategy that identifies total funding needs, gaps and potential funding sources. with mutual support of the Coalition.

California Freight Mobility Plan

In accordance with MAP 21, Caltrans developed the California Freight Mobility Plan (CFMP). The original CFMPthe Goods Movement Action Plan, completed in 2014,was updated in two phases in 2005 and 2007. The CFMP is updated every five years, addresses current freight conditions, identifies important trends, and responds to major issues in goods movement across all modes and regions of California. In addition, the CFMP plan responds to a number of contemporary issues in terms of community impacts, trucking, new legislation, regional differences and linkages, and greenhouse gas emissions reduction strategies. The current CFMP was completed in March 2020.

Figure 2-4: Goods Movement System

A Freight Working Group was established by Caltrans District 5 to update the Commercial Flows Study and other freight studies in the Central Coast region.

Commercial Flows Study

Over the next several decades, the Central Coast region can expect to see significant increases in freight movement due to both population increases and a continued expansion of the region's agricultural and industrial production. As a result of this demand for freight by both the local population and industries, a focus on enhancing the efficiency and safety of the region's goods movement system is critical to supporting the economic health of the region and the quality of life for its residents.

To respond to this challenge, six major agencies across the five counties – comprising the California Central Coast region, from Santa Cruz County in the north to Santa Barbara County in the south – partnered with Caltrans District 5 to prepare this study of freight flows, issues, needs, and deficiencies in the region. The recommendations that came out of the 2012 Commercial Flows Study were the result of engaging private and public sector stakeholders in the Freight Actions Strategy Taskforce. The recommendations include operational improvements and capacity increases to the major corridors that move freight traffic.

Salinas Valley Truck-to-Rail Intermodal Facility Feasibility Study

One of the key factors in maintaining the competitiveness of the Salinas Valley agricultural industry is to provide additional methods of shipping products to important markets. The main markets are primarily located in the eastern United States. Given upward pricing pressure on the trucking industry due to rising fuel costs, as well as safety concerns, and problems with truck traffic congestion, freight and transportation stakeholders are looking for alternatives for transporting goods. The rail system is one of the main options available.

The purpose of the Truck-to-Rail Study, prepared by AMBAG in 2011, was to analyze the potential for building and operating a truck-to-rail intermodal facility to support the movement of perishable agricultural products

from this region. This study builds off a previous study commissioned by the Grower-Shipper Association of Central California in Fall 2008 which showed there was both a desire on the part of the growers/shippers in the Salinas Valley to expand methods of shipping from truck only and that rail would be a cost competitive option for shippers.

This study also analyzed the impact of the significant number of trucks leaving the Salinas Valley has on air quality, roadway congestion, safety and quality of life in this region. Using modeling software, this study determined that greenhouse gas emissions could be reduced by as much as 59 percent by switching from truck to rail freight and that other pollutants could be reduced by an average of 35 percent. The study identified two potential locations in Chualar and Gonzales for a truck-to-rail intermodal facility based on operations logistics and cost feasibility. A preliminary environmental assessment of the two sites was also prepared.

U.S. 101 Corridor Freight Study

The primary freight corridor in the Monterey Bay Area is U.S. 101. It is the main north-south route between Los Angeles and San Francisco. The U.S. 101 corridor supports the economic vitality of the Central Coast area as a major goods movement corridor and is a key commute route.

AMBAG was awarded a Caltrans Partnership Planning grant in 2013 to identify short term and long term strategies to improve freight mobility and transportation operations along U.S. 101 from San Benito County through Santa Barbara County. The U.S. 101 Freight Study will assess opportunities for improved freight operations, safety, and efficiency, and will identify funds for recommended improvements. It will build off of the aforementioned studies which identify the commodities, goods movement patterns, and intermodal station feasibility to analyze opportunities for freight. Final recommended improvements provide better connectivity between adjacent communities. The study was completed in 2016.

In April 2022, AMBAG was awarded a Caltrans planning grant to develop the California Central Coast Sustainable Freight Study which will cover the five counties area of Santa Barbara, San Luis Obispo, Monterey, San Benito and Santa Cruz. This study will advance sustainable freight improvements and position projects to be in alignment with state planning priorities. The study is expected to begin in Fall 2022 and be completed by Summer 2025.

Transportation Management Programs

Transportation Demand Management (TDM) and Traffic Systems Management (TSM) are two types of techniques used to improve the efficiency and effectiveness of the transportation system. In TDM, the focus is on changing peoples' travel behavior; in TSM, system operational and/or service improvements are implemented to facilitate traffic flow. When successfully employed, these techniques decrease travel demand and improve operations and/or services prior to committing to significant investment for new supply or new capacity. Planning for TDM and TSM strategies requires looking at the transportation system as an interconnected whole in order to reduce GHG emissions.

Demand Management

TDM strategies reduce vehicular demand and thereby congestion, particularly during peak periods. In total, the 2045 MTP/SCS allocates approximately $127 million to TDM strategies.

Ridesharing

Ridesharing strategies include vanpool services for larger employers and rideshare matching services. The implementation of ridesharing programs and projects, such as providing vanpool services to commuters, is an effective strategy leading to reduction of the number of vehicle trips which helps to meet the GHG targets.

Vanpools

Over the years, AMBAG has recognized that there is a limited set of transportation options for individuals who would like to use sustainable modes of transportation, or cannot afford the cost of driving a car. Since 2009, the Monterey Bay region has benefited from a regional vanpool program that AMBAG initiated by implementing a partial subsidy funded through AB 2766 grants. The program provides a viable and cost efficient rideshare opportunity to employees and students who live, work, or attend college in Monterey, Santa Cruz, and San Benito Counties. The program also provides a sustainable transportation solution for the region's unique land use, demographic and employment characteristics. Moreover, the program fills an important market niche by helping traditionally underserved population groups (including but not limited to low income and minority population, rural communities, agriculture workers, etc.). The agricultural industry is a major employer in the region, currently comprising roughly 17 percent of all employment and whose workers represent a unique sector particularly well suited for vanpools. Often working irregular hours, at multiple worksites, and/or for multiple employers, the seasonal and remote nature of work destinations makes fixed route transit service impractical because average one-way commute distances exceed 20 miles and farm workers often need to travel to multiple work locations within one work day. The regional vanpool program provides agricultural employees with a safe and affordable form of transportation, thus providing flexibility and increased employment opportunities.

For other occupations, strategically located Park and Ride lots are located throughout the region and serve as pick up sites for vanpool and carshare commuters who travel out of the region for employment in the neighboring counties. The University of California Santa Cruz (UCSC) operates 14 vanpools located from San Jose to Monterey. The vanpool program assembles University employees and students commuting to the main campus and provides a van for transport. On-campus parking fees are used to subsidize the vanpool program for staff and faculty. The Go831 Smart Commute Travel Demand Management Program, operated by the Transportation Agency of Monterey County (TAMC), promotes travel alternatives like carpooling and vanpooling by providing information to the traveling public. Go831 works directly with major employers, schools and businesses serving visitors to provide support, planning assistance and tools for these institutions to establish and maintain their own "smart commute" programs. Programs offered through the Go831 Smart Commute Program include, Park and Ride lots and Commuter Choice Programs, both of which promote the use of vanpool as a means of reducing VMT and GHGs throughout the region. The Commuter Choice Program offers a way to track and connect with other vanpool and carpool riders using the RideAmigos platform, while keeping the employers' administrative costs low.

Telecommuting

TDM investments aim to reduce peak hour congestion by promoting flexible work schedules and telecommuting. Flexible work schedules allow employees to work fewer days in exchange for longer hours on the days they do work. Beyond the changes that can be accounted for in the development of a long-range transportation plan, the 2045 MTP/SCS was developed during the COVID-19 global pandemic. Among many other impacts, COVID-19 forced many people to telecommute and work from home for more than 12 months. Time will tell what the lasting impacts will be, but the 2045 MTP/SCS makes an assumption that remote work will be more significant post pandemic than it was prior to the pandemic. The lasting impacts of the COVID-19 global pandemic will require careful analysis for many years going forward.

Table 2-2: TSM Strategies

Strategy	Benefit
Incident Management	Reduces incident related congestion
Ramp Metering	Alleviates congestion and reduces accidents at on ramps and interchanges
Traffic Signal Synchronization	Minimizes wait times at traffic signals
Traffic Signal Preemption	Improves operational efficiency of transit and allows better service of emergency vehicles
Advanced Traveler Information	Provides real-time traffic conditions, alternative routing and transportation choices such as 511 programs or Waze
Improved Data Collection	Monitor system performance
Transit Automatic Vehicle Location (AVL)	Enables monitoring of transit vehicles and ensures on time performance

Systems Management

TSM increases the productivity of the existing multimodal transportation system, thereby reducing the need for expensive system expansion. These projects include signal coordination and transit sign priority. TSM relies in part on intelligent transportation system (ITS) technologies to increase traffic flow and reduce congestion. This 2045 MTP/SCS dedicates $109 million to TSM projects and programs.

Regional ITS Architecture

The Central Coast Intelligent Transportation Systems Architecture and Implementation Plan, prepared by Caltrans in 2010, establishes a framework for the regional integration of transportation systems. It not only looks within the MPO boundaries, but strategically addresses integration between MPO's and with Caltrans from the broader Central Coast perspective.

AMBAG continues to maintain, revise, and validate, as needed, the Central Coast Regional ITS Architecture in consultation with all regional agencies including but not limited to the three RTPAs and Caltrans. ITS projects to be implemented over next 25 years are described in the project lists contained in Appendix C.

Transportation System Management Strategies

In the Monterey Bay region, TSM efforts will help improve the efficiency of the existing transportation system and help the region meet its GHG reduction targets. See Table 2-2 for a summary of regional TSM strategies and associated benefits.

Future Transportation Technologies

Transportation plans must be responsive to emerging technologies that make existing modes more efficient, and to new transportation modes that better address the needs of a changing society. Technological innovations have the potential to make existing transportation choices more widely available and easier to use throughout the region. By providing more options for local and regional trips, technological innovations have the potential to shift travel to less environmentally damaging modes, lessen the negative environmental impacts associated with current vehicle use, increase system efficiency, improve safety, and reduce auto-related collisions and fatalities. Although they may have limited applicability in many parts of our region today, there is little doubt that certain technological innovations in transportation will grow significantly during the time frame of the 2045 MTP/SCS and beyond. For this reason, it is important to strategically plan our transit networks in preparation for emerging technologies to come online regionally. Changing demographics and broad economic trends have led to a demand for more flexible transportation options, the expansion of the sharing economy, and calls for

communities where people can live, work, and play within a small area. AMBAG will continue to monitor the emerging technologies as they come online in the U.S.. A few of the near-term emerging technologies are highlighted in the next section.

Smart Cities Digital Infrastructure and Intelligent Transportation Systems

Advancements in Information and Communications Technology (ICT) has allowed for quick access to on demand services which has altered travel demand patterns in significant ways. Perhaps the greatest impact ICT will have on the future of transportation is the Internet of Things (IoT). IoT refers to a network of ordinary objects, like household appliances, vehicles, street lights and traffic signals that are embedded with Internet-connected electronics, sensors, or software that can capture, exchange, and receive data. The rapidly increasing number of connected devices and systems presents significant opportunities for transportation. Data and connectivity enable the implementation of Smart Cities and intelligent transportation systems that offer a host of benefits, such as reliability, operational efficiency, cost effectiveness, safety and improved asset management and planning.

Smart Cities are connected cities that utilize ICT to enhance the quality and performance of public services, by connecting people, vehicles and infrastructure which communicate in 'real-time' through regional telecommunication networks. Smart Cities refer to the way in which public agencies use technology to collect data, provide services, conduct business more efficiently and improve decision making. Smart Cities and Intelligent Transportation Systems (ITS) provide the connected infrastructure that ultimately supports the efficiency of a shared, electric, and autonomous transportation future. The use of Smart City digital infrastructure has a wealth of future applications to enhance mobility across the city and region, including improved parking, improved traffic flow, targeted investments in bicycle infrastructure, improved public safety, improved transit trip planning, optimized traffic flow and congestion and can lead to increases in users, customer satisfaction and accessibility.

AMBAG recognizes the importance advancements in technology, data collection and ICT have in enhancing the performance of public services, such as energy and transportation, and reducing consumption and increasing responsiveness and overall efficiency of transportation operations.

Mobility as a Service

Mobility as a Service (MaaS) is the idea of providing people with on-demand access to a wide range of public and private shared mobility services. MaaS enables a transition from the current paradigm where vehicle ownership is all but required to enable people to freely move about their community, to a new mobility paradigm, where people have access to an array of transportation services. MaaS proponents have developed mobile applications that aggregate data from service providers to enable users to plan and book door-to-door trips using a single application that provides the best transportation option based on real-time conditions and user preferences (i.e., time, convenience, and cost).

While shared mobility, which includes transit, carshare, and vanpool, is not a new concept, technology has allowed for explosive growth and variance in business models in recent years, blurring the line between public and private transportation. Services like carsharing, traditionally seen at airports across the world, are taking off in more innovative ways thanks to the advancement of MaaS in everyday life. Transit agencies and cities of all sizes across the U.S. are exploring MaaS as a way to enhance public transit and reduce drive-alone trips. Establishing a mobility hub is one strategy to implementing MaaS to support transit investments and improve mobility in a variety of community settings.

Mobility hubs are places of connectivity where differing travel options come together, offering on-demand

travel opportunities, and supporting infrastructure that enhance connections to high-quality transit services, while helping people make short trips around a community on flexible fleets. Hubs can span one to a few miles and are uniquely designed and able to be integrated with complete corridors, prioritizing pooled ride options over single-occupant vehicles, while also ensuring safe walking and biking experiences. Mobility hub services and supporting amenities often include: bikeshare, carshare, neighborhood electric vehicles, convenient micromobility parking and e-charging, dynamic parking management strategies, real-time traveler information, on-demand ride sharing, microtransit services, safer bikeways and walkways, and a variety of urban design features.

AMBAG is aware of the potential for mobility hubs in the region and the opportunities for automated and connected vehicle technologies to enhance travel for people of all ages and abilities, while fostering a safer environment for all mobility hub users."

Flexible Fleets

Flexible fleets are shared, on-demand transportation services that provide convenient and personalized travel options. While they build on the popularity of services such as ride share, bikeshare, and scootershare, fleets can also include neighborhood shuttles and delivery services. Flexible fleets encompass a range of services including:

- Micromobility
- On-Demand Ride Hailing (also known as Transportation Network Companies)
- Ridesharing
- Microtransit
- Last Mile Delivery Service

The result of planning with the intent of implementing all five services will result in better, more convenient access to transit, reduced reliance on personal vehicles, and an overall reduction in congestion and greenhouse gas emissions. Operating flexible fleets within, and between, mobility hubs advances the full potential and utilization of these mobility service options, increasing the above mentioned benefits.

Autonomous Vehicles

New emerging technologies are developing that have the potential to fundamentally alter travel patterns and how goods and services are delivered. Automated vehicles are those in which at least some aspect of a safety-critical control function (e.g., steering, throttle, or braking) occurs without direct driver input. Automated vehicles may be autonomous (i.e., use only vehicle sensors) or may be connected (i.e., use communications systems such as connected vehicle technology, in which cars and roadside infrastructure communicate wirelessly). These emerging technologies have the potential to increase mobility for the elderly, disabled and transit dependent, make the transportation system safer, more efficient and reliable, and to reduce criteria pollutant and greenhouse gas emissions. Google's autonomous car project, known as Waymo, began in 2009 and now has over twenty million miles of driverless operation in 25 cities across the nation. Other private technology companies have also began testing driverless cars with success. The 2045 MTP/SCS recognizes these advancements and AMBAG will be monitoring this technology to potentially incorporate autonomous car operations in future horizon years.

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3 Financial Plan

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Introduction

The financial plan identifies how much money is available to support the region's surface transportation investments, including transit, highways, local road improvements, active transportation system preservation, and demand management goals. It also addresses the need for investment in goods movement infrastructure. Improving ground access in and around major freight facilities and enhancing major highways and public transit are critical to maintaining the health of the Monterey Bay Area's economy. The 2045 MTP/SCS calls for various revenue sources for implementing a program of infrastructure improvements to keep people and freight moving.

The 2045 MTP/SCS includes reasonably available revenue sources to supplement existing transportation dollars. The Monterey Bay Area's financially constrained plan includes a core revenue forecast of existing local, state, and federal sources along with funding sources that are reasonably available over the time horizon of the 2045 MTP/SCS. The financial plan also includes action steps to obtain the revenues necessary for implementing the region's transportation vision.

Currently there are considerable challenges associated with financing transportation investments. The Plan highlights the importance of finding new and innovative ways to pay for transportation, including the ever expanding backlog of investment needs just to maintain the existing transportation system.

Revenue & Expenditure Categories

The 2045 MTP/SCS is based on existing and reasonably available revenues. The existing revenues identified are those that have been committed or historically available for the building, operation, and maintenance of the current roadway and transit systems in the Monterey Bay Area. Essentially, these revenues are existing transportation funding sources projected to 2045.

Financial Assumptions

The financial forecasts in the 2045 MTP/SCS are based on reasonably foreseeable revenues. The projections are calculated using a combination of historical averages, current trends, and/or state and federal actions.

Actual revenues will vary from year to year. The financial projections and estimation methods used in the 2045 MTP/SCS were developed collectively with transportation planning agencies in the Monterey Bay Area including AMBAG, the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission, the San Benito County Council of Governments, the California Department of Transportation (Caltrans), Monterey-Salinas Transit, the Santa Cruz County Metropolitan Transit District, the three Counties, and 18 cities. Projections are consistent with figures shown in the California Transportation Commission's State Transportation Improvement Program Fund Estimate and Federal Transportation Improvement Program.

Year of Expenditure (YOE)

Federal law requires regions to escalate revenue sources and project costs to reflect "year of expenditure dollars" (YOE). The rationale for this rule is to present a more accurate picture of costs, revenues, and deficits associated with the long range plan. Table 3-1 shows projected revenue in today's dollars as well as in escalated (future) dollars. The text below describes each revenue source using today's dollars.

Revenue Sources

State and federal planning regulations require the development of a revenue constrained plan. The Financial Plan is based on current and reasonably available sources and levels of federal, state, and local transportation revenue, projected out to the year 2045. Revenue forecasts are thus a key part of the 2045 MTP/SCS development. A full list and description of funding sources is included in Appendix B.

The major sources of revenue for transportation can be divided into three categories: federal, state and regional/local.

Federal Revenues

Federal transportation bills must be reauthorized by Congress to provide a predictable source of federal funding for projects and all federal funding is subject to the annual budget process and congressional appropriations. On July 6, 2012 President Obama signed into law a new two year transportation authorization, entitled Moving Ahead for Progress in the 21st Century (MAP-21). The first long term highway authorization enacted since 2005, MAP-21 created a streamlined, performance based and multimodal program to address the challenges facing the U.S. transportation system.

MAP-21 was followed by the Fixing America's Surface Transportation Act (FAST Act) in December 2015 for the 2016-2020 period. The FAST Act authorized $305 Billion nationwide and built on the policy framework of MAP-21 including continuous efforts to streamline project delivery and new dedicated funding for freight projects. In 2020, the FAST Act was reauthorized until September 2021. In September 2021, the Fixing America's Surface Transportation Act (FAST Act) expired. As part of negotiations for a multiyear federal infrastructure plan, Congress adopted a new federal transportation act – the Infrastructure Investment and Jobs Act (IIJA) of 2021 – which is expected to increase funding for transportation. Under IIJA, California is estimated to receive $25.3 billion for federal-aid highway apportioned programs over five years, $4.2 billion over five years from a new bridge program; $384 million over five years from a new program to support the expansion of an electric vehicle (EV) charging network; and $9.45 billion over five years to improve public transportation options across the state. The IIJA also creates new transportation discretionary grant programs and increases funding for existing discretionary grant programs between FY 2022 and FY 2026. Details on what this means for projects in the AMBAG region will be integrated into future updates once available.

Federal revenue sources for the region total approximately two billion, roughly 15 percent of the region's total forecasted revenue through 2045. The region qualifies for federal revenue from almost 19 different programs. However, just four of these programs constitute 60% of all federal revenue: the Surface Transportation Block Grants/Regional Surface Transportation Program, the Highway Bridge Program, FEMA funding for emergency road repairs, and the FAA Airport Improvement Program. The major revenue sources are detailed below.

Surface Transportation Block Grants/Regional Surface Transportation Program

The Surface Transportation Block Grants (STBG)represents the most flexible federal fund source available for local uses. Funds can be used for projects on any Federal-aid highway (ranging from national highways to city arterials), rural minor collectors, bridge projects, transit capital projects, and bus facilities.

Eligibility for use of STBG funds has been expanded over the years to include environmental provisions, modification of sidewalks to meet Americans with Disabilities Act requirements, and infrastructure based intelligent transportation systems capital improvements. The region forecasts over $262 million from this federal program over the course of the next 25 years. Key Federal revenue sources are detailed below.

The Gas Tax and the Highway Trust Fund

The federal government funds transportation projects and programs in part through taxes and fees related to use of the transportation system. The Highway Revenue Act of 1956 tied the gas tax to transportation projects through the Federal-Aid Highway program. The 1956 act created a dedicated transportation funding account, the Highway Trust Fund (HTF). In the early 1980s, Congress expanded the definition of federal highways and created new programs to address transit infrastructure as well as established a Mass Transit Account within the trust fund.

Since 1956, Congress has taken gradual steps to increase the gas tax and diversify the taxes and fees associated with funding the transportation system. Congress has traditionally counted on ever increasing gas tax revenues generated from ever increasing traffic volumes to keep up with the need for transportation funding. However, mileage driven per person has hit a plateau in recent years and improvements in fuel efficiency are slowing fuel consumption.

Source: Transportation for America, "Transportation 101: An Introduction to Federal Transportation Policy," http://t4america.org/docs/Transportation%20101.pdf

Highway Bridge Program

The Highway Bridge Program (HBP) is a safety program that provides federal-aid to local agencies to replace and rehabilitate structurally deficient locally owned public highway bridges or complete preventive maintenance on bridges that are not deficient. This program is funded by the Federal Highway Administration (FHWA). The programming of HBP projects is managed through a 15-year plan. This multi-year plan provides 4-years of HBP funding to be programmed in the Federal Statewide Transportation Improvement Program (FSTIP) and 11-years of planning. The intent of the HBP is to remove structural deficiencies from existing local highway bridges to keep the traveling public safe. The HBP goal is to keep local highway bridges in good condition through a preventive maintenance program and to fix bridges that are in fair condition. A bridge that is in poor condition must utilize the most cost-effective and prudent solution to improve its condition from poor to fair or good. The region forecasts over $365 million from this federal program over the course of the next 25 years.

Federal Emergency Management Agency (FEMA) Funding

FEMA reimburses local governments for a variety of disaster related costs. In the AMBAG region, recent and expected funding is primarily for fire disaster response. Recently fires in the region have increased in frequency and intensity. The Soberanes Fire burned over 132,000 acres in 2016 and was the most expensive fire in history to fight at the time. In August 2020 two more major fires affected the region. The CZU Fire in Santa Cruz County burned more than 86,000 acres destroying over 7,500 structures and the Dolan Fire in Monterey County burned approximately 125,000 acres. Fires can damage the transportation system in many ways. For large fires, hundreds of heavy fire trucks come to the region and cause a significant wear and tear impact on highways, roadways, and rural roads between the central incident command post and the fire lines. Wood, plastic, and metal roadway structures are often damaged by intense heat including culverts, side rails, and bridge structures. Fallen branches and trees can block culverts and drainage system. Post-fire season rains then often cause wash outs, undermining, and in some cases total loss of roadway sections. FEMA Fire Management Assistance Grants (FMAG) helps local governments pay for some of the costs of rebuilding and repairing bridge and road facilities.

Fire Management Assistance is available to states, local and tribal governments, for the mitigation, management, and control of fires on publicly or privately owned forests or grasslands, which threaten such destruction that constitute a major disaster. The Fire Management Assistance declaration process is initiated when a State submits a request for assistance to the Federal Emergency Management Agency (FEMA) Regional

Director at the time a "threat of major disaster" exists. This normally occurs after the Governor declares a State of Emergency related to the specific fire incident. The FMAG Program provides a 75 percent Federal cost share and the State is expected to pay the remaining 25 percent of costs. The region forecasts over $297 million from this federal program over the course of the next 25 years.

Federal Aviation Administration's Airport Improvement Program

The Airport Improvement Program (AIP) provides grants to public agencies — and, in some cases, to private owners and entities — for the planning and development of public-use airports included in the National Plan of Integrated Airport Systems (NPIAS). For small primary, reliever, and general aviation airports, the grant covers a range of 90-95 percent of eligible costs. Eligible projects include those improvements related to enhancing airport safety, capacity, security, and environmental concerns. Applicants can get funding for most airfield capital improvements or rehabilitation projects and in some specific situations, for terminals, hangars, and nonaviation development. Certain professional services that are necessary for eligible projects (such as planning, surveying, and design) may also be eligible. Projects related to airport operations are not eligible for funding.

As the demand for AIP funds exceeds the availability, FAA bases distribution of these funds on present national priorities and objectives. AIP funds are typically first apportioned into major entitlement categories such as primary, cargo, and general aviation. Remaining funds are distributed to a discretionary fund. Set-aside projects (airport noise and the Military Airport Program) receive first attention from this discretionary distribution. The remaining funds are distributed according to a national prioritization formula. The region forecasts over $272 million from this federal program over the course of the next 25 years.

Urbanized Area Formula Program

The Urbanized Area Formula (or known as Section 5307) is the original federal transit assistance program for transit operators in urbanized areas with a population of 50,000 or more. Federal Transit Administration (FTA) Section 5307 block grants are apportioned annually to urbanized areas through a complex formula weighted by population density and revenue vehicle miles, or rail miles, if applicable.

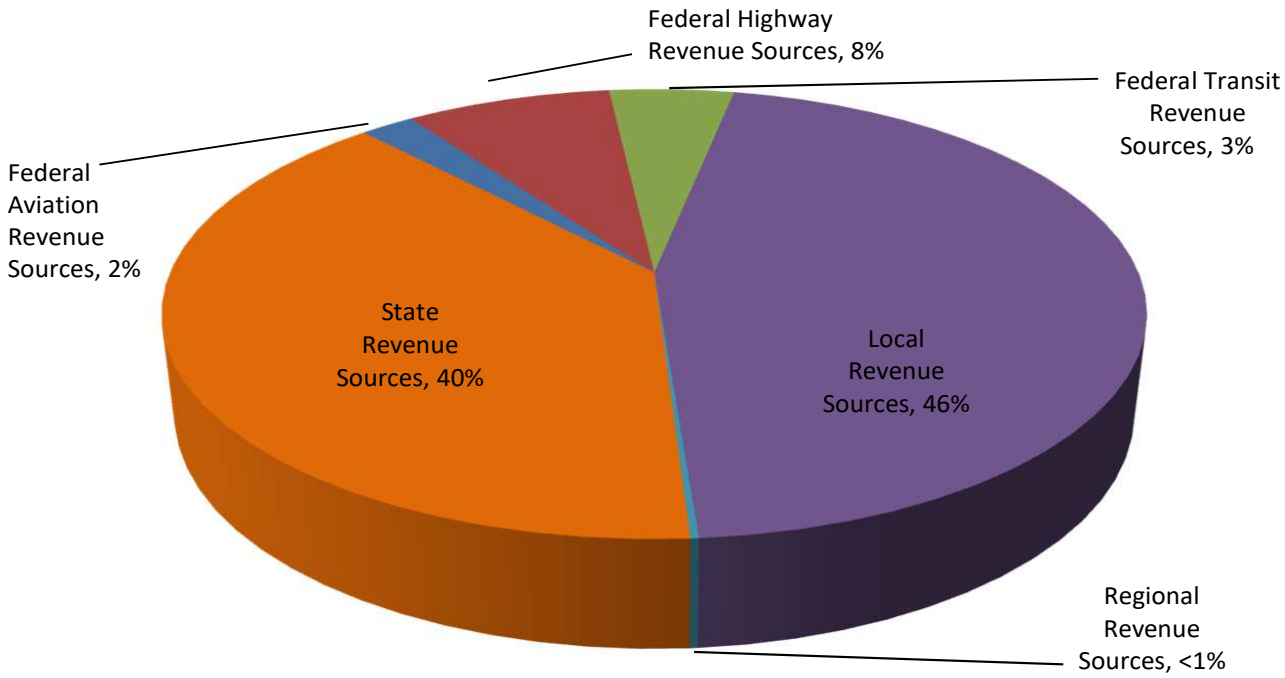
For urbanized areas with populations less than 200,000, funding may be used for either capital or operating costs at local option and without limitation. Local match requirements vary depending on the use of 5307 funds.

Operations require a 50 percent federal, 50 percent local match; and capital acquisitions and associated capital maintenance items are allowed at a 80 percent federal, 20 percent local match rate. If they choose, operators can use Section 5307 funds for planning purposes. The region forecasts more than $284 million from this federal program through 2045.

State Revenues

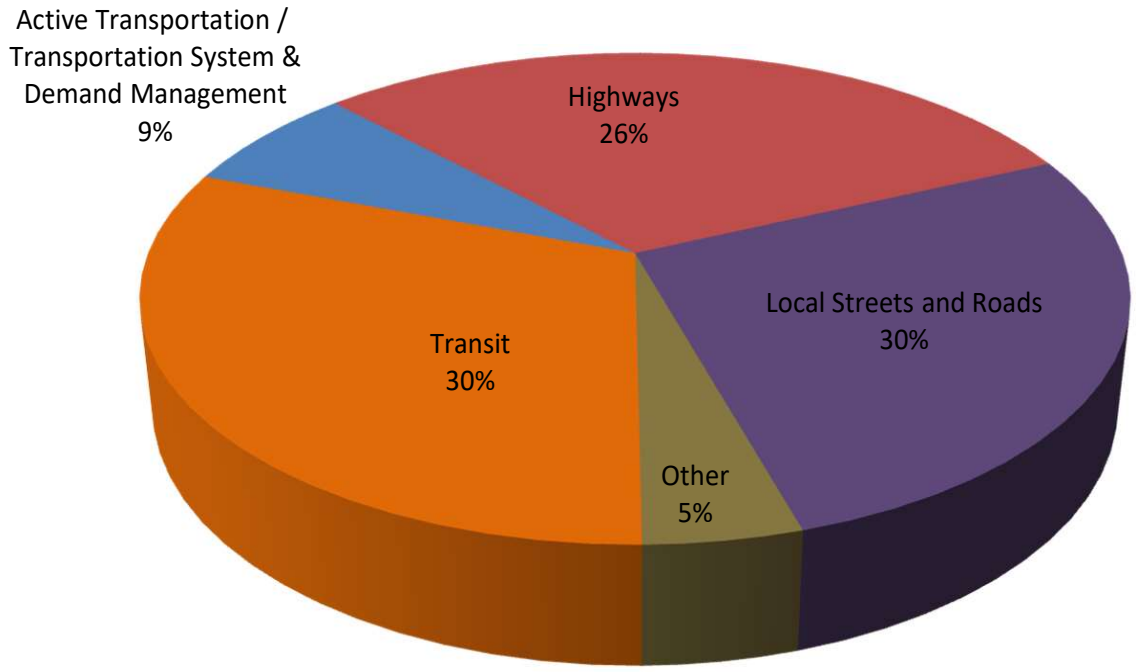
State revenue sources total over $5.4 billion, or over 40 percent of the region's total forecast revenue for the life of the Plan and represents a significant increase in the State's revenue impact on the MTP/SCS. This is due to the passage of the Road Repair and Accountability Act in 2017, better known as SB 1, and subsequent funding. SB 1 greatly increased transportation revenues throughout the state through increases in gasoline sales and excise taxes and vehicle registration fees. Most of the new state funds from SB 1 are allocated through existing programs including two programs – State Highway Operation and Protection Program (SHOPP) and the State Transportation Improvement Program (STIP). The SHOPP and STIP account for over 80 percent of total state funding. The 2045 MTP/SCS is consistent with the STIP, ITIP & RTIP. The major state revenue sources are detailed below.

Figure 3-1: Total Revenue by Source



Source: AMBAG, SBtCOG, SCCRTC and TAMC

Figure 3-2: Total Expenditures by Project Type



Source: AMBAG, SBtCOG, SCCRTC and TAMC

Table 3-1: Total Revenue by Source

Revenue Sources (all figures in $1000's)	Total in Today's Dollars	Percent of Total Funding (Today's Dollars)	Total in Future Dollars	Percent of Total Funding (Future Dollars)
Local Revenue Sources	**$6,283,432**	**46.4%**	**$7,691,235**	**46.2%**
Gas Tax	$794,525	5.9%	$997,720	6.0%
Local Misc. Revenues	$1,827,902	13.5%	$2,276,502	13.7%
Transit Revenues	$708,337	5.2%	$875,935	5.3%
Transit Sales Tax	$835,093	6.2%	$1,040,995	6.2%
Transportation Sales Tax	$1,507,063	11.1%	$1,889,571	11.3%
Local SB 1 Revenues	$610,512	4.5%	$610,512	3.7%
Regional Revenue Sources	**$30,375**	**0.2%**	**$38,125**	**0.2%**
AB 2766	$30,375	0.2%	$38,125	0.2%
State Revenue Sources	**$5,461,218**	**40.4%**	**$6,729,792**	**40.3%**
SB 1 State Revenues	$413,475	3.1%	$472,054	2.8%
SB 1 SHOPP Addition	$812,625	6.0%	$1,020,431	6.1%
SHOPP	$2,238,250	16.5%	$2,812,384	16.9%
STA	$279,603	2.1%	$345,547	2.1%
State Misc. Revenues	$250,988	1.9%	$273,331	1.6%
STIP	$304,786	2.3%	$357,788	2.1%
Federal Transit Capital Programs	$231,740	1.7%	$282,165	1.7%
Metropolitain/State Planning	$5,013	0.0%	$6,314	0.0%
ATP	$249,388	1.8%	$312,744	1.9%
LTF/TDA	$675,350	5.0%	$847,034	5.1%
Federal Transit Revenue Sources	**$416,225**	**3.1%**	**$519,320**	**3.1%**
Nonurbanized Rural Area Formula Program	$50,150	0.4%	$63,236	0.4%
Small Transit Intensive Cities Program	$71,150	0.5%	$88,764	0.5%
Urbanized Area Formula Program	$284,925	2.1%	$357,320	2.1%
Federal Rail Revenue Sources	$10,000	0.1%	$10,000	0.1%
Federal Highway Revenue Sources	**$1,075,734**	**7.9%**	**$1,335,565**	**8.0%**
Federal Highway Misc. Revenues	$717,469	5.3%	$885,917	5.3%
Highway Safety Improvement Program	$96,237	0.7%	$120,770	0.7%
Surface Transportation Block Grant	$262,028	1.9%	$328,878	2.0%
Federal Aviation Revenue Sources	**$272,750**	**2.0%**	**$343,307**	**2.1%**
FAA Airport Improvement Program	$272,750	2.0%	$343,307	2.1%
Grand Total	**$13,539,734**	**100.0%**	**$16,657,344**	**100.0%**

Source: AMBAG, SBtCOG, SCCRTC and TAMC

State Highway Operation and Protection Program

The State Highway Operation and Protection Program includes state highway rehabilitation, traffic safety, seismic safety, and traffic operational improvements. The SHOPP, a four year program, is adopted separately from the State Transportation Improvement Program. The Rehabilitation and Safety and Other Highway Construction elements previously included under the STIP are incorporated under the SHOPP.

New projects for the SHOPP are given priority and programmed according to rehabilitation, safety and operational needs. No new project is programmed unless Caltrans has a completed project study report (PSR) or equivalent document identifying a specific project scope and estimated cost. Funding from this source is forecasted to total over $3 billion for the life of the 2045 MTP/SCS.

State Transportation Improvement Program

The State Transportation Improvement Program (STIP) was significantly changed with the enactment of Senate Bill (SB) 45 in 1997. SB 45 simplifies the transportation programming process by combining seven previous funding categories into one pot of funds which is then divided into two categories. Prior to its division, however, Caltrans support, planning, and maintenance and rehabilitation needs are taken from the total. The remaining funding is then divided into the two categories: Regional Transportation Improvement Program and Interregional Transportation Improvement Program.

Prior to 2010, state sales tax on gasoline funded discretionary projects through the Transportation Investment Fund, which distributed revenues to the STIP, local streets and roads, and transit. In 2010, the sales tax revenues were “swapped” for an increased excise tax (initially 17.3 cents) recalculated each year to ensure revenue neutrality. This policy shift significantly reduced STIP funding to the Monterey Bay Area, and while SB 1 addresses the STIP by tying the excise tax to CPI, the STIP funding still lags behind the needs of the program.

The Monterey Bay Area forecasts over $304 million in revenue from the STIP in total. The 2045 MTP/SCS projects are consistent with the STIP fund estimate, Interregional Transportation Improvement Program, and Federal Transportation Improvement Program.

Active Transportation Program

MAP-21 has consolidated many of the dedicated funding streams for active transportation projects (Transportation Enhancements, Safe Routes to School, and Recreational Trails) under a single new program: the Transportation Alternatives Program (TAP). This equated to roughly a 30 percent cut to active transportation program funding. On the other hand, MAP-21 increased the Highway Safety Improvement Program (HSIP) and has clarified that the safety of all road users should be improved, not just motorists. In addition, MAP-21 gave great flexibility for Caltrans to shift, or flex, money between its many programs–representing a potential opportunity to actually increase the amount of federal funding that supports pedestrian and bicycle projects and programs across the state.

On September 26, 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP) in the Department of Transportation (Senate Bill 99, Chapter 359 and Assembly Bill 101, Chapter 354). The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program for active transportation. The funding in this program is administered on a competitive grant basis. The region forecasts over $249 million in revenue from the competitive ATP grant funding program.

Transportation Development Act - State Transit Assistance Fund

The Transportation Development Act (TDA) of 1971, enacted by the California Legislature to improve existing

public transportation services and encourage regional transportation coordination, provides funding to be allocated to transit and non-transit related purposes that comply with regional transportation plans. The TDA provides two funding sources: the Local Transportation Fund (LTF) and the State Transit Assistance Fund (STA). The LTF portion of TDA funding is described further below under "Local Revenues." The STA is derived from the statewide sales tax on gasoline and diesel fuel that was recently increased under SB 1. Statute requires that 50 percent of STA funds are allocated according to population and 50 percent be allocated according to operator revenues from the prior fiscal year. The region forecasts over $228 million in TDA/STA funds.

Transportation Development Act - Local Transportation Fund

The TDA extended sales tax to gasoline purchases and earmarked one-quarter of one cent of all sales tax proceeds for public transit improvements in the county where the revenue was generated. Jurisdictions may use these Local Transportation Fund (LTF) amounts for street and road purposes if a finding is made by the jurisdiction involved that there are "no unmet transit needs that are reasonable to meet." The reasonableness criteria is defined by each Regional Transportation Planning Agency administering the funds. The Monterey Bay Area forecasts over $675 million from the TDA/LTF category.

Local Revenues

At over $6.2 billion, local revenues constitute roughly 46 percent of all transportation funding for the Monterey Bay Area in the 2045 MTP/SCS. Gas tax/gas tax replacement, local transportation sales taxes, and transit sales taxes constitute approximately 50% of all local revenues. These and other major revenue sources are detailed below.

Gas Tax/Gas Tax Replacement

The gas tax funds that are apportioned from the state to cities and counties are to be used exclusively for local roadway projects. Gas tax revenues are dependent upon the amount of gasoline consumed since the tax is assessed on a per gallon basis rather than on the cost of gasoline. Any unobligated balance in these funds is transferred to the State Highway Account.

In the past decade, gas tax revenues have not kept up with demand and in turn have put pressure on other funding sources to make up the deficiency. With the passage of SB 1, local gas tax revenue has been reestablished as a major cornerstone of local transportation funding. At the same time, gas taxes are being assessed at the state level, and a use based replacement is being evaluated.

The region is forecast to receive over $794 million in gas tax or equivalent revenues over the life of the Plan.

Transit Fares

All the public transit operators in the Monterey Bay metropolitan region charge a user fee (fare) for persons to ride their service. Although the intent is for the users of the service to contribute a small portion of the cost to operate the system, it also is to ensure that each operator can meet pre-established farebox recovery ratio standards for the continued receipt of Transportation Development Act funds. The farebox recovery ratio is the amount collected from passenger fares divided by the cost of providing the service. In the Monterey Bay metropolitan region, this amount ranges from 10 percent (usually the general public transit and paratransit programs have low farebox recovery ratios) to up to 40 – 50 percent (e.g. Express Bus services).

Transit fares will constitute over $708 million of revenue for the Monterey Bay Region through 2045. Other sources of transit revenue include more than $1 billion from local transit sales tax and revenue from ad space. The combined total revenue from transit is forecasted to be over $1.5 billion or over 24 percent of all local revenue sources for the life of this Plan.

Miscellaneous Revenue and Developer Fees

An additional source of funding which is used in many places throughout the Monterey Bay region is traffic impact fees. A traffic mitigation impact fee distributes the costs of transportation improvements among all new developments based on the size of a proposed development or estimates of a project's trip generation capacity. Caltrans notes that fair-share, per unit fees for new development that have a direct nexus to mitigating the impacts of additional trips created, are appropriate. San Benito County has implemented an impact fee program within the County and the City of Hollister for some years. In Monterey County, the Cities of Greenfield, King City, Salinas and Soledad have impact fee programs.

In addition to jurisdictions' traffic impact fee programs, the Transportation Agency for Monterey County has developed a countywide regional traffic impact fee program to move transportation projects forward. Other revenue categories in miscellaneous revenues include airport revenues, city/county general funds, and leases. In total the region forecasts to collect over $1.8 billion in miscellaneous revenues and developer fees including regional developer fees.

Local Transportation Sales Tax

In November 2016, the Transportation Agency of Monterey County and the Santa Cruz County Regional Transportation Commission passed local sales tax measures, Measure X and Measure D respectively, to fund transportation projects of all modes in their respected counties. In 2018, the Council of San Benito County Governments passed local transportation sales tax Measure G. This significant local investment in transportation will account for a much needed stable funding source for local road maintenance, transit operations, active transportation investments and other congestion reducing projects. In addition, with the passage of these local funding sources, Monterey County, Santa Cruz County, and San Benito County are now considered "self-help" counties making them eligible for additional state grant funding.

Measure X in Monterey County, a three-eighths cent sales tax, will be prioritized to address maintenance of local roads, increase road safety and reduce traffic congestion, improve mobility and make active transportation safer. Based on these priorities the sales tax revenue is divided into two accounts with 60 percent allocated to local road maintenance and safety and 40 percent allocated to regional safety, mobility and walkability. Measure X is expected to generate roughly $500 million over the life of this plan.

Measure D in Santa Cruz County, a one-half cent sales tax, is designed to address major transportation issues including local road repair and increased safety, traffic congestion, mobility for seniors and those with disabilities, investments in active transportation and increase alternative transportation options. The sales tax revenue generated will be divided into five programs including 30 percent to neighborhood projects for local road repair with set asides for Highway 9 improvements and Highway17 wildlife crossing projects, 25 percent to highway corridors including transportation demand management programs and safety programs, 20 percent to transit focusing on senIor mobility, 17 percent to active transportation projects and the remaining 8 percent to preserve and analyze the rail corridor. Measure D is expected to generate nearly $625 million over the life of the plan.

Measure G in San Benito County, a 1% sales tax, funds various transportation issues including local road repair, increased safety, traffic congestion, mobility for seniors and those with disabilities, investments in active transportation and improves alternative transportation modes. This local sales tax measure will generate $380 million between 2020 and 2045.

In total, these local sales tax measures for transportation projects will generate over $1.5 billion in dedicated revenue, which equates to over 11 percent of all revenue expected in the 2045 MTP/SCS.

Table 3-2: Total Expenditures by Project Type

Expenditures (all figures in 1,000's)	Total in Today's Dollars	Percent of Total Expenditures (Today's Dollars)	Total in Future Dollars	Percent of Total Expenditures (Future Dollars)
Active Transportation / Transportation System & Demand Management	**$1,235,005**	**7.1%**	**$1,519,371**	**7.1%**
Active Transportation	$998,515	6.4%	$1,228,429	6.4%
Transportation Demand Management	$127,238	0.4%	$156,535	0.4%
Transportation System Management	$109,252	0.3%	$134,407	0.3%
Highways	**$3,554,629**	**30.6%**	**$4,373,106**	**30.6%**
Highway - New Capacity	$1,595,185	14.9%	$1,962,487	14.9%
Highway - Operations & Maintenance	$1,959,444	15.7%	$2,410,619	15.7%
Local Streets and Roads	**$4,080,504**	**27.1%**	**$5,020,066**	**27.1%**
Local Streets & Roads - New Capacity	$602,115	3.9%	$740,756	3.9%
Local Streets & Roads - Operations & Maintenance	$3,478,389	23.2%	$4,279,310	23.2%
Other	**$645,626**	**4.4%**	**$794,286**	**4.4%**
Airports, Planning, Other	$645,626	4.4%	$794,286	4.4%
Transit	**$4,023,970**	**30.8%**	**$4,950,515**	**30.8%**
Paratransit Operations and Capital	$514,069	4.1%	$632,437	4.1%
Transit - New Capacity	$614,124	4.3%	$755,530	4.3%
Transit - Operations	$2,406,729	16.6%	$2,960,894	16.6%
Transit - Fleet Rehab and Capital	$489,048	5.8%	$601,654	5.8%
Grand Total	**$13,539,734**	**100.0%**	**$16,657,344**	**100.0%**

Source: AMBAG, SBtCOG, SCCRTC and TAMC

Highway 156 Toll Revenues

Tolling revenues for State Route 156 West are included as a reasonably available revenue source for Monterey County as Local Miscellaneous Revenues. TAMC has been working closely with Caltrans to outline the tasks, activities and agreements necessary to consider tolling via a public-private partnership as an option to fund construction of the State Route 156 West Corridor project. The agency completed a Tolling Traffic and Revenue Study for State Route 156 in 2013 and took action to further study the feasibility of the project. TAMC and Caltrans also held a private industry workshop to gauge private interest in investing in the tolling project. In December 2017, TAMC in cooperation with Caltrans, completed a Level 2 Tolling Study for the 156 Corridor. In June 2020, the State Route 156 Multimodal Corridor Plan was developed with the intent of presenting an integrated analysis of mode-specific plans along the corridor. The region is forecasting over $146 million in revenue from tolling on State Route 156.

COVID-19 Pandemic Impacts on Transportation Revenues

The COVID-19 pandemic impacted transportation funding primarily in FY 2019/20. Self help tax measures for each County experienced minor decreases in FY 2019/20 revenues due to reduced sales tax revenues which fund these measures. State Transportation Development Act (TDA) funding, a critical local funding source, was also impacted by the pandemic. In addition, transit systems saw revenue losses related to running fewer buses with fewer passengers.

State transportation funding losses were balanced by FY 20/21 federal stimulus funding. Local FY 19/20 transit

funding shortfalls were largely recovered through the Federal Coronavirus Air, Relief, and Economic Security (CARES) Act (HR 748) approved in March 27, 2020. In FY 20/21 California had a projected FY 21/22 budget deficit of $54 billion, but by May 2021, California had a nearly $76 billion budget surplus in addition to over $25 billion in federal stimulus funding. State budgetary losses were mediated by FY 21/22 state budget surpluses exceeding pre-pandemic budget amounts due to stimulus funding, resulting in temporarily increased funding for transportation projects such as transit, rail, active transportation, highways, and local streets and roads.

While short term impacts were realized for transportation funding in the FY 19/20 period, stimulus funding mediated impacts in FY 20/21 and FY 21/22 which generally balanced funding losses with gains. As a result of these revenue recovery initiatives, over the 25-year period, the MTP/SCS does not assume a significant long term negative impact on transportation funding due to the COVID-19 pandemic.

Revenue Constrained Scenario

As the 2045 MTP/SCS is a long range planning document, projects listed in the Plan do not represent any specific commitment of funds to any project. Projects are approved by the Regional Transportation Planning Agency for respective federal or state funding sources and then amended into the Metropolitan Transportation Improvement Program (MTIP) prior to funding being dedicated to an individual project. As such, the MTP represents a long range list of projects through which those programmed funding will be advanced into the MTIP for implementation.

Financing for the 2045 MTP/SCS is shown in the Tables 3-1 and 3-2. The tables identify revenue sources and financial amounts reasonably expected to be available over the life of the Plan as well as expenditures.

Unconstrained Projects

Based on the analysis of travel demand in the region to 2045, needs have been identified for transportation improvements and associated operations, maintenance, and rehabilitation. These needs require funding above and beyond assumed revenues included in the 2045 MTP/SCS. The total known unconstrained need for the Monterey Bay Area is more than $25 billion. These projects and programs are not included in the 2045 MTP/SCS because funding has not been identified. As funding is identified then these projects may be moved from unconstrained to the constrained list. The Unconstrained projects are included in Appendix C.

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4 Sustainable Communities Strategy

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Introduction

The word "sustainable" is used in many contexts. In the case of this Plan, it refers to the mandates arising from Senate Bill (SB) 375 to develop a Sustainable Communities Strategy. At the heart of SB 375 is the requirement to coordinate transportation investments with land use patterns such that the region makes informed decisions about where to invest the region's limited resources and simultaneously reduces greenhouse gases by providing more direct access to destinations as well as by providing alternative transportation options. This Plan is required to analyze where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region. One strategy included in this Plan to achieve this goal is more focused growth in high quality transit corridors. Another strategy in the Plan is to provide more travel choices as well as a safe and efficient transportation system with improved access to jobs and education for the region's residents. In addition, the 2045 MTP/SCS supports job creation through economic development, ensures the region's economic competitiveness through strategic investments in freight, and improves environmental outcomes for the region's residents by 2045.

The passage of SB 375 directs AMBAG to consider future land use patterns in conducting its long range transportation planning. The mandates of SB 375 provide the region with a renewed opportunity for integrated planning for the future. The purpose of SB 375 is to implement the state's greenhouse gas (GHG) emissions reduction goals for cars and light trucks. This law requires the California Air Resources Board (CARB) to determine per capita GHG emission reduction targets for each metropolitan planning organization (MPO) in the state at two points in the future—2020 and 2035.

In accordance with Government Code Section 65080(b)(2)(B)(vii), the 2045 MTP/SCS achieves GHG emission reductions of three percent per capita in 2020 and a six percent per capita in 2035, surpassing CARB's reduction targets of three and six percent for the same years.

Under SB 375, AMBAG and California's 17 other MPOs must address GHG reduction as part of a broader "Sustainable Communities Strategy," or SCS. Transportation strategies contained in this MTP, such as managing transportation demand and making certain transportation system improvements, are major components of the SCS. However, the SCS also focuses on the land use growth pattern for the region, because the geographical relationships between land uses —including density, diversity, and intensity — help determine the need for travel. Therefore, AMBAG's SCS includes not only projections regarding the transportation network, but land use as well.

Specifically, SB 375 calls for the preparation of an SCS that "sets forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state Air Resources Board." [CGC Section 65080(b)(2)(B)(vii)].

In summary, under SB 375, an SCS must:

- Identify existing and future land use patterns;
- Identify transportation needs and the planned transportation network;
- Consider statutory housing goals and objectives;
- Identify areas to accommodate long term housing needs;
- Identify areas to accommodate 8 year housing needs;

- Consider resource areas and farmland; and
- Comply with federal law for developing an MTP.

These requirements, as outlined in California Government Code Section 65080(b)(2)(B), do not mean that the SCS creates a mandate for land use policies at the local level. In fact, SB 375 specifically states that the SCS cannot dictate local general plan policies (see Government Code Section 65080(b)(2)(J)). Rather, the SCS is intended to provide a regional policy foundation that local governments may build upon as they choose, which includes quantitative growth projections for each city and county in the region. In addition, some projects consistent with the SCS may be eligible for a streamlined environmental review process.

The key difference between past and current regional planning efforts is a sharper focus on reducing GHG emissions from cars and light trucks. For these vehicles, the state has developed a three-tiered approach to reducing GHG emissions. In addition to the regional land use policies and transportation investments contained in the 2045 MTP/SCS, the state has enacted laws to increase vehicle fuel efficiency and to increase the use of alternative, lower carbon transportation fuels. AMBAG and other regional stakeholders are supporting infrastructure planning for alternative fuels and zero emissions vehicles, which is addressed later in this chapter.

The 2045 MTP/SCS must comply with specific state and federal mandates. These include an SCS, per California Senate Bill 375 (Steinberg, 2008) (SB 375), that achieves GHG emissions–reduction targets set by the California Air Resources Board; compliance with federal civil rights requirements (Title VI); environmental justice considerations; air quality conformity; and public participation.

Key State goals, policies, and Executive Orders considered in the 2045 MTP/SCS:

- SB 375 and SCS Program and Evaluation Guidelines
- 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations
- California Transportation Plan 2050
- California Senate Bill 32 (Pavley, 2016): Reduce GHG emissions 40% below1990 levels by 2030
- EO B-55-18: Carbon Neutrality by 2045
- EO S-3-05: Reduce GHG emissions 80% below 1990 levels by 2050
- EO N-19-19: empowers the California State Transportation Agency (CalSTA) to leverage discretionary state transportation funds to help meet the state's climate goals.
- EO N-79-20: 100% zero-emission vehicle sales by 2035

AMBAG strives to advance equity through careful consideration of investments and policies that affect historically marginalized and systemically underserved groups, including people with low incomes and communities of color. The SCS has been crafted to advance equity, with particular attention paid to the needs of people living in disadvantaged communities, which are geographic areas that have a concentration of residents of color or 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.

California Transportation Plan

Senate Bill 391 of 2009 required the California Department of Transportation to prepare the California Transportation Plan, a long range transportation plan every five years. This system must reduce GHG emissions to 1990 levels from current levels by 2020, and 80 percent below the 1990 levels by 2050 as described by AB 32 and Executive Order S-03-05 respectively. In March 2021, the California Transportation Plan 2050 was completed and demonstrates how major metropolitan areas, rural areas and state agencies can coordinate planning efforts to achieve critical statewide goals. SB 375 addresses the regional GHG emissions from the transportation sector and SB 391 addresses the statewide GHG emissions from the transportation sector, both in support of AB 32.

Climate Action Plan for Transportation Infrastructure

The California State Transportation Agency (CalSTA) has developed the Climate Action Plan for Transportation Infrastructure (CAPTI), in collaboration with many different state agencies. CAPTI is the result of executive orders (EO) signed by Governor Gavin Newsom in 2019 and 2020 targeted at reducing greenhouse gas (GHG) emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's ambitious climate goals. CAPTI includes recommendations on how to invest billions in state discretionary transportation dollars annually to address climate change while supporting public health, safety and equity. This includes revenues collected under Senate Bill 1, the Road Repair and Accountability Act of 2017, State Highway Operation and Protection Program (SHOPP), Active Transportation Program (ATP), and Cap-and-Trade funds.

Regional Transportation Planning Agencies

As the agencies statutorily responsible for the implementation of transportation projects in their respective counties, AMBAG's three RTPAs - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito County Council of Governments - have a critical role in the development of the 2040 MTP/SCS. Early in the development process, the RTPAs worked closely with AMBAG to identify key priorities for consideration in the 2045 MTP/SCS's scenario planning process. The RTPAs remained actively involved throughout the entire scenario planning process, offering meaningful input as AMBAG decision-makers considered the various policy alternatives. Given the new requirements of SB 375, it will be critical for the RTPAs to embrace the concept of integrating transportation planning with land use planning for this region to develop a truly sustainable 2045 MTP/SCS.

Creating the 2045 MTP/SCS

The 2045 MTP/SCS contains ambitious goals to meet the region's challenges and is informed by the policies identified in Chapter 1. In recent years, AMBAG and its local jurisdictions laid the groundwork for the 2045 MTP/SCS by engaging in a variety of efforts to plan for more sustainable communities such as the Blueprint – "Envisioning the Monterey Bay." Building on this foundation, AMBAG's first step in developing the SCS was to coordinate with its local and regional partners in both information gathering and strategy development to create a realistic and implementable 2045 MTP/SCS. AMBAG also engaged the public and regional stakeholders to determine their priorities for the region. This "bottom-up" approach has included local jurisdictions, the three regional transportation planning agencies (RTPAs), transit operators, Caltrans, Monterey Bay Air Resources District and a wide array of stakeholders.

Land Use & Transportation Connection

Scenario Planning

Scenario planning analyzes a series of potential futures. In developing the region's first, Sustainable Communities Strategy, it was used to evaluate potential combinations of land use patterns and transportation investment. The resulting scenarios were analyzed and evaluated in context of the 2040 MTP/SCS' goals and performance measures; and were used to develop the scenarios for this 2045 MTP/SCS.

Building off of the scenarios developed for the last MTP/SCS and further refining them, this 2045 MTP/SCS analyzed scenarios. AMBAG used relevant data and information gathered from local governments and the RTPAs- the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito County Council of Governments- to develop scenarios using a process that engaged the entire region in envisioning a more sustainable future. For the SCS, it is assumed that the AMBAG Regional Growth Forecast (three county total) is a constraint (fixed upper limit) to the amount of total development in the region and the majority of growth is restricted to the Spheres of Influence of any given city. AMBAG worked very closely with local jurisdictions to identify future land uses and growth as depicted in the Place Type and Opportunity Area maps included in Appendix I. Detailed documentation of the development of the scenarios can be found in Appendices E and F.

Regional Growth Forecast

The 2045 MTP/SCS depends on an accurate and credible forecast for future growth in population, housing, and employment as a basis for determining the region's infrastructure needs. Beginning in summer 2019, AMBAG conducted nearly 80 meetings with 18 cities, three counties, Local Agency Formation Commissions and local universities to receive local input on the regional population, housing and employment growth forecast for the 2045 MTP/SCS.

The Regional Growth Forecast uses data from the 2010 Census, data from the California Employment Development Department and InfoUSA, as well as updated 2015 population and household data from the California Department of Finance. Meetings with local jurisdictions led to refinement of the forecast figures, as well as to obtain a consensus on the Regional Growth Forecast to serve as the foundation for the 2045 MTP/SCS. Detailed information on the Regional Growth Forecast can be found in Appendix A.

Overall Land Use Pattern

Land use patterns that provide a diverse mixture of goods and services in combination with residential uses have been shown to reduce vehicle miles traveled and thereby reduce greenhouse gas emissions. Combining mixed use development with infill development, rather than building on the fringes of urbanized areas, reduces greenhouse gas emissions by reducing the distance that people have to travel to meet their basic needs.

However, such smart growth strategies are not enough to encourage people to switch modes of travel from single occupant vehicles to transit, bicycling or walking. Transportation infrastructure that makes alternative modes more attractive also needs to be in place. For this reason, the land use pattern in the SCS, as shown in Figures 4-1 through 4-13, assumes increased density via infill development and mixed use in existing commercial corridors in combination with high quality transit service, that is,bus service that has headways of 15 minutes or less during the peak period or rail service. Figure 4-10 depicts the High Quality Transit Areas.

By combining increased density and accessibility to transit there is a higher likelihood that people will chose to use transit instead of driving. In addition, these same corridors and the streets that connect to other

neighborhoods are envisioned to have a greater investment in bicycle and pedestrian infrastructure such that people can chose to walk or bike for shorter distance trips. Making streets friendlier for all users of the network is the concept of complete streets that is being encouraged at the local level.

Past Planning Efforts

"Envisioning the Monterey Bay," or the Blueprint for short, prepared by AMBAG in 2010, was the first regional effort to develop a coordinated vision of the future for the Monterey Bay Area. It described how the communities of the Monterey Bay Area could grow in a sustainable fashion over the next 25 years. It explored how the housing and transportation choices in the region can be expanded to provide a more compact land use pattern with supportive infrastructure. The Blueprint set the stage for the dialogue that planners and community stakeholders have engaged in with the development of the region's first SCS. At its core the Blueprint was an effort to educate ourselves about the options for sustainable growth as a region prior to implementing the mandates of SB 375.

Place Types

To better analyze land use patterns and consider scenario alternatives, AMBAG created a set of place types which established a set of land use designations common to general plans for the three counties and 18 cities in the region during the development of the 2035 MTP/SCS. These place type categories are meant to act as a common "language" so that the diverse general and specific plans across the Monterey Bay Area may be compared in a consistent and standard manner.

Development of the place types began with a review of the predominant land uses and development patterns in the Monterey Bay region, leading to the creation of initial place type categories and a preliminary place type matrix. The following metrics and characteristics were established as the primary determinants of place type designations:

- Density – The general density of a particular land use, expressed as Floor to Area Ratio (FAR) and/or as dwelling units per acre
- Setting – The surrounding land use and development context
- Character – The urban and built form, including building placement, street pattern, and pedestrian or auto-orientation
- Transportation – The level of transit access, quality of the pedestrian environment, and presence of bicycle infrastructure

Based on these characteristics, a place type matrix was created and place type designation assignments were made. The Place Type Matrix was updated as part of the 2045 MTP/SCS. The assignment of place types was based primarily on existing land use designations, transit service maps and aerial imagery, but also relied upon information from local jurisdictions. The Place Type maps and descriptions of residential densities and building intensities are included in Appendix I. The 2045 MTP/SCS includes place types that transition commercial corridors into mixed use areas served by high quality transit. Outside of those mixed use areas the place types largely remain the same as the baseline.

SCS Toolkits

Developed collaboratively between AMBAG, transportation partners, local jurisdictions and stakeholders, an

SCS Implementation Toolkit provides examples of projects and best practices to help achieve regional and local sustainability goals and emission reduction targets through efforts to provide housing, jobs and services in proximity to one another and to better link them by transit and safe and convenient bicycle and pedestrian access.

The wide variety of tools are grouped in separate Infill Housing, Economic Development and Transportation sections of the Toolkit. Each of these sections opens with a summary matrix of all of its tools that indicates which ones are most applicable to the variety of settings or "Place Types" found in the region. These place types were developed prior to the Toolkit to help inform local and regional efforts to achieve MTP/SCS objectives. As individual communities in the region may include a range of place types and transitions between them, tools in the SCS Implementation Toolkit may be useful in a variety of settings. Together, any number of tools from one or more sections of the SCS toolkits can be used to improve quality of life, support investment and improve safety and accessibility in any of the diverse communities that make up the region. The SCS toolkits are available at www.ambag.org.

High Quality Transit Corridors and Stops

SB 375 defines high quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. Projects quality as a transit priority project if they are within a ½ mile of a high quality transit corridor or a major transit stop. (GC 21155 (b)) A major transit stop is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (GC 21064.3).

Given these definitions for the purposes of the SCS, AMBAG has focused on corridors that meet the definition of high quality transit corridors as defined in SB 375. For the sake of consistency in this document, major transit stops are referred to as high quality transit stops and include rail meeting the definition of the government code. In addition, the service provided at major transit stops is referred to as high quality transit service

Opportunity Areas

Senate Bill 375 also includes provisions for CEQA streamlining for developments that meet a specific set of criteria (per definition in California Public Resources Code Section 21155). At a minimum this criteria includes proximity to high quality transit. Areas that qualify for streamlining are called "opportunity areas." A "Sustainable Communities Opportunity Area" is an area within ½ mile of an existing or planned "high quality transit corridor" (per definition in California Public Resources Code Section 21155(a)) or "major stop" (per California Public Resources Code Section 21064.3) that has the potential for transit oriented development including mixed use. High quality transit is service with headways of 15 minutes or less during peak period or rail service.

During the past year, AMBAG worked with local jurisdictions to update Opportunity Areas in the region. Opportunity Areas are places in the region with the highest chance for successful sustainable growth in the future; they are generally located where Transit Priority Areas (TPAs) and Economic Development Areas (EDAs) within the AMBAG region overlap. This effort also identified Transit Priority Areas as locations that have both supportive land use densities and high quality transit service/connections for each Opportunity Area. Opportunity Areas are used to identify a set of potential Transit Priority Projects that supports the SCS. The Opportunity Areas maps and descriptions are included in Appendix I.

Economic Development

The Monterey Bay Area is comprised of a diverse population and has very distinct industries that support the local economy. While the tri-county area is considered a mid-sized region, there are many jurisdictions within the area that are small and relatively rural in nature. These areas are home to the region's low income and minority populations as they are the most affordable places to live. These populations are responsible for the production of the agricultural goods that are generally considered to be the backbone of the region's economy.

Similarly, the tourism and hospitality industry, considered to be just as important as agriculture to the economy, is supported by thousands of low income minority workers. Despite the importance of these two industries to the region, jobs in these areas are mostly low income.

While low wage workers support and make possible the engine of the regional economy, they tend to live in cities that struggle to collect enough revenue to support their residents with basic services. The land value in these cities is low compared to the coastal areas, people have access to fewer services, and are isolated from the more well-marketed tourist attractions near the ocean. Low land values, lack of infrastructure and small, dispersed populations make it difficult to attract development. In addition, the jobs that provide the livelihood for many of these workers are a far commute from the jurisdiction in which they live. The combination of these factors creates a persistent jobs/housing imbalance within the region.

Often jobs/housing imbalances are tackled by implementing a combination of mixed use and infill development as well as increased transportation investment. However, applying this approach regionwide does not take into account the attractiveness of different markets for development in any given jurisdiction. Development markets are complex and land use policies or goals that do not consider the market potential for varying types of development will not be successful.

Previous studies have shown that these low cost areas may not yield a high enough residual land value for developers to find mixed use or residential development profitable. Assuming that development in the form

of mixed use will help to address the need for jobs in low cost areas ignores the reality of market conditions. Changes in policy, construction costs, pricing, and other factors could help with long term financial feasibility of development in these areas.

In the short term, it may be appropriate to encourage commercial types of development in these areas as this type of development has been shown to yield higher residual land values, with a long term strategy towards mixed use. Until then, economic development policies that help to create jobs and attract commercial development could greatly benefit the population by providing better access to services as well creating jobs closer to their home.

Traditionally economic development in this region has been the responsibility of each local jurisdiction. However, the mandates of SB 375 require the MPO to consider land use within the 2040 MTP/SCS. As a regional dialogue regarding the variety of land use in the region began, it became apparent that the transportation hurdles in the region cannot be addressed in isolation of the regional economy.

Previous analysis utilizing developer interviews regarding the feasibility of mixed use development in the region found that the highest barriers to development are fees, risks and uncertainties associated with the entitlement process. Fees exceed 10 percent of development costs in many jurisdictions in the region; this can prove cost prohibitive for mixed use development. To further exacerbate the issue, fees are higher in the mid to low cost areas of the region, where achievable price points are lower compared to the high cost areas of the region where achievable price points are higher. Fee reductions would reduce costs and thus enhance financial returns for new development.

Perceived uncertainty associated with the entitlement process also appears to be a barrier to new development. While developers may target a 15 percent return on cost, many would accept a lower return if risk and uncertainty were minimized. A reliable entitlement process could therefore enhance the feasibility of future development.

In addition to jobs/housing and land use policies, transportation strategies to provide alternative means to driving alone can also impact the regional economy. By providing better and more transportation alternatives the region can reduce the amount of money people must spend on transportation thereby injecting that same money back into the local economy.

There are extreme differences in housing and economic characteristics of the jurisdictions within the region. To that end, the approach taken with land use and transportation investments should not be the same throughout the region. To achieve a higher quality of life and implement the policies and goals outlined in Chapter 1, it is important to invest more regional effort into understanding this diversity so that regional land use and transportation strategies take into account and respond appropriately to the needs of all jurisdictions.

Figure 4-1a: 2045 Land Use Pattern North Monterey County

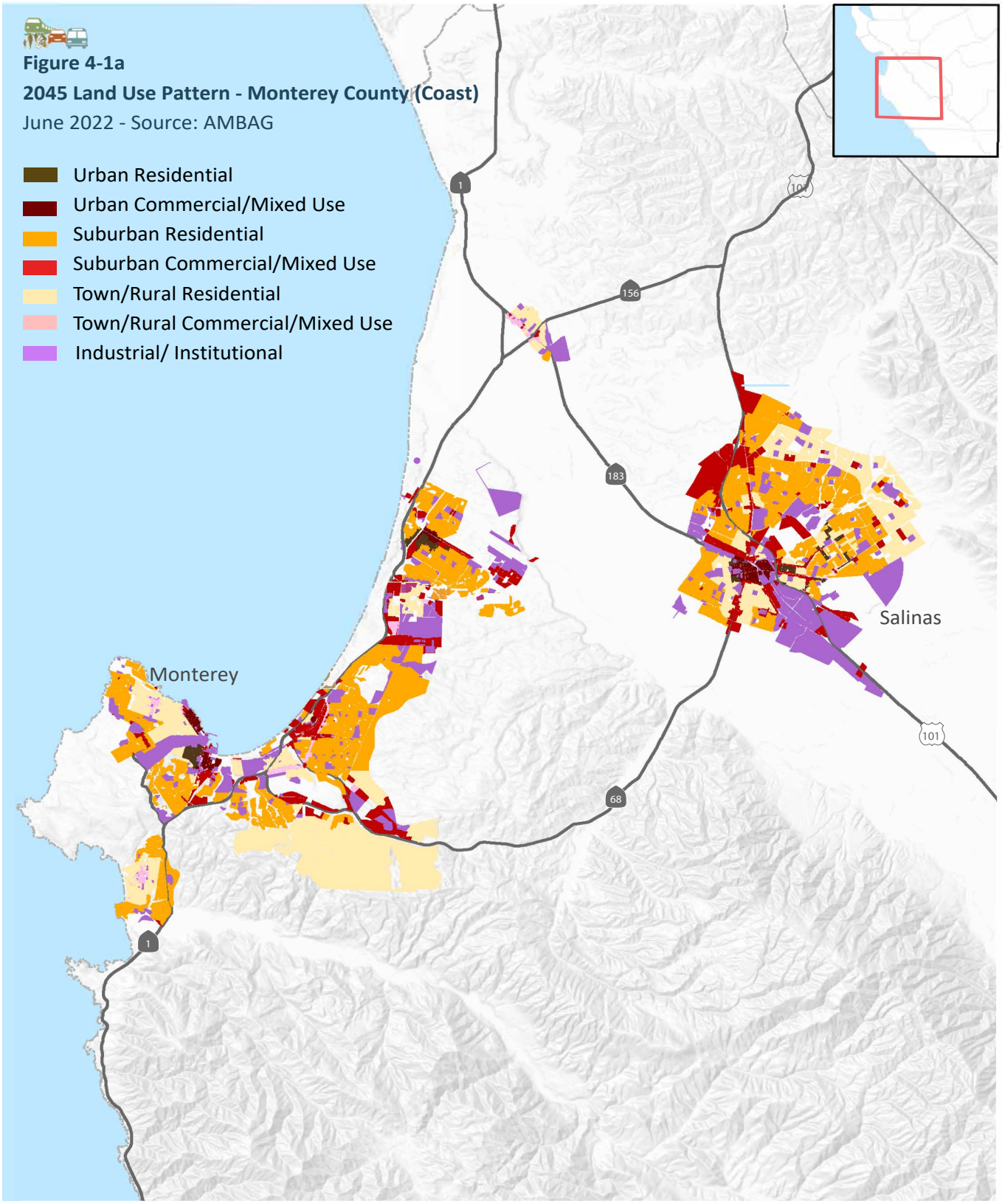

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Figure 4-1b: 2045 Land Use Pattern South Monterey County

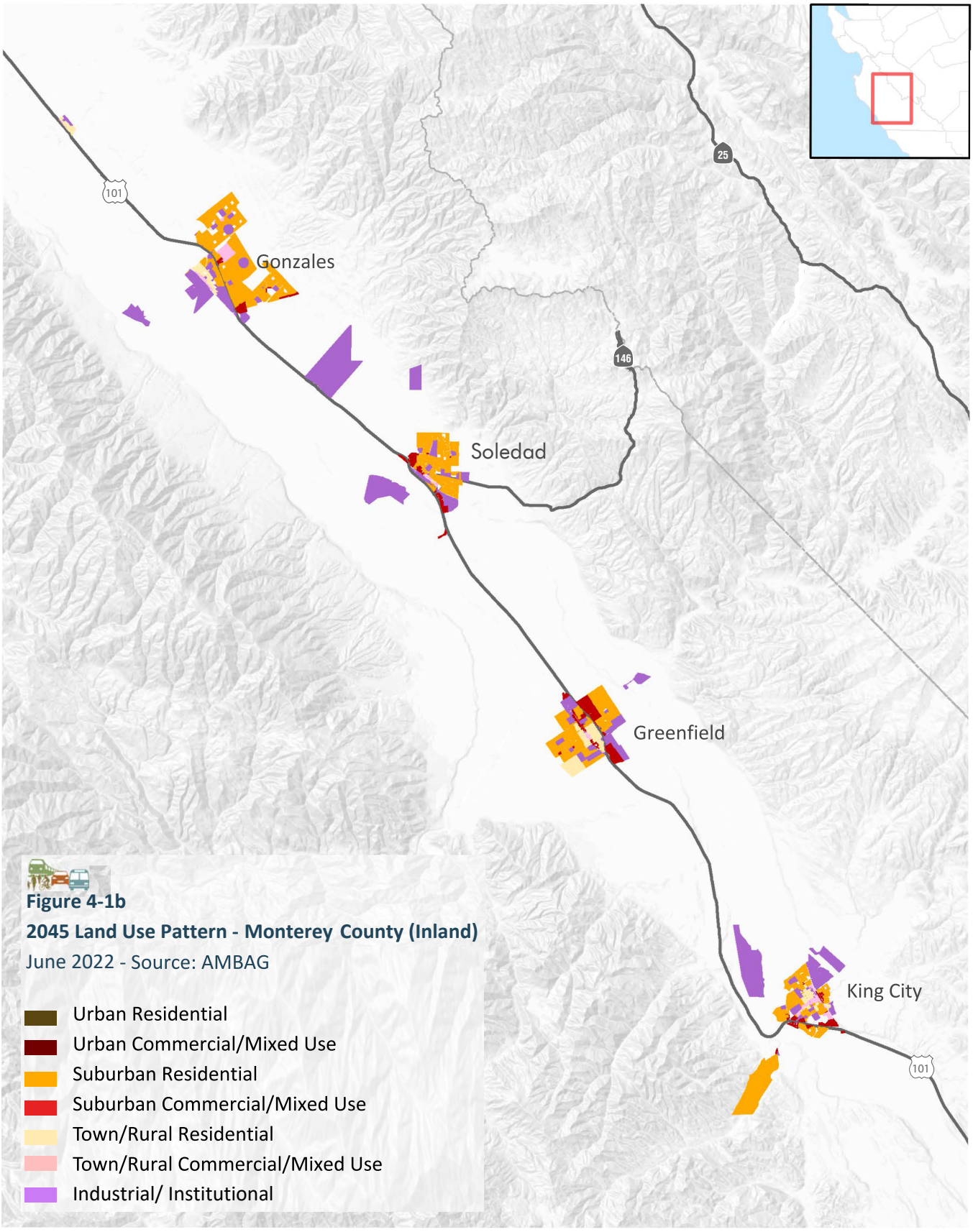

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Figure 4-2: 2040 Land Use Pattern San Benito County

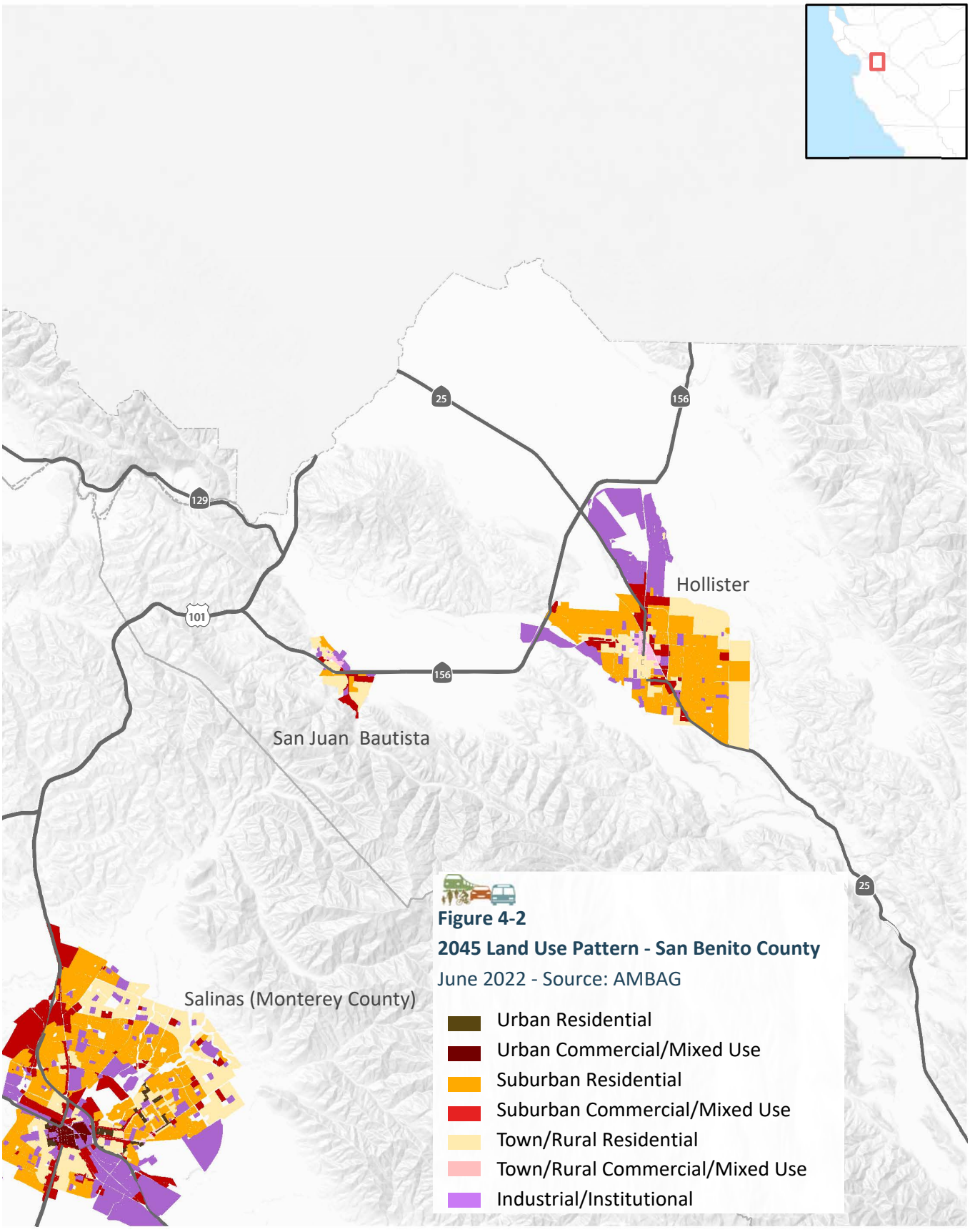

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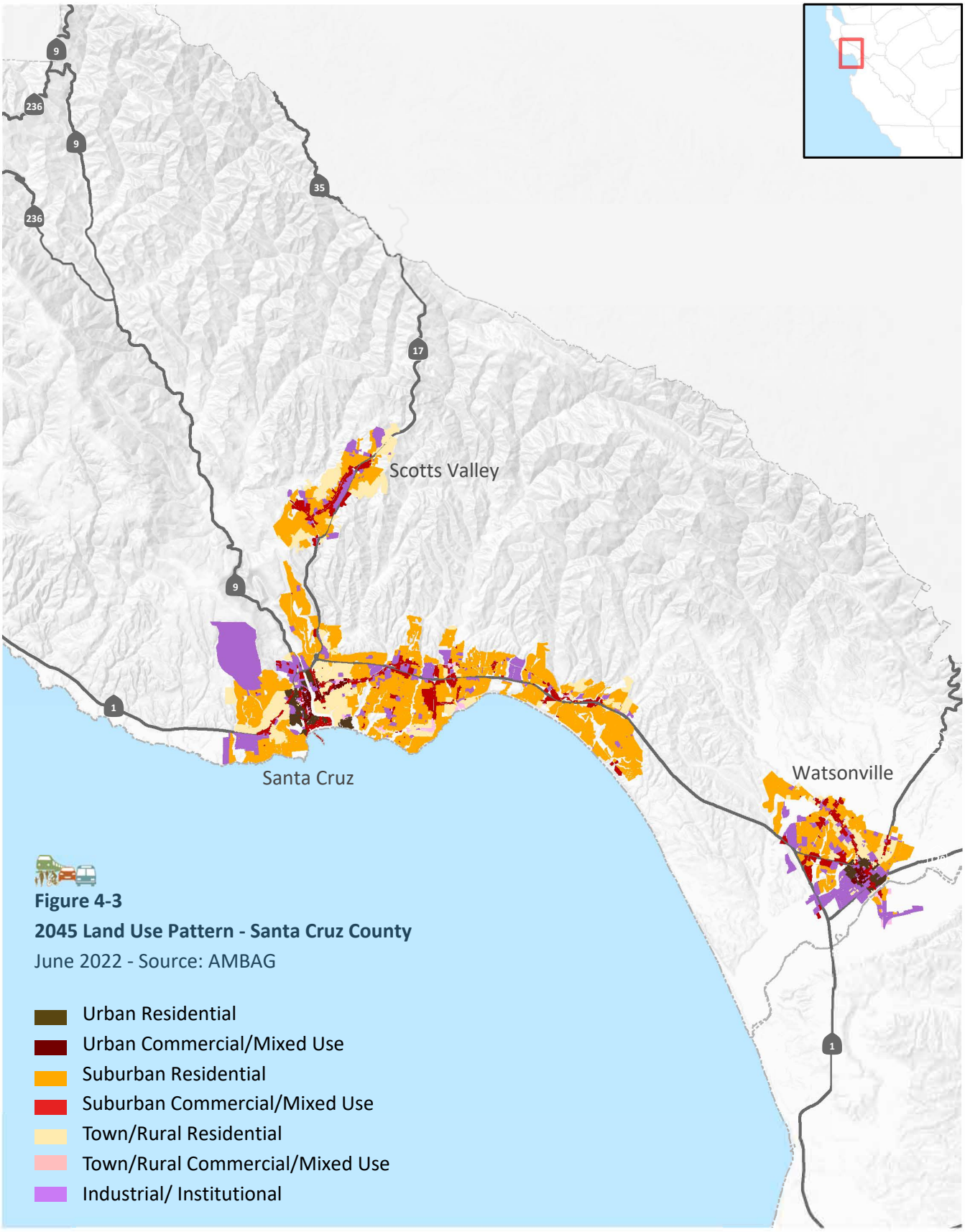
Figure 4-3: 2040 Land Use Pattern Santa Cruz County



The implementation strategies included in this 2045 MTP/SCS include a series of strategies focused solely on economic development and better understanding the dynamics of rural and low cost areas so that the needs and interests of these populations are better reflected in the regional planning process.

AMBAG developed a set of SCS implementation toolkits to help local jurisdictions and other organizations implement the SCS. The Economic Development Toolkit targets providing funding for infrastructure that will support infill housing and transportation improvements.

Transportation System and Programs

Integrated Multimodal Network

The 2045 MTP/SCS calls for an expanded transportation network that will complement the overall land use pattern. Working together, these complementary land use and transportation strategies can significantly reduce GHG by increasing transit ridership, increasing walking and biking, and reducing the auto trips.

Transit

As shown in Figure 4-4, the 2040 MTP/SCS calls for an expansion of the public transit network and transit service on new and existing routes, resulting in greater transit accessibility and connectivity throughout the region. The 2045 MTP/SCS introduces bus rapid transit and rail passenger service in the region in key corridors. These include the rail extension to Monterey County and bus rapid transit services in Monterey County and bus on shoulder transit service in Santa Cruz County along Highway 1.

Roadways

The 2045 MTP/SCS includes strategic capacity and technology enhancements to existing highways (as shown in Figure 4-5) as well as local streets. These enhancements, combined with transit, rail and active transportation improvements complement the preferred land use pattern and support the expected growth throughout the region. The overall land use pattern relies on the development of high quality transit stations and efficient transportation corridors, which leads to significant GHG reductions and other benefits due to a higher walk/bike mode share, more transit use, and shorter auto trips.

Active Transportation

The 2045 MTP/SCS also includes a notable increase in the regional active transportation network. Figure 4-6 shows the bicycle network in 2045. Active transportation is an essential part of the region's transportation system, is low cost, does not produce greenhouse gases, can help reduce roadway congestion, and increases health and the quality of life of residents. Active transportation will receive nearly $1 billion or nearly seven percent in available revenues under the 2045 MTP/SCS. In addition, 42 percent of the region's local streets and roads projects include Active Transportation components, representing more than an additional $1 billion in active tranportation investments. This emphasis signifies an important opportunity to advance the goals of SB 375 by increasing non-motorized modes of transportation, thereby expanding access to transit and improving public health and air quality. The Regional Transportation Planning Agencies- Transportation Agency for Monterey County, Santa Cruz County Regional Transportation Commission and San Benito Council of Governments- worked closely with cities and counties to identify a list of projects that will add and enhance walking and biking facilities to make these modes more attractive for short distance trips, including trips to access transit. In addition, the RTPAs developed the Regional Complete Streets Guidelines to assist local jurisdictions in project design and implementation. The guidelines can be found in Appendix H.

Figure 4-4: 2045 Regional Transit Network

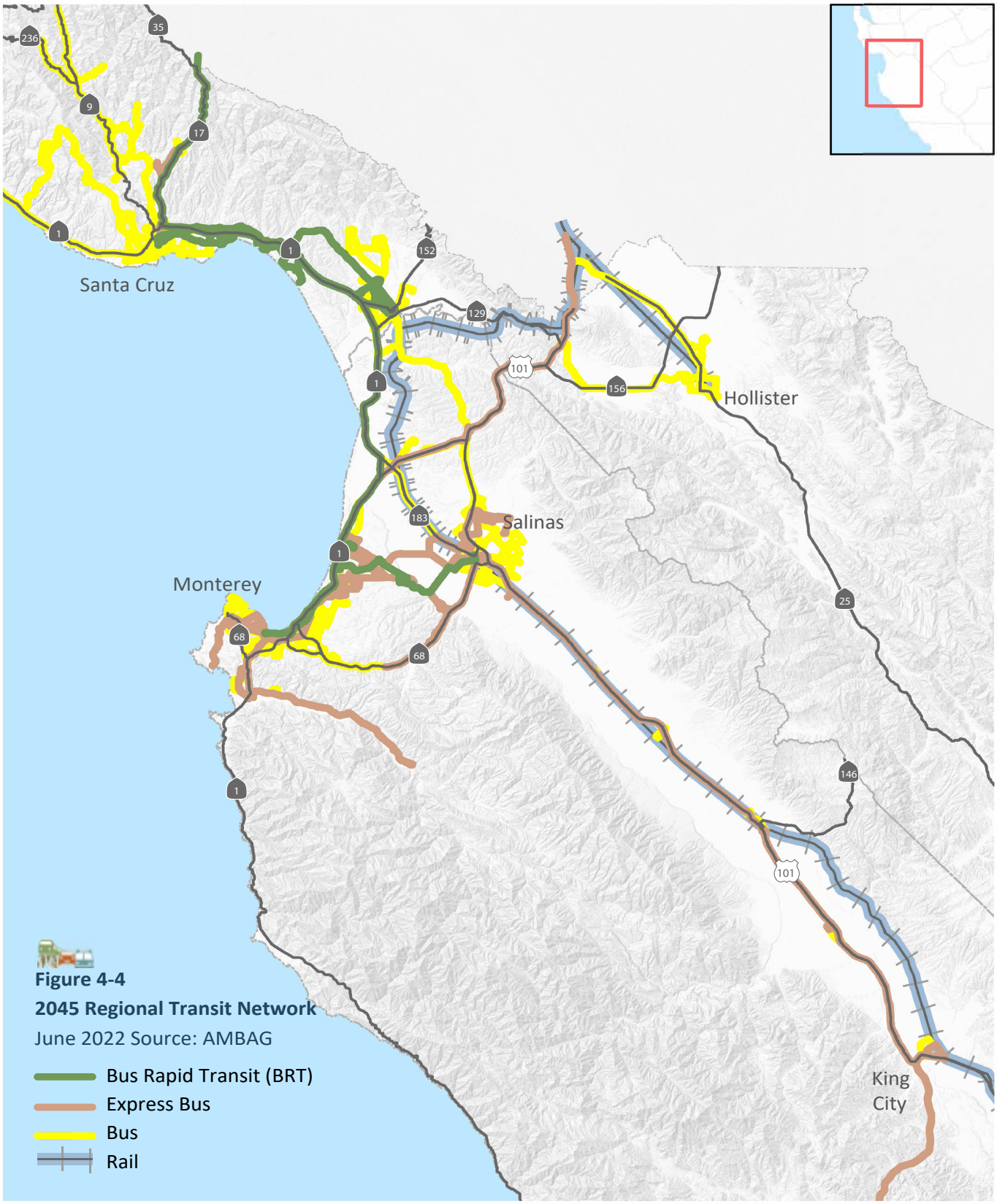


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Figure 4-5: 2045 Regional Highway Network

Programs and Strategies

In addition to infrastructure improvements to the transportation network there are less costly programs and strategies that can improve the flow of traffic on the transportation network as well as the effectiveness of the transportation system as a whole.

Transportation Systems Management

A variety of tools and strategies are necessary to effectively operate and manage transportation infrastructure as a coordinated regional system, including managing the roadway network, transit system, and active transportation facilities. Transportation Systems Management (TSM) could help operators manage demands on different parts of the transportation system, including bus and rail lines, major transit centers, and roads and highways. The ultimate goal is to ensure that people have the information they need to travel seamlessly through the region's entire transportation system.

TSM measures support the goals of the 2045 MTP/SCS by making improvements to improve operational efficiency. These techniques contribute to improved traffic flow, better air quality, improved system accessibility, and safety. The following TSM measures support the forecasted land use development pattern of the 2045 MTP/SCS:

- Enhanced incident management
- Ramp metering
- Traffic signal synchronization
- Improved data collection

Transportation Demand Management

Transportation Demand Management (TDM) refers to policies and programs that help reduce commute-related traffic congestion. Typical TDM programs promote carpooling, vanpooling, taking transit, biking, and walking to work. When used widely, these alternatives—along with telework and compressed work schedules—can significantly reduce congestion on our region's roadways. During the COVID-19 pandemic, many people worked from home during stay at home orders. As we emerge from the pandemic, it will be important to encourage and support employers and employees to continue to work from home.

In addition to the transportation network, the 2045 MTP/SCS also relies on strategic and extensive TDM measures that support planned land use patterns. These cost-effective strategies improve the effectiveness of the transportation system by supporting a shift from single occupancy vehicle use to other alternatives. TDM measures will receive a total of more than $127 million in available revenues.

The 2045 MTP/SCS employs the following TDM measures to improve mobility and access:

- Promoting telecommuting and flexible work schedules
- Complete streets improvements to increase first mile/last mile connectivity
- Expanding vanpool programs
- Expanding traveler information systems

Figure 4-6: 2045 Regional Bicycle Network

Public Health

The 2045 MTP/SCS recognizes the impact that transportation and land use decisions have on the health of the region's residents. A substantial body of research shows that certain aspects of the transportation infrastructure, including public transit, sidewalks and safe street crossings near schools, and bicycle paths, are associated with more walking and bicycling, greater physical activity, and lower obesity rates. Local jurisdictions implementing Health in All Policies strategies can greatly help improve public health in local communities. The Plan supports the integration of transportation and land use policies to promote improved public health. The 2045 MTP/SCS seeks to promote active transportation options, and a decrease in bicycle and pedestrian fatalities and injuries through increased funding of active transportation facilities and transportation demand management measures.

The 2045 MTP/SCS also sets forth a vision for a less carbon intensive vehicle fleet. Through partial zero and zero-emission vehicle technologies, the 2045 MTP/SCS promotes a more sustainable future for the region that includes less tail pipe emissions from the vehicles that are on the road.

Energy and Alternative Fuels

The transportation of people and goods in cars, trucks, buses, and on motorcycles is the single largest source of GHG emissions in the region. The levels of fuel consumption and GHG partly result from the region's reliance on petroleum-based gasoline and diesel fuels, as well as the average fuel efficiency of vehicles.

The region's need for gasoline and diesel is projected to decline from about 880,000 gallons per day in 2015 to about 715,000 gallons per day in 2045. Meanwhile the region's transportation electricity need is projected to increase from about 20,000 kWh a day in 2015 to 1.3 million kWh per day in 2045. The projected reduction in fuel consumption is due in large part to state fuel efficiency standards for vehicles and state mandated increases in the supply and use of alternative transportation fuels. The increase in plug-in hybrids and electric vehicle adoption is driving the increase in the transportation electricity need. Electric vehicles, in particular, are an important alternative to conventional vehicles as they reduce greenhouse gas emissions resulting from the consumption of fossil fuels.

Increasing electric vehicle use will help achieve statewide policies aimed at reducing greenhouse gas emissions. California has a number of policies to encourage widespread adoption of electric vehicles.

AB 32 requires the state to reduce emissions to 1990 levels by 2020, and Executive Order S-3-05 calls for a 80 percent reduction below 1990 levels by 2050. Key elements of the state's AB 32 Scoping Plan for achieving these goals include the Zero Emissions Vehicle Program and Low Carbon Fuel Standards. It is expected that as many as one-third of the fleet in California by 2030 will need to be made up of battery electric vehicles, plug-in hybrids, and fuel cell vehicles to help meet emissions reduction goals.

California Executive Order B-16-2012 seeks to have over 1.5 million zero emission vehicles on the road by 2025. The Electrification Coalition's Electrification Roadmap suggests that to reduce the transportation sector's reliance on oil, 75 percent of light duty vehicle miles traveled should be electrified by 2040. For the Monterey Bay Area, this would equate to more than 18 million daily miles driven by the region's residents.

SB 32 (Pavley, 2016) extends the AB 32 required reductions of GHG emissions by requiring a GHG reduction of at least 40 percent of 1990 levels by 2030.

California has also adopted a low carbon fuel standard that will require a reduction in the carbon intensity of California's transportation fuels by at least 10 percent by 2020. This will be achieved by offering a variety of fuel options for personal vehicles that include electricity, natural gas, propane, and biofuels.

Issued in September 2020, EO N-79-20 calls for elimination of new internal combustion passenger vehicles sales by 2035. By setting a course to end sales of internal combustion passenger vehicles by 2035, the Executive Order establishes a target for the transportation sector that helps put the state on a path to carbon neutrality by 2045.

AMBAG has taken steps to assess what regional infrastructure is needed to accommodate more alternative fuel choices across the region. In 2012, AMBAG adopted the Electric Vehicle Infrastructure for the Monterey Bay Area Plan. This plan presents a siting prioritization method to help identify potential charging locations and presents a framework for establishing a robust electric vehicle charging network in the region. The siting analysis in the plan provides guidance to local and regional stakeholders based on potential demand for electric vehicle charging stations. The three major goals of the siting analysis are:

- Provide charging opportunities for plug-in electric vehicle owners that lack access to home charging.
- Extend the range of plug-in electric vehicle for intra- and interregional travel along various corridors.
- Maximize all electric miles by providing opportunities for charging while minimizing the risk of stranded plug-in electric vehicles.

This study was the precursor to the Monterey Bay Plug-In Electric Vehicle Readiness Plan (2013), a comprehensive regional plan to promote plug-in electric vehicle adoption throughout the region.

In 2013, AMBAG and other regional organizations completed the Monterey Bay Plug-In Electric Vehicle Readiness Plan. The goal of this plan is to encourage the mass adoption of plug-in electric vehicles in the region and reduce greenhouse gas emissions by providing a toolbox of recommended approaches for public, private, and non-profit organizations. These tools range from innovative approaches to plug-in electric vehicle marketing and streamlining electric vehicle supply equipment permitting, to guidelines on establishing an electric vehicle fleet. The GV Readiness Plan identifies specific regional targets for significantly expanding plug-in electric vehicle adoption in the Monterey Bay Area by 2015, 2020 and 2025.

Electric Vehicles (EVs) use clean sources of power such as electricity and hydrogen. Unlike vehicles that use internal combustion engines to burn fossil fuels EVs do not produce harmful exhaust gases such as CO2 and ozone. EV technologies are becoming more popular and affordable, and new EVs are appearing on the roads all the time. EVs include battery electric vehicles and hydrogen fuel cell vehicles, and they come in the form of passenger vehicles, light- and medium-duty vehicles (e.g., pickup trucks and delivery vehicles), and heavy-duty vehicles (e.g., semi-trucks and buses). The Plan strives to integrate EV charging infrastructure stations along key corridors.

AMBAG and our transportation partners continue to work with local jurisdictions and other organizations to implement charging stations and to increase adoption of electric vehicles around the region.

AMBAG is working with the Santa Barbara County Association of Governments (SBCAG) and the San Luis Obispo Council of Governments (SLOCOG) to develop the Central Coast Zero Electric Vehicle Strategy (CCZEVS). The CCZEVS will identify gaps and opportunities to implement ZEV infrastructure on the Central Coast, including on or near the State Highway System, major freight corridors, and transit hubs. This strategy is important as it will seek to accelerate large scale, affordable, and equitable ZEV development across all altitudes of the public sphere in the wake of Governor Newsom's EO N-79-20. This strategy will directly advance the goals outlined in the 2045 MTP/SCS as well as the goals of CalSTA's CAPTI.

The region's open space is at the crux of its tourist economy. Preserving it is a high priority for residents and businesses.

Agriculture is the economic engine of the region and is an important asset to preserve.

AMBAG Sustainability Program

AMBAG is committed to equitably enhancing the sustainability and climate resiliency of the Monterey Bay. The objective of the AMBAG Sustainability Program is to implement initiatives that: assist jurisdictions in meeting their sustainability goals, enable deeper regional collaboration on sustainability issues, and help residents, small businesses, and non-profits to reduce their energy usage, GHG emissions, and energy costs.

AMBAG Sustainability Program initiatives are designed to focus on three priorities: providing project assistance, furthering climate planning, and building sustainability awareness. Project assistance initiatives seek to achieve the installation of energy efficient or demand response equipment by identifying potential projects, connecting them to funding opportunities, and providing technical assistance that facilitate project implementation. Climate planning initiatives seek to support climate mitigation and adaptation planning in the Monterey Bay Area by providing no cost GHG inventories and climate action planning technical assistance to our jurisdictions. Sustainability awareness initiatives seek to provide learning resources and opportunities to residents as well professionals throughout the Monterey Bay Area in order to promote sustainability.

Climate Change and Adaptation Planning

The Monterey Bay Region needs to prepare for climate uncertainty in terms of mitigation and adaptation. Climate change adaptation and mitigation are both important and needed. The region can help mitigate climate change by reducing emissions and supporting climate smart policies. The region can adapt by identifying how we're vulnerable to climate change and protect communities from the dangers of sea level rise and natural hazards.

The transportation sector is a key contributor of GHGs, but also is threatened by the impacts of continued climate change. Climate Action Plans (CAPS) includes efforts to both reduce GHG emissions and prepare communities for the impacts of climate change. CAPs typically focus on reducing GHG emissions. Climate adaptation planning is equally important and includes strategies to prepare for sea level rise, extreme heat, prolonged drought, and more destructive wildfires. Since 2006, AMBAG has provided resources to advance climate action planning in the region. The Monterey Bay region is expected to change due to climate, even under the most optimistic scenarios. Potential impacts include more frequent and intense heat waves and wildfires, rising sea levels and higher storm surges, the loss of native plant and animal species, and a higher demand for electricity, particularly during peak periods. Developing and implementing measures to help the region adapt to these potential changes will be critical in protecting the regional transportation network.

Despite efforts to reduce GHG emissions, the consequences of global climate change continue to affect people around the world, public health, national and local economies, and the planet's natural environment. Communities and people across our region will have to adjust how they respond to the impacts of climate change today and become more resilient as they face future impacts. Adaptation is the way communities and people change how they respond to the impacts of climate change. Becoming more resilient means that the communities, local and regional economies, and natural resources and recreational spaces that make our region special can endure, recover, and thrive in response to impacts of ongoing climate change. Anticipated impacts for the Monterey Bay region include hotter and more frequent heat waves, prolonged droughts, more destructive wildfires and more extreme precipitation and flooding, and rising sea levels and destructive storm surges. To advance the region's climate adaptation and resilience efforts, AMBAG works with partners to advance regional projects, offers resources to member agencies, and analyzes vulnerabilities of the transportation system, including which areas are prone to flooding and know to keep critical infrastructure available during an emergency. The transportation system envisioned in the 2045 MTP/SCS will incorporate strategies to improve regional resilience and better adapt to climate change impacts. For example, the

transportation system must consider travel patterns and rapid mobility for evacuations and emergency response. Also, coastal infrastructure must be designed to withstand rising seas and storm surge.

More frequent hot days and prolonged periods of extreme heat will increase the risk of buckling highways and railroad tracks. This could lead to increased and more frequent maintenance costs, premature deterioration, or even the failure of some transportation infrastructure. More frequent and severe wildfires that are followed by rainfall will increase the risk of mudslides and erosion. This could disrupt major infrastructure such as roadways and rail lines. Rising sea levels and stronger storm surges would likely impact communities, roadways, railways and other vital lines of coastal transportation. Existing fortifications may need to be enhanced as sea levels rise and storm surges intensify, and areas not previously considered at risk may need to be protected. Preparing transportation infrastructure for climate change impacts is a new priority as future projects are designed and the current system is maintained.

The tools and methodologies for evaluating and adapting to such impacts are still in the early stages of development and will require ongoing monitoring.

Central Coast Highway 1 Climate Resiliency Study

The Central Coast Highway 1 Climate Resiliency Study is a collaborative project between the AMBAG, Caltrans, the Nature Conservancy, and the Center for Blue Economy. The Highway 1 corridor and railway near Elkhorn Slough presents significant challenges to the future of transportation in the Monterey Bay region under conditions of climate change and sea level rise. This multi-benefit planning study identifies the needs and opportunities to improve transportation mobility, safety and efficiency, promote healthy coastal habitats, and provide economic security and benefits to the local community.

Driven by a need to sustain this critical transportation corridor and to protect the iconic coastal habitat in the face of the unique challenges posed by climate change, a diverse partnership was formed in the Monterey Bay area to find innovative ways to address this complex transportation adaptation problem by exploring creative transportation solutions and the use of natural infrastructure approaches to promote transportation, habitat and economic resilience for the region. The study was completed in summer 2020.

Resource Areas, Farmland and Mitigation

Central coast residents share a strong attachment to the region's open spaces and are economically dependent on the accessibility of this open space. Equally important to the region's economic wellbeing are the thousands of acres of farmland that produce billions of dollars' worth of berries and other produce. In addition to identifying areas where development is projected to occur, the SCS identified protected parklands and open space, natural resource areas, and farmland using the best practically available scientific information. AMBAG consulted with the appropriate State and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation.

Of the 3.3 million acres within the Monterey Bay region, about 20 percent have been previously conserved as parks or open space and are included in the SCS land use pattern. These lands range from public use parks to rural open space and U.S. Forest Service Lands. As part of this regional greenprint analysis, AMBAG assembled and applied the following additional data layers.

- Protected, sensitive, or special status species as defined by local, state or federal agencies
- Lands subject to conservation, agricultural easements and the Williamson Act and areas designated by the State Mining and Geology Board as areas of statewide significance
- Areas designated for open space or agricultural uses in local general plans

Figure 4-7: 2045 Natural Resource Areas

Figure 4-7
2045 Natural Resource Areas / Wetlands
June 2022 - Source: AMBAG (2020)

- Waterway Critical Habitat Timber
- Resources / Special Forest Critical
- Habitat Areas
- Wetlands

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Figure 4-8: 2045 Open Space

- Farmland classified as prime or unique or of statewide importance designation
- Areas containing biological resources
- Administrative boundary restrictions
- Habitat connectivity

Figures 4-8 and 4-9 show the location of these parks, open space and farmlands.

AMBAG is involved in resiliency planning efforts such as the Pajaro River Watershed Flood Protection and the Elkhorn Slough Natural Infrastructure Pilot project on the Pacific Coast Highway. In addition, regional efforts have been ongoing in wildlife corridor planning.

The region is incorporating environmental mitigation as much as possible into corridor planning efforts and funding has been included in the recently approved local sales tax measures. Federal Land Management Agencies (FLMAs) are engaged early on in the development of the 2045 MTP/SCS and the Transportation Improvement Program (TIP) to support the transportation needs and access routes that connect public roads to Federal lands.

Protecting the Region's Natural Resources

The SCS land use pattern incorporates adopted habitat plans as well as the conservation of other sensitive resource lands such as steep slopes, wetlands, and floodplains as reflected in plans by local jurisdictions. These local and regional plans ensure the conservation of plant and animal species, and natural habitats through low density zoning, conservation easements, and land purchases.

One of the largest habitat,g plans to date is the Fort Ord Habitat Management Plan, which will eventually become the Habitat Conservation Plan. In 1997, after the closure of the former Fort Ord, the Fort Ord Reuse Authority made a commitment to conserve nearly two-thirds of the former army base as open space. The Habitat Management Plan is primarily funded by federal, state, and local government annual appropriations, whereas the Habitat Conservation Plan will provide additional habitat management resources through collection of Fort Ord Reuse Authority Development Fees or Community Facilities District Special Tax payments from reuse of the former Fort Ord. The Habitat Management Plan does not provide incidental take coverage of state and federal listed species to state and local entities, whereas the Habitat Conservation Plan, if approved by federal and state Wildlife Agencies, will provide incidental take coverage for a period of 50 years to allow restoration of sensitive habitats and a regional framework for habitat protection and base reuse. Figure 4-7 shows the location of the region's natural resources.

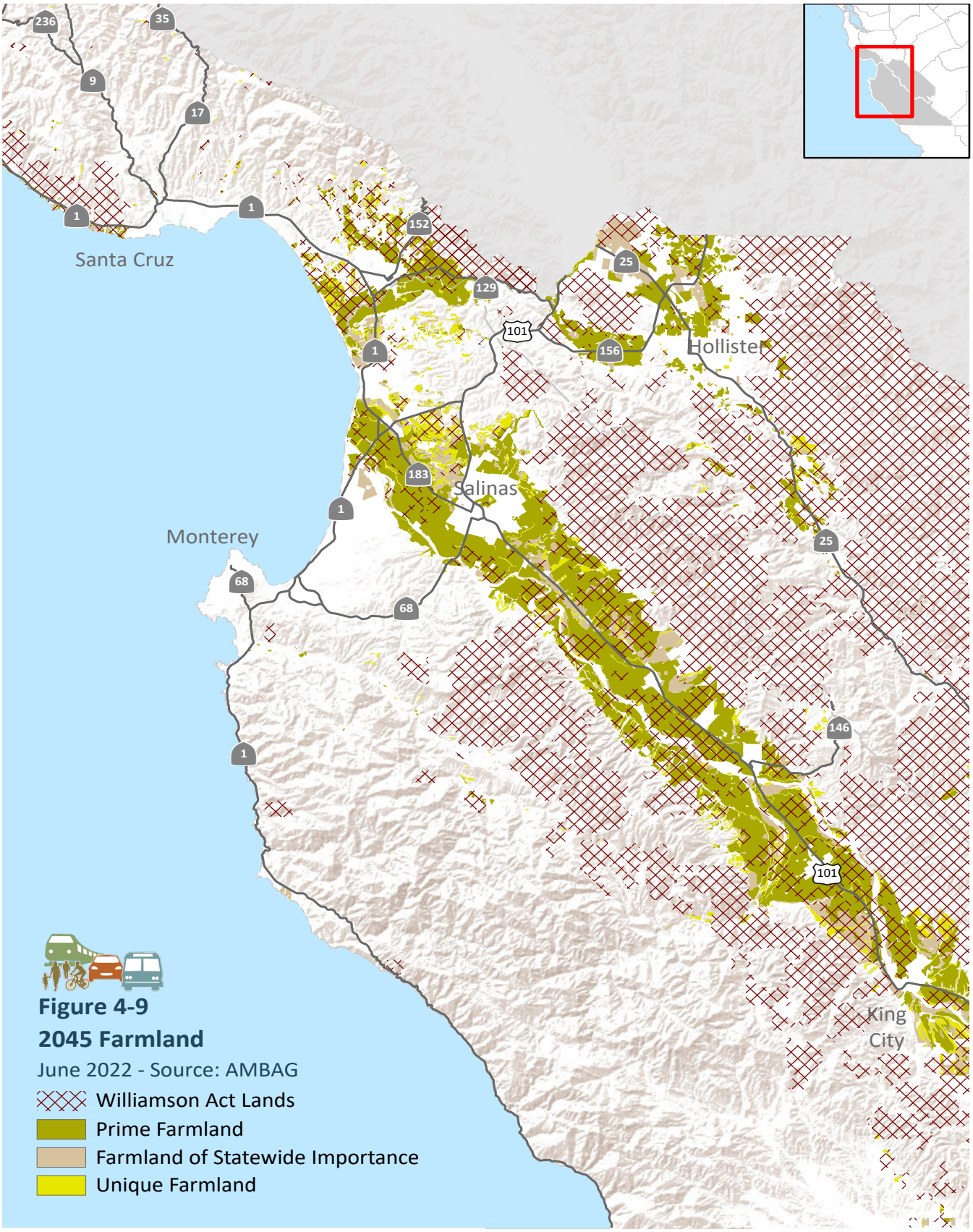
Regional Conservation Investment Strategy (RCIS)

AB 2087 (2016) established a conservation planning tool called a Regional Conservation Investment Strategy (RCIS) with the goals to:

- Identify high-value conservation and habitat enhancement opportunities within a region that will aid in species recovery, adaptation to climate change, and resiliency in the face of development pressures.
- Provide a science-based guide for voluntary conservation and mitigation actions implemented by a state agency, local governments, non-government organizations (NGOs) or private entities.

In addition to providing important biological information that policy makers and land-use planners may use to balance wildlife and development interests, an RCIS also allows public and private entities to enter into

Figure 4-9: Farmland



Mitigation Credit Agreements (MCAs). MCAs create mitigation credits in advance of development impacts by implementing conservation or enhancement actions to achieve the goals and strategies outlined in an RCIS. In exchange, infrastructure entities or other developers may use this advance mitigation tool to offset impacts of future development projects. RCISs may be used to guide mitigation funding to key areas of biological importance. A state agency or private entity may enter into an MCA if the mitigation site is within an approved RCIS area.

The Transportation Agency for Monterey County (TAMC) developed the Monterey County RCIS to assess the vulnerability of species and habitat to climate change related stressors (drought, wildfire, and landslides, etc.); develop conservation strategies to improve resiliency from the identified stressors; and defined a framework to finance the implementation of these conservation strategies as compensatory mitigation from new transportation improvements. The types of conservation strategies that are eligible to be included in an RCIS will both directly and indirectly contribute to the climate resiliency of Monterey County's transportation infrastructure, including wildlife crossings, wetlands restoration, and habitat acquisition and conservation. The Monterey County RCIS was completed in 2021.

The Santa Cruz County Regional Transportation Commission (SCCRTC) in coordination with the Santa Cruz County Resource Conservation District, is also developing a RCIS. The Santa Cruz County RCIS will be reviewed and approved by the California Department of Fish and Wildlife. Once finalized, the Santa Cruz County RCIS may help expedite delivery of transportation projects by facilitating regional advance mitigation planning: a process in which the environmental mitigation for impacts from multiple projects can be pooled and conducted in advance, resulting in larger conservation projects that have greater benefits, and potential mitigation for transportation projects is identified in advance of final project design. The Santa Cruz County RCIS is scheduled to be completed in 2022.

Construction Aggregate

In addition to natural habitat the region is home to another important resource, aggregates. Aggregates are used in variety of construction projects, such as roads, bridges, streets, bricks and concrete. Every town and city, along with every road connecting them are built and are maintained with aggregates. More than 90 percent of asphalt pavements and 80 percent of concrete are aggregates. Natural aggregates make up the largest component of nonfuel mineral materials consumed in the United States. In highways, natural aggregates are mixed into asphalt and concrete and are used as road base. In addition to construction projects, many items such as, paint, paper, plastics, and glass also require sand, gravel, or crushed stone. Aggregates are also used as soil erosion control programs and water purification. In addition to new resources, aggregate product can be recycled and repurposed into new construction projects.

Historic mineral production within the Monterey Bay Area included sand and gravel mining for construction materials, mining for industrial materials (diatomite, clay, quartz, and dimension stone) and metallic minerals (chromite, placer gold, manganese, mercury, platinum, and silver). The public depends on several categories of minerals found in Monterey, San Benito and Santa Cruz Counties for a variety of everyday uses. For example, minerals such as sand and gravel are used to make concrete for buildings and asphalt to pave roads.

Natural aggregates, which consist of crushed stone and sand and gravel, are among the most abundant natural resources and a major basic raw material used by construction, agriculture, and industries employing complex chemical and metallurgical processes. Despite the low value of the basic products, natural aggregates are a major contributor to and an indicator of the economic well-being of the nation. Of the non-metallic minerals, construction-grade aggregate is the most abundant and commonly used mineral resource in the Monterey Bay Area.

Figure 4-10: 2045 High Quality Transit

Protecting the Region's Farmland

The Farmland Mapping and Monitoring Program, administered by the Division of Land Resource Protection at the California Department of Conservation, produces maps and statistical data to analyze impacts to California's agricultural resources. To characterize existing and potential farmland, agricultural lands are rated according to soil quality and irrigation status. Farmland Mapping and Monitoring Program maps are updated every two years using aerial photographs, a geographic information system, public review, and field reconnaissance. Lands important for agriculture are placed in one of four categories of productivity established by the United States Department of Agriculture. These lands are categorized according to their specific qualities of soil, slope, degree of wetness, flooding hazards and other factors. Within the Monterey Bay region, the Farmland Mapping and Monitoring Program has identified 313,188 acres of land as "Important Agricultural Lands" combined with Williamson Act Lands. The Monterey Bay Area has a total of 1,668,261 acres of preserved agricultural land which represents 51 percent of the region's total land area.

These lands are reflected in the SCS land use pattern and they are not threatened due to zoning ordinances or the purchase of land for conservation easements. In the SCS land use pattern, 97 percent of the region's existing agricultural land is expected to remain available for agriculture. Ninety-six percent of the region's agricultural land is planned for agricultural use only, and less than one percent is planned as low density, rural residential land that allows and often encourages agricultural use.

Figure 4-9 includes agricultural preserves such as areas under Williamson Act contracts. The California Land Conservation Act, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

Environmental Mitigation

Transportation investments have the potential to impact the environment both positively and negatively. The 2045 MTP/SCS was extensively evaluated for its potential impacts as part of the required California Environmental Quality Act (CEQA) environmental review. The evaluation is available as the Environmental Impact Report.

In order to minimize the negative environmental impacts of transportation projects, mitigation of impacts may be necessary. Regional mitigation efforts rather than the traditional project-specific mitigation provide the greatest benefit for habitat and wildlife by leveraging resources available across a larger geographic area. Regional mitigation can result in conserving larger, scarce, multi-resource ecosystems and increase habitat connectivity which improves both the quantity and quality of habitat. AMBAG and its partner agencies are making efforts to collect data on mitigation opportunities and engage in early consultation with resource agencies in order to improve opportunities for and results of mitigation measures.

The Regional Ecological Framework Project was funded by the Strategic Highways Research Program 2, and based on Transportation Research Board Integrated Ecological Resource Framework Research (C06). The Regional Ecological Framework Project produced a series of maps identifying sensitive resource areas near planned regional transportation projects in the Monterey Bay Area Region, promoting early mitigation and better project planning among transportation agencies. By providing awareness of potential environmental conflicts early in the project development process, these maps allow transportation agencies throughout the region to engage in earlier consultation with resource agencies such as the Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and other resource agencies. This early

consultation allows project proponents to adjust their projects to avoid impacting sensitive resources, reducing environmental impacts, allowing projects to move forward with fewer delays, speeding project implementation and mediating increased project costs associated with extended environmental mitigation.

The Pajaro Compass is a framework to advance voluntary conservation in the Pajaro River Watershed. The Pajaro Compass is an assessment that identifies important features on the landscape; including agriculture, biodiversity and habitat connectivity, water resources, recreation, etc.

As a regional planning document, the 2045 MTP/SCS allows for early consideration of broad mitigation strategies. In fact, the 2045 MTP/SCS must include a "discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the "plan."

The Environmental Impact Report (EIR) associated for the 2045 MTP/SCS serves as the first tier of environmental review for identified transportation improvement projects and programmatically evaluates the environmental impacts of the Plan. The EIR identifies mitigation measures that programmatically apply to individual transportation projects based on a review of general project parameters and locations for all potentially significant environmental impacts of the 2045 MTP/SCS. Transportation project sponsors are responsible for more in-depth, project-level environmental analysis and mitigation to more precisely quantify impacts and specify mitigation measures based on project-level design details and site-specific review. However, where applicable, the 2045 MTP/SCS can provide a framework for mitigation at a regional level. The EIR will contain a Mitigation Monitoring and Reporting Program (MMRP) that is intended to ensure that the mitigation measures identified in the EIR are effectively implemented by the applicable jurisdictions and responsible agencies. The applicable jurisdictions and responsible agencies with projects contained in the 2045 MTP/SCS are encouraged to adopt the MMRP or an adaptation of it specific to its independent discretion and/or special expertise.

Wildlife Connectivity

California's distinctive topography and climate have given rise to a remarkable diversity of habitats that support a multitude of plant and animal species. In fact, California has more species than any other state in the U.S. and has the greatest number of species that occur nowhere else in the world. Many of the places where wildlife thrive are the same as those valued for recreation and other human activities. To ensure a sustainable future for wildlife, there is a need for a collaborative approach to conservation.

The California Wildlife Action Plan examines the health of wildlife and prescribes actions to conserve wildlife and vital habitat before they become more rare and more costly to protect. The plan also promotes wildlife conservation while furthering responsible development and addressing the needs of a growing human population. The plan is required to be updated every 10 years and the last CA Wildlife Action Plan was adopted in 2015.

Wildlife corridors connect like-habitats to facilitate the movement of certain species to allow the exchange between individual populations and reestablishment after changes to a specific geographic area. In the AMBAG region, a number of wildlife connectivity planning efforts are underway in order to ensure and protect wildlife corridors.

Accommodating the Region's Housing Needs

Addressing housing availability and affordability requires action at the local, regional, and state levels. For example, cities in the Monterey Bay region have taken steps to increase affordable housing by making the

development process faster and easier. The State of California offers grants to accelerate the production of housing and approves legislation that allows for more types of homes, like accessory dwelling units to be built statewide. Regionally, government agencies are considering how to better align housing policies with transportation initiatives because both contribute substantially to the region's cost of living.

The SCS land use pattern accommodates the more than 42,000 new households that will be needed over the next 25 years to serve a projected growth of nearly 108,000 additional people.

The SCS land use pattern addresses the needs of all economic segments of the population. Based on the capacity for planned housing development the region will be able to accommodate the projected housing needs for residents of all income levels.

Regional Housing Needs Allocation

California Housing Element law requires that every eight years, AMBAG shall develop a methodology for distributing projected housing need in four income categories – very low, low, moderate and above moderate – to local jurisdictions in Monterey and Santa Cruz Counties and sets forth a process, objectives and factors to use for that methodology. The Council of San Benito County Governments (SBtCOG) performs this function for San Benito County. This process, the Regional Housing Needs Allocation (RHNA), is coordinated by the California Department of Housing and Community Development (HCD). The 2045 MTP/SCS includes an updated RHNA. The 6th Cycle Regional Housing Needs Determination (RHND) from HCD to AMBAG is 33,274 units. SBtCOG's 6th Cycle RHND is 5,005 units.

In the past, the RHNA was conducted separately from the MTP process. SB 375 now links the RHNA and MTP/SCS processes to better integrate housing, land use, and transportation planning. Integrating processes helps ensure that the state's housing goals are met. The RHNA occurs before each housing element cycle, which SB 375 changed from a five-year to an eight-year cycle.

The AMBAG region received its RHNA Determination (for Monterey and Santa Cruz Counties) from HCD for the housing element cycle (2023-2031). The AMBAG RHNA Plan allocates the RHNA Determination by jurisdiction. (For the San Benito RHNA, refer to SBtCOG's RHNA Plan.) Based on the RHNA Plan each jurisdiction will need to

identify adequate sites to address its RHNA allocations in the four income categories when updating its housing element.

Monterey and Santa Cruz Counties have enough housing capacity to accommodate the RHNA allocations. San Benito County also has the housing capacity to accommodate the RHNA as described in the San Benito RHNA Plan. The allocations do not exceed forecasted growth and can be accommodated through infill and redevelopment. The AMBAG and SBtCOG RHNA Plans are under development and are expected to be consistent with the 2045 MTP/SCS. The 2045 MTP/SCS will be adopted within 18 months of the RHNA planning period and 6th Cycle Housing Element deadline as documented by HCD. This schedule follows the required statutory deadlines.

Meeting GHG Targets

In 2018, CARB set updated targets for lowering GHG in the Monterey Bay region. They call for a three percent reduction, in per capita GHG emissions from passenger vehicles by 2020 (compared with 2005); and a six percent per capita reduction by 2035 through land use and transportation planning.

The 2045 MTP/SCS demonstrates that the Monterey Bay region will meet these targets by focusing housing and employment growth in urbanized areas; protecting sensitive habitat and open space; and investing in a transportation system that provides residents, workers and visitors with transportation options that are more effective and diverse.

In addition, the 2045 MTP/SCS includes economic development strategies to encourage job growth in communities that are currently job poor as well as planning for new housing in communities that are currently job rich help to address the jobs/housing imbalance in the region and reduce vehicle miles traveled. The process to develop the MTP/SCS was based upon modeling these forecasted land use patterns and future transportation networks, along with the use of sustainable development principles that have been standard planning practice in the region for some time, and an extensive public outreach process.

California Environmental Quality Act (CEQA) Streamlining

Provisions in SB 375 include opportunities for streamlining the CEQA process, when certain conditions are met, as an incentive for implementing projects that are consistent with this SCS. Generally, there are two types of projects for which CEQA requirements can be streamlined, once the MPO adopts an MTP/SCS that meet the greenhouse gas targets established by CARB:

- Transit priority projects streamlining
- Residential/mixed use projects streamlining

SB 375 includes specific requirements for the CEQA streamlining. The discussion below provides a general outline of the requirements.

Transit Priority Projects

A Transit Priority Project (TPP) is a project within an Opportunity Area and is eligible for CEQA streamlining if it is:

- Consistent with the SCS;

- Contains at least 50 percent residential use;
- Proposed to be developed at a minimum 20 dwelling units per acre; and
- Located within one half mile of a major transit stop or high quality transit corridor that is included in the MTP.

A "Sustainable Communities Opportunity Area" is an area within one half mile of an existing or planned "high quality transit corridor" or "major stop" that has the potential for transit oriented development including mixed use. High quality transit is service with headways of 15 minutes or less during peak period or rail service. Figure 4-10 depicts the High Quality Transit Areas.

If a project meets these criteria, it may be analyzed under a new environmental document created by SB 375, called the Sustainable Communities Environmental Assessment, or through an EIR for which the content requirements have been reduced. Alternatively, a TPP can be considered a Sustainable Communities Project and be eligible for a new full CEQA exemption if it further meets the additional requirements beyond the base criteria.

Residential/Mixed Use Projects Consistent with the SCS

Residential and mixed use projects that are consistent with the SCS qualify for streamlined CEQA review if at least 75 percent of the total building square footage consists of residential use or if the project is a Transit Priority Project (TPP). If a project meets these requirements and is consistent with the use designation, density, building intensity and applicable policy of the SCS, any environmental review conducted will not be required to discuss:

- Growth inducing impacts;
- Any project-specific or cumulative impacts from cars and light duty truck trips generated by the project upon its completion on climate change or the regional transportation network; or
- A reduced density alternative.

It is not known how many projects in the Monterey Bay Area would meet the criteria to qualify for the CEQA exemption or streamlining. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining consistency of any future project with the SCS.

Implementation Strategies

The 2045 MTP/SCS is first and foremost a transportation plan. However, the transportation network in the 2045 MTP/SCS and the growth patterns envisioned must complement each other. Integration of transportation and land use is essential for improved mobility and access to transportation options.

To encourage implementation of the SCS, SB375 provides CEQA incentives for development projects that are consistent with the regional SCS and help meet greenhouse gas emission targets. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining consistency of any future project with the SCS. Cities and counties maintain their existing authority over local planning and land use decisions.

In addition, to achieve the goals of the 2045 MTP/SCS, public agencies at all levels of government may implement a wide range of strategies. Table 4-1 list specific strategies that AMBAG, RTPAs, local jurisdictions, and other stakeholders may consider in order to successfully implement the SCS.

Table 4-1: Implementation Strategies

Strategy	Responsible Party
Economic Development	
Encourage infill housing by working with local jurisdictions to update municipal policies, such as reduced fees tax credits or exemptions, graduated density bonuses, and reduced parking requirements for redevelopment, affordable housing, or mixed use in Opportunity Areas.	AMBAG; local jurisdictions
Create a taskforce to understand and address the economic development and transportation needs of rural areas. The following topic areas are suggested areas to be further explored by the task force: 1) Land Use and Conservation: policies and plans that shape rural areas; 2) The Infrastructure of Agriculture: transportation challenges to the production process; 3) Economic Opportunities: new ways to grow revenue and support better access to jobs; 4) Forest Management: building up economic and environmental value; and 5) Regulations; navigating federal and state environmental guidelines. Once the task force is convened the scope, responsibilities, and role of the group will be further defined.	AMBAG; economic development agencies and non-profits; local jursidictions
Conduct research on economic sectors in the region to identify and understand high value industry sectors and "clusters" and work with other public agencies and private entities to provide policy and regulatory support for those sectors.	AMBAG; economic development agencies and non-profits; local jursidictions
Compile and coordinate research and development that supports the green economy which can then be used to attract small, private business that would not otherwise be able to afford extensive research and development costs.	AMBAG; economic development agencies and non-profits
Provide a forum to coordinate the various economic development efforts by both the private and public sector throughout the region in order to maximize desirable economic development on a regional level.	AMBAG; economic development agencies and non-profits
Research ways to encourage vocational training facilities to educate the existing workforce for middle income jobs as well as leverage existing educational institutions to attract more middle income jobs.	AMBAG; local jurisdictions
Work with the Planning Directors Forum to further define and evaluate Opportunity Areas as areas for transit oriented development, as well as educate jurisdictions on the definition of transit priority project (TPP) areas per SB 375 to take advantage of CEQA streamlining benefits.	AMBAG; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Economic Development	
Stay abreast of new local initiatives, such as economic development plans, in order to more fully integrate transportation planning efforts with economic development issues and opportunities in urban and rural areas.	AMBAG
Support the reduction of impact fees and costs to developers for projects that will result in a net increase of jobs within enterprise zones or areas with a low job-housing ratio. Explore the economic impact of implementing an impact fee program that would incorporate multimodal projects and reductions for infill in parts of the region that do not currently have one.	AMBAG; RTPAs
Land Use & Housing	
Prioritize corridor investment projects along high quality transit corridors that serve multiple modes of travel in the development of the Metropolitan Transportation Plan and Regional Transportation Plans. Supportive investments include enhancements for high quality transit, technology development, bicycle and pedestrian improvements and safer intersections.	AMBAG; local jurisdictions
Support mitigation efforts that reduce the impact transportation and land use projects have on open space and farmland by providing readily available data on natural resources and prime farmland to public agencies, exploring a mitigation bank program and participating in resource management planning activities.	AMBAG; RTPAs
Continue to work with local jurisdictions on long range land use planning by refining the land use typologies for the region and better defining opportunity areas.	AMBAG; local jursidictions
Prioritize projects for funding that are consistent with the Sustainable Communities Strategy goals and/or that have complete streets elements per the adopted Sustainable Communities Strategy and Regional Complete Streets Guidelines in order to encourage use if active transportation options for short trips and improve quality of life	RTPAs; local jurisdictions
Investment in safe bicycle and pedestrian routes that improve connectivity and access to common destinations, such as connections between residential areas and schools, employment centers, neighborhood shopping, and transit stops and stations, supporting efforts throughout the region to improve connectivity and realize public health benefits from these investments.	RTPAs; local jurisdictions
Develop and offer technical resources to support cities and the county with updating their general plans to accommodate housing growth.	AMBAG

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Land Use & Housing	
Provide transportation infrastructure and planning grants in areas with access to transit.	AMBAG; RTPAs
Create a collaborative forum for sharing resources, successful strategies, and best practices.	AMBAG; RTPAs
Compete for state grants to encourage sustainable land use practices.	AMBAG; RTPAs; local jurisdictions
Develop technical resources for local jurisdictions to understand transit priority areas, opportunity areas, and other areas for priority development.	AMBAG
Meet state requirements to complete the Regional Housing Needs Assessment by quantifying existing and future housing needs resulting from population, employment, and household growth.	AMBAG
Legislative	
Work with State and Federal agencies to provide new and reformed transportation funding methods and sources to implement the Sustainable Communities Strategy that are stable, predictable, flexible, adjustable and adequate in the whole to operate and expand the system.	AMBAG; RTPAs
Support the following legislative agenda: 1) Reinstate tax increment financing and redevelopment for areas identified as Sustainable Communities Investment Areas; 2) Collaborate with other mid to small size regions to ensure that reporting and performance measure requirements do not exceed reasonably available staffing and financial resources; and 3) work with legislatures to reduce the voter threshold from two-thirds to 55 percent for passing transportation related tax measures.	AMBAG; RTPAs
Environment	
Develop technical resources to support regionally consistent climate action planning.	AMBAG
Provide templates and facilitate coordination among jurisdictions to enhance CAP implementation activities.	AMBAG
Explore opportunities to advance local CAP implementation through regional programs.	AMBAG; local jurisdictions
Develop a climate action data portal to help jurisdictions with Climate Action Plan monitoring.	AMBAG; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Environment	
Consider climate change in all functions of government and across public and private sectors.	AMBAG; RTPAs; tranist agencies; local jurisdictions
Partner with vulnerable populations to increase equity and resilience through investments, planning, research, and education.	AMBAG; RTPAs; local jurisdictions
Support continued climate research and data tools.	AMBAG; RTPAs; local jurisdictions
Identify significant and sustainable funding sources to reduce climate risks, minimize harm to people, and increase spending for disaster relief.	AMBAG; RTPAs; local jurisdictions
Maximize the use of natural lands, such as wetlands at the coast and agricultural and conservation lands, to help absorb the impacts of climate change. Wetlands can be natural buffers against rising seas and destructive storm surges. Agricultural and conservation lands, often in more rural communities, can serve as natural fire breaks against increased wildfires. Protected natural lands can also help absorb greenhouse gas emissions while providing many other societal benefits.	AMBAG; RTPAs; local jurisdictions
Promote collaboration among federal, local, state and regional government partners and across sectors to help communities better adapt to the impacts of climate change.	AMBAG; RTPAs; local jurisdictions
Assess the vulnerability of critical infrastructure to the impacts of climate change.	AMBAG; RTPAs; local jurisdictions
Analyze the benefits of open space conservation and land-management activities, including carbon sequestration, species preservation, and habitat connectivity.	AMBAG
Technical Assistance/Education	
Continue to improve the Bicycle Model tool and LiveMaps as well as make available other data products that will help to assist local jurisdictions in the development of bicycle networks that have better connectivity and meet the origin and destination needs of the community	AMBAG
Continue to provide forums for regional dialogue regarding local plans and projects so that localities can leverage each other's work for more coordinated regional planning efforts.	AMBAG; RTPAs

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Technical Assistance/Education	
Keep appraised of federal and state program funding cycles and specific funding opportunities, advise local agencies about them in a timely way, and help to zero in on projects that fit program requirements and are far enough along in delivery to maximize chances for success at bringing federal or state discretionary funds into the region	AMBAG; RTPAs
Seek grant funding to develop a regional economic modeling tool that helps to identify and address the reasons for the jobs/housing imbalance in the region as well as simulate the effects of various kinds of economic development.	AMBAG
Educate and provide resource material to local jurisdiction elected officials and the public about the economic benefits of sustainable development to both the public and private sector.	AMBAG; local jurisdictions; RTPAs
Provide grant technical support as well as letters of support to jurisdictions and public agencies looking to implement projects that are consistent with the Sustainable Communities Strategy.	AMBAG
Work with the Office of Planning and Research (OPR) to educate local jurisdictions about new CEQA options and analysis requirements including streamlining in SB 375, SB 743, and potential future legislation that includes CEQA incentives.	OPR; AMBAG; local jurisdictions
Increase public perception of the value, benefits, and use of transit, vanpool, and rideshare services, via activities such as the 511 website, image and product-specific advertising, promotion of new and restructured services, the guaranteed ride home program, outreach for special events, and education for those unfamiliar with alternative modes, including transit services and bicycle facilities, with both access and safety education.	RTPAs; transit agencies
Transportation	
Facilitate local jurisdiction adoption and implementation of a complete streets policy by recommending adoption of the region's guidelines. Encourage local jurisdictions to implement design principles consistent with the regional complete streets guidelines whenever completing local streets and road projects. Initiate a technical assistance program to help local agencies develop street designs or implement complete streets that are sensitive to their surroundings and context.	AMBAG; RTPAs; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Encourage and support Caltrans in seeking traffic management and safety improvements along with highway rehabilitation projects from the State Highway Operations and Protection Program. Ensure that both urban and rural needs are targeted.	AMBAG; RTPAs; CalTrans
Improve safety and security at crosswalks, transit stops and along main access routes to transit, including rural areas, with higher priority for low income, minority and high crime areas.	RTPAs; local jurisdictions
Collaborate with jurisdictions and employers to provide local community shuttles or circulators that serve transit oriented development, high quality transit stops and neighborhood commercial centers providing an incentive for residents and employees to make trips on transit.	AMBAG; local jurisdictions; large regional employers;
Continue to identify and promote projects that transition freight from trucks to rail, such as an intermodal station in the Salinas Valley.	AMBAG and TAMC in coordination with regional freight stakeholders
Continue to study the impacts of freight and goods movements on major arterials and corridors and support projects that increase freight mobility through and within the region.	AMBAG
Continue to plan for and provide infrastructure for electric vehicles using the region's PEV Readiness Plan, while also planning for and considering evolving transport methods from driverless cars to informal ridesharing networks.	AMBAG
Continue to seek funding to support the regional vanpool program and market vanpooling throughout the region.	AMBAG
Continue the region's commitment to transportation demand management programs as a strategy for safety education and promotion of alternative travel modes for all types of trips. Market transportation demand management strategies towards tourists so that once people arrive to the Monterey Bay Area they have resources to get out of their cars.	RTPAs
Support work-based programs that encourage emission reduction strategies and incentivize active transportation commuting or ride-sharing modes.	AMBAG; RTPAs
Work with Caltrans to incorporate multimodal design into highway projects such that transit can be accommodated on the highway and pedestrian and bicyclists connectivity is enhanced for access over the highway.	RTPAs; CalTrans; transit agencies; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Increase rural and low income minority communities' transportation mobility by supporting greater coordination of rural transportation services, providing solutions to bridge the distance between trip origins or destinations and transit, as well as developing cost-effective programs that attract more riders, including expanded rural vanpools and increased local transit service.	AMBAG; RTPAs; transit agencies
Support projects that improve mobility and accessibility for seniors and people with disabilities.	AMBAG;RTPAs; transit agencies
Encourage the use of traffic operational strategies and intelligent transportation systems to improve traffic flow that will provide lower-cost alternatives to road expansion.	AMBAG; RTPAs; local jurisdictions
Work with local cities, as well as regional, state and national organizations to find alternative funding sources for improving access to open space including national parks in the region.	AMBAG; RTPAs; local jurisdictions
Work with the Regional Storm Water Program staff to learn more about new post-construction storm water management requirements and incorporate best practices for storm water management into project design and future regional planning efforts	AMBAG; Regional Storm Water Management Program; RTPAs; local jurisdictions
Work with the Monterey Airport staff and partner agencies to secure funding to update the Airports Economic Impact Study.	AMBAG; RTPAs; local jurisdictions
Provide training opportunities for local jurisdictions on transportation system management strategies and collaborate with local jurisdictions to update the intelligent transportation systems architecture.	FHWA; AMBAG
Coordinate with Central Coast Community Energy and Monterey Bay Air Resources District to provide programs that install charging stations for workplaces, multi-unit dwelling communities, and medium- and heavy duty vehicles throughout the region	AMBAG; RTPAs; local jurisdictions
Monitor the region's EV efforts, including the number of charging stations, greenhouse gas reductions, energy use, air quality and pollution impacts, and EV-ready cities.	AMBAG; MBARD; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Support the inclusion of EVs in local Climate Action Plans.	AMBAG; RTPAs; local jurisdictions
Support commuters, regional employers, and local jurisdictions by providing programs and services that promote sustainable commute options and incentives, supporting the development of local TDM policies, and helping develop and implement programs that serve commuters.	AMBAG; RTPAs
Consider a regional TDM policy that would require large businesses to implement their own TDM plans. These plans would identify strategies to reduce the number of employees who drive alone to work.	RTPAs
Work with our transportation partners on the design and implementation of pilot projects and collaborative partnerships that promote alternatives to driving alone through innovative mobility solutions. Potential projects could expand beyond traditional TDM strategies to integrate strategies such as shared streets, shared mobility services, technology-based solutions, and more.	AMBAG; RTPAs; transit agencies
Develop and maintain a flexible, adaptable approach to working with the private sector so that solutions launch quickly while still complying with regional, state, and federal laws, regulations, and policies.	AMBAG; RTPAs; transit agencies
Work with regional transportation system operators to develop and maintain a set of common data standards that will allow systems, including planners and policymakers, to share data with one another while protecting security and privacy.	AMBAG; Caltrans; RTPAs; transit agencies

5 Outcomes

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Introduction

The investments identified in the 2045 MTP/SCS are expected to result in significant benefits to the region, not only with respect to transportation and mobility, but also economic activity, air quality, safety, and social equity. This chapter describes the benefits and outcomes projected to result from the implementation of the 2045 MTP/SCS with respect to the adopted regional performance measures. This chapter also describes how the 2045 MTP/SCS addresses the statutory requirements regarding SB 375 and social equity.

As with many areas across the country, inequities created at all levels of government in the past have left a lasting impression on communities today. In developing and implementing the 2045 MTP/SCS, AMBAG has a responsibility to listen to the communities we serve, prioritize equitable solutions in the transportation system, and analyze the burdens and benefits of this system for historically underserved communities.

In the 2045 MTP/SCS, historically marginalized communities include people with low incomes, seniors, people with disabilities, and communities of color. Coordination with various community-based organizations throughout the planning process has resulted in a Plan that can guide our region toward a more inclusive and equitable future.

Performance Outcomes

This section summarizes how well the 2045 MTP/SCS performs. Table 5-1 lists the outcomes of performance measures forecasted using both the AMBAG Regional Travel Demand Model (RTDM) and Geographic Information Systems (GIS). While this chapter includes summaries of the performance improvements expected from the implementation of the 2045 MTP/SCS, more detail is provided in Appendix G.

In the discussion of performance and outcomes, three scenarios are referenced: Existing, No Build, and Plan. The 2015 Existing represents existing conditions and includes only existing transit service and the existing transportation network in 2015. The 2045 No Build assumes current land use trends and represents a future in which only committed programs and projects are implemented. Committed programs and projects are those which are programmed in the 2020 Metropolitan Transportation Improvement Program (MTIP) that have received environmental clearance. The Plan refers to future conditions in which the 2045 MTP/SCS land use patterns and transportation investments are realized. The specific projects associated with the Plan are identified in Appendix C.

Access and Mobility

Accessibility is used to capture how well the transportation system performs in providing people access to various destinations. Destinations can include anything from jobs, education, medical care, recreation, shopping, or another activity that is essential to one's daily needs or helps to improve quality of life. In the 2045 MTP/SCS, accessibility performance measures consider the distribution of trips by mode and travel time.

Commute Travel Time

Compared to Existing and No Build, average commute travel time will remain nearly the same with the improvements included in the 2045 MTP/SCS, despite an additional 114,000 people living in the region.

Work Trips Within 30 Minutes

Compared to existing, the percentage of transit work trips that can be made in 30 minutes improves in the 2045 MTP/SCS. Drive alone and carpool work trips maintain a high level of performance with more than 84 percent of the trips capable of being made within 30 minutes. Sixty-one percent of transit will also be within 30 minutes.

Table 5-1: Performance Measures

Regional Performance Measures	2015 Existing	2045 No Build	2045 MTP/SCS
Access and Mobility			
Work Trips Within 30 Minutes (percentage)			
Drive Alone	85.1%	84.8%	84.3%
Carpool	85.1%	84.8%	84.3%
Transit	58.1%	59.5%	60.8%
Population Within 30 Minutes of Parks (percentage)			
Drive Alone	98.3%	98.4%	98.4%
Bike	97.5%	97.7%	97.7%
Walk	90.1%	90.3%	90.3%
Population Within 30 Minutes of Healthcare (percentage)			
Drive Alone	97.7%	97.9%	97.9%
Bike	90.7%	90.3%	90.3%
Walk	70.0%	67.3%	67.3%
Daily Vehicle Delay Per Capita (minutes)	3.36	6.96	6.13
Commute Travel Time (minutes)	15.3	15.5	15.6
Economic Vitality			
Population Near High Quality Transit (percentage)	15.3%	14.7%	30.0%
Jobs Near High Quality Transit (percentage)	12.0%	11.8%	24.8%
Daily Truck Delay (hours)	3,772	9,611	8,218
Environment			
GHG Reductions (Percent reduction from 2005 baseline)[1]	N/A	N/A	N/A
Open Space Consumed (acres)[2,3]	N/A	N/A	293
Farmland Converted (acres)[2,3,4]	N/A	N/A	2,635
Healthy Communities			
Growth in Opportunity Areas (percentage)			
Monterey County	N/A	32.9%	32.3%
San Benito County	N/A	21.8%	21.8%
Santa Cruz County	N/A	7.0%	7.0%
Alternative Transportation Trips (percentage)	15.06%	14.60%	14.74%
Population Near Bike Facilities (percentage)	N/A	N/A	86.9
Jobs Near Bike Facilities (percentage)	N/A	N/A	90.5
Peak Period Congested Vehicle Miles of Travel (miles)	552,221	875,310	797,962

Table 5-1: Performance Measures (continued)

Regional Performance Measures	2015 Existing	2045 No Build	2045 MTP/SCS
Social Equity			
Distribution of MTP/SCS Investments (percentage)[5]			
Low income population	N/A	N/A	81.7%
Non low income population	N/A	N/A	83.6%
Minority population	N/A	N/A	89.6%
Non minority population	N/A	N/A	87.2%
Low mobility (zero car households and aged populations)	N/A	N/A	71.5%
Low community engagement (linguistic isolation and education attainment)	N/A	N/A	67.9%
Access to Transit within 1/2 mile (percentage)[6]			
Low income population	9.9%	9.9%	14.4%
Non low income population	2.3%	2.3%	6.9%
Minority population	16.7%	16.8%	19.9%
Non minority population	0.7%	0.7%	8.1%
Low mobility (zero car households and aged populations)	0.6%	0.6%	1.6%
Low community engagement (linguistic isolation and education attainment)	1.2%	1.3%	1.4%
System Preservation and Safety			
Maintain the Transportation System (percentage)	N/A	N/A	62.6%
Fatalities and Injuries per 1,000 VMT	0.02	0.06	0.06
Annual Projected Bike/Pedestrian Fatalities and Injuries per 1,000 VMT	0.005	0.004	0.004

[1]Greenhouses gas reductions in 2020 are -3.0 percent per capita and -6.3 percent per capita from 2005 levels.

[2]Rail projects are not reflected in the 2020, 2035 and 2045 MTP/SCS regionally significant project analysis, as rail lines are existing.

[3]2045 No Build scenario has increased open space due to farmland conversion per the 2045 MTP/SCS typology as identified by the city and county jurisdictions in SOI's.

[4]Farmland analyzed is Prime, Unique, or Farmland of Statewide Importance as defined by Dept. of Conservation FMMP.

[5]Calculated based upon criteria on total investment of all modelable projects within 1/2 mile of U.S. Census Bureau defined tracts.

[6]Tracts defined per U.S. Census Bureau. Calculated based per criteria on total acreage and percentage of population within a 1/2 mile of transit.

Source: AMBAG Regional Travel Demand Model and Geographic Information Systems. For more information on methodology see Appendix G.

Daily Vehicle Delay Per Capita

Compared to Existing and No Build, daily vehicle delay per capita will remain nearly the same with the improvements included in the 2045 MTP/SCS.

Population Within 30 Minutes of Parks

Compared to Existing and No Build, the percentage of the region's population living within 30 minutes of a park will remain nearly the same in the 2045 MTP/SCS. More than 90 percent of the region's population are able to make a trip to the park within 30 minutes, whether biking, walking, or driving.

Population Within 30 Minutes of Healthcare

Compared to Existing and No Build, the percentage of the region's population that are capable of making a trip from home to a healthcare facility within 30 minutes will remain nearly the same, with the 2045 MTP/SCS improvements.

Economic Vitality

In order to measure the economic vitality of the region, performance measures related to proximity of jobs from transit as well as truck traffic were examined. By providing better access to jobs the region's economy can continue to grow. Additionally, a measure looking at truck traffic was considered imperative given the importance of goods movement to the regional economy.

Jobs Near High Quality Transit

In 2045, nearly 25 percent of the region's jobs are within one-half mile of a high quality transit stop, compared to only 12 percent in the base year and nearly 12 percent in the No Build scenario.

Population Near High Quality Transt

In 2045, 30 percent of the region's population are within one-half mile of a high quality transit stop, compared to only 15 percent in the base year.

Daily Truck Delay

This measure estimates the daily truck hours of delay. The 2045 MTP/SCS includes investments in a regional freight corridor and other improvements to facilitate goods movement. The Plan is estimated to reduce truck delay by more than 14 percent over No Build. However, the truck delay under the Plan will still be above existing levels.

Environment

There are many aspects of the 2045 MTP/SCS that are geared towards improving the environment. However, the performance measures categorized as environmental here are those that have a major effect on the physical surroundings.

Greenhouse Gas Reductions

The targets agreed upon by AMBAG and the California Air Resources Board (CARB) for greenhouse gas reductions are a three percent per capita reduction from 2005 levels by 2020 and a six percent per capita reduction from 2005 levels by 2035. The Plan meets the target in both years achieving three percent reduction in 2020, and a six percent reduction in 2035.

Open Space Conservation

This performance measure shows the total acreage of open space consumed by development. In that regard it considers impacts to sensitive habitat only as it pertains to destruction of that habitat for development. The performance measures do not include a separate analysis for sensitive habitat, however a detailed discussion of the impacts to sensitive habitat can be found in the Environmental Impact Report. The Plan assumes the amount of open space that would be consumed due to land use development and transportation investments is 293 acres.

Farmland Preservation

This performance measure shows the total acreage of farmland consumed by development. The 2045 MTP/SCS shows that 2,635 acres of farmland would be consumed. All of the farmland being consumed in the Plan is within existing spheres of influence or is within Community Plan Areas as designated by the General Plans in the region.

Healthy Communities

More and more government organizations are adopting a health in all policies approach to policy and planning. The transportation system and land use patterns in this region have the potential to substantially impact the health and wellbeing of its residents. Specifically, alternative transportation trips have the potential to: increase a person's daily physical activity therefore having a lasting positive effect on health; improve air quality which directly effects people's lungs and physical wellbeing; and reduce congestion which can decrease the amount of exposure to poor air and noise pollution.

Growth in Opportunity Areas

This performance measure evaluates the percentage of the region's population growth increase within the region's opportunity areas. Each county's population within opportunity areas remains nearly the same with implementation of the 2045 MTP/SCS, compared to the No Build. Monterey County's growth in opportunity areas are over 32 percent of the population. San Benito County's growth in oppoortunity areas are nearly 22 percent. Santa Cruz County's growth in opportunity areas are 7 percent.

Alternative Transportation Trips

This performance measure evaluates the percent of trips made using transit, shared ride, bicycle or pedestrian modes. The Plan shows a slight increase in the total percent of trips taken using an alternative mode, compared to the No Build scenario. However, it is difficult to capture the full benefits of active transportation investments in current travel demand models as available data on these types of modes is more limited than data on vehicle trips. The benefit of investing in alternative transportation modes is likely far greater than models are able to capture.

Population Near Bike Facilities

This performance measure evaluates the percentage of the region's population living within one-half mile of a bicycle facility. The 2045 MTP/SCS shows nearly 87 percent of the region's population live within one-half mile of a bike facility.

Jobs Near Bike Facilities

This performance measure evaluates the percentage of the region's population employed within one-half mile of a bicycle facility. The 2045 MTP/SCS shows over 90 percent of the region's population are able to reach a bike facility witihin one-half mile of their place of employment.

Peak Period Congested Vehicle Miles of Travel

The congested vehicle miles traveled in the region is improved in the Plan over the No Build scenario, however it still increases over 2015 existing levels. As population increases so will congested VMT increase. The Plan does improve the projected congested VMT over No Build.

Social Equity

In this document social equity refers to the equitable distribution of transportation impacts (benefits, disadvantages and costs) regardless of income status or race and ethnicity. Social equity performance measures compare low income and minority populations against non-low income and minority populations to ensure that there is an equitable distribution of benefits and not a disproportionate share of burdens. The low income and minority areas are shown in Figure 5-1. The low mobility and low community engagement areas are shown in Figure 5-2. For more information on identification of these populations refer to Appendix G.

- *Low Income Areas:* any Census tract in which 33 percent or more of residing families in an area earned less than 200% of the federal poverty level annually.
- *Non Low Income Areas:* any Census tract in which less than 33 percent of residing families in an area earned less than 200% of the federal poverty level annually.
- *Minority Areas:* any Census tract in which 65 percent or more of the total population residing in an area are non-White.
- *Non Minority Areas:* any Census tract in which less than 65 percent of the total population residing in an area are non-White.
- *Low Mobility:* any Census tract in which 5 percent or less of the households have zero-car ownership, more than 11.35 percent of the population jhad a disability, and/or 15 percent of the population aged 65 and over had income below the poverty level.
- *Low Community Engagement:* any Census tract in which 15 percent or less of the tract were housholds where English is not spoken “very well” and/or 15 percent or less of the tract is over the age of 25 without a high school diploma.
- *Low Income Populations:* any Census tract in which 65 percent or more of families are low income, and/or 20 percent or more of the families are living at or below the poverty income threshold.
- *Non Low Income Population:* any Census tract in which less than 65 percent of the families are low income and/ or 20 percent of less of the families are living at or below the poverty income threshold.

Distribution of Transportation Investments

The 2045 MTP/SCS includes regional investments in the transportation system across the three counties. The distribution of transportation investments are equal, if not greater, in low income and minority areas compared to other areas.

The analysis for low income populations shows that the 2045 MTP/SCS will result in nearly the same distribution of transportation investments for low income populations and non-low income populations.

The analysis also shows that the 2045 MTP/SCS will result in higher investments for minority populations as compared to non-minority populations.

The analysis for low mobility populations shows that the 2045 MTP/SCS will result in nearly 72 percent of

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Figure 5-1: Low Income Minority Areas

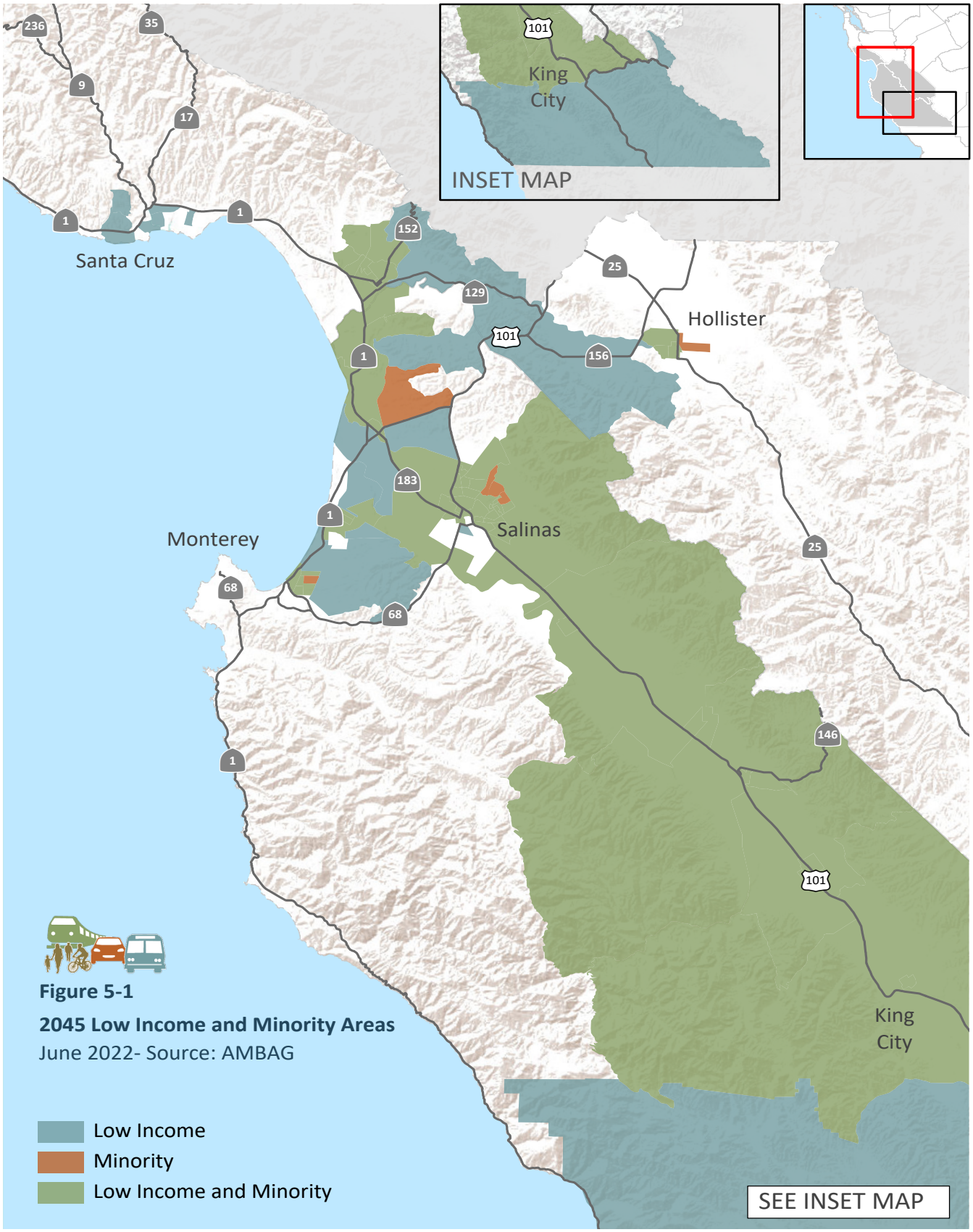

Figure 5-1

2045 Low Income and Minority Areas

June 2022- Source: AMBAG

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Figure 5-2: Low Community Engagement and Low Mobility Areas

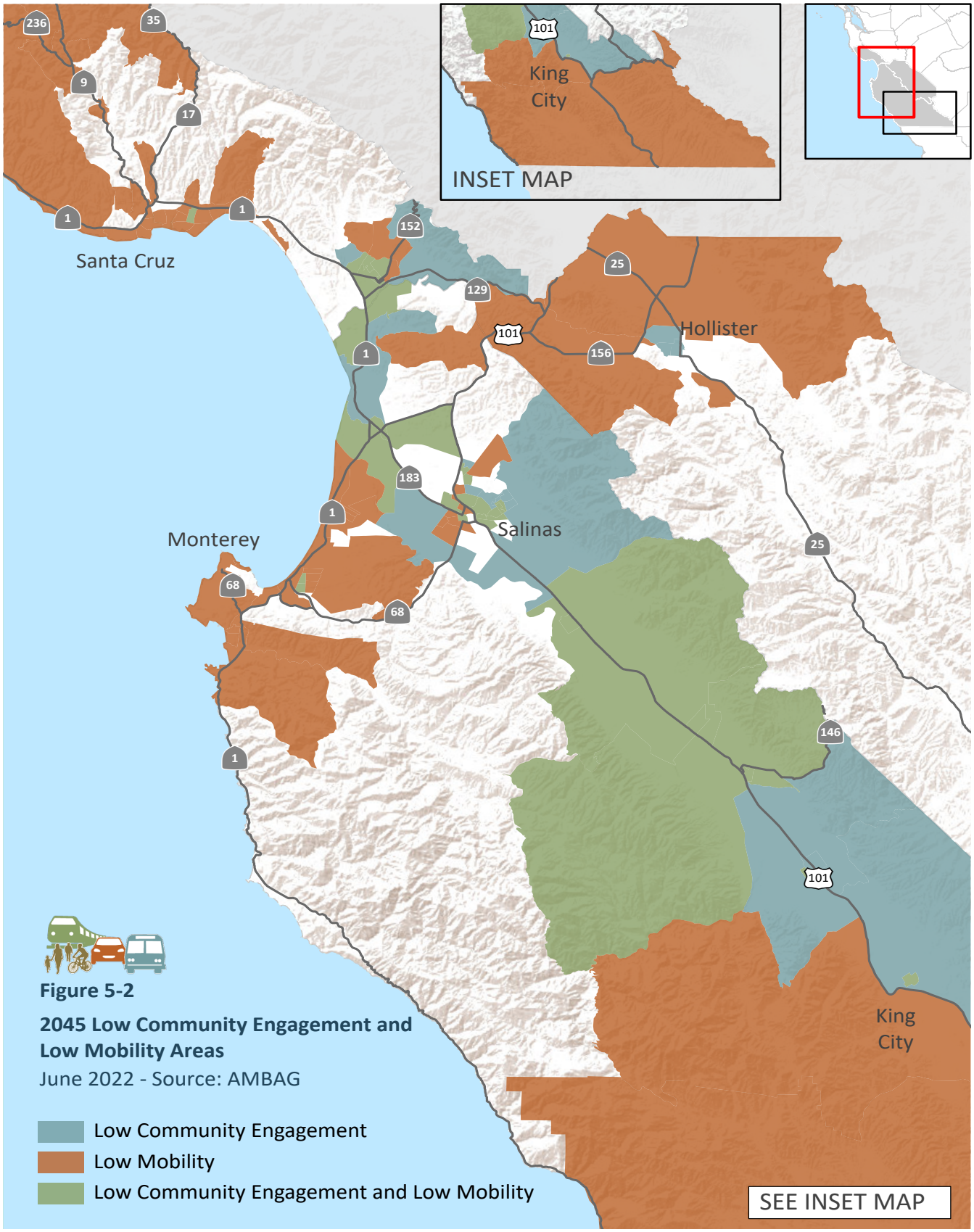


Figure 5-2

2045 Low Community Engagement and Low Mobility Areas

June 2022 - Source: AMBAG

investments distributed to low mobility populations.

The analysis for areas with low community engagement shows that the 2045 MTP/SCS will result in nearly 68 percent of investments distributed to areas with low community engagement.

Equitable Transit Access Within 1/2 Mile

This performance measure evaluates the percent of low income and minority populations that are located within one-half mile of a transit stop. The 2045 MTP/SCS would increase access to transit by nearly five percent for both low income and minority populations. Figure 5-3 highlights transit accessibility of the region.

System Preservation and Safety

One of the ongoing struggles with the region's transportation system is finding the funding needed for preventative maintenance. The cost to maintain the existing transportation system is accelerating as the cost to fix roadways increases exponentially the longer it is deferred. The cost for roadway rehabilitation is six to ten times more expensive than ongoing preventative maintenance. Maintenance is required for the system not only for quality of life for existing users, but also for the safety of those users.

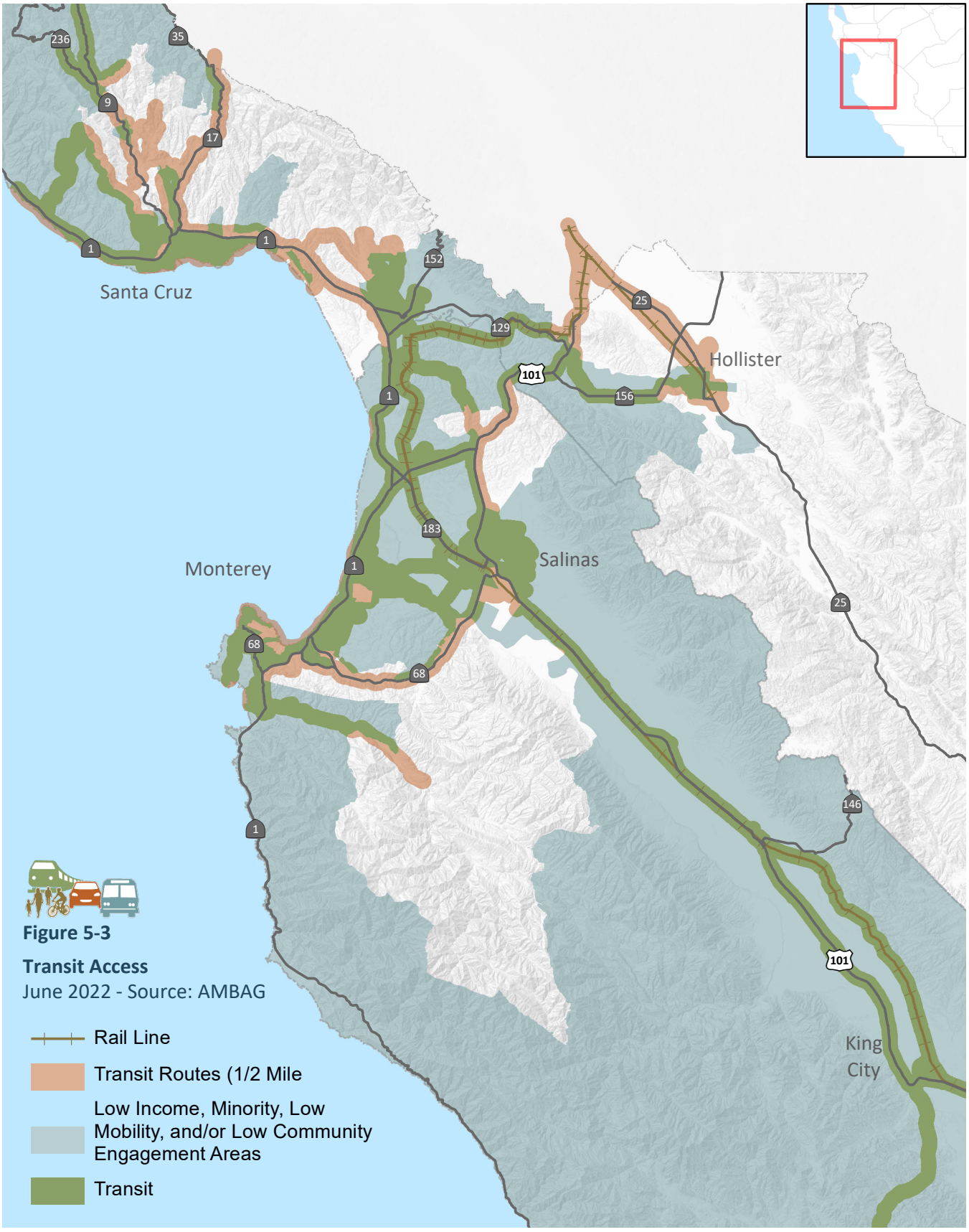
Maintain the Transportation System

The 2045 MTP/SCS dedicates nearly 63 percent of the total funding available for maintenance and rehabilitation projects.

Fatalities and Injuries per 1,000 VMT

This performance measure evaluates the safety of the transportation system by using data on injuries and fatalities to calculate a per capita rate of injury or fatality. Fatalities and injuries are relatively unchanged between 2015 and 2045 staying below a rate of less than 0.1 in 1,000 of injury or fatality per capita. This is a particularly difficult measure to project because it assumes that fatalities and injuries are held constant for every vehicle mile traveled. However, by establishing it as a performance measure in the 2045 MTP/SCS this opens the door for AMBAG to monitor past injuries and fatalities and therefore monitor the effects of the Plan as it is implemented over the course of time.

Figure 5-3: Transit Access



Annual Projected Bike/Pedestrian Fatalities and Injuries per 1,000 VMT

This performance measure evaluates the safety of the transportation system by using data on bicycle and pedestrian injuries and fatalities to calculate a per capita rate of injury or fatality. Bike and pedestrian related fatalities and injuries are nearly the same between 2015 and 2045, however the rate of injury and fatality reduces with the improvement included in the 2045 MTP/SCS.

Focus on Equity

As with many areas across the country, inequities created at all levels of government in the past have left a lasting impression on communities today. Systemic racism has resulted in inequities throughout our region. In developing and implementing the 2045 MTP/SCS, AMBAG has a responsibility to listen to the communities we serve, prioritize equitable solutions in the transportation system, and analyze the burdens and benefits of this system for historically underserved communities.

In the 2045 MTP/SCS, historically marginalized communities include people with low incomes, seniors, people with disabilities, and communities of color. Coordination is key throughout the planning process to result in a Plan that can guide our region toward a more inclusive and equitable future. While the Monterey Bay Area has a long history of working together to create a better, more inclusive region, opportunities exist to continue the work to advance a more equitable and inclusive society.

The Monterey Bay Area is a diverse area with both low and high cost areas. However, in California even "low cost" areas are expensive compared to national averages. According to the H+T index developed by Center for Neighborhood Technology over half of the households in this region spend more than 45 percent of their income on transportation and housing costs combined. If just housing costs are considered without transportation costs, then half of the residents in this region spend over 30 percent of their income on housing costs. The high cost of housing as well as daily goods and services means that many households which are above the federal poverty standards will still struggle to live in this region. In addition, the Plan looks at the effect of these investments on the minority population, which increasingly is the majority of the people living in the region.

Environmental Justice Background

The concept of environmental justice is about equal and fair access to a healthy environment, with the goal of protecting underrepresented and low income communities from incurring disproportionate negative environmental impacts. Consideration of environmental justice in the transportation planning process stems from Title VI of the Civil Rights Act of 1964 (Title VI). Title VI establishes the need for transportation agencies to disclose to the public the benefits and burdens of proposed projects on minority populations. The understanding of civil rights has expanded to include low income communities, as further described below. Title VI states that "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." Additionally, Title VI not only bars intentional discrimination, but also unjustified disparate impact discrimination. Disparate impacts result from policies and practices that are neutral on their face (i.e., there is no evidence of intentional discrimination), but have the effect of discrimination on protected groups.

A 1994 Presidential Order (Executive Order 12898) directed every federal agency to make Environmental Justice part of its mission by identifying and addressing the effects of all programs, policies and activities on underrepresented groups and low income populations. Reinforcing Title VI, this Presidential Order ensures that every federally funded project nationwide considers the human environment when undertaking the planning

and decision making process. The Presidential memorandum accompanying E.O. 12898 identified Title VI as one of several federal laws that should be applied "to prevent minority communities and low income communities from being subject to disproportionately high and adverse environmental effects." Given the overlap in Title VI and environmental justice policies, the term "environmental justice" is used as an inclusive term to mean minority and low income populations. In addition to federal requirements, AMBAG must comply with California Government Code Section 11135, which states that "no person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state."

AMBAG's Title VI/Environmental Justice Policy and Program

As a government agency that receives federal funding, AMBAG is required to conduct an environmental justice analysis for its MTP. AMBAG's environmental justice program includes two main elements: technical analysis and public outreach. Specifically, it is AMBAG's role to ensure that when transportation decisions are made, low income and minority communities have ample opportunity to participate in the decision making process and that they receive an equitable distribution of benefits and not a disproportionate share of burdens. AMBAG adheres to all directives on Environmental Justice.

Under federal policy, all federal agencies must make environmental justice part of their mission and adhere to three fundamental Title VI/environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low income populations.

AMBAG complies with the framework provided to integrate the principles of environmental justice into the decision making processes.

Technical Analysis

As with the other performance measures presented in this chapter, the comparison of the Plan versus Existing and the No Build is the primary focus of the environmental justice analysis for the 2045 MTP/SCS. The Plan represents the selected strategy to guide the region's transportation planning over the next two decades, while the No Build represents "business as usual" and assumes current land use trends and the completion of projects programmed in the 2020 MTIP that have received environmental clearance. The data for the analysis is based on the AMBAG RTDM and GIS analysis results. Based on the analysis conducted, the Plan increases transportation investment in low income and minority populations as well as improves access to transit and therefore destination opportunities. Additional information on the performance measures is included in Appendix G.

AMBAG's Title VI and Environmental Justice Outreach

A key component of the 2045 MTP/SCS development process is seeking public participation. Public input from partner agencies and key stakeholders helped AMBAG prioritize and address needs in the region. As part of the outreach effort, AMBAG compiled a list of key stakeholders to be contacted regarding 2045 MTP/SCS programs

and policies. This list is comprised of a large variety of individuals and organizations ranging from community groups, interest groups, environmental groups, etc. AMBAG maintains this list regularly and allows interested persons to sign up online for the mailing list. The outreach conducted for the SCS to low income and minority groups resulted in the inclusion of increased transit funding in currently underserved areas, the prioritization of vanpooling as a transportation demand management strategy and the emphasis on economic development within the SCS itself.

Transportation Performance Management

The federal government's Moving Ahead for Progress in the 21st Century Act (MAP-21) established a performance- and outcome-based transportation program. The objective of this program is for states and regions to invest resources in projects that collectively will make progress toward the achievement of the national goals to improve the transportation system. The national goals include safety, infrastructure condition or state of good repair, congestion reduction, transportation system reliability, freight movement and economic vitality, environmental sustainability and reduced project delivery delays.

MAP-21 and the Fixing America's Surface Transportation (FAST) Act require the U.S. Department of Transportation (DOT), in consultation with states, metropolitan planning organizations (MPOs) and other stakeholders, to establish performance measures in the following areas:

- Fatalities and serious injuries on all public roads including rate of fatalities and serious injuries
- Pavement and bridge condition on the Interstate Highway System and remainder of the National Highway System.
- Travel time reliability, freight travel time reliability, congestion and on-road mobile emissions.

The U.S. DOT issued Final Rules for these performance areas. AMBAG submitted comments on these performance measure rules during the rulemaking process. In consultation with our regional transportation planning partners, AMBAG supports the works with Caltrans to achieve state targets in lieu of setting our own

Table 5-2: Safety Performance Measures

Measure	Data Source	5- Yr. Rolling Average (2021)	Percent Reduction 2018 to 2021
Number of Fatalities	FARS	3624.8	2.9%
Rate of Fatalities (per 100M VMT)	FARS & HPMS	1.0	2.9%
Number of Serious Injuries	SWITRS	15419.4	1.3%
Rate of Serious Injuries (per 100M VMT)	SWITRS & HPMS	4.4	1.3%
Number of Non-Motorized Fatalities and Severe Injuries	FARS & SWITRS	4340.8	2.9%/1.3% Fatalities/ Injuries

regional targets. The Infrastructure Investment and Jobs Act of 2021 (IIJA), continued to identify safety as a national goal area and requires each state to set Safety Performance Management Targets in order to achieve a significant reduction in motorized and non-motorized traffic fatalities and serious injuries on all public roads. The Metropolitan Planning Organizations must also establish targets in coordination with the state. AMBAG also has created a new work element in its Overall Work Program for Transportation Performance Management to support this initiative. The following describes each national performance management measure in detail.

Performance Measure Rule 1 (PM 1): Safety Targets

The FHWA's Safety Performance Management Measure rule establishes five performance measures to carry out the Highway Safety Improvement Program (HSIP) and requires data reporting of the five-year rolling averages for: (1) number of fatalities, (2) rate of fatalities per 100 million vehicle miles traveled (VMT), (3) number of serious injuries, (4) rate of serious injuries per 100 million VMT and (5) number of non-motorized fatalities and non-motorized serious injuries. Safety performance measures data is currently collected and reported on by state and local law enforcement agencies and is maintained in centralized state and national databases.

Federal regulations require states to set performance targets for improving the transportation system in cooperation with MPOs. The Safety Performance Management final rule became effective on April 14, 2016. Final statewide safety targets were established on August 31, 2017 and will are updated annually as needed. In 2018, AMBAG and our RTPA partners reviewed the statewide targets and agreed to support these targets. On February 14, 2018, the AMBAG Board approved supporting Caltrans statewide safety targets. See Table 5-2 for Safety performance measures and targets. While these targets are to be met at a Statewide level, local projects should strive to contribute towards the achievement of these goals to the extent practicable.

See Appendix G for a regional system performance report on PM 1 safety measures.

State safety targets were accepted by AMBAG in February 2018. Numerous upcoming operational and management strategies to improve safety are found in Chapter 4 and a number of safety related projects are found in Appendix C. These strategies and projects are expected to contribute to the improvement of transportation safety throughout the region.

Performance Measure Rule 2 (PM 2): Bridge and Pavement Performance Targets

The Bridge and Pavement Performance Rule requires the State to collaborate with MPOs to develop performance targets for two areas: (1) pavement condition on the Interstate System and (2) on the non-Interstate National Highway System (NHS) and bridge condition on the NHS. See Table 5-3 for a list of these measures. The state has established performance targets for this management rule. In 2018 AMBAG and our RTPA partners reviewed the statewide targets and agreed to support the state targets. These targets are to be

Table 5-3: System Performance Measures

PM 3 Statewide Targets Applicable to AMBAG Region			
Performance Measure	2017 Baseline Data	2-year Target	4-year Target
Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS	73%	N/A	74%

achieved at the state level with MPOs and RTPAs working in cooperation with the state. See Table 5-3 for bridge and pavement performance measures and targets as of October 2018.

See Appendix G for a regional system performance report on PM 2 safety measures.

Performance Measure Rule 3 (PM 3): System Performance, Freight System, and Congestion Mitigation and Air Quality Performance Targets

The System Performance, Freight System, and Congestion Mitigation and Air Quality Improvement Program Rule requires the State work in cooperation with MPOs to develop performance targets which measure travel reliability for persons and freight, congestion, non-single occupant vehicle travel and emissions reductions. See Table 5-4 for a list of these measures. The state has established performance targets for this management rule. In 2018 AMBAG and our RTPA partners reviewed the statewide targets and agreed to support the state targets. These targets are to be achieved at the state level with MPOs and RTPAs working in cooperation with the state. See Table 5-4 for system, freight, congestion mitigation, and air quality performance measures and targets.

See Appendix G for a regional system performance report on PM 3 safety measures.

6 Public Participation

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Introduction

AMBAG values public participation in the development of the 2045 MTP/SCS. Public involvement is essential to ensure that stakeholders gain a clear understanding of AMBAG, its role as a metropolitan planning organization (MPO), critical elements of the 2045 MTP/SCS, and its development process. Furthermore, public involvement helps AMBAG policymakers and staff better understand the needs and concerns of stakeholders, leading to more meaningful planning.

A critical component in preparing the 2045 MTP/SCS was to provide guidance in the structuring of regional transportation planning processes to ensure that, to the greatest extent possible, interagency consultation and public participation were an integral and continuing part of the regional transportation decision making process. The participation policies and procedures were structured to enable all participants the ability to express their values and interests in the shaping and implementation of regional policies and decisions regarding the transportation system.

Due to the COVID-19 pandemic, engagement with the public throughout the development of the 2045 MTP/SCS was completed both in person and virtually. AMBAG worked diligently to ensure that individuals without devices were engaged through other sources by providing physical materials and technical support when necessary or requested. In the future, AMBAG will continue to engage the public both in person and virtually, even beyond the pandemic, due to the success seen through the MTP/SCS development.

Development of the 2045 MTP/SCS has been a multi-year effort that began in 2019. A comprehensive program of public involvement activities was a key part of the process. Extensive outreach with local government officials was conducted, as well as numerous community workshops and meetings, in addition to telephone and online surveys. AMBAG also maintained a project website where the 2045 MTP/SCS was posted. A detailed description of the outreach activities is included in Appendix D.

Public Participation Plan

In compliance with federal and state requirements and to guide effective public involvement, AMBAG utilizes its Public Participation Plan. The Public Participation Plan provides direction for public participation activities, outlining the processes and strategies AMBAG uses to reach out to a broad range of stakeholders to gain input. AMBAG's Public Participation Plan was updated to incorporate requirements of SB 375. Detailed documentation of the public outreach conducted for the 2045 MTP/SCS is included in Appendix D.

Engaging the Community

AMBAG engaged the community throughout the development of the 2045 MTP/SCS. These activities include:

- Ten community workshops have been held to date
- A project website (https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy)
- Preparation of handout materials, flyers, information sheets, online surveys, frequently asked questions (FAQs), etc.

Each of these activities is described in further detail in subsequent sections of this chapter.

Workshops

Three series of workshops each were held throughout the tri-county region at key milestones. The in person workshops were designed in an open house format with a variety of stations to provide one-on-one discussion and to create a more comfortable and meaningful environment for participants. Virtual workshops were also held during the COVID-19 pandemic. Materials were provided in both English and Spanish and translation services were available at most of the workshops. Each workshop had a series of interactive stations where participants were asked to engage with planners by drawing on maps, asking questions and stating preferences.

The first workshop series was held in January 2020 and was designed to inform participants of regional issues, explain the purpose of this project, and to solicit input on their preferences and priorities, which would help shape the initial set of scenarios. The second workshop series was held virtually in May 2021 and was set up to explain the purpose of the 2045 MTP/SCS and to solicit input on potential SCS strategies such as affordable housing, telework, pricing, transit, economic development, etc.

The third workshop series was held in January 2022 on the Draft 2045 MTP/SCS and the Draft Environmental Impact Report (EIR). The staff held four public workshops/ hearings to receive feedback and public comments on the draft 2045 MTP/SCS and Draft EIR.

Digital Media

In addition to print media AMBAG provided information in a few different digital formats. Data that was collected for the purposes of this project was compiled in the AMBAG Regional Data Viewer system.

GIS Data Portal

AMBAG launched a new GIS Portal leveraging the latest ESRI technology in 2020, replacing our previous GIS Viewer. The GIS Portal allows jurisdictions to log in and edit data for inclusion in our long-range plan and also provides the ability for the public to view geospatial data in a live and interactive format. The Portal hosts spatial data holdings in a standardized, dynamic and accessible format. AMBAG compiled GIS datasets to show transportation project, managing agencies and the types of sensitive environmental or other resources are near projects to help them prepare Environmental Impact Reports (EIRs) and design projects which cause the least impact to these resources. AMBAG staff is also working to incorporate the data captured in GIS Portal into Urban Footprint as a key component in MTP/SCS's public participation process.

Project Website

The project website (https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy)is the central portal for information about the project and upcoming events. The Draft 2045 MTP/SCS and associated Draft Environmental Impact Report are posted to the project website, as will the Final 2045 MTP/SCS and Final Environmental Impact Report upon adoption. The website address was provided on all outreach materials and has been updated regularly to maintain current content.

From the homepage, visitors of the website could access upcoming events, recent news, email sign-up and the AMBAG Facebook page.

Engaging Local Jurisdictions

A variety of committees and boards were consulted throughout the planning process and at key milestones to solicit feedback, provide project updates, and relay community input from the workshops and surveys. These committees and boards are made up of elected officials, staff from local jurisdictions and agencies, local leaders and organizers, and members of the general public.

AMBAG Board of Directors

The AMBAG Board of Directors consists of local elected officials that have been appointed by their respective city council or board of supervisors. Each member city has one representative on the AMBAG Board and each member county has two. There are nine ex-officio members representing each of the three Regional Transportation Planning Agencies, Caltrans District 5, Monterey-Salinas Transit, Santa Cruz Metropolitan Transit District, Monterey Bay Air Resources District, Central Coast Community Energy, and the Monterey Peninsula Airport District.

The AMBAG Board meets monthly and sets policy. Day-to-day oversight is provided by the Executive Director, who is appointed by and serves at the pleasure of the Board of Directors.

The AMBAG Board met once a month throughout the planning process to receive project updates, provide policy direction and select the preferred scenario for the 2045 MTP/SCS.

Planning Directors Forum

The Planning Directors Forum consists of planning directors and staff from the 18 cities, three counties, three regional transportation planning agencies, transit operators, other transportation partners, and AMBAG. The Planning Directors Forum meets regularly to address regional land use and transportation planning issues. The Planning Directors Forum met 13 times throughout the planning process and at key milestones to identify

priorities, review growth projections, assist in scenario development and draft project lists, review draft workshop materials and to receive project updates.

Public Participation Plan

Providing public access to and participation in the planning processes of the Monterey Bay region is a responsibility shared between Caltrans, AMBAG, the Council of San Benito County Governments, the Santa Cruz County Regional Transportation Commission, the Transportation Agency for Monterey County, Monterey-Salinas Transit, San Benito County Local Transportation Authority, and Santa Cruz Metropolitan Transit District. Each partner agency solicits public input from its planning, policy, and programming processes. Various methods are used to engage stakeholders, and provide affected agencies and interested parties with timely information and opportunities to participate in the transportation planning process.

Each federally funded transportation program or project conducted by a partner agency must have a specified public participation process that defines the avenues for reasonable involvement in the metropolitan transportation planning process. AMBAG's process is outlined in the 2015 Public Participation Plan.

The Monterey Bay Area Public Participation Plan was adopted in 2019. The passage of Senate Bill 375 in 2008 resulted in changes in Government Code §65080, which required an update to the Monterey Bay Area Public Participation Plan.

Technical Advisory Committees

The Technical Advisory Committees for each county are made up of staff from local jurisdictions and agencies, including local transit service providers and are managed by staff from the RTPAs. The Technical Advisory Committees review and provide technical guidance and advice on transportation projects and programs within each county, and makes recommendations to the RTPA Boards of Directors. AMBAG staff met with the Technical Advisory Committees frequently, particularly at key milestones throughout the planning process to confirm transportation priorities, projects, and funding sources.

One-on-One Meetings

In addition to coordinating workshops and large meetings to discuss and inform the planning process, AMBAG held more than 80 one-on-one meetings with senior staff from local jurisdictions. Many of these meetings were to discuss the Regional Growth Forecast. However, these meetings were critical to engaging local planners in the overall 2045 MTP/SCS development process as well as for incorporating ongoing local infill development strategies and other land use plans into the regional planning process.

Coordinating with Partner Agencies

The Regional Transportation Planning Agencies - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the Council of San Benito County Governments- are important partners in the planning process for the 2045 MTP/SCS. Each RTPA develops a separate Regional Transportation Plan for each county in the region that has county specific details for transportation projects. AMBAG works with

the RTPAs to develop project lists, financial assumptions and revenue constrained scenarios during the planning process. AMBAG staff met with the three RTPAs' staff twice a month as part of a working group in order to coordinate development of each of the Regional Transportation Plans with the 2045 MTP/SCS.

AMBAG worked very closely with the RTPAs in the planning process. The RTPAs held meetings beginning in 2019 to obtain input on transportation projects and local community priorities which feed into the development of the 2045 MTP/SCS.

These meetings included presentations to a broad range of community groups, business organizations, chambers of commerce's, city councils, school superintendents, service clubs, trade & professional organizations, educational & medical institutions, taxpayer associations, etc. Additionally, the RTPAs sought public input via surveys, comments, focus groups, stakeholders interviews, websites and social media.

AMBAG consulted with the appropriate State and local representations, including representatives from environmental and economic communities; airports; transit and freight during the preparation of the 2045 MTP/SCS. AMBAG also included federal land management agencies during the preparation of the Plan.

Consultation with Interested Parties

Engaging individual and groups that have an interest in transportation and land use planning decisions are critical to the development of the 20245 MTP/SCS. AMBAG involved private sector interests in the development of the 2045 MTP/SCS. These groups include, but are not limited to: landowners, neighborhood and community groups, environmental advocates, affordable housing advocates, home builder representatives, business organizations, commercial property interests, educational organizations, tourism, trucking and agricultural representatives, etc. Engagement with these groups and other interested parties are pursued through a variety of mechanisms such as direct outreach, advisory committees, meetings, presentations, etc. as statutorily required.

Consultation and Coordination with Resource Agencies

MAP-21 requires that the MTP/SCS environmental mitigation program be developed in consultation with federal, state and tribal land management, wildlife, and regulatory agencies (Title 23 CFR Part 450.322(f)(7)), as well as with state and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation (Title 23 CFR Part 450.322(g)). Further, in accordance with Title 23 CFR Part 450.322, the MTP/SCS must provide a discussion of potential environmental mitigation activities

and areas, including those mitigation activities that might maintain or restore the environment that is being affected by the plan. This mitigation discussion must happen in consultation with federal, state and tribal land management, wildlife and regulatory agencies. During the development of the Plan, AMBAG consulted with various land management agencies to refine potential approaches to support the conservation of natural lands and farmlands consistent with State conservation planning initiatives. This consultation ensured policies when combined with land use strategies and transportation investments included in the 2045 MTP/SCS, enable the region to work toward consistency with State conservation planning initiatives. AMBAG's compliance with the California Environmental Quality Act (CEQA) serves as another opportunity to consult with federal, state and local resource agencies and sovereign tribal nations responsible for land use management, natural resources, environmental protection, conservation and historic preservation in the development of the MTP/SCS. This consultation includes other agencies and officials responsible for planning activities in the AMBAG region that are affected by transportation.

As required by CEQA, the Notice of Preparation (NOP) stating that AMBAG as the lead agency would prepare a program-level Environmental Impact Report (EIR) for the 2045 MTP/SCS was the first step in the environmental review process. The NOP gave federal, state and local agencies and the public an early opportunity to identify areas of concern to be addressed in the EIR and to submit them in writing to AMBAG. AMBAG held public scoping workshops in January 2020 to explain the environmental review process and solicit early input on areas of concern. While the MTP is not subject to the federal National Environmental Policy Act (NEPA), AMBAG consulted with federal agencies as appropriate during the preparation of the CEQA environmental document.

Consultation with Native American and Tribal Governments

State and federal regulations require AMBAG to conduct government-to-government consultation regarding MTC's planning and programming activities with tribal governments of federally-recognized Native American tribes. Additionally, effective July 1, 2015, Assembly Bill 52 (Gatto, 2014) began requiring that state and local agencies analyze the impacts to Native American cultural resources under the California Environmental Quality Act (CEQA). The law introduced new state requirements for consultation with Native American tribal governments. As such, lead agencies under CEQA must work with tribal governments to avoid or mitigate the impacts to cultural resources. AMBAG submitted formal notification of a project and consultation opportunity under AB 52 (Gatto, 2014), pursuant to Public Resources Code § 21080.3.1 to all interested parties in the AMBAG region. The AMBAG region does not have any tribal nations or tribal owned land, however, there are tribal cultural sites in the region.

Title VI and Environmental Justice Outreach

The outreach conducted for the 2045 MTP/SCS meets the requirements of Title 23 CFR Part 450.316(a)(1)(vii) in seeking out and considering the needs of those traditionally underserved. Materials were prepared in both English and Spanish and public meetings were held in accessible locations and virtually. Interpretation services were also provided for. More information on the public engagement strategies can be found in AMBAG's Public Participation Plan.

7 Glossary

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Glossary

AASHTO
American Association of State Highway and Transportation Officials – A nonprofit, non-partisan association representing highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico.

AB 32
Assembly Bill 32: Signed into law on September 26, 2006, it requires that the state's global warming emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on global warming emissions that will be phased in starting in 2012. In order to effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels.

ADA
Americans with Disabilities Act: The federal civil rights legislation for disabled people that was passed in 1990; it requires public transportation systems to be more fully accessible; includes the provision of paratransit service.

Active Transportation
Active Transportation includes any method of travel that is human-powered, but most commonly refers to walking and bicycling.

ADT
Average Daily Traffic: The average number of vehicles that travel on a given roadway in a 24-hour period on a weekday.

Air Cargo
Revenue producing items in domestic or international air commerce, composed of freight, express, and mail, but excluding passenger baggage.

Air Carrier
An aviation operator that provides regular round-trips per week between two or more points, and publishes flight schedules that specify the times, days of the week, and places between which such flights are performed; or that transports mail by air pursuant to a contract with the U.S. Postal Service.

Alternative Transportation Fuels
Low polluting fuels that are used to propel a vehicle, in place of petroleum-based gasoline or diesel fuels. Examples include biodiesel, electricity, ethanol, propane, compressed natural gas and liquid natural gas.

AMBAG
Association of Monterey Bay Area Governments: AMBAG is responsible for long-range transportation planning and programming under federal and state law.

Amtrak
The National Railroad Passenger Corporation, or Amtrak, is the nation's intercity passenger rail provider. Amtrak operates trains in partnership with 15 states and four commuter rail agencies.

Annual Service Miles
The number of miles that all transit vehicles travel each year in scheduled transit service operations, or when carrying passengers in door-to-door transit service.

Apportionment
A federal budgetary term that refers to a statutorily prescribed division of assigned funds. It is based on formulas prescribed by law.

APS
Alternative Planning Strategy: Senate Bill 375 (SB 375) provides that if the sustainable communities strategy falls short of meeting the regional greenhouse gas reduction targets from passenger vehicles, the region must prepare an "alternative planning strategy" that, if implemented, would meet the targets.

ArcInfo
A geographic information system (GIS) that can be used to maintain, manipulate, and display transportation, land use and demographic data.

Arterial
Streets with traffic lights that serve primarily to carry traffic through an area as quickly and efficiently as possible.

Arterial Management System
A hardware and software system that enables local agencies to coordinate the timing of traffic signals across jurisdictional boundaries; optimize the flow of traffic on regionally significant arterials; manage traffic caused by special events and major accidents; and coordinate arterial signals with freeway ramps, transit service and rail grade-crossings.

ATIS
Advanced Traveler Information Systems: Technology used to provide travelers with information, both pre-trip and in-vehicle, so they can better utilize the transportation system.

ATMS
Advanced Transportation Management Systems: Technology used to improve the operations of the transportation network.

Autonomous Vehicles
Autonomous vehicles (also known as a driverless cars, autos, self-driving cars, robotic cars) are vehicles that are capable of sensing their environment to navigate and operate without human input.

Auxiliary Lane
An additional freeway lane between adjacent interchanges that improves the weaving conflicts between exiting and entering vehicles.

AVL
Automated Vehicle Location: A transportation device that uses the coordinates from earth-orbit satellites to determine the precise location of a vehicle on the earth's surface. AVL is used to manage taxi, bus and commercial vehicle fleet operations.

AVO
Average Vehicle Occupancy: Calculated by dividing the total number of travelers by the total number of vehicles.

Base Year
The year 2015, used in the MTP performance analysis as a reference point for current conditions.

Baseline
Future scenario which includes only those projects that are existing, undergoing right-of-way acquisition or construction, come from the first year of the previous MTP or MTIP, or have completed the NEPA process. The Baseline is based upon the adopted 2020 MTIP.

Bikeway Classifications
As defined by the Manual on Uniform Traffic Control Devices:

- Class I Bike Path: A paved shared-use path within an exclusive right of way
- Class II Bike Lane: Signed and striped lanes within a street right of way
- Class III Bike Route: Preferred routes on existing streets identified by signs
- Shared Lane Marking or "Sharrow:" Provides positional guidance to bicyclists on roadways that are too narrow to be striped with bicycle lanes and to alert motorists of the location a cyclist may occupy in the roadway

BRT
Bus Rapid Transit: Corridor-level services providing fast and frequent transit services that are designed to take advantage of priority treatments in order to serve longer distance regional trip making.

BTA
Bicycle Transportation Account: Provides state funds for city and county projects that improve safety and convenience for bicycle commuters.

CAA
Clean Air Act: Federal legislation that sets national air quality standards and requires each state with areas that have not met federal air quality standards to prepare a State Implementation Plan, or SIP. The 1990 amendments to the CAA, often referred to as the CAAA, established new air quality requirements for the development of metropolitan transportation plans and programs. The California Clean Air Act (CCAA) sets more stringent standards for state air quality.

CAAA
Clean Air Act Amendments of 1990: Federal legislation that established criteria for attaining and maintaining federal air quality standards for allowable concentrations and exposure limits for various air pollutants. The legislation also provides emissions standards for specific vehicles and fuels.

CAFR
Comprehensive Annual Financial Report: Official annual financial report that encompasses all funds and financial components associated with any given organization.

California Transportation Plan 2050
The California Transportation Plan (CTP 2050) provides a long-range policy framework to meet future mobility needs and reduce greenhouse gas emissions. The CTP 2050 defines goals, performance-based policies and strategies to achieve a collective vision for California's future statewide, integrated, multimodal transportation system. The plan envisions a sustainable system that improves mobility and enhances our quality of life.

Caltrans
California Department of Transportation: The state agency responsible for the design, construction, operation, and maintenance of the state highway system. The State system includes interstate freeways and state highways.

CAPTI
Climate Action Plan for Transportation Infrastructure: A framework for aligning state transportation infrastructure investments with state climate, health, and social equity goals, built on the foundation of the "fix-it-first" approach established in SB 1.

CARB
California Air Resources Board: The state agency responsible for adopting state air quality standards, establishing emission standards for new cars sold in the state, overseeing activities of regional and local air pollution control agencies, and setting regional targets for reducing greenhouse gas emissions from passenger vehicles.

Carpool
An arrangement in which two or more people share the use of a privately-owned automobile to travel together to and from pre-arranged destinations — typically between home and work or home and school.

Carsharing
Organized short-term auto rental, often located in downtown areas near public transit stops as well as near residential communities and employment centers. Carsharing organizations operate fleets of rental vehicles that are available for short trips by members who pay a subscription fee, plus a per trip charge.

CCI
Construction Cost Index: A measurement of the inflation rate in the cost of major construction projects.

CEQA
California Environmental Quality Act: State law providing certain environmental protections that apply to all transportation projects funded with state funds.

CFR
Code of Federal Regulations: The codification of the general and permanent rules and regulations (sometimes called administrative law) published in the Federal Register by the executive departments

and agencies of the federal government of the United States.

CHP
California Highway Patrol: The state law enforcement agency responsible for highway safety.

CHSRA
California High Speed Rail Authority: It was created by the California Legislature in 1996 to develop a plan for the construction, operation, and financing of a statewide, intercity high speed passenger rail system.

CIP
Capital Improvement Program: Long-range strategic plan that identifies capital projects; provides a planning schedule and financing options.

Climate Adaptation
Strategic response to global warming and climate change, that seeks to reduce the vulnerability of social and biological systems to relatively sudden change and thus offset the effects of global warming. In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry and Transportation and Energy.

CMP
Congestion Management Program: Required of every county in California with a population of 50,000 or more to qualify for certain state and federal funds. CMPs set performance standards for roads and public transit, and show how local agencies will attempt to meet those standards. The CMP is required to be adopted by the Congestion Management Agency, and it must be consistent with the adopted Metropolitan Transportation Plan (MTP).

CNG
Compressed Natural Gas: A clean-burning alternative fuel for vehicles.

COG
Council of Governments: A voluntary organization of local governments that strives for comprehensive regional planning. AMBAG is the COG for Monterey and Santa Cruz counties. SBtCOG is the COG for San Benito County.

Community Plan
More specific versions of General Plans, generally dealing with smaller geographical areas, but having the same force of law. See General Plan.

Commuter
A person who travels regularly between home and work or school.

Commuter Rail
Conventional rail passenger service within a metropolitan area. Service primarily is in the morning

(home-to-work) and afternoon (work-to-home) travel periods.

Complete Streets
A complete street is a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists, appropriate to the function and context of the facility.

Constant Dollars
Dollars expended/received in a specific year adjusted for inflation/deflation relative to another time period.

Conformity
A demonstration of whether a federally-supported activity is consistent with the SIP — per Section 176 (c) of the Clean Air Act. Transportation conformity applies to plans, programs, and projects approved or funded by the Federal Highway Administration or the Federal Transit Administration.

Congestion
Congestion is usually defined as travel time or delay in excess of what is normally experienced under free flow traffic conditions. Congestion is typically accompanied by lower speeds, stop-and-go travel conditions, or queuing, such as behind ramp meters or heavily-used intersections.

Corridor
A broad geographical band that follows a general directional flow connecting major trip origins and destinations. A corridor may contain a number of streets, highways, and transit route alignments.

CPI
Consumer Price Index: Developed by the Bureau of Labor Statistics of the U.S. Department of Labor to provide a measurement of the inflation rate in the general economy of a given metropolitan area.

CTC
California Transportation Commission: A state agency that sets state spending priorities for many state and federally funded highway and transit projects and allocates funds to those projects. An eleven member commission, nine members are appointed by the Governor, one by the pro tem of the Senate and one by the Speaker of the Assembly.

CTP
California Transportation Plan: A statewide, long-range transportation policy plan that provides for the movement of people, goods, services, and information. The CTP offers a blueprint to guide future transportation decisions and investments that will ensure California's ability to compete globally, provide safe and effective mobility for all persons, better link transportation and land-use decisions, improve air quality, and reduce petroleum energy consumption.

CVO
Commercial Vehicle Operations: Management of commercial vehicle activities through ITS.

Demand Responsive Service
Transit service that is provided in response to a pre-ordered or telephone reservation.

Development Impact Fee
A fee charged to private developers, usually on a per-dwelling-unit or per-square-foot basis, to help pay for infrastructure improvements necessitated as a result of the development.

DOT
Department of Transportation: At the federal level, the cabinet agency headed by the Secretary of Transportation that is responsible for highways, transit, aviation, and ports. The DOT includes the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Federal Aviation Administration (FAA) and other agencies. The state DOT is Caltrans.

Drive Alone
See SOV.

EIR
Environmental Impact Report: An informational document, required under CEQA, which will inform public agency decision-makers and the public generally of the significant environmental effects of a project, possible ways to minimize significant effects and reasonable alternatives to the project.

EIS
Environmental Impact Statement (federal): National Environmental Policy Act (NEPA) requirement for assessing the environmental impacts of federal actions that may have a significant impact on the human environment.

EMFAC
An Emission Factor Model that estimates on-road motor vehicle emission rates for current year as well as backcasted and forecasted inventories.

Environmental Justice
The fair treatment of people of all races, cultures, and incomes during the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

EPA
Environmental Protection Agency: Federal agency established to develop and enforce regulations that implement environmental laws enacted by Congress to protect human health and safeguard the natural environment.

E-work
See Telework.

Expressway
Similar to a freeway, but with some signal-controlled intersections.

FAA
Federal Aviation Administration: The federal agency that regulates the use of airspace and is responsible for evaluating and disseminating information about hazards and obstructions to aviation. FAA is a component of the federal DOT.

Farebox Recovery Ratio
The proportion of operating expenses covered by passenger fares. The ratio divides the farebox revenue by the total operating expenses.

Farebox Revenue
The value of cash, tickets, and pass receipts given by passengers for payment for rides on public transit.

Fare Structure
The varying fees charged to use transit, normally differing by the age of the transit rider, single versus multiple transit trips, the type of service (Trolley, express bus, etc.), and, for some types of services, the length of the trip.

FAST Act
Fixing America's Surface Transportation: On December 4, 2015 President Obama signed into law a new five-year transportation authorization bill, the FAST Act. The FAST Act authorizes $305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail and research, technology, and statistics programs. The FAST Act maintains our focus on safety, keeps intact the established structure of the various highway-related programs we manage, continues efforts to streamline project delivery and, for the first time, provides a dedicated source of federal dollars for freight projects.

Financially Constrained
Expenditures are said to be financially constrained if they are within limits of anticipated revenues.

Fiscal Year
The 12-month period established for budgeting purposes. In California, the commonly accepted fiscal year for governmental purposes begins on July 1 and ends on June 30.

Fixed Route Service
Service provided on a regular, fixed-schedule basis along a specific route, with vehicles stopping to pick up and deliver passengers to specific locations.

FRA
Federal Railroad Administration: Federal agency created to promulgate and enforce rail safety regulations, administer railroad assistance programs, conduct research and development in support of improved railroad safety and national rail transportation policy, and consolidate government support of rail transportation activities.

Freeway
A divided highway with limited access and grade-separated junctions, and without traffic lights or stop signs.

FSP
Freeway Service Patrol: An ongoing program to provide a roving tow and motorist aid service, with technicians who assist or remove stranded and disabled vehicles on designated urban freeways and state roadways during peak period commuting hours. It is operated by the RTPAs in cooperation with Caltrans and the California Highway Patrol.

FTA
Federal Transit Administration: The federal agency responsible for administering federal transit funds and assisting in the planning and establishment of areawide urban mass transportation systems. As opposed to FHWA funding, most FTA funds are allocated directly to local agencies, rather than to Caltrans.

Gas Tax
The tax applied to each gallon of fuel sold. Currently, the federal government has imposed a per-gallon tax of 18.4 cents, and the state has imposed a per-gallon excise tax of 35.3 cents per gallon which under SB 1 increases to 47.3 cents per gallon beginning November 1, 2017.

General Plan
A policy document required of California cities and counties by state law that describes a jurisdiction's future development in general terms. All land use decisions must be derived from the document, which includes text, maps, and other information. The General Plan contains a set of broad policy statements about the goals for the jurisdiction, and it also must contain nine mandatory elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, Safety, Environmental Justice and Air Quality.

GHG Emissions
Greenhouse Gas Emissions: Gases that influence global climate change. They include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

GIS
Geographic Information System: Mapping software that links information about where things are with information about what things are like. GIS allows users to examine relationships between features distributed unevenly over space, seeking patterns that may not be apparent without using advanced techniques of query, selection, analysis, and display.

GNP
Gross National Product: An estimate of the total value of goods and services produced in any specified country in a given year. GNP can be measured as a total amount or an amount per capita.

Grade Crossing
A crossing or intersection of highways, railroad tracks, other guideways, or pedestrian walks, or combinations of these at the same level or grade.

Greenfield
Also known as "raw land," land that is privately owned, lacks urban services, has not been previously developed, and is located at the fringe of existing urban areas.

HCD
State Department of Housing and Community Development: The state agency responsible for, among other things, overseeing the development of the Regional Housing Needs Allocation (RHNA) and the General Plan Housing Elements for all the local jurisdictions in the region.

HCM
Highway Capacity Manual: A resource for generating technical information that is used by transportation

planners, designers, and operators. The materials contained in the HCM represent a collection of state of the art techniques for estimating level of service for many transportation facilities and modes.

HCP
Habitat Conservation Plan: Established under Section 10 of the Endangered Species Act to allow development to proceed while protecting endangered species.

HDT
Heavy Duty Truck: Truck with a gross vehicle weight of 8,500 pounds or more.

Heavy Rail
Railroad services that operate in a mixed-user environment on conventional railroad tracks. Heavy rail services include freight trains, Amtrak, Commuter Rail and most conventional rail transit systems.

Highway
A general term usually referring to a state or federally-designated urban or rural route, designed to accommodate longer trips in the region.

Household
All people living in a housing unit, regardless of whether they are related to one another. Housing units include houses, condominiums, apartments, and mobile homes.

HOV
High Occupancy Vehicle: A vehicle that carries more than one occupant. Examples include carpools, vanpools, shuttles, and buses.

HOV Lane
High Occupancy Vehicle Lane: An exclusive road or traffic lane that typically has a higher operating speed and lower traffic volumes than a general purpose or mixed-flow lane. In California, vehicles that typically can use HOV lanes include carpools, vanpools, buses, other multi-passenger vehicles, motorcycles and emergency vehicles.

HPMS
Highway Performance Monitoring System: A federally mandated program designed by FHWA to assess the performance of the nation's highway system.

HSR
High Speed Rail: Railroad passenger service that, as defined by California state law, operates at maximum speeds of more than 200 miles per hour. Because of the speed, high speed rail normally operates on intercity (longer) routes.

HUD
U.S. Department of Housing and Urban Development: Federal agency charged with increasing homeownership, supporting community development, and increasing access to affordable housing free from discrimination.

ICM
Integrated Corridor Management: A collaborative, cooperative, and coordinated system in which corridor partners work together to improve mobility and safety across modes and networks for people and goods.

IGR
Intergovernmental Review Process: The review of documents by several governmental agencies to ensure consistency of regionally significant local plans, projects, and programs with AMBAG's adopted regional plans.

Incident
An incident may be a traffic collision, stalled vehicle, load spillage, or other event that affects one or more lanes of traffic.

Integrated Performance Management Systems Network
This network will connect the region's local transportation management centers, and will enable agencies to cooperatively manage the overall performance of the local and regional transportation systems.

Intercity Rail
Railroad passenger service that primarily serves longer trips, such as those between major cities or regions.

Intermodal
Passenger or freight transportation services which involve or use more than one type of transportation facility (or mode). Aviation, automobile, rail and transit are travel modes.

ITS
Intelligent Transportation Systems: A general classification of transportation technologies, management tools, and services made possible through advances in computer and communication technologies. ITS is used to make transportation systems safer and more efficient.

JPA
Joint Powers Authority: Two or more agencies that enter into a cooperative agreement to jointly wield powers that are common to them. JPAs are a vehicle for the cooperative use of existing governmental powers to finance and provide infrastructure and/or services in a cost-efficient manner.

LEP
Limited English Proficiency

Light Rail
A passenger transportation system of self-propelled vehicles that operate over steel rails located in the street, on an aerial structure, or on a separated right of way.

LIM
Low Income and Minority communities

LNG
Liquefied Natural Gas: An alternative liquid fuel derived from a natural gas that is cooled to below its boiling point so it becomes a liquid.

LOS
Level of Service: A qualitative measure describing operational conditions within a traffic stream and motorists' perceptions of those conditions. LOS ratings typically range from LOS A, which represents free-flow conditions, to LOS F, which is characterized by heavy congestion, stop-and-go traffic, and long queues forming behind breakdown points.

Low Engagement Community of Concern
A Low Engagement Community of Concern is any community in which 15 percent or more of households where English is not spoken very well and/or 15 percent or more of population are over the age of 25 without a high school diploma.

Low Income Community of Concern
A Low Income Community of Concern is any community in which 33 percent or more of households are low income, and/or 10 percent or more of the households are severely overcrowded, and/or 25 percent or more of the population is in poverty.

Low Mobility Community of Concern
A Low Mobility Community of Concern is any community in which 15 percent of the population are aged 65 and over has income below the poverty level, and/or if 15 percent of the households have zero car ownership, and/or 11.2 percent of the population is disabled.

LRT
Light Rail Transit: A type of transit vehicle and service that uses steel wheels and operates over railroad tracks. LRT systems generally serve stations averaging one-mile apart, are not remotely controlled, and can operate in a separated right of way or on public streets.

MAP-21
Moving Ahead for Progress in the 21st Century: On July 6, 2012 President Obama signed into law a new two-year transportation authorization, MAP-21. The first long-term highway authorization enacted since 2005, MAP-21 creates a streamlined, performance-based and multimodal program to address the challenges facing the U.S. transportation system.

MBARD
Monterey Bay Air Resources District: MBARD is a government agency that regulates sources of air pollution within the tri-county region.

Minority Community of Concern
A Minority Community of Concern is any community in which 65 percent or more of the population is non-White.

Mixed Flow
Traffic movement having autos, trucks, buses and motorcycles sharing traffic lanes.

Mixed Use
The combining of commercial, office and residential land uses to provide easy pedestrian access and reduce the public's dependence on driving. It can be implemented in multi-story buildings containing businesses and retail stores on the lower floors and homes on the upper floors.

Mode
A particular form of travel (e.g., walking, bicycling, traveling by automobile, traveling by bus, or traveling by train).

Mode Split or Mode Share
The percentage of trips that use each of the various travel modes.

Model
A mathematical description of a real-life situation that uses data on past and present conditions to make a projection.

MPO
Metropolitan Planning Organization: A federally-designated agency that is responsible for regional transportation planning in each metropolitan area. AMBAG is the MPO for the Monterey Bay Area.

MTIP
Metropolitan Transportation Improvement Program (MTIP): A five-year listing of major highway, transit, and active transportation projects including project costs, funding sources and development schedules. Compiled from priority lists submitted by local jurisdictions and transportation agencies.

MTP
Metropolitan Transportation Plan: A minimum 20-year plan that is required by state and federal law to guide the development of the region's transportation system.

NCCP
Natural Communities Conservation Plan: Program under the State Department of Fish and Game that uses a broad-based ecosystem approach toward planning for the protection of plants, animals and their habitats, while allowing compatible and appropriate economic activity.

Nominal Dollars
Actual dollars expended/received in a specific year without adjustments for inflation/deflation.

NTD
National Transit Database: The Federal Transit Administration's (FTA) national database for transit statistics.

O&M
Operations and Maintenance: The range of activities and services provided by the transportation system and for the upkeep and preservation of the existing system.

Off-Peak Period
The time of day when the lowest concentration of vehicles or transit riders are on the road or on another

transit facility. These times are generally before 6 A.M., between 9 A.M. and 3 P.M., and after 7 P.M.

Open Space
Generally understood as any area of land or water which, for whatever reason, is not developed for urbanized uses and which therefore enhances residents' quality of life. However, note that each county and city in California must adopt an open space element as part of its general plan. The element is a statement of local planning policies focusing on the use of unimproved land or water for: 1) the preservation or managed production of natural resources, 2) outdoor recreation, and 3) the promotion of public health and safety. Therefore, open space will be defined by each jurisdiction based on their own unique resources and environment.

Opportunity Areas
Opportunity Areas are places in the region with the highest chance for successful sustainable growth in the future; they are generally located where Transit Priority Areas (TPAs) and Economic Development Areas (EDAs) overlap.

OWP
Overall Work Program: AMBAG develops an OWP annually, describing proposed transportation planning activities for the upcoming fiscal year, including those required by federal and state law.

Paratransit
A specialized, door-to-door transport service for people with disabilities who are unable to use standard bus or commuter rail services.

Park-and-Ride
A travel option in which commuters park their personal vehicles in a public lot or other location and continue their trip via carpool, vanpool, or transit.

Park-and-Ride Lot
A facility where individuals can meet to utilize carpools, vanpools, and public transit to continue traveling to their destinations.

Passenger Miles
The total number of passengers carried by a transit system, multiplied by the number of miles each passenger travels. Passenger miles are normally measured on a daily or annual basis.

Peak Period
The time of day when the highest concentrations of vehicles or transit riders are on the road or on another transit facility. The morning peak period is generally considered to be from 6 A.M. to 9 A.M.; the afternoon peak period is from 4 P.M. to 7 P.M.

PEIR
Program Environmental Impact Report: Environmental review process used to evaluate the potential environmental effects of large-scale plans or programs.

PeMS
Performance Monitoring System: The PeMS program uses urban freeway data collected through freeway

loop detectors to provide current, ongoing data on freeway volumes and speeds that can be displayed graphically and exported to other monitoring applications.

Performance Measures
Objective, quantifiable measures used to evaluate the performance of the transportation system, and to determine how well planned improvements to the system are achieving established objectives.

Person Trip
Any person's one-way travel to any destination for any purpose. More specifically, a trip is the one-way movement from an origin to a destination, whereby each trip has two trip ends.

Place Types
A set of land use designations common to general plans for the three counties and 18 cities in the AMBAG region. These place type categories are meant to act as a common "language" so that the diverse general and specific plans across the Monterey Bay Area may be compared in a consistent and standard manner.

PSR
Project Study Report: A preliminary engineering report that documents agreements on the scope, a set of reasonable and feasible alternatives, the schedule, and the estimated cost of a project so that the project can be included in a future State Transportation Improvement Program (STIP).

PTA
Public Transportation Account: Provides funding for local transit, as outlined in the Transportation Development Act. The sole source of revenue for this Account is from the state sales tax on diesel fuel.

Public Transit
See Public Transportation.

Public Transportation
Travel by bus, rail, or other vehicle, either publicly or privately owned, that provides general or specialized service on a regular or continuing basis.

Ramp Metering
Electronic traffic control devices located at freeway access points to meter the entry of vehicles onto the freeway. The goal is to help optimize the movement of persons and vehicles.

Reverse Commute
Travel in the direction opposite to the main flow of peak period commute traffic.

RHNA
Regional Housing Needs Allocation: Quantifies the need for housing within each jurisdiction of the AMBAG region based on population and job growth projections. Communities then address this need through the process of completing the housing elements of their General Plans.

Ridership
The number of transit users, usually reported as a yearly total or as the average for a normal workday.

Ridesharing
A mode of travel in which at least two individuals share the same vehicle to get to their destination. Rideshare vehicles include private automobiles, privately owned and operated vans and buses, as well as public transportation.

Route Miles
The length of a transit route or service, multiplied by the number of trips made by transit vehicles or trains each day.

ROW
Right of Way: The land required for the construction and/or operation of transportation infrastructure.

RTIP
Regional Transportation Improvement Program: The state required multiyear capital improvement program for transportation projects using state and federal funds.

State Highway
A state-designated roadway. May be urban or rural.

Safe Routes to School
A state and federal program that funds education, encouragement campaigns, and infrastructure improvements to help decrease traffic congestion around schools and to make the journey to school on foot or bike more feasible and safer for children.

Safe Routes to Transit
A program that funds strategies to address the challenges of getting to and from a transit stop or station. These strategies include first-mile/last-mile solutions such as enhanced pedestrian crosswalks near transit stations, bicycle lanes that connect to transit and bike parking at transit stations, feeder-distributor bus/shuttle routes, car sharing/station cars and ridesharing.

SB 1
Senate Bill 1 (Chapter 5, Beall, 2017): known as The Road Repair and Accountability Act of 2017 provides the first significant, stable and ongoing increase in state transportation funding totaling an estimated $5.2 billion annually. SB 1 created the Road Maintenance and Rehabilitation Account, and the Road Maintenance and Rehabilitation Program. Programs funded from this account include the Local Partnership Program, the Active Transportation Program, the State Highway Operation and Protection Program (SHOPP) and local streets and roads apportionments. Other programs funded in SB 1 include: increases in State Transit Assistance (STA), Solutions for Congested Corridors Programs, Trade Corridors Enhancement Account and State Transportation Improvement Program (STIP) stabilization.

SB 32
Senate Bill 32 (Chapter 249, Pavley, 2016): The California Global Warming Solutions Act of 2006 (known as AB 32) designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide

greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emissions reductions.SB 32 is an extension of AB 32 to require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.

SB 45

Senate Bill 45 (Chapter 622, Statutes of 1997, Kopp): Established the current STIP process and shifted control of decision-making from the state to the regional level.

SB 375

Senate Bill 375 (Chapter 728, Steinberg): Established to implement the state's greenhouse gas (GHG) emission-reduction goals, as set forth by AB 32, in the sector of cars and light trucks. This mandate requires the California Air Resources Board to determine per capita GHG emission-reduction targets for each metropolitan planning organization (MPO) in the state at two points in the future—2020 and 2035. In turn, each MPO must prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG reduction target through integrated land use, housing and transportation planning.

SB 743

SB 743, which was signed into law in 2013, initiated an update to the CEQA Guidelines to change how lead agencies evaluate transportation impacts under CEQA, with the goal of better measuring the actual transportation-related environmental impacts of any given project. Starting on July 1, 2020, agencies analyzing the transportation impacts of new projects must now look at a metric known as vehicle miles traveled (VMT) instead of LOS. VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto our roads, the project may cause a significant transportation impact.

SCS

Sustainable Communities Strategy: An element of the MTP, as required by SB 375, that demonstrates how development patterns and the transportation network, policies, and programs can work together to achieve the state's targets for reducing regional greenhouse gas (GHG) emissions from cars and light trucks in a region.

Self Employed

Self Employed workers are those who work for themselves, rather than for an employer (i.e. even if engaged in contract work for another company, a self-employed worker is, for reporting purposes, his or her own employer). Self Employed workers may work in any industry or occupation, and the same occupation may be classified differently depending on the compensation arrangement. For example a hair stylist who is on the payroll at a salon would be counted among industry employment while one who works independently and rents space at a salon would be counted as self-employed. Examples include freelance writers, housekeepers, day laborers, babysitters, consultants, and others.

SHOPP

State Highway Operation and Protection Program: Caltrans' three-year program to address traffic safety, roadway rehabilitation, roadside rehabilitation, or operations needs on the state highway system.

Smart Growth
A compact, efficient, and environmentally-sensitive pattern of development that provides people with additional travel, housing, and employment choices by focusing future growth away from rural areas and closer to existing and planned job centers and public facilities, while preserving open space and natural resources.

Social Equity
Social Equity means ensuring that all people are treated fairly and are given equal opportunity to participate in the planning and decision-making process, with an emphasis on ensuring that traditionally disadvantaged groups are not left behind.

SOV
Single Occupant Vehicle: Privately operated vehicle that contains only one driver or occupant.

STIP
State Transportation Improvement Program: A multi-year program of major transportation projects to be funded by the state. The CTC adopts the STIP every two years, based on projects proposed in RTIPs and from Caltrans.

STA
State Transit Assistance: State funding program for mass transit operations and capital projects. Current law requires that STA receive 50 percent of PTA revenues.

STBG
Surface Transportation Block Grant: Provides flexible funding that may be used by states and localities for projects on any federal-aid highway, bridge projects on any public road, transit capital projects and intracity and intercity bus terminals and facilities. A portion of funds reserved for rural areas may be spent on rural minor collectors.

TAZ
Traffic Analysis Zone: a geographic unit used for transportation modeling. A TAZ is smaller than a census tract and a Trip Distribution Zone (TDZ).

TDA
Transportation Development Act: State law enacted in 1971 that provided a 0.25 percent sales tax on all retail sales in each county for transit, bicycle, and pedestrian purposes. In non-urban areas, funds may be used for streets and roads under certain conditions.

TCRP
Transportation Congestion Relief Program.

TDM
Transportation Demand Management: Programs to reduce demand by automobiles on the transportation system, by promoting telecommuting, flex-time, bicycling, walking, transit use, staggered work hours, and ridesharing.

Telework
Teleworkers or e-workers are employees who conduct some or all of their daily work activities from their home or from a remote site other than the normal work site, in order to avoid commuting during peak periods.

Title VI of the Civil Rights Act
Title VI of the Civil Rights Act states that "no person in the United States, shall, on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance."

TPP
Transit Priority Project: Under SB 375, a project is exempt from CEQA if it (1) qualifies as a "transit priority project" and (2) meets the "sustainable communities project" requirements as declared by the legislative body of the local jurisdiction.

TransCAD
A computer model that simulates travel demand and its distribution to facilities within a geographic area.

Transportation Network Companies
Transportation Network Companies (TNCs) are organizations that provide pre-arranged transportation services for compensation using an online-enabled platform, usually via mobile apps, to connect passengers with drivers using the driver's personal vehicle. TNCs include companies such as Lyft, Uber and Sidecar.

Transit
See Public Transportation.

Transit Management System
A field operations management system that enables improved transit route planning, scheduling, and performance monitoring.

Transit Oriented Development
Residential and employment growth that occurs near existing and planned public transit facilities.

Trip
See Person Trip and/or Vehicle Trip.

TSM
Transportation Systems Management: Strategies that allow transportation systems to operate in a way that maximizes the number of people traveling in a corridor or facility. These strategies include traffic flow improvements, ramp metering, tracking public transit vehicles; and keeping travelers informed.

U.S. DOT
United States Department of Transportation: The federal cabinet-level agency with responsibility for highways, mass transit, aviation, and ports and headed by the Secretary of Transportation. The DOT includes the Federal Highway Administration and the Federal Transit Administration, among other agencies.

U.S. EPA
U.S. Environmental Protection Agency: The federal agency charged with setting policy and guidelines, and carrying out legal mandates, for the protection of national interests in environmental resources.

Vanpool
A vehicle operating as a ridesharing arrangement, providing transportation to a group of individuals typically traveling directly between their homes and employment locations within the same geographic area.

V/C Ratio
Volume to Capacity Ratio: The volume of traffic divided by the capacity of a transportation facility. Traffic volume is defined as the number of vehicles passing (or projected to pass) a point or section of roadway in a given time interval. Capacity is defined as the maximum number of vehicles that reasonably can be expected to traverse that point or section of roadway during the same time period under prevailing roadway, traffic, and control conditions.

Vehicle Trip
A single vehicle movement from the beginning of travel to its destination, in a vehicle that is motor-driven (e.g., automobiles, motorcycles, trucks, buses and vans).

VMT
Vehicle Miles Traveled: On highways, a measurement of the total miles traveled by all vehicles in the area for a specified time period. It is calculated by the number of vehicles times the miles traveled in a given area or on a given highway during the time period. In transit, the number of vehicle miles operated on a given route or line or network during a specified time period.

Work Trip
Any “person” or “vehicle” trip whose purpose (on at least one trip end) involves work or work-related business.